Master Environmental Servicing Plan Update

Simpson Road

Caledon, Ontario

Submitted to:
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Statement of Conditions

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Executive Summary

A Master Environmental Servicing Plan (MESP) has been prepared to establish the preferred method of servicing for the study area located within the West Rainbow Creek. The aim of the MESP is to present the preliminary design of the municipal sanitary sewers, storm drainage, water supply and distribution systems, stormwater management, site grading and road design to support future development within the study area. The development area is identified as part of the Phase 2 South Simpson Industrial Secondary Plan in Schedule C of Staff Report 2022-0374.

Previously an MESP for the area was completed by R.J. Burnside for the Bolton South Industrial Lands in December 2000. The Town has requested that the MESP be updated by the Simpson Road Landowner's Group (LOG) for study area to better understand the servicing strategy for these lands. GEI Consultants was retained by the LOG to prepare a Block Plan and update to the Master Environmental Servicing Plan (MESP).

Development Proposal

It is proposed to develop the subject lands part of the Phase 2 Secondary Plan Area into individual site plan blocks and extend the current Simpson Road southwards towards Mayfield Road.

Natural Heritage

The original MESP completed by R.J. Burnside in 2000 provided a baseline of the physical setting of the Subject Lands. Detailed field studies were completed in 2023 to confirm and further characterize the existing natural heritage features present on the landscape. Located within the Humber River Watershed, Tributary D of West Rainbow Creek flows southward along the eastern boundary of the Subject Lands. Two individual wetland units are also present on site, existing within an otherwise highly disturbed and anthropogenic landscape.

Geotechnical Study

The Ontario Geological Survey and Quaternary mapping identified clay and silt till deposits with minor sand or gravel content and non-free-flowing groundwater. In 2012, Golder's Environmental Assessment for Simpson Road found silt and clay soils up to 3.5 meters deep without encountering groundwater or installing monitoring wells. GEI's preliminary investigation for the Block Plan found topsoil and pavement over clayey silt, sandy clayey silt, and glacial till. Groundwater after stabilization was found at depths of 0.5 to 4.7 meters.

The geotechnical report provides recommendations for the proposed road services. Typical trenching and backfilling are recommended in accordance with OHSA and OPS/Standard OPSD's. The native soil was found suitable to support the pipe and groundwater is generally not expected to be an issue during service installation.

Stormwater Servicing and Stormwater Management

The proposed storm sewers will consist of a 2.4m x 1.8m storm trunk by-pass sewer that collects flows upstream from an existing headwall via an existing 750mm storm sewer. Along the proposed Simpson ROW extension, there is an approved storm network that has been re-aligned and comprising a series of 1800(w)x900(d)mm, 1200mm, 1050mm, 900mm, 750mm and 600mm sewers collecting flows from Simpson Road and Parts 1, 2, 3, 4, ,5 and 10 of the subject sites. Parts 6, 7, 8, 9 and 11 will connect to the ditch, an existing 375mm or a 450mm storm sewers on Coleraine Drive. Part 12 will connect to the existing 525mm storm sewer on Mayfield Road.

On-site measures are proposed within each of the site plans to meet the quantity, quality and erosion requirements before discharging to the proposed bypass culvert or existing storm sewer system.

Sanitary Servicing

The Sanitary Sewers for Parts 1, 2, 3, 4, ,5 and 10 will connect to the re-aligned 250mm sanitary sewer on Simpson Road. The flows discharge to Simpson Road accumulates to a total of 25.56 L/s. The Sanitary Sewers for Parts 6, 7, 8, 9, 11 and 12 will connect to the 750mm sanitary sewer on Coleraine Drive. The flows discharge to Coleraine Drive contributes an additional total of 2.08 L/s.

Water Supply Servicing

The water supply for Part 1, 2, 3, 4, 5, and 10 is anticipated to have a maximum daily consumption of 178,394 L/d and connected to the approved 300mm watermain on Simpson Road. The water supply for Part 6, 7, 8, 9 and 11 is anticipated to have a maximum daily consumption of 33,474 L/d and connected to the existing 300mm watermain on Coleraine Drive. The water supply for Part 12 is anticipated to have a maximum daily consumption of 13,555 L/d and connected to the existing 300mm watermain on Coleraine Drive.

The proposed grading will match into the existing grades where needed and maintain the existing overland flow patterns. For this concept of grading 0.5% slope has been maintained running west to east with a 3:1 slope matching into existing. The study area is governed by the approved Simpson Road extension drawings. This extension has proposed grades that are approximately on averaging between 1-2m higher than existing which would cause this site to required fill. Additional grading detail will be required upon preparation of the detailed engineering plans at detail design.

1. INTRODUCTION

1.1 Study Purpose

GEI Consultants Canada Ltd. (GEI) have been retained by Simpson Road Landowners Group Inc. to update the Master Environmental Servicing Plan (MESP) to support the Block plan and the Official Plan Amendment (OPA) for the Bolton South Industrial Lands. The previous MESP was prepared by Burnside Development Services dated, December 2000.

The subject sites are a part of the Phase 2 Secondary Plan Area consisting of the extension of Simpson Road to Mayfield Road and are comprised of fourteen (14) parcels; parts 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, A and B which are located at the north-east intersection of Mayfield Drive and Coleraine Drive in Bolton within the Town of Caledon, Ontario, in Peel Region. These sites consist of participating, non-participating landowners, pending participation and adjacent landowners. The Block Plan area consists of parts 1 – 12. Refer to **Figures 1-1, 1-2, and 1-3** for the location plan, aerial plan, and ownership map outlining the study area respectively. The Phase 2 Secondary Plan Area is reflective of the Ownership Map prepared by Weston Consultants dated July 31, 2023.

The following report provides a compilation of ecological, geomorphic and servicing information for the various lands within the Study Area. The MESP Terms of Reference South Simpson (Headwaters of West Rainbow Creek) Master Environmental Servicing Plan Update (TOR), specific to the preparation of the MESP for the Subject Lands, was prepared by the Town of Caledon. A copy of the approved TOR is provided in **Appendix A – Background Information.**

1.2 Study Location

The Phase 2 Secondary Plan Area consists of fourteen (14) subject sites along with the extension of Simpson Road to Mayfield Road. These subject sites consist of parcel parts 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, A and B which is located at the north-east intersection of Mayfield Drive and Coleraine Drive in Bolton within the Town of Caledon, Ontario, The Regional Municipality of Peel. The site is located within the jurisdiction of the Toronto and Region Conservation Authority (TRCA).

1.3 Overview of Background Information

The following documents were available for review for the preparation of this report:

- Ownership map, Drawing OM, prepared by Weston Consulting, dated July 31, 2023;
- Bolton South Industrial Lands Master Environmental Servicing Plan (MESP), prepared by Burnside Development Services dated, December 2000;
- Stormwater Management Design Brief, prepared by Pitura Husson Limited, dated June 2008;
- Stormwater Management Pond Report, Simpson Road Extension, Proposed SWM Pond, prepared by Schaeffers Consulting Engineers, dated August 2020;

- Environmental Study Report Final, prepared by AMEC Environmental & Infrastructure A division of AMEC Americas Limited, dated December 2012;
- Simpson Road Extension Phase 3 drawings, prepared by Wood Consultants, Issued September 2021;
- Staff Report 2022-0374, prepared by the Town of Caledon, dated July 12, 2022;
- Simpson Road Extension and rainbow Creek By-pass Feasibility Study, prepared by Greck and Associates Limited, dated August 25, 2023;
- Simpson Road Extension Channel By-pass drawing, prepared by Greck and Associates Limited, Issued August 25, 2023;
- Town of Caledon Development Standards Manual Version 5.0, dated 2019;
- Region of Peel Public Works Design Criteria Manual dated July 2009, modified March 2017;
- Region of Peel Public Works Watermain Design Criteria dated June 2010;
- Stormwater Management Planning and Design Manual, dated March 2003;
- Toronto and Region Conservation Authority Stormwater Management Criteria, Version 1.0, dated 2012;

1.4 Planning and Environmental Policy Context

The Simpson Road area is subject to the planning policy framework, including direction related to environmental matters, established by the Province, the Region and the Town under the *Planning Act*. The following summarizes the key directions of the planning and environmental policy framework most relevant to Simpson Road. Reference should be made to the specific policy and regulatory documents themselves for a full understanding of the applicable policies and regulations. Detailed policies within these documents were reviewed and applied where appropriate.

1.4.1 Town of Caledon Official Plan (Consolidated March 2024)

Per the Town of Caledon OP the subject lands are characterized as having land use of "Prestige Industrial" and being very close in proximity to "General Industrial" lands. This is noted in Schedule C and with more detail in Schedule C-5.

1.4.2 Region of Peel Official Plan (2022)

The Region of Peel's OP characterizes the subject lands as being part of the "Urban System" as noted in schedule E-2 and being in close proximity to the Greenbelt Area in Peel and the Bolton Residential Expansion Settlement Area (Schedule E-1). This area is part of the CTC Region Source Protection Plan Area and is considered Settlement Area Outside the Greenbelt. Schedule E-3 marks this land as being Designated Greenfield Area, while E-4 indicates this is Employment area.

1.4.3 Provincial Policy Statement (MMAH 2020)

The PPS (MMAH 2020) provides direction on matters of provincial interest related to land use planning and development. It "supports improved land use planning and management, which contributes to a more effective and efficient land use planning system." The PPS is to be read in its entirety and land use planners and decision-makers need to consider all relevant policies

and how they work together. The PPS (MMAH 2020) came into effect May 1, 2020 and replaces the previous PPS issued April 30, 2014.

This report addresses those policies that are specific to Natural Heritage (**Section 2.1**) with some reference to other policies with relevance to Natural Heritage and impact assessment considerations and areas of overlap (e.g., those related to Efficient and Resilient Development and Land Use Patterns, Section 1.1; Sewage, Water and Stormwater, Section 1.6.6; Water, Section 2.2; Natural Hazards, Section 3.1).

Eight types of significant natural heritage features are defined in the PPS, as follows:

- Significant wetlands;
- Significant coastal wetlands;
- Significant woodlands;
- Significant valleylands;
- Significant wildlife habitat;
- Fish habitat;
- Habitat of endangered and threatened species; and
- Significant Areas of Natural and Scientific Interest (ANSIs).

Development and site alteration shall not be permitted in significant wetlands within Ecoregions 5E, 6E or 7E, or in significant coastal wetlands. Development and site alteration shall not be permitted in significant woodlands, significant valleylands, significant wildlife habitat or significant ANSIs, unless it is demonstrated that there will be no negative impacts on the natural features or their ecological functions.

Development and site alteration shall not be permitted in the habitat of endangered and threatened species or in fish habitat, except in accordance with provincial and federal requirements.

1.4.4 Toronto and Region Conservation Authority

Effective January 1, 2023, in association with Bill 23 updates, the role Conservation Authorities play in development applications changed. Up until this time, the TRCA reviewed planning application submissions associated with future development of properties within its jurisdictional boundaries. In addition, the TRCA provided planning and technical advice to planning authorities to assist them in fulfilling their responsibilities regarding natural hazards, natural heritage, and other relevant policy areas pursuant to the Planning Act, as both a watershed-based resource management agency and through planning advisory services, in addition to their regulatory responsibilities.

With the changes associated with Bill 23, the commenting role Conservation Authorities play in Planning Act applications may vary from municipality to municipality.

TRCA administers the Development, Interference with Wetlands, Alterations to Shorelines and Watercourses Regulation, (O. Reg.) 166/06, which defines the areas of interest that allow TRCA to:

- Prohibit, regulate, or provide permission for straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream, watercourse or changing or interfering with a wetland; and
- Prohibit, regulate, or provide permission for development if the control of flooding, erosion, dynamic beaches, pollution or the conservation of land may be affected by the development.

The Regulation Limit delineates hazardous lands, wetlands, shorelines, and areas susceptible to flooding and associated allowances. The Subject Lands include the TRCA regulation limits, and the flooding hazards associated with watercourses that transect the Subject lands. Further to this, evaluated 'other wetlands' and 'unevaluated wetlands' are also present within the Subject Lands.

Pursuant to the Development, Interference with Wetland and Alterations to Shorelines and Watercourse Regulation (TRCA; Ontario Regulation 166/06), any development in or on areas defined in the Regulation (e.g., river or stream valleys, hazardous land, wetlands) requires permission from the Conservation Authority. The Conservation Authority may grant permission for development in or on these areas if, in its opinion, the control of flooding, erosion, dynamic beaches, pollution or the conservation of land will not be affected by the development. The Regulation also states that it is prohibited to straighten, change, divert or interfere in any way with the existing channel of a river, creek, stream, or watercourse or change or interfere in any way with a wetland without permission from the Conservation Authority.

The TRCA's 'The Living City Policies' (2014) contains the principles, goals, objectives, and policies approved by the TRCA for their planning and development approvals process. This document outlines policies related to the determination of the Natural System and recommends buffer widths for natural heritage features such as woodlands, wetlands, and valley and stream corridors.

1.4.5 Fisheries Act (1985)

Fisheries and Oceans Canada (DFO) administers the federal Fisheries Act (1985) which defines fish habitat as "spawning grounds and other areas, including nursery, rearing, food supply and migration areas, on which fish depend directly or indirectly in order to carry out their life processes" [subsection (2)1]. The Fisheries Act prohibits the death of fish by means other than fishing [subsection 34.4 (1)] and the harmful alteration, disruption or destruction of fish habitat [HADD; subsection 35. (1)]. A HADD is defined as "any temporary or permanent change to fish habitat that directly or indirectly impairs the habitat's capacity to support one or more life processes" (DFO 2021).

Some projects may be eligible for exemption from the DFO review process, as specified under Step 3 of the DFO Fish and Fish Habitat Protection Program review process, such as clear-span bridges and bridge maintenance projects where DFO mitigation measures are applied, artificial waterbodies with no hydrological connection to occupied fish habitat, and projects that follow the Standards and Codes of Practice defined by DFO (DFO, 2021). All other projects or activities that have the potential to impact fish or fish habitat should be submitted to DFO through the "Request for Review" process. DFO will review the proposed project to determine whether there is potential to (1) impact an aquatic species at risk, (2) cause the death of fish or (3) result in HADD of fish habitat. The death of fish by means other than fishing

or a HADD of fish habitat can be authorized by DFO under paragraphs 34.4(2)(b) or 35(2)(b) of the Fisheries Act. Authorizations require the preparation and submission of an application package identifying the impacts on fish and fish habitat as well as the avoidance, mitigation and offsetting measures that will be implemented as well as any monitoring that is proposed.

1.4.6 Migratory Birds Convention Act (1994)

The MBCA (1994) provides protection to migratory birds, their habitats and nests at the federal level by prohibiting the destruction of active migratory bird nests. Currently, 700 migratory bird species are protected under this Act, including songbirds, woodland birds, waterfowl, shorebirds and seabirds. Although no permit is required by the legislation, appropriate timing constraints on potentially disruptive activities such as vegetation clearing (e.g., tree removal) where migratory birds may be nesting are required to avoid contravention of this Act.

1.4.7 Endangered Species Act (2007)

The provincial Endangered Species Act (ESA), 2007 was developed to:

- Identify Species at Risk (SAR), based upon best available science;
- Protect SAR and their habitats and to promote the recovery of SAR; and
- Promote stewardship activities that would support those protection and recovery efforts.

The ESA (2007) protects all threatened, endangered, and extirpated species on the Species at Risk in Ontario (SARO) list. These species are legally protected from harm or harassment and their associated habitats are legally protected from damage or destruction, as defined under the ESA (2007).

It should be noted that for the purposes of this TOR SAR will be considered those species designated as either Endangered or Threatened on the SARO list. Habitats for species with a designation of Special Concern on the SARO list are treated as a Species of Conservation Concern (SOCC) and are protected under the PPS as a type of Significant Wildlife Habitat (SWH).

2. DESCRIPTION OF THE STUDY AREA

2.1 Study Limits and Land Ownership

The Phase 2 Secondary Plan Area is made up of fourteen (14) participating landowners, non-participating landowners, pending participation and adjacent landowners not within Block Plan Area. The Simpson Road ROW extension is proposed through the land parcel identified as Part A, Part B, 1 and 2.

Within the Block Plan Area there are five (5) participating landowner's that form the Simpson Road Landowners Group Inc, six (6) non-participating landowners and one (1) pending participation which is as follows:

- Part 1: PT LT 1 CON 6 Albion. Ownership is Arion Services Ltd.
- Part 2: 12155 Coleraine Drive. Ownership is Triple X Inc.
- Part 3: PT LT 1 CON 6 Albion. Ownership is Coleraine Properties Inc.
- Part 4: 0 Coleraine Drive. Ownership is 2781823 Ontario Inc.
- Part 5: 8602 Mayfield Road. Ownership is Anatolia Investments Corp
- Part 6: 12197 Coleraine Drive. Ownership is 2840928 Ontario Inc.
  (Pending Participation)
- Part 7: 10265 Coleraine Drive. Ownership is Morresi Holdings Limited.
  (Non-Participating Landowners)
- Part 8: 12045 Coleraine Drive. Ownership is Morpo Holdings Inc.
  (Non-Participating Landowners)
- Part 9: 12029 Mayfield Road. Ownership is 11446835 Canada Inc.
  (Non-Participating Landowners)
- Part 10: 8576 Mayfield Road. Ownership is 2833720 Ontario Inc.
  (Non-Participating Landowners)
- Part 11: 0 Coleraine Drive. Ownership is 2744801 Ontario Inc.
  (Non-Participating Landowners)
- Part 12: 8522 Mayfield Road. Ownership is Vespa Engineers Ltd. The corporation of the Town of Caledon
  (Non-Participating Landowners)

The following are adjacent landowners not within Block Plan Area:

- Part A: 88 Simpson Road. Ownership is 88 Simpson Road Ltd. The corporation of the Town of Caledon. 5008545 Ontario Inc.
  (Adjacent Landowners Not within Block Plan Area)
- Part B: 100 Pilsworth Road. Ownership is Anatolia Real Estate Corp. The Regional Municipality of Peel
  (Adjacent Landowners Not within Block Plan Area)

The study area and Land ownership is delineated on **Figure 1-3** – Ownership Map.

2.2 Existing Conditions

2.2.1 Land Use

The study area / Phase 2 Secondary Plan Area is approximately 39.6 ha (395,764.2 m²) with 17.9ha (179,098.7 m²) of participating Landowners. The study area is bounded by industrial buildings to the northeast, Simpson Road to the north a stormwater management facility to the northwest, Coleraine Drive to the southwest, Mayfield Road to the southeast, and a stormwater management facility to the east.

The land is currently occupied lands of various truck and transportation uses, with various permanent buildings and some non-permanent trailers on site. There are a variety of current companies such as Panam Trans Inc., Blue Shark Transport, Phantom Logistics, Caledon Truck Drive School, Everest Road Xpress and Babbar Transport Bolton Yard off Coleraine Drive, and The Tow Company off Mayfield Road. There is also three (3) in use and one (1) not in use residential single house dwellings off Coleraine Drive.

2.2.2 Existing Drainage

Under existing conditions, the flows from the study area drain north to south with majority of the drainage flowing to the pre-existing ditch in the southeast corner of the study area. This ditch drains to the northern ditch of Mayfield Road and ultimately flows through the existing north to south 1350mm culvert on Mayfield Road.

A portion of the study site to the southwest corner located in the non-participating landowners drains through the existing north to south 900mm culvert on Mayfield Road.

Refer to **Figure 2-1** in for the pre-development drainage area figure.

2.2.3 External Drainage Area

Northern section of the subject site (Industrial lands) discharges into the SWM pond (Equity Prestige Business Park SWM Pond) located northeast of the 12197 Coleraine Drive property. The outflows from the SWM pond are systematically directed southwards, flowing through the ditch/channel transversing through the subject site.

2.2.4 Existing Hydrology

As part of a 2015 and 2018 study by Civica Infrastructure, the Humber River watershed was meticulously divided into 714 subcatchments, guided by topography, drainage, and land use patterns illustrated in the Humber River Hydrology update's "Figure 2.1: Subcatchments of the Humber River watershed". The subject land is specifically situated within subcatchment 24.10. Refer to the aforementioned figure in **Appendix D.1**.

The existing flows for the subject site was estimated utilizing the TRCA 2015 Existing model and Ministry of Transportation (MTO) prorating methodology. The estimated flows for the 12hr AES which were found to be higher are presented in **Table 2.1**.

Table 2.1: Pre-development Peak Flow Rates from Subject Land using MTO Prorating Method

Catchment ID / Subject Site	Area (ha)	Storm Event (m^3/s) – 12hr AES					
		2-YR	5-YR	10-YR	25-YR	50-YR	100-YR
24.10 / 7417	90.03	0.500	0.813	1.038	1.331	1.553	1.779
Subject Site	23.57	0.190	0.393	0.602	0.884	1.143	1.413

Detailed calculations and flows for 6hr AES and 24hr AES are presented in **Appendix D.2**.

2.2.5 Existing Hydraulics and SWM Infrastructure

The subject site is situated in the headwaters of the Rainbow Creek tributary. Prior phases to the north of the study area have undergone complete industrial development and currently channel runoff into the constructed SWMF at Coleraine Drive. This facility, known as the Equity Prestige Business Park SWM Pond, directs its outflow into the Rainbow Creek drainage feature located within the study area, with the pond's outfall marking its starting point. The outflows from the SWMF follow a southeastern course through the study area, ultimately to the existing 1350mm diameter culvert beneath Mayfield Road.

Moreover, the land situated to the east of the study area has been developed and is served by a SWM pond positioned at the northeast corner of Mayfield Road and the Rainbow Creek drainage feature. This SWM facility directly discharges to the existing 1350mm diameter culvert beneath Mayfield Road

Floodplain mapping for the existing reach traversing through the subject lands was not mapped in any of the background studies completed to date or in the TRCA Floodplain Mapping. The tributary area to this reach until the Mayfield Road was identified to be around 100ha which is smaller than the standard 125ha drainage area required to identify the flood hazard limits.

2.2.6 Existing Soils and Groundwater

On the regional level, the Ontario Geological Survey and Quaternary mapping show the subsurface conditions to consist of till deposits that are predominately comprised of clay and silt soils with minor sand or gravel content. Groundwater is not free flowing within these soils.

In 2012, Golder completed a Municipal Class Environmental assessment for the completion of Simpson Road and an accompanying geotechnical report was completed for the site. The boreholes within the area of this study revealed silt and clay soils to the 3.5 m depth of exploration. No groundwater was encountered in the borehole during or upon completion of drilling. No monitoring wells were installed to monitor the groundwater levels.

As part of the scope of work for this Block Plan, GEI completed a preliminary geotechnical investigation and report. For details refer to the attached report in **Appendix C – Geotechnical Engineering**.

The boreholes revealed topsoil and parking lot pavement over a thin layer of fill, overlying native soil predominately comprising competent clayey silt, sandy clayey silt/clayey silt glacial till. During drilling and upon completion groundwater was typically not encountered. Seepage is expected to be slow/produce low volumes in these soils. More stabilized groundwater levels were measured in the monitoring wells about a month later and the groundwater was recorded at depths between 0.5 and 4.7 m depth below existing grade.

2.2.7 Existing Municipal Services

2.2.7.1 Existing Storm Sewers

The study area / Phase 2 Secondary Plan Area is surrounded by ditches along Coleraine Drive to the west and Mayfield Road to the south with several culverts at existing driveway locations. There are also two culverts that outlet to the ditches on either side of Mayfield Road from north to south. On Coleraine Drive and Mayfield Road there are a series of existing storm sewers fronting the site which are as follows:

Mayfield Road

- 525mm diameter (fronting parts 9, and 12)
- 600mm diameter (fronting part 10)
- 750mm diameter (outlets across Mayfield Road)
- 1350mm diameter (outlets across Mayfield Road)

Coleraine Drive

- 375mm diameter (fronting parts 7, and 11)
- 450mm diameter (fronting parts 8, and 9)

These sewers flow from north to south and from west to east that ultimately discharges close to the existing 900mm culvert across Mayfield Road.

2.2.7.2 Existing Sanitary Sewers

The study area / Phase 2 Secondary Plan Area only has an existing sanitary sewer west of the site on Coleraine Drive. There are currently no sanitary sewers on Mayfield Road. The following streets have sanitary sewers:

Coleraine Drive

- 750mm diameter (fronting parts 1, 2, 3, 4, 6, 7, 8, 9, and 11)

The 750mm diameter sanitary sewer drains north to south and continues to drain south down Coleraine Drive.

2.2.7.3 Existing Watermains

The study area / Phase 2 Secondary Plan Area has two existing watermains on Coleraine Drive. There is also one watermain to the south of the study area on Mayfield Road. The following streets have watermains:

Coleraine Drive

- 300mm diameter (fronting parts 1, 2, 3, 4, 6, 7, 8, 9, and 11)
- 750mm diameter (fronting parts 1, 2, 3, 4, 6, 7, 8, 9, and 11)

Mayfield Road

- 300mm diameter (fronting parts 5, 9, 10, and 12)

The existing 300mm diameter watermain on Mayfield Road network continues east. The existing 300mm diameter watermain on Coleraine Drive network continues north and the existing 750mm diameter trunk watermain on Coleraine Drive network continues north and south.

2.3 Natural Heritage Features

GEI completed a review of background information to provide additional insight into the overall character of these Subject Lands. This information was used to support the field studies which were then undertaken to confirm and characterize the natural heritage features present.

2.3.1 Secondary Source Review

The following resources were reviewed for information relating to natural features and species that may be found on the Subject Lands and within the greater Study Area:

- Ministry of Natural Resources and Forestry's (MNRF) Natural Heritage Information Centre (NHIC) database (2023);
- MNRF's Land Information Ontario (LIO) database (2023);
- Bird Studies Canada's Atlas of the Breeding Birds of Ontario (BSC et al. 2008);
- Ontario Nature's Reptile and Amphibian Atlas (2019);
- Toronto Entomologists' Association's (TEA) Ontario Butterfly and Moth Atlases (2020 a, b); and
- Fisheries and Oceans Canada's (DFO) Aquatic Species at Risk (SAR) Map (2023).
- Online citizen science databases (e.g., eBird and iNaturalist).

2.3.1.1 NHIC Database Results

The Natural Heritage Information Centre Database (NHIC, MNRF 2022) was searched for records of provincially significant pants, vegetation communities and wildlife on and within the vicinity of the Subject Lands. The database provides occurrence data by 1km^2 area squares, there were three (3) squares that overlapped the Subject Lands (17PJ0354, 17PJ0455 and 17PJ0454). Three species of interest were noted, Yellow-banded Bumble Bee (*Bombus terricola*) which is listed as Special Concern on the SARO list and, two threatened species, Eastern Meadowlark (*Sturnella magna*) and Bobolink (*Dolichonyx oryzivorus*).

2.3.1.2 Land Information Ontario Natural Features Results

Based on the MNRF LIO geographic database, one watercourse feature was identified on the Subject Lands; this feature is identified as West Rainbow Creek. Potential impacts associated with site alteration and/or development will be discussed within the updated MESP, including potential impacts to its ecological function.

2.3.1.3 Ontario Breeding Bird Atlas Results

The Ontario Breeding Bird Atlas (OBBA) contains detailed information on the population and distribution status of Ontario birds (Cadman et al. 2007). The data is presented on 100 km^2 area squares with one square overlapping the Subject Lands (17PJ05). It should be noted that the Subject Lands are a small component of the overall bird atlas square, and therefore it is unlikely that all bird species are found within the Subject Lands. Habitat type, availability and size are all contributing factors in bird species presence and use.

A total of 100 bird species were recorded in the atlas square that includes the Subject Lands, with the following species of interest noted:

- Species listed as Threatened or Endangered on the SARO List:
    a. Acadian Flycatcher (*Empidonax virescens*) – Endangered;
    b. Bank Swallow (*Riparia riparia*) – Threatened;
    c. Bobolink (*Dolichonyx oryzivorus*) – Threatened;
    d. Chimney Swift (*Chaetura pelagica*) – Threatened; and
    e. Eastern Meadowlark (*Sturnella magna*) – Threatened.
- Species of Conservation Concern (i.e., listed as Special Concern on the SARO List or identified as an S1–S3 species):
    a. Common Nighthawk (*Chordeiles minor*) – Special Concern;
    b. Eastern Wood-Pewee (*Contopus virens*) – Special Concern;
    c. Upland Sandpiper (*Bartramia longicauda*) – S2B and
    d. Wood Thrush (*Hylocichla mustelina*) – Special Concern.

2.3.1.4 Ontario Reptile and Amphibian Atlas Results

The Ontario Reptile and Amphibian Atlas contains detailed information on the population and distribution status of Ontario herpetofauna (Ontario Nature 2019). The data is presented on 100 km^2 area squares with one square overlapping the Subject Lands (17PJ05). It should be noted that the Subject Lands are a small component of the overall atlas square, and therefore it is unlikely that all herpetofauna species are found within the Subject Lands. Habitat type, availability and size are all contributing factors in herpetofauna species presence and use.

A total of 17 species were recorded in the atlas square that overlaps with the Subject Lands, of which three are salamander and lizard species, eight are frog and toad species, two are turtle species and four are snake species.

2.3.1.5 Ontario Butterfly and Moth Atlas Results

The Ontario Butterfly and Moth Atlases (Toronto Entomologists' Association 2022a, 2020b) contain detailed information on the population and distribution status of butterflies and moths in Ontario. The database provides occurrence data by 10 km x 10 km squares. The Study Area is located within the atlas square (17PJ05), which was used to determine a potential butterfly and moth species list for the area. The Study Area is a small component of the overall atlas square, and therefore all the butterfly and moth species listed for this atlas square may not be found within the Study Area. Habitat type, availability, and size are all contributing factors to reptile and amphibian species presence and use.

A total of 74 species including 62 butterfly species and 12 moth species were recorded in atlas square. Of these reported species, the following species of interest is noted:

- Species of Conservation Concern (i.e., listed as Special Concern on the SARO List or identified as an S1–S3 species):
    a. Monarch (*Danaus plexippus*) – Special Concern

2.3.1.6 Aquatic SAR Distribution Mapping Results

The DFO Aquatic Species at Risk Map (2023) was reviewed to identify any known occurrences of aquatic SAR, including fish and mussels, on the Subject Lands. No aquatic SAR were identified on the Subject Lands.

2.3.1.7 iNaturalist

The iNaturalist (2023) database is a large citizen science-based identification and data collection app. It allows any citizen to submit observations to be reviewed and identified by other naturalists and scientists to help provide accurate species observations. As the observations can be submitted by anyone, and the records are not officially vetted, the data obtained from this tool should not be used as a clear indicator of species presence, and species may be filtered out based on habitat and target survey efforts.

This online database was examined to identify observations made within the Subject Lands that were research grade. No significant species were found on the Subject Lands or within 120 meters of its boundaries.

2.3.1.8 eBird

The eBird (2023) database is a large citizen science-based project with a goal to gather bird diversity information in the form of checklists of birds, archive it, and share it to power new data-driven approaches to science, conservation and education. As the observations can be submitted by anyone, and the records are not officially vetted, the data obtained from this tool should not be used as a clear indicator of species presence, and species may be filtered out based on habitat and target survey efforts.

This online database was examined to identify observations made within the Subject Lands. However, no significant bird species were found on the Subject Lands or within 120 meters of its boundaries.

2.3.2 Field Surveys

The following ecological field investigations were completed to inform the presence and extent of natural heritage features within the Subject Lands and Study Area. A summary of field studies completed is provided in **Table 1** (**Appendix B – Natural Heritage**).

2.3.2.1 Ecological Land Classification

Methodology

Vegetation communities were first identified on aerial imagery and then verified in the field. Vegetation community types were confirmed, sampled and revised, if necessary, using the sampling protocol of the ELC for Southern Ontario (Lee at al. 1998). Vegetation communities of at least 0.5 ha in size were mapped; where appropriate, distinct communities smaller than this were also mapped. Where a suitable ELC classification code was not available in the 1998 manual, codes from the unpublished 2008 ELC 2nd Approximation (Lee, H. T. 2008) were used.

Results

The Subject Lands consist of tableland topographic features, which primarily contain disturbed features but do contain some natural vegetation communities. Two ELC community types were documented and classified to vegetation type, while three were classified to ecosite (e.g., Mineral Cultural Thicket); ecosite codes were generally used where the species assemblage did not match any available vegetation type codes.

ELC mapping of the Subject Lands is shown on **Figure 2-2**. A description of each ELC type is provided in **Table 2** (**Appendix B – Natural Heritage**). No provincially rare vegetation communities were present on the Subject Lands (NHIC, 2022).

Wetlands

Identification of wetlands generally relies on the '50/50 rule', where features having over 50% relative cover of wetland plants are classified as wetland. Based on this, wetland is present on the Subject Lands, collectively occupying approximately 0.296 ha. These consisted of two individual wetland units, which were either mineral meadow marsh or mineral shallow marsh ecosites.

The Land Information Ontario (LIO) database was accessed to determine if any MNRF-identified wetlands have been mapped on or in the vicinity of the Subject Lands. Such wetlands could include Provincially Significant Wetlands (PSW), MNRF evaluated wetlands, or unevaluated wetlands. Results show that no wetland units overlap with the Subject Lands; although a small wetland (approximately 0.25 acres) is located on the opposite side of Mayfield Rd approximately 125 m at its closest.

2.3.2.2 Botanical Inventory

Methodology

Scientific botanical names primarily follow the nomenclature from the Database of Vascular Plants of Canada (Brouillet et al. 2010+). The provincial status of all plant taxa and vegetation communities is based on NHIC (2023). Identification of potentially sensitive native plants is based on their assigned coefficient of conservatism (CC) value, as determined by Oldham et al. (1995). This CC value, ranging from 0 (low) to 10 (high), is based on a species tolerance of disturbance and fidelity to a specific natural habitat. Species with a low CC value tend to have little or no fidelity to pristine or unique natural ecosystems and can be found in a variety of natural or anthropogenic habitats. Species with a CC value of 9 or 10 are potentially sensitive as they tend to have a consistent fidelity to high-quality or unique ecosystems.

Results

Vascular Plants

Botanical inventories completed on the Subject Lands recorded a total of 93 species (i.e., taxa, inclusive of subspecies, varieties, and hybrids). Of these, 46% are native to Ontario and 50% are exotic. A complete list of species documented from the Subject Lands is provided in **Table 3** (**Appendix B – Natural Heritage**).

Most of the native plants (95%) are ranked S5 (secure in Ontario). Two species (5%) are ranked S4 (apparently secure in Ontario), and none are ranked S1-S3). Three locally rare species were observed, as per the Peel Region rarity rankings (Varga et al. 2005; Credit Valley Conservation 2002). None of the locally rare species are considered rare in Ontario, and none had a co-efficient of conservatism value of 9 or 10.

An NHIC search was conducted for the Subject Lands using the MNRF Make a Map: Natural Heritage Areas mapping application. The following rare plants have been historically documented on or in the vicinity of the Subject Lands:

Butternut (*Juglans cinerea*; S2?). This species was not observed on the Subject Lands; it typically prefers hedgerows and woodland edges but was not present on the Subject Lands and does not appear to be present on adjacent lands.

Species at Risk Plants

No Species at Risk plant were identified on the Subject Lands.

Provincially Rare Plants

Provincially rare plants are those that are ranked S1-S3 by the NHIC (2022). No provincially rare plants were documented on or adjacent to the Subject Lands.

Locally Rare Plants

Local plant rarity is based on the number of population occurrences for a given area. For Peel Region, a plant is considered rare if it has 10 or fewer known occurrences, the data of which is derived primarily from historical checklists, MNRF reports, site records, and herbaria records (Varga et al. 2005; Credit Valley Conservation 2002). Overall, three locally rare plants were observed on the Subject Lands. These were:

- Eastern Ninebark (*Physocarpus opulifolius; R1*)
  - Occasional within CUT1 community.
- Big Bluestem (*Andropogon gerardii; R5*)
  - Abundant within CUT1 community.
- Yellow Indiangrass (*Sorghastrum nutans; R2*)
  - Occasional within CUT1 community.

Invasive Plants

Invasive plants are those that can become (or presently are) a serious problem within a defined location. These plants reproduce and spread aggressively, reducing the local biodiversity and threatening ecological function. Depending on existing conditions, some invasive species can outcompete all other species.

Urban Forest Associates (2002) provides a categorical ranking system for plants known to be invasive in southern Ontario. Of the 50 exotic species observed on the Subject Lands, six are ranked as Category 1 by Urban Forest Associates.

Category 1 plants are deemed to be the most invasive and can dominate a site indefinitely. These are a threat to natural areas wherever they occur because they have very effective reproduction and dispersal mechanisms. The six Category 1 plants observed on the Subject Lands are:

- Canada Thistle (*Cirsium arvense*)
- Tartarian Honeysuckle (*Lonicera tatarica*)
- Purple Crown-Vetch (*Securigera varia)*
- Purple Loosestrife (*Lythrum salicaria*)
- Manitoba Maple (*Acer negundo)*
- European Reed (*Phragmites australis* ssp. *australis*)

2.3.2.3 Breeding Bird Survey

Methodology

Breeding bird surveys were conducted following protocols set forth by the Ontario Breeding Bird Atlas (Cadman et al. 2007), the Ontario Forest Bird Monitoring Program (Cadman et al. 1998). These protocols generally follow the Bird and Bird Habitats: Guidelines for Wind Power Projects (OMNR 2010) recommended under the SWH Criteria Schedules for Ecoregion 7E and 6E (MNRF 2015) but have been adjusted, based on professional experience, to implement a more comprehensive approach that combines area search and point count techniques.

Surveys were conducted between dawn and five hours after dawn with suitable wind conditions, no thick fog or precipitation (Cadman et al. 2007). A total of four point count stations were surveyed within the Subject Lands and are illustrated on **Figure 2-3**. Point count stations were placed in various habitat types, where present, within the Subject Lands and combined with area searches to help determine the presence, variety, and abundance of bird species. Each point count station was surveyed for 10 minutes for birds within 100 m and outside 100 m. All species recorded on a point-count were mapped to provide specific spatial information and were observed for signs of breeding behavior. Surveys were conducted at least 7 days apart.

Breeding bird surveys were completed on the following dates and times:

Table 2.2: Dates and Times of Breeding Bird Surveys

BREEDING BIRD SURVEY (Round #)	DATE (Month Day Year)	TIME (AM)
1	June 11, 2023	6:30 to 7:30
2	June 29, 2023	6:15 to 7:15

Results

A total of 19 bird species was observed within the Subject Lands. Of this total, no species are confirmed, 11 are probable, and eight are possible breeders on the Subject Lands. No bird species are considered non-breeders, flyovers, or migrants. No additional species were observed only on surrounding lands within 120 m. The observed breeding bird species are discussed in the sections below. All species observed on the Subject Lands are listed in **Table 4** (**Appendix B – Natural Heritage**).

A total of 19 (100%) of the confirmed, probable, or possible breeders are provincially ranked S5 (common and secure), S4 (apparently common and secure) or SNA (species not native to Ontario). No bird species are considered provincially rare (S1-S3; NHIC 2023).

2.3.2.4 Amphibian Call Count Survey

Methodology

Survey protocols are based on the 'Marsh Monitoring Program' (Bird Studies Canada (BSC) 2014).

Survey station locations were determined through an assessment of orthophotography, existing vegetation communities and ground observations. A total of 5 amphibian call count stations were surveyed within the Subject Lands. Stations were located within an industrialized transport area (**Figure 2-3**).

The call count surveys were conducted at night within the appropriate timing window from approximately 30 minutes after sunset until midnight. Each station was surveyed three times (once in April, once in May and once in June) during optimal weather conditions (low wind levels, no heavy rain). Minimum night air temperatures at time of survey of 5°C, 10°C and 17°C were applied to each of the respective survey periods. Surveys were conducted at least 15 days apart. All calls heard within a survey station were recorded, as well as any call observations outside of the survey station, including on adjacent lands. The provincial and global statuses of species identified on the Subject Lands were obtained from the Natural Heritage Information Centre (NHIC 2022) and the Species at Risk of Ontario (SARO) list.

Amphibian surveys were conducted on the following dates and times:

- Round 1 – April 20, 2023; 20:30 to 21:06;
- Round 2 – May 12, 2023; 21:00 to 21:31;
- Round 3 – June 22, 2023; 21:40 to 22:06.

Results

A total of 2 amphibian species were heard calling within the Subject Lands during the three rounds of call count surveys (full details are provided in AMC station results Table, attached). 2 amphibian species were heard calling on adjacent lands. All of these species are provincially ranked S5 (common and secure) or S4 (apparently common and secure).

- AMC Station 1 is a SWM pond located within an industrialized transport yard. Water was present during all three surveys. No species were heard calling from this feature, but a new feature (small pond) was present during round 2 and 3, southeast of station 1. Two AMTOs were heard calling during round 2 and was observed in the feature during round 3.
- AMC Station 2 is a pond located within an industrialized transport yard. This survey was conducted offsite, listening into the property. Water presence was unknown during all three surveys. No species were heard calling from this feature, but two species, AMTO and SPPE was heard calling from outside the station, from AMC 3.
- AMC Station 3 is a pond located within an industrialized transport yard. This survey was conducted offsite, listening into the property Water presence was unknown during all three surveys, but presumed present based on calling. A total of two species were heard calling from this feature, AMTO and SPPE. Call abundance was listed as a 1, calls can be counted without error.
- AMC Station 4 is located adjacent to the property, at a culvert located within an agricultural field. Water was present during all three surveys. No species were heard calling from this feature, but one species, SPPE was heard calling from outside the station, from AMC 3.
- AMC Station 5 is a SWM pond located within an industrialized zone. Water was present during all three surveys. No species were heard calling from this feature, but one species, AMTO was heard calling from outside the station, from AMC 3.

2.3.2.5 Aquatic Habitat Assessment

Methodology

The Aquatic Habitat Assessment consisted of a visual survey of existing instream and riparian habitat conditions along and adjacent to the watercourse running through the Subject lands. The assessment took note of any of the following features:

- Hydrology (e.g. flowing or standing water)
- General watercourse morphology (e.g. riffle, run, pools)
- Wetted width and depth (at time of survey)
- Bed and bank substrate
- Instream habitat (e.g. woody debris, aquatic vegetation, undercut banks)
- Presence of obstructions to fish movement (e.g. culverts, debris dams)
- Evidence of groundwater inputs (e.g. seeps or springs, iron flocculation/staining)
- Riparian habitat.

Results

The Subject Lands occur within the Humber River Watershed. Tributary D of West Rainbow Creek flows southward along the eastern boundary of the Subject Lands (**Figure 2-2**). This feature originates from a stormwater management (SWM) pond located immediately north of the study area. Flow is conveyed onto the Subject Lands through a discharge pipe at the northern boundary of site. The feature is contained within a narrow and isolated band of marsh community (MAM2/MAS2). Channel conditions at this location are very poorly defined, obstructed by large amounts of Phragmites and cattail (*Typha sp.*). Accumulated vegetation and debris were noted to obstruct the channel at multiple locations. Channel morphology is relatively flat and lacks sinuosity, no pools or riffles were present. Sediment within this area was dominated by a mixture of silt and muck. Channel flows are eventually directed into a small diameter corrugated steel pipe (CSP) approximately 55 meters onto the Subject Lands. The undersized culvert appeared to back up flows and cause pooling during higher flow periods.

Tributary D remains buried for approximately 90 meters before discharging into a narrow and highly channelized drainage ditch along the eastern boundary of site. The dug drainage ditch averages approximately 2-3 meters in bankful width, bordered by a narrow band of cultural meadow to the east and active trucking yards to the west. Debris and crushed parking asphalt regularly encroach the channel along the length of the study area. Riparian growth is highly limited along the west bank of the channel, as industrial land use directly abuts much of the channel. The band of cultural meadow along the east of the channel extends for approximately 30 meters until reaching a large storage warehouse on the adjacent property. Phragmites and cattail are found throughout much of the channel reach. Accumulated garbage was also noted to be abundant throughout much of the channel. Sediment was composed primarily of silt and muck with erosion evident along both banks. Tributary D is eventually conveyed beneath Mayfield Road through a large diameter CSP. At the southern side of Mayfield Road, the tributary forms a confluence with discharge from a headwall connecting to a SWM pond located adjacent to the storage facility on the neighboring property.

2.3.2.6 Fish Community Sampling

Methodology

Fish community sampling was completed at multiple locations across the Subject Lands (**Figure 2-3**). A Halltech HT-2000 Battery Back Electrofisher and a D-frame dip net with a 500-micron mesh size was used to retrieve fish from the features. Sampling was conducted using the Ontario Stream Assessment Protocol (OSAP) standard single pass survey method (Stanfield 2017). The purpose of the survey was to determine whether fish were present within the watercourse on the Subject Lands.

Weather conditions and electrofisher shocking parameters were recorded. All data recorded was then reported to the MNRF in accordance with License to Collect Fish for Scientific Purposes permit requirements.

Results

Fish community sampling was completed June 14, 2023 at three locations along the tributary. Sampling was completed using the OSAP standard single pass method. Sampling Results are summarized in **Table 6** (**Appendix B – Natural Heritage**).

Sampling Reach 1 (SR1) SR1 is located along the northern boundary of site, occurring immediately upstream of the piped section of tributary and downstream of the adjacent SWM pond. The channel at this location is very poorly defined. Abundant cattail and phragmites, in combination with the generally flat terrain, impede natural flow and cause the channel to widen outwards. The entirety of the area was sampled to determine the presence or absence of fish within this isolated section of tributary. A single Creek Chub (*Semotilus atromaculatus*) was captured within SR1. The low capture abundance at this location is indicative of the poor-quality fish habitat which is present. In stream cover at SR1 is provided only by the overgrown emergent vegetation. The SWM pond outlet and piped portion of the tributary downstream were also both identified as likely barriers to fish passage, isolating this section of tributary to only those species which get washed out of the upstream SWM pond.

Sampling Reach 2 (SR2) is located towards the southern boundary of site, upstream of Mayfield Road. Deep silt and muck at this location provided for difficult sampling conditions. The channel at this location is contained within a straitened drainage ditch, abundant with phragmites and cattail. Large amounts of garbage and debris were also noted within the channel. Riparian conditions provided little shade to the channel. A single Fathead Minnow (*Pimephales promelas*) and six (6) Brook Stickleback (*Culaea inconstans*) were captured within SR2. The capture results demonstrate low species diversity and low species abundance at this location, characteristic of the poor-quality fish habitat present.

Sampling Reach 3 (SR3) is located within the road allowance on the southern side of Mayfield Road. Spot sampling was completed at this location to better evaluate the distribution of fish within and us surrounding the study area. A full survey transect could not be completed at this location due to site access limitations. Sampling was concentrated within a scour pool located at the outlets of the CSP from the Subject Lands and a headwall from the nearby storage facility. A total of fifteen (15) Fathead Minnow and two (2) Pumpkinseed (*Lepomis gibbosus*) were captured at this location. Although these results still demonstrate relatively low species diversity, the species abundance at this location was significantly higher, given that the total sampling effort occurred over only approximately 15% of the time that the other stations were completed in. Instream cover was provided by overhanging vegetation, riprap stone, and a

deep refuge pool. Riparian conditions were still highly limited, bordered by active agricultural fields on both side. Overall fish habitat was still reasonably poor but was improved when compared to the habitat present on the Subject lands.

2.3.2.7 Headwater Drainage Feature Assessment

Methodology

Ahead of conducting the first round HDFA, GEI completed a desktop review to identify the locations of potential headwater drainage features. This was completed through an ArcGIS mapping exercise using available LiDAR data to determine where potential flow paths may be located within the landscape based on relative topographic relief. The presence of all feature locations within the Subject Lands were confirmed during the first round HDFA. If features were not present within the landscape or were dry upon site assessment, these features were not mapped.

Per the requirements of the HDFA Guidelines, GEI completed three site visits to assess headwater drainage features on the Subject Lands on the following dates:

Round 1 – April 19, 2023
Round 2 – May 29, 2023

During the first site visit, all areas of the Subject Lands were walked to identify potential headwater drainage features. Each headwater drainage feature observed was separated into specific reaches, per the guidance on reach delineation in the HDFA Guidelines, and data collection was completed for each reach based on Ontario Stream Assessment Protocols for Unconstrained Headwater Sampling, Section 4: Module 11 (Stanfield, ed. 2017).

Following completion of the three survey rounds, the collected data was used to classify each headwater drainage feature, based on the HDFA Guideline hierarchy.

Results

As depicted on **Figure 2-2**, a total of two (2) headwater drainage features were identified on the Subject Lands. These features have been further broken down into specific reaches, per the guidance on reach delineation in the HDFA Guidelines. A description of each feature reach is provided below.

H1S1

H1S1 is characterized as a poorly defined swale located between active industrial parking areas. During the initial assessment, H1S1 demonstrated a slow flowing and narrow connection to the discharge location of the piped watercourse. The feature was completely dry at the time of the second-round assessment. No riparian or terrestrial habitat was noted to be present along the feature. H1S1 is likely to contribute seasonal flow downstream but does not represent direct fish habitat.

H2S1

H2S1 is characterized as a dug drainage ditch which conveys flow from the surrounding parking areas. This feature is highly channelized and connects to the watercourse at the eastern boundary of site. H2S1 demonstrated a slow flowing connection to the watercourse during the first-round survey but was completely dry by the second-round assessment. A narrow band of anthropogenically disturbed cultural meadow borders the right bank of H2S1. Riparian and terrestrial habitat was not present along the left bank of the feature, encroached upon by active industrial parking areas. H2S1 is likely to contribute seasonal flow downstream but does not represent direct fish habitat.

Management Recommendations

Part 2 of the HDFA Guidelines provides an approach to classify HDFs by providing a step-by-step characterization of specific functions that may be associated with the features assessed, including hydrology, riparian function and provision of fish or terrestrial habitat. **Table 7** (**Appendix A – Background Information**) highlights the key components of this analysis based on the three rounds of HDFA completed in 2023.

Part 3 of the HDFA Guidelines provides guidance on linking the characteristics and functions of features to specific management recommendations that may be applied to those features. To assist, the HDFA Guidelines include Figure 2: “Flow Chart Providing Direction on Management Options”. The flow chart depicts various decision points associated with hydrology, fish habitat, riparian vegetation and terrestrial habitat, and ultimately leads the user to an appropriate management recommendation for each HDF segment.

Both headwater drainage features located on the Subject lands were assigned a Mitigation management strategy. The recommended management of a mitigation feature, per the assessment guidelines, is provided below.

Mitigation

- Replicate or enhance functions through enhanced lot level conveyance measures, such as well-vegetated swales (herbaceous, shrub and tree material) to mimic online wet vegetation pockets or replicate through constructed wetland features connected to downstream;
- Replicate on-site flow and outlet flows at the top end of system to maintain feature functions with vegetated swales, bioswales etc. If catchment drainage has been previously removed due to diversion of stormwater flows, restore lost functions through enhanced lot level controls (i.e., restore original catchment using clean roof drainage);
- Replication functions by lot level conveyance measures (e.g. vegetated swales) connected to the natural heritage system, as feasible and/or Low Impact Development (LID) stormwater options;

2.4 Updated Geotechnical Report/Considerations

Geotechnical recommendations are provided in the geotechnical report in **Appendix C – Geotechnical Engineering.**

Regarding the proposed services for the road, at the time of the geotechnical report preliminary drawings provided, show the sanitary service as deep as 4 m below existing grades corresponding to 5 to 6 m below the proposed grades. The watermain and storm sewer were typically only about 2.0 to 2.5 m below existing grade. The creek will also be piped, and is assumed to be above the sanitary inverts, based on the drawings provided. Typical trenching and backfilling are recommended in accordance with OHSA and OPS/Standard OPSD's. The native soil is suitable to support the pipe and groundwater is generally not expected to be an issue during service installation.

The pavement design from previous works coincides with the latest GEI recommendation in **Table 2.3** as follows:

Table 2.3: Pavement Design Recommendation

Pavement Layer	Compaction Requirements	Minimum Component Thickness
Surface Course Asphaltic Concrete: HL3 (OPSS 1150) with PG 58-28 Asphalt Cement (OPSS.MUNI 1101)	OPSS 310	40 mm
Binder Course Asphaltic Concrete: HDBC (OPSS 1150) with PG 58-28 Asphalt Cement (OPSS.MUNI 1101)	OPSS 310	50 mm over 60 mm
Base Course: Granular A (OPSS.MUNI 1010)	100% SPmdd (ASTM-D698)	150 mm
Subbase Course: Granular B Type I (OPSS.MUNI 1010)	100% SPmdd (ASTM- D698)	450 mm

General guidance for building construction on the lots is also provided in the geotechnical report, however the recommendations will need to be reviewed once lot grading has been established.

2.5 Existing Zoning

The existing zoning and land use for the study area is outlined in the official plan prepared by the Town of Caledon Consolidated in April 2018. The study area land use is outlined on the zoning map 1a BY-LAW 2006-50 dated April 3, 2006; revised February 27, 2003. The land use is for prestige industrial and serviced industrial. Refer to Zone Map 1a (**Appendix A – Background Information**).

3. Hydrology

3.1 Design Criteria

The study area, identified as the south Simpson – Headwaters of West Rainbow Creek, is situated at the northeast junction of Mayfield Road and Coleraine Drive in Bolton, within the Town of Caledon, Ontario. In general, the following criteria need to be met for the proposed development in the subject site:

- **Quantity Control:** In general, the peak flows from the subject lands should meet the peak flows determined using the unit flow relationship equations provided by the TRCA for the Humber River Sub-Basin 36 if directly discharging to the creek. The equations that apply to the study area are presented in **Table 3.1** below.

Table 3.1: Unit flow relationship for Sub-Basin 36

Return Period	Sub-Basin 36 Equations*
2 Year	Q=9.506-0.719 *ln(A)
5 Year	Q=14.652-1.136 *ln(A)
10 Year	Q=17.957-1.373 *ln(A)
25 Year	Q=22.639-1.741 *ln(A)
50 Year	Q=26.566-2.082 *ln(A)
100 Year	Q=29.912-2.316 *ln(A)

*Where Q is flow in L/s/ha and A is area in ha

The Town of Caledon requires on-site control for industrial developments. A maximum of 180L/s/ha is required from block along with a 42L/s/ha rooftop discharge. In addition to the above criteria, flows discharging into the Region of Peel stormwater system should control the flows to 10yr pre-development flows.

- **Quality Control:** Enhanced Quality Control – 80% TSS removal is required to be provided for the subject lands.

- **Erosion Control:** 5mm from each of the site plans to be retained on site and/or detain 25mm and discharge over 48hrs.

- **Water Balance:** The subject lands are not located in Wellhead Protection areas Q1 or Q2 nor in the significant groundwater recharge areas, therefore best efforts need to be made to meet the post to pre water balance requirements.

3.2 Hydrologic Model Selection

Similar to the TRCA Humber River Hydrology Model 2015, Visual OTTHYMO (VO) software, was utilized to analyze and simulate the proposed development conditions.

3.3 Hydrologic Modelling Parameters

The hydrologic modeling has incorporated the subsequent hydrograph commands:

- NASHYD – Undeveloped area
- STANDHYD – Developed area
- Route Reservoir – Used specifically for underground storage facilities (Water Quantity Control)

Additional parameters such as the Curve Number (CN), TIMP and XIMP were calculated for each of the site plans are presented in **Section 3.3.2**.

3.3.1 Existing Model

As stated in **Section 2.2**, the study area is part of the TRCA Existing Humber River Hydrology Model subcatchment 24.10. Based on the review of the model, it was noted that the subcatchment was modelled as a NasHYD which is generally used to model undeveloped areas and areas with imperviousness less than 20%.

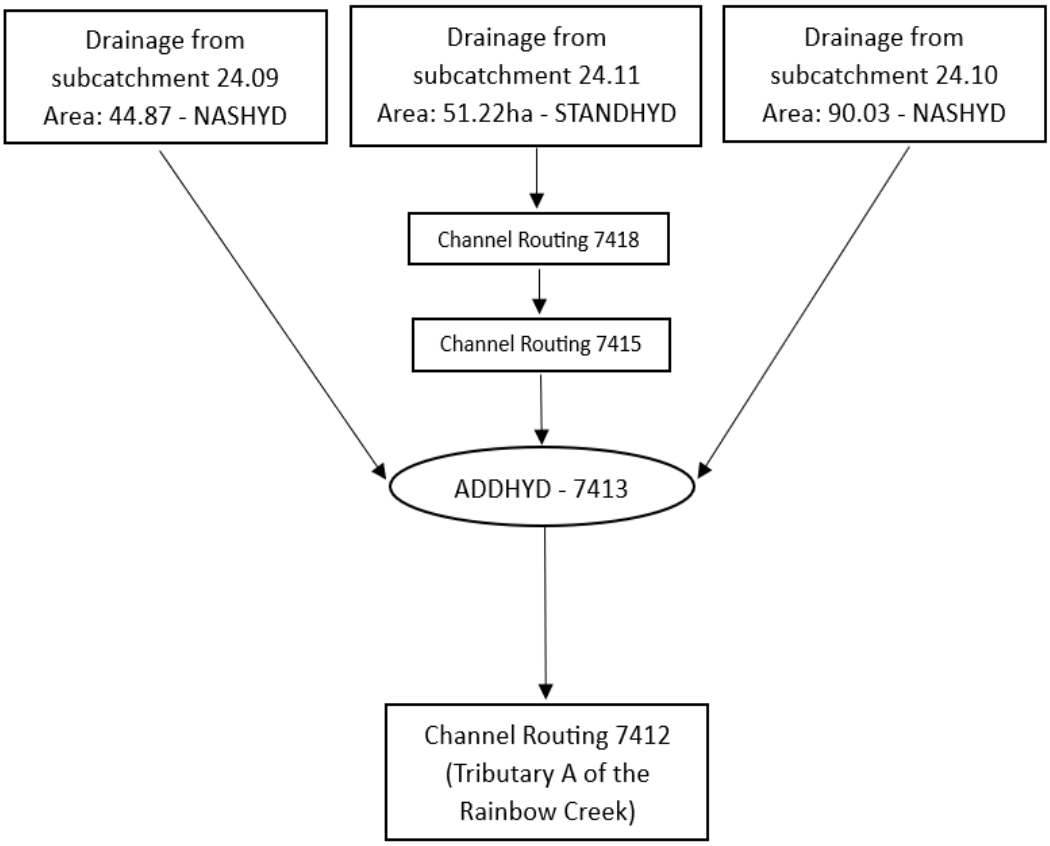
In existing condition, catchment 24.10 encompasses the subject area, covering approximately 23.79ha. This specific area is a subset of the broader NasHYD 24.10 region, which has total area of 90.03ha.

Table 3.2 below summarizes the catchments parameters of the original TRCA Humber River model, while **Figure 3-1** shows the schematic from existing TRCA model.

Table 3.2: Existing Humber River Model Parameters

	Catchment ID	Command	NHYD	Area (ha)	DT (min)	CN	IA
Existing model for 2-500yr	24.10	NASHYD	7417	90.03	5	89	10

Figure 3-1: TRCA VO Model schematic



The existing peak flow within the NasHYD catchment 24.10 along with the subject site flows calculated using MTO proration is detailed in **Table 3.3** below.

Table 3.3: Existing flow rates

Catchment ID/Channel Routing	Flow (cms) – 12hr AES					
	2-year	5-year	10-year	25-year	50-year	100-year
Catchment - 24.10	0.500	0.813	1.038	1.331	1.553	1.779
Subject site	0.190	0.393	0.602	0.884	1.143	1.413

3.3.2 Post-development Modeling

Post development modelling was completed based on the established post development drainage pattern discussed in **Section 5.4**.

In the post-development scenario, the model was programmed to represent Catchments C1, C2.1, C3.1, C4, C5, C10, and C11 as draining into the bypass channel. This drainage pathway continues through the box culvert located south of the subject site at Mayfield Road. The parameters outlined in **Table 3.4** below confirm the characteristics of these catchments within this scenario. Each of the catchments are proposed to drain to a route reservoir representing the proposed storage on site.

Table 3.4: Updates on Catchment draining through the Bypass channel towards the Mayfield Road Box culvert

Property ID	Command	Catchment ID	Area (ha)	TIMP	XIMP	Slope (%)
C1	STANDHYD	7623	1.15	0.99	0.99	0.5
C2.1	STANDHYD	7624	1.80	0.99	0.99	0.5
C3.1	STANDHYD	7567	2.72	0.99	0.99	0.5
C4	STANDHYD	7629	4.09	0.99	0.99	0.5
C5	STANDHYD	7631	3.91	0.99	0.99	0.5
C10	STANDHYD	7641	2.21	0.99	0.99	0.5
C11	STANDHYD	7643	2.02	0.99	0.99	0.5

While catchments C6, C7, C8, C9, and C12 will undergo on-site management utilizing underground storage facilities to control their discharge. This approach guarantees that the stormwater runoff from these catchments is in line with the Town of Caledon requirements and the capacity of the storm sewers at Coleraine Drive and Mayfield Road. Considering the block areas are less than 2ha, the analysis was conducted using the Rational method, as detailed in **Section 5.6.2** of the report.

Lastly, catchments C2.2.1, C2.2.2, C3.2.1, and C3.2.2 will undergo on-site control measures to meet the requirements set up in the Stormwater Management Pond Report, Simpson Road Extension dated June 2021 prepared by Schaeffers Consulting Engineers. Route reservoirs were utilized to estimate the on-site control requirements for these subject sites.

This comprehensive analysis delineates the varied drainage pathways and destinations for runoff from the catchments, informing future development and stormwater management strategies effectively.

3.4 Design Storms

In accordance with the guidelines outlined by the Toronto and Region Conservation Authority (TRCA) for developments within the Humber River watershed, we utilized 6-hour and 12-hour Antecedent Effective Storm (AES) events to evaluate existing flows and proposed condition flows. Additionally, for the analysis of underground storage and flow regulation, we incorporated the 4-hour Chicago storm event. Furthermore, for catchments directing runoff to storm sewers, Rational method was utilized to determine the flow and storage requirements as the site plans were less than 2ha.

4. Overview of Key MESP Requirements

4.1 Existing Relevant Studies

- Stormwater Management Pond Report, Simpson Road Extension, Proposed SWM Pond, prepared by Schaeffers Consulting Engineers, dated June 2021.
- Simpson Road Extension and Rainbow Creek Bypass Feasibility Study, prepared by Greck and Associated Ltd., dated October 2023.
- Equity Prestige Business Park, West Phase, Stormwater Management Report, prepared by A.M.Candaras Associates Inc., dated October 2003.
- Simpson Road Extension and Tributary to West Rainbow Creek – Scoped Fluvial Geomorphology Assessment, Aquatic Habitat Review and Evaluation of Alternative Flow Conveyance Options, prepared by Palmer, dated May 2024.

4.2 Environmental Constraints and Agency Requirements

The MESP TOR require that limits of the Natural Heritage System (NHS) be established during the Block Plan process based on the recommendations of the PPS (2020), applicable municipal and/or TRCA policies, and features staking/surveying.

It is the purpose of this MESP to create a framework to guide the development of lands and natural heritage system planning so that significant natural heritage features, along with their linkages and respective functions, are protected, restored and (where appropriate) enhanced.

Eight types of natural features are identified in the PPS (MMAH 2020):

- Significant wetlands;
- Significant coastal wetlands;
- Significant woodlands;
- Significant valleylands;
- SWH;
- Fish habitat;
- Habitat of endangered and threatened species; and
- Significant areas of natural and scientific interest.

The presence/absence of these natural features on the Study Area are discussed in the subsequent sections below. The NHRM (MNR 2010), Town of Caledon's OP (2024), Peel Region's OP (2022) and TRCA O.Reg 166/06 were referenced to assess the potential significance of other natural features, and their associated forms and functions on the landscape.

Resulting from the fieldwork summarized in **Section 2**, GEI has confirmed the presence of all natural heritage features in the Study Area based on criteria outlined in applicable policies. It is the goal of development to achieve no net loss of NHS function, and when possible, to strive for a net gain. The remainder of **Section 4.2** summarizes the proposed of the NHS. All NHS features and buffers are then further discussed in **Section 4.3**, in the context of environmental enhancement opportunities and constraints.

Significant Valleylands

Significant valleylands should be defined and designated by the planning authority. General guidelines for determining significance of these features are presented in the NHRM (MNR 2010) for Policy 2.1 of the PPS. Recommended criteria for designating significant valleylands include prominence as a distinctive landform, degree of naturalness, and importance of its ecological functions, restoration potential, and historical and cultural values.

No valleylands are present on the Subject Lands.

Significant Woodlands

Woodlands, as defined by the Peel OP and Caledon OP, include woodlots, cultural woodlands, cultural savannahs, plantations and forested areas and may also contain remnants of old growth forests.

No woodland communities are present on the Subject Lands.

Significant Wetlands and Other Wetlands

No significant wetland is present on the Subject Lands.

Wetland is present on the Subject Lands, collectively occupying approximately 0.296 ha. This area is composed of two individual wetland units, consisting of mineral meadow marsh and mineral shallow marsh ecosites.

Environmentally Sensitive/Significant Areas

Environmentally Significant Areas are identified by the relevant Conservation Authority or Municipality according to their established criteria and would be reflected on Schedule C of the City's OP. There are no Environmentally Sensitive/Significant Areas designated by TRCA or the Town within the study area.

Area of Natural and Scientific Interest (ANSIs)

Areas of Natural and Scientific Interest (ANSIs) are designated by the MNRF and include sites of particular ecological or geological significance. There are no ANSIs located on the Subject Lands.

Fish Habitat

Fish habitat, as defined in the federal Fisheries Act, C.F-14, means "spawning grounds and nursery, rearing, food supply, and migration areas on which fish depend directly or indirectly in order to carry out their life processes." Fish, as defined in S.2 of the Fisheries Act, C.F-14, includes "parts of fish, shellfish, crustaceans, marine animals and eggs, sperm, larvae, spat and juvenile stages of fish, crustaceans and marine animals" (DFO 2019).

Tributary D of West Rainbow Creek is present along the eastern boundary of the Subject Lands and provides direct fish habitat.

Significant Wildlife Habitat

Significant wildlife habitat (SWH) is one of the more complex natural heritage features to identify and evaluate. There are several provincial documents that discuss identifying and evaluating SWH: the NHRM (MNR 2010), the Significant Wildlife Habitat Technical Guide (MNR 2000), and the SWH Ecoregion Criterion Schedule (MNRF, 2015). The Simpson Lands are in Ecoregion 6E and were therefore assessed using the 6E Criteria Schedule (MNRF 2015). There are four general types of significant wildlife habitat: seasonal concentration areas, rare or specialized habitats, habitat for species of conservation concern, and animal movement corridors. Candidate habitat, in relation to the Study Area, is discussed in detail below.

Seasonal Concentration Areas of Animals

Seasonal concentration areas are those sites where large numbers of a species gather together at one time of the year or where several species congregate. Several types of seasonal concentration areas of animals include criteria such as a large body of water, or for the habitat to be within 5km of a Great Lake - both of which are not present within, or adjacent to, the Subject Lands. Deer yard and deer wintering congregation areas are mapped and provided by the MNRF. Neither of these habitat types were identified through agency correspondence, nor is this habitat type identified on the Subject Lands with MNRF's Land Information Ontario (LIO) database.

Rare Vegetation Communities or Specialized Habitat for Wildlife

Rare or specialized habitat, are two separate components. Rare habitats are those with vegetation communities that are considered rare in the province. SRANKS are rarity rankings applied to species at the 'state', or in Canada at the provincial level, and are part of a system developed under the auspices of the Nature Conservancy (Arlington, VA). Generally, community types with SRANKS of S1 to S3 (extremely rare to rare-uncommon in Ontario), as defined by the NHIC, could qualify. It is assumed that these habitats are at risk and that they are also likely to support additional wildlife species that are considered significant. No rare vegetation communities were identified within or surrounding the Subject Lands.

Specialized habitats require large areas of suitable habitat for successful breeding. This SWH type is community/diversity-based. The largest and least fragmented habitats are generally considered more significant. Similar to the approach taken with Seasonal Concentration Areas, this SWH component requires specific habitat criteria to warrant targeted surveys.

Amphibian Breeding Habitats

A total of 5 amphibian call count stations were surveyed in 2023. Both Spring Peeper (*Pseudacris crucifer*) and American Toad (*Anaxyrus americanus*) were recorded with a call code level of 1 (individuals) at Amphibian Call Station 3, however, the species abundance and habitat do not meet the criteria for Significance for this SWH type.

Habitat of Species of Conservation Concern

Species of conservation concern include those that are rare and whose populations are significantly declining. Habitats of species of conservation concern do not include habitats of endangered or threatened species as identified by the ESA, 2007.

As indicated in the SWH categories above, this SWH component requires specific habitat criteria to warrant targeted surveys, none of which were met on the Subject Lands.

Animal Movement Corridors

Animal movement corridors are areas that are traditionally used by wildlife to move from one habitat to another. This is usually in response to different seasonal habitat requirements. Some examples are trails used by deer to move to wintering areas, and areas used by amphibians between breeding and summering habitat.

No evidence of traditional mammal trails was found during any of the site visits. While mammals utilize these lands, there is no indication of a formal migration corridor or other evidence of "high traffic" trails. The detailed technical work completed and summarized in this report identifies the role of the Subject Lands as providing limited function in this regard.

Summary
Based on detailed field survey programs completed during 2023, no SWH has been identified to be present on the Subject Lands.

4.3 Enhancement Areas/Buffering

Buffers are intended to preserve the ecological integrity of natural features and their associated processes. The Town of Caledon requires the establishment of buffers and setbacks to protect natural heritage features, including hazardous lands. A buffer refers to the distance from adjacent land uses to a natural heritage feature and/or hazard land. Ecological buffers can be effective in mitigating adverse impacts (e.g. noise, light, pollution, etc.) to individual natural heritage features and the NHS itself.

Per Section 7.9.6.1 of Caledon's OP (2024), *no lands within the South Simpson Industrial Area Secondary Plan are designated as an Environmental Policy Area. However, all lands within the Plan are subject to the Ecosystem Planning and Management provisions of Section 3.2 of the Official Plan*.

Natural heritage feature buffers, or Vegetation Protection Zones (VPZs), and setbacks were reviewed including requirements set out in the TRCA Living Cities Policies (2014b), the Town of Caledon OP (2024), the Peel OP (2018), the Significant Wildlife Habitat Criteria Schedules for Ecoregions 6E and 7E (MNRF 2015a and 2015b), and the Natural Heritage Reference Manual (MNR 2010). These policy requirements were reviewed in the context of feature form, function, sensitivity, as well as the extent and nature of the proposed development or site alteration on adjacent lands to support VPZ recommendations. Based on this review, the following VPZs are recommended to be applied to features on the Study Area.

The guiding principles are listed in brackets.

a) Identified wetlands = 10 m (Caledon OP 2024; TRCA 2014b);

b) Fish habitat (warm water) = 15 m (Caledon OP 2024); and

c) Floodplain = 10 m (Caledon OP 2024; TRCA 2014b).

The proposed natural heritage network (NHN) does not currently accommodate for the recommended VPZs of each feature.

The Simpson Road LO group explored three alternative approaches to convey flow and benefit ecology in association with construction of the Simpson Road extension and development of the adjacent lands. Two open channel options (fully open/partially piped) and one fully piped alternative were considered in determination of the preferred alternative option. Palmer evaluated each option using a scoring matrix, designed to consider a variety of objectives: natural environment, technical criteria, financial criteria, constructability, public safety, and land use planning (Palmer 2024, **Appendix B**). Fully piping the tributary was identified as the preferred alternative option. It was identified to provide the greatest potential overall benefit when the opportunity for off-site compensatory habitat improvements was considered against the limitations of on-site attempts at restoration between closely spaced driveway crossings.

The full details of Palmer's evaluation are further discussed in their 2024 Memorandum provided in **Appendix B**.

4.4 Existing Master Financial Agreement

There has been a financial agreement between Anatolia Corp., Arion Service Ltd., Simpson Road Landowners Group and the Region and Town for development of the subject site. Refer **Appendix A – Background Information** for the Letter of Agreement between Landowners.

5. Master Environmental Servicing Plan

5.1 Development Concept

The proposed development plan within the Study area / Phase 2 Secondary Plan Area includes individual site plan blocks and extending the current Simpson Road southwards towards Mayfield Road. The following sections provide a brief description of the proposed site plan blocks as well as the proposed ROW extension.

5.1.1 Site Plans

The Study area / Phase 2 Secondary Plan Area is broken down into 5 participating parcel parts; parts 1, 2, 3, 4, and 5. There is also 7 pending participation, and non-participating landowners that are within the Block Plan Area. There are also 2 Adjacent Landowners not within the Block Plan Area. Each part will consist of its own site plan development. Refer to **Tables 5.1-5.4** below.

Table 5.1: Participating Parcel Parts

PART	Address	SITE AREA	DEVELOPMENT TYPE	GFA	OWNER
Part1	PT LT 1 CON 6 Albion	4.01ha (40,11.9m²)	Industrial	3,309.00m²= Warehouse 4,020.00m²= Office	Arion Service Ltd
Part2	12155 Coleraine Drive	4.16ha (41,551.8m²)	Industrial	1,995.57m²	Arion Service Ltd
Part3	PT LT 1 CON 6 Albion	3.97ha (39,746.4m²)	Industrial	19,873.20m²	Coleraine Properties Inc
Part4	0 Coleraine Drive	3.83ha (38,278.1m²)	Industrial	19,139.05m²	Anatolia Investment Corp
Part5	8602 Mayfield Road	1.94ha (19,410.5m²)	Industrial	7265.92m²	2840928 Ontario Inc

Table 5.2: Pending Participation Parcel Parts

PART	Address	SITE AREA	DEVELOPMENT TYPE	GFA	OWNER
Part6	12197 Coleraine Drive	1.13ha (11,326.6m²)	Industrial	5,663.3m²	Coleraine Properties Inc

Table 5.3: Non-Participation Parcel Parts

PART	Address	SITE AREA	DEVELOPMENT TYPE	GFA	OWNER
Part7	12197 Coleraine Drive	0.22ha (2,235.4m²)	Industrial	1,177.00m²	Morresi Holdings Limited
Part8	12045 Coleraine Drive	0.24ha (2,360.0m²)	Industrial	1,180.0m²	Morpo Holding Limited
Part9	12029 Coleraine Drive	0.47ha (4,721.9m²)	Industrial	2,360.95m²	11446835 Canada Inc
Part10	8576 Mayfield Road	2.32ha (23,229.0m²)	Industrial	11,614.5m²	2833720 Ontario Inc
Part11	0 Coleraine Drive	0.20ha (2.008.7m²)	Industrial	1,004.35m²	2744801 Ontario Inc
Part12	8522 Mayfield Road	1.15ha (11,526.0m²)	Industrial	Site Plan not provided	The owner is Vespa Engineers Ltd. The Corporation of the Town of Caledon

Table 5.4: Adjacent Parcel Parts not within Block Plan Area

PART	Address	SITE AREA	DEVELOPMENT TYPE	GFA	OWNER
PartA	88 Simpson Road	3.15ha (31,515.9m²)	Industrial	Site Plan not provided	Vespa Engineers Ltd. The Corporation of the Town of Caledon
PartB	100 Pillsworth Road	12.77ha (127,742.0m²)	Commercial	Site Plan not provided	The owner is 88 Simpson Road Ltd. The Regional Municipality of Peel

5.1.2 Simpson Road ROW Extension

The extension of Simpson Road that runs south to Mayfield Road varies from a 24m (ROW) right-of-way to a 25.5m (ROW) right-of-way. The variation accounts for the left hand turn lane off of Simpson Road to Mayfield Road and starts approximately at station 11+220. The lanes are a 5.5m lane width with the south bound lane going up to 7.0m for the left hand turn lane. The total pavement width varies from 11-12.5m. The boulevards on each side will have a total of 6.5m. All servicing and utilities are proposed in this (ROW) right-of-way. Refer to **Figure 5-1** for the typical road cross-section.

Simpson Road Extension Phase 3 drawings, prepared by Wood Consultants, Issued September 2021 show the previously designed Simpson Road Extension. To accommodate the proposed storm sewer by-pass pipe, the previously designed road profile would require modifying in order to provide cover over the by-pass pipe. Refer to the **Figures 5-2-1, 5-2-2 and 5-2-3**.

5.2 Proposed Municipal Servicing

5.2.1 Sanitary Servicing

The proposed sanitary flows were separated discharging into Simpson Road or Coleraine Drive. These flows where calculated by the site areas outlined in Section 5.1.1. The estimated sanitary discharge from the sites have been calculated using the Region of Peel Public Works Design Criteria Manual dated July 2009, modified March 2017. – Sanitary Sewer. Refer to the sanitary design sheet to Coleraine Drive and Simpson Road, the Sanitary drainage area **Figure 5-3** and Conceptual Sanitary Servicing **Figure 5-4**.

The flows contributing to Coleraine Drive sanitary network had a combined site area of 1.30ha. The flows discharge to Coleraine Drive contributes an additional total of 2.08 L/s. This does not include existing flows upstream. Parts 6, 7, 8, 9, 11 and 12 will require a sanitary connection to the existing sanitary sewer located within Coleraine Drive.

The flows discharging to Simpson Road Extension sanitary network had a combined site development area of 6.72ha. The flows discharge to Simpson Road accumulates to a total of 10.95 L/s. The pipe at most capacity is the last leg sewer a 250mm diameter pipe at 24.8% full. A 200mm sanitary lateral will be provided to Parts 1A, 1B, 2A, 2B, 3, 4, 5 and 10 from the mainline within the Simpson Road Extension. The sanitary laterals to the Parts listed above are intended to cross underneath the storm sewer by-pass pipe. To protect the sanitary pipe a steel liner will need to be installed to protect the pipe and will be designed during detailed design.

5.2.2 Water Supply

The proposed watermain were separated with connections into Simpson Road, Coleraine Drive and Mayfield Drive. The water consumption flow rate is calculated by the site areas outlined in section 5.1.1. The estimated water demands from the sites have been calculated using the Region of Peel Public Works Watermain Design Criteria dated June 2010. Refer to the water demand calculations and **Figure 5-5** for Conceptual Water Servicing.

It is anticipated that for parts: Part 1, Part 2, Part 3, Part 4, Part 5, and Part 10 an average consumption of approximately 127,424 L/d (1.47 L/s), a maximum daily consumption of 178,394 L/d, a minimum hourly demand of 3,451 L/hr and a peak hourly demand of 4.42 L/s will be required to service Part 1, Part 2, Part 3, Part 4, Part 5, and Part 10 connected to the watermain fronting Simpson Road Extension. Watermain laterals to each Part listed above will be provided using Regional standard 1-8-6. The water services to the Parts listed above are intended to cross underneath the storm sewer by-pass pipe. To protect the watermain pipe a steel liner will need to be installed to protect the pipe and will be designed during detailed design.

It is anticipated that for parts: Part 6, Part 7, Part 8, Part 9, Part 11 an average consumption of approximately 23,910 L/d (0.28 L/s), a maximum daily consumption of 33,474 L/d, a minimum hourly demand of 648 L/hr and a peak hourly demand of 0.83 L/s will be required to service Part 6, Part 7, Part 8, Part 9, and Part 11 connected to the watermain fronting Coleraine Drive. Water services will be provided to each Part listed above at the time they go for Site Plan Approval. Laterals will be sized appropriately at that time.

No site plan or statistics has been provided at this time for Part 12. An assumption of 40% of the lot area has been used for building coverage. It is anticipated that for parts: Part 12 an average consumption of approximately 9,682 L/d (0.11L/s), a maximum daily consumption of 13,555 L/d, a minimum hourly demand of 262 L/hr and a peak hourly demand of 0.34 L/s will be required to service Part 12 connected to the watermain fronting Mayfield Road. Water services will be provided to each Part listed above at the time they go for Site Plan Approval. Laterals will be sized appropriately at that time.

5.2.2.1 Hydrant Flow Test

Two fire hydrant flow tests were conducted on September 23, 2021, by IQ Environmental Inc. The hydrant tests were performed on Mayfield Road, west of the proposed intersection of Simpson Road and Mayfield Road, and on the existing Simpson Road, immediately north the proposed developments. The static pressure was shown to be 90 psi from both hydrant tests.

5.2.2.2 Water Modelling

A water model using WaterCAD was completed to simulate the site watermain distribution system to confirm that water supply requirements have been achieved. The waterCAD model utilizes the calculated demands for the proposed site and confirms that sufficient flows and pressures can be achieved for the follow scenarios: peak hour and maximum day + fire flow.

A dummy reservoir (R-1) is placed at the Simpson Road connection and a second dummy reservoir (R-2) is placed at the Mayfield Road connection. The hydraulic grade line (HGL) of the dummy reservoirs is set to the static pressure of the corresponding hydrant test location, in order to apply the corresponding boundary conditions to the model. The hydraulic grade line applied to each reservoir is shown below in **Table 5.5**.

Table 5.5: WaterCAD Boundary Conditions

Boundary Connection	Ground Elevation (m)	Measured Static Pressure (psi)	Total Hydraulic Grade (m)
Simpson Road	235	90	280.5
Mayfield Road	230	90	291.0

A C-factor value of 120 was applied to all 300mm watermain pipes.

The WaterCAD model was tested for Sites 1, 2, 3, 4, 5, and 10. Refer to the WaterCAD schematic in **Appendix F – Water Servicing** for the model schematic. The results showed that the pressure for the site during the maximum day demand scenarios range between 87 to 91 psi (600 to 627 kPa) for all six sites and is therefore within the required range of the required operating range of 40 psi to 100 psi, in accordance with the Region of Peel. Similarly, During the peak hour demand scenarios range between 87 to 91 (600 to 627 kPa) for all six sites, therefore, is within the required operating range of 40 – 100 psi.

Fire flow demand was run individually for each site. The WaterCAD model results below show the corresponding pressure of all tested hydrants and during the fire flow scenario. All site connections and hydrants have a minimum of 20 psi (140 kPa) and, therefore, there is sufficient fire flow to meet firefighting requirements of the proposed developments. See **Appendix F** for detailed modelling results.

5.3 Proposed Grading

The proposed grading will match into the existing grades where needed and maintain the existing overland flow patterns. The site will match into existing grades to the south-east adjacent to Mayfield Road along parts 5, 9, 10, and 12. The site will match into the existing grading to the west adjacent to Coleraine Drive along parts 1, 2, 3, 4, 5, 6, 7, 8, 9 and 11 and the site will also match into the existing grading to the north-west along site 1 and 6. There is an approved road extension for Simpson Road designed by Wood Consultants that runs through the study area and connects into Mayfield Road. Study area parts 1, 2, 3, 4, 5, and 10 will match into the grade for the extension of Simpson Road. Allowing for majority of the overland flow route to flow north-west to south-east (for parts 1, 2, 3, 4, 5, 6, 10 to the Simpson Road extension. The road extension splits site 1 and 2 and will match into the existing grading to the north-east property limits.

For this conceptual grading, 0.5% slope has been maintained running west to east with a 3:1 slope matching into existing along the west portion for parts 1, 2, 3, and 4. 3:1 sloping is required for site 4, 5 and 10 matching into existing and parts 11 along the west and south. 3:1 sloping is also required for site 1 and 2 along the east property line maintaining a 0.5% slope flowing east to west.

The study area is governed by the approved Simpson Road extension drawings. This extension has proposed grades that are approximately on averaging between 1-2m higher than existing which would cause this site to require fill. As noted above, in order to incorporate the storm by-pass pipe, a proposed change to the Simpson Road extension has been contemplated in order to maintain cover over the storm pipe. Each individual Lot will require detailed grading design during the Site Plan Application stage of development. The detailed grading will be required to maintain the general grading and emergency overland flow indicated on the conceptual grading plan. Refer to **Figure 5-6** for Conceptual Grading and **Figures 5-2-1, 5-2-2, and 5-2-3** for plan and profiles.

5.4 Post Development Stormwater Management Plan

In order to meet the SWM design criteria mentioned in **Section 3.1,** and taking into consideration the proposed development plan and grading plan discussed in the previous sections, it is proposed to provide on-site control within each of the site plans blocks. The flows from the on-site SWM facilities will ultimately either discharge to existing storm sewer system on Coleraine Drive, Mayfield Road, the proposed storm sewer on Simpson Road extension or the proposed bypass culvert proposed to replace the existing ditch on the subject lands. The discharge locations are based on the proposed grading and site topography.

Majority of the proposed development is proposed to drain to the proposed bypass box culvert proposed to replicate the existing reach traversing the subject lands. The design of the bypass box culvert has been completed by Greck and Associates and presented in the memo titled "Simpson Road Extension and Rainbow Creek Culvert Feasibility Study, dated May 17, 2024". The memo discusses the construction of a bypass channel to manage forthcoming flows from the developed subject site as well the existing SWM pond located on the north of the subject site. A 1.8m by 2.4m box culvert approximately 500 meters long, originates from the SWM pond outfall channel and extends eastward toward Simpson Road. Approximately 50 meters upstream of Mayfield Road, the culvert transitions into an open channel before reaching the proposed 6m by 1.8m concrete box culvert (designed by others) that will pass under Mayfield Road. This new culvert, based on Wood's drawings and the Mayfield Road expansion project plans, will replace the existing 1.3m diameter corrugated steel pipe (CSP). For additional details regarding the proposed bypass culvert design please refer to the above-mentioned letter included in **Appendix D.1.** The proposed storm servicing for the site plans to the bypass box culvert should be designed such that no backwater effect from the box culvert occurs.

Due to the proximity to the existing storm sewer system along Coleraine Drive and Mayfield Road, it is proposed to connect some of the site plans adjacent to the roads directly to the storm sewer system which ultimately discharges to the same location as the proposed bypass box culvert. Refer to **Figure 5-7** for the Post-Development Drainage Area and **Figure 5-8** for Conceptual Storm Servicing.

As part of the SWM scheme to support the development of Parcel B, some of the Block Plan area, precisely Catchments C2.1, C2.2 and C3.2 were considered in the design of the pond which was designed to provide Quantity, Quality and Erosion control. It is expected that these catchments will drain to the approved SWM facility via the proposed storm sewer system on Simpson Road. Details of the proposed SWM scheme can be found in **Table 5.6**.

Table 5.6: Proposed SWM Scheme

Parcel	Catchment	Area (ha)	Runoff Coefficient (Imper)	Discharge Location	SWM Scheme
Part 6 (P)	C1	1.15	0.9 (100%)	Bypass Box Culvert	**Quantity control:** On-site control to meet the SWM requirements. Refer to **Section 5.6.1** for additional details. **Quality Control:** On-site
Portion of Part 1 (P)	C2.1	1.80	0.9 (100%)		
Portion of Part 2 (P)	C3.1	2.72	0.9 (100%)		

Parcel	Catchment	Area (ha)	Runoff Coefficient (Imper)	Discharge Location	SWM Scheme
Part 3 (P)	C4	4.09	0.9 (100%)		measures such as OGS, Filter units etc. Refer to **Section 5.7** for additional details. **Erosion Control:** Retain 5mm on site. Refer to **Section 5.8** for additional details.
Part 4 (P)	C5	3.91	0.9 (100%)		
Part 10 (NP)	C10	2.21	0.9 (100%)		
Part 5 (P)	C11	2.02	0.9 (100%)		
	Total	17.9			
Part 11 (NP)	C6	0.19	0.9 (100%)	Existing Storm Sewer System	**Quantity control:** On-site control to meet the SWM requirements. Refer to **Section 5.6.2** for additional details. **Quality Control:** On-site measures such as OGS, Filter units etc. Refer to **Section 5.7** for additional details. **Erosion Control:** Retain 5mm on site. Refer to **Section 5.8** for additional details.
Part 7 (NP)	C7	0.21	0.9 (100%)		
Part 8 (NP)	C8	0.23	0.9 (100%)		
Part 9 (NP)	C9	0.45	0.9 (100%)		
Part 12 (NP)	C12	1.12	0.9 (100%)		
	Total	2.20			
-	R1	1.41	0.76	Equity Prestige Business Park SWMF	**Quantity control:** Control to 180 l/s/ha primarily using roof controls. Additional control is provided by the downstream SWM Facility. Refer to **Section 5.6.3** **Quality Control:** No quality control required on site, as it will be provided by the Equity Prestige Business Park SWMF. **Erosion Control:** No erosion control required, as it will be provided by the Equity Prestige Business Park SWMF.
Portion of Part 1 (P)	C2.2.1	0.71	0.81		
Portion of Part 1 (P)	C2.2.2	1.26	0.81		
Portion of Part 2 (P)	C3.2.1	0.24	0.81		
Portion of Part 2 (P)	C3.2.2	1.03	0.81		
	Total	4.65ha			

5.5 Stormwater Management Alternatives

Based on the Stormwater Management Planning and Design Manual dated March 2003, a hierarchy of stormwater management practices are recommended to be incorporated in SWM plan for a development. The hierarchy is as follows:

5.5.1 Lot Level Controls

Lot level controls refer to those measures that can be implemented at the individual lot levels. Lot level controls are primarily used to provide storage and/or on-site infiltration/filtration. Common lot level controls include the following:

- **Rooftop storage:** Provide storage on rooftops by controlling the flows using roof drains;
- **Ponding Areas (Parking and Backyards):** Provide storage on parking lot and rear yards where feasible by implementing Catchbasin restrictors or orifices in the storm sewer system. At Site Plan Application stage, ponding within parking areas and rooftops of the commercial/industrial lands will be considered for water quantity control.;
- **Downspout Disconnection:** Disconnect rooftop leaders onto grassed ponding areas, soak away pits or rain barrels.
- **Permeable Pavers:** Permeable Pavers can be utilized instead of regular asphalt driveways to reduce the amount of runoff from the lot areas and to promote infiltration. However, they are additional operation and maintenance requirements required to ensure efficiency of the system. Considering this measure is costlier to implement than the other infiltration-based measures on site, this measure should generally be considered if other measures are not applicable to the site.
- **Lot grading and Topsoil Amendments:** Overland flow routes can be maximized, and lot grading can be reduced to increase the runoff time and maximize the infiltration potential.
- **Stormwater Reuse:** Stormwater can be collected and reused within industrial/commercial developments for either irrigation or as 'grey water'. This measure is quite effective at reducing runoff volumes and can utilized to meet the retention requirements on site plan. This measure also requires continued operation and maintenance of the facility.
- **Additional Low Impact Development (LID) Measures**: Additional LID measures such as green roofs, rain gardens, constructed infiltrated basins can be reviewed depending on site soil conditions and development plans.

5.5.2 Conveyance Controls

Conveyance controls refer to the measures that can be implemented to convey from the source point i.e Lot Level to the outlet point (either end of pipe control or outlets). Some of the common recommended conveyance controls **include the following:**

- **Perforated storm sewers and catchbasins**: Infiltration can be promoted by utilizing perforated storm sewer system to enhance infiltration. However, pre-treatment is required to ensure only clean water runoff is infiltrated. Additionally, consideration

should be given to the GWL table and feasibility on site. Operation and Maintenance requirements for such type of a system is also expected to increase.

- **Right of Way LID Measures:** Runoff from the roads can be captured in the catchbasins and can be directed to an adjacent bioswale/tree pits to promote infiltration before discharging to the storm sewer system. This measure replaces the traditional curb and gutter drainage system on the right of ways.

5.5.3 End of Pipe Controls

End of pipe controls represent the downstream measures that can be implemented on site prior to discharge to the outlet location. The following are most commonly used end of pipe controls for both quantity and quality control:

- **Wetponds:** Most commonly used end of pipe system. Effective in providing both quantity and quality control if sized as per MECP Standards. Minimum required tributary area to a pond is 5ha.
- **Dryponds:** Utilized in areas where the main goal is to provide quantity/flood control. Additional treatment methods are required to meet the quality controls. Dry ponds are generally recommended to proposed where in parks or a multipurpose land uses to maximize the space available.
- **Underground Storage Tanks and Superpipes:** Recently, underground storage chambers are becoming the most favored measure to provide quantity control or even quality control especially on-site plans where spacing is restricted. When sized appropriately, the underground storage chambers provide all the required SWM controls and can also accommodate infiltration where feasible. There are multiple underground storage chambers available in the industry and the most efficient and applicable system should be utilized.
- **Oil Grit Separators/Filtration Devices:** Quality control is commonly provided by utilizing Oil grit separators (OGS) devices or filtration systems. Considering only quality control is provided by this measure, additional measures need to be implemented on site to meet the SWM criteria. The efficiency of each of the available devices vary and need to be considered in detailed design to meet the 80% TSS removal.

5.5.4 Recommended SWM Measures

Considering the proposed development on subject sites is mainly commercial/industrial and taking into consideration that the development timeline will vary for each of the different site plans, it is recommended to utilize the following measures to meet SWM control within each of the site plan areas. The final SWM strategy will be established at the detailed design stage.

It is proposed that each of the site plans will provide quantity, quality and erosion control and discharge to the proposed bypass culvert. The following SWM Alternatives are recommended to meet the SWM criteria:

- **Quantity Control**: Roof control, ponding storage and/or underground storage/super pipe storage
- **Quality Control**: Filtration Units, Oil Grit Separators (additional treatment required to achieve 80% TSS control), Green Roofs (if feasible).

- **On-site retention (5mm) for Erosion Control:** Rainwater Harvesting Systems to reuse as grey water or for irrigation, green roofs.

5.6 Flood Control & Conveyance of Runoff

While, in the absence of effective stormwater management controls, there is an anticipated elevation in peak flows downstream from the study area during post-development conditions. To address the potential risk of the downstream flooding, quantity control is proposed within each of the site plan blocks. This infrastructure is designed to exert quantitative control over the flows, ensuring that post-development peak flow rates align with those observed in the pre-development phase. This control mechanism is intended to be effective for all storm events, including 100-year storm.

Adhering to the regulations set forth by the Town of Caledon, it is mandatory for all industrial and commercial developments to incorporate onsite controls, which may involve underground storage, rooftop storage, or parking storage. The allowable discharge rates for each of the catchments are further discussed in sections below and are separated based on the discharge locations.

5.6.1 Catchments Draining to Proposed Box Culvert

Control manholes are proposed to collect the flows from the individual site plans and convey the discharge to the proposed bypass Box culvert. The allowable release rates for each of these site plans were established based on the TRCA Unit flows for Sub-Basin 36. The Allowable Release Rates for each of the catchments are presented in **Table 5.7** below.

Table 5.7: Allowable release rate for catchments draining to proposed box culvert

Catchment ID	Area (ha)	Return Period (cms)					
		2-YR	5-YR	10-YR	25-YR	50-YR	100-YR
C1	1.15	0.011	0.017	0.020	0.026	0.030	0.034
C2.1	1.80	0.016	0.025	0.031	0.039	0.046	0.051
C3.1	2.72	0.024	0.037	0.045	0.057	0.067	0.075
C4	4.09	0.035	0.053	0.066	0.083	0.097	0.109
C5	3.91	0.033	0.051	0.063	0.079	0.093	0.105
C10	2.21	0.020	0.030	0.037	0.047	0.055	0.062
C11	2.02	0.018	0.028	0.034	0.043	0.051	0.057
Total Area	17.9	0.157	0.242	0.296	0.374	0.438	0.493

The maximum required quantity control volume for each of the site plan blocks is presented in **Table 5.8** below. The required volumes were based on the 4hr Chicago design storms which was found to be governing than the 6hr/12hr/24hr AES design storms. Refer to **Appendix D.3** for detailed calculations and VO output.

Table 5.8: Storage volume required

Catchment ID	Area (ha)	Maximum Storage Volume ($m^{3)}$
C1	1.15	815
C2.1	1.80	1280
C3.1	2.72	1945
C4	4.09	2935
C5	3.91	2805
C10	2.21	1575
C11	2.02	1440

5.6.2 Catchments Draining to Existing Storm Sewer System

Due to servicing constraints and location of the parcels, it is proposed to connect Catchments C6/C7/C8/C9/C12 to the existing storm sewer network on Coleraine Drive and Mayfield Road. Currently all the lands are non-participating, therefore the servicing strategy is applicable once the lands get developed. The Allowable Release rates were established based on the 10year pre-development flows from only half the site plan areas as currently based on the available topographic information, the extent of area contributing to the existing storm sewer system is not clear.

The capacity of the existing storm sewer system would be required to be confirmed at detailed design stage.

The allowable release rates are presented in **Table 5.9** below along with the required storage volumes. Refer to **Appendix D.4** for detailed calculations and VO output.

Table 5.9: Allowable release rate and Required storage for catchments draining to Existing Storm sewer system

Catchment ID	Area (ha)	100-YR Allowable Release Rate (m^3/s) based on 10yr Pre-development flows	Required Storage (m^3)
C6	0.19	0.009	91
C7	0.21	0.010	101
C8	0.23	0.011	110
C9	0.45	0.021	215
C12	1.12	0.022	677
Total Area	**2.20**	**0.072**	**1194**

5.6.3 Catchments Draining to Equity Prestige Business Park SWMF

According to the Stormwater Management Pond Report, Simpson Road Extension dated June 2021 prepared by Schaeffers Consulting Engineers(SCE), the Equity Prestige Business Park SWMF was designed to accept flows from some of the Block Plan areas as well as the Simpson Road Extension. Catchments R1 (SCE Catchment 204) and Catchments 2.2.1, 2.2.2, 3.2.1, 3.2.2 (SCE Catchments 203+205) were considered in the design with imperviousness of 80% for Catchment R1 and combined imperviousness of 86.6% for Catchments 2.2.1, 2.2.2, 3.2.1, 3.2.2. However, the design assumed that the site plans provide on-site control utilizing rooftop controls for at least 35% of the area. If the roof area reduces more than 35% of the total area of 3.22ha then additional on-site controls are required.

A summary of the max. flow from the catchments tributary to the pond based on the SCE report is provided in **Table 5.10** below based on the assumption that 35% of the area will be roof area.

Table 5.10: Release rate for catchments draining to Equity Prestige Business Park SWMF

Catchment ID	Area (ha)	Peak Release Rate (m^3/s)	Quantity Control
R1	1.41	n/a	Provided by the SWM Pond
C2.2.1/C2.2.2/C3.2.1/C3.2.2	2.106	n/a	Provided by the SWM Pond
C2.2.1/C2.2.2/C3.2.1/C3.2.2 Roof*	1.134	0.048	Roof Control

*Assuming 35% of the site plan compromises of Roof and provides control based on 42L/s/ha

Based on the preliminary review of the latest site plans, it is noted that the catchments are likely to be developed as parking lot, therefore on-site control is required to be ensure the flows are less than 180L/s. The required volumes calculated using rational method as individual site plan areas are less than 2ha are provided in **Table 5.11** below along with the Allowable release rates based on 180L/s/ha.

Table 5.11: Required volumes and allowable release rates

Catchment ID	Area	Peak Release Rate		Storage required
	(ha)	(m3/s)	(L/s)	(m3)
C2.2.1	0.71	0.128	**127.8**	**156.2**
C2.2.2	1.26	0.227	**226.8**	**277.2**
C3.2.1	0.24	0.043	**43.2**	**52.8**
C3.2.2	1.03	0.185	**185.4**	**226.6**

The total area considered in the Equity Prestige Business Park SWMF was 4.67ha (SCE Catchments 203+ 204 +205) which is greater than the sum of R1/ C2.2.1/C2.2.2/C3.2.1/C3.2.2 =4.65ha, therefore no constraints are expected in the downstream pond. Please refer to **Appendix D.5** for additional information.

5.7 Water Quality Control

Enhanced quality controls are required to meet the 80% TSS removal design requirements. The quality control requirements for each of the site plans discharging to the Box culvert and the existing storm sewer system is proposed to be met via onsite quality controls while the proposed Simpson Road ROW extension as well as Catchments C2.2.1/C2.2.2/C3.2.1/C3.2.2 are proposed to drain to the Equity Prestige Business Park SWMF where quality control is provided utilizing the permanent pool volume. The total area draining to the SWMF from the subject lands as well as the ROW extension remained the same or it is lower, therefore no additional measures are required on these site plans.

On-site control for the site plans can include either infiltration/filtration based Low Impact Development Measures or manufactured filtration (such as Jellyfish Filter units) or oil/grit separator devices (OGS's). It's worth highlighting the variability in performance levels among different oil/grit separators (OGS); some can meet the water quality criteria of achieving an 80% removal of suspended solids, while others may fall short of this criterion. Conservation authorities generally assign only 50% credit to OGS devices, therefore additional measures are required in addition to the OGS to meet the 80% TSS removal. On contrary, filtration devices such as a Jellyfish Filter (JF) units are assigned 80% TSS removal, therefore, there are currently considered as most preferred option for site plans.

However, the choice of quality control measures should be tailored at the detailed design stage to the specific characteristics and requirements of the site plan, considering both efficacy and feasibility. The sizing for the proposed treatment measures will be completed at the site plan stage when additional details are available.

5.8 Erosion Control

As detailed in the preceding section, a slight alteration in imperviousness, approximately 5%, has been discussed, and this change is not anticipated to result in a substantial increase in erosion.

Where feasible, it is proposed to retain the first 5mm from the impervious areas of all events on-site for each of the site plan areas draining directly to the box culvert or the existing storm sewer system. The site plans draining to the SWM pond are not required to provide onsite control as the downstream SWM facility provides the required erosion control. The required 5mm retention volumes for each of the catchment areas are presented in **Table 5.12** below based on the assumptions that the site plans are 100% impervious.

Table 5.12: Required 5mm Retention Volume for Erosion Control

Catchment ID	Area(ha)	Required 5mm retention volume (m^3)
C1	1.15	58
C2.1	1.80	90
C2.2.1	0.71	36
C2.2.2	1.26	63
C3.1	2.72	136
C3.2.1	0.24	12
C3.2.2	1.03	52
C4	4.09	205
C5	3.91	196
C6	0.19	10
C7	0.21	11
C8	0.23	12
C9	0.45	23
C10	2.21	111
C11	2.02	101
C12	1.12	56

5.9 Site Water Balance

The subject site is not located in Wellhead Protection Areas Q1 or Q2 nor in the Significant Groundwater recharge area. Moreover, under existing conditions, the subject site is impervious with various permanent buildings and parking area. The existing imperviousness area for the site was estimated to be approximately 69%. Under post development conditions the imperviousness is expected to increase to 99%. Considering the above, best efforts are required to be implemented on site to meet post to pre-development requirements.

The pre-development water balance assessment was completed utilizing the TRCA Water Balance Tool. Based on the assessment, annual pre-development infiltration volume was estimated to be around 575m^3/year. Under post-development conditions, the infiltration volume is estimated to be reduced to approximately 25m^3/year. The deficit was estimated to be approximately 550m^3/year which requires retention of less than 1mm from the proposed impervious areas. If infiltration-based measures are proposed to meet the 5mm erosion requirements on site, they can help meet the water balance requirements as well. Best efforts need to be made to promote infiltration on site.

Refer to **Appendix D.6** for detailed water balance calculations.

5.10 Bypass Concrete Box Culvert

The detailed design drawings dated September 14, 2021 for the proposed Simpson Road Extension, shown the proposed Simpson Road extension along with a proposed open channel re-alignment for the headwater reach of Rainbow Creek.

Greck and Associates Limited (Greck) reviewed the feasibility of replacing the proposed open channel with a new extended underground culvert system located under the Simpson Road Extension and presented their study in the technical letter titled “Simpson Road Extension and Rainbow Creek Culvert Feasibility Study “dated May 17, 2024.

The study determined that a single 1.8m high by x 2.4m wide box culvert extending from the Equity Prestige Business Park SWM Pond through the Simpson Road right-of-way can convey upstream regulatory runoff and service the lands draining to Mayfield Road / Rainbow Creek. The installation of this culvert system would remove the need for an open channel system to convey flows to Mayfield Road through the subject properties. Greck completed a review of the open channel designed by Wood and noted that out of the 560m open channel system, roughly 30% or 167m of channel would need to be filled to accommodate the industrial crossings. Each of crossing would require a minimum 1.8m by 2.4m wide box culvert to convey flows without overtopping onto Simpson Road.

Therefore, Greck undertook a preliminary hydrologic and hydraulic analysis using the Toronto and Region Conservation Authority’s (TRCA) Visual Otthymo (VO) model. Additionally, Greck prepared a new PCSWMM, HECRAS and updated the VO model to design the new culvert system and quantify potential drainage and flood hazard impacts downstream. It was found that replacing 526m of routed channel will result in a 4.1% to 0.1% flow increase up to 7km

downstream (Huntington Road and Rutherford Road). This flow change translates to a maximum flood elevation increase of 9cm for the regulatory flood event.

Please refer to **Appendix D.1** for a copy of the technical letter titled “Simpson Road Extension and Rainbow Creek Culvert Feasibility Study” prepared by Greck.

In support of preparation of the letter, GEI provided the preliminary post development allowable release rates for the subject sites that was estimated to be 1.05cms. The flows have been updated as discussed in the previous sections 7.6.1 to 7.6.3. The new 100 year allowable flow for the subject sites was estimated as follows: 0.493 (discharge to Box culvert) + 0.072 (Discharge to Sewer System) +0.369 (final release rate of the Equity Prestige Business Park SWM Pond) = 0.93cms which is less than the assumed flow of 1.05cms by Greck.

5.11 Sediment and Erosion Control During Construction

5.11.1 Part 1: PT LT 1 CON 6 ALBION – (Participating Landowners)

The ESC construction for Landowner Part 1 will have three stages of erosion control. Stage 1 will require topsoil stripping (refer to the geotechnical report), stage 2 will be required to match into pre-grade elevation and stage 3 will include the installation of the proposed underground services.

The following esc measures will be required for each stage of sediment and erosion control during construction and will be maintained until siltation control is no longer required. For this site, silt fence surrounding the site will be required. A temporary sediment trap will be constructed at the low point of the site adjacent to Coleraine Drive and discharge to the existing ditch on the east side of Coleraine Drive. Rock check dams, and temporary swales will surround the site and flow into the temporary sediment pond. These erosion control measures are intended for silt and erosion control protection of existing vegetation, watercourses, and adjacent properties. The construction access mud mat will be accessible off of the extension of Simpson Road.

It is expected that the Contractor will protect all tree limbs, roots and trunks outside of the construction boundary at all times during construction.

5.11.2 Part 2: 12155 Coleraine Drive – (Participating Landowners)

The construction for Landowner Part 2 will have three stages of erosion control. Stage 1 will require topsoil stripping (refer to the geotechnical report), stage 2 will be required to match into pre-grade elevation and stage 3 will include the installation of the proposed underground services.

The following esc measures will be required for each stage of sediment and erosion control during construction and will be maintained until siltation control is no longer required. For this site, silt fence surrounding the site will be required. A temporary sediment pond will be constructed at the low point of the site adjacent to Coleraine Drive and discharge to the existing ditch on the east side of Coleraine Drive. Rock check dams, and temporary swales will surround the site and flow into the temporary sediment pond. These erosion control measures are intended for silt and erosion control protection of existing vegetation, watercourses, and adjacent properties. The construction access mud mat will be accessible off of the extension of Simpson Road.

5.11.3 Part 3: PT LT 1 CON 6 ALBION – (Participating Landowners)

The construction for Landowner Part 3 will have three stages of erosion control. Stage 1 will require topsoil stripping (refer to the geotechnical report), stage 2 will be required to match into pre-grade elevation and stage 3 will include the installation of the proposed underground services.

The following esc measures will be required for each stage of sediment and erosion control during construction and will be maintained until siltation control is no longer required. For this site, silt fence surrounding the site will be required. A temporary sediment pond will be constructed at the low point of the site adjacent to Coleraine Drive and discharge to the existing ditch on the east side of Coleraine Drive. Rock check dams, and temporary swales will surround the site and flow into the temporary sediment pond. These erosion control measures are intended for silt and erosion control protection of existing vegetation, watercourses, and adjacent properties. The construction access mud mat will be accessible off of the extension of Simpson Road.

5.11.4 Part 4: 0 Coleraine Drive – (Participating Landowners)

The construction for Landowner Part 4 will have three stages of erosion control. Stage 1 will require topsoil stripping (refer to the geotechnical report), stage 2 will be required to match into pre-grade elevation and stage 3 will include the installation of the proposed underground services.

The following esc measures will be required for each stage of sediment and erosion control during construction and will be maintained until siltation control is no longer required. For this site, silt fence surrounding the site will be required. A temporary sediment pond will be constructed at the low point of the site adjacent to Coleraine Drive and discharge to the existing ditch on the east side of Coleraine Drive. Rock check dams, and temporary swales will surround the site and flow into the temporary sediment pond. These erosion control measures are intended for silt and erosion control protection of existing vegetation, watercourses, and adjacent properties. The construction access mud mat will be accessible off of the extension of Simpson Road.

5.11.5 Part 5: 8602 Mayfield Road – (Participating Landowners)

The construction for Landowner Part 5 will have three stages of erosion control. Stage 1 will require topsoil stripping (refer to the geotechnical report), stage 2 will be required to match into pre-grade elevation and stage 3 will include the installation of the proposed underground services.

The following esc measures will be required for each stage of sediment and erosion control during construction and will be maintained until siltation control is no longer required. For this site, silt fence surrounding the site will be required. A temporary sediment trap will be constructed at the low point of the site adjacent to Mayfield Road and discharge to the existing ditch on the north side of Mayfield Road. Rock check dams, and temporary swales will surround the site and flow into the temporary sediment trap. These erosion control measures are intended for silt and erosion control protection of existing vegetation, watercourses, and adjacent properties. The construction access mud mat will be accessible off of the extension of Simpson Road.

5.11.6 Part 6: 12197 Coleraine Drive – (Pending Participation)

The construction for Landowner Part 6 will have three stages of erosion control. Stage 1 will require topsoil stripping (refer to the geotechnical report), stage 2 will be required to match into pre-grade elevation and stage 3 will include the installation of the proposed underground services.

The following esc measures will be required for each stage of sediment and erosion control during construction and will be maintained until siltation control is no longer required. For this site, silt fence surrounding the site will be required. A temporary sediment trap will be constructed at the low point of the site adjacent to Coleraine Drive and discharge to the existing ditch on the east side of Coleraine Drive. Rock check dams, and temporary swales will surround the site and flow into the temporary sediment trap. These erosion control measures are intended for silt and erosion control protection of existing vegetation, watercourses, and adjacent properties. The construction access mud mat will be accessible off Coleraine Drive.

5.11.7 Part 7: 10265 Coleraine Drive – (Non-Participating Landowners)

The construction for Landowner Part 7 will have three stages of erosion control. Stage 1 will require topsoil stripping (refer to the geotechnical report), stage 2 will be required to match into pre-grade elevation and stage 3 will include the installation of the proposed underground services.

The following esc measures will be required for each stage of sediment and erosion control during construction and will be maintained until siltation control is no longer required. For this site, silt fence surrounding the site will be required. These erosion control measures are intended for silt and erosion control protection of existing vegetation, watercourses, and adjacent properties. The construction access mud mat will be accessible off Coleraine Drive.

5.11.8 Part 8: 12045 Coleraine Drive – (Non-Participating Landowners)

The construction for Landowner Part 8 will have three stages of erosion control. Stage 1 will require topsoil stripping (refer to the geotechnical report), stage 2 will be required to match into pre-grade elevation and stage 3 will include the installation of the proposed underground services.

The following esc measures will be required for each stage of sediment and erosion control during construction and will be maintained until siltation control is no longer required. For this site, silt fence surrounding the site will be required. These erosion control measures are intended for silt and erosion control protection of existing vegetation, watercourses, and adjacent properties. The construction access mud mat will be accessible off Coleraine Drive.

5.11.9 Part 9: 12029 Mayfeild Road – (Non-Participating Landowners)

The construction for Landowner Part 9 will have three stages of erosion control. Stage 1 will require topsoil stripping (refer to the geotechnical report), stage 2 will be required to match into pre-grade elevation and stage 3 will include the installation of the proposed underground services.

The following esc measures will be required for each stage of sediment and erosion control during construction and will be maintained until siltation control is no longer required. For this site, silt fence surrounding the site will be required. These erosion control measures are intended for silt and erosion control protection of existing vegetation, watercourses, and adjacent properties. A temporary sediment trap will be constructed at the low point of the site adjacent to Coleraine Drive and discharge to the existing ditch on the east side of Coleraine Drive. Rock check dams, and temporary swales will surround the site and flow into the

temporary sediment trap. The construction access mud mat will be accessible off Coleraine Drive.

5.11.10 Part 10: 8576 Mayfeild Road – (Non-Participating Landowners)

The construction for Landowner Part 10 will have three stages of erosion control. Stage 1 will require topsoil stripping (refer to the geotechnical report), stage 2 will be required to match into pre-grade elevation and stage 3 will include the installation of the proposed underground services.

The following esc measures will be required for each stage of sediment and erosion control during construction and will be maintained until siltation control is no longer required. For this site, silt fence surrounding the site will be required. These erosion control measures are intended for silt and erosion control protection of existing vegetation, watercourses, and adjacent properties. A temporary sediment trap will be constructed at the low point of the site adjacent to Mayfield Road and discharge to the existing ditch on the north side of Mayfield Road. Rock check dams, and temporary swales will surround the site and flow into the temporary sediment trap. The construction access mud mat will be accessible off of the extension of Simpson Road.

5.11.11 Part 11: 0 Coleraine Drive – (Non-Participating Landowners)

The construction for Landowner Part 11 will have three stages of erosion control. Stage 1 will require topsoil stripping (refer to the geotechnical report), stage 2 will be required to match into pre-grade elevation and stage 3 will include the installation of the proposed underground services.

The following esc measures will be required for each stage of sediment and erosion control during construction and will be maintained until siltation control is no longer required. For this site, silt fence surrounding the site will be required. These erosion control measures are intended for silt and erosion control protection of existing vegetation, watercourses, and adjacent properties. The construction access mud mat will be accessible off Coleraine Drive.

5.11.12 Part 12: 8522 Mayfeild Road – (Non-Participating Landowners)

The construction for Landowner Part 12 will have three stages of erosion control. Stage 1 will require topsoil stripping (refer to the geotechnical report), stage 2 will be required to match into pre-grade elevation and stage 3 will include the installation of the proposed underground services.

The following esc measures will be required for each stage of sediment and erosion control during construction and will be maintained until siltation control is no longer required. For this site, silt fence surrounding the site will be required. These erosion control measures are intended for silt and erosion control protection of existing vegetation, watercourses, and adjacent properties. A temporary sediment trap will be constructed at the low point of the site adjacent to Mayfield Road and discharge to the existing ditch on the north side of Mayfield Road. Rock check dams, and temporary swales will surround the site and flow into the temporary sediment trap. The construction access mud mat will be accessible off Mayfield Road.

The erosion control installations will be completed prior to commencing work, as required. The Developer, Contractor and Engineer will monitor these devices bi-weekly during the cut / fill earthworks program and monthly following the completion of the cut / fill earthworks program or immediately following any significant rainfall or snowmelt event. The Contractor is to make every attempt necessary to interrupt concentration of surface run-off areas within the site and ensure that drainage is directed to the erosion control measures. Monitoring reports for siltation controls are to be forwarded to the Town on a monthly basis at a minimum. The Contractor will be responsible for the removal and disposal of collected sediments when necessary or as directed by the Engineer. The aforementioned ESC measures will be maintained in good working condition for the duration of the construction and maintenance period or until such time as the siltation is no longer required. When directed by the Engineer, these items will be removed, and the disturbed areas restored.

6. Implementation

6.1 Preferred SWM Strategy

The SWM strategy outlined in **Sections 5.5-5.10** is deemed well-suited to meet the design criteria and objectives of the Municipal Environmental Site Plan (MESP) for the subject site. Specifically, the recommended on-site control involves the utilization of underground storage and other LID's to maintain the quality control. This approach is believed to offer significant flexibility in implementing the MESP guidelines and for phasing of the developments. A detailed breakdown of the preferred stormwater strategy is provided below:

- **Quantity Control**: Roof control, ponding storage and/or underground storage/super pipe storage
- **Quality Control**: Filtration Units, Oil Grit Separators (additional treatment required toa achieve 80% TSS control), Green Roods (if feasible).
- **On-site retention (5mm) for Erosion Control:** Rainwater Harvesting System s to reuse as grey water or for irrigation, green roofs.

6.2 Requirements for Offsite Works

Within the Simpson Road extension roadway, proposed storm, sanitary and watermain will be installed. Each site will have its own proposed storm, sanitary and waters service connection that will be connected from either the Simpson Road extension, Coleraine Drive and Mayfield Road. Site accesses will also be provided off Simpson Road extension, Coleraine Drive and Mayfield Road.

There is a proposed 2.4m x 1.8m storm trunk by-pass sewer that collects flows upstream from an existing headwall via an existing 750mm storm sewer. The proposed by-pass storm sewer runs south through the easement on the west side of Simpson Road on part 1 and 2 for a portion of the sewer; the remainder of the sewer runs under Simpson Road and outlets within the easement of part 5.

An approved Simpson Road has been prepared by Wood Consultants. The approved storm sewer catch basins will remain as designed on Simpson Road. The approved storm network runs south on Simpson Road with a network series of 1800(w)x900(d)mm, 1200mm, 1050mm, 900mm, 750mm and 600mm pipes. This network alignment has been updated to accommodate the proposed by-pass trunk storm sewer. The approved 250mm sanitary network alignment has also been adjusted to accommodate the proposed by-pass trunk sewer and the updated approved storm network. This network runs south to Mayfield Road and then east on Mayfield Road and connects to the existing 250mm on Mayfield Road. The approved 300mm watermain on Simpson Road will connect to the existing 300mm watermain on Simpson Road to the north and the existing 300mm watermain on Mayfield Road to the south.

6.2.1 Part 1: PT LT 1 CON 6 ALBION – (Participating Landowners)

Part 1 is split into two locations and will require two separate connections with Simpson Road extension running through it. All connections will connect into Simpson Roads infrastructure. The storm service will be a min. 250mm diameter @ 2.0% and connect into the approved 600mm diameter storm sewer. The sanitary sewer will be a min. 200mm diameter @ 2.0% and connect into the approved 250mm diameter sanitary sewer. The watermain will be min. 200mm diameter and connect into the approved 300mm watermain. The site access will front Simpson Road with two (2) required accesses.

6.2.2 Part 2: 12155 Coleraine Drive – (Participating Landowners)

Part 2 is split into two locations and will require two separate connections with Simpson Road extension running through it. All connections will connect into Simpson Roads infrastructure. The storm service will be a min. 250mm diameter @ 2.0% and connect into the approved 600mm diameter storm sewer. The sanitary sewer will be a min. 200mm diameter @ 2.0% and connect into the approved 250mm diameter sanitary sewer. The watermain will be min. 200mm diameter and connect into the approved 300mm watermain. Part 2A site access will front Coleraine Drive and Part 2B site access will front Simpson Road.

6.2.3 Part 3: PT LT 1 CON 6 ALBION – (Participating Landowners)

All Part 3 connections will connect into Simpson Roads infrastructure. The storm service will be a min. 250mm diameter @ 2.0% and connect into the approved 1050mm diameter storm sewer. The sanitary sewer will be a min. 200mm diameter @ 2.0% and connect into the approved 250mm diameter. The watermain will be min. 200mm diameter and connect into the approved 300mm watermain The site access will front Simpson Road.

6.2.4 0 Coleraine Drive – (Participating Landowners)

All Part 4 connections will connect into Simpson Roads infrastructure. The storm service will be a min. 250mm diameter @ 2.0% and connect into the approved 1200mm diameter storm sewer. The sanitary sewer will be a min. 200mm diameter @ 2.0% and connect into the approved 250mm diameter. The watermain will be min. 200mm diameter and connect into the approved 300mm watermain. The site access will front Coleraine Drive.

6.2.5 Part 5: 8602 Mayfield Road – (Participating Landowners)

All Part 5 connections will connect into Simpson Roads infrastructure. The storm service will be a min. 250mm diameter @ 2.0% and connect into the approved 1800x900mm storm sewer. The sanitary sewer will be a min. 200mm diameter @ 2.0% and connect into the approved 250mm diameter sanitary sewer. The watermain will be min. 200mm diameter and connect into the approved 300mm watermain. The site access will front both Simpson Road and Mayfield Road.

6.2.6 Part 6: 12197 Coleraine Drive – (Pending Participation)

All Part 6 connections will connect into Coleraine Drives infrastructure. There is no storm sewer front part 6. The storm service will be a min. 250mm diameter @ 2.0% and discharge to the existing ditch. The sanitary sewer will be a min. 200mm diameter @ 2.0% and connect into the existing 750mm sanitary sewer. The watermain will be min. 300mm diameter and connect into the existing 300mm diameter watermain. The site access will front Coleraine Drive.

6.2.7 Part 7: 10265 Coleraine Drive – (Non-Participating Landowners)

All Part 7 connections will connect into Coleraine Drives infrastructure. The storm service will be a min. 250mm diameter @ 2.0% and connect into the existing 375mm diameter storm sewer. The sanitary sewer will be a min. 200mm diameter @ 2.0% and connect into the existing 750mm sanitary sewer. The watermain will be min. 300mm diameter and connect into the existing 300mm diameter watermain. The site access will front Coleraine Drive.

6.2.8 Part 8: 12045 Coleraine Drive – (Non-Participating Landowners)

All Part 8 connections will connect into Coleraine Drives infrastructure. The storm service will be a min. 250mm diameter @ 2.0% and connect into the existing 450mm diameter storm sewer. The sanitary sewer will be a min. 200mm diameter @ 2.0% and connect into the existing 750mm sanitary sewer. The watermain will be min. 300mm diameter and connect into the existing 300mm diameter watermain. The site access will front Coleraine Drive.

6.2.9 Part 9: 12029 Mayfield Road – (Non-Participating Landowners)

All Part 9 connections will connect into Mayfield Roads infrastructure. The storm service will be a min. 250mm dia @ 2.0% and connect into the existing 450mm diameter storm sewer. The sanitary sewer will be a min. 200mm diameter @ 2.0% and connect into the existing 750mm sanitary sewer. The watermain will be min. 300mm diameter and connect into the existing 300mm diameter watermain. The site access will front Coleraine Drive.

6.2.10 Part 10: 8576 Mayfield Road – (Non-Participating Landowners)

All Part 10 connections will connect into Mayfield Roads infrastructure. The storm service will be a min. 250mm diameter @ 2.0% and connect into the approved 1800x900mm storm sewer. The sanitary sewer will be a min. 200mm diameter @ 2.0% and connect into the approved 250mm diameter sanitary sewer. The watermain will be min. 200mm diameter and connect into the approved 300mm watermain. The site access will front Mayfield Road.

6.2.11 Part 11: 0 Coleraine Drive – (Non-Participating Landowners)

All Part 11 connections will connect into Mayfield Roads infrastructure. The storm service will be a min. 250mm diameter @ 2.0% and connect into the existing 375mm diameter storm sewer. The sanitary sewer will be a min. 200mm diameter @ 2.0% and connect into the existing 750mm sanitary sewer. The watermain will be min. 300mm diameter and connect into the existing 300mm diameter watermain. The site access will front Coleraine Drive.

6.2.12 Part 12: 8522 Mayfield Road – (Non-Participating Landowners)

Part 12 connections will connect into both Coleraine Drive and Mayfield Road infrastructure. The storm service will be a min. 250mm diameter @ 2.0% and connect into the existing 525mm storm sewer on Mayfield Road. There is no sanitary sewer fronting the site. A sanitary sewer extension connected to the 750mm diameter on Coleraine Drive will be needed. The sanitary sewer connection will be a min. 200mm diameter @ 2.0% and connect into a proposed minimum diameter of 250mm via the existing 750mm diameter on Coleraine Drive. The watermain will be min. 200mm diameter and existing 300mm diameter watermain on Mayfield Road. The site access will front Mayfield Road.

6.2.13 Part A: 88 Simpson Road – (Non-Participating Landowners)

Part A connects into the existing infrastructure on Simpson Road, north of the Simpson Road extension. The site access will front Simpson Road.

6.2.14 Part B: 8522 Mayfield Road – (Non-Participating Landowners)

Part B storm will discharge to the ex pond at the south of part B and east of the Simpson Road extension via. A 1200mm diameter storm sewer. The sanitary sewer will connect to the future 250mm diameter sanitary sewer on Mayfield Road via. A 200mm diameter connection. The water connection is connected internally through phase 2 development. The Site access will front Mayfield Road.

6.3 Development Phasing and Cost Sharing

The phasing of the lands will be split into two phases. Phase 1 will consist of the entire road allowance of the Simpson Road Extension. Phase 2 will consist of all other parts developing for industrial use. Refer to Phasing Plan shown in **Figure 6-1**.

7. Summary

7.1 Storm Sewers/Drainage

The proposed storm sewers will consist of a 2.4m x 1.8m storm trunk by-pass sewer that collects flows upstream from an existing headwall via an existing 750mm storm sewer. Along the proposed Simpson ROW extension, there is an approved storm network that has been re-aligned and comprising a series of 1800(w)x900(d)mm, 1200mm, 1050mm, 900mm, 750mm and 600mm sewers collecting flows from Simpson Road and Parts 1, 2, 3, 4, ,5 and 10 of the subject sites. Parts 6, 7, 8, 9 and 11 will connect to the ditch, an existing 375mm or a 450mm storm sewers on Coleraine Drive. Part 12 will connect to the existing 525mm storm sewer on Mayfield Road.

On-site measures are proposed within each of the site plans to meet the quantity, quality and erosion requirements before discharging to the proposed bypass culvert or existing storm sewer system.

7.2 Sanitary Sewers

The Sanitary Sewers for Parts 1, 2, 3, 4, ,5 and 10 will connect to the re-aligned 250mm sanitary sewer on Simpson Road. The flows discharge to Simpson Road accumulates to a total of 25.56 L/s. The Sanitary Sewers for Parts 6, 7, 8, 9, 11 and 12 will connect to the 750mm sanitary sewer on Coleraine Drive. The flows discharge to Coleraine Drive contributes an additional total of 2.08 L/s.

7.3 Water Supply

The water supply for Part 1, 2, 3, 4, 5, and 10 is anticipated to have a maximum daily consumption of 178,394 L/d and connected to the approved 300mm watermain on Simpson Road. The water supply for Part 6, 7, 8, 9 and 11 is anticipated to have a maximum daily consumption of 33,474 L/d and connected to the existing 300mm watermain on Coleraine Drive. The water supply for Part 12 is anticipated to have a maximum daily consumption of 13,555 L/d and connected to the existing 300mm watermain on Coleraine Drive.

7.4 Site Grading

The proposed grading will match into the existing grades where needed and maintain the existing overland flow patterns. For this concept of grading 0.5% slope has been maintained running west to east with a 3:1 slope matching into existing.

The study area is governed by the approved Simpson Road extension drawings. This extension has proposed grades that are approximately on averaging between 1-2m higher than existing which would cause this site to require fill. Additional grading detail will be required upon preparation of the detailed engineering plans at detail design.

7.5 Natural Heritage

The Subject Lands were surveyed to confirm and evaluate existing natural heritage features present on the landscape. Two individual wetland cells, and a highly channelized tributary to West Rainbow Creek (Tributary D) represent the primary natural heritage features present. These features exist across an otherwise industrial and anthropogenically influenced landscape. The proposed development plan will remove the two existing wetland communities and pipe Tributary D across the Subject Lands. Fully piping the tributary was identified as the preferred option under the evaluation matrix (Palmer 2024, **Appendix B**), as it was identified to provide the greatest potential overall benefit when the opportunity for off-site compensatory habitat improvements was considered against the limitations of on-site attempts at restoration between closely spaced driveway crossings.

Prepared By:

GEI Consultants Canada Ltd.

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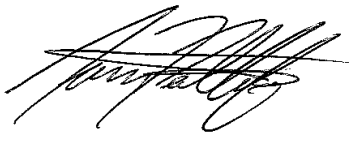
Reviewed By:



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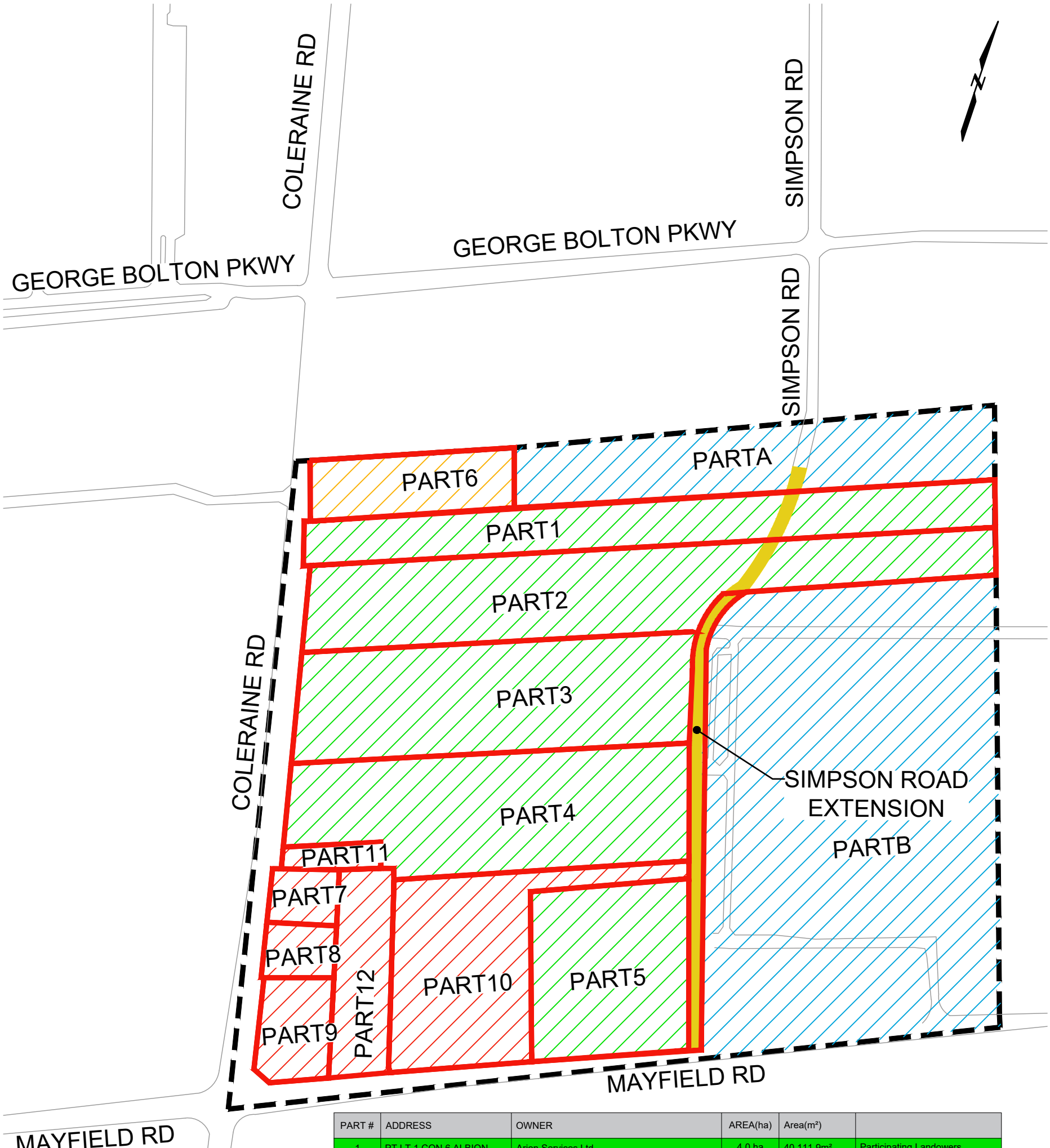

PART #	ADDRESS	OWNER	AREA(ha)	Area(m²)	
1	PT LT 1 CON 6 ALBION	Arion Services Ltd.	4.0 ha	40,111.9m²	Participating Landowers
2	12155 Coleralne Drive	Triple X Inc.	4.2 ha	41,551.8m²	Participating Landowers
3	PT LT 1 CON 6 ALBION	Coleraine Properties Inc.	4.0 ha	39,746.4m²	Participating Landowers
4	0 Coleraine Drive	2781823 Ontario Inc.	3.8 ha	38,278.1m²	Participating Landowers
5	8602 Mayfield Road	Anatolla Investment Corp.	1.9 ha	19,410.5m²	Participating Landowers
6	12197 Coleraine Drive	2840928 Ontario Inc.	1.1 ha	11,326.6m²	Pending Participation
7	10265 Coleraine Drive	Morresi Holdings Limited	0.2 ha	2,235.4m²	Non-Participation Landowers
8	12045 Coleraine Drive	Morpo holdings Ltd.	0.2 ha	2,360.0m²	Non-Participation Landowers
9	12029 Coleraine Drive	11446835 Canada Inc.	0.5 ha	4,721.9m²	Non-Participation Landowers
10	8576 Coleraine Drive	2833720 Ontario Inc.	2.3 ha	23,229.0m²	Non-Participation Landowers
11	0 Coleraine Drive	2744801 Ontario Inc.	0.2 ha	2,008.7m²	Non-Participation Landowers
12	8522 Mayfield Road	-VESPA ENGINEERS LTD. -THE CORPORATION OF THE TOWN OF CALEDON	1.2 ha	11,526.0m²	Non-Participation Landowers
A	88 Simpson Road	-88 SIMPSON ROAD LTD. -THE CORPORATION OF THE TOWN OF CALEDON -5008545 ONTARIO INC	3.2 ha	31,515.9m²	Adjacent Landowners Not Within Block Plan Area
B	100 Pillsworth Road	-ANATOLIA REAL ESTATE CORP -THE REVIONAL MUNICIPALITY OF PEEL	12.8 ha	127,742.0m²	Adjacent Landowners Not Within Block Plan Area
TOTAL AREA			39.6 ha	395,764.2m²	

BLOCK AREA

PHASE 2 SECONDARY PLAN AREA

TOWN OF CALEDON,
PEEL REGIONAL MUNICIPALITY,ONTARIO

SIMPSON ROAD LANDOWNER GROUP

GEI Consultants

LOCATION PLAN

Project 2301130

FEBRUARY 2024 1-1

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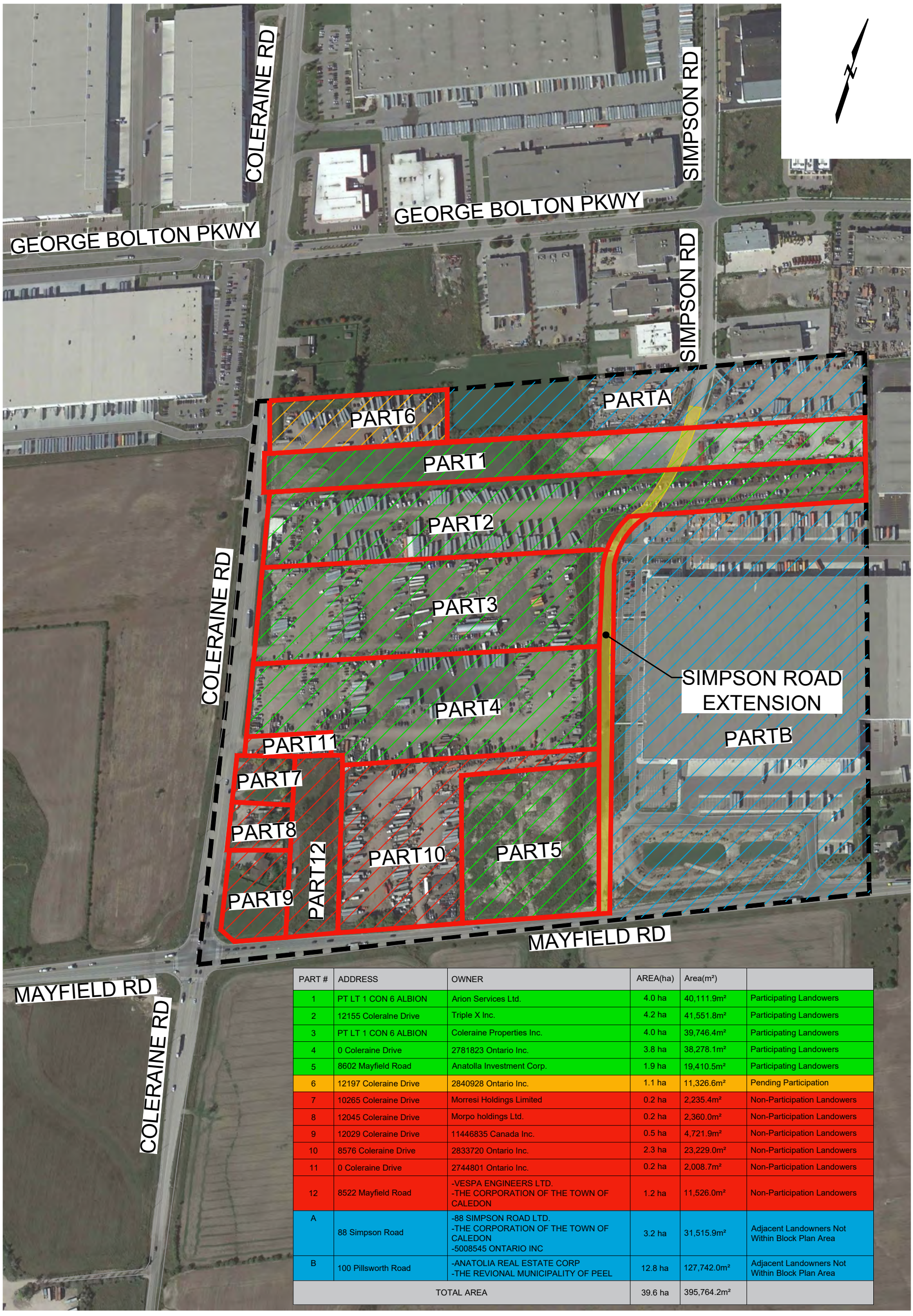

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4	0 Coleraine Drive	2781823 Ontario Inc.	3.8 ha	38,278.1m²	Participating Landowers
5	8602 Mayfield Road	Anatolla Investment Corp.	1.9 ha	19,410.5m²	Participating Landowers
6	12197 Coleraine Drive	2840928 Ontario Inc.	1.1 ha	11,326.6m²	Pending Participation
7	10265 Coleraine Drive	Morresi Holdings Limited	0.2 ha	2,235.4m²	Non-Participation Landowers
8	12045 Coleraine Drive	Morpo holdings Ltd.	0.2 ha	2,360.0m²	Non-Participation Landowers
9	12029 Coleraine Drive	11446835 Canada Inc.	0.5 ha	4,721.9m²	Non-Participation Landowers
10	8576 Coleraine Drive	2833720 Ontario Inc.	2.3 ha	23,229.0m²	Non-Participation Landowers
11	0 Coleraine Drive	2744801 Ontario Inc.	0.2 ha	2,008.7m²	Non-Participation Landowers
12	8522 Mayfield Road	-VESPA ENGINEERS LTD. -THE CORPORATION OF THE TOWN OF CALEDON	1.2 ha	11,526.0m²	Non-Participation Landowers
A	88 Simpson Road	-88 SIMPSON ROAD LTD. -THE CORPORATION OF THE TOWN OF CALEDON -5008545 ONTARIO INC	3.2 ha	31,515.9m²	Adjacent Landowners Not Within Block Plan Area
B	100 Pillsworth Road	-ANATOLIA REAL ESTATE CORP -THE REVIONAL MUNICIPALITY OF PEEL	12.8 ha	127,742.0m²	Adjacent Landowners Not Within Block Plan Area
TOTAL AREA			39.6 ha	395,764.2m²	

BLOCK AREA

PHASE 2 SECONDARY PLAN AREA

TOWN OF BOLTON,
PEEL REGIONAL MUNICIPALITY,ONTARIO

SIMPSON ROAD LANDOWNER GROUP

GEI Consultants

AERIAL PLAN

Project 2301130

FEBRUARY 2024 1-2

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PART #	ADDRESS	OWNER	AREA(ha)	Area(m²)	
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A	88 Simpson Road	-88 SIMPSON ROAD LTD. -THE CORPORATION OF THE TOWN OF CALEDON -5008545 ONTARIO INC	3.2 ha	31,515.9m²	Adjacent Landowners Not Within Block Plan Area
B	100 Pillsworth Road	-ANATOLIA REAL ESTATE CORP -THE REVIONAL MUNICIPALITY OF PEEL	12.8 ha	127,742.0m²	Adjacent Landowners Not Within Block Plan Area
TOTAL AREA			39.6 ha	395,764.2m²	

BLOCK AREA

PHASE 2 SECONDARY PLAN AREA

TOWN OF CALEDON,
PEEL REGIONAL MUNICIPALITY,ONTARIO

SIMPSON ROAD LANDOWNER GROUP

GEI Consultants

OWNERSHIP PLAN

Project 2301130 | FEBRUARY 2024 | 1-3

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EX POND

EX POND DISCHARGES TO SITE

EX. CHANNEL/DITCH

APPROVED POND

APPROVED CULVERT CROSSING

EX. CULVERT CROSSING

EX POND DISCHARGES TO RAINBOW CREEK

EX. CULVERT CROSSING

COLERAINE DR

MAYFIELD RD

CONCESSION

LOT

A1PRE
24.9ha | 0.25

LEGEND:

- PROPERTY LINE
- EXISTING STORM DRAINAGE AREA BOUNDARY
- EXISTING OVERLAND FLOW DIRECTION
- EXISTING CULVERT CROSSING
- EXISTING CHANNEL\DITCH

STORM DRAINAGE AREA NUMBER

A1 PRE
0.25ha | 0.50

DRAINAGE AREA IN HECTARES

RUNOFF COEFFICIENT

GEI Consultants

PRE-DEVELOPMENT DRAINAGE AREA FIGURE

SIMPSON ROAD MESP UPDATE

SIMPSON ROAD LANDOWNER GROUP

PROJECT NoA	2301130
DRAWING NoA	2-1
SCALEA	1:1500
DATEA	FEBRUARY 2024

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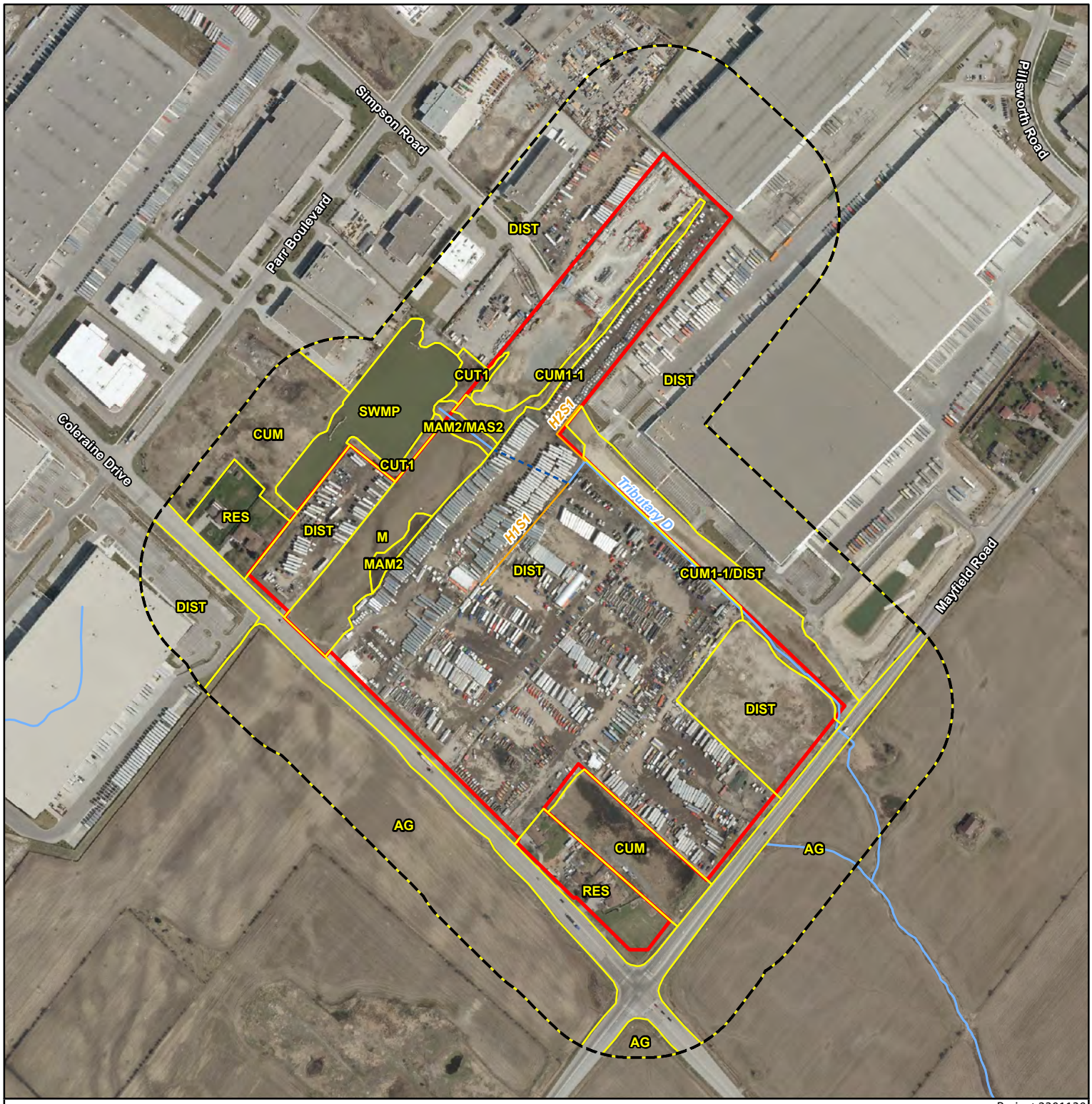

Project 2301130

NOTES:
1. Coordinate System: NAD 1983 UTM Zone 17N.
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2024.
3. Orthoimagery © First Base Solutions, 2024. Imagery taken in 2022.

Legend

- Site Boundary
- Site Boundary +120m
- Watercourse
- Buried Pipe
- Headwater Drainage
- Ecological Land Classification

ELC Legend

AG, Agricultural
CUM, Cultural Meadow
CUM1-1, Mineral Cultural Meadow
CUT1, Mineral Cultural Thicket
DIST, Disturbed
M, Maintained
MAM2, Mineral Meadow Marsh
MAS2, Mineral Shallow Marsh
RES, Residential
SWMP, Swamp

Simpson Road, Caledon
Simpson Road Landowners Group Inc.

Figure 2-2
Existing Conditions

0 75 m
1:6,000

N

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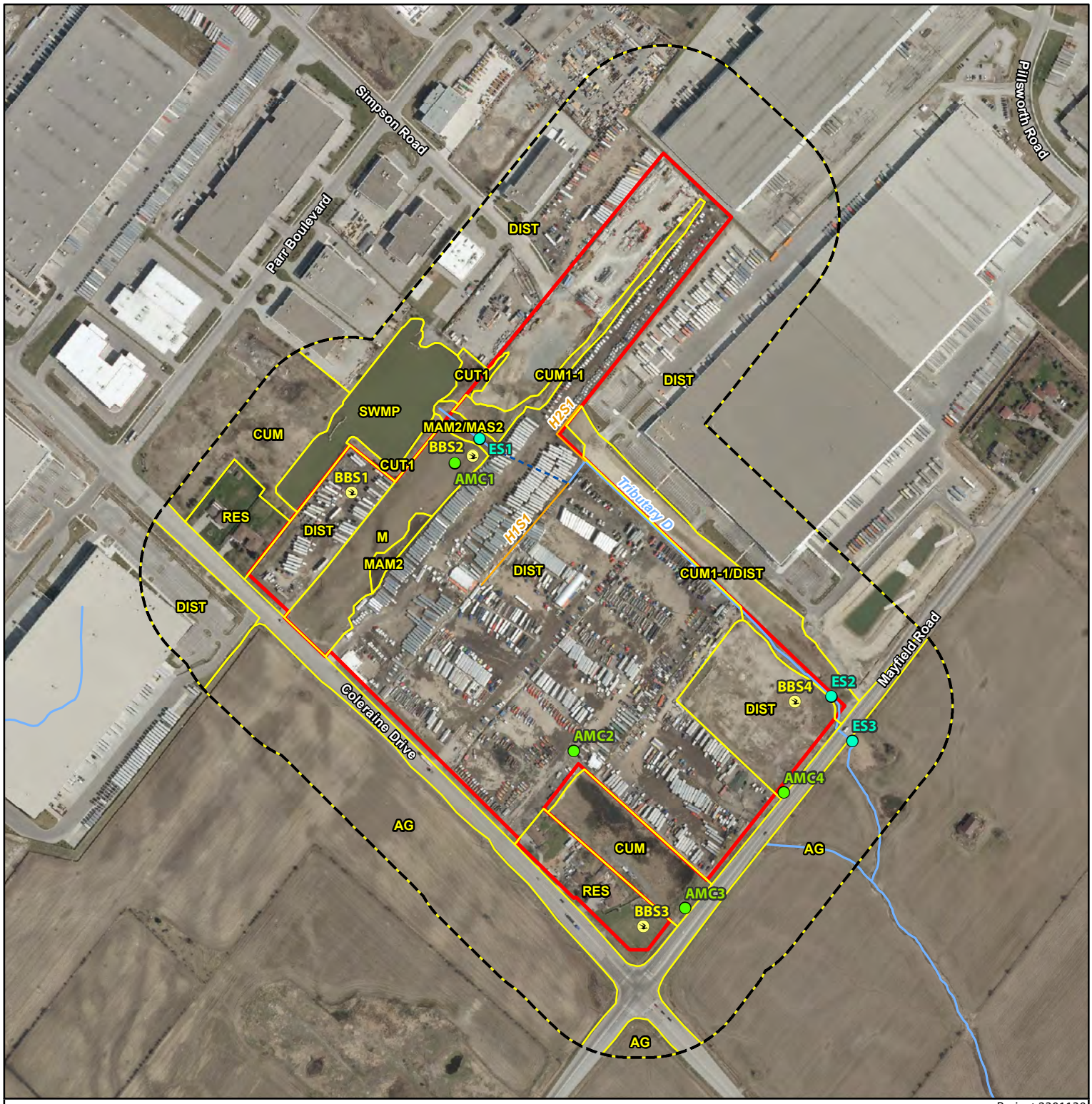

Project 2301130

NOTES:
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2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2024.
3. Orthoimagery © First Base Solutions, 2024. Imagery taken in 2022.

Legend

- Site Boundary
- Site Boundary +120m
- Watercourse
- Buried Pipe
- Headwater Drainage
- Ecological Land Classification
- Amphibian Call Count Survey Location
- Electrofishing Survey Location
- Breeding Bird Station

ELC Legend

AG, Agricultural
CUM, Cultural Meadow
CUM1-1, Mineral Cultural Meadow
CUT1, Mineral Cultural Thicket
DIST, Disturbed
M, Maintained
MAM2, Mineral Meadow Marsh
MAS2, Mineral Shallow Marsh
RES, Residential
SWMP, Swamp

Simpson Road, Caledon
Simpson Road Landowners Group Inc.

Figure 2-3
Survey Locations

0 75 m
1:6,000

N

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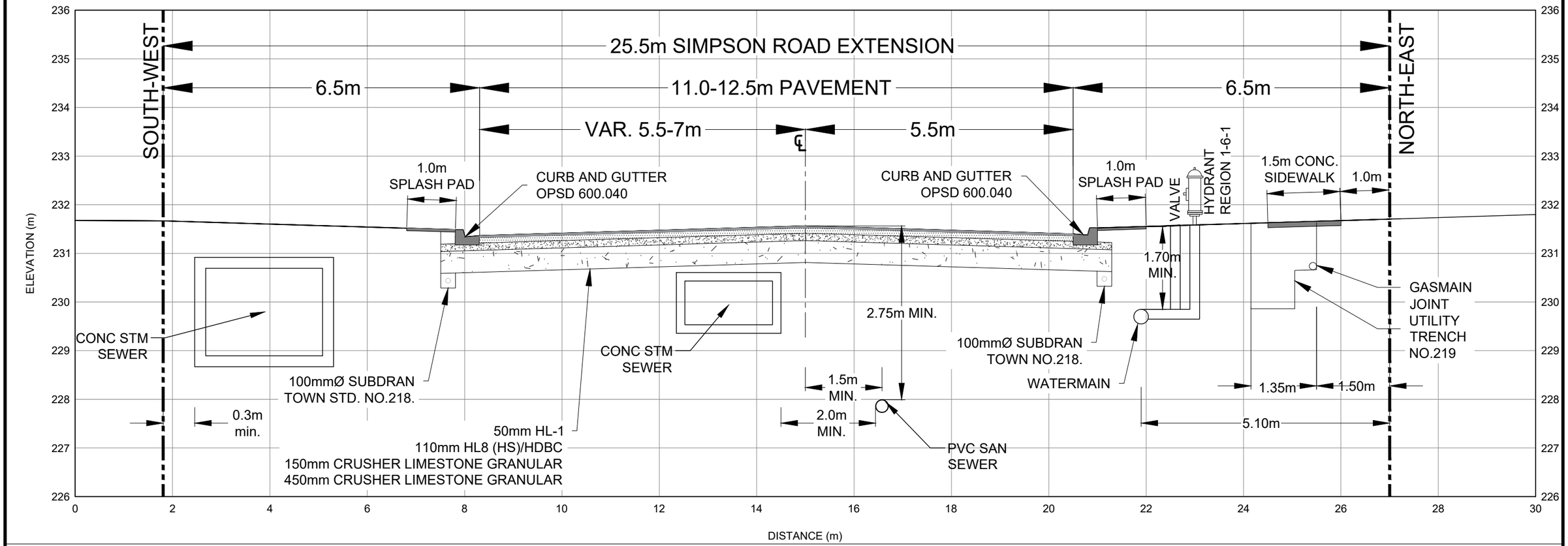

	SIMPSON ROAD MESP UPDATE BOLTON, CALEDON, ONTARIO	GEI Consultants	TYPICAL ROAD CROSS-SECTION
	SIMPSON ROAD LANDOWNER GROUP	Project 2301130	FEB 2024 5-1

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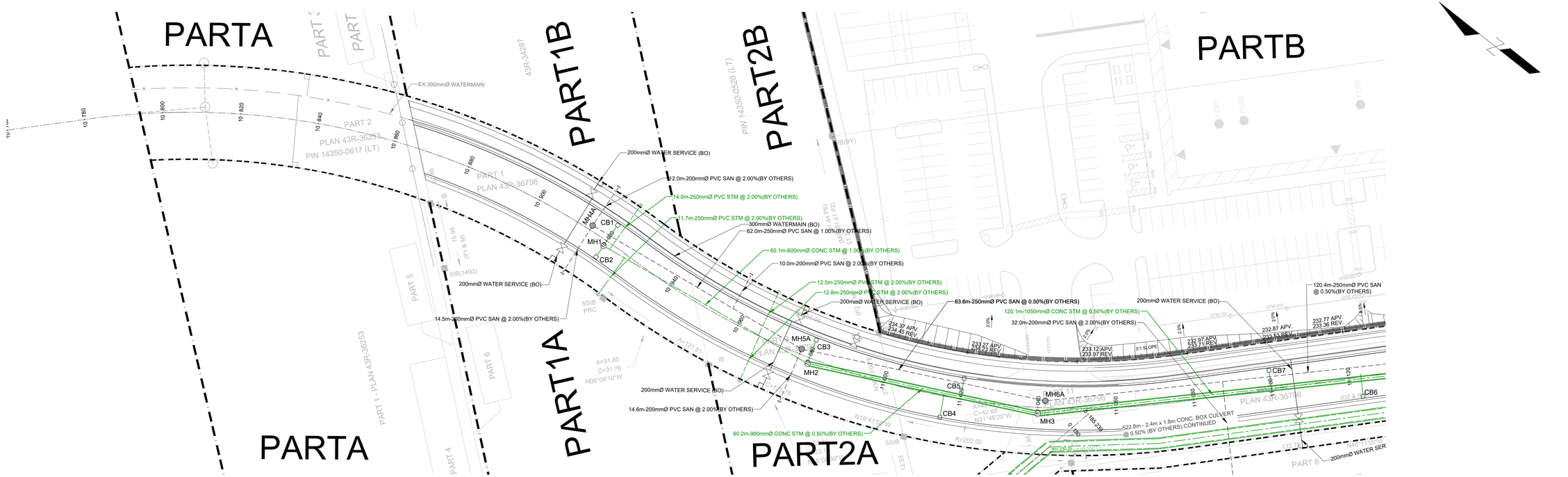

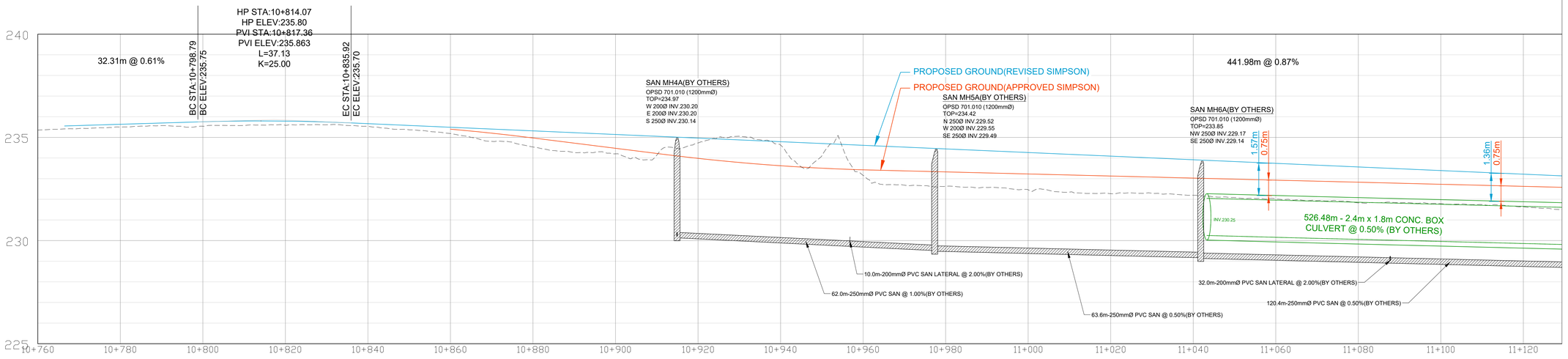

LEGEND:

- PROPERTY LINE
- × 461.07 APV — APPROVED SIMPSON ROAD GRADES
- × 461.07 REV — APPROVED SIMPSON ROAD GRADES (REVISED)
- ⊕ (459.92) — PROPOSED GRADES (BY GRECK ENGINEERING)

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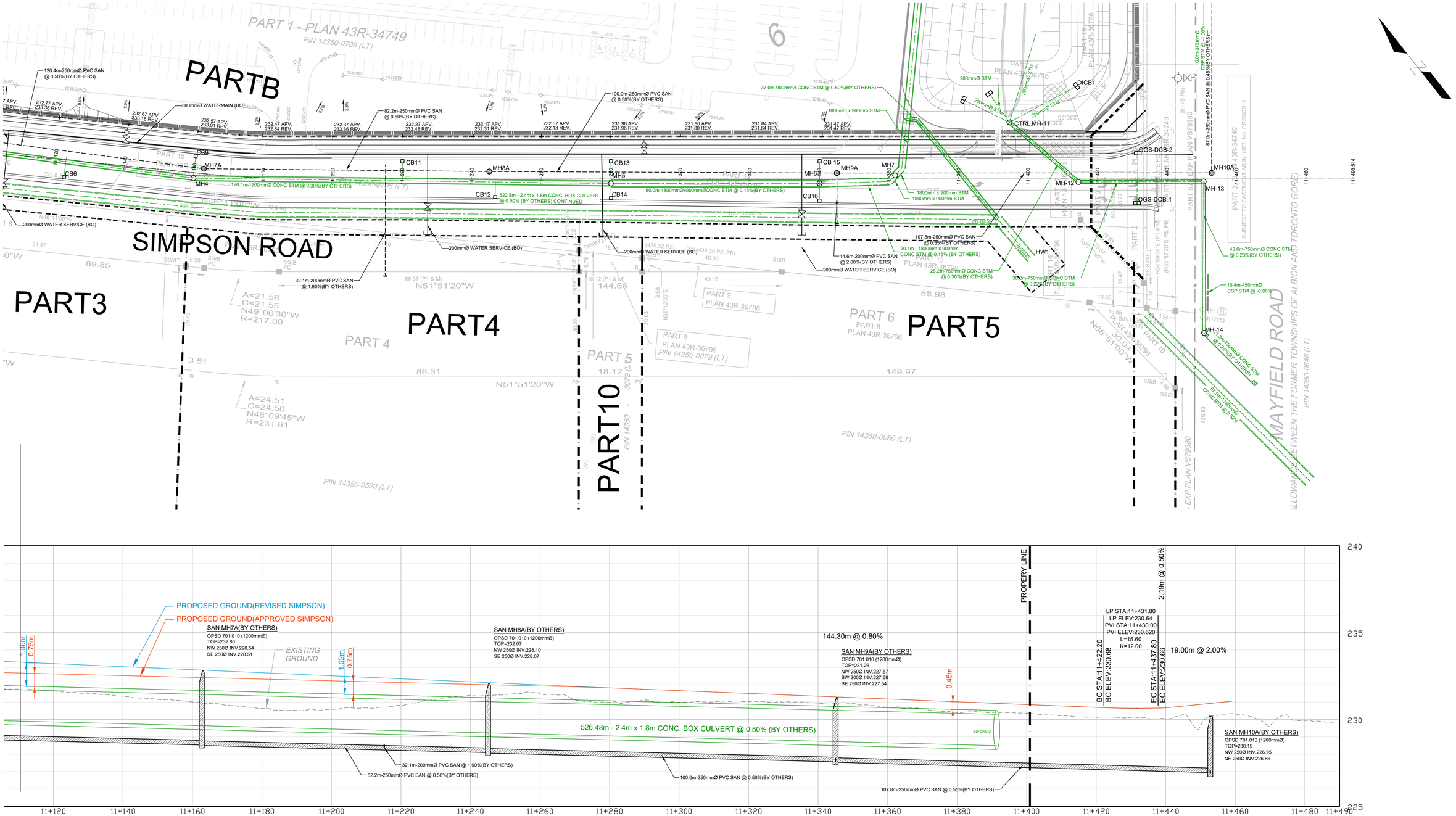
PLAN AND PROFILE

SIMPSON ROAD MESP UPDATE

SIMPSON ROAD LANDOWNER GROUP

PROJECT NoA	2301130
DRAWING NoA	5-2-1
SCALEA	1:500
DATEA	SEPTEMBER 2023



LEGEND:

PROPERTY LINE	
× 461.07 APV	APPROVED SIMPSON ROAD GRADES
× 461.07 REV	APPROVED SIMPSON ROAD GRADES (REVISED)
⊹(459.92)	PROPOSED GRADES (BY GRECK ENGINEERING)

GEI Consultants

PLAN AND PROFILE

SIMPSON ROAD MESP UPDATE

SIMPSON ROAD LANDOWNER GROUP

PROJECT NoA	2301130
DRAWING NoA	5-2-2
SCALEA	1:500
DATEA	SEPTEMBER 2023

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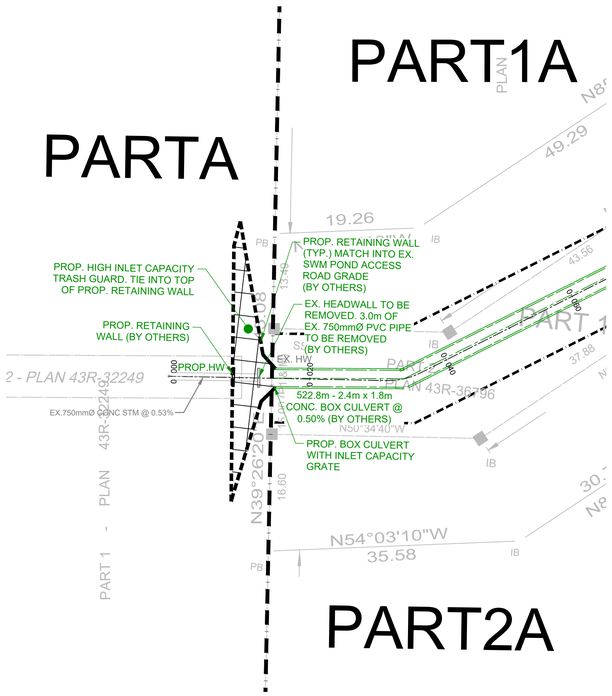

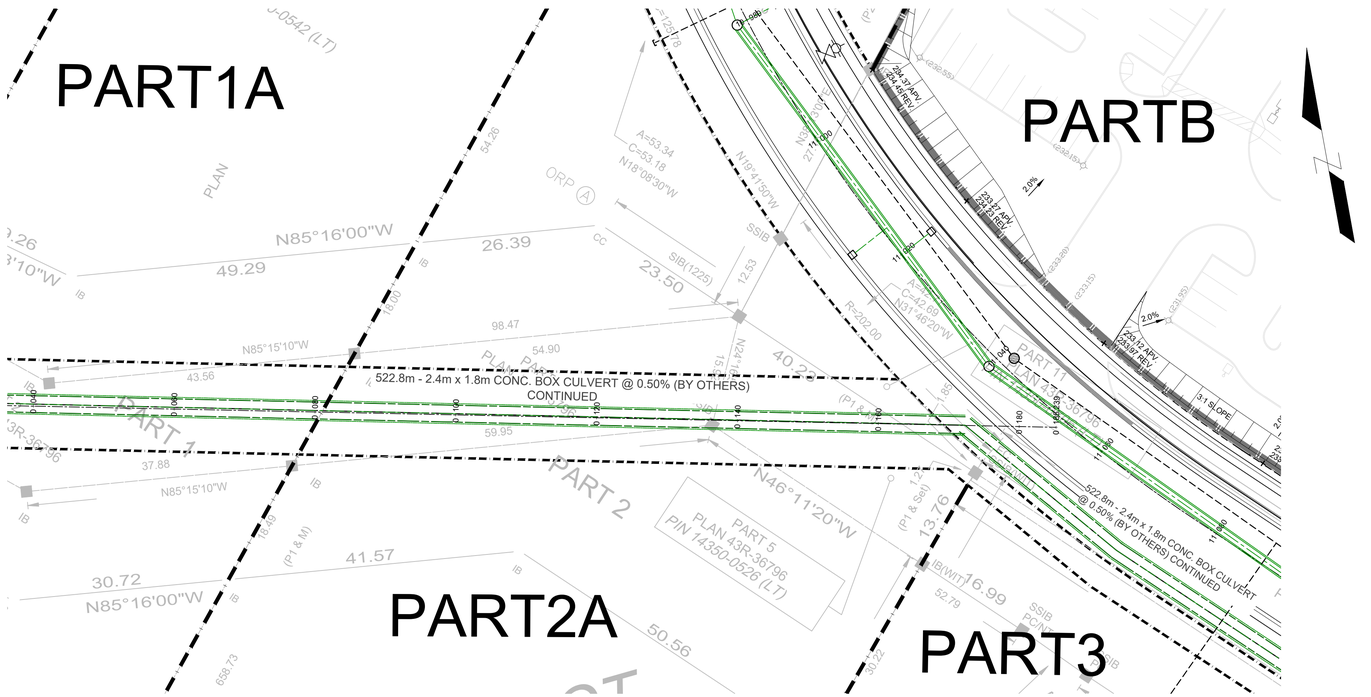

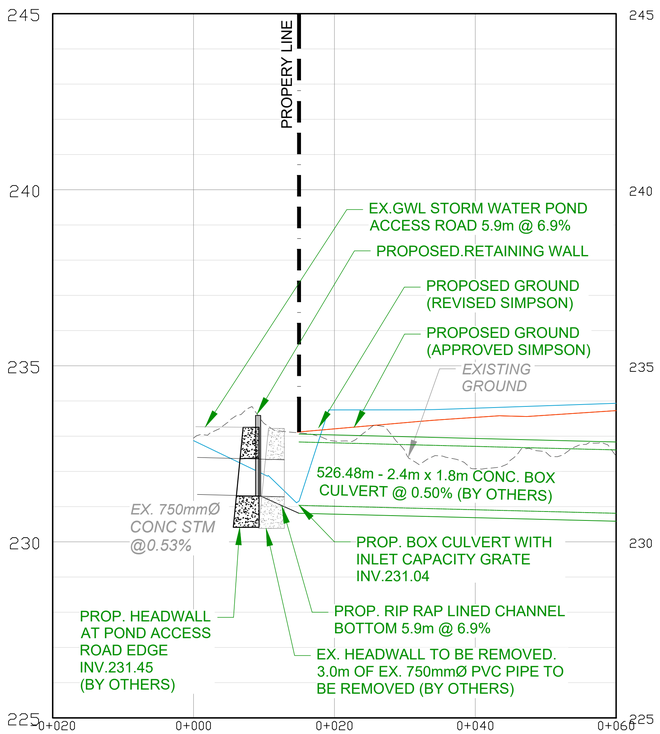

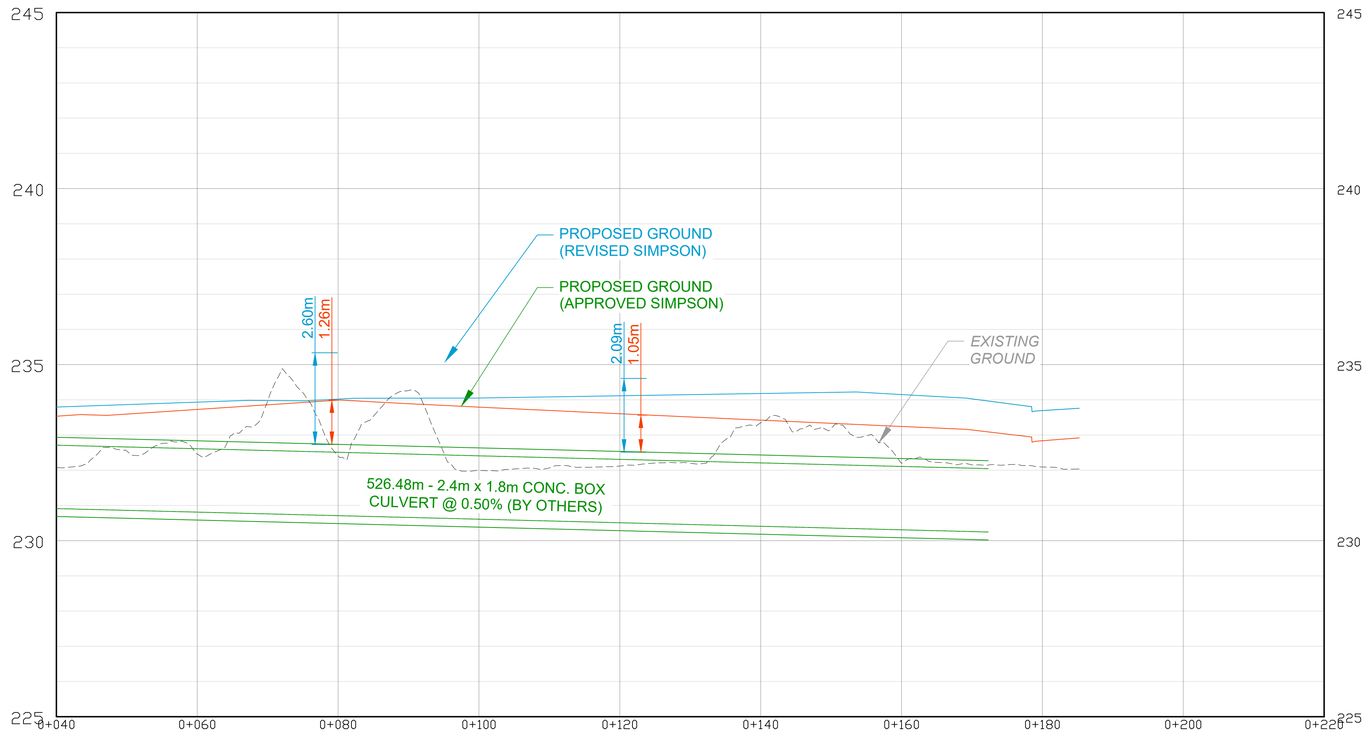

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PLAN AND PROFILE

SIMPSON ROAD MESP UPDATE

SIMPSON ROAD LANDOWNER GROUP

PROJECT NoA	2301130
DRAWING NoA	5-2-3
SCALEA	1:400
DATEA	SEPTEMBER 2023

EX SAN MH29

150.4m-750mmØ
CONC SAN @ 0.27%

EX.SAN MH 28

PART 6
AREA: 1.14 ha
ZONING: IND

SAN SEWER

150.2m-750mmØ
CONC SAN @ 0.32%

B1
0.48ha

PART 1
AREA: 4.01 ha
ZONING: IND

PART 1A

COLERAINE DRIVE

EX.SAN MH27

PART 2
AREA: 4.16 ha
ZONING: IND

PART 2A

LOT

B2
0.48ha

150.1m-750mmØ
CONC SAN @ 0.28%

CONCESSION

PART 3
AREA: 3.97 ha
ZONING: IND

EX SAN. MH26

B3
0.49ha

COLERAINE DR

PART 11
AREA: 0.20 ha
ZONING: IND

145.9m-750mmØ
CONC SAN @ 0.30%

SAN SEWER

PART 4
AREA: 3.83 ha
ZONING: IND

SAN SEWER

SAN SEWER

EX SAN MH25

PART 7
AREA: 0.22 ha
ZONING: IND

SAN SEWER

SAN SEWER

PART 8
AREA: 0.24 ha
ZONING: IND

B4
0.52ha

153.2m-750mmØ
CONC SAN @ 0.76%

PART 12
AREA: 1.15 ha
ZONING: IND

SAN SEWER

EX SAN MH24

PART 9
AREA: 0.47 ha
ZONING: IND

B5
0.21ha

60.3m-750mmØ
CONC SAN @ 0.55%

EX SAN MH 23

150.4m-750mmØ
CONC SAN @ 1.20%

PART 10
AREA: 2.32 ha
ZONING: IND

PART 5
AREA: 1.94 ha
ZONING: IND

COLERAINE DRIVE

PART 1 PLAN 43R-12845

11.50m ROAD WIDENING

MAYFIELD ROAD

(ORIGINAL ROAD ALLOWANCE BETWEEN THE FORMER TOWNSHIPS OF ALBION AND TORONTO GORE)

PART A
AREA: 3.15 ha
ZONING: IND

PART 1B

PART 2B

14.5m-200mmØ
PVC SAN @ 2.00%

MH4A

12.0m-200mmØ
PVC SAN @ 2.00%

62.0m-250mmØ
PVC SAN @ 1.00%

14.6m-200mmØ
PVC SAN @ 2.00%

MH5A

10.0m-200mmØ
PVC SAN @ 2.00%

A1
0.15ha

61.6m-250mmØ
PVC SAN @ 0.50%

MH6A

A2
0.14ha

32.0m-200mmØ
PVC SAN @ 2.00%

120.4m-250mmØ
PVC SAN @ 0.50%

A3
0.50ha

MH7A

A4
0.32ha

82.2m-250mmØ
PVC SAN @ 0.50%

32.1m-200mmØ
PVC SAN @ 1.90%

MH8A

SIMPSON ROAD

PART B
AREA: 12.77 ha
ZONING: IND

A5
0.28ha

100.0m-250mmØ
PVC SAN @ 0.50%

14.6m-200mmØ
PVC SAN @ 2.00%

MH9A

107.8m-250mmØ
PVC SAN @ 0.55%

A6
0.26ha

15.0m-200mmØ
PVC SAN @ 2.00%

85.0m-250mmØ
PVC SAN @ 0.60%

90.0m-250mmØ
PVC SAN @ 0.49%

MH12A

87.0m-250mmØ
PVC SAN @ 0.48%

MH11A

22.4m-200mmØ
PVC SAN @ 2.00%

SANITARY MH

MH10A

MAYFIELD ROAD

LEGEND:

PROPERTY LINE

EXISTING SANITARY DRAINAGE AREA BOUNDARY

A1
0.74ha

SANITARY DRAINAGE AREA NUMBER

DRAINAGE AREA IN HECTARES

SITE1
AREA: 0.4 ha
ZONING: IND

SITE NUMBER

DRAINAGE AREA IN HECTARES

TYPE OF DEVELOPMENT

GEI Consultants

SANITARY DRAINAGE AREA FIGURE

SIMPSON ROAD MESP UPDATE

SIMPSON ROAD LANDOWNER GROUP

PROJECT No:	2301130
DRAWING No:	5-3
SCALE:	1:1250
DATE:	FEBRUARY 2024

b:\Working\simpson rd landowners grp inc\2301130 simpson rd block plan mesp update\00_CAD\Figures\MESP\2301130-MESP-SAN-DAP.dwg - 6/11/2024

GEI Consultants

CONCEPTUAL SANITARY SERVICING

SIMPSON ROAD MESP UPDATE

SIMPSON ROAD LANDOWNER GROUP

PROJECT No.	2301130
DRAWING No.	5-4
SCALE	1:1250
DATE	FEBRUARY 2024

b:\Working\simpson rd landowners grp inc\2301130 simpson rd block plan mesp update\00_CAD\Figures\MESP\2301130-MESP-SS-01.dwg - 6/14/2024

GEI Consultants

CONCEPTUAL WATER SERVICING

SIMPSON ROAD MESP UPDATE

SIMPSON ROAD LANDOWNER GROUP

PROJECT NoA	2301130
DRAWING NoA	5-5
SCALEA	1:1250
DATEA	FEBRUARY 2024

b:\Working\simpson rd landowners grp inc\2301130 simpson rd block plan mesp update\00_CAD\Figures\MESP\2301130-MESP-SS-01.dwg - 6/14/2024

EXISTING
SWM POND
TOP
ELEV.=234.00

PART 6

PART 1

PART 2

PART 3

PART A

PART B

PART 4

PART 11

PART 7

PART 8

PART 12

PART 10

PART 5

PART 9

APPROVED
SWM POND

STM EASEMENT

SIMPSON RD

COLERAINE DR

MAYFIELD RD

MAYFIELD ROAD
(ORIGINAL ROAD ALLOWANCE BETWEEN THE FORMER TOWNSHIPS OF ALBION AND TORONTO GORE)
PIN 14350-0646 (LT)

11.50m ROAD WIDENING

LOT

CONCESSION

ORIGINAL ROAD ALLOWANCE BETWEEN CONCESSIONS 5 & 6

MATCH INTO EX. 3:1 SLOPE

3:1 SLOPE

LEGEND:

----------	PROPERTY LINE
× 461.07	PROPOSED GRADE
× *459.92EX*	EXISTING GRADE

GEI Consultants

CONCEPTUAL GRADING

SIMPSON ROAD MESP UPDATE

SIMPSON ROAD LANDOWNER GROUP

PROJECT NoA	2301130
DRAWING NoA	5-6
SCALEA	1:1250
DATEA	FEBRUARY 2024

b:\Working\simpson rd landowners grp inc\2301130 simpson rd block plan mesp update\00_CAD\Figures\MESP\2301130-MESP-GR-01(REV-SIMPSON).dwg - 6/12/2024

EX POND

EX POND DISCHARGES TO SITE

3.0m STM EASEMENT

12.6m STM EASEMENT

4m STM EASEMENT

12.6m STM EASEMENT

APPROVED POND

APPROVED CULVERT CROSSING

EX. CULVERT CROSSING

EX POND DISCHARGES TO RAINBOW CREEK

EX. CULVERT CROSSING

COLERAINE DR

MAYFIELD RD

CONCESSION

LOT

C1 1.15ha 0.9

C2.1 1.80ha 0.9

C2.2.1 0.71ha 0.81

C2.2.2 1.26ha 0.81

C3.1 2.72ha 0.9

C3.2.1 0.24ha 0.81

C3.2.2 1.03ha 0.81

C4 4.09ha 0.9

C5 3.91ha 0.9

C6 0.19ha 0.9

C7 0.21ha 0.9

C8 0.23ha 0.9

C9 0.45ha 0.9

C10 2.21ha 0.9

C11 2.02ha 0.9

C12 1.12ha 0.9

R1 1.41ha 0.76

LEGEND:

- PROPERTY LINE
- PROPOSED STORM DRAINAGE AREA BOUNDARY TO BOX CULVERT
- PROPOSED STORM DRAINAGE AREA BOUNDARY TO POND
- PROPOSED STORM DRAINAGE AREA BOUNDARY TO EXISTING STORM SEWER
- PROPOSED OVERLAND FLOW DIRECTION
- EXISTING CULVERT CROSSING

STORM DRAINAGE AREA NUMBER — A1 POST — RUNOFF COEFFICIENT

DRAINAGE AREA IN HECTARES — 0.25ha 0.50

GEI Consultants

POST-DEVELOPMENT DRAINAGE AREA FIGURE

SIMPSON ROAD MESP UPDATE

SIMPSON ROAD LANDOWNER GROUP

PROJECT NoA	2301130
DRAWING NoA	5-7
SCALEA	1:1500
DATEA	FEBRUARY 2024

b:\Working\simpson rd landowners grp inc\2301130 simpson rd block plan mesp update\00_CAD\Figures\2301130-SIMPSON ROAD DAP.dwg - 6/14/2024

GEI Consultants

CONCEPTUAL STORM SERVICING

SIMPSON ROAD MESP UPDATE

SIMPSON ROAD LANDOWNER GROUP

PROJECT NoA	2301130
DRAWING NoA	5-8
SCALEA	1:1250
DATEA	FEBRUARY 2024

b:\Working\simpson rd landowners grp inc\2301130 simpson rd block plan mesp update\00_CAD\Figures\MESP\2301130-MESP-SS-01.dwg - 6/14/2024

TOWN OF CALEDON,
PEEL REGIONAL MUNICIPALITY,ONTARIO

SIMPSON ROAD LANDOWNER GROUP

GEI Consultants

PHASING PLAN

Project 2301130

FEBRUARY 2024

6-1

SRIKANTHAN, CHAMENA b:\Working\simpson rd landowners grp inc\2301130 simpson rd block plan mesp update\00_CAD\Figures\2301130-SIMPSON ROAD-Phase-Plan.dwg - 6/17/2024

Appendix A

Background Information

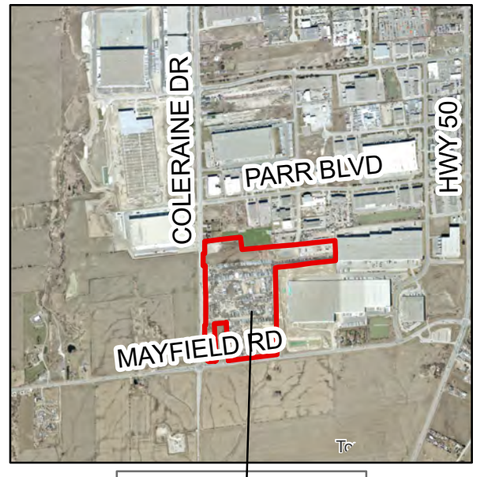
South Simpson Secondary Plan Area Subject to Block Plan

Town of Caledon,
Regional Municipality of Peel

Legend

Subject Lands

Key Map



Date: May 25, 2022

File: N/A

#	Address	Owner	Area (ha)	Area (m²)
1	PT LT 1 CON 6 ALBION	Arion Services Ltd.	4.0 ha	40,111.9 m²
2	12155 Coleraine Drive	Triple X Inc.	4.2 ha	41,551.8 m²
3	PT LT 1 CON 6 ALBION	Coleraine Properties Inc.	4.0 ha	39,746.4 m²
4	0 Coleraine Drive	2781823 Ontario Inc.	3.8 ha	38,278.1 m²
5	8602 Mayfield Road	Anatolia Investment Corp.	1.9 ha	19,410.5 m²
6	12197 Coleraine Drive	2840928 Ontario Inc.	1.1 ha	11,326.6 m²
7	10265 Coleraine Drive	Morresi Holdings Limited	0.2 ha	2,235.4 m²
8	12045 Coleraine Drive	Morpo Holdings Ltd.	0.2 ha	2,360.0 m²
9	12029 Mayfield Road	11446835 Canada Inc.	0.5 ha	4,721.9 m²
10	8576 Mayfield Road	2833720 Ontario Inc.	2.3 ha	23,229.0 m²
11	0 Coleraine Drive	2744801 Ontario Inc.	0.2 ha	2,008.7 m²
12	8522 Mayfield Road	-VESPA ENGINEERS LTD. -THE CORPORATION OF THE TOWN OF CALEDON	1.2 ha	11,526.0 m²
A	88 Simpson Road	- 88 SIMPSON ROAD LTD. - THE CORPORATION OF THE TOWN OF CALEDON - 5008545 ONTARIO INC	3.2 ha	31,515.9 m²
B	100 Pillsworth Road	- ANATOLIA REAL ESTATE CORP. - THE REGIONAL MUNICIPALITY OF PEEL	12.8 ha	127,742.0 m²
	Total Area		39.6 ha	395,764.2 m²

Participating Landowners

Non-Participating Landowners

Pending Participation

Adjacent Landowners Not Within Block Plan Area

COLERAINE DR.

PARR BLVD.

SIMPSON RD.

MAYFIELD RD.

LEGEND

- Surroudning Parcel Fabric
- Block Plan Area
- Lot Subdivision
- Phase 2 Secondary Plan Area

Notes:

- Parcel fabric, Block plan Area and lot subdivision are approximate and subject to confirmation by a survey.
- Areas are approximate and subject to confirmation by a survey.
- Phase 2 Secondary Plan Area is sourced from Schedule C-5 from the South Simpson Industrial Secondary Plan (Town of Caledon OP).
- Air Photo is from First Base Solutions, dated 2022.

DRAWN / REVISED	
31 JUL 2023	First Draft

OWNERSHIP MAP

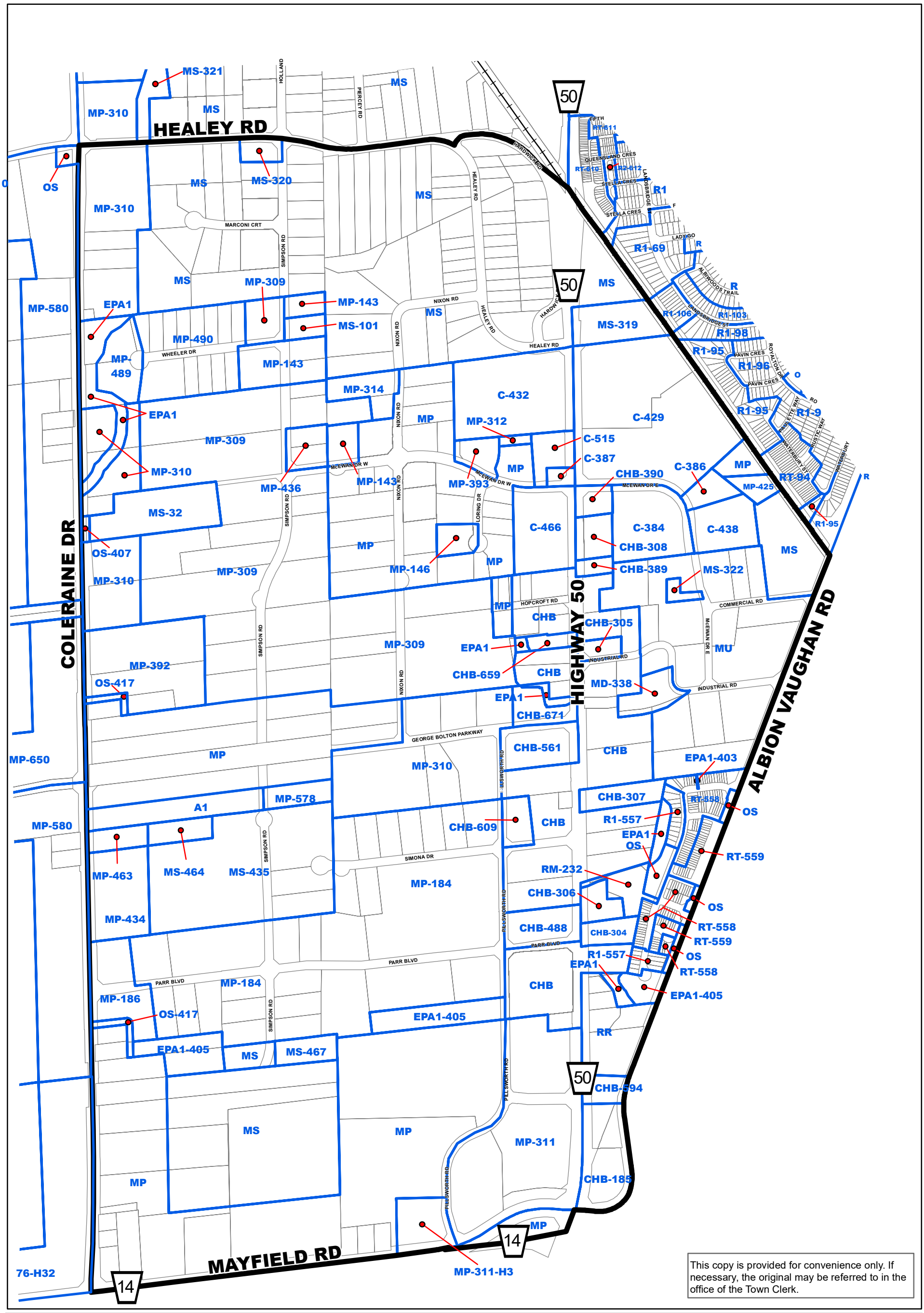
NORTHEAST CORNER OF COLERAINE DR. AND MAYFIELD RD.
TOWN OF CALEDON
REGIONAL MUNICIPALITY OF PEEL

SCALE
0 20 50 100m

WESTON CONSULTING

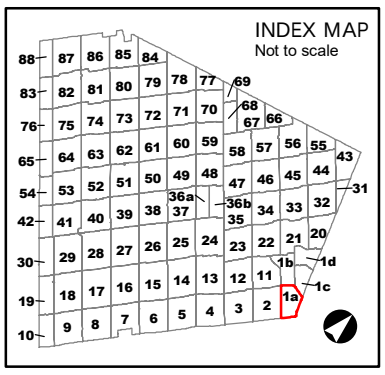
File Number: 10846
Date: 2023-07-31
Drawn By: ADB
Planner: SS
CAD: 10846_Ownership Map_2023-07-31.dgn

Drawing
OM



This copy is provided for convenience only. If necessary, the original may be referred to in the office of the Town Clerk.

INDEX MAP
Not to scale



A2 ZONE SYMBOL

A2-### ZONE SYMBOL
Note: Number of suffixes represent Exceptions which can be looked up in the Exceptions section of the By-law.

ZONE BOUNDARY

STRUCTURAL ENVELOPE MAP

NIAGARA ESCARPMENT DEVELOPMENT CONTROL AREA
Lands lying within the Development Control area pursuant to the Niagara Planning and Development Act are subject to permit requirements under Ontario Regulations 685/50, as amended.

OAK RIDGES MORAINE CONSERVATION PLAN AREA BOUNDARY

WELLHEAD PROTECTION AREA BOUNDARY
WP-2 WP-5 WP-10 WP-25
Zone Maps amended to indicate the 2, 5, 10, and 25 year Wellhead Protection Areas.

BY-LAW 2006-50
ZONE MAP 1a
SCHEDULE "A"
0 110 220 440 m
TOWN OF CALEDON

Date: 3 April 2006
Revised: February 27, 2023

File: S:\POLICY SECTION\GIS\zoning_bylaw\2015_mxd

1a

Terms of Reference:
South Simpson (Headwaters of West Rainbow Creek) Master Environmental Servicing Plan Update

Purpose:

The Town retained R.J. Burnside to prepare a Master Environmental Servicing Plan (MESP) for the Bolton South Industrial Lands (December 2000). To support development of the remaining portion of the West Rainbow Creek, the MESP (Burnside, 2000) needs to be updated inclusive of an implementation plan for the subject lands to support the Block Plan application.

The development area is identified in Schedule C to Staff Report 2022-0374. The MESP update will establish the preferred method of servicing for the Study Area and West Rainbow Creek, including municipal sanitary sewers, storm drainage, water supply and distribution systems, stormwater management, site grading and road design at a preliminary engineering level of detail, in order to support future development of the study area.

The MESP update is to follow and utilize the framework from the previously completed MESP 2000 and be scoped specifically to West Rainbow Creek. While the primary focus of the Study will be on the development area identified in Schedule C to Staff Report 2022-0374, the Study must also examine the downstream reaches of West Rainbow Creek as well as upstream and external drainage.

Content:

1.0 Executive Summary

- Description of why the MESP is being completed and how it relates to the broader planning process, as well as any applicable master planning or environmental assessment processes for the area.
- Integrated summary of the work completed and conclusions of the individual sections.
- Concise summary of the significance and implications of the findings of the MESP, conclusion and recommendations.

2.0 Introduction

- Study purpose
- Study location
- Overview of background information

3.0 Description of the Study Area

- Overview of study limits and land ownership
- Existing condition, land use, drainage features, hydrology, hydraulics, physiography etc.
- Natural heritage features and all regulation limits
    - Identify valley and stream corridors, woodlands, wetlands, watercourses and headwater drainage features (see TRCA's Evaluation, Classification and Management of Headwater Drainage Features Guidelines, for identifying HDFs)
    - Identify aquatic habitat and management objectives from the Fisheries Management Plan or other documents that may contain aquatic management objectives for the watershed
    - Identify existing vegetation communities (ELC)
    - Conduct flora/fauna species inventory using accepted protocols and seasonal sensitivities
    - Identify species or communities of conservation concern as per the TRCA rankings
    - Identify areas that have federal and/or provincial designations such as federally designated aquatic species, provincially significant wetlands (PSWs), Areas of Natural and Scientific Interest (ANSIs), significant wildlife habitat and endangered species, etc.
    - Identify the natural heritage system for the subject lands and document sensitivities to changes in land uses. This includes the identification of the habitats that support species that have designations under the Endangered Species Act or the Species At Risk Act; and

provincially significant areas under the Provincial Policy Statement such as valley lands, woodlands, wildlife habitat and wetlands (PSWs). In addition, the natural heritage system will include species and communities of concern as ranked by TRCA, as well as Locally Significant Features and Areas pursuant to applicable municipal and TRCA policies.
    - Downstream erosion potential of watercourse - Erosion assessment needs to be undertaken based on TRCA Erosion Assessment Guideline (please refer to https://trca.ca/conservation/stormwater-management/understand/swm-criteria-2012/download)
- Updated Geotechnical Report/Considerations Existing municipal services in the vicinity of the study area and anticipated extension of services
- Existing zoning

4.0 Hydrology

- General overview
- Hydrologic model selection - As Humber River Watershed Hydrology is modelled using Visual Ottohymo, for consistency purposes, TRCA recommends that the selected model be in line with the watershed hydrology model.
- Design storms - As part of the recent Humber River Watershed hydrology update, TRCA established design storms of 6-hr and 12-hr AES storms are critical design storms for the watershed. Hurricane hazel is the regional storm established by the province.
- Hydrologic modelling parameters
- Existing drainage
- External drainage areas
- Existing flow rates
- Post development modelling

5.0 Overview of Key MESP Requirements

- Existing relevant studies
- Environmental constraints and agency requirements
- Enhancement Areas/Buffering
    - Identify the natural heritage system for the subject lands and document sensitivities to changes in land uses. This includes the identification of the habitats that support species that have designations under the Endangered Species Act or the Species At Risk Act; and provincially significant areas under the Provincial Policy Statement such as valley lands, woodlands, wildlife habitat and wetlands (PSWs). In addition, the natural heritage system will include species and communities of concern as ranked by TRCA, as well as Locally Significant Features and Areas pursuant to applicable municipal and TRCA policies.
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    - Identify restoration/enhancement opportunities using municipal official plan mapping and policies, TRCA's Terrestrial Natural Heritage System Strategy, and the applicable watershed plan(s).
    - Should realignment be sought, updated MESP to include an updated Natural Channel Design Report following current natural channel design guidelines and integrating other disciplinary findings. Identification of NHS, including buffers from the realigned corridor need to be identified.
- Existing Master Financial Agreement
    - Simpson Road extension, channel re-alignment and Stormwater Management Pond

6.0 Master Environmental Servicing Plan

- Development concept
- Post development drainage patterns

Terms of Reference:
South Simpson (Headwaters of West Rainbow Creek) Master Environmental Servicing Plan Update

- Flood control and conveyance of runoff
- Site Water Balance
- Water quality control
- Erosion control
- Conceptual SWM facility design
- Sediment and erosion control during construction
- Stormwater management alternatives

7.0 Implementation

- Preferred SWM strategy
- Flood control, conveyance and lot level controls
- Water quality and erosion control
- Requirements for offsite works
- Development phasing and cost sharing

8.0 Summary

9.0 References

Resources:

- Staff Report 2022-0374
- Master Environmental Servicing Plan 2000
- Simpson Road ESR
- Simpson Road & Channel Design Drawings
- Equity Prestige Business Park SWM Report and SWM Pond Drawings
- Simpson Road Extension SWM Design Brief and SWM Pond Expansion Drawings
- Town of Caledon Engineering Guidelines
- Ministry of Environment Stormwater Management Planning and Design Manual
- Toronto and Region Conservation Authority Stormwater Management Guideline

Studies Required to Process South Simpson Block Plan

1. Completed Application Form
2. Fee pursuant to Town's Fees By-law
3. Block Plan showing all lands in the immediate area (including Schedule C to Staff Report 2022-0374 and any adjacent non-participating landowners)
4. Transportation Study (Confirm scoped TOR with Town and Regional Transportation staff)
    a. Road Network Capacity Review
    b. Active Transportation Network Connections
    c. Transportation Demand Management Plan
5. Access Management Plan
6. MESP as per attached Town, Peel and TRCA joint TOR
7. Planning Justification Report (including the recommended outcomes of the Study and any policy and zoning updates that would be needed).

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- Existing soils and groundwater
- Existing municipal services in the vicinity of the study area and anticipated extension of services
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Staff Report 2022-0374

Meeting Date:	July 12, 2022
Subject:	Block Planning for the South Simpson Secondary Plan, North-East Corner of Coleraine Drive and Mayfield Road, Ward 5
Submitted By:	Stephanie McVittie, Manager of Development and Design, Planning Department

RECOMMENDATION

That Staff be directed to require the South Simpson Landowners Group to prepare and receive approval of a Block Plan and to update the Master Environmental and Servicing Plan to the satisfaction of the Town, prior to the submission of any development application and site development occurring in the South Simpson Secondary Plan lands as shown on Schedule 'C' to Staff Report 2022-0374, save and except any development applications deemed 'complete' on or before July 8, 2022.

REPORT HIGHLIGHTS

- The South Simpson Secondary Plan applies to lands north of Mayfield Road on the east side of Coleraine Drive.
- The lands at the north-east corner (quadrant) of Mayfield Road and Coleraine Drive are designated Prestige Industrial and General Industrial in the Town's Official Plan, permitting various industrial land uses.
- The policies of the South Simpson Secondary Plan speak to development adhering to the Master Environmental Servicing Plan (MESP), completed in 2000, and stormwater management be required as per the MESP.
- An updated Environmental Assessment for Simpson Road (2013) indicates an alternative stormwater management scheme including a new channel, additional ponds in alternative locations and requiring that the properties along Mayfield Road and the southern portion of Coleraine Drive require future local stormwater management, with no further direction provided.
- An update to the Master Environmental Servicing Plan (MESP) is required to evaluate development applications and provide for a comprehensive servicing solution.
- From a transportation and access perspective, there are constraints and potential opportunities to be explored. Consolidated accesses and an internal road network will be critical in developing this area as it has limited access to roads to the east, south and west; while the Town is looking to evaluate a new east/west road within the area.
- There are immediate development pressures on the fragmented lands within the area, with proposals being considered on a site-by-site basis, with no overall

consideration of transportation, access, grading, stormwater management, servicing, etc.

- In keeping with the Strategic Growth Directions report 2022-0247 Caledon must plan Caledon, staff is requesting that lands at the north-east corner of Mayfield Road and Coleraine Drive be required to submit a Block Plan prior to any future development application or site development proceeding (not deemed complete on or before July 8, 2022).
- The Block Plan will help to ensure transportation, access, servicing, stormwater and other important considerations are appropriately and strategically addressed and improve the quality of development.

DISCUSSION

The South Simpson Secondary Plan applies to lands north of Mayfield Road, on the east side of Coleraine Drive. The lands at the north-east corner (quadrant) of Mayfield Road and Coleraine Drive are designated Prestige Industrial and General Industrial in the Official Plan.

Master Environmental Servicing Plan

The policies of the South Simpson Secondary Plan speak to development adhering to the Master Environmental Servicing Plan (MESP), completed in 2000, and stormwater management be required as per the MESP. There are policies requiring communal stormwater management facilities to be designed and furthermore that that improvements are required downstream for acceptable receiving of stormwater discharge. See Schedule 'A' attached, for an excerpt of the Plan identifying stormwater management infrastructure for the area (Street 'A' is Parr Boulevard). The stormwater management pond identified as the "Di Iulio & Spinelli Facility" has been constructed but is slightly south of the location identified on the map. The "Mayfield Facility" has not been constructed in this area.

To support the extension of Simpson Road south to Mayfield Road the Town undertook an Environmental Assessment (EA) for Simpson Road (2013). See Schedule 'B' attached, for an excerpt of the Plan identifying a different stormwater management strategy for the area. The EA alters the previously approved MESP from 2000 as follows:

- Illustrates a realigned Simpson Road
- Changes the stormwater management catchment areas
- Identifies existing stormwater management ponds
- Identifies a new realigned creek/channel running along the west side of Simpson Road

- Identifies the newly constructed stormwater management facility at the north-east corner of Mayfield Road and Simpson Road (identified as WR) to generally service the east side of Simpson Road and the Simpson Road extension
- Identifies two other possible stormwater management facilities (identified as WR2a and WR2b)
- Indicates that the properties along Mayfield Road are to have future local stormwater management controls, with no further detail provided.

Considering the fragmented ownership of land in the area, the changes which have occurred since the approved MESP in 2000 and the lack of detail on how some of the lands in the South Simpson Secondary Plan will be appropriately serviced, an update to the Master Environmental Servicing Plan is required to support development in the area. This update is further supported by the Secondary Plan which requires that where modifications to the MESP are required, an applicant will need to submit studies to support the modification. This MESP update is required prior to the receipt of any development application or any site development occurring to ensure that the area is appropriately serviced and developed; otherwise, piecemeal development will occur based on site specific development applications.

Block Plan

With the fragmented ownership of the area coupled with the immediate development pressures and proposals being considered on a site-by-site basis, there is an inability to plan the area cohesively, resulting in piecemeal planning and development.

From a transportation and access perspective, there are constraints and potential opportunities to be explored. Consolidated accesses and potentially an internal road network will be critical in developing this area as there is no access available to the north (Parr Boulevard) and it has limited access to roads to the east, south and west:

- Coleraine Drive and Mayfield Road are Regional Roads with controlled access by-laws and requirements to limit (i.e. right-in/right-out) and/or consolidate accesses where they are permitted.
- There is an approved channel which will run north/south along the west side of Simpson Road, creating challenges to accessing Simpson Road.

In addition, through Staff Report 2022-370 being brought forward to Planning and Development Committee on July 12th, staff are requesting an Interim Control By-law be placed on lands on the west side of Coleraine Drive, to study, among other things, land uses and a transportation network which may include a potential new east/west road intersecting with Coleraine Drive. This may result in an opportunity to create a four-way intersection with a potential east/west road on the east side of Coleraine Drive.

Developing on the “Caledon plan Caledon” direction, consistent with Strategic Growth Directions Report (Staff Report 2022-0247), and in keeping with the policies of the Official Plan, the South Simpson Landowners Group will be required to prepare and receive approval of a Block Plan and to update the Master Environmental and Servicing Plan to the satisfaction of the Town, Region of Peel, City of Brampton and applicable Conservation Authority, prior to the submission of any development application and site development occurring in the South Simpson Secondary Plan lands as shown on Schedule ‘C’ to Staff Report 2022-0374, save and except any development applications deemed ‘complete’ on or before July 8, 2022. The Block Plan will include a Framework Plan which explains how the lands within the area will develop comprehensively including considerations of transportation, road network, access, grading and servicing (water, sanitary and stormwater), etc.

Staff have made arrangements to meet with the landowners to discuss the report in advance of the Planning and Development Committee.

FINANCIAL IMPLICATIONS

Stormwater management and the studies required to support development are the financial responsibility of the individual landowners. There are no immediate financial implications associated with this report.

COUNCIL WORK PLAN

Sustainable Growth: Advance proactive infrastructure development solutions for growth management

Improved Service Delivery: Plan for improved stormwater management to reduce drainage issues

ATTACHMENTS

Schedule A: Excerpt from the Master Environmental Servicing Plan (2000)

Schedule B: Excerpt from the Environmental Assessment (EA) for Simpson Road (2013)

Schedule C: South Simpson Secondary Plan Area Subject to a Block Plan

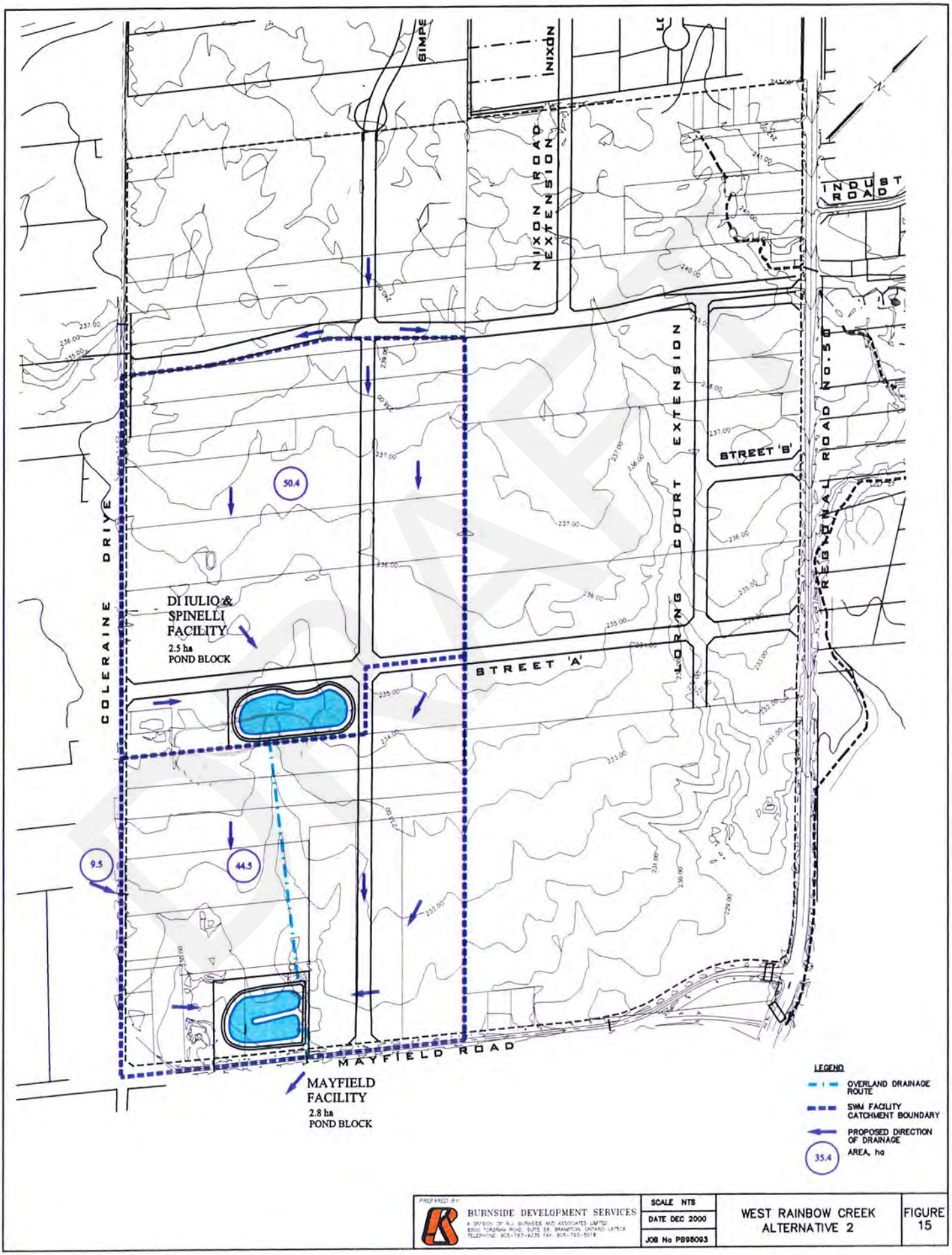
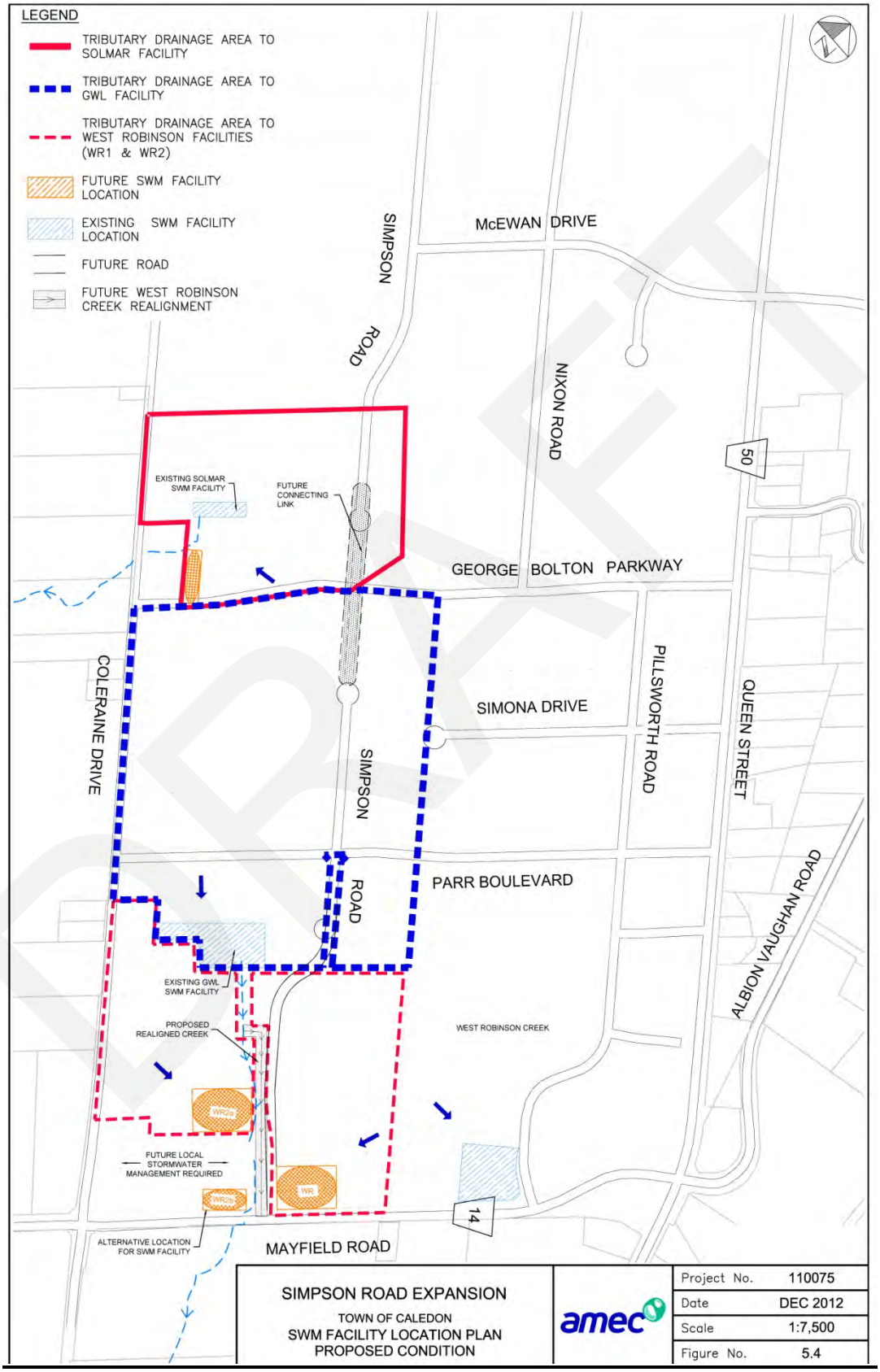

SIMPE
NIXON
NIXON ROAD EXTENSION
INDUST ROAD
REGIONAL ROAD NO. 50
LORING COURT EXTENSION
STREET 'B'
STREET 'A'
COLERAINE DRIVE
MAYFIELD ROAD
50.4
DI IULIO & SPINELLI FACILITY
2.5 ha
POND BLOCK
9.5
44.5
MAYFIELD FACILITY
2.8 ha
POND BLOCK
LEGEND
OVERLAND DRAINAGE ROUTE
SWM FACILITY CATCHMENT BOUNDARY
PROPOSED DIRECTION OF DRAINAGE
35.4
AREA, ha
PREPARED BY:
BURNSIDE DEVELOPMENT SERVICES
SCALE NTS
DATE DEC 2000
JOB No PB98093
WEST RAINBOW CREEK ALTERNATIVE 2
FIGURE 15

Figure 5.4: SWM Facility Location Plan Proposed Condition



TOWN OF CALEDON

March 26, 2021

DELIVERED BY MAIL

Simpson Road Landowners Group Inc.
c/o 7501 Keele St, Suite 200
Vaughan, ON L4K 1Y2

Attention: Helen Mihailidi

Dear Madame:

RE: Master Financial Agreement
Simpson Road South Extension

Enclosed please find one copy of the Master Financial Agreement between Anatolia Capital Corp., Arion Services Ltd., Simpson Road Landowners Group Inc., the Region and the Town which has been registered upon the title of the above lands as Instrument No. PR3804318 on March 24, 2021 for your records.

Respectfully,

Tiffany McClain
Law Clerk
Legal Services, Corporate Services Department
TOWN OF CALEDON

Tel: 905.584.2272 ext. 4036
Fax: 905.584.4325
tiffany.mcclain@caledon.ca

Encl.

Properties

PIN	14350 - 0542 LT
Description	PT LT 1 CON 6 ALBION AS IN RO1058982, EXCEPT PT 1, EXPROP. PL PR1156810; CALEDON
Address	COLERAINE DRIVE CALEDON
PIN	14350 - 0706 LT
Description	PT LT 1, CON 6 ALBION DES AS PTS 1, 2, 5, 6, 9, 10, PL 43R34749; SUBJECT TO AN EASEMENT IN GROSS OVER PTS 2, 6, 10, PL 43R34749 AS IN PR2267912; TOWN OF CALEDON
Address	CALEDON

Consideration

Consideration $2.00

Applicant(s)

The notice is based on or affects a valid and existing estate, right, interest or equity in land

Name THE CORPORATION OF THE TOWN OF CALEDON

Address for Service 6311 Old Church Rd
Caledon, ON L7C 1J6

This document is not authorized under Power of Attorney by this party.

This document is being authorized by a municipal corporation The Corporation of the Town of Caledon by Akhil Bhalla, Assistant Town Solicitor, pursuant to By-law 2016-106.

Name THE REGIONAL MUNICIPALITY OF PEEL

Address for Service 10 Peel Centre Drive
Brampton, ON L6T 4B9

This document is not authorized under Power of Attorney by this party.

This document is being authorized by a municipal corporation The Regional Municipality of Peel, Rajeshree Sanichara, Senior Legal Counsel, pursuant to By-law 32-2017, as amended.

Statements

This notice is pursuant to Section 71 of the Land Titles Act.

This notice is for an indeterminate period

Schedule: See Schedules

The registration of this document is not prohibited by registration PR3686904 registered on 2020/08/12.

Signed By

Rajeshree Sanichara	10 Peel Centre Dr. Brampton L6T 4B9	acting for Applicant(s)	Signed	2021 03 23

Tel 905-791-7800

Fax 905-791-6992

I have the authority to sign and register the document on behalf of the Applicant(s).

Submitted By

REGIONAL MUNICIPALITY OF PEEL	10 Peel Centre Dr. Brampton L6T 4B9	2021 03 24

Tel 905-791-7800

Fax 905-791-6992

Fees/Taxes/Payment

Statutory Registration Fee	$65.30
Total Paid	$65.30

MASTER FINANCIAL AGREEMENT – SIMPSON ROAD SOUTH EXTENSION

This Agreement is made as of the 17th day of December, 2020.

B E T W E E N:

THE CORPORATION OF THE TOWN OF CALEDON

(the "**Town**")

- and -

THE REGIONAL MUNICIPALITY OF PEEL

(the "**Region**")

- and -

ANATOLIA CAPITAL CORP.

- and -

ARION SERVICES LTD.

(collectively and individually, as the context requires, the "**Owners**")

- and -

SIMPSON ROAD LANDOWNERS GROUP INC.

(the "**Trustee**")

WHEREAS:

[A] The Owners are the owners of the lands in the Town of Caledon more particularly described in Schedule "A" to this Agreement;

[B] The Owner's Lands are located in the Town's South Simpson Secondary Plan (the "Secondary Plan") area and further within the Benefiting Area as shown conceptually on Schedule "B" and to be confirmed on Schedule "I" to this Agreement through the future ASDC By-law;

[C] the Owners seek to develop their lands without applying for approval of and registering a plan of subdivision;

[D] in order to facilitate the Owners' desire to develop their lands without obtaining approval of and registering a plan of subdivision, the Town and the Region are requiring the Owners to provide in the Benefiting Area certain services and facilities, to make certain financial arrangements and to convey certain lands similar to how these may be required in conjunction with approval and registration of a plan of subdivision, so that the Benefiting Area may be developed in accordance with the Secondary Plan. In particular these obligations include:

(i) the conveyance to the Town of certain lands within the Benefiting Area for the purpose of a public highway in the form of an extension to existing Simpson Road and other appurtenant Public Infrastructure Works, including a channel and Stormwater Management Facilities as defined herein (the "Future Public Road/SWM Lands") as shown on the reference plan identified in Schedule "G" attached hereto.

(ii) the conveyance to the Region a certain lands within the Benefiting Area for the purpose of daylight triangles, road widening, reserves, a drainage ditch and for appurtenant works

and infrastructure ("Intersection Lands") as shown on the reference plan identified in Schedule "G" attached hereto.

(iii) The conveyance to Ontario Hydro of a permanent easement for two (2) hydro pole anchors over, under, along and through the Future Public Road/SWM Lands.

(iv) The completion of the design and construction work at the Owners' expense of all services and facilities required to construct a road to municipal standards on the Future Public Road/SWM Lands and Intersection Lands that complies with the approved drawings, plans, reports and specifications listed in Schedule "C" attached hereto.

(v) The completion of the design and construction work at the Owners' expense of all other services facilities identified under this Agreement and on Schedule "E" as Public Infrastructure Works.

(vi) Entering into a Cost Sharing Agreement to ensure the adequate provision of the Public Infrastructure Works, including the Future Public Road/SWM Lands and Intersection Lands and that all participating landowners share proportionately in the costs of providing the Public Infrastructure Works;

[E] the Owners may require the Town's assistance to acquire the lands necessary to construct the Public Infrastructure Works, the terms of which assistance shall be governed by this Agreement;

[F] the Owners have appointed the Trustee to assist with the implementation of this Agreement and the Cost Sharing Agreement;

[G] to expedite the construction of the Public Infrastructure Works, the Town has undertaken certain studies, reports, designs and applications for approvals, which the Owners through this Agreement will reimburse the Town for;

[H] the Owners will be reimbursed for the Recoverable Capital Cost of the Public Infrastructure Works being provided pursuant to this Agreement by credits for area specific development charges otherwise payable by the Owners pursuant to the Area Specific Development Charges By-law for the Benefiting Area, as well as by remittances of ASDCs paid by Benefiting Owners to the Town;

[I] section 38 of the *Development Charges Act, 1997*, S.O. 1997, c. 27 authorizes the Town to enter into an agreement for the purpose of granting development charge credits in exchange for the provision of services, but any such credits will not apply to any of the Region's Works, including but not limited to, sanitary and watermain works, as set out in this Agreement;

NOW THEREFORE this agreement witnesses that in consideration of the mutual covenants hereinafter contained and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Trustee, Owners, the Region and the Town hereby agree as follows:

PART ONE – DEFINITIONS AND GENERAL PROVISIONS

DEFINITIONS

1. In this Agreement and in the recitals above,

"**Agreement**" means this agreement;

"**Area Specific Development Charge**" or "**ASDC**" means a development charge imposed pursuant to the ASDC By-law passed pursuant to the DC Act with respect to the Capital Cost of the Public Infrastructure Works and the Land Acquisition Costs and payable in addition to Town of Caledon development charges that may be payable pursuant to By-law 2019-031 and/or any other similar charge(s) imposed by the Town;

"**ASDC Background Study**" means a future Town area specific development charge background study applicable to the Benefiting Area with respect to the Capital Cost of the Public Infrastructure Works and the Land Acquisition Costs;

"**ASDC By-law**" or "**Area Specific Development Charges By-law**" a future Town by-law, being an area specific development charge by-law with respect to the Capital Cost of the Public Infrastructure Works and the Land Acquisition Costs and applicable to the Benefiting Area, enacted by Council under the Act, as amended or re-enacted from time to time;

"**ASDC Credit**" or "**Credit**" means Redeemable ASDC Credits actually used to offset area specific development charges otherwise payable pursuant to this Agreement.

"**ASDC Credit Balance**" means the difference, if any, between the Recoverable Capital Cost paid for or security via a financial security posted with the Town under this Agreement less the total amount of:

- all ASDC Credits;
- all ASDC Remittances already paid to the Trustee; and
- any adjustments properly accounted for and reported to the Trustee in accordance with this Agreement, including but not limited to as a result of updates to the ASDC By-law or Recoverable Capital Cost incurred by the Town.

"**ASDC Remittance**" means a monetary payment from the Town to the Trustee drawn from the ASDC Reserve Account pursuant to this Agreement.

"**ASDC Reserve Account**" means the Town's general ledger account in which is held all payments of Area Specific Development Charges by the Benefiting Owners.

"**Benefiting Area**" means those lands that will derive a benefit from the construction, installation or provision of the Public Infrastructure Works, as conceptually shown on Schedule "B" and to be confirmed on Schedule "I" by the future ASDC By-law;

"**Benefiting Owner**" means any owner of land within the Benefiting Area, other than the Owners;

"**Business Day**" shall mean any day other than Saturday, Sunday, or a statutory holiday in the Province of Ontario;

"**Capital Cost**" means all costs related to the Public Infrastructure Works, including without limitation, the costs of financing, engineering, monitoring, construction, environmental mitigation measures, maintenance and assumption of the Public Infrastructure Works, as well as:

(1) all costs paid under contracts awarded for the construction of the Public Infrastructure Works, as certified by the Consulting Engineer (and accompanied by back-up invoices);

(2) all engineering, legal, project management, administrative and other consulting fees, whether paid to consultants or to the Town or Region;

(3) any studies, Class Environmental Assessments, reports, designs, permit applications or any other approvals, prepared in advance of, or in support of the construction of the Public Infrastructure Works;

(4) all fees and charges, whether payable to the Town, Region, TRCA, or any other governmental agency, body or authority; and

(5) the costs paid for the preparation of the ASDC Background Study and the enacting of the ASDC By-Law;

"**Certificate of Assumption**" means written correspondence from the Town confirming assumption of the Public Infrastructure Works has been approved by Council by way of an attached by-law;

"**Claims**" includes all losses, damages (including without restriction all indirect damages, consequential damages, special damages, business losses and economic losses, howsoever arising), injuries (including without restriction injuries resulting in death), claims, causes of action, demands, liabilities and Litigation;

"**Cost Sharing Agreement**" means a private agreement, separate and apart from this Agreement, entered into among the Owners setting out how the Capital Cost, Land

Acquisition Cost, Recoverable Capital Cost and all other costs may be shared and apportioned between them;

"**Council**" means the Town council;

"**Construction Commencement Deadline**" has the same meaning as in section 34 of this Agreement;

"**DC Act**" or "**Act**" means the *Development Charges Act, 1997*, S.O. 1997, c. 27, as amended, re-enacted or consolidated from time to time, and any successor statute;

"**Defaulting Owner**" means an Owner that is in default of its obligations under this Agreement;

"**Development**" means the construction, erection or placing of one or more buildings or structures on land or the making of an addition or alteration to a building or structure that has the effect of increasing the size or changing the use thereof from non-residential to residential, and includes redevelopment, zoning by-law amendments and official plan amendments;

"**Development Approval**" means approval of site plans, plans of subdivision, zoning by-law amendments and official plan amendments and any minor variance that in the opinion of the Town or Region requires servicing by the Public Infrastructure Works;

"**Estimated Capital Cost**" means the estimate of the Capital Cost as of the date of this Agreement, which is set out in Schedule "D", and which the parties acknowledge may vary from the actual Capital Cost in accordance with this Agreement;

"**Estimated Land Acquisition Cost**" has the same meaning as in section 91(1) of this Agreement;

"**Future Public Road**" means the road to be constructed on the Future Public Road/SWM Lands as part of the Public Infrastructure Works, as set out in this Agreement;

"**General Manager**" means the General Manager, Finance and Infrastructure Services of the Town or a designate;

"**Internal Works**" means local works exclusively internal to and for the sole benefit of an Owner's Lands and which works are not listed in Schedule "C";

"**Intersection**" means the intersection to be constructed at the intersection of the Future Public Road and Mayfield Road as part of the Public Infrastructure Works, as set out in this Agreement;

"**Land Acquisition Costs**" means all reasonable costs related to the acquisition of land or rights in land required for the construction, installation, operation and maintenance of the Public Infrastructure Works, including the cost of expropriation by the Town, any payments or awards for injurious affection, loss of business profits or damages, and all appraisal fees, consultant fees and Litigation Costs;

"**Land Acquisition Security**" or "**Land Acquisition Securities**" means Letter(s) of Credit in the form attached as Schedule "J", certified cheque or cash, or any combination thereof in a form satisfactory to the Treasurer, representing 100% of the Land Acquisition Costs as estimated in accordance with this Agreement;

"**Letter of Credit**" means irrevocable, standby, demand letter(s) of credit issued by a Schedule "I" or Schedule "II" Canadian chartered bank and in a form attached as Schedule "J" to this Agreement that is to the satisfaction of the Treasurer and to the Region with respect to the Intersection Lands;

"**Litigation**" includes all appeals, actions, applications or other proceeding before a court of law or administrative tribunal;

"**Litigation Costs**" includes all reasonable costs related to advancing, prosecuting or defending the Litigation, including without restriction, all legal fees, filing fees, appraisal fees, consultant fees, expert fees, witness fees, disbursements, and adverse costs orders;

"**MECP**" means the Ontario Ministry of the Environment, Conservation and Parks;

"**Naturalization**" means a process of ecological restoration that involves returning an altered or degraded site to a more natural condition through the use of trees, shrubs and flowers that are native to the area, as shown on the approved landscaping drawing, plans, reports and specifications listed in Schedule "C" attached to this Agreement;

"**Owners' Lands**" means the lands in the Town of Caledon, located within the Benefiting Area, title to which is vested in the Owners, and which are more particularly described in Schedule "A";

"**Planning Act**" means the *Planning Act,* R.S.O. 1990, c. P.13, as amended and replaced from time to time;

"**Public Infrastructure Works**" means all work related, incidental or provided therefore, thereto or in connection therewith, the design, construction and implementation and final completion of the Future Public Road and the Stormwater Management Facilities as defined in this Agreement, including grading, servicing works, boulevards and sidewalks, and streetlighting, as well as accommodation for and/or provision of utilities, sanitary and storm sewer system, and water supply system, including all connection works to the Region's lands described as Mayfield Road, all of which are to be located within the stormwater management ponds that will accept drainage from this road, erosion and sediment control measures, preservation of existing vegetation, grading, topsoiling, landscaping works, driveway construction, curbs, traffic control devices, and sidewalks and all other relevant items included on the approved drawings, plans, reports and specifications listed in Schedule "C" attached to this Agreement;

"**Public Infrastructure Works Security**" or "**Public Infrastructure Works Securities**" means Letter(s) of Credit in the form attached as Schedule "J", certified cheque or cash, or any combination thereof in a form satisfactory to the Treasurer, and where applicable the Region, representing 100% of the Capital Cost to be completed by the Owners;

"**Recoverable Capital Cost**" means the Land Acquisition Cost and the Capital Cost of the Town's Works as identified in the initial ASDC Background Study and ASDC By-law, following any appeals, and subject to updates to be initiated by the Town to increase ASDC rates to reflect the actual Land Acquisition Costs and the actual Capital Cost of the Public Infrastructure Works, which the parties acknowledge may differ from the Estimated Capital Cost identified in Schedule "D" of this Agreement;

"**Redeemable ASDC Credit**" means an Area Specific Development Charge Credit eligible for redemption pursuant to this Agreement.

"**Region's Works**" has the same meaning as in section 8 of this Agreement;

"**Required Benefiting Lands**" has the same meaning as in section 19 of this Agreement;

"**Secondary Plan**" has the same meaning as in recital [B] of this Agreement;

"**Stormwater Management Facilities**" or "**SWM Facilities**" means the stormwater management facilities to be constructed on the Future Public Road/SWM Lands as part of the Public Infrastructure Works which is necessary for adequate stormwater drainage from the Future Public Road, as well as to control storm water from private property;

"**TRCA**" means the Toronto Region Conservation Authority and any successor agency;

"**Treasurer**" means the Treasurer for the Town or a designate;

"**Trustee**" means the Trustee retained by the Owners, whose responsibilities are more particularly described in Part Five of this Agreement.

"**Town's Works**" has the same meaning as in section 8 of this Agreement.

SCHEDULES

2. The Schedules attached to this Agreement shall form part of this Agreement and are as follows:

Schedule "A"	Owners' Lands
Schedule "B"	Conceptual Benefiting Area
Schedule "C"	Public Infrastructure Works – Approved Plans, Drawings and Reports
Schedule "D"	Public Infrastructure Works – Estimated Capital Cost
Schedule "E"	Financial Obligations - Region
Schedule "F"	Region of Peel Requirements
Schedule "G"	Reference Plan for Public Infrastructure Works
Schedule "H"	Owners' Addresses
Schedule "I"	Final Benefiting Area to be confirmed through ASDC By-law
Schedule "J"	Town standard Letter of Credit
Schedule "K"	Trustee Certificate
Schedule "L"	TRCA Conditional Approval Letter
Schedule "M"	Owner's Statutory Declaration Certifying Discharge of Liabilities
Schedule "N"	Insurance Certificate
Schedule "O"	Conveyances

3. The Owners acknowledge and agree that the Town or the Region may amend Schedules "C", "D", "E", "F", "G", "I" and "O" from time to time, at their sole discretion and according to their respective standards and requirements for the Public Infrastructure Works, the Future Public Road/SWM Lands and Intersection Lands, as applicable. Each such amendment will be deemed to be fully part of this Agreement and will be effective and binding on all of the parties hereto upon receipt by each party in accordance with the requirements for giving notice contained herein.

RECITALS

4. The statements contained in the recitals, which are an integral part of this Agreement, are true and correct.

APPLICATION OF AGREEMENT

5. This Agreement applies to the Owners' Lands described in Schedule "A", and the Benefiting Area in Schedule "I", to be confirmed by the future ASDC By-law.

PRINCIPLES

6. The following principles, which accord with the Secondary Plan, guided the drafting of this Agreement and govern its interpretation and implementation:

   (1) the owners of lands within the Benefiting Area are responsible for all of the costs of the local services, including Public Infrastructure Works outlined in this Agreement and all related costs including all Capital Costs and all Land Acquisition Costs, subject to Credits and reimbursements as set out in this Agreement;

   (2) the Town, the Region and the Town's taxpayers outside of the Benefiting Area will not pay for any of the costs related to the local services and Public Infrastructure Works outlined in this Agreement;

   (3) the Owners and Trustee shall fully support the implementation of this Agreement;

(4) the Town nor the Region shall incur no new or additional costs, liabilities, or liability for Claims, howsoever arising, as a result of entering into this Agreement.

(5) the Owners shall remain subject to the ASDC By-law (but subject to ASDC Credits in accordance with this Agreement), regardless of the timing of any site plan applications submitted by either one of them and regardless of any legislative amendments made to the DC Act.

(6) the Town will collect the Recoverable Capital Cost on behalf of the Owners through the imposition of the ASDC By-law and the application of development approval conditions on development applications within the Benefiting Area (to the extent such development approval conditions are permitted by the Town's Secondary Plan policies), but does not guarantee that the ASDC or development approval conditions will be finally adopted by Council or the Local Planning Appeal Tribunal (the "**LPAT**"), however Town staff shall use their best efforts to recommend and implement such final adoption.

COUNCIL DISCRETION

7. Nothing in this Agreement fetters or restricts the discretion of Council. Without limiting the generality of the forgoing, the Owners and Trustee acknowledge and agree that:

(1) the Town is obliged to duly consider applications under the *Planning Act* and *Building Code Act* on the merits of the applications, to hear and consider any objections, comments or concerns with respect thereto, and to make appropriate determinations in the Council's unfettered decision on such applications;

(2) nothing contained in this Agreement shall derogate the various rights of appeal, which the Owners or the Town or the Region, as applicable shall have in respect of the implementation of any Official Plan amendments, secondary plan(s), zoning by-laws, minor variances, consents or approval of site plans or plans of subdivision; and

(3) the Town is under no obligation by virtue of this Agreement or otherwise, to grant any approvals whatsoever, under any legislation or by-law, including without limitation, any approvals related to any contemplated Development or use of the Owners' Lands.

PART TWO – PUBLIC INFRASTRUCTURE WORKS

OWNERS' OBLIGATION

8. The Owners shall design, supply, install, construct and maintain in a good and efficient manner all Public Infrastructure Works required by the Town, as set out in Schedule "C" (the "**Town's Works**") to the satisfaction of the Town, and in accordance with the Town's standard specifications as set out in the "Development Standards Policies and Guidelines" and the Region's "Design, standards specification and procedures" in effect at the time of execution of this Agreement by the Owner and amended from time to time and all Public Infrastructure Works required by the Region, as set out in Schedule "C" (the "**Region's Works**") to the satisfaction of the Region so as to comply with the scheduling contemplated by this Agreement or within such time or times as are required by the Town or the Region. Notwithstanding the foregoing and/or any other provision to the contrary contained in this Agreement, the parties acknowledge and agree that the Owners may, with the approval of the Town and the Region, alter the design of the Public Infrastructure Works (including, without limitation, re-designing the Public Infrastructure Works) and install and construct such Public Infrastructure Works in accordance with such altered designs, to the satisfaction of the Town and Region.

9. The Owner further agrees to adhere to the standard specifications of the Region and such amendments as may be made thereto prior to the Region's approval of the drawings, plans, specifications and reports for the Public Infrastructure Works required by the Region.

10. Without limiting the generality of the forgoing, the Owners acknowledge that the TRCA conditional approval letter, attached as Schedule "L", is subject to the future modeling, monitoring and study requirements noted in the letter, and subject to comments from MECP pursuant to an application for Environmental Compliance Approval which are the

responsibility of the Owners to fulfill and that any changes to the design for the Public Infrastructure Works submitted by the Town at the time of conditional approval, may result in additional requirements. Any additional costs associated with any such changes shall form part of the Capital Cost, subject to the final approval of the Town or the Region, as the case may be.

BENEFITING AREA

11. (1) The Parties agree that the Benefiting Area for the Public Infrastructure Works is conceptually shown on Schedule "B" and the final Benefiting Area to be confirmed by the ASDC Background Study and ASDC By-law shall be inserted at Schedule "I" at such time as the ASDC By-law is finally adopted by Council and the Benefiting Area which is conceptually shown in Schedule "B" may not be the same as the final Benefiting Area to be inserted at Schedule "I" and to which the ASDC By-law, the ASDC Background Study and any Area Specific Development Charge and ASDC Credits under this Agreement will ultimately apply. Notwithstanding the foregoing the Town acknowledges and confirms that it supports the scope, location and configuration of the Benefiting Area as shown conceptually on Schedule "B" attached hereto.

(2)

(A) The Town shall impose, to the extent permitted by the Town's Secondary Plan policies a condition of any Development Approval within the Benefiting Area requiring the Benefiting Owner/Owner (as the case may be) to become a party to the Cost Sharing Agreement and to satisfy its obligations pursuant to this Agreement and the Cost Sharing Agreement (the "**Development Condition**"). The Town shall refuse to grant a Development Approval within the Benefiting Area unless it has received confirmation from the Trustee that the Benefiting Owner/Owner has executed the Cost Sharing Agreement and that such Benefiting Owner/Owner is in good standing pursuant to this Agreement and the Cost Sharing Agreement.

(B) If an applicant appeals the Development Condition set out above to the LPAT (or other applicable authority), the Town will notify the Trustee in writing and the Owners will appoint a representative to confer with the Town.

(C) Subject to the approval of Council, the Town shall defend the Development Condition at any LPAT (or other applicable authority) hearing. However, if the Owners' representative advises the Town that the Owners do not require the Town to defend or continue its defense of the Development Condition, or if the Development Condition is determined to be inconsistent with the policies of the Secondary Plan, the Town shall not be required to defend, or to continue its defense of the condition, but the Town may, at its option and expense, defend or continue its defence of the condition.

(D) Prior to commencing the defence and on an ongoing basis throughout the defence, the Town and the Owners' representative shall consult with one another with respect to the direction and extent of the Town's defence, and for so long as the Owners bear the cost of the Town's legal and consulting costs in defending the Development Condition before the LPAT (or other applicable authority), the direction, extent and estimated cost of the Town's defence will be subject to the approval of the Owners' representative, acting reasonably.

(E) Unless the Owners' representative has advised the Town that the Owners do not require the Town to defend or to continue its defence of the Development Condition, the Owners' representative shall be entitled to participate in the negotiation of any settlement of the matter and the Town and the Owners' representative shall mutually agree to accept or reject the settlement.

(F) The Owners shall bear the cost of the Town's legal and consulting costs in defending the Development Condition before the LPAT (or other applicable authority), unless the Owners' representative has advised the Town that the Owners do not require the Town to defend or to continue its defense of

the condition, in which case the Town shall be responsible for any and all such costs incurred by it following such advice.

(G) Upon the Development Condition being appealed to the LPAT (or other applicable authority), the Town shall provide written notice to the Trustee of the estimated reasonable legal and consulting costs to defend the condition before the LPAT (or other applicable authority), as approved by the Landowner's representative, and the Trustee shall, unless the Trustee advises the Town that the Owners do not require the Town to defend the condition, provide by certified cheque or letter of credit satisfactory to the Town, to the Town, within thirty (30) days of the notice, the estimated costs as security for the Town's costs (the "**Development Condition Security**"). The Owners will provide additional security through the Trustee within thirty (30) days of receipt of a revised estimate from the Town of its legal and consulting costs to defend the Approval Condition, as approved by the Owners' representative, such that all times the Town has security for its estimated costs. The Town may draw down the Development Condition Security as legal costs and expenses are actually incurred, provided proof of such costs in a format to be mutually agreed upon by the Town and the Trustee, is first provided to the Trustee. The Town will return the balance of any remaining Development Condition Security, within thirty (30) days of the Trustee advising the Town that they do not require the Town to continue its defense of the Approval Condition, or upon the final disposition of the appeal.

(H) If the Town is unsuccessful in defending the Development Condition before the LPAT (or other applicable authority), the Town shall not in any way be liable to the Owners for any financial loss sustained from the inability of the Owners to recover costs pursuant to the terms of the Cost Sharing Agreement from any applicant.

(I) Notwithstanding the foregoing, the Owners shall be entitled to participate in and have separate representation at any LPAT (or other applicable authority) hearing if they so desire.

CONSULTING ENGINEER / LANDSCAPE ARCHITECT

12. The Owners shall retain and keep retained a professional consulting engineer registered with the Professional Engineers of Ontario (the "**Consulting Engineer**") and a professional landscape architect registered with the Ontario Association of Landscape Architects (the "**Landscape Architect**") until final acceptance by the Region and the granting of a Certificate of Assumption by the Town for all of the Public Infrastructure Works, upon whom the Town and the Region shall be entitled to rely as the Owner's agents. The Owners agree that the Town may rely upon the representations of the agents as if these representations were those of the Owners and the Owners shall be bound by these representations as if the representations had been made by the Owners. The Consulting Engineer and/or Landscape Architect shall:

(1) prepare and provide such drawings, plans, reports and specifications as are required by the Town and the Region in order to fully describe the Public Infrastructure Works;

(2) co-ordinate and integrate the drawings, plans, reports and specifications prepared by any other consultants retained in connection with the Public Infrastructure Works;

(3) comply with all federal, provincial and municipal laws, by-laws (including by-laws enacted by the Town and the Region), rules and regulations affecting the Future Public Road/SWM Lands and Intersection Lands including the obtaining of all necessary permits and licenses required to complete the Public Infrastructure Works, and the Owners shall save the Town and the Region harmless from any liability or cost suffered by them as a result of the failures of the Consulting Engineer and Landscape Architect to do so;

(4) obtain approvals and acceptances from the Town, the Region and all other relevant bodies, including the TRCA and MECP that require approvals or acceptances in order to complete the Public Infrastructure Works;

(5) prepare all contracts required for the supply, installation, construction and maintenance of the Public Infrastructure Works and provide copies thereof to the Town and the Region before the installation or construction of any of the Public Infrastructure Works is commenced;

(6) provide co-ordination and scheduling with respect to the installation and construction of the Public Infrastructure Works so as to comply with the scheduling contemplated by this Agreement and the requirements of the Town and the Region;

(7) provide field layout verification, siting control, contract administration, co-ordination, inspection of the installation, construction and maintenance of the Works. In this regard, the Consulting Engineer shall provide full-time resident supervision and inspection during the construction of all of the Public Infrastructure Works, and the Landscape Architect shall provide supervision and inspection of the construction of those components of the Public Infrastructure Works that are designed by the Landscape Architect (i.e., boulevard works, tree planting) as needed to certify that they have been constructed and installed in accordance with the approved drawings, plans, specifications and reports as listed at Schedule "C" in accordance with this Agreement;

(8) provide such certifications with respect to the installation and construction of the Public Infrastructure Works as are required by the Town and the Region;

(9) provide deficiency lists to the Town and the Region and co-ordinate and supervise the repair, reinstallation, reconstruction, replacement or rectification of any deficient Public Infrastructure Works;

(10) maintain all records of construction and keep the Town and the Region informed of all construction changes;

(11) provide the Town and the Region with final "as recorded" and/or "as constructed" drawings of the Public Infrastructure Works; and

(12) act as the Owners' agent in all matters pertaining to the design, supply, installation, construction and maintenance of the Public Infrastructure Works.

PLANS

13. Subject to Sections 3 and 8 of this Agreement (regarding the alteration of designs), the Public Infrastructure Works to be installed or constructed are shown on the approved drawings, plans, reports and specifications which have been provided to the Town and the Region by the Owners and listed in Schedule "C" attached to this Agreement. The parties hereby agree that the said drawings, plans, reports and specifications shall be deemed to be an integral part of this Agreement. In the event that the designs for the Public Infrastructure Works are altered by the mutual agreement of the parties, then Schedule "C" attached to this Agreement will be amended and replaced accordingly.

14. The Owners shall comply with all of the requirements and recommendations set out in any approved drawings, plans, reports and specifications listed in Schedule "C" attached to this Agreement or as may be added or amended upon written notice from the Town or the Region from time to time in accordance with current industry standards and approved by the Town and the Region.

15. While the Town and the Region have reviewed the approved drawings, plans, reports and specifications listed in Schedule "C" attached to this Agreement, the Owners shall at all times be responsible for ensuring the accuracy of the drawings, plans, reports and specifications and for ensuring that the stripping, grading, servicing and related works shall meet the standard specifications of the Town and the Region. This provision shall apply to any additional, supplementary or amended drawings, plans, reports and specifications not listed in Schedule "C" attached to this Agreement and prepared in connection with the stripping, grading, servicing and related works.

APPROVAL OF PLANS

16. The approval of the drawings, plans, reports and specifications for the Public Infrastructure Works by the Town and the Region respectively shall operate as a review of the drawings, plans, reports and specifications only and shall not relieve the Owners from the responsibility for providing such Works as are required by the Town and the Region.

CONVEYANCE AND EXPROPRIATION

17. All Public Infrastructure Works constructed and all lands and easements to be conveyed under this Agreement, including any conveyances contained in Schedule "O" hereto, shall be conveyed to the Town or the Region, as applicable, at no cost or expense to the Town or Region, free and clear of all liens and encumbrances except for municipal and development agreements and related interests.

18. The Owners shall gratuitously convey to the Town or the Region, as applicable, any part of the Owners' Lands which are required by the Town or the Region for the construction, installation, operation and maintenance of any of the Public Infrastructure Works located on the Owners' Lands, free of all liens and encumbrances and at no cost or expense to the Town or Region within thirty (30) days of receiving written notice from the Town or Region of the lands to be conveyed or upon such later date as may be determined by the Town or Region.

19. The Owners shall pay for any and all costs associated with acquiring any part of the lands not owned by them within the Benefiting Area required for the construction, installation, operation or maintenance of the Public Infrastructure Works, including any part of the Future Public Road/SWM Lands and Intersection Lands ("**Required Benefiting Lands**"), free and clear of all liens and encumbrances at the Owners' sole cost, and in accordance with a budget to be agreed upon, and revised from time to time, by the Owners and the Town and the Region. Such costs shall form part of the Land Acquisition Costs. This section shall apply to all Required Benefitting Lands, save and except the lands to be acquired as part of the Region's Mayfield road widening project as determined by the Region in their sole discretion.

20. To the extent that any Required Benefiting Lands are required for the construction, installation, operation and maintenance of the Public Infrastructure Works, the other Owners shall use their commercially reasonable best efforts to acquire such lands. For clarity, commercially reasonable best efforts shall include:

    (1) a land appraisal of the Required Benefiting Lands by a certified appraiser acceptable to the Town;

    (2) a written offer to purchase the Required Benefiting Lands ("**Offer to Purchase**"); and,

    (3) evidence, satisfactory to the Town (acting reasonably), that the Offer to Purchase was delivered to the Benefiting Owner who owns the Required Benefiting Lands and that a refusal or counter-offer was received from the Benefiting Owner, or an affidavit sworn by the Trustee that no response was received to the Offer to Purchase by the irrevocable date and time for a response set out therein.

21. The Owners shall gratuitously convey to the Town or the Region, as applicable, any Required Benefiting Lands which they have acquired, free of all liens and encumbrances and at no cost or expense to the Town or Region, and immediately following the acquisition of such lands by the Owners.

22. Within 180 days of conveying any Owner's Lands, Required Benefiting Lands or easements required under this Agreement to the Town or the Region, the Owners shall:

    (1) submit a Phase 1 Environmental Site Assessment ("ESA") report for the applicable Owner's Lands, Required Benefiting Lands or easements that are conveyed, prepared in accordance with the requirements of Regulation 153/04 under the *Environmental Protection Act,* R.S.O. 1990, c. E.19, as amended (the "*Environmental Protection Act*"), and a Phase 2 ESA report, if such a report has

been recommended in the Phase 1 ESA report, and shall reimburse the Town or Region, as applicable, for the cost of peer review of the reports.

(2) submit a record of site condition for the applicable Owner's Lands, Benefiting Lands or easements that are conveyed to the Town or Region, and provide proof to the Town or Region, as applicable, that the record of site condition has been acknowledged by the MECP and registered on the Environmental Site Registry.

23. Immediately after completion of the Public Infrastructure Works, the Owner shall provide certification to the Town or Region, as applicable, that any fill material imported onto the applicable Owner's Lands, Benefiting Lands or easements meets the requirements of Table 2 (Full Depth Generic Site Condition Standards in a Potable Groundwater Condition) of the Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the *Environmental Protection Act*.

24. The Town shall use its commercially reasonable best efforts to directly acquire by expropriation or other means, all Required Benefiting Lands, the Intersection Lands, any other lands required for the construction, installation, operation and maintenance of the Public Infrastructure Works, and the lands for the construction, installation, operation and maintenance for the Intersection (to be transferred to the Region gratuitously, free and clear of all encumbrances) where the Owners have provided to the Town the Land Acquisition Security, and where:

(1) the Owners have provided, in the Town's reasonable discretion, satisfactory evidence to the Town that they have used commercially reasonable best efforts without success;

(2) the Town, in its sole discretion, deems it convenient or expedient to directly acquire any Required Benefiting Lands or any lands on which any part of the Public Infrastructure Works and Intersection are to be constructed; or,

(3) the Owners have not initiated the commercially reasonable best efforts referred to in section 20 to acquire all of the lands of Benefiting Owners required for the Public Infrastructure Works, by that date which is one (1) year following the date of execution of this Agreement by all parties.

25. If the Town commences a process to acquire or expropriate any lands required by this Agreement, the Town will draw upon the Land Acquisition Security, in accordance with paragraph 81 below.

TREE PRESERVATION

26. The Owners shall retain a registered arborist or forester who shall prepare a vegetation inventory report and tree preservation plan for the review and approval of the Town and for review of the TRCA.

27. The Owners shall implement any tree preservation measures set out in the approved tree preservation plan to the satisfaction of the Town.

28. The Owners shall maintain the tree preservation measures in a good and workmanlike condition, to the satisfaction of the Town and the TRCA, and shall submit such monitoring reports as may be required by the Town and the TRCA and shall not remove any tree preservation measures without the approval of the Town who may consult the applicable Conservation Authority.

CONSTRUCTION OF THE WORKS

29. (1) Subject to Section 8 of this Agreement, the Owners shall install and construct all Public Infrastructure Works or cause all Public Infrastructure Works to be installed and constructed in accordance with the drawings, plans, reports and specifications listed in Schedule "C" attached to this Agreement and in accordance with the requirements of the Town and the Region.

(2) In order to facilitate the construction of the Public Infrastructure Works, the Town and the Owners shall enter into the Town's standard form of license agreement which shall authorize and permit the Owners, together with their agents, servants,

employees, consultants, contractors, contractor's workmen, subcontractors, subcontractors' workmen, the right, license, liberty and privilege of access to the Town's lands (including, without limitation, any lands conveyed to and/or expropriated by the Town pursuant to this Agreement), together with supplies, equipment and machinery for the installation and construction of the Public Infrastructure Works, in accordance with and subject to this Agreement.

(3) Notwithstanding any other provision to the contrary contained in this Agreement, the Owners shall be entitled to proceed with construction of the Public Infrastructure Works in stages, phases or components (*i.e.* grading, pre-servicing and then full road/above ground construction), subject to the approval of the Town and the Region in respect of each stage, phase or component, and all relevant provisions of this Agreement shall be interpreted and implemented to apply with respect to the particular stage, phase or component, as the case may be.

30. Should the Region proceed with the planned widening of Mayfield Road as set out in Schedule "F" , the Region will undertake the water and sanitary sewer components of the Public Infrastructure Works in order to facilitate the widening, which may occur prior to the planned constructed date by the Owner. The construction of the water and sanitary sewer components of the Public Infrastructure Works will require additional securities by the Owner as set out in Schedule 'F' to this Agreement, and any and all additional constructed costs.

31. Notwithstanding the provisions of Town By-law 86-110, as amended, the Owners shall not construct any structure or Public Infrastructure Works, except during the period from Monday to Saturday, 7:00 am to 7:00 pm and shall not construct any Public Infrastructure Works on statutory holidays.

32. During the construction and maintenance of the Public Infrastructure Works, all erosion sediment control facilities shall be inspected by the Consulting Engineer once a week and after each rainfall of 10 mm or greater, or a significant snow melt. The Owners shall provide erosion and sediment control reports to the Town within five (5) days of the inspection.

SCHEDULING OF CONSTRUCTION

33. Except with respect to construction on any Required Benefiting Lands, the Owners shall commence construction on the Future Public Road/SWM Lands as soon as reasonably possible following receipt of approval of the plans, drawings, reports and specifications of the Public Infrastructure Works from the Town and the Region and all permits required for construction from the Town, Region, TRCA, and any other governmental agency, body or authority.

34. The Owners shall commence construction on the Required Benefiting Lands no later than twelve (12) months after either the Owners or the Town acquiring all of the Required Benefiting Lands (the **"Construction Commencement Deadline"**), subject to receipt of approval of the plans, drawings, reports and specifications of the Public Infrastructure Works from the Town and the Region and all permits required for construction from the Town, Region, TRCA and any other governmental agency, body or authority.

35. Where, in the opinion of the Town or the Region, any of the Public Infrastructure Works will in any manner benefit or serve any lands outside the Future Public Road/SWM Lands, the Owners shall install and construct the Public Infrastructure Works in such order as is required by the Town or the Region provided that reasonable advance written notice of such order is provided to the Owners.

36. During the construction of the Public Infrastructure Works, the Owners shall ensure that all construction traffic for which it is responsible uses only such routes and such locations for ingress and egress to the Future Public Road/SWM Lands that are approved by the Town and/or the Region.

37. During the construction of the Public Infrastructure Works, the Owners shall take such steps as are necessary, including such steps as are required by the Town or the Region, to prevent any mud-tracking from the Future Public Road/SWM Lands or on any lands on which the Public Infrastructure Works are being constructed, to any roads in the vicinity of

such lands.

CONSTRUCTION SITE

38. During the construction on the Future Public Road/SWM Lands and any lands on which the Public Infrastructure Works are being constructed, the Owners shall keep such lands reasonably free of all debris, refuse, rubble and waste material. Such material shall not be stockpiled or stored on the Future Public Road/SWM Lands, or on any lands on which the Public Infrastructure Works are being constructed, for any longer than is reasonably necessary to effect its removal and, only then, in a safe and orderly manner. The Owners shall take such reasonable measures as are required by the Town to prevent debris, refuse and waste material from blowing off the Future Public Road/SWM Lands or any lands on which the Public Infrastructure Works are being constructed onto any other lands, and to remove the same immediately upon being directed to do so by the Town or Region.

HOUSEKEEPING DEPOSIT

39. Upon execution of this Agreement by the Owners, the Owners shall deposit with the Town cash in the amount of **SEVEN THOUSAND, FIVE HUNDRED DOLLARS ($7,500.00)** (the "**Housekeeping Deposit**") to be used at the discretion of the General Manager for such housekeeping items as control of debris and dust, damage to Town or Region roads, and any other similar items pertaining to the construction on the Future Public Road/SWM Lands and any lands on which the Public Infrastructure Works are being constructed. The Owners shall maintain the Housekeeping Deposit at no less than **SEVEN THOUSAND, FIVE HUNDRED DOLLARS ($7,500.00)** until the issuance of a Certificate of Assumption for all Public Infrastructure Works and the enactment of a by-law by Town Council dedicating and/or making the Future Public Road a public highway, at which time the Town shall refund any remaining Housekeeping Deposit to the Owners, without interest.

40. Within five (5) Business Days of written notice being given to them or their agent by the Town, the Owners shall undertake such work as directed by the Town to clear and/or clean the roads, control dust, clean up debris, repair fences, or any other work that might be reasonable to maintain the site in a tidy and orderly condition. If the Owners fail to comply with the notice, the Town may perform the necessary work at the expense of the Owners. At the Town's discretion and without further notice, the cost of this work shall be drawn from the Housekeeping Deposit, and if insufficient funds are available from that source, any remaining costs may be drawn from the Public Infrastructure Works Securities.

DAMAGE TO ANY LANDS, BUILDINGS OR STRUCTURES

41. The Owners shall be responsible for and shall immediately repair, at its own cost, any damage caused to any lands, buildings or structures outside the Future Public Road/SWM Lands and Intersection Lands or any lands on which the Public Infrastructure Works are being constructed as a result of construction or constructed Public Infrastructure Works on the Future Public Road/SWM Lands and Intersection Lands, or any lands on which the Public Infrastructure Works are being constructed.

42. The Owners shall assume full responsibility for any claims related to any damage to affected neighbouring properties as a result of construction or constructed Public Infrastructure Works on the Future Public Road/SWM Lands and Intersection Lands or any lands on which the Public Infrastructure Works are being constructed.

43. In the event that any private well systems in the zone of influence deteriorate due to the Public Infrastructure Works, the Owners will provide temporary water supply to the residents/owners upon notice by the Region and it will continue supplying the water to the affected residents/owners until the issue is resolved to the satisfaction of the involved parties. If the quantity of water in the existing wells is not restored to its original condition within a month after first identification of the issue, the Owners shall engage the services of a recognized hydrogeologist to evaluate the wells and recommend solutions including deepening the wells, drilling a new well or providing a permanent water service connection from the watermain to the residence/property.

EMERGENCY REPAIRS

44. Upon execution of this Agreement by the Owners, the Owners shall deposit with the Town cash in the amount of **TWENTY THOUSAND DOLLARS ($20,000.00)** (the "**Emergency Repairs Deposit**") to be used at the discretion of the General Manager for emergency repairs to the Public Infrastructure Works. The Town, the Region and their agents, contractors and employees shall be entitled to enter upon the Future Public Road/SWM Lands and Intersection Lands or any lands on which the Public Infrastructure Works are being constructed at any time or from time to time for the purpose of making emergency repairs to the Public Infrastructure Works. Such entry and repair shall not be deemed an acceptance of any of the Public Infrastructure Works by the Town or the Region, nor an assumption by the Town or the Region of any liability in connection therewith, nor a release of the Owners from any of their obligations under this Agreement. The Owners shall maintain the Emergency Repair Deposit at no less than **TWENTY THOUSAND DOLLARS ($20,000.00)** until the issuance of a Certificate of Assumption and the enactment of a by-law by Town Council dedicating and/or making the Future Public Road a public highway, at which time the Town shall refund any remaining Emergency Repair Deposit to the Owners without interest. Nothing in this provision limits the General Manager from using the Securities to perform emergency repairs on the Public Infrastructure Works should the Emergency Repairs Deposit not be sufficient to cover the costs of the repairs. Notwithstanding the foregoing or any other provision to the contrary contained in this Agreement, the Emergency Repairs Deposit shall not be drawn on unless the Owners have been given five (5) Business Days prior written notice of the required repairs and the Owners have failed to perform the necessary work and/or repairs.

INSPECTION OF CONSTRUCTION

45. The Owners agree that the Town, the Region and inspectors employed or retained by the Town or the Region are entitled to enter upon the Future Public Road/SWM Lands and Intersection Lands or any lands on which the Public Infrastructure Works are being constructed at any time or from time to time for the purpose of inspecting the installation, construction and maintenance of the Public Infrastructure Works.

46. The Owners shall comply with any direction or order given or issued by the Town and the Region that is related to health and/or safety or to a dangerous or hazardous or potentially dangerous or hazardous situation or to the prevention or repair of damage to the community or any other lands.

ADDITIONAL PUBLIC INFRASTRUCTURE WORKS

47. If at any time or from time to time during the installation or construction of the Public Infrastructure Works, the Town or the Region is of the opinion, acting reasonably, that, because of previously unknown or unforeseen conditions, it is necessary to design, supply, install or construct additional works which are related to the Public Infrastructure Works described in this Agreement, in order to adequately provide services which are related to the Public Infrastructure Works for the Benefiting Area or in order to prevent damage to lands outside the Future Public Road/SWM Lands or any lands on which the Public Infrastructure Works are being constructed and arising from such construction, the Owners shall perform any required studies and design, supply, install or construct such additional works at the request of the Town or the Region, subject to delivery of prior written notice to, and consultation with, the Owners in respect of such additional works. Such additional works shall be deemed to be Public Infrastructure Works and form part of the Capital Costs and be subject to ASDC Credits/ASDC Remittances under this Agreement. Town staff shall recommend that Council adopt updates to the ASDC By-law from time to time to include such additional Public Infrastructure Works which shall form part of the Recoverable Capital Cost.

GRADING AND DRAINAGE

48. The Owners shall complete the drainage system including all grading, swales, ditches, watercourses, ponds, channels, SWM Facilities, sewers and related appurtenances, catchbasins, service connections, and other related work in accordance with the approved drawings, plans, reports and specifications listed in Schedule "C" attached to this Agreement. The Town may connect or authorize connections to said drainage system but said connections shall not constitute acceptance of the drainage system by the Town. During

construction of the SWM Facilities, over-excavation of the facility will require prior approval from the Town.

ROADS

49. The Owners shall complete the Future Public Road and the Intersection, including all grading, ditches, gravel, asphalt, sidewalks, curbing, street lighting, street name, parking and traffic control signs, utility crossings and boulevard grading, topsoiling, seeding and sodding, as required by and according to the drawings, plans, reports and specifications approved by the Town and listed in Schedule "C" attached to this Agreement. The Owners shall also complete all boulevard trees and other vegetation planting in accordance with the drawings, plans, reports and specifications listed in Schedule "C" attached to this Agreement when required by and to the satisfaction of the Town. Unless otherwise authorized or directed by the Town or Region, as applicable, all road paving shall consist of at least two (2) courses of asphalt and the top course of asphalt shall not be laid until at least one (1) winter season after the base course of asphalt is laid. The top course of asphalt shall not be laid without the approval of the Town and Region, as applicable.

50. The Owners shall clear and clean roads outside the Future Road Lands and the Intersection upon which obstructions, mud or dust are deposited as a result of any work being done on the Future Public Road/SWM Lands and Intersection Lands or any lands on which the Public Infrastructure Works are being constructed or by construction traffic travelling to or from Future Public Road/SWM Lands and Intersection Lands or any lands on which the Public Infrastructure Works are being constructed.

WATER SYSTEM

51. The Owners shall complete the water supply system, including but not limited to all wells, pumps, mains, hydrants, valves, valve chambers, meters, service connections, apparatus and equipment, as required by and according to the drawings, plans, reports and specifications approved by the Region and shown in the plans at Schedule "C" attached to this Agreement. The Region may connect or authorize connections to the water system but such connections shall not constitute acceptance of the water system by the Region.

52. The Owners acknowledge and agree that the Region may require at the Owners' cost the construction of a sampling hydrant within the Future Public Road/SWM Lands and Intersection Lands and any lands on which the Public Infrastructure Works are being constructed. The location of and the requirement for a sampling hydrant will be determined during the engineering review.

53. The Owners shall maintain adequate chlorine residuals in the watermain the Future Public Road/SWM Lands and any lands on which the Public Infrastructure Works are being constructed from the time the watermain is connected to the municipal system until such time as the Region issues final acceptance. In order to maintain adequate chlorine residuals, the Owners will be required to either install automatic flushing devices or retain Region staff to carry out manual flushing. Region staff will conduct the monitoring and testing for chlorine residuals. The costs associated with the monitoring and flushing will be the responsibility of the Owners pursuant to the Region's Fees By-law. If construction of the Future Public Road is phased, and the watermain works will not be constructed in its entirety; any actual and ongoing maintenance costs associated with this phased construction will be the responsibility of the Owners. These costs may include, but are not limited to, automatic flushing costs of the watermain.

54. The Owners acknowledge that any existing water service connections which are installed to service any lands within the Benefiting Area that will not be utilized within one (1) year of Preliminary Acceptance shall be disconnected and removed at the subject Owner/Benefitting Owner's expense in accordance with the Region's standards. Any re-commissioning of any disconnected services shall be the subject Owner/Benefitting Owner's responsibility and at the subject Owner/Benefitting Owner's cost.

SANITARY SEWER SYSTEM

55. The Owners shall complete the sanitary sewer system, including but not limited to all mains, pipes, manholes, service connections, apparatus and equipment, as required by and according to the drawings, plans, reports and specifications approved by the Region

and shown in the plans listed at Schedule "C" attached to this Agreement. The Region may connect or authorize connections to the sanitary sewer system but such connections shall not constitute acceptance of the sanitary sewer system by the Region.

56. The Owners acknowledge that any existing sanitary sewer service connections which are installed to service any development that will not be utilized shall be removed at the subject Owner/Benefitting Owner's expense in accordance with the Region's standards.

UTILITY SERVICES

57. Prior to the placement of base course asphalt for the Future Public Road on the Future Public Road/SWM Lands, the Owners shall make arrangements for the supply and installation of hydro-electric service (i.e. for purposes of street lighting) to be located in, on or under the Future Public Road in accordance with the composite utilities plan listed in Schedule "C" attached to this Agreement. The Owner shall co-ordinate the installation and/or relocation of hydro-electric service (i.e. street lighting) with the installation and construction of the Public Infrastructure Works so as to comply with the scheduling contemplated by this Agreement.

58. Unless otherwise approved by the General Manager all duct structures necessary for the installation of utilities shall be installed prior to the placement of the base course asphalt.

59. Prior to assumption of any of the Public Infrastructure Works, easements as may be required for utility, drainage or construction purposes shall be granted to the appropriate authority free of all charge and encumbrances.

USE OF PUBLIC INFRASTRUCTURE WORKS

60. Any of the Public Infrastructure Works may be used by the Town or the Region or anyone authorized by the Town or the Region at any time or from time to time for the purpose for which such Public Infrastructure Works were designed. Such use shall not be deemed an acceptance of any of the Public Infrastructure Works by the Town or the Region, nor an assumption by the Town or the Region of any liability in connection therewith, nor a release of the Owners from any of their obligations under this Agreement.

ENGINEERING PRELIMINARY ACCEPTANCE

61.

(1) On behalf of the Owners, the Consulting Engineer shall certify in writing to the General Manager and to the Region that the Public Infrastructure Works have been completed. Certification shall be no earlier than the time when the following Public Infrastructure Works shown on the approved plans at Schedule "C" attached to this Agreement have been completed to the base course asphalt stage to the satisfaction of the Town and of the Region, as applicable:

a) any sanitary and storm sewer system to be located on the Future Public Road/SWM Lands and Intersection Lands or any lands on which the Public Infrastructure Works are constructed;

b) any water supply system to be located on the Future Public Road/SWM Lands and Intersection Lands or any lands on which the Public Infrastructure Works are constructed;

c) any stormwater management system, including the SWM Facilities, to be located on the Future Public Road/SWM Lands and Intersection Lands or any lands on which the Public Infrastructure Works are constructed; and

d) the roads, including granulars, base asphalt, first stage curbs, street name signs, street light system, and regulatory traffic signage as required to be located on the Future Public Road/SWM Lands and Intersection Lands.

(2) The Owners shall perform such tests, analyses, CCTV inspections, and to provide such reports or certifications as may be required by the Town or the Region prior to Preliminary Acceptance being granted for the Town's Works and the Region's Works.

(3) Notwithstanding the generality of the foregoing, at the sole cost of the Owners, the Owners shall engage the services of a qualified geotechnical engineering firm which shall, for every 25 metres in alternating lanes of road, take core samples of the base asphalt and granular material of the Future Public Road ("**Core Sample Test**") to confirm thickness used in construction meets the Town's Engineering Standards.

(4) The Owners shall submit the Core Sample Test and the pavement structure assessment report ("**PSAR**") to the Town for review and approval prior to Preliminary Acceptance. The Owners shall provide to the Town a letter from their geotechnical engineer stating that the Town may rely on the PSAR.

(5) If the General Manager or the Region is satisfied that the Public Infrastructure Works are complete and acceptable, he may grant preliminary acceptance for the Public Infrastructure Works, in whole or in part, at his discretion ("**Preliminary Acceptance**").

AS CONSTRUCTED DRAWINGS (REGION) / AS RECORDED DRAWINGS (TOWN)

62. The Owners acknowledge and agree that its consultant is required to provide all "as constructed" drawings and all "as recorded" drawings within sixty (60) days of issuance of Preliminary Acceptance of the Region's Works. The "as constructed" drawings and "as recorded" drawings must be submitted in digital format and be in accordance with the latest Region Digital Format Guidelines. In addition, the Owners' consultant shall also be required to provide ties to all mainline valves, ties to individual water service boxes, linear ties to sanitary sewer services and GPS coordinates of all watermain and sanitary sewer appurtenances in accordance with the latest requirements of the Region's Development Procedure Manual.

MAINTENANCE OF THE PUBLIC INFRASTRUCTURE WORKS

63. During the maintenance period for the Public Infrastructure Works described in this Agreement, the Owners shall maintain all of the Public Infrastructure Works in a good and workmanlike manner, and in accordance with the standards of the Town and Region, as applicable, at its sole cost, to the satisfaction of the General Manager and to the Region.

64. With the prior written approval of the General Manager, the Owners may place the second or top layer of asphalt and complete the remaining roadworks, but such roadworks shall not occur sooner than one (1) year after the completion of the base course of asphalt.

65. The maintenance period shall run for the longest period of:

(1) two (2) years from the date of the granting of Preliminary Acceptance; or,

(2) one (1) year from the date of placement of top course asphalt and completion of the roads constructed on the Future Public Road/SWM Lands; or,

(3) from the date of the granting of Preliminary Acceptance to the date of the issuance of the Certificate of Assumption.

66. Notwithstanding the above, the maintenance period for any Naturalization and other landscaping works which form part of the Public Infrastructure Works installed on the Future Public Road/SWM Lands shall commence once the said Naturalization and other landscaping works have been substantially completed to the satisfaction of the General Manager and shall terminate upon issuance of the Certificate of Assumption. The maintenance period will be for a minimum of:

(1) three (3) years for any Naturalization areas forming part of the Public Infrastructure Works; and,

(2) two (2) years for all other landscaping works forming part of the Public Infrastructure Works.

67. During the maintenance period, the Owners shall, as determined by the Town and the Region, if applicable:

(1) repair, reinstall, reconstruct or replace any damaged or destroyed Public Infrastructure Works, and,

(2) rectify any incorrectly installed or constructed Public Infrastructure Works.

WINTER MAINTENANCE OF FUTURE PUBLIC ROAD

68. Until the enactment of a by-law by the Town dedicating and/or making the Future Public Road/SWM Lands a public highway, the Owners agree that once occupancy of any sites serviced by the Public Infrastructure Works occurs, the Town will commence winter maintenance, including spring clean-up, on the Future Public Road. The Owners shall pay the Town these costs as set out in the part of this Agreement addressing financial considerations.

PLACEMENT OF TOP COURSE ASPHALT AND COMPLETION OF ROADWORKS AND STORMWATER MANAGEMENT WORKS

69. With the prior written approval of the General Manager, the Owners may place the second or top layer of asphalt and complete the remaining roadworks but such work shall not occur any sooner than one (1) year after the completion of the base course of asphalt.

70.

(1) The Owners shall make available to the Town all road tests and investigative results carried out on behalf of the Owners by the Consulting Engineer within one (1) month of the placing of top asphalt; and

(2) The Town, Consulting Engineer and sub engineers shall perform a site inspection of the pavement surface within one week of placement to identify any surface defects and confirm acceptance of work.

71. The Owners shall not actually place the top layer of asphalt on Future Public Road until the following work is completed to the satisfaction of the Town in accordance with the approved drawings, plans, reports and specifications listed in Schedule "C" attached to this Agreement:

(1) construction of all sidewalks;

(2) construction of the top curb;

(3) installation of topsoil, seeding and sod in the boulevards;

(4) planting of street trees and any other required vegetation in the boulevard;

(5) installation of any urban design features required to be installed in the boulevards;

(6) the undertaking of a Falling Weight Deflectometer (FWD) test to determine pavement structural integrity and capacity under the supervision of the Consulting Engineer;

(7) flush all storm sewers, storm manholes, and catch basins free of road materials, building debris, and other foreign matter and to remove such materials from the storm and sewer system;

(8) provide the Town with the results of a CCTV inspection of the storm sewer system in a format acceptable to the Town; and

(9) stormwater management pond operation and maintenance manual including recorded drawings, Bathymetric survey, gate keys, agency sign off and CCTV for stormwater management pond works.

REQUIREMENTS PRIOR TO THE ISSUANCE OF CERTIFICATE OF ASSUMPTION

72. Immediately prior to requesting the issuance of the Certificate of Assumption for any portion of the Public Infrastructure Works, the Owners shall perform the following work and provide the following documentation, all to the satisfaction of the Town:

(1) flush all storm sewers, storm manholes, and catch basins free of road materials, building debris, and other foreign matter and to remove such materials from the storm and sewer system;

(2) provide the Town with the results of a CCTV inspection of the storm sewer system in a format acceptable to the Town;

(3) sweep roadway pavements and sidewalks clear of building debris and earth deposits and to remove such material;

(4) rectify and repair all damage to the sidewalks, and curbs constructed under the terms of this Agreement, including relocation of curb depressions as may be required by the General Manager;

(5) rectify and repair all settlements, depressions, or other defects on roadways and boulevards;

(6) remove sediment from all stormwater management facilities, as necessary, so that the full design capacity of said facilities is available for use; and certification that the full design capacity of all stormwater management facilities is available for use;

(7) require the Consulting Engineer to provide to the Town's General Manager with:

a) certification that all of the Town's Public Infrastructure Works have been completed in accordance with the approved drawings, plans, reports and specifications as listed in Schedule "C" attached to this Agreement;

b) certification that the full design capacity of all SWM Facilities is available for use, including a bathymetric survey;

c) certification from an electrical consultant that all street lighting has been constructed in accordance with the approved drawings, plans, reports and specifications listed in Schedule "C" attached to this Agreement;

d) certification that sight lines have been constructed in accordance with the approved drawings, plans, reports and specifications listed in Schedule "C" attached to this Agreement;

e) certification from a registered Ontario Land Surveyor that they have found or replaced all standard iron bars pertaining to the Future Public Road/SWM Lands or any lands on which the Public Infrastructure Works are constructed as shown in approved drawings, plans, reports and specifications listed at Schedule "C" attached to this Agreement;

f) certification from a registered Ontario Land Surveyor indicating the establishment of the required benchmark(s) as shown in the approved drawings, plans, reports and specifications listed at Schedule "C" attached to this Agreement;

(8) to provide the Town and Region, if applicable, with "as constructed" and "as recorded" drawings of all the Public Infrastructure Works presented in the following manner:

a) full size plans which are photographically or mechanically reproduced on a medium satisfactory to the General Manager and to the Region; and

b) electronic copies of the drawings in a format acceptable to the General Manager and to the Region;

(9) to provide the Town with certification from the Region that the Region's Intersection and Infrastructure Works have been completed to the satisfaction of the Region, that the Region has granted final acceptance for the Region's Works, that the Region approves the release of any remaining securities posted for the construction of the Region's Works, and that the Region has no objection to the issuance of a Certificate of Assumption by the General Manager;

(10) to provide the Town with a statutory declaration, in a form acceptable to the Town and as attached to this Agreement at Schedule "M", certifying that all liabilities of whatever nature and kind incurred by the Owners in relation to this Agreement have been discharged in full;

(11) to complete and fully comply with all other terms and conditions of this Agreement to the satisfaction of the Region and all other departments within the Town;

(12) to pay all fees and monies required pursuant to this Agreement, including any amounts outstanding for the purposes of the Emergency Repair Deposit, the Housekeeping Deposit and the insurance deductible and any outstanding real property taxes;

(13) to obtain written clearances from the appropriate agencies confirming compliance;

(14) to require the Landscape Architect to provide the Town's General Manager with:

a) certification that all landscape works have been completed in accordance with the approved drawings, plans, reports and specifications as listed in Schedule "C" attached to this Agreement;

b) an as constructed tree planting summary chart in excel format;

c) all testing and sub consultant certifications as required; and

d) as recorded and/or as constructed landscape drawings in PDF and CAD format on a portable USB drive.

(15) to pay all invoices in respect of utility costs for streetlights constructed on the Future Public Road/SWM Lands until the enactment of a by-law by the Town dedicating and/or making the Future Public Road a public highway. Until such time, the Owners shall be responsible for the streetlight utility costs for the energized streetlights on the Future Public Road/SWM Lands. The Town shall provide an invoice of the streetlight utility costs payable by the Owners to the Owners and the Owners shall pay the Town the said costs within fifteen (15) Business Days of the date of the invoice. The amount of the invoice shall be calculated in accordance with this Agreement.

(16) to provide the Town with an electronic copy of all GIS information created in a digital GIS database. The GIS data layers are to be provided in a File Geodatabase (.gdb) or Shapefile (.shp) format in the Town's standard coordinate system.

FINAL ACCEPTANCE – CERTIFICATE OF ASSUMPTION

73. The General Manager shall issue a Certificate of Assumption for the whole of the Public Infrastructure Works upon the longest period of:

(1) the expiry of two (2) years from the date of the granting of the preliminary acceptance;

(2) one (1) year from the date of placement of top course asphalt and completion of road system;

(3) satisfactory completion of all applicable matters set out in this Agreement;

(4) enactment of a by-law by Town Council dedicating and/or making the Future Public Road a public highway; and,

(5) completion of the maintenance periods applicable to any landscaping works that are part of the Public Infrastructure Works.

74.

(1) Upon issuance of the Certificate of Assumption, the Town will assume ownership of the Town's Works (which shall vest in the Town), and the Region shall assume ownership of the Region's Works (which shall vest in the Region), and the operation and maintenance of same, and the Owners hereby agree that they relinquish all rights, titles, and/or claims they may have to the Public Infrastructure Works.

(2) Notwithstanding the foregoing, the Owners agree that the issuance of a Certificate of Assumption by the General Manager or the final acceptance of the Public Infrastructure Works by the Region, if applicable, shall not relieve the Owners of any liability in law arising from the provisions of this Agreement.

PART THREE – FINANCIAL CONSIDERATIONS

COSTS

75. Subject to Part 4 below, the Owners agree to be responsible for the Capital Cost and Land Acquisition Costs of the Public Infrastructure Works, and Intersection Works, regardless of any variance from the Estimated Capital Cost, Estimated Land Acquisition Cost, or Recoverable Capital Cost. The Town or the Region shall not be required to pay any portion of the Capital Cost or Land Acquisition Cost (subject to section 19 and Part 4 of this Agreement).

76. The Owners shall pay to the Town, via certified cheque:

(1) upon execution of this Agreement, the Town's costs for the preparation of this Agreement, in accordance with the Town's Fees By-law, in the amount of **Seven Thousand Seven Hundred and One Dollars** inclusive of HST **($7,701.00)**; and,

(2) upon delivery to the Trustee of a complete summary of costs together with all invoices and back-up information related thereto, the Town's costs related to the Public Infrastructure Works incurred prior to the execution of this Agreement, including, but not necessarily limited to the cost of an environmental assessment, designs, permits, external legal services, internal project management and ongoing administrative costs ("Overhead"), in the amount of approximately **Seven Hundred Twenty-Five Thousand One Hundred Nine Dollars and Sixty-seven Cents ($725,109.67)**, which exact amount shall be confirmed by the Town after the execution of this Agreement.

77. Upon payment to the Town of the fees and costs set out above, and execution of this Agreement by the Owners, the Owners shall be entitled to copies of all studies, reports, drawings, designs and approvals completed by the Town as of the execution of this Agreement. The Town agrees that it shall authorize and direct its consultants to deal with the Owners on a go-forward basis.

78. The Owners acknowledge and agree that any studies, reports, drawings, designs and approvals provided by the Town and Region may not be in their final form or may be subject to change or may contain errors and inaccuracies and the Owners rely on them at their own risk.

SECURITIES

79. Prior to the Owners commencing construction of the Public Infrastructure Works (or applicable component thereof) and in any event, prior to the Construction Commencement Deadline, the Owners shall provide to the Town the Public Infrastructure Works Security equivalent in aggregate to 100% of the Estimated Capital Cost for the applicable component, as set out on Schedule "D" and as set out on Schedule "E". For greater clarity, the Owners or Trustee may provide individual securities to fulfil in aggregate 100% of the Public Infrastructure Works Security requirements.

80. INTENTIONALLY DELETED

81. INTENTIONALLY DELETED

82.

(1) The Owners shall provide any and all letters of credit required by this Agreement in the form attached at Schedule "J" to this Agreement including provision of the Public Infrastructure Works Security.

(2) The Owners acknowledge and agree that the Public Infrastructure Works Securities and letters of credit as provided for in this part of the Agreement are to serve in part as a guarantee for the repair, reinstallation, reconstruction, replacement or rectification, as well as for the maintenance of the Public Infrastructure Works.

83.

(1) The Owners shall keep the Public Infrastructure Securities and any Letters of Credit provided pursuant to this Agreement in full force and effect until the enactment of a by-law of the Town Council dedicating and/or making the Future Public Road a public highway. If the Owners fail to keep such Public Infrastructure Securities in full force and effect, the Town and the Region shall be entitled to stop all work on the Future Public Road/SWM Lands or any lands on which the Public Infrastructure Works are being constructed and to refuse to grant approvals, to grant acceptances, and to refuse assumption of the Public Infrastructure Works until such failure is remedied to the satisfaction of the Town and the Region.

(2) The Owners acknowledge and agree that neither the Town nor the Region shall accept any Public Infrastructure Securities or letters of credit from any party other than the Trustee and/or Owners as stated on the first page of this Agreement.

84.

(1) If, in the opinion of the Town or the Region, the Owners:

a) are carelessly or improperly installing or constructing any of the Public Infrastructure Works;

b) are not installing or constructing the Public Infrastructure Works so as to comply with the scheduling contemplated by this Agreement;

c) neglect or abandon any of the Public Infrastructure Works before completion or unreasonably delays the installation or construction of the Public Infrastructure Works;

d) fail, neglect or refuse to maintain the Public Infrastructure Works;

e) fail, neglect or refuse to repair, reinstall, reconstruct or replace any of the Public Infrastructure Works that may be rejected by the Town or the Region as defective or unsuitable; or,

f) are in default of any provision of this Agreement;

the Town or the Region shall notify the Owners in writing of such default or neglect.

(2) If such default or neglect as identified in accordance with section 84(1) is not remedied by the Owners within ten (10) calendar days after notice of same, or if satisfactory arrangements have not been made with the Town to remedy such default or neglect within the ten (10) calendar days:

a) the Town or the Region shall be entitled to immediately purchase such materials, tools and machinery and employ such workers and retain such consultants as are required for the proper completion of the Works in accordance with the provisions of this Agreement and to use all or any part of the Public Infrastructure Securities provided pursuant to this Agreement to pay the cost thereof, and in so doing, the Town or the Region are not bound by the allocation of costs between the Public Infrastructure Works as set out in Schedule "D" to this Agreement;

b) The cost of such works shall be calculated by the Town or the Region, and the decision of the Town or the Region shall be final and shall be in accordance with any applicable by-law. Notwithstanding the generality of the foregoing, such costs shall include the actual cost, plus such other charges as may be detailed in the Town's Fees By-law or the Region's Fees By-law, as amended or in effect from time to time;

c) in the case of emergency, such work may be done without prior notice, but the Town or Region shall notify the Owners forthwith thereafter; and

d) any work done at the direction of the Town or the Region pursuant to the provisions of this Agreement shall not be deemed an acceptance or assumption of any of the Public Infrastructure Works by the Town or the Region, nor an assumption by the Town or the Region of any liability in connection therewith nor a release or waiver of the Owners from any of its obligations under this Agreement.

85. Notwithstanding any other provision of this Agreement, if the Town or Region undertakes any work pursuant to 84 of this Agreement, the following charges shall apply:

(1) if the work is undertaken by Town or Region employees, one hundred and fifteen percent (115%) of the actual cost, based on the applicable hourly rates for the employees and the equipment used in undertaking the work, with a minimum charge for four (4) hours;

(2) if the work is undertaken by a contractor retained by the Town or Region, one hundred and fifteen percent (115%) of the actual cost.

86. Notwithstanding any other provision of this Agreement, the Town may use the Public Infrastructure Securities to perform housekeeping work and emergency repairs to the Public Infrastructure Works.

87. If the Owners or any corporate assignee makes an assignment for the benefit of creditors, or becomes insolvent or commits an act of bankruptcy as defined by the *Bankruptcy and Insolvency Act*, R.S.C. 1985, c. B-3, or if Owners' interest in the Lands is at any time seized or taken in execution or in attachment, or if the Owners or any corporate assignee is subjected to voluntary or compulsory liquidation or winding-up, then, at the option of the Town, the Town may take all steps necessary to cash the Public Infrastructure Securities.

88. If the Town or Region receives a notice from the financial institution that has issued the Public Infrastructure Securities that the Public Infrastructure Securities shall not be renewed, then, at the option of the Town or Region, the Town or Region may take all steps necessary to cash the Public Infrastructure Securities.

PAYMENT OF WINTER MAINTENANCE COSTS

89. The Owners shall pay the costs incurred by the Town for the winter maintenance of the Future Public Road based on the number of lane kilometres as per the Town's Fees By-law currently in effect as of November 1 of the current year. Said costs shall continue until the Town has passed a by-law dedicating and/or making the Future Public Road a public highway. If the Owners fail to pay the said costs then the Town shall be entitled to use all or any part of the Public Infrastructure Works Securities to pay the costs thereof.

DRAW DOWN ON SECURITIES

90. The Town shall be entitled to draw on the Public Infrastructure Works Security for the purpose of rectifying any default or neglect referred to in paragraph 84(1). Ten (10) Business Days prior to making any draw on the Public Infrastructure Works Security, the Town shall provide the Owners with a description of the payments to be made from the draw. If the Town draws upon the Public Infrastructure Works Security for the purpose of completing any Public Infrastructure Works, the Owners shall be entitled to ASDC Credits and ASDC Remittances for such Public Infrastructure Works to the extent the works are included within the Recoverable Capital Cost, except in the case of draws made to pay for the cost of repairing, reinstalling, reconstructing or replacing works that the Town or the

Region have rejected as defective or unsuitable, in which case such costs shall not be considered part of the Recoverable Capital Cost.

91. If the Town undertakes a process to directly acquire or expropriate some or all of the lands for the construction, installation or maintenance of Public Infrastructure Works, the Town will request a Land Acquisition Security as follows:

(1) Town staff and/or Town consultant(s) will estimate the Land Acquisition Costs for the land to be acquired or expropriated ("Estimated Land Acquisition Cost");

(2) The Town will provide a copy of the Estimated Land Acquisition Cost to the Trustee;

(3) within twenty (20) Business Days following receipt of the Town's Estimated Land Acquisition Cost, the Owners shall provide the Town a Land Acquisition Security.

92. If the full amount of the Land Acquisition Security is not provided to the Town within twenty (20) Business Days as aforesaid, all internal and external costs incurred by the Town to obtain the Estimated Land Acquisition Cost shall be reimbursed to the Town via a draw from any Land Acquisition Security provided, and the balance from Public Infrastructure Works Security. Future requests to acquire or expropriate the same property will be subject a revised cost estimate.

93. The Town may draw on the Land Acquisition Securities as follows:

(1) draws from the Land Acquisition Security will be based upon the Town's estimate as to the costs incurred at the time of the draw and future costs that will be incurred over the next six (6) month period;

(2) no less than ten (10) Business Days' notice and either evidence that the Town has initiated an expropriation proceeding against one or more Required Benefiting Lands or documentation that the Town has received acceptance of its offer to purchase lands from one or more Benefitting Owners shall be provided to the Owners via the Trustee;

(3) the Town will create a separate capital project, or track separately, within one capital project, draws from the Land Acquisition Securities for each property;

(4) the Town will provide the Owners an annual status update on the properties the Town is assisting in acquiring/expropriating that includes a financial summary comparing original cost estimate, revised cost estimates, and amount spent-to-date; and

(5) draws shall form part of the Capital Costs and be subject to ASDC Credits/ASDC Remittances under this Agreement;

94. In the event that the Owners provide individual securities to the Town, the Trustee shall provide, within five (5) Business Days following written request by the Town, particulars as to the amounts to be drawn against the individual Owners' securities in accordance with this Agreement, and the Town shall be entitled to rely on the Trustee's statement in this regard and shall not be required to confirm or inquire further into such draw-down breakdowns, provided that the aggregate amount to be drawn-down from the Owners' securities, as set out in the Trustee's statement, shall be equal to the total amount which the Town requires to be drawn-down pursuant to this Agreement.

CHANGES IN AMOUNT OF SECURITY REQUIRED

95. The Town may review the Estimated Capital Cost and Estimated Land Acquisition Cost at any time the Town deems appropriate, in its sole discretion, and may adjust either estimate to reflect changes in estimated or actual costs and anticipated or actual changes in scope. In the event that the Capital Cost or Land Acquisition Cost is revised, the Town shall provide to the Owners a statement and back-up information setting out the revised Capital Cost or Land Acquisition Cost and the deficit or surplus compared to the security held by the Town.

96. In the event that the revised Capital Cost or Land Acquisition Cost is higher than the Public Infrastructure Works Security or Land Acquisition Security held by the Town, the Owners shall be required to provide to the Town additional security within ten (10) business days of a written request from the Town, to bring the balance of the Public Infrastructure Works Security or Land Acquisition Security to one hundred percent (100%) of the outstanding revised cost.

97. In the event that the revised Capital Cost or Land Acquisition Cost, is lower than Public Infrastructure Works Security or Land Acquisition Security held by the Town, the Owners may request, in writing, that the Town reduce the Public Infrastructure Works Security or Land Acquisition Security to a balance equal to 100% of the revised Capital Cost or Land Acquisition Cost and the Town shall complete such reduction within thirty (30) days after receipt of the aforesaid written request.

98. The circumstances in which the actual Capital Cost or Land Acquisition Cost may vary from the Estimated Capital Cost or Estimated Land Acquisition Cost, include but are not limited to:

(1) changes in scope or design, whether due to changes required by the Town, the Region, the Town, Region, TRCA, any other governmental agency, body or authority, or the Owners;

(2) unforeseen costs or contingencies that may arise during construction of the Public Infrastructure Works or the acquisition of land, including Litigation Costs;

(3) draws on securities in accordance with this Agreement;

(4) inflation; or

(5) changes in cost estimation methodology.

RELEASE OF LAND ACQUISITION SECURITIES

99. Land Acquisition Security shall only be reduced or released after the Town determines that:

(1) any land acquisition or expropriation process undertaken by the Town has been fully and finally determined whether by agreement, settlement, or the exhaustion of all available appeals; and

(2) all Land Acquisition Costs are known.

RELEASE OF PUBLIC INFRASTRUCTURE WORKS SECURITIES

100. Provided that there are no outstanding liens or other claims with respect to the Public Infrastructure Works and provided that the Owners are in compliance with the provisions of this Agreement and has satisfied all provisions of the *Construction Act*, R.S.O. 1990, c. C.30, as amended, the Town shall authorize no more than five (5) interim reductions in the Public Infrastructure Works Security down to an amount equal to ten (10%) percent of the total cost of the Public Infrastructure Works, as estimated by the Town or the Region on the basis of the prevailing costs thereof at such time, upon:

(1) receipt by the Town and the Region of a statutory declaration that all accounts with respect to the design, supply, installation, construction and maintenance of the Public Infrastructure Works (or applicable component thereof) have been paid and that there are no outstanding actions, causes of action, suits, liens, claims or demands with respect to the design, supply, installation, construction or maintenance of the Public Infrastructure Works; PROVIDED THAT, notwithstanding the foregoing, in respect of the Public Infrastructure Works, in the event that a lien is filed against the Lands in respect of the Public Infrastructure Works, the reduction(s) of the Public Infrastructure Works Security shall nonetheless proceed in the amount that is certified by the Consulting Engineer and approved by the Town less the amount of the lien plus twenty-five per cent (25%) of the lien amount, until such time as the lien is discharged and vacated at which time the balance of the reduction shall occur;

(2) receipt by the Town and the Region of a certificate from the Consulting Engineer and Landscape Architect certifying that the Public Infrastructure Works (or applicable component thereof) have been completed in accordance with the requirements of this Agreement, including the drawings, plans, reports and specifications listed in Schedule "C" attached to this Agreement;

(3) the Town and the Region granting Preliminary Acceptance of the Public Infrastructure Works (or applicable component thereof); and,

(4) the Town confirming that all cash deposits are in full amount as required by this Agreement.

101. The minimum ten percent (10%) holdback as per Section 100 in the amount of the Public Infrastructure Works Security, as provided for in this Agreement, shall be released by the Town within 30 days following the issuance of a Certificate of Assumption.

102. A suitable amount will be held back on the Public Infrastructure Works Security provided in this Agreement to cover the costs of services completed by the Region that are covered under time and material basis in accordance with the latest requirements of the Region's Public Works Design, Specifications and Procedures Manual.

103. The amount of TWENTY THOUSAND DOLLARS ($20,000.00) shall be held in the Public Infrastructure Works Security until the issuance of a Certificate of Assumption by the Town to serve as protection for the private wells in the zone of influence of the Public Infrastructure Works.

104. To secure a reduction in the Public Infrastructure Works Security, the Owners shall provide to the Town a request in writing and shall provide sufficient information for the General Manager to determine whether a reduction may be authorized in accordance with the provisions of this Agreement.

105. Upon the issuance of the Certificate of Assumption by the General Manager, the Town shall release the Public Infrastructure Works Security, or any remaining part thereof, in such amounts and upon such conditions as determined by the Town.

106. Until all of the Public Infrastructure Works have been completed and the Certificate of Assumption has been issued by the General Manager the Town or the Region may review the estimated cost of the design, supply, installation, construction and maintenance of the Public Infrastructure Works to be completed and, if necessary, may adjust the estimated cost thereof in accordance with the current cost estimates thereof at such time. If the estimated cost of the Public Infrastructure Works is increased as a result of the review and adjustment, the Owners shall, within thirty (30) days, deposit with the Town a letter of credit, in a form satisfactory to the Town or the Region, as the case may be, in an amount equal to the said increase and the said letter of credit shall be held upon the same terms and conditions as the Public Infrastructure Works Security. If the Owners fail to deposit the said letter of credit, if and when required, the Town or the Region shall be entitled to stop all construction on the Public Infrastructure Works and on the Lands and refuse to grant any approval, acceptance or grant any assumption until such failure is remedied.

INSURANCE

107. Prior to commencing any work of any nature on the Future Public Road/SWM Lands and Intersection Lands or any lands on which the Public Infrastructure Works are to be constructed, the Owners shall insure against all damages or claims for damage with an insurer satisfactory to the Town and the Region, and the Owners shall keep such insurance in full force and effect until acceptance of all of the Public Infrastructure Works, the enactment of a by-law by Town Council dedicating and/or making the Future Public Road a public highway and an issuance of a Certificate of Assumption by the General Manager. The insurance policy or policies shall comply with all of the following requirements:

(1) The minimum limits shall be Five Million Dollars ($5,000,000.00) all inclusive;

(2) There shall not be an exclusion for blasting;

(3) The insurance policy or policies shall include the Town and the Region as insured parties;

(4) The insurance policy or policies shall not be cancelled unless notice has been sent by registered mail to the Town and the Region at least thirty (30) days in advance of the cancellation date;

(5)

a) It is the obligation of the Owners to process any claim in the first instance. Failure by the Owners to process a claim in an expeditious manner shall result in the Town processing the claim in accordance with this Agreement;

b) If the policy or policies contain a deductible clause, the Owners shall post an additional cash deposit with the Town in the amount of the deductible. The Owners agree to pay any claim made against the Town in an amount less than the deductible amount, authorizes the Town to retain an independent adjuster to investigate claims less than the amount of the deductible and authorizes and directs the Town to pay such claims as are deemed valid by the adjuster from the deductible in the event that the Owners fail to do so. The Town shall use its best efforts to assist in the investigation of any claim by the adjuster and to provide any information required to resolve such claim. Lastly, the Owners shall be responsible for all adjustment service costs and shall maintain the cash deposit in the amount of the deductible until the Securities is released in accordance with this Agreement;

c) The insurance policy shall be in a format satisfactory to the Town and Region and shall be issued by an insurer satisfactory to the Town and Region;

(6) If the Owners fail to keep the insurance policy or policies in full force and effect, the Town and the Region shall be entitled to stop all work on the Public Infrastructure Works and to refuse to grant any approval or acceptance or issue any Certificate of Assumption until such failure is remedied;

(7) The issuance of the insurance policy or policies shall not be construed as relieving the Owners from responsibility for other or larger claims, if any, for which it may be held liable; and,

(8) Where cash is deposited with the Town pursuant to this Agreement, the Owners agree that the Town shall not be required to pay to the Owners any interest on the amount received.

PAYMENT OF EXISTING UTILITY CHARGES

108. The Owners agree to be responsible for all streetlight energization/connection and ongoing electricity utility costs for all of the streetlights constructed on the Future Public Road/SWM Lands up until Preliminary Acceptance. The ongoing utility costs will be a prorated amount of the electricity costs associated with the unassumed road streetlighting. This will be calculated by dividing the kilowatt-hour consumption (energy consumption X 12 hours a day X days per year that streetlights are operational) for the unassumed road streetlighting by the total kilowatt-hour consumption for all streetlights that exist as of December 31st of each year, multiplied by 100 to determine the percentage of consumption of the Town's streetlight portfolio. This percentage is then applied to the total annual cost incurred by the Town for all streetlights to determine the electricity cost of the unassumed streetlights. The Town shall provide an invoice of the streetlight utility costs and/or associated energization/connection fees to the Owners, and the Owners shall pay the Town the said costs within fifteen (15) Business Days of the date of the invoice. If the Owners fail to pay the said costs then the Town shall be entitled to use all or any part of the Securities provided in this Agreement to pay the cost thereof.

PART FOUR – AREA SPECIFIC DEVELOPMENT CHARGE CREDITS, REMITTANCES AND CREDIT BALANCE

109. The Town shall bring forward and enact the Area Specific Development Charge By-law (which shall include, for clarity, the Recoverable Capital Cost of the Public Infrastructure Works and the Land Acquisition Costs) as soon as reasonably possible following the date of this Agreement And, subject to paragraph 122 shall keep same in force until the Capital Costs and Land Acquisition Costs are reimbursed in full to the Owners via Credits or reimbursements, as set out in this Agreement. This Agreement shall be conditional upon such Area Specific Development Charge By-law being enacted and not appealed, or all appeals of such by-law being finally disposed of.

110. Notwithstanding anything else in this Agreement, ASDC Credits and ASDC Remittances shall be administered as set out in this Part of the Agreement.

111. Upon the enactment of the ASDC By-law, the Owners are eligible for ASDC Credits and ASDC Remittances to a maximum of the ASDC Credit Balance, subject to paragraphs 112, 118 and 121 of this Agreement. The ASDC Credits and ASDC Remittances shall apply only to those Public Infrastructure Works identified as the Town's Works in this Agreement and in accordance with the ASDC By-law (including the Capital Cost and Land Acquisition Costs).

112. Subject to paragraph 117, the Owners shall be permitted to redeem the ASDC Credits described in this Part to reduce the Area Specific Development Charges otherwise payable by the Owners for the development within the Benefiting Area. The amount of the redeemed ASDC Credits shall be the amount of the Area Specific Development Charges otherwise payable by the applicable Owner at the time that the ASDC would otherwise be payable and must be accompanied by the Trustee's certificate confirming the amount of the Redeemable ASDC Credit the applicable Owner is eligible for and indicating that the subject Owner is in good standing with the Trustee. Redeemable ASDC Credits provided by the Town shall reduce the ASDC Credit Balance. No further ASDC Credits may be redeemed by the Owners if the ASDC Credit Balance is zero or less than zero.

113. The Trustee shall advise the Town in writing as to the distribution and allocation of the ASDC Credits amongst the Owners who are then in good standing under this Agreement and such ASDC Credits shall be distributed to such Owners and allocated accordingly. The Town shall apportion and allocate such ASDC Credits as directed in writing by the Trustee, and the Town shall not be responsible for the proportionate distribution of the ASDC Credits amongst the Owners. Prior to the granting of any ASDC Credits or payment of any ASDC Remittances, the Town shall request, and the Trustee shall provide, written notice as to the distribution of such ASDC Credits amongst the Owners, or, in the alternative, the direction to pay such ASDC Credits to the Trustee for distribution amongst the Owners. Arrangements for the redistribution of such ASDC Credits or ASDC Remittances amongst the Owners are the sole responsibility of the Owners through the Trustee. The decisions and directions of the Trustee shall be final, and the Town shall not become involved in any way with disputes between individual Owners and the Trustee. The parties acknowledge and agree that the ASDC Credits shall be "pooled" among the Owners, such that an Owner shall be entitled to ASDC Credits as directed by the Trustee and not necessarily based on its pro-rata share of the Capital Costs.

114. ASDC Credits may not be applied to development charges related to growth-related infrastructure recovered pursuant to any other development charges by-laws in effect in the Town.

115. The ASDC Credit shall only be available with respect to Area Specific Development Charges imposed upon development of the lands subject to this Agreement and may only be applied against the Recoverable Capital Cost, and not to any other lands owned by the Owners or any one of them.

116. The Owners acknowledge and agree that the entitlement to an ASDC Credit shall accrue to a successor in title to an Owner, to be distributed by the Trustee in the event that title to either or both of the Owners' Lands are transferred prior to entitlement to all or part of an ASDC Credit. The Town shall not be required to reconcile the ASDC Credits between the Owners; reconciliation of this amount as between the Owners, or any successors in title, shall be the responsibility of the Trustee.

117. The Owners acknowledge and agree that any Public Infrastructure Works which are temporary in nature, such as, but not limited to, temporary access roads, temporary turning circles and road alignments, temporary road connections, temporary interchange and temporary storm ponds, shall not be considered Recoverable Capital Costs and the Town shall not provide ASDC Credits nor ASDC Remittances for same, unless such temporary works were required in connection with the construction of the permanent Public Infrastructure Works. Except as aforesaid, all such costs shall be at the sole cost and expense of the Owners.

118. ASDC Credits and ASDC Remittances available to Owners pursuant to this Agreement shall only be given to the extent that the Public Infrastructure Works have been completed and paid for, or secured, by the Owners No ASDC Credits or ASDC Remittances shall be accrued or be given to the Owners for any Public Infrastructure Works which are not yet complete and paid for, or secured, by the Owners, or as otherwise agreed to by the Town.

119. The Town shall collect ASDC's related to Public Infrastructure Works and hold these collections in an ASDC Reserve Account.

120. Following the enactment of the Area Specific Development Charge By-law with respect to the Public Infrastructure Works, the Town will provide the Trustee, on an annual basis, a financial summary (the "**Financial Summary**") outlining:

(1) Recoverable Capital Cost;

(2) Redeemable ASDC Credits redeemed to-date;

(3) ASDC Remittances provided to-date;

(4) ASDC Credit Balance;

(5) ASDC Reserve Account balance;

(6) Recoverable Capital Costs completed and paid for, or secured, by the Owners; and

(7) Any portion of the Recoverable Capital Cost that has been paid for by the Town.

121. If, upon providing the Financial Summary, the ASDC Credit Balance is greater than zero or in a positive balance, the Town shall reimburse itself from the ASDC Reserve Account for any portion of the Recoverable Capital Cost that has been paid for by the Town, as set out in the Town's Financial Summary, and not reimbursed for by the Owners. Any reimbursements shall reduce the ASDC Credit Balance. Subject to paragraph 106, the Town shall then pay to the Trustee, within sixty (60) days following the issuance of the applicable Financial Summary, any ASDC Remittance that is available from the ASDC Reserve Account to a maximum of the ASDC Credit Balance. Any ASDC Remittances provided by the Town shall reduce the ASDC Credit Balance.

122. If, per the Trustee, no further ASDC Credits are owing, the Town shall do the following until such time as either the Owners' ASDC Credit Balance reaches $0, or the end of a period of twenty-five (25) years from the date the ASDC By-law was enacted, whichever is earlier:

(1) make additional ASDC Remittances, from the ASDC Reserve Account, to the Trustee, subject to paragraph 106, within sixty (60) days of the Town receiving an ASDC payment from any Benefiting Owner or Owner;

(2) provide Financial Summaries to the Trustees annually; and,

(3) renew the ASDC By-law, at a minimum, every five (5) years, where the cost of renewal has been provided by the Trustee on behalf of the Owners.

123. Following the issuance of the Certificate of Assumption, the Town shall calculate the final Capital Cost. Should the final Capital Cost vary from the Recoverable Capital Cost by an amount equal to or greater than ten thousand dollars ($10,000), the Town shall, in consultation with the Owners initiate an ASDC By-law update to establish revised ASDC rates to collect the final Capital Cost from the Benefiting Owners. For clarity, no part of

the ASDC, or ASDC By-law update, shall apply to any of the Region's Works, including sanitary and water sewers, or work on the Intersection Lands.

PART FIVE –TRUSTEE RESPONSIBILITIES

TRUSTEE

124. The Trustee shall:

(1) keep all ASDC Credits, Public Infrastructure Works Security and Land Acquisition Security current and manage on behalf of the Owners all reductions, payments, defaults, releases and return of securities posted pursuant to this Agreement;

(2) provide one or more letters of credit to the Town and apportion the security requirements under this Agreement as between the Owners;

(3) ensure that all Public Infrastructure Works Security and Land Acquisition Securities have been posted;

(4) advise the Town from time to time, or upon request, which parties are required to post Public Infrastructure Works Security/Land Acquisition Security, which parties have complied with their obligation to do so, and which parties are in good standing under the Cost Sharing Agreement; and

(5) provide the Town a certificate confirming the amount of the ASDC Credit the Owners are eligible for and whether the Owner applying for the ASDC Credit is in good standing with the Trustee.

125. The Town shall be entitled to rely upon the Trustee's advice regarding the status of the ASDC Credits, Public Infrastructure Works Security and the Land Acquisition Security, including but not limited to all reductions, payments, defaults, releases and return of the Public Infrastructure Works Security and the Land Acquisition Security posted and the Town shall not be required to inquire further as to the validity, accuracy or authority of such advice

126. In the event that the Town or the Region receives an application for development approval from any Benefiting Owner for lands within the Benefiting Area prior to the coming into force of the ASDC By-law, the Trustee, on behalf of the Owners, shall be solely responsible for ensuring that such Benefiting Owner pay its proportionate share of the Capital Cost of the Public Infrastructure Works and the Land Acquisition Costs as would have been required had the ASDC By-law been in force at the time of its application for development approval, provided that the Town shall impose the Development Condition to the extent permitted by the Town's Secondary Plan policies, as per paragraph 11(2) of this Agreement.

PART SIX – DEFAULTING OWNERS

127. If the Owners do not provide to the Town the full amount of the Public Infrastructure Works Security or the Land Acquisition Security required to be provided by such Owners under Part Three of this Agreement within the time provided therein or if any Owners are otherwise in default of any of the Owners' obligations pursuant to this Agreement, then the Town shall give notice of such default to the Owners.

128. Failure by the Defaulting Owner(s) to comply with any of the provisions of this Agreement including any of the schedules attached hereto shall, until such time that the Defaulting Owner(s), have cured the failure, entitle the Town, in its sole discretion, to take any or all of the following steps:

(1) stop the construction of the Public Infrastructure Works;

(2) cash any securities deposited with the Town or refuse to agree to reductions in, or release of, any securities deposited with the Town pursuant to this Agreement;

(3) refuse to grant preliminary acceptance for the Public Infrastructure Works and/or assume the Public Infrastructure Works;

(4) refuse to issue Development Approvals for the Defaulting Owner(s);

(5) seek specific performance of this Agreement before the Superior Court of Justice; and

(6) any other step that the Town is entitled to take under this Agreement or at law.

PART SEVEN – INDEMNIFICATION

INDEMNITY

129. The Owners shall comply with all provisions of the *Construction Act*, R.S.O. 1990, c. C.30, as amended including retention of al holdbacks and funds required. The Owners shall at their own expense, within ten (10) days of receiving written notice from the Town or the Region to do so, pay or otherwise discharge or vacate any lien, charge or claim brought or registered pursuant to the *Construction Act*, R.S.O. 1990, c. C.30, as amended (whether perfected or not) which affects any lands owned by the Town, the Region, or in which the Town or the Region has an interest, and which arise out of the performance of this Agreement.

130. In consideration of the Town and the Region entering into this Agreement at the request of the Owners in order to advance construction of the Public Infrastructure Works, the Owners shall defend, indemnify and save harmless the Town, its Mayor, the Region, its Chair, their respective Council Members, employees, elected officials, contractors, subcontractors and agents against all Claims which may arise either directly or indirectly by reason of the Town and the Owners entering into this Agreement, including, but not limited to Claims arising out of or in any way related to:

(1) a breach by the Owners or the Trustee of its obligations under this Agreement;

(2) the construction, installation or maintenance of the Public Infrastructure Works and any related work, undertaken by, or on behalf of the Owners, and in particular suits and claims pursuant to the *Construction Act*, R.S.O. 1990, c. C.30, as amended. This indemnity does not extend to the negligence of the Town or the Region, its employees, agents or contractors.

(3) the acquisition or expropriation of the lands for the Public Infrastructure Works;

(4) the Town denying a Development Approval or imposing a condition to a Development Approval on any lands within the Benefiting Area relating to the Public Infrastructure Works, Capital Costs, Land Acquisition Costs or Cost Sharing Agreement;

(5) the Town's reliance upon the Trustee's certificate;

(6) any Town stoppage of the Public Infrastructure Works;

(7) the cost of the Public Infrastructure Works, including Capital Costs or Land Acquisition Costs;

(8) any provision for reimbursement, or actual reimbursement, by the Owners' Trustee;

(9) suits, claims or orders (including orders of the Ministry of Environment, Conservation and Parks) of any nature arising out of or connected with any form of environmental contamination and/or damage existing on the Future Public Road/SWM Lands and any lands on which the Public Infrastructure Works are being constructed and any form of environmental contamination and/or damage caused by or attributable to the actions or inactions of the Owners on the Future Public Road/SWM Lands and any lands on which the Public Infrastructure Works are being constructed. With respect to the Future Public Road/SWM Lands, this indemnity expires upon the Town issuing a Certificate of Assumption and passing a by-law dedicating and/or making the Future Public Road/SWM Lands a public highway. With respect to lands that contain the Region's Works, this indemnity expires upon the Region's final acceptance of the Region's Works;

(10) any preliminary or final designs, cost estimates, plans, drawings, reports or studies or approvals related to the Public Infrastructure Works that were prepared, completed, submitted or applied for by the Town or any consultant or agent of the Town ("**Designs and Approvals**") including any changes to Designs and Approvals made by the Town, Owner(s) or approval authorities; and

(11) all indirect damages, consequential damages, special damages, business losses, economic losses, property damage, and personal injury, including without restriction injuries resulting in death;

PROVIDED THAT the Owners shall not be required to indemnify, defend or save harmless the Town and Region for Claims arising out of or in any way related to the foregoing if such Claims are the direct result of the fraud or negligence of the Town, Region, its Mayor, Council Members, employees or elected officials.

131. On each occasion when Litigation is commenced by or against the Town or Region:

(1) related to the matters described in paragraph 130; or

(2) to defend or enforce the imposition of this Agreement, the Development Condition or cost-sharing upon Benefiting Owners;

the Owners shall participate in the Litigation, at their sole cost, to support the Agreement and shall reimburse the Town and Region for all costs incurred by the Town and Region up to a maximum of Three Hundred Thousand Dollars ($300,000.00). The Owners shall fund the Town and/or Region's participation in the Litigation by providing a Letter of Credit in the amount of Three Hundred Thousand Dollars ($300,000.00) at the commencement of the Litigation, which may be drawn on by the Town or Region for its Litigation Costs. If it appears that the cost of Litigation will likely exceed Three Hundred Thousand Dollars ($300,000.00), then the Owners may, at their sole option:

(1) provide the Town and/or Region with additional funds in the form of a Letter of Credit within ten (10) Business Days of a written request from the Town or Region; or

(2) require that the Town and/or Region discontinue the Litigation at no cost to the Town or Region.

132. Notwithstanding the foregoing, where the Litigation was for the benefit of the Owners to defend or enforce the imposition of this Agreement and/or cost sharing upon other owners in the Benefiting Area, the Owners may, at any time, through the Trustee advise the Town in writing that they do not wish to fund the Town's costs related thereto, ("**Right to Discontinue**").

133. Where the Owners, through the Trustee, exercise their Right to Discontinue:

(1) the Town may rely on the Trustee's exercise of the Right to Discontinue regardless of any objection(s) by individual Owner(s);

(2) the Town is under no obligation to continue with the Litigation;

(3) if the Town does not continue with the Litigation, the Owners shall reimburse the Town for all Litigation Costs, including without restriction Litigation Costs related to settling, withdrawing from, abandoning or otherwise bringing the Litigation to an end; and

(4) if the Town continues with the Litigation, the Owners shall reimburse the Town for all Litigation Costs incurred by the Town up to the time the Owners exercise the Right to Discontinue, including without restriction the portion of any future adverse costs awarded against the Town related to costs incurred as a result of steps taken in the Litigation prior to the exercise of the Right to Discontinue.

134. The Town and/or the Region has the right to withhold and/or use any portion of the Securities to indemnify the Town or Region for any legal fees that the Town or Region incurs to defend its interest against any suit or claim of any nature arising out of or connected with the carrying out of the Owners' obligations under this Agreement, or the

entering into of this Agreement.

135. The Town or the Region may use all or part of the Securities to pay, discharge, vacate and obtain and register a release of all charges, claims, liens, and all preserved or perfected liens, made, brought, or registered pursuant to the *Construction Act*, R.S.O. 1990, c. C.30, as amended which affect any lands owned by the Town or the Region, or in which the Town or the Region has an interest, in the event that the Owners default in respect of their obligations in Section 84 of this Agreement.

INDEMNITY RE ASDC BY-LAW AMENDMENTS

136. In the event that the Town Council has enacted an amendment to the ASDC By-law for the purpose of recovering increased Capital Costs of the Public Infrastructure Works by way of development charges in accordance with this Agreement and that amendment is the subject of litigation:

(1) The Owners agree to indemnify and save harmless the Town, its Mayor, Council Members, employees, elected officials, contractors, subcontractors and agents against all actions, causes of action, suits, claims and demands whatsoever, which may arise either directly or indirectly by reason of the Town enacting the amending ASDC By-law.

(2) Where any litigation is commenced against the Town whether before any court of law or any administrative tribunal, including the LPAT and is the result of the Town Council enacting the amending ASDC By-law, the Owners shall participate in the litigation, at their sole cost, and shall support the amending development charges by-law. If the Owners refuse to participate in the litigation to support the amending ASDC By-law, the Town may choose not to participate in the litigation to support the amending ASDC By-law. In the event that the ASDC By-law is struck down in its entirety by the LPAT, the parties agree that the Town shall endeavor to use its commercially reasonable best efforts to recover the Capital Cost from the Benefiting Owners on behalf of the Owners by means of, inter alia, the imposition the Development Condition in accordance with paragraph 11(2).

(3) The Owners may elect to fund all of the Town's costs incurred by the Town in defending the Town's imposition of the requirement. Where the Owners elect not to fund all of the Town's costs incurred by the Town in defending the amending development charges by-law and/or fail to provide security satisfactory to the Town in respect of such Town costs, the Town may at its discretion elect not to defend the Town's enactment of the amending ASDC By-law.

WAIVER AND RELEASE

137. The Trustee, and each Owner hereby release the Town, its Mayor, the Region, its Chair, their respective Council Members, employees, elected officials, contractors, subcontractors, representatives and agents from any liability for Claims of any kind arising out of or in connection with:

(1) recovery, or reimbursement for any costs or securities related to this Agreement, the Public Infrastructure Works, Capital Costs or Land Acquisition Costs from Benefiting Owners;

(2) Development Approvals for Benefiting Owners, including without restriction, the failure to include conditions related to this Agreement, the Public Infrastructure Works, Capital Costs or Land Acquisition Costs;

(3) Designs and Approvals including any changes to Designs and Approvals made by the Town, the Region, Owner(s) or approval authorities; and

(4) any delay in the construction, preliminary acceptance or assumption of the Public Infrastructure Works, including without restriction, delays in acquiring the lands necessary for the Public Infrastructure Works;

PROVIDED THAT the foregoing release shall not be applicable to Claims arising out of or in any way related to the foregoing if such Claims are the direct result of the fraud or

negligence of the Town, the Region, the Town's Mayor, Council Members, employees or elected officials.

138. In addition to, and without limitation to the release of liability set out in paragraph 137, the Trustee and the Owners hereby release the Town, the Region, the Town's Mayor, Council Members, employees, elected officials, contractors, subcontractors, representatives and agents from anything referred to in Section 139.

139. Any liability for all other Claims of any kind arising out of or in connection with this Agreement or the Public Infrastructure Works except where said Claims are the direct result of the fraud or negligence on the part of the Town, its Mayor, Council Members, employees or elected officials.

DISPUTE RESOLUTION

140. The Town, the Region and the Owners agree that they shall use their commercially reasonable best efforts to resolve any disputes regarding the Public Infrastructure Works or otherwise arising from this Agreement by alternative dispute resolutions (mediation, arbitration, etc.) prior to commencing court proceedings in respect thereof.

PART EIGHT – MISCELLANEOUS

WAIVER OF CLAIMS INCONSISTENT WITH AGREEMENT

141. Each Owner and the Trustee hereby acknowledge that this Agreement is entered into and executed for the purpose of having the Town or Region act in reliance on the covenants contained herein and each Owner and Trustee waives any right or claim which it now has or may hereinafter acquire which is inconsistent with the terms of this Agreement.

NO PARTNERSHIP OR JOINT VENTURE

142. The Town and/or the Region, as applicable, is not a partner of the Owners nor party to a joint venture with the Owners and nothing herein shall be construed to make the Town or Region a partner or joint venturer or to impose any liability on the Town or the Region as partner or joint venturer.

WARRANTY AS TO CAPACITY

143. Each Owner represents and warrants to the Town and the Region as follows:

(1) Each Owner is a corporation validly subsisting under the laws of Ontario and has full corporate power and capacity to enter into this Agreement and any documents arising from this Agreement.

(2) All necessary corporate action has been taken by each Owner to authorize the execution and delivery of this Agreement.

(3) Each Owner owns the lands described in Schedule "A" as being owned by that Owner.

JOINT AND SEVERAL RESPONSIBILITY

144. The individual Owners and Trustee agree that they are both jointly and severally liable for all costs, and obligations contained in this Agreement.

TAXES

145. All amounts payable pursuant to this Agreement are exclusive of taxes and the Owners shall pay all applicable taxes (if any) in addition to the amounts set out herein.

INTERPRETATION

146. All obligations contained in this Agreement, although not expressed to be covenants, shall be deemed to be covenants.

147. Whenever a statement or provision in this Agreement is followed by words denoting inclusion or example and then a list of or reference to specific items, such list or reference shall not be read so as to limit the generality of that statement or provision, even if words such as "without limiting the generality of the foregoing" do not precede such list or reference.

148. This Agreement shall be construed with such changes in gender and number as the context may require.

149. The headings and paragraph numbers in this Agreement shall be deemed to be inserted for convenience of reference only and shall not affect the construction or interpretation of this Agreement.

150. References in this Agreement to any statute, regulation or by-law or any provision thereof include such statute, regulation or by-law as amended, revised, re-enacted or consolidated from time to time and any successor thereto.

151. Every provision of this Agreement by which the Owners are obligated in any way to perform any work or do any act shall be deemed to include the words "at the expense of the Owners" unless the context otherwise requires.

152. A word interpreted in the singular has a corresponding meaning in the plural and vice versa.

BINDING UPON SUCCESSORS

153. The parties agree that this Agreement shall be enforceable by and against the parties, their heirs, executors, administrators, successors and assigns and that this Agreement and all the covenants by them shall run with the lands owned by the Owners for the benefit of the Town and the Region.

154. No Owner shall transfer title to all or any part of the lands described in Schedule "A", unless the purchaser of such lands agrees with the Town and the Region to assume the obligations of that Owner pursuant to this Agreement and provided further that such purchaser delivers such payment or other security as the Trustee may require in order to secure such purchaser's obligations under this Agreement. Any conveyance in contravention of this provision shall be null and void. Following assumption by any assignee, the Owner herein shall be released of any further obligations and liability.

REGISTRATION

155. The parties hereby consent to the registration of this Agreement against title to the Owners' Lands.

156. Prior to the registration of this Agreement, the Owners shall obtain and deliver to the Town postponements in electronic form for any and all encumbrances of the Owners' Lands postponing such encumbrance(s) and subordinating it in all respects to this Agreement in favour of the Town and Region.

RELEASE OF AGREEMENT

157. The Town and Region agree that, upon completion of the construction of the Public Infrastructure Works to the satisfaction of the Town and Region and upon fulfillment of an Owner's obligations under this Agreement, the Town and Region shall deliver to such Owner an executed release from the terms of this Agreement.

TIME OF THE ESSENCE

158. Time shall be of the essence of this Agreement and each of its provisions.

SEVERABILITY AND JURISDICTION

159. This Agreement shall be interpreted under and is governed by the laws of the Province of Ontario. If any ambiguity is found in the Agreement, the ambiguity shall be resolved in favour of the interpretation that is most consistent with the laws of the Province of Ontario.

160. If any term, provision or part of a term or provision of this Agreement is determined to be fully or partially invalid, illegal, void, or unenforceable, all other conditions and provisions of this Agreement shall nevertheless remain in full force and effect. Upon such determination that any term or provision or part of a term or provision is invalid, illegal or incapable of being enforced, the parties hereto shall negotiate in good faith to modify the term so as to effect the original intent of the parties as closely as possible in a manner consistent with the principles of this Agreement.

161. The Owners acknowledge that the Town and the Region have the lawful authority to proceed with and enter into this Agreement. The Owners represent that they have all requisite power and authority to enter into this Agreement and to bind the Owners' lands to the terms of the Agreement and that this Agreement does not conflict with any other Agreement or agreement to which the Owners are a party or by which they are bound.

162. It is agreed and acknowledged by the parties that each is satisfied as to the jurisdiction of each party to enter into this Agreement. The parties agree that they shall not question the jurisdiction of any party to enter into this Agreement nor question the legality of any portion hereof, nor question the legality of any obligation created hereunder and the parties, their successors and assigns are and shall be estopped from contending otherwise in any proceeding before a Court of competent jurisdiction or any administrative tribunal.

163. The Owners shall be and are hereby estopped from asserting in any proceeding at any time and in any forum that the Town or Region does not or did not have lawful authority to enter into this Agreement, or that any of the terms of this Agreement are not within the jurisdiction or capacity of the Town or Region to enter into. The Owners acknowledge that they have voluntarily entered into this Agreement.

NOTICES

164.

(1) Any notice, demand, acceptance or request required to be given hereunder in writing, shall be deemed to be given if either personally delivered or mailed by registered mail, postage prepaid, (at any time other than during a general discontinuance of postal services due to a strike, lockout or otherwise) and addressed to the Owners, with a copy provided to the Trustee as provided below, at the addresses set out in Schedule "H", or such change of address as the Owners have by written notification forwarded to the Town;

and to the Town as follows:

Town of Caledon
6311 Old Church Road
Caledon, Ontario
L7C 1J6

Attention: General Manager, Finance and Infrastructure Services

or such change of address as the Town has by written notification forwarded to the Owners.

to the Trustee as follows:

Simpson Road Landowners Group Inc.
c/o 7501 Keele Street, Suite 200
Vaughan, Ontario
L4K 1Y2

Attention: Helen Mihailidi
Phone: 905-760-2600 ext. 277
Email: hmihailidi@bratty.com

and to the Region as follows:

Region of Peel
10 Peel Centre Drive, Suite A
Brampton, Ontario

L6T 4B9

Attention: Director, Development Services

or such change of address as the Region has by written notification forwarded to the Owners.

(2) Any notice shall be deemed to have been given to and received by the party to which it is addressed:

a) if delivered, on the date of delivery; or

b) if mailed, then on the fifth day after the mailing thereof.

ENTIRE AGREEMENT

165. This Agreement constitutes the entire agreement between the parties with respect to the subject matter of this Agreement and supersedes any prior agreements, undertakings, declarations, representations and understandings between the parties, written or verbal, in respect thereof.

166. No modification, variation, amendment or termination by mutual consent of this Agreement, and no waiver of the performance of any of the responsibilities of the parties shall be effective unless such action is taken in writing by instrument or document executed by the parties, excepting that the foregoing shall not apply where an express provision of this Agreement permits such modification, variation, amendment or termination pursuant to any other means, and in such instance the said provision shall apply. All representations and understandings of the parties with respect to the lands owned by the Owners and the subject matter of this Agreement are contained in this Agreement, and there are no other representations or understandings between the parties.

COVENANT

167. The covenants, agreements, conditions and undertakings contained in this agreement on the part of the Owners shall run with the lands on which it is registered and shall be binding upon them and upon the Owners' successors and assigns.

COUNCIL DISCRETION

168. Notwithstanding any other provision of this Agreement, the Owners acknowledge and agrees that none of the provisions of this Agreement is intended to operate, nor shall have the effect of operating, in any way to fetter the discretion of the municipal council of the Town and the Region in its determinations. The Owners acknowledge and agree that they do not expect and shall not receive any advantageous planning or other consideration from the Town or the Region by virtue of having entered into this Agreement or by virtue of the existence of this Agreement.

AUTHORITY

169. The Owners shall not object to or contest the jurisdiction, authority or right of the Town or the Region to enter into this Agreement or to enforce any provision of this Agreement.

INDEPENDENT LEGAL ADVICE

170. The Owners acknowledge that, prior to executing this Agreement, they have obtained or have had a reasonable opportunity to obtain independent legal advice with respect to this Agreement and the easements, covenants and restrictions set out in this Agreement.

ASSIGNMENT OF THE AGREEMENT

171. The Owners may assign this Agreement only with the consent, in writing, of the Town and the Region. Notwithstanding the foregoing, any Owner may transfer title to all or any part of the lands described in Schedule "A" if the transferee of such lands agrees with the Town to assume the obligations of the applicable Owner pursuant to this Agreement and provided further that such transferee delivers such payment or other security as the

Trustee may require in order to secure such transferee's obligations under this Agreement.

BUSINESS AGREEMENT

172. This Agreement is made for business purposes and is a "business agreement" as defined under the *Limitations Act, 2002*, S.O. 2002, c. 24, as amended. Further, no limitation periods set out in the *Limitations Act, 2002*, S.O. 2002, c. 24, as amended other than the ultimate limitation period set out in section 15 of the *Limitations Act, 2002*, S.O. 2002, c. 24, as amended shall apply to this Agreement and to the obligations imposed herein.

GOVERNING LAW

173. This Agreement shall be governed by and construed in accordance with the laws of Canada and the Province of Ontario.

REMEDIES

174. The rights and remedies provided for in this Agreement are in addition to and shall not limit the ability of the Town and the Region to take such actions as may be available to it to ensure compliance with this Agreement.

175. Failure by the Owners to comply with any of the provisions of this Agreement including any of the schedules attached hereto ("**Defaulting Owner**") shall, until such time that the Defaulting Owner has cured the failure, result in:

(1) the Town and/or the Region, in its sole discretion, taking all necessary steps to avoid incurring further expense, including not proceeding with the Public Infrastructure Works or stopping the Public Infrastructure Works;

(2) the Town, in its sole discretion, revoking any stormwater servicing allocation to the Defaulting Owner's Lands or refusing any conveyances from or granting any conveyances to the Defaulting Owner;

(3) the Town or Region, as applicable, in its sole discretion, refusing to grant any approvals required by the Agreement;

(4) the Town, in its sole discretion, cashing any Securities deposited with the Town or refusing to agree to reductions in, or release of, any Securities deposited with the Town; and

(5) the Town and or the Region, in its sole discretion, refusing to grant Preliminary Acceptance of the Public Infrastructure Works and/or assuming the Public Infrastructure Works.

176. This Agreement prevails over all prior agreements to the extent of any inconsistencies or conflict.

FURTHER DOCUMENTS

177. The Town, the Region and the Owners shall execute such further documents and cause the doing of such acts and cause the execution of such further documents as are within their power as the Town, the Region or the Owners may reasonably request be done or executed, in order to give full effect to the provisions of this Agreement.

COUNTERPARTS

178. This Agreement may be executed in any number of counterparts and by different parties in separate counterparts and each of such counterparts shall be deemed to be an original document and such counterparts, taken together, shall constitute one and the same document. To evidence the fact that it has executed this Agreement, a party hereto may send a copy of its executed counterpart to all parties hereto by facsimile transmission or other electronic means. Such party shall be deemed to have executed and delivered this Agreement on the date it sent such facsimile transmission or other electronic signature. In such event, such party shall forthwith deliver to the other parties hereto an original

counterpart (copy) of this Agreement executed by such party.

IN WITNESS WHEREOF the parties have executed this Agreement.

THE CORPORATION OF THE TOWN OF CALEDON

Per: _____
Allan Thompson
Mayor

Per: _____
Laura Hall
Acting Town Clerk

We have authority to bind the Town.

THE REGIONAL MUNICIPALITY OF PEEL

Per: _____
John Hardcastle
Interim Director, Public Works, Development Services

Execution No. L03-2020-9408

I have authority to bind the Region purauant to By-law 32-2017, as amended.

ANATOLIA CAPITAL CORP.

Per: _____
Name: Bekir Elmaagacli
Title: Co-CEO

Per: _____
Name:
Title:

I/We have authority to bind the Corporation.

ARION SERVICES LTD.

Per: _____
Name: Domenico Saverino
Title: Director - President

Per: _____
Name:
Title:

I/We have authority to bind the Corporation.

counterpart (copy) of this Agreement executed by such party.

IN WITNESS WHEREOF the parties have executed this Agreement.

THE CORPORATION OF THE TOWN OF CALEDON

Per: _____
Allan Thompson
Mayor

Per: _____
Laura Hall
Acting Town Clerk

We have authority to bind the Town.

THE REGIONAL MUNICIPALITY OF PEEL

Per: _____
John Hardcastle
Interim Director, Public Works, Development Services

Execution No. 03-2020-9408

I have authority to bind the Region pursuant to By-law 32-2017, as amended.

ANATOLIA CAPITAL CORP.

Per: _____
Name: Bekir Elmaagacli
Title: Co-CEO

Per: _____
Name:
Title:

I/We have authority to bind the Corporation.

ARION SERVICES LTD.

Per: _____
Name: Domenico Saverino
Title: Director - President

Per: _____
Name:
Title:

I/We have authority to bind the Corporation.

SIMPSON ROAD LANDOWNERS GROUP INC.

Per: _____
Name: Helen Mihailidi
Title: A.S.O.

Per: _____
Name:
Title:

I/We have authority to bind the Corporation.

SCHEDULE "A"
OWNERS' LANDS

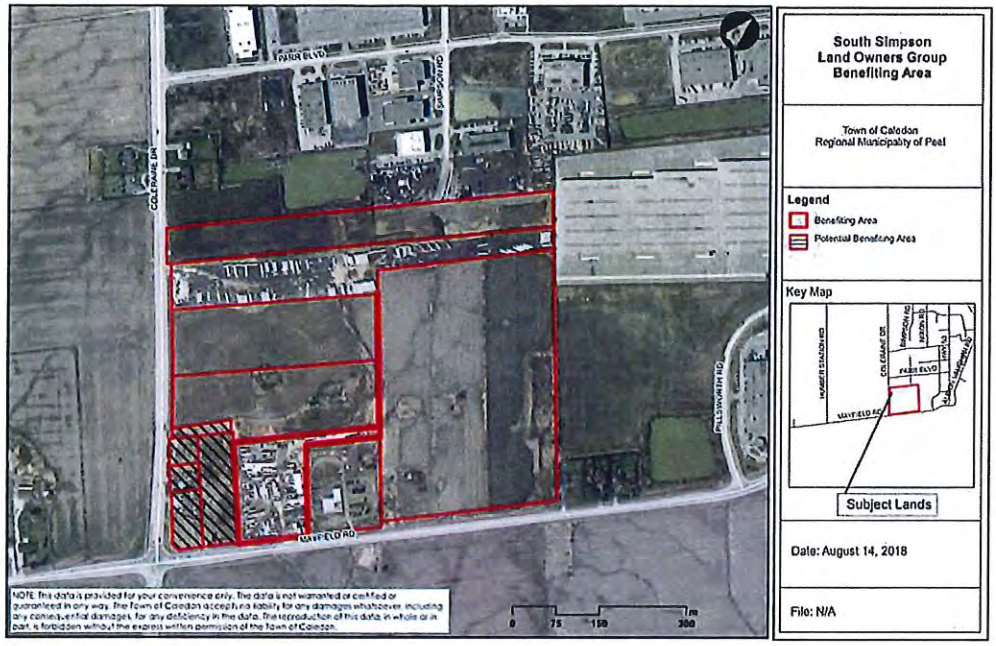
1. **ANATOLIA CAPITAL CORP.**

   PIN: 14350-0706 (LT) – Part Lot 1, Concession 6 (Albion), designated as Parts 1, 2, 5, 6, 9, and 10 on 43R-34749, Town of Caledon; Regional Municipality of Peel.

2. **ARION SERVICES LTD.**

   PIN: 14350-0542 (LT) – Part Lot 1, Concession 6 (Albion), as in RO1058982, except Part 1 on Expropriation Plan PR1156810, Town of Caledon; Regional Municipality of Peel.

SCHEDULE "B"
BENEFITING AREA (CONCEPTUAL)



SCHEDULE "C"
PUBLIC INFRASTRUCTURE WORKS – PLANS, DRAWINGS AND REPORTS

The following plans, drawings and reports shall form the set of construction plans, drawings and reports required for the completion of the Public Infrastructure Works as of the execution of this Agreement, and may be amended by the Region or Town from time to time, at their sole discretion, and each such amendment will be deemed to be fully part of this Schedule "C" and this Agreement:

SCHEDULE C1

Documents Provided by Owners

- Drawings:
  - Drawing No. SWM-1A, Simpson Road SWM Pond (Interim), prepared by Schaeffers, dated October 7, 2020;
  - Drawing No. SWM-2A, SWM Pond Sections SEC-1A TO SEC-5A, prepared by Schaeffers, dated October 7, 2020;
  - Drawing No. SWM-3, Control Flow Structure Details, prepared by Schaeffers, dated October 7, 2020;
  - Drawing No. SWM-4, Manholes, 9, 10 and 16 details, prepared by Schaeffers, dated October 7, 2020; and
  - Drawing No. SWM-5, Storm Outfall Detail, prepared by Schaeffers, dated October 7, 2020
- Reports:
  - Stormwater Management Pond Report-Simpson Road Extension-Proposed SWM Pond-Town of Caledon, prepared by Schaeffers, Revision No. 3.0, dated September 2020;
  - Proposed SWM Pond Operations and Maintenance Report, prepared by Schaeffers, Revision No. 1.0, dated September 2020;
  - Storm Drainage Design Chart for Circular Drains Flowing Full 5-Year Storm Event, prepared by Schaeffers, dated October 2, 2020;
  - Summary of Cost Estimate, prepared by Schaeffers, dated October 9, 2020; and
  - Review of Proposed SWM Pond, prepared by Forward Engineering, dated October 2, 2020

SCHEDULE C2

Documents To Be Provided by Owners

- Drawings:
  - TBD
- Reports:
  - TBD

SCHEDULE C3

Documents Provided by Owners

- Drawings:
  - Drawing No. SWM-1B, Simpson Road SWM Pond (Ultimate), prepared by Schaeffers, dated October 7, 2020;
  - Drawing No. SWM-2B, SWM Pond Sections SEC-1B TO SEC-6B, prepared by Schaeffers, dated October 7, 2020;
  - Drawing No. SWM-3, Control Flow Structure Details, prepared by Schaeffers, dated October 7, 2020;
  - Drawing No. SWM-4, Manholes, 9, 10 and 16 details, prepared by Schaeffers, dated October 7, 2020;
  - Drawing No. SWM-5, Storm Outfall Detail, prepared by Schaeffers, dated October 7, 2020;
  - Landscape Letter of Conformance, dated December 22, 2020, prepared by Adesso Design Inc. Landscape Architecture;
  - Letter of Credit Cost Estimate – SWM Pond, dated December 22, 2020, prepared by Adesso Design Inc. Landscape Architecture in the amount of $106,040.26;

- Landscape Drawing Schedule, December 22, 2020, prepared by Adesso Design Inc. Landscape Architecture;
- L-1, Tree Inventory and Preservation Plan, revision #10, dated December 22, 2020, prepared by Adesso Design Inc. Landscape Architecture;
- L-2, Tree Inventory and Preservation Plan, revision #10, dated December 22, 2020, prepared by Adesso Design Inc. Landscape Architecture;
- L-3, SWM Planting Plan, revision #10, dated December 22, 2020, prepared by Adesso Design Inc. Landscape Architecture;
- L-4, Details, revision #10, dated December 22, 2020, prepared by Adesso Design Inc. Landscape Architecture; and
- L-5, Naturalization & SWM Pond Specifications, revision #9, dated December 22, 2020, prepared by Adesso Design Inc. Landscape Architecture

•Reports:

- Stormwater Management Pond Report-Simpson Road Extension-Proposed SWM Pond-Town of Caledon, prepared by Schaeffers, Revision No. 3.0, dated September 2020;
- Proposed SWM Pond Operations and Maintenance Report, prepared by Schaeffers, Revision No. 1.0, dated September 2020;
- Storm Drainage Design Chart for Circular Drains Flowing Full 5-Year Storm Event, prepared by Schaeffers, dated October 2, 2020;
- Summary of Cost Estimate, prepared by Schaeffers, dated October 9, 2020;
- Review of Proposed SWM Pond, prepared by Forward Engineering, dated October 2, 2020; and
- Arborist Report, dated January 23, 2018, revised December 17, 2019, prepared by Adesso Design Inc. Landscape Architecture

Documents Provided by Town of Caledon

- Contract Drawings dated Nov. 20 unless noted otherwise (Total of 35 sheets):
  - Title Page
  - Drawing 1 – Legend
  - Drawing 2 – General Notes
  - Drawing 3 – Simpson Road Erosion & Sediment Control Plan
  - Drawing 4 – Simpson Road General Plan Above Ground
  - Drawing 5– Simpson Road General Plan Below Ground
  - Drawing 6 – Simpson Road Alignment
  - Drawings 7-8 – Simpson Road Removals
  - Drawings 9-11 – Simpson Road New Construction Plan and Profile dated Aug. 20
  - Drawing 12 – Mayfield Road New Construction Plan and Profile dated Aug. 20
  - Drawings 13-14 – Simpson Road Pavement Markings and Signs
  - Drawing 15 – Details
  - Drawing 16 – Simpson Road Water Distribution and Commissioning Plan
  - Drawing 17 – Sanitary Drainage Area Plan
  - Drawing 18 – Storm Drainage Area Plan
  - Drawing C1 - West Rainbow Creek Tributary Erosion & Sediment Control & Staging Plan dated 20/11/19
  - Drawings C2-C3 - West Rainbow Creek Tributary Plan and Profile dated 20/11/19
  - Drawing C4 - West Rainbow Creek Tributary Cross Sections dated 20/11/19
  - Drawing C5 - West Rainbow Creek Tributary Bankfull Sections dated 20/11/19
  - Drawing C6 - West Rainbow Creek Tributary Pool Profiles dated 20/11/19
  - Drawing C7 - West Rainbow Creek Typical Details dated 20/11/19
  - Drawings E01-E03 – Simpson road – South Electrical Layout dated 2020-01-31
  - Drawing E04 - Simpson road – South Wiring Diagram dated 2020-01-31
  - Drawing E05 - Simpson road – Electrical Details dated 2020-01-31
  - Drawings L1-L2 – Landscaping Plan dated Dec. 07/20
  - Drawings L3-L4 – Landscaping Details dated Dec. 07/20
  - Landscape Cost Estimate, dated March 15, 2020, prepared by McWilliam & Associates in the amount of $178,260.00

- Contract Documents:
  - Schedule of Unit Prices
  - Earth excavation volumes report
  - Special Provisions – General
  - Special Provisions – Items

AGENCY APPLICATIONS

Agency Applications to be submitted by the Simpson Road Landowner Group upon acquisition of municipal infrastructure lands and completion of the interim Simpson Road detailed design. The following is being provided to assist with the agency approval process.

Toronto Region Conservation Authority

Toronto Region Conservation Authority letter Ontario Regulation #166/06, Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Application #1095/17/CAL Simpson Road Extension and West Rainbow Creek Re-alignment – Submission #4 Humber River Watershed; Town of Caledon; Regional Municipality of Peel dated August 21, 2019

Region of Peel – Sanitary and Watermain

- Environment Compliance Approval Application with data fields completed to the extent possible;
- Sanitary and Water Environmental Compliance Approval Application with data fields completed to the extent possible;
- Sanitary Sewer Design Calculations;
- Pipe Data Form – Watermain, Storm Sewer, Sanitary Sewer, and Forcemain Design Supplement to Application for Approval for Water and Sewage Works;
- Form 1 – Records of Watermains Authorized as a Future Alteration with data fields completed to the extent possible;
- Form 0709 – Schedule B Form 1 Attachment;
- Public Consultation documents to support the application – See below reference documents

Ministry of Environment and Climate Change - Storm

- Environment Compliance Approval Application with data fields completed to the extent possible;
- Storm Drainage Design Chart (MH1 to MH 5) dated 2020 12 11;
- Storm Drainage Design Chart by Schaeffer's Consulting Engineers dated October 2, 2020;
- Pipe Data Form – Watermain, Storm Sewer, Sanitary Sewer, and Forcemain Design Supplement to Application for Approval for Water and Sewage Works;
- Public Consultation documents to support the application – See below reference documents

Reference Documents – Reports

- Environmental Study Report prepared by AMEC Environment and Infrastructure, dated December 22, 2012 and mandatory notices;
- Geotechnical Investigation Report prepared by AMEC Earth and Environmental dated December 22, 2010

SCHEDULE "D"
PUBLIC INFRASTRUCTURE WORKS – CAPITAL COST

SIMPSON ROAD SOUTH EXTENSION
TOWN OF CALEDON CONTRACT 14-093
REGION OF PEEL C02.312

		Town Works		
A		GENERAL ITEMS		$182,000.00
B		REMOVALS		$12,150.00
C		ROAD WORKS		$1,231,550.00
D		STORM SEWER		$519,465.00
G		LANDSCAPING - STREET TREES		$55,800.00
G		LANDSCAPING - NATURALIZED CHANNEL PLANT		$122,460.00
H		ELECTRICAL		$125,750.00
I		CHANNEL		$1,000,600.00
J		SWM FACILITY - Engineering		$1,398,400.00
J		SWM FACILITY - Landscaping		$106,040.26
			Subtotal - Works:	$4,754,215.26
			10% Engineering and Contingency	$475,421.53
			Total - Works:	$5,229,636.79
		TOWN OF CALEDON ENGINEERING FEE		
		Cost of Town Works (incl. 10% Eng. & Cont.)	**Cost of Town Works for Fee Calculation:**	$5,229,636.79
		Total Town Works at 6%	**Subtotal - Town Fees:**	$313,778.21
			13% HST:	$40,791.17
			Total - Town Fees:	$354,569.37
		Region Works		
E		SANITARY		$705,290.00
F		WATERMAIN		$443,000.00
		INTERIM ROAD WORKS		$200,000.00
		INTERIM TRAFFIC SIGNALS		$200,000.00
			Subtotal - Region Works	$1,548,290.00
			10% Engineering and Contingency	$154,829.00
			Total - Region Works	$1,703,119.00
		REGION OF PEEL ENGINEERING FEE		
		Total Region Works at 7.00% (incl.10% Eng. & Cont.)		$119,218.33
			Subtotal - Region Fee	$119,218.33
			Total - Region Fees	$119,218.33
		REQUIRED SECURITY FOR CONSTRUCTION PURPOSES:		$1,703,119.00

SCHEDULE "E"
FINANCIAL OBLIGATIONS – REGION AND TOWN
(to be collected by the Region and the Town)

Region

ITEM	TOTAL AMOUNT	AMOUNT PAID	AMOUNT OWED	TIMING
Securities Cost of Works	$1,703,119.00 $0		$1,703,119.00	Included in amount owed for securities Cost of Works To be collected by Town
Well Security	$20,000.00	$0	$20,000.00	Included in amount owed for securities Cost of Works To be collected by Town
Administration fees – PW & E (7.00%)	$119,218.33	$0	$119,218.33	Prior to Construction
Hydrant Inspection (3 @ $575)	$1,725.00	$0	$1,725.00	Prior to Construction
Record updating 1.643 km @ $750.00 plus HST	$1,392.44 (HST included)	$0	$1,392.44 (HST included)	Prior to Construction
Development Charges	TBD	TBD	TBD	In accordance with Schedule F

Town

ITEM	TOTAL AMOUNT	AMOUNT PAID	AMOUNT OWED	TIMING
Engineering Administration Fee (6%)	$313,778.21 HST $40,791.17 $354,569.37	$0.00 HST $0.00 $0.00	$313,778.21 HST $40,791.17 $354,569.37	Prior to Construction
Development Charges	As per ASDC		As per ASDC	At building permit
Benchmark Fee	$2,754.00 HST $358.02 $3,112.02	$0.00	$2,754.00 HST $358.02 $3,112.02	Prior to Construction
Drawing Management Fee ($540.60 per km of road, minimum of $330)	$330.00 HST $3.90 $333.90	$0.00	$330.00 HST $3.90 $333.90	Prior to construction
Preparation of Master Financial Agreement	$6815.04 HST $885.96 $7,701.00	$6815.04 HST $885.96 $7,701.00	$0.00	Prior to Execution of Agreement

SCHEDULE "F"
REGION OF PEEL REQUIREMENTS

1. The Owner acknowledges that payment of appropriate development charges shall be payable prior to issuance of building permits.

2. The Owner acknowledges and agrees that the Region may require the Owner to construct a sampling hydrant (at the Owners cost) within the proposed Simpson Road South extension. The location of and the requirement for a sampling hydrant will be determined during the engineering review.

3. The Owner shall maintain adequate chlorine residuals in the watermains within the Simpson Road South extension from the time the watermains are connected to the municipal system until such time as the Region issues final acceptance. In order to maintain adequate chlorine residuals, the Owner will be required to either install automatic flushing devices or retain Regional staff to carry out manual flushing. Regional staff will conduct the monitoring and testing for chlorine residuals. The costs associated with the monitoring and flushing will be the responsibility of the Owner pursuant to Region's Fees By-law.

4. The Owner represents, warrants, acknowledges and agrees that the Owners nor any Builder will apply for building permits for any lots or blocks within the Simpson Road South extension until the Region's, Public Works Department, has given written notice to the Town and the Owner that the internal watermains have been completed to the Region's satisfaction and have been preliminary approved. In addition, the Region will not accept payment for connection permits until fire protection for the development is available and all securities for the development are in place.

5. The Owner acknowledges and agrees that prior to the issuance of building permits for all lots and blocks within the Simpson Road South extension, satisfactory arrangements must be made with the Region with regard to water servicing applications and payments of the required connection charges.

6. The Owner hereby acknowledges and agrees that location and off-sets for the Region's infrastructure such as watermains must be acceptable to the Region.

7. The Owner shall pay the Region's costs for updating its electronic "As Constructed" information for the infrastructure installed by the Owner. The cost will be based on a "per kilometer" basis for combined watermains and sanitary sewers installed pursuant to the Region's Fees By-law.

8. The Owner acknowledges and agrees that satisfactory arrangements are to be made with the Region with respect to construction and looping of watermains within the limits of the Simpson Road South extension. The works are 100% the financial responsibility of the Owner. The Owner is responsible to ensure that their design, materials and construction practices conform to the latest Region's standards, specifications, materials and design criteria.

9. The Owner acknowledges that existing site services which were installed to service any lot or block within the Simpson Road South extensionthat will not be utilized shall be removed at the Owner's expense in accordance with the current Region's Standards.

10. The Owner shall assume full responsibility for any Claims related to any impact on the affected neighbouring properties, their servicing or otherwise, related to the proposed works for the development. Prior to the construction commencement of the proposed works for the development, the Owner may conduct a pre-construction survey of the neighbouring lands within the zone of influence at the Owner's cost and shall provide to the Region upon request the final report and all background material relating thereto. The Owner shall assume all costs and expenses relating to the resolution of any such Claims.

11. The Owner acknowledges and agrees that their consultant is required to provide all "as constructed" drawings within sixty (60) days of issuance of preliminary approval of the underground services. The "as constructed" drawings must be submitted in the digital format and be in accordance with the latest Region's Digital Format Guidelines. In addition, the Owner's consultant is also required to provide ties to all mainline valves, ties to individual water service boxes, linear ties to sanitary sewer services and GPS coordinates of all

watermain and sanitary sewer appurtenances in accordance with the latest requirements of the Region's "Development Procedure Manual".

12. The Owner acknowledges and agrees that a suitable amount will be held back on the Letter of Credit until the "as-constructed" drawings have been received in accordance with the requirements specified in the Region's, Public Works Design, Specifications & Procedures Manual.

13. The Owner acknowledges that:

    a) It shall maintain all Regional Underground and Aboveground Works currently set for a period of Two (2) years from the date of Preliminary Acceptance by the Region. All Regional works must be constructed and approved prior to any maintenance period commencing.
    b) Prior to the end of the maintenance period, the Owner's consultant shall confirm in writing that the works meet all Regional standards and specifications manual and are ready for final acceptance.
    c) Should the Region be involved in re-inspection or maintenance works, the rates will be as set out in the Region's Standard and Specification Manual current at the time.

14. The Owner acknowledges and agrees that a suitable amount will be held back on the Letter of Credit to cover the costs of services completed by the Region that are covered under time and material basis as noted in the Region's current Development Procedure Manual.

15. The parties acknowledge and agree that municipal watermains shall be assumed by the Region after the maintenance period is complete, and all deficiencies shall be rectified by the Owner, at its expense, to the satisfaction of the Region.

16. The Owner agrees that:

    a) Prior to assumption of the Works by the Region, the Works may be used by the Town, the Region, or by any member of the public for purposes for which such Works are designed;
    b) Such uses shall not constitute nor be deemed to be an acceptance of the Works by the Region; and
    c) Such use shall not in any way relieve the Owner of the Owner's obligations in respect of the construction, installation and maintenance of the Works so used.

17. The Owner acknowledges and agrees that after fulfilling the maintenance obligations by the Owner, the Region will clear the requirements and conditions for assuming the Works. The Final Assumption by the Region will occur at the same time as the Assumption By-law is enacted by the Town's Council.

18. The Owner acknowledges and agrees that landscaping, signs, fences, gateway features or any other encroachments are not be permitted within the Region's easements and/or right-of-way limits.

19. The Owner acknowledges and agrees that the amount of $20,000 shall be held in the Letter of Credit until final acceptance of the Works by the Municipality to serve as protection for the private wells in the zone of influence of the Simpson Road South extension. If the private well systems in the zone of influence deteriorate due to the servicing of the Simpson Road South, the Owner will provide temporary water supply to the residents upon notice by the Region and it will continue supplying the water to the effected residents until the issue is resolved to the satisfaction of involved parties. If the quantity of water in the existing wells is not restored to its original condition within a month after first identification of the problem, the Owner will engage the services of a recognized hydrogeologist to evaluate the wells and recommend solutions including deepening the wells, drilling a new well or providing a permanent water service connection from the watermain to the dwelling unit.

20. The Owner acknowledges and agrees that prior to final acceptance, the Owner's engineer is required to submit to the Region's, Public Works Department, all Engineering Drawings in Micro-Station Format as set out in the latest version of the Region's "Development Procedure Manual".

21. The Owner acknowledges and agrees that financing and construction of all temporary/permanent infrastructures not covered by the current Development Charges By-law (watermains and sanitary sewers) are the financial responsibility of the Owner.

22. Where construction of the Future Public Road occurs before the Region's planned widening of Mayfield Road, the Owner acknowledges and agrees that the Owner is responsible for all costs associated with the relocation of existing services to accommodate the Future Public Road. The Owner shall have made appropriate arrangements with the Region regarding financing and relocation of Regional services prior to execution of this agreement.

23. If the Region proceeds with Mayfield Road widening works before the Simpson Road South extension works are undertaken and completed, the Owner hereby acknowladges and agrees that prior to starting Mayfield Road's construction for this intersection, the Region will require a Letter of Credit in the amount of $250,000 (100% of the total projected costs) for the installation of sanitary sewers and watermains within Mayfield Road'sright-of-way.

24. The Owner hereby agrees to make payment to the Region, in full, for all actual costs as identified in the Clause 24 related to the sanitary sewers and watermains installation within Mayfield Road's right-of-way within 30 days upon being notified of the incurred expenses.

25. The Owner acknowledges that prior to final approval by the Town, a print of the proposed final plan be forwarded to the Region. Prior to the Region granting clearance of the site, the following must be forwarded to the Region's Legal Services Division:

    a) A copy of the final 43-R plans; and
    b) Easement and conveyance documents required pursuant to Schedule O of this agreement.

SCHEDULE "G"
REFERENCE PLAN FOR PUBLIC INFRASTRUCTURE WORKS

The following plan shall be the Reference Plan which depicts the Simpson Road Extension and Public Infrastructure Works as referred to in this Agreement and shall be included in this Schedule "G":

- Reference Plan 43R-36796
- Reference Plan 43R-39439
- Reference Plan 43R-XXXXX
- Reference Plan 43R-XXXXX

The parties acknowledge and agree that this Reference Plan is subject to change depending on any modifications that may be made to the Public Infrastructure Works as required.

SCHEDULE "H"
OWNERS' ADDRESSES

NAME OF PARTY	MAILING ADDRESS
ANATOLIA CAPITAL CORP.	Anatolia Capital Corp. 8300 Huntington Road Vaughan, ON L4L 1A5 Attention: Baran Yilmaz Phone: (905) 771-3800 ext. 740 Email: baran.yilmaz@anatoliacapitalcorp.com
ARION SERVICES LTD.	63 Progress Court, Unit 3 Brampton, ON L6S 5X2 Attention: Paul Ricciuto Phone: (905) 789-5769 Email: paul@parcor.ca

SCHEDULE "I"
BENEFITING AREA (FINAL)

Watson & Associates ECONOMISTS LTD

Map Ref	Municipal Address	Developable Land Area (ha.)	D.C. Payable		
			Services Related to a Highway	Stormwater Management Services	Total D.C. per Property
S-3	12155 COLERAINE DR	3.65	3,157,134	550,881	3,708,014
S-8	8576 MAYFIELD RD	2.30	1,991,441		1,991,441
S-2	0 COLERAINE DR	3.60	3,117,184	928,936	4,046,120
S-4a	8664 MAYFIELD RD	10.46	9,055,275	5,114,548	14,169,822
S-4b	0 MAYFIELD RD				
S-4c	8746 MAYFIELD RD				
S-5	0 COLERAINE DR	3.46	2,995,324		2,995,324
S-6	0 COLERAINE DR	3.30	2,854,690		2,854,690
S-7	8602 MAYFIELD RD	1.55	1,345,703		1,345,703
TOTAL SIMPSON RD. PHASE 3 LANDS		**28.32**	**24,516,751**	**6,594,364**	**31,111,116**

SCHEDULE "J"
TOWN STANDARD LETTER OF CREDIT

AUTOMATIC EXTENSION

LETTERHEAD OF BANK OR OTHER FINANCIAL INSTITUTION
ADDRESS OF FINANCIAL INSTITUTION

DATE

TO: THE CORPORATION OF THE TOWN OF CALEDON
6311 OLD CHURCH ROAD
CALEDON, ONTARIO
L7C 1J6

ATTENTION: TREASURER

Dear Madam/Sir:

RE: Irrevocable Standby Letter of Credit No. _____

We hereby authorize you to draw on (*Name and Address of Bank*), for the account of (*Customers Name and Address*), up to an aggregate amount of $_____ available on demand.

Pursuant to the request of (*Name of Customer*), we (*Name of Bank*), hereby establish and give to you an Irrevocable Standby Letter of Credit in your favour in the total amount of $_____, which may be drawn on by you at any time and from time to time upon written demand for payment made upon us by you which demand we shall honour without inquiring whether you have a right as between yourself and our said customer to make such demand, and without recognizing any claim of our said customer.

Provided, however, that you are to deliver to us at such time as a written demand for payment is made upon us, a certificate confirming that monies drawn pursuant to this Irrevocable Standby Letter of Credit are to be retained and used to meet obligations incurred or to be incurred by you in connection with an agreement entered into by (*Customers Name*) with the Town of Caledon regarding Lot _____, Concession or Registered Plan _____, being (name of street) _____, Town of Caledon, Regional Municipality of Peel.

The amount of this Irrevocable Standby Letter of Credit shall be reduced from time to time as advised by notice in writing given to us from time to time by you.

This Irrevocable Standby Letter of Credit will expire at our counters (*Name of Bank*) on (*expiry date*).

It is a condition of this Irrevocable Standby Letter of Credit that it shall be deemed to be automatically extended for one year from the present or any future expiration date hereof, unless thirty (30) days' prior to any such date we shall notify you in writing by Registered Mail that we elect not to consider this Irrevocable Standby Letter of Credit renewed for any such additional period. Upon receipt by you of such notice, you may draw hereunder by means of your demand accompanied by your written certification that the amounts drawn will be retained and used by you to meet obligations incurred or to be incurred in connection with the above agreement; further, that you will release any amounts not required by you to (*Name of Customer*).

Partial drawings are permitted.

The drawings under this Irrevocable Standby Letter of Credit are to state on their face that they are drawn under (*Name and Address of Bank*), Irrevocable Standby Letter of Credit No. _____ dated _____.

We hereby agree that drawings under this Irrevocable Standby Letter of Credit will be duly honoured upon presentation provided that all terms and conditions of the Credit have been complied with.

NAME OF BANK OR FINANCIAL INSTITUTION

Per: _____

Per: _____

SCHEDULE "K"
TRUSTEE CERTIFICATE

TO: THE CORPORATION OF THE TOWN OF CALEDON

FROM : Simpson Road Landowners Group Inc. (the "**Trustee**")

RE: (INSERT DETAILS OF APPLICABLE OWNER AND APPLICABLE LANDS)

1. The undersigned is the Trustee for the Simpson Road Landowners Group Inc. and hereby confirm to the Town that (insert name of Benefiting Owner):

   a) has executed the Cost Sharing Agreement and is in good standing thereunder, and
   b) has paid its share of all payments due and payable to date under the Cost Sharing Agreement in respect of the Lands within the above referenced (insert legal description of the applicable lands).

2. I have no objection to the Town granting final approval of the site plan application OR issuing a building permit for development on the Lands OR otherwise permitting development of the Lands.

3. The Town shall be entitled to rely upon this certificate in respect of the matters set out herein, and the Town shall not be required to inquire further as to the validity, accuracy or authority of this certificate.

Dated at _____ this _____ day of _____ 20__

SIMPSON ROAD LANDOWNERS GROUP INC.

Per: _____
Name

I have authority to bind the corporation.

SCHEDULE "L"
TRCA CONDITIONAL APPROVAL LETTER

Toronto and Region Conservation Authority

November 7, 2019

CFN 58448
XREF CFN 44508, 34067

BY E-MAIL ONLY (ian.todhunter@caledon.ca)

Ian Todhunter
Senior Project Manager, Engineering Services
Town of Caledon
6311 Old Church Road
Caledon ON, L7C 1J6

Dear Mr. Todhunter:

Re: Ontario Regulation #166/06, Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Application #1095/17/CAL
Simpson Road Extension and West Rainbow Creek Re-alignment – Submission #6
Humber River Watershed; Town of Caledon; Regional Municipality of Peel

Toronto and Region Conservation Authority (TRCA) staff received the design drawings, Town of Caledon cover letter dated October 9, 2019, Appendix A, Appendix B, Appendix C (Hydraulics, Hydrology, Natural Channel Design), Wood response dated October 4, 2019 and a digital copy of these materials, on October 11, 2019.

PROJECT OVERVIEW

TRCA staff understands that this proposal involves the extension of Simpson Road from south of Parr Boulevard to Mayfield Road, in the Town of Caledon. It is further understood that the proposed road work also includes installation of catch basins, manholes, sanitary and storm sewers, and watermains. In addition, a realignment of the existing creek that extends from the existing stormwater management (SWM) pond located south of Parr Boulevard to West Rainbow Creek at Mayfield Road is proposed to run along the western boundary of the Simpson Road Extension.

It is also staff's understanding that the Town of Caledon is requesting TRCA's conditional approval on this application, including confirmation that all requirements have been satisfied apart from the landowner acquisition and authorization.

PROJECT REVIEW

Based on the latest submission it is now our understanding that:

- The landowners group will be responsible for the construction of Simpson Road and the channel.
- A temporary stormwater management (SWM) facility is no longer being proposed and that the Town is working with the landowners group to design the ultimate SWM facility (one pond) to address stormwater requirements for both the Town infrastructure and the development lands.
- The Mayfield Road works including the culvert upgrade will precede the Simpson Road construction and channel reconfiguration.
- The Town and landowners group are in the process of securing all landowner permissions.

In concept this approach seems reasonable and is subject to meeting our requirements through each of those permit applications.

Notwithstanding the above, the phasing and proponency of these works has changed several times throughout our review of this application. It is our understanding that the above- noted phasing of these works is now confirmed and it is our expectation that all of this will be coordinated moving forward. Furthermore, given that this application is being made based on hypothetical scenarios, please be advised that additional review of supporting documentation for the future pond and Mayfield Road, at the crossing location, will be required prior to permit issuance to confirm that all stormwater requirements have been met.

Staff has reviewed the above-noted information and while many of our previous comments have been addressed (refer to Appendix A), because the design is based on a hypothetical scenario in which the SWM pond, Mayfield Road culvert and Mayfield Road are in place additional comments may be provided in subsequent submissions as this information has not been reviewed by TRCA staff to date. In addition, should phasing of this work change from what was provided in the latest response from the Town and Wood, then further discussions with TRCA staff will be required and our previous comments which have been removed from the table in Appendix A may still apply.

Finally, we understand that this file will be transferred to a landowners group to coordinate through the final stages of the permitting process. Please ensure that one point of contact is established through that group who will be responsible for full coordination including, but not limited to, ensuring quality control of future submissions to TRCA. We respectfully request that the Town or landowner lead contact Glenn Pitura at glenn@arutip.com to further discuss a similar working relationship that we have on-going with the Seaton landowners group.

SUBMISSIONS

In order to facilitate the review of the next submission, please provide the following:

- One (1) copy of a cover letter with Central File Number (CFN) 58448 quoted, which outlines how the comments in Appendix A have been addressed.
- Revised and signed permit application with the new permit holder, if this has changed from what was originally submitted.
- Four (4) individually folded full size copies of the submission **(complete set of plans)**, signed and stamped by a professional
- One (1) hard copy of all background materials for Simpson Road and the channel, including but not limited to supporting information for the SWM pond, Mayfield Road culvert sizing and Mayfield Road design at the crossing.
- Digital modeling to support the above.
- Please include a digital copy of all submitted material. Materials must be submitted in PDF format, with drawings pre-scaled to print on 11"x17" pages. Materials may be submitted on discs, via e-mail (if less than 2.5 MB), or through file transfer protocol (FTP) sites (if posted for a minimum of two weeks).

REVIEW FEES

Please be advised that additional fees are applied as per the fee schedule for reviews beyond three (3) submissions, including the final as per our 2018 Fee Schedule. Additional fees will be applied for all subsequent submissions.

Should you have any questions, or require any additional information, please contact me at extension 5717 or at sharon.lingertat@trca.ca.

Regards,

Sharon Lingertat
Senior Planner, Infrastructure Planning and Permits
Development and Engineering Services

BY E-MAIL

cc: Wood: Felix Wong (felix.wong@woodplc.com)
Brian Bishop (brian.bishop@woodplc.com)
Caledon: Melissa Mohr (Melissa.Mohr@caledon.ca)
Ryan Grodecki (Ryan.Grodecki@caledon.ca)
Peel: John Hasselbacher (john.hasselbacher@peelregion.ca)
TRCA: Jason Wagler, Senior Planner, Development Planning and Permits
Beth Williston, Associate Director, Infrastructure Planning and Permits
Quentin Hanchard, Associate Director, Development Planning and Permits

APPENDIX A: TRCA COMMENTS

**Comments that have been addressed have been removed from the table. Outstanding comments based on our review of the latest submission remain. The numbering system remains the same as previous.

#	TRCA COMMENTS (October 27, 2017)	PROPONENT RESPONSE (May 17, 2018)	TRCA COMMENTS (June 22, 2018)	PROPONENT RESPONSE (March 12, 2019)	TRCA COMMENTS (April 17, 2019)	PROPONENT RESPONSE (June 27, 2019)	TRCA COMMENTS (August 21, 2019)	PROPONENT RESPONSE (September 24 2019)	TRCA COMMENTS (November 7, 2019)
OUTSTANDING COMMENTS FROM DRAFT ESR (November 2012)									
Hydrology and Stormwater Management									
3.	***Draft ESR – TRCA Comment (November 2012):*** Please provide a figure/ drawing to clearly illustrate the location of the temporary quantity facility and grassed swale within the West Humber River sub watershed and the (two) temporary west pond(s) within the West Rainbow Creek sub watershed. Please provide some preliminary details of the grades and outlet structures. Also, please provide preliminary calculations/ documentation for the temporary grassed swale to ensure the quality control criteria can be achieved. ***Draft ESR – Proponent/ Consultant Response (November 2012):*** A figure will be provided to clearly show the proposed locations for the swales and facilities. Functional grades have been based on the available topographic mapping. Similarly, as there are several hundred metres for grassed swales, and the slopes are relatively gentle, we propose that the requisite flow, velocity, and length criteria can all be met, at the detailed design stage. ***Detail Design – TRCA Comment (October 2017):*** Please address the previous comment. Please also provide supporting calculations for the allowable peak flow discharge for the West Humber subwatershed catchment.	Allowable peak flow for the West Humber subwatershed catchment was calculated using the unitary discharge criteria stipulated within the subwatershed study [Sub Basin 36- Equation F] (ref. TRCA August 2012). As for the Nov 2012 comment on the temporary facility and swales, the noted facilities are outside the current project limits. Separate applications will be submitted at a later date as a requirement for the site plan development application.	As the VO files and appendix were not provided, staff was unable to review the target flows and resulting outflows. Please provide the digital VO model, associated output files and supporting calculations. In regards to the SWM facility, email correspondence from the Town (Geoff Hebbert) dated June 4, 2018, indicated that the pond that will be constructed at the north east corner of the new Simpson Road and Mayfield Road will be constructed to ultimate size to service both the road and the proposed Anatolia development by the developer. However, contrary to this email correspondence and the proponent response dated May 17, 2018, a SWM facility still appears to be proposed as a part of the Simpson Road project as depicted on Drawings No. 1, 8, 10, 14, C3 and C4. If the SWM facility is outside of the Simpson Road project limits and scope, please remove	The digital VO model including all scenarios and storm events has been provided As noted by the Town at the August 8, 2018 meeting at TRCA offices, in all likelihood the industrial development will proceed the construction of Simpson Road, as such the theoretical pond that serves the road will be incorporated into the actual pond that serves the industrial development and the road. Notwithstanding, the Town is including the SWM facility to demonstrate the functionality of a facility that would service the Town lands, should the development be delayed. Ideally they will proceed concurrently. Alternatively, the facility has quantity control measures, and the Town has added bioswales to the road right-of-water for quality.	a) Target flows and resulting outflows will be reviewed once the drainage plan associated with the hydrology model is submitted. b) Comments on the temporary SWM facility and swales remain outstanding. Based on the responses these comments will be addressed at a later time. Discussion on how the temporary SWM facility is going to function in the interim will need to be provided including supporting calculations consistent with the revised hydrology model. This information should be compiled in a	b) The overall timing of the project was discussed at the April 22, 2019 meeting, and the Town confirmed that the Developer will be designing an ultimate SWM facility, and submitting a SWM report to accompany that design, along with the road. The Town provided a SWM brief with the initial submission in September 2017, to document that the temporary facility would function, if the road was constructed in advance. The Town confirmed that this scenario will not be pursued. c) See response to b), the Developer is to provide this information. Developer is to construct the outfall, and provide all details of the outlet structure. d) Elevations were confirmed at the April 22, 2019 meeting.	a) Targets flows are consistent with TRCA SWM Criteria. No further comment. b) TRCA staff considers the proposed temporary SWM pond size as adequate as it was sized to service approximately 9% (1.43 ha) of the total 15.50 ha that will be serviced under ultimate conditions. However, as the construction of Simpson road will change the existing drainage pattern, some areas that drain towards the existing channel may end up at the proposed temporary pond, which may not function as intended. An interim solution (i.e., bypass) that mimics existing drainage or an increase in the size of the temporary pond will be required, in order to account for the lands currently draining towards	b) Further to the proposed phasing discussed above (Caledon email response of September 24, 2019), an interim or temporary facility is not planned, hence further design will not be submitted. c) Agreed, a single centralized facility is planned, so no further temporary facility design is planned.	An interim/temporary facility is not planned. Therefore, there is no new design to review or comment on at this time. Based on the responses provided by the Town of Caledon (email September 24, 2019) and Wood (memo dated October 4, 2019) a design for the ultimate SWM facility to address Town and development lands will be completed prior to road/channel construction. This will need to be reviewed by TRCA staff as part of the next submission as it relates to the construction of Simpson Road and the channel. Once the SWM facility and Mayfield Road design are approved, a copy of those details will need to be included with the Simpson Road/channel submission to ensure works have been coordinated as it relates to stormwater controls for this project. Information such as modeling and design plans will need to be provided to confirm that all related infrastructure can support SWM and LID requirements for the new road and channel.

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			from the drawings. If it is still within the project scope, please provide additional information as requested in previous comments. In addition, please clarify if the road construction will proceed prior to the Anatolia development, or if the road and Anatolia development will occur concurrently. It is staff understanding that the Anatolia development will require the Simpson Road extension for access during construction. Also proponent/ consultant responses to Comments #4 and #5 suggests that there will be an interim condition in which Simpson Road construction will precede industrial developments. If this is the case and road construction must proceed prior to the development to provide access, please provide the interim SWM quantity and quality control measures for the road right of way.		SWM report for the temporary pond including details for the design showing how the quality, quantity and erosion criteria for the road are being met. Please provide. c) Based on the 100 Pitsworth Road Phase 3 development plan, it is our understandin g that a second SWM pond will be constructed adjacent to the temporary pond. Please ensure the design and function of these ponds is coordinated as the Anatolia design plans indicate that the pond proposed to service the road will be constructed by the Town. Staff also require clarification on who will be responsible for	Developer to confirm the function in the SWM report and detailed design drawings for the ultimate SWM facility. a) A section, and the Region culvert details, are provided on the drawings submitted in March 2019, and resubmitted in June 2019. Per the May 22, 2019 e-mail, the Town will provide landowner details and timing as they become available. See attached memorandum describing the proposed Developer commitments.	the creek. c) Staff recommends that the proponent work in a centralized SWM facility to provide water quality, quantity and erosion control for the road and surrounding lands. Extensive works will be required to bring the temporary pond to current MECP standards as not only would modification of the outlet structure be required but also excavating the permanent pool underneath it, in addition to a forebay, extended detention and quantity control component for the 16.50 ha draining to the pond. If the Town decides to go ahead with the temporary SWM pond we require supporting information that demonstrates the facility has enough capacity to handle potential increases in flows resulting from the road extension and the adjacent lands. Further, measures to provide water quality control for the Simpson road extension (i.e., Oil and Grit separator)		

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					constructing the outfall and the spillway. If the Town foresees a SWM facility at the same location where the temporary pond is proposed, we recommend including relevant details on the proposed control structure and outlet pipe consistent with the road and culvert upgrades that have been proposed for Mayfield road. d) Please confirm the elevations at the pond as it appears that the pond outlet and inlets are very close in elevations. Please confirm that the pond will be configured for positive drainage for all storm events and ensure this is addressed in the SWM report.		should also be provided. In addition, staff infers from the memorandum provided by Wood that the proposed temporary pond was size only to provide quantity control. However, Drawing C4 illustrates a 2.0m-deep permanent pool. Please note that permanent pools are not typically recommended for drainage areas less than 5.0 hectares. Please clarify or adjust accordingly.		

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					e) Please provide a cross section through the temporary pond and outlet pipe including the proposed culvert at Mayfield Road and include the proposed crossing in the model. Please also coordinate with the Region of Peel and include the most up to date design information for the above-mentioned culvert and road so that staff can confirm sizing.				
5.	***Draft ESR – TRCA Comment (November 2012):*** Please provide a figure/ drawing illustrating the contributing drainage area to each of the temporary SWM facilities. Please provide supporting calculations for the target rates of each temporary SWM facility. As requested above, please ensure a digital copy of the hydrologic model(s) is provided with the next submission. ***Draft ESR – Proponent/ Consultant Response (November 2012):*** A figure has been created to show the currently proposed facilities. A digital copy of the hydrologic models will be submitted. ***Detail Design – TRCA Comment (October 2017):***	Target release rates for the temporary SWM facility were calculated using the unit flow relationships specified for the Humber River Watershed [Sub Basin 36-Equation F] (ref. TRCA August 2012). Given the request by the TRCA to achieve the water balance criteria for the interim condition i.e. Simpson Road preceding the industrial developments, the Town will incorporate LID infiltration measures within the right-of-way. Water quality and erosion control is proposed to be provided in the temporary SWM facility.	Comment remains outstanding. Please refer to Comment #4 above.	Details of the bioretention swale design are attached to the letter as an appendix. The swale volumes have been maximized based on the road and driveway design. Based on the design guidelines, the swales provide between 20 and 42 m3 of volume, managing the volume from roughly the equivalent of a 20, 21, 34, and 42 mm event	a) As indicated in previous correspondence it appears the proposed SWM pond will provide water quantity, quality and erosion control for the proposed Simpson Road extension only, while the proposed bio-retention swales will provide the required water	Based on the borehole information in the geotechnical report for Simpson Road (ref. Amec, 2010, attached), silt and clay/clayey silt soil was found underneath the topsoil, in the vicinity of the proposed Simpson Road	The proposed LID measures are acceptable. The EA for the proposed replacement of the crossing at Mayfield road (Culvert 16) has not yet been finalized. Originally the Region proposed a twin 2000 CSP culvert but later the Fluvial assessment proposed a 3.0x1.50m box culvert at that location. It is our understanding that the final crossing will be a 6.0x1.50m concrete box culvert	We (Caledon) confirm that the proposed Region crossing is as per the TRCA comment (6.0 x 1.5 m box), please see phasing discussion above (Caledon email response of September 24, 2019), the channel works are not planned to	The consultant confirmed the new crossing at Mayfield Road will be a 6.0x1.5m concrete box which may pass up to the Regional flows. TRCA staff have not had the opportunity to review the new culvert size proposed by the Region. Staff is looking forward to reviewing the final culvert design which should be provided by the Region of Peel once it is completed. Based on our understanding of the phasing of this work the culvert will need to be in place prior to construction

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	As requested previously, please provide supporting calculations for the target rates of the temporary SWM facility, as well as a digital copy of the hydrologic model. Furthermore, the SWM Memo only discussed proposed water quantity control. Please provide information on how water quality (MOECC Enhanced Level), water balance (minimum 5 mm on-site retention), and erosion control would be provided for the proposed extension of Simpson Road.	Details of the proposed roadway LID measures will be included in the next submission of design drawings. The Town anticipates the use of infiltration trenches, and catchbasin sumps. Calculations will be provided to demonstration the 5 mm infiltration.			balance control. Please clarify or confirm. b) The staff comment in regard to the water quantity, quality and erosion control (target rates, required volumes etc.) will be provided once we receive the drainage plan, as mentioned in comment 3 above, as the drainage plans may influence the type of treatment measure needed for the road. c) Staff is of the opinion that the proposed LID measures may be able to provide the required 5 mm onsite retention. However, the following information should be provided/clarified with the next submission: • Please provide an area drainage plan indicating how	extension and proposed bioswales. Therefore, we propose that a hydraulic conductivity of 0.51 mm/hr be assumed (typical value for Silty Clay soil type) and this value has been used in the bioswale calculations. This value was confirmed via e-mail between Wood and TRCA. Updated calculations are attached. The bioswales will provide the 5 mm retention. The bioswales are supplementary treatment, in addition to the SWM facility. It was discussed at the April 22, 2019 meeting that the Town has taken a proactive approach and	embedded 0.4m, which is consistent with the modeling information provided by Wood. A discussion should be provided regarding the phasing of all of this work including the channel implementation, road work, construction of the SWM pond and the installation of Culvert 16. Coordination among the consultants, the Region and the Town is required. If for any reason, the channel works advance prior to installation of the new Culvert 16, a scenario assessing the performance of the proposed channel will be required. No significant changes in water surface elevations upstream or downstream should occur as a result of the proposed channel works.	precede Culvert 16 (Region culvert and Mayfield Road).	of Simpson Road and the channel, as per responses from the Town of Caledon and Wood.

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					the proposed bio-retention swales will function (i.e., which bio-retention swales treats which area) and achieve TRCA water balance requirements for the new paved areas. • The assumed hydraulic conductivity (6.8mm/hr) and associated infiltration (54.4mm/hr) appear to be too high for the site in question. As per TRCA's guideline, an in-situ test is required. Please conduct a soil infiltration test consistent with TRCA protocol described in Appendix C of the TRCA *Low Impact Development (LID) Stormwater Management Planning and Design Guide* (2010) • Please provide supporting calculations	provided the bioswales as supplementary treatment, and that the minimum criteria for quality treatment will be provided in the SWM facility. The Town has optimized the location and size of the bioswales to be proactive, knowing that the MECP will eventually be asking for road right-of-way LIDs. Per the May 22, 2019 TRCA e-mail, the recent borehole information has been provided to TRCA for review, and is proposed to be the			

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					consistent with section 4.5 (page 4-64) of the above noted LID Guide.	basis for selection of the hydraulic conductivity.			
NEW COMMENTS ON DETAIL DESIGN									
General									
6.	Staff understands that the Town of Caledon (Town) is currently in the process of obtaining land required for the proposed Simpson Road extension. Please provide an update on the status of land acquisition and authorization.	This is on-going by the Town.	Please provide an update when information is available.	The Landowner Group has been formed. Land acquisition and authorizations are ongoing.	To be provided.	Town will provide landowner details and timing as they become available. See attached memorandum describing the proposed Developer commitments.	Landowner authorization to be provided.	-	Landowner authorization to be provided.
Hydrology and Stormwater Management									
20.	Staff notes that the submitted information demonstrates that the proposed natural channel will mimic existing conditions and will not create additional flood risk. Please update the model, compare existing and proposed conditions for the 2 to 100-year and Regional storms consistent with the TRCA Technical Guidelines for Flood Hazard Mapping (attached). The HEC-RAS model should be georeferenced and the existing condition revised to include additional cross sections to code the proposed crossings. Adding these cross sections to the existing model will allow comparison of potential increases in water surface elevation at each cross section. Please note that four cross sections are typically required to properly represent and capture losses through the crossings. Please refer to the HEC-RAS users and hydraulic reference manual for further guidance.	The HEC-RAS model has been georeferenced as requested, and additional sections have been added such that four cross sections are included at each crossing location. As the purpose of the channel re-alignment is to facilitate the development of the neighbouring lands; a comparison of existing and proposed conditions is not applicable for the study area. It is noted that under future condition, the floodplain is maintained within the channel banks for the regional storm.	Although the purpose of the proposed channel re-alignment is to facilitate development of neighbouring lands, a water surface elevation comparison (at the same cross-sections) can still be completed regardless of the purpose of the proposed works. Please provide a comparison of surface water elevations for the existing and proposed conditions according to the enclosed TRCA Technical Guidelines for Flood Hazard Mapping.	A table comparing the elevations has been provided.	Comment is outstanding. Please refine the HEC RAS existing condition model so that a water surface elevation comparison at each cross section (between the refined existing and proposed scenario) can be appropriately estimated.	Further to the TRCA staff request, the proposed conditions HEC-RAS model has been updated to enable direct comparisons with all existing conditions HEC-RAS model cross sections. The HEC-RAS model result tables have been updated accordingly. The updated results tables and the proposed condition HEC-RAS model are attached to the letter.	Please refer to comment 22.	-	Refer to comment 22.
22.	Email correspondence dated February and March 2017 between the Town (Geoff Hebbert) and TRCA (Sharon Lingertat) staff identified issues with the existing SWM pond located on the Great West Life/ Solmar Developments site located just south of Parr Boulevard. This	The Town recognizes that there are two facilities at the headwaters of this watercourse: Solmar (2004) and Great West Life amendment (2006). One	Inputs in regards of the channel design have been provided. Please provide a copy of the channel design report, signed and stamped	A copy of the report and addendum memo is included, signed by Aqualogic, as per the direction received at the August 8, 2018	A copy of the channel design report has been received. We have no comments at this time on the	-	The HEC RAS model and hydraulic assessment memo prepared by Wood (amec foster wheeler) on August 31, 2017,	A final copy of the HEC-RAS model, hydraulic assessment, and	A final copy of the HEC RAS model along with the hydraulic assessment (stamped and signed) were provided. The hydraulic assessment

#	TRCA COMMENTS (October 27, 2017)	PROPONENT RESPONSE (May 17, 2018)	TRCA COMMENTS (June 22, 2018)	PROPONENT RESPONSE (March 12, 2019)	TRCA COMMENTS (April 17, 2019)	PROPONENT RESPONSE (June 27, 2019)	TRCA COMMENTS (August 21, 2019)	PROPONENT RESPONSE (September 24 2019)	TRCA COMMENTS (November 7, 2019)
	existing SWM pond did not meet the requirement for allowable erodible velocities. It is staff understanding that the design of the realigned channel will address the erosion/ velocity issues that originated from the Great West Life/ Solmar Developments SWM pond. Please explain how the channel and any other related ponds have been designed to accommodate predicted runoff and velocities to properties downstream of the Great West Life/ Solmar Developments lands. Please explain how potential increases in flows are being managed on-site to address the above concerns.	facility has a 72-hour extended detention drawdown, and the second smaller facility has a 36 hour drawdown. It is this reduced drawdown that is the subject of the TRCA comment. We have proposed that the channel will be designed to withstand the existing flow regime, and therefore address the foregoing shortcoming in the design. The proposed channel design is based on existing condition. The flow regime reflects pre-existing and ongoing upstream stormwater pond influence on discharge. The design is therefore based on this influence. The bankfull channel hydraulic geometry is designed for stability by vegetation reinforcement. The calculated threshold indicators meet or are less than the level of protection that will be created. Conservative vegetation control criteria are identified as 40N m-2 for shear stress and 1.2m s-1 for channel velocity. Higher thresholds for vegetation control are common, approximately 80N m-1 and 1.8m s-1, which are viable under high density rooting and stem condition. Proposed run condition have calculated shear and velocity of 16N m-2 and 0.8m s-1 respectively, or on average about 50% of the minimum protection and 30% of the typical protection from high rooting and stem density. The modelled riffle section is shown at higher feature face gradient with 47N m-2 and 1.2m s-1 for shear and velocity respectively. At I, the actual energy gradient will be	by a qualified professional, for staff review.	meeting with TRCA, is part of the overall design for which the drawings are signed and stamped by Wood.	natural channel design. A thorough review will be completed once the HEC RAS model is revised/adjusted.		are acceptable. Please provide a final copy, including supporting calculations signed and stamped by a qualified professional with the next submission.	calculations, signed and stamped, will be submitted as part of the Final Submission. Regarding Comment #22, we (Wood) are enclosing the following previously submitted information.	was completed assuming a 6.0x1.5m box culvert which has not been reviewed or approved by TRCA staff through the Region of Peel. As a result, this hydraulic assessment will be valid only if the implementation of the culvert precedes the proposed channel works as previously discussed. Otherwise, a hydraulic reassessment will be required consistent with the final Mayfield culvert size and proposed geometric design of the road. Hydrology Model: A visual Otthymo model has been provided. Preliminary parameters and assumptions are adequate. As the temporary pond will no longer be constructed, TRCA staff have not fully reviewed the model. The hydrologic model to be provided as part of the proposed solution by the landowners group will be reviewed once submitted.

#	TRCA COMMENTS (October 27, 2017)	PROPONENT RESPONSE (May 17, 2018)	TRCA COMMENTS (June 22, 2018)	PROPONENT RESPONSE (March 12, 2019)	TRCA COMMENTS (April 17, 2019)	PROPONENT RESPONSE (June 27, 2019)	TRCA COMMENTS (August 21, 2019)	PROPONENT RESPONSE (September 24 2019)	TRCA COMMENTS (November 7, 2019)
		lower and more typical of the run conditions. Nonetheless the riffle calculation are acceptable for high density vegetation and the feature face will have gravel-cobble substrate sized for applicable thresholds. At all event flows higher than bankfull are purposeful width of the corridor bottom will result in actual lowering of shear and velocity due to the higher relative increase in wetted perimeter versus lower relative increases in hydraulic radius. Based on this summary the magnitude and frequency of existing flow regime conditions has been fully considered in the proposed design stability.							

SCHEDULE "M"
OWNERS' STATUTORY DECLARATION CERTIFYING DISCHARGE OF LIABILITIES

STATUTORY DECLARATION

CANADA PROVINCE OF ONTARIO	)	IN THE MATTER OF the Master Financial and Development Agreement between
	)	and
	)	the CORPORATION OF THE TOWN OF CALEDON and THE REGIONAL MUNICIPALITY OF PEEL,
To Wit	)	

I,

Of the of in the
Regional Municipality of

SOLEMNLY DECLARE, that

1. I am the of
and as such have knowledge of the matters herein deposed to.

2. All accounts due relevant to the design, supply, installation, construction and maintenance of the Town's Works (as defined in the Agreement) for the relevant lands have been paid and there are no outstanding actions, causes of action, suits, claims or demands whatsoever relating to the design, supply, installation, construction and maintenance of the Town's Works.

3. All accounts due relevant to the design, supply, installation, construction and maintenance of the Region's Works (as defined in the Agreement) for the relevant lands have been paid and there are no outstanding actions, causes or action, suits, claims or demands whatsoever relating to the design, supply, installation, construction and maintenance of the Region's Works.

4. This declaration is made in support of a request for a reduction in the letter of credit posted with respect to the above mentioned Master Financial Agreement.

AND I make this solemn Declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath.

Declared before me at the	)	
	)	
of	)	
	)	_____
in the _____	)	Name:
	)	
of	)	
	)	
this day of 20__	)	
	)	
	)	

_____

A Commissioner, etc.

Name

SCHEDULE "N"
INSURANCE CERTIFICATE

*** This is to certify that the Insured named below is insured as described below ***

*** This form must be completed and signed by your insurer or insurance broker ***

NOTE: 1. Proof of liability insurance will be accepted on this form only (with no amendments)

2. **Insurance company must be licensed to operate in Canada.**

me of Insured (Landowner)	ephone No. (including area code)
	)
ured's address (street name, city, province and postal code)	No. (including area code)
	)

e of Insurance	urer's Name	licy Number	licy Period m 12:01 AM Y MM DD	12:01 AM Y MM DD	nits of Liability (bodily injury & property damage – inclusive)	ductible
mmercial General Liability						
Umbrella Excess						
Other (Explain)						

mmercial/General Liability includes:

currence basis, including Personal Injury, Property Damage, Broad Form Property Damage, Contractual Liability, Non-owned Auto Liability, Cross Liability and Severability of Interest Clause, Pollution Liability (Owners & Contractors not less than $2 Million)

s policy contains no exclusions for damage or loss from vibration (excluding pile driving), the removal or weakening of support, shoring and underpinning, or from any other activity or work that may be done on land owned by the Town of Caledon in connection with the development referred to in the agreement. Such policy shall be written with a **limit of not less than FIVE MILLION Dollars ($5,000,000.00)** exclusive of interest or costs.

nant's Legal Liability:	☐ No or ☐ Yes... (Limit) $
uor Liability	☐ Nor or ☐ Yes

THE CORPORATION OF THE TOWN OF CALEDON has been added as an additional insured but only with respect to their interest in the operations of the Named Insured.

er policies	urer's Name	licy Number	licy Period m 12:01 AM Y MM DD	12:01 AM Y MM DD	nits of Coverage
tor Vehicle Liability "All vehicles owned or operated by the insured"					

Motor Vehicle Liability – must cover all vehicles owned, operated by or on behalf of the insured – Not Less than $2 Million

s certifies that the policies of insurance described above have been issued by the undersigned to the Insured named above and ara in force at this time. ancelled or materially changed in any manner that would affect the Town of Caledon or other scheduled additional insured, for any reason, so as to affect this certificate, thirty (30) days prior written notice by registered mail or facsimile transmission will be given by the Insurer(s) to:	e Corporation of the Town of Caledon neral Manager of Finance and Infrastructure Services 1 Old Church Road edon, ON L7C 1J6

	x: (905) 584-4325
SCRIPTION OF OPERATIONS/LOCATIONS gal Description - plication No.: **21T-** perty Address:	

This is to certify that the Policies of Insurance as described above have been issued by the undersigned to the insured named above and are in force at this time. This Certificate is executed and issued to the aforesaid Corporation of the Town of Caledon, the day and date herein written below.

me of Insurance Company or Broker (completing form)	ephone No. (including area code))	
dress (street name, city, province and postal code)	x No. (including area code))	
me of Authorized representative or official	nature of authorized representative or official	e (YY MM DD)

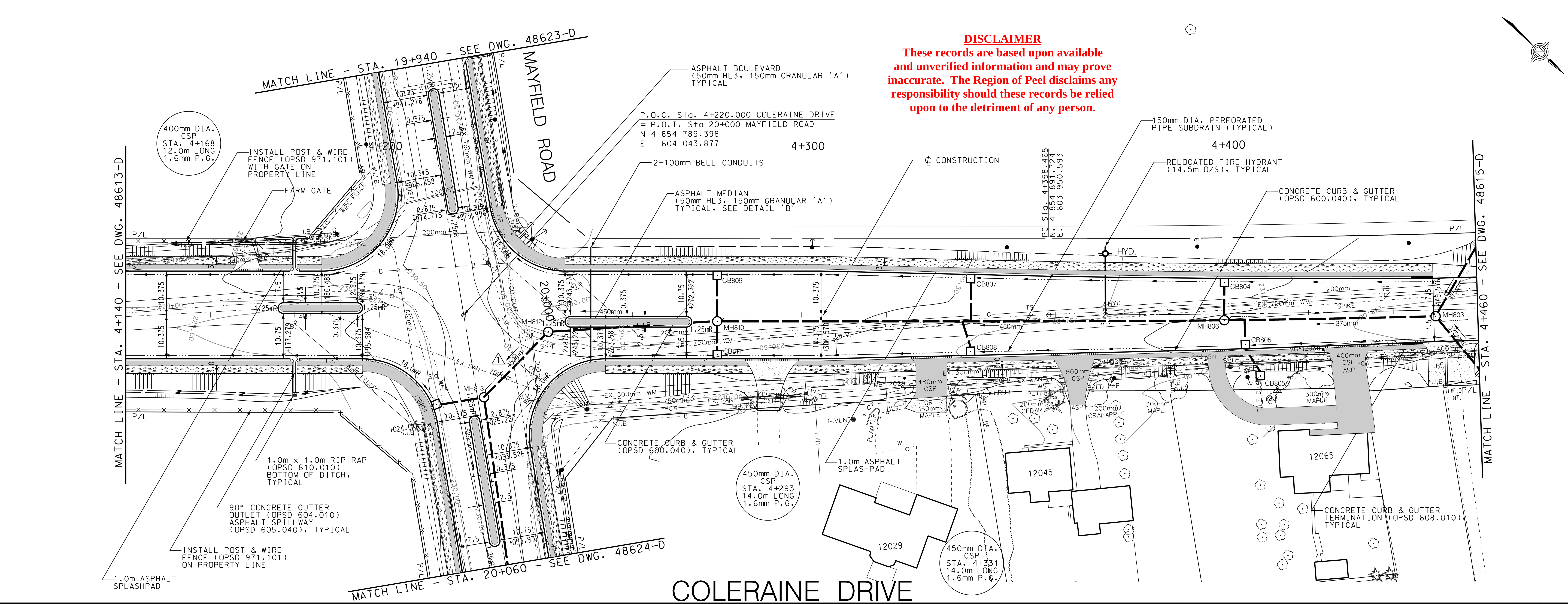
SCHEDULE "O"
CONVEYANCES

The parties acknowledge and agree that this Agreement and Schedule "O" may be amended by the Town or the Region to include all Public Infrastructure Works, lands and easements to be conveyed to the Town or the Region, as applicable.

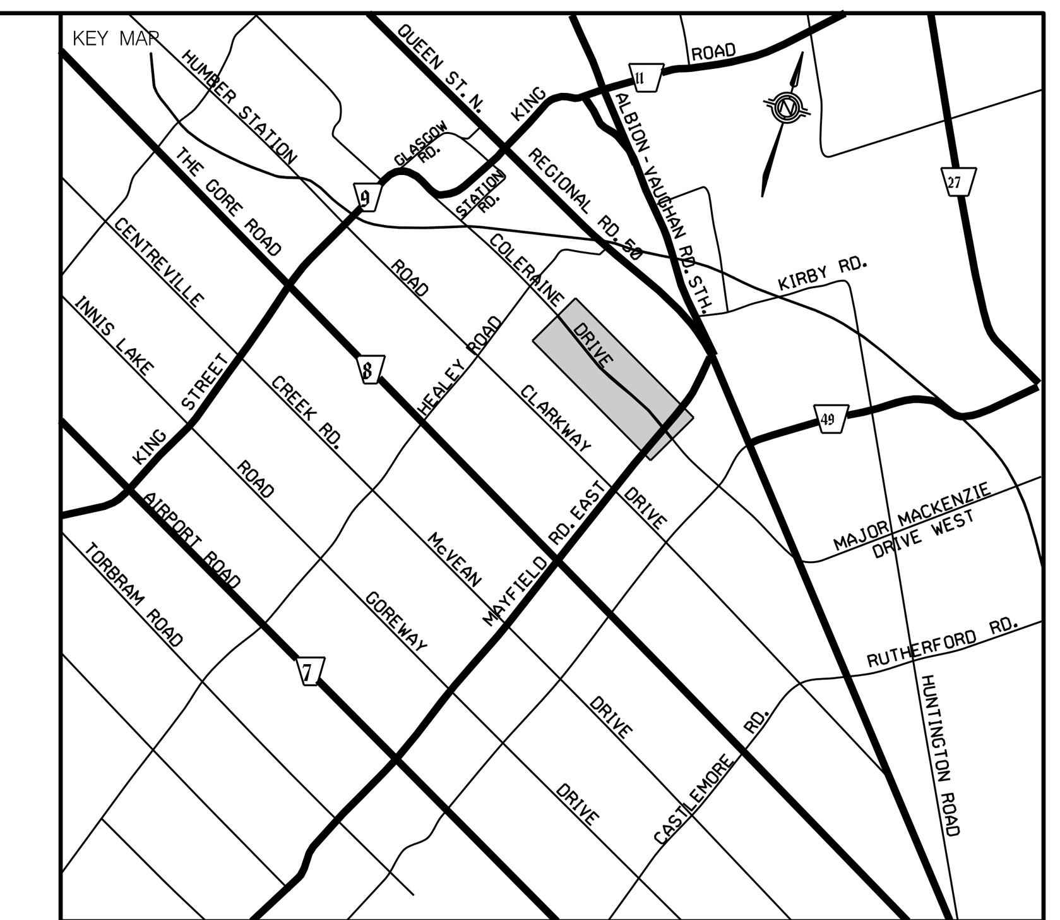
Land and easements to be gratuitously conveyed free and clear of any encumbrances:

Lands to be Transferred to the Town:

1. Future Simpson Road and Channel – designated as Parts 1 to 13, and 15 to 17 43R-36796
2. Future Simpson Road and Channel – designated as Parts 1 to 6, 43R-39439
3. Future Simpson Road and Channel – designated as Parts X to X, 43R-XXXXX
4. Storm Water Management Pond – designated as Parts 3, 4, 28 and 29, 43R-XXXXX



DISCLAIMER
These records are based upon available and unverified information and may prove inaccurate. The Region of Peel disclaims any responsibility should these records be relied upon to the detriment of any person.



GENERAL NOTES

(1) FOR STORM SEWER DATA SEE SHEET 20

AS-BUILT DRAWING
CONTRACTOR: FERMAR PAVING LTD.
WORK COMMENCED: APRIL 2008
WORK COMPLETED: OCTOBER 2009
These As-Built Drawings have been prepared based on inspections and observations undertaken by MRC staff during key stages of construction and on information submitted, in part, by others. While this information is believed to be reliable, MRC is not responsible for its accuracy, or for errors or omissions that may have been incorporated into this drawing as a result.

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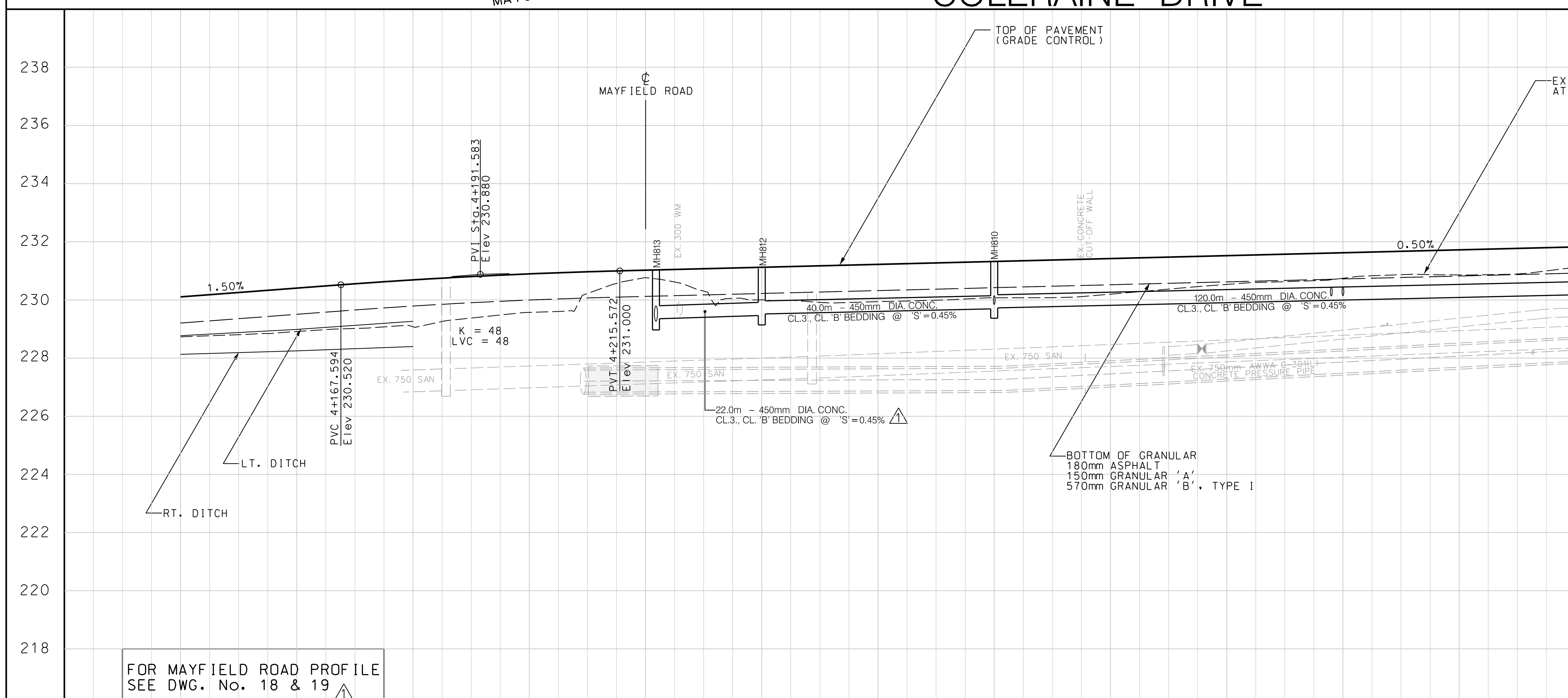
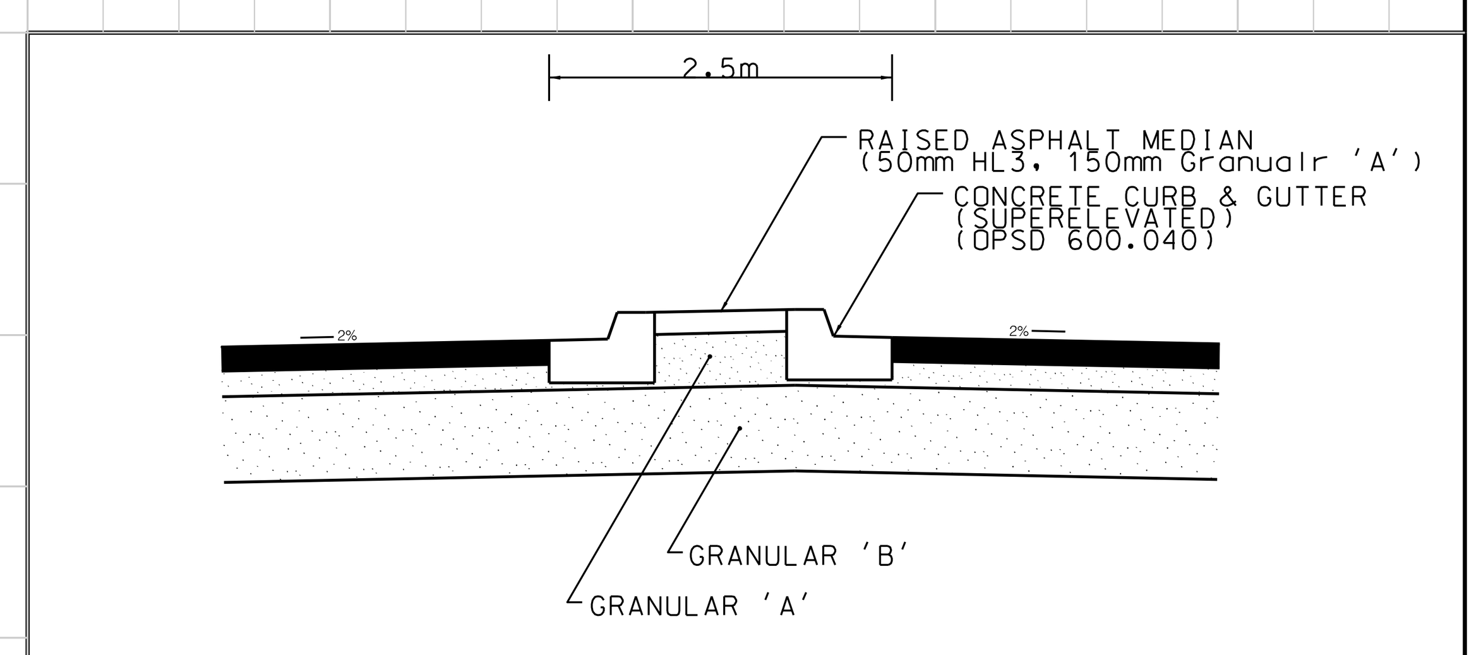
THE LOCATION OF UTILITIES IS APPROXIMATE ONLY AND THE EXACT LOCATION SHOULD BE DETERMINED BY CONSULTING THE MUNICIPAL AUTHORITIES AND UTILITY COMPANIES CONCERNED. THE CONTRACTOR SHALL PROVE THE LOCATION OF UTILITIES AND SHALL BE RESPONSIBLE FOR ADEQUATE PROTECTION FROM DAMAGE.

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
1	W.J.B.	05/18/07	ADDENDUM 1.	M.W.S.	
2	W.J.B.	09/17/07	DRIVEWAY REVISED, CB ADDED	M.W.S.	





MEDIAN ISLAND - DETAIL 'B'
N.T.S.

℄ CHAINAGE	STORM INVERT	PROPOSED ℄ ROAD GRADES	EXISTING ℄ ROAD GRADES
4+140		230.106	228.73
4+160		230.406	228.91
4+180		230.690	229.08
4+200		230.897	229.57
4+220	229.269 / 229.349	231.022	230.77
4+240	229.466 / 229.516	231.122	230.00
4+260		231.222	229.94
4+280	229.616 / 229.726	231.322	230.08
4+300		231.422	230.20
4+320		231.522	230.53
4+340		231.622	230.75
4+360		231.722	230.86
4+380		231.822	231.12
4+400	230.266 / 230.341	231.922	231.48
4+420		232.022	231.83
4+440	230.566	232.122	232.05
4+460		232.222	232.19

APPROVED FOR CONSTRUCTION

DATE : ______ APPROVED BY: ______
C.A. Campbell, C.E.T.
Director

BENCH MARK:

Designed by

PROJECT NAME
COLERAINE DRIVE WIDENING AND RECONSTRUCTION

CONSULTANT
McCORMICK RANKIN CORPORATION

IN THE REGION OF PEEL

THE CORPORATION OF THE
TOWN OF CALEDON

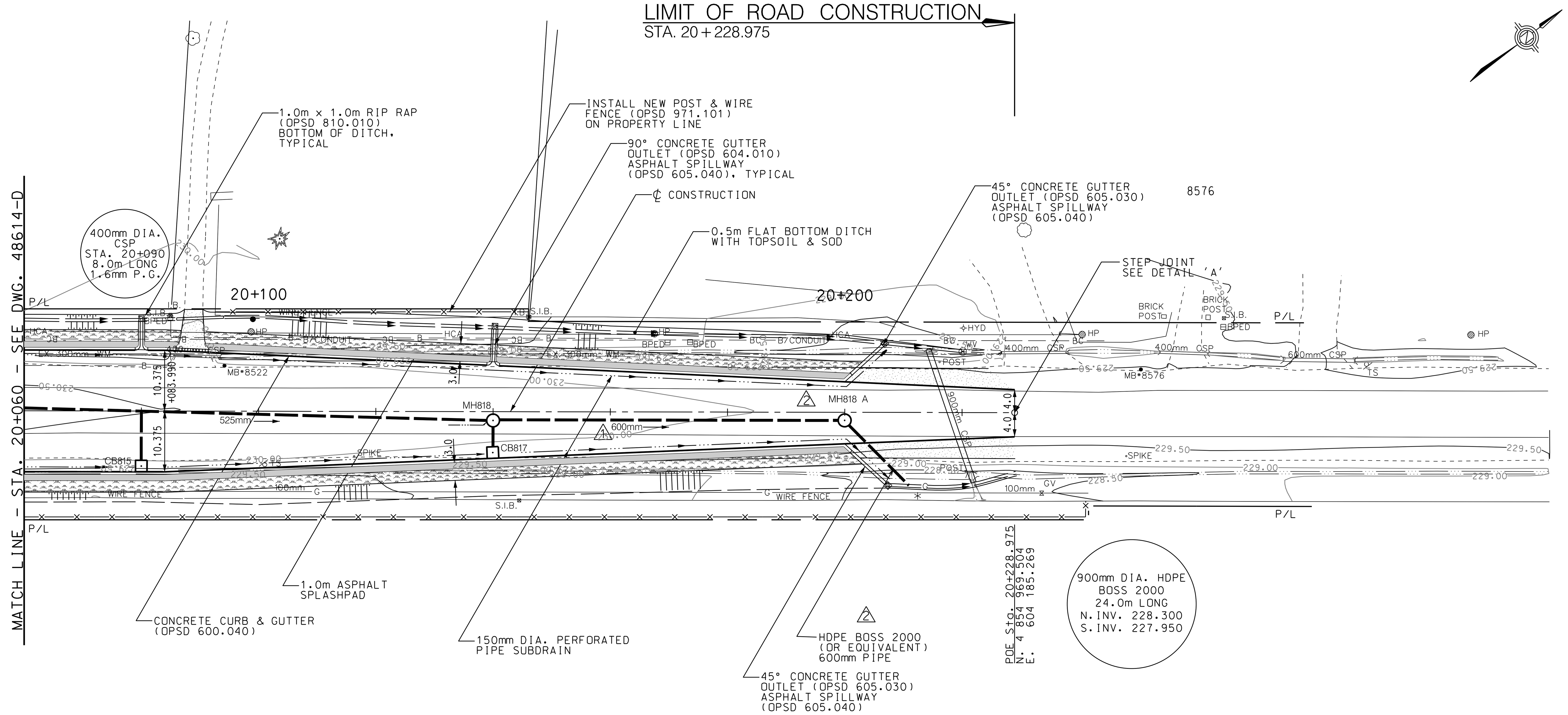
COLERAINE DRIVE GRADING, PAVEMENT AND DRAINAGE

STA. 4+140 TO STA. 4+460

AREA: C-02

SCALE:	HORIZ. 1:500	VERT. 1:100	PROJECT No. 01-4230
DESIGNED BY: W.J.B.	DRAWN BY: A.K.S.		DRAWING No. 48614-D
CHECKED BY: M.W.S.	DATE: MAY, 2007		

FILE: $FILE$
DATE: 27/11/2013



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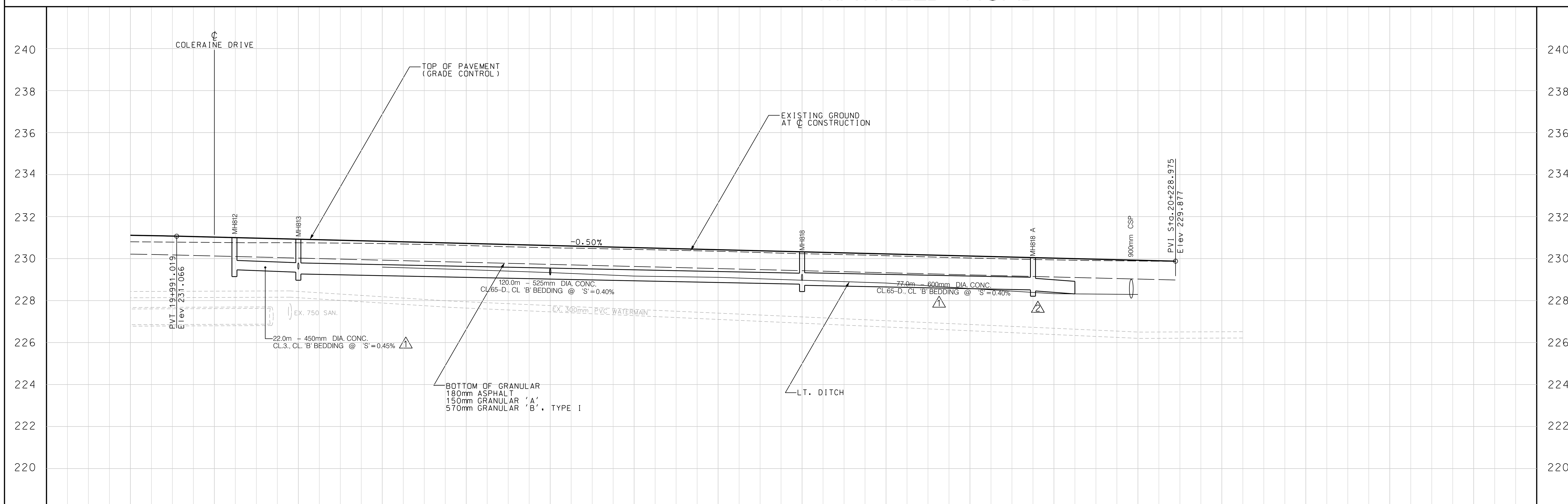
MAYFIELD ROAD

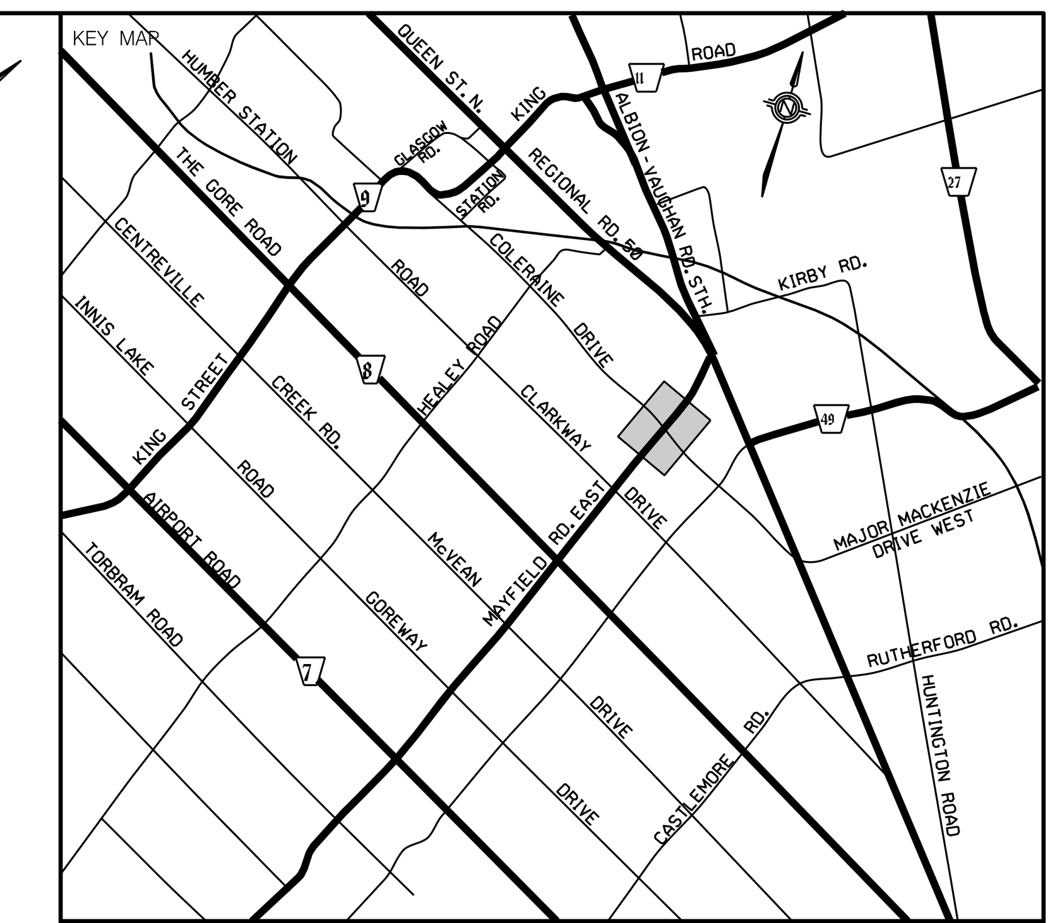


STORM INVERT: 229.516 / 229.466 (MH812); 229.349 / 229.269 (MH813); 228.758 / 228.728 (MH818); 228.488 / 228.438 (MH818 A); 228.300

℄ CHAINAGE	PROPOSED ℄ ROAD GRADES	EXISTING ℄ ROAD GRADES
19+980	231.109	230.80
20+000	231.022	230.77
20+020	230.922	230.75
20+040	230.822	230.71
20+060	230.722	230.62
20+080	230.622	230.52
20+100	230.522	230.44
20+120	230.422	230.35
20+140	230.322	230.23
20+160	230.222	230.14
20+180	230.122	230.03
20+200	230.022	229.94
20+220	229.922	229.88

FILE: $FILE$
DATE: 27/11/2013

KEY MAP



GENERAL NOTES

(1) FOR STORM SEWER DATA SEE SHEET 20

AS-BUILT DRAWING

CONTRACTOR: FERMAR PAVING LTD.

WORK COMMENCED: APRIL 2008

WORK COMPLETED: OCTOBER 2009

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NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
1	W.J.B.	05/18/07	ADDENDUM 1.	M.W.S.	
2	W.J.B.	19/17/07	OUTLET REVISED	M.W.S.	

APPROVED FOR CONSTRUCTION

DATE :____________ APPROVED BY:____________
C.A. Campbell, C.E.T. Director

BENCH MARK:

Designed by

PROJECT NAME
COLERAINE DRIVE WIDENING AND RECONSTRUCTION

CONSULTANT
McCORMICK RANKIN CORPORATION

IN THE REGION OF PEEL

THE CORPORATION OF THE
TOWN OF CALEDON

MAYFIELD ROAD
GRADING, PAVEMENT AND DRAINAGE

STA. 20+060 TO STA. 20+228.975

AREA: C-02

SCALE: HORIZ. 1:500 VERT. 1:100		PROJECT No. 01-4230
DESIGNED BY: W.J.B.	DRAWN BY: A.K.S.	DRAWING No. 48624-D
CHECKED BY: M.W.S.	DATE: MAY, 2007	

TOWN OF CALEDON

SIMPSON ROAD EXTENSION
PHASE 3

FROM 282m SOUTH OF PARR BOULEVARD TO MAYFIELD ROAD
CONTRACT- 14-093

REGION OF PEEL

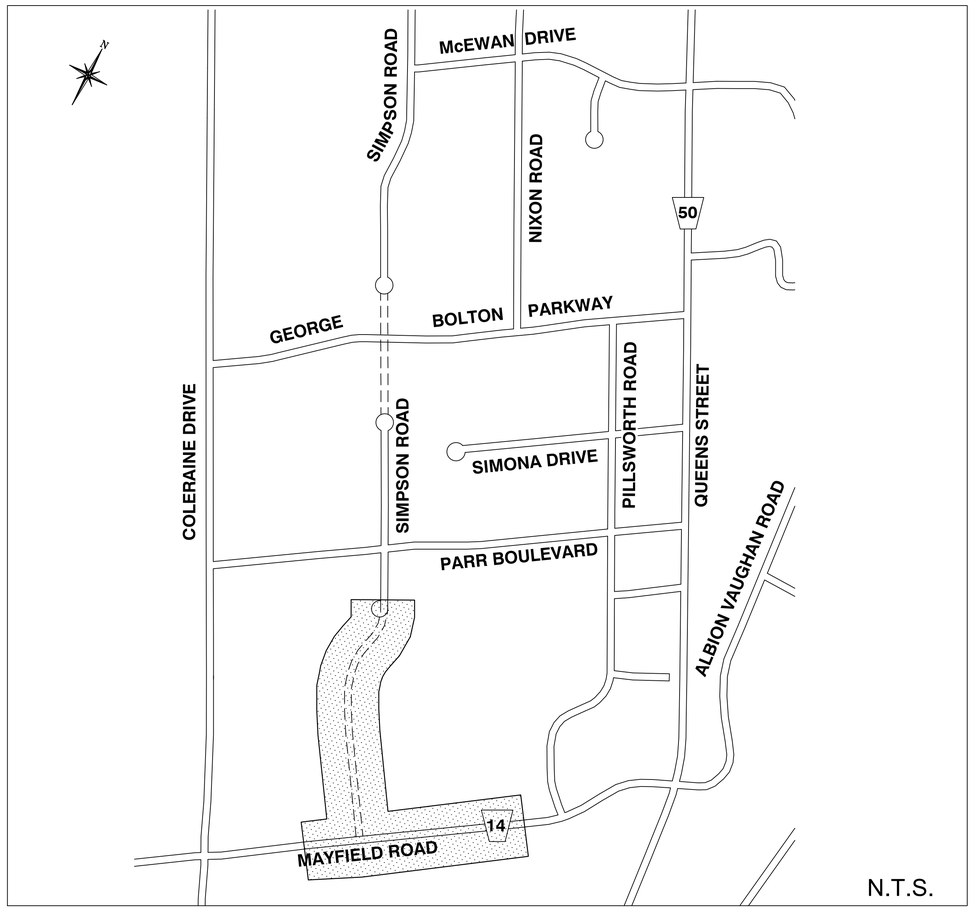
COMMISSIONER OF PUBLIC WORKS

wood.

3450 HARVESTER ROAD
BURLINGTON, ON
L7N 3W5

INFRASTRUCTURE

561m OF ROAD
459m OF STORM SEWER
833m OF SANITARY SEWER
583m OF WATERMAIN
17 MANHOLES
14 CATCHBASINS
16 STREETLIGHTS



DRAWING INDEX

Issued for Client Review – 100% Detailed Design

LEGEND

1. EXISTING

GENERAL:

- BOUNDARY LINE
- BRIDGES
- CENTERLINE AND (OR) BASELINE
- CNR RAILWAY
- EASEMENT LINE
- DIRECTION OF GRADING
- LOT (LOT) LOT LINE
- MISCELLANEOUS
- PARKING
- LINE PAINTING REMOVAL
- ROAD
- RIGHT OF WAY
- LAKE SHORELINE
- TOP OR BOTTOM SLOPE, BERM
- STREAMS
- WATERSHED SUB-BOUNDARY
- SWAMP AREA, MARSH
- TRANS CANADA GAS PIPELINE
- LANE & PAVEMENT MARKINGS
- WATERSHED AREA

SITE & ROAD:

- BUILDINGS
- EX. BASE
- EX. CENTERLINE AND (OR) BASELINE
- EX. CURB
- EX. DITCH, SWALE (>)
- EX. FENCE (X)
- EX. GABION BASKETS
- EX. GUIDERAIL OR POST & WIRE
- EX. LINE PAINTING
- EX. EDGE OF PAVEMENT
- EX. EDGE OF SHOULDER
- EX. SIDEWALK

SEWER:

- EX. CULVERT
- EX. SANITARY MAIN (SAN)
- EX. SANITARY SERVICE
- EX. STORM MAIN / SUBDRAIN
- EX. STORM SERVICE

UTILITIES:

- EX. BELL (U/B)
- EX. CONDUIT (TRAFFIC LIGHTS ETC.)
- EX. CABLE TV (CTV)
- EX. GAS MAIN (G)
- EX. HYDRO (U/H)
- EX. SPRINKLER SYSTEM
- EX. WATER MAIN (W)
- EX. WATER SERVICE (WS)

2. PROPOSED

SITE & ROAD:

- BASE PLAN
- CURB
- DITCH LINE (>)
- FENCE (X)
- GABION BASKETS
- GUIDERAIL OR POST & WIRE
- LINE PAINTING
- PAVEMENT EDGE
- SHOULDER EDGE
- SIDEWALK

SEWER:

- CULVERTS
- SANITARY DRAINAGE AREA
- SANITARY MAIN
- SANITARY SERVICE
- STORM DRAINAGE AREA
- STORM MAIN / SUBDRAIN
- STORM SERVICE

UTILITIES:

- BELL
- CONDUIT (TRAFFIC LIGHTS ETC.)
- CABLE TV
- GAS MAIN
- HYDRO
- SPRINKLER SYSTEM
- WATER MAIN
- WATER SERVICE (WS)

3. DRAINAGE PLANS

SANITARY:

- SANITARY DRAINAGE DIVIDE
- SUBCATCHMENT BOUNDARY
- LOCAL BOUNDARY
- ZONING BOUNDARY

STORM:

- EX. WATERSHED BOUNDARY - 5 YEAR STORM
- EX. WATERSHED BOUNDARY - 100 YEAR STORM
- FUTURE WATERSHED BOUNDARY - 5 YR STORM
- FUTURE WATERSHED BOUNDARY - 100 YR STORM
- EXISTING SUBCATCHMENT - 5 YEAR
- EXISTING SUBCATCHMENT - 100 YEAR
- FUTURE SUBCATCHMENT - 5 YEAR
- FUTURE SUBCATCHMENT - 100 YEAR
- LOCAL BOUNDARY

SYMBOLS	DESCRIPTION
C.M. , S.I.B. , S.S.I.B.	CONCRETE MONUMENT, STANDARD IRON BAR, SHORT STANDARD IRON BAR
I.B. , STK , P.K.	IRON BAR, STAKE, NAIL
R.I.B. , I.P.	ROUND IRON BAR, IRON PIPE
C.C.	CUT CROSS
B.M., G.B.M.	BENCH MARK, GEODETIC BENCH MARK
G.S.M. #	GEODETIC SURVEY MONUMENT (2nd Order)
P.I.	POINT OF INTERSECTION
B.H.#	BORE HOLE
R.C.S.	RAILWAY CROSSING SIGN
S.B.	SIGNAL BOX
	RAILWAY TRACKS
H.P. , B.P.	HYDRO POLE, BELL POLE
G.W.	GUY WIRE
G.S. , B.S. , M.S.	GAS SIGN, BELL SIGN, MONUMENT SIGN
B.B. , H.B. , CTV.B.	BELL BOX, HYDRO BOX, CABLE TV BOX
POLE (DESCRIPTION)	MISC. POLE (ie. Clothline)
SIGN	SIGN POST (SPECIFY)
U.MH.	UTILITY MANHOLE (OTHER)
S.S. , T.S.	STOP SIGN, TRAFFIC SIGN
POST	POSTS
P.M.	SINGLE PARKING METER
P.M.	DOUBLE PARKING METER
L.P. , T.L.	LIGHT POLE, TRAFFIC LIGHT
H.MH.	HYDRO MANHOLE
E.MH.	ELECTRICAL MANHOLE (TRAFFIC LIGHTS)
B.MH.	BELL MANHOLE
	TELEPHONE BOOTH
HYD.	FIRE HYDRANT
V #	WATER VALVE
	CURB STOP
	WATERMAIN CROSS, TEE
	WATERMAIN CAP, REDUCER
	FIRE HYDRANT (IN PROFILE)
G.V.	GAS VALVE
	EXISTING GROUND POINT
	VAULT
	GABION BASKET, STONE
	RIP RAP
	ROCK
WELL	WELL
SAN.MH.	SANITARY MANHOLE
STM.MH.	STORM MANHOLE
C.B.MH.	CATCH BASIN MANHOLE
C.B.	SINGLE CATCH BASIN
D.C.B., D.C.B.MH.	DOUBLE CATCH BASIN, DOUBLE CATCH BASIN MANHOLE
D.I.C.B.	DITCH INLET CATCH BASIN
	CULVERT
	SWAMP, MARSH
	TREE LINE, HEDGE
	DECIDUOUS, CONIFEROUS TREE ; STUMP (TREE SIZES WILL BE IN 100mm INCREMENTS)
	DECIDUOUS AND CONIFEROUS SHRUBS
	HATCHING FOR OBJECTS TO BE REMOVED (SCALE OF HATCHING TO BE IN PROPORTION TO THE ITEM TO BE REMOVED)

BLOCK SYMBOLS

BLOCK	BLOCK NAME
C.M.	CM
S.I.B.	SIB
S.S.I.B.	SSIB
I.B.	IB
STK	STK
P.K.	PK
C.C.	CC
R.I.B.	RIB
I.P.	IP
B.M.	BM
G.B.M.	GBM
P.I.	PI
R.C.S.	RCS
S.B.	SB
S.S.	SS
T.S.	TS
SIGN	SIGN
POST	POST
P.M.	PM1
P.M.	PM2
EG	EG
N	N
H.P.	HP
G.W.	GW
L.P.	LP
T.L.	TL
POLE	POLE
B.P.	BP
B.S.	BS
G.S.	GS
M.S.	MS
EX.SAN.MH.	SANMH
EX.STM. MH.	STMMH
EX. C.B.MH.	CBMH
EX. D.C.B.MH.	DCBMH
EX. C.B.	CB
EX. D.C.B.	DCB
EX. D.I.C.B.	DICB
CULV	CULV
TREELINE	TREELINE
HEDGE	HEDGE
B.MH.	BMH
B.B.	BB
PHONE	PHONE
H.MH.	HMH
E.MH.	EMH
H.B.	HB
U.MH.	UMH
CTV.B.	CTVB
DSHRUB	DSHRUB
CSHRUB	CSHRUB
HYD	HYD
WV	WV
CS	CS
PHYD	PHYD
PWV	PWV
PCS	PCS
CAP	CAP
CROSS	CROSS
TEE	TEE
REDUCER	REDUCER
G.V.	GV
VAULT	VAULT
RIPRAP	RIPRAP
SWAMP	SWAMP
ROCK	ROCK
WELL	WELL

PROP. FIRE HYDRANT STA. 0+035.4
FLANGE ELEV. 227.52
HYD-PROF

BLOCKS WITH ATTRIBUTES

BLOCK	BLOCK NAME
PROP.STM. MH.#	PSTMMH
PROP.C.B.#	PCBMH
PROP.D.C.B. MH.#	PDCBMH
PROP.C.B.#	PCB
PROP.D.C.B.#	PDCB
PROP. D.I.C.B.#	PDICB
PROP.SAN. MH.#	PSANMH
QUANTITY .1	D1
QUANTITY .2	D2
QUANTITY .3	D3
QUANTITY .4	D4
QUANTITY .5	D5
QUANTITY .6	D6
QUANTITY .7	D7
QUANTITY .8	D8
QUANTITY .9	D9
QUANTITY 1.0	D10
QUANTITY 1.1	D11
QUANTITY 1.2	D12
QUANTITY 1.3	D13
QUANTITY 1.4	D14
QUANTITY SIZE	D15
QUANTITY 1	C1
QUANTITY 2	C2
QUANTITY 3	C3
QUANTITY 4	C4
QUANTITY 5	C5
QUANTITY 6	C6
QUANTITY 7	C7
QUANTITY 8	C8
QUANTITY 9	C9
QUANTITY 1.0	C10
QUANTITY 1.1	C11
QUANTITY 1.2	C12
QUANTITY 1.3	C13
QUANTITY 1.4	C14
QUANTITY SIZE	C15
QUANTITY 1	STUMP1
QUANTITY 2	STUMP2
QUANTITY 3	STUMP3
QUANTITY 4	STUMP4
QUANTITY 5	STUMP5
QUANTITY 6	STUMP6
QUANTITY 7	STUMP7
QUANTITY 8	STUMP8
QUANTITY 9	STUMP9
QUANTITY 10	STUMP10
QUANTITY 11	STUMP11
QUANTITY 12	STUMP12
QUANTITY 13	STUMP13
QUANTITY 14	STUMP14
QUANTITY SIZE	STUMP15
G.S.M. # #	GSM
B.H.#	BH

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NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
4	F.W.	NOV. 20	ISSUED FOR 100% CLIENT REVIEW		
3	F.W.	AUG. 20	ISSUED FOR 100% CLIENT REVIEW		
2	F.W.	JUN. 20	ISSUED FOR 100% DETAILED DESIGN FOR ROP – MAYFIELD ROAD COORDINATION REVIEW		
1	F.W.	JAN. 20	ISSUED FOR 100% REVIEW		

BENCH MARK:

CONSULTANT

wood.

ENGINEER'S STAMP

APPROVED FOR CONSTRUCTION

R. GRODECKI, C.E.T., MITE
MANAGER, ENGINEERING SERVICES

DATE

PROJECT NAME

CONTRACT 14-093
SIMPSON ROAD EXTENSION PHASE 3

FINANCE AND INFRASTRUCTURE SERVICES

REGION OF PEEL
C02.312

THE CORPORATION OF THE
TOWN OF CALEDON

LEGEND

SCALE: **N.T.S.**		PROJECT No. **TP113126**
DESIGNED BY: **F.W.**	DRAWN BY: **N.H.**	
CHECKED BY: **D.S.**	DATE: **NOV. 2020**	DRAWNING No. **1**

REGION OF PEEL GENERAL NOTES

GENERAL:

1. THE APPLICANT, APPLICANTS REPRESENTATIVE, CONSULTANT, CONTRACTOR AND SUB CONTRACTORS ARE RESPONSIBLE TO ENSURE THAT THEIR DESIGN MATERIALS AND CONSTRUCTION PRACTICES CONFORM TO THE LATEST REGION OF PEEL STANDARDS, SPECIFICATIONS, MATERIALS AND DESIGN CRITERIA, POSTED ON REGION OF PEEL'S WEBSITE (www.peelregion.ca/pw/standards). IN THE ABSENCE OF REGION SPECIFICATIONS, THE ONTARIO PROVINCIAL STANDARD SPECIFICATIONS (OPSS) SHALL APPLY.
2. ALL WORKS SHALL BE COMPLETED IN ACCORDANCE WITH THE "OCCUPATIONAL HEALTH AND SAFETY ACT". THE GENERAL CONTRACTOR SHALL BE DEEMED THE CONSTRUCTOR AS DEFINED IN THE ACT.
3. THE CONTRACTOR AT THEIR EXPENSE SHALL VERIFY THE LOCATION, DIMENSION AND ELEVATION OF ALL EXISTING SERVICES AND UTILITIES IN THE FIELD.
4. PRIOR TO EXCAVATION OR BORING CONTRACTOR AT THEIR EXPENSE SHALL EXPOSE AND VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES AND SERVICES TO BE CROSSED AND MUST NOTIFY THE DESIGN ENGINEER AND THE AGENCY FIELD INSPECTOR AND/OR PROJECT MANAGER IMMEDIATELY, IN WRITING, OF ANY CONFLICTS OR DISCREPANCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR EXPOSING THE EXISTING UTILITIES FAR ENOUGH IN ADVANCE OF CONSTRUCTION TO MAKE NECESSARY DESIGN MODIFICATIONS FOR REVIEW AND APPROVAL, IF REQUIRED, WITHOUT DELAYING THE WORK.
5. THE CONTRACTOR, AT THEIR EXPENSE AND TO THE SATISFACTION OF THE REGION OF PEEL, SHALL BE RESPONSIBLE FOR THE RESTORATION AND THE REPAIR OF THE EXISTING UTILITIES AND ALL AREAS BEYOND THE PLAN OF SUBDIVISION DISTURBED DURING CONSTRUCTION.
6. THE SUPPORT OF ALL UTILITIES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
7. ALL BACKFILL FOR SEWERS, WATERMAINS AND UTILITIES ON THE ROAD ALLOWANCE MUST BE MECHANICALLY COMPACTED.
8. ALL BOREHOLES SHOWN ON DRAWING ARE FOR INFORMATION ONLY. REFER TO GEOTECHNICAL REPORT.
9. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.

WATERMAINS:

1. THE REGION OF PEEL SHALL CONDUCT THE OPERATION OF EXISTING VALVES AND HYDRANTS IF REQUIRED.
2. CONTRACTOR MUST USE BATTER BOARD OR ROD-AND-LEVEL METHOD FOR WATERMAIN INSTALLATION.
3. ALL WATERMAINS SHALL HAVE 1.70m MINIMUM COVER FOR URBAN ROAD DESIGN AND 2.1m MINIMUM COVER FOR RURAL ROAD DESIGN.
4. ALL WATERMAINS SHALL MAINTAIN A MINIMUM 1.5m CLEARANCE FROM ALL MANHOLES AND CATCH BASINS, WHERE APPLICABLE.
5. FOR WATERMAINS CROSSING OVER OR UNDER SEWERS A MINIMUM 0.5m VERTICAL CLEARANCE SHALL BE PROVIDED.
6. FOR WATERMAIN CROSSING A SANITARY SEWER, WATERMAIN JOINTS ARE TO BE OFFSET A MINIMUM OF 2.5m HORIZONTALLY FROM THE CENTERLINE OF THE SANITARY SEWER.
7. WATERMAIN BEDDING SHOULD BE PER DWG 1-5-1.
8. WATERMAINS TO BE INSTALLED TO GRADES AS SHOWN ON APPROVED PLANS, COPY OF GRADE SHEET MUST BE SUPPLIED TO THE REGION OF PEEL INSPECTOR PRIOR TO COMMENCEMENT OF WORK.
9. ANY JOINT DEFLECTION SHALL NOT EXCEED 50% OF MANUFACTURERS SPECIFICATIONS. PIPE BARREL DEFLECTION IS PROHIBITED.
10. FIRE HYDRANTS SHALL BE INSTALLED AS PER REGION STD. DWG. 1-6-1 OR 1-6-2 WITH FLANGE SET BETWEEN 50mm AND 150mm ABOVE FINISHED GRADE.
11. ALL HYDRANTS SHALL HAVE 1.2m MINIMUM HORIZONTAL CLEARANCE FROM ALL OTHER UTILITIES AND STRUCTURES MEASURED FROM THE NEAREST POINT OF THE STRUCTURE.
12. MECHANICAL RESTRAINERS ARE REQUIRED FOR ALL FITTINGS, VALVES, DEAD ENDS, CAPS AND HYDRANTS ON ALL PVC WATERMAINS; MINIMUM RESTRAINED PIPE LENGTH AS PER REGION'S STANDARD DRAWING 1-5-9.
13. STAINLESS STEEL NUTS AND BOLTS ARE TO BE USED ON ALL METALLIC FITTINGS AND JOINT RESTRAINTS.
14. ALL METALLIC VALVES, FITTINGS, THROUGH WALL METAL PIPING AND JOINT RESTRAINTS TO BE C/W DENSO PASTE, DENSO MASTIC & DENSO TAPE OR APPROVED EQUAL APPLIED TO MANUFACTURERS RECOMMENDATIONS.
15. WHERE PLASTIC PIPE IS USED, INSTALL A 12 GAUGE TWU STRANDED COPPER, LIGHT COLOURED, PLASTIC COATED TRACER WIRE ATTACHED TO THE PIPE WITH APPROVED WIRE SPLICE. THE WIRE SHOULD BE BROUGHT TO THE SURFACE AT EACH SERVICE & VALVE BOX AND HYDRANT VALVES.
16. 50mm DIAMETER WATERMAIN SHALL BE TYPE K SOFT COPPER. WATERMAIN INSTALLATION IN CULDE-SACS AS PER REGION STD. DWG. 1-7-4.
17. A PHYSICAL SEPARATION MUST BE MAINTAINED AT ALL CONNECTION POINTS OF NEW WATERMAIN TO THE EXISTING SYSTEM UNTIL BACTERIOLOGICAL TESTS HAVE PASSED, AS PER STD. DWG. 1-7-7 AND 1-7-8.
18. PROVISION FOR FLUSHING OF NEW WATERMAINS PRIOR TO TESTING MUST BE PROVIDED WITH AT LEAST 50mm OUTLET ON WATERMAINS SMALLER THAN 300mm IN DIAMETER, AND MINIMUM 100mm OUTLET ON WATERMAINS 300mm AND LARGER. COPPER WATERMAINS ARE TO HAVE FLUSHING POINTS AT THE END, THE SAME SIZE AS THE WATERMAIN, AS PER STD. DWG. 1-7-7 AND 1-7-8.
19. ALL SERVICE CONNECTIONS TO PVC PIPES ARE TO BE MADE USING APPROVED WIDE BAND SERVICE SADDLE, DIRECT TAPPING IS NOT ALLOWED.
20. ALL WATER SEVICES SHALL BE MINIMUM 25mm DIA NOMINAL COPPER PIPE SIZE OR 32mm DIA POLYETHYLENE PIPE. IN GENERAL, NON METALLIC SERVICES SHALL BE ONE SIZE LARGER THAN THE NOMINAL COPPER PIPE SIZE AS PER LATEST APPROVED REGIONAL PRODUCT LIST AND SIZES C/W TRACER WIRE.
21. THE MINIMUM LATERAL DISTANCE BETWEEN WATER SERVICES AND OTHER UTILITIES SHALL BE 1.2m.
22. ALL RESIDENTIAL WATER SERVICE BOXES/CURB STOPS SHALL BE INSTALLED WITHIN SODDED AREAS WITH MINIMUM DISTANCE OF 1.0 METRES FROM THE EDGE OF THE DRIVEWAY, BE FLUSH WITH GRADE AND ACCESSIBLE AT ALL TIME.
23. VALVE AND BOXES SHALL BE CAST IRON SLIDING TYPE, COMPLETED WITH VALVE GUIDE PLATES AND INSTALLED AS PER REGION STD. 1-3-8. MAINLINE VALVES TO BE RESTRAINED AS PER REGION STD. 1-3-3A. VALVES SHALL OPEN TO THE LEFT (COUNTER-CLOCKWISE).
24. ALL WATER SERVICES BOXES SHOULD BE "LEAD FREE" AS PER REGION'S MATERIAL SPECIFICATIONS.
25. THE REGION WILL COMPLETE THE NECESSARY WATER TESTING (PRESSURE TEST, FLUSHING, CHLORINATION AND SAMPLING). CONTRACTOR MAY PROCEED WITH HIS OWN PRESSURE TEST AND FLUSHING PRIOR TO REGION'S TESTING.
26. ALL METALLIC WATER PIPES INCLUDING 'K' COPPER WATER SERVICES, INSTALLED OE REPAIRED, SHALL HAVE ZINC ANODE AS PER REGION OF PEEL STANDARD 1-7-1, OPSS 422 AND OPSD 1109.011 AND TO CONFORM TO ASTM B-418 TYPE.
27. ALL WATERMAIN PIPE DELIVERED ON SITE SHALL HAVE MANUFACTURER'S PLUGS AND STORED SO THAT NO DEBRIS ENTERS THE PIPE.
    NO WATERMAIN IS TO BE INSTALLED UNTIL NIGHT PLUG IS ON SITE.
    NIGHT PLUG TO BE USED EVERY TIME WORK IS STOPPED.

WATERMAIN IN FILL AREA:

1. NO WATERMAIN TO BE LAID ON FILL UNTIL THE FIELD DENSITY TEST REPORTS HAVE BEEN SUBMITTED TO AND APPROVED BY THE REGION OF PEEL OR THE CONSULTING ENGINEER.
2. PIPE JOINTS DEFLECTIONS ARE NOT ALLOWED IN FILL AREA.
3. JOINTS SHALL BE MECHANICALLY RESTRAINED THE WHOLE LENGTH.
4. ALL HYDRANTS, TEE BRANCH VALVES AND HORIZONTAL BENDS ARE TO BE MECHANICALLY RESTRAINED WITH TIE RODS.
5. IN EXISTING MUNICIPAL RIGHT-OF-WAY OR EASEMENT, FILL TO BE PLACED TO 600mm MINIMUM ABOVE THE OBVERT OF THE WATERMAIN AND TO 300mm EITHER SIDE, COMPACTED TO MINIMUM 100% STANDARD PROCTOR DENSITY IN 300mm LIFTS; AND THEREAFTER, FOR EVERY 300mm LIFT ALONG THE CENTERLINE, AND 1.5m TO EITHER SIDE, OF WATERMAIN AT MAXIMUM INTERVAL OF 30.0m. TEST RESULTS MUST BE SUBMITTED TO AND APPROVED BY THE CONSULTANT OR AGENCY.

SANITARY SEWERS:

1. ALL SANITARY SEWER BEDDING AS PER STD. 2-3-1.
2. MAINLINE SANITARY SEWER PIPE SIZE SHALL BE MINIMUM 250mm IN DIAMETER INSTALLED AT THE APPROVED DESIGN GRADE. PIPE CLASS AND APPURTENANCES AS PER REGIONS SPECIFICATIONS.
3. ALL SEWERS CONSTRUCTED WITH GRADES 0.5% OR LESS SHALL BE APPROVED BY THE ENGINEER AND THE AGENCY PROJECT MANAGER OR DESIGNATE AND BE INSTALLED WITH LASER AND CHECKED PRIOR TO BACKFILL.
4. MINIMUM SANITARY SEWER PIPE SLOPE FOR LAST LEG SHALL BE 1% AND DESIRABLE SLOPE 2%.
5. ALL MANHOLES SHALL BE AS PER REGION STD. DWG. 2-5-2, 2-5-3, 2-5-4, 2-5-5 AND 2-5-6 AND BENCHING AS PER STD 2-5-20.
6. FRAME AND COVERS SHALL BE AS PER REGION STD. DWG. 2-5-13, 2-6-1 TO 2-6-8.
7. MANHOLE STEPS SHALL BE AS PER REGION STD. DWG. 2-6-9 TO 2-6-11.
8. MANHOLES DEEPER THAN 5.0m MUST BE EQUIPPED WITH SAFETY PLATFORMS, AS PER STD 2-6-13 AND 2-6-14.
9. MANHOLE DROP STRUCTURES SHALL BE AS PER REGION STD. DWG. 2-5-26 AND 2-5-27.
10. SANITARY SERVICE LATERALS SHALL BE MINIMUM 150mm DIAMETER.
    a. SANITARY SERVICE SHALL BE LOWER THAN AND TO THE RIGHT OF THE STORM SERVICE AT THE PROPERTY LINE WHEN FACING THE LOT FROM THE STREET.
    b. CONNECTIONS TO SEWERS SHALL BE MADE WITH MANUFACTURED TEES OR WYES WHERE APPLICABLE APPLICABLE AND SHALL BE COLOUR CODED AS NON-WHITE, AS PER STD. DWG. 2-4-1 TO 2-4-7.

REGIONAL ROAD: (NOT APPLICABLE)

1. CONSTRUCTION AND DETOUR SIGNAGE MUST CONFORM TO "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" AND LATEST REVISION OF THE ONTARIO MINISTRY OF TRANSPORTATION "TRAFFIC CONTROL MANUAL FOR ROADWAY WORK OPERATIONS"
2. ALL TEMPORARY SIGNAGE AND TRAFFIC CONTROL MEASURES SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF ONTARIO TRAFFIC MANUAL, BOOK 7 "TEMPORARY CONDITIONS" AND OPS SPECIFICATIONS AND STANDARD DRAWINGS.
3. PAVEMENT MARKINGS MUST BE IN ACCORDANCE WITH THE ONTARIO TRAFFIC MANUAL, BOOK 11 "PAVEMENT HAZARD AND DELINEATION MARKINGS".
4. THE CONTRACTOR SHALL NOTIFY IN ADVANCE, AS REQUIRED, THE APPROPRIATE AUTHORITY HAVING JURISDICTION FOR THE ROAD PRIOR TO COMMENCING ANY WORK AND SHALL ACQUIRE AND SATISFY THE REQUIREMENTS OF APPROPRIATE PERMITS (FEES, INSPECTIONS, SIGNAGE, TRAFFIC, MAINTENANCE, DIVERSION, ETC...)
5. REGIONAL ROAD CLOSURE IS NOT PERMITTED AT ANY TIME UNLESS APPROVAL FROM REGIONAL COUNCIL WAS OBTAINED FOR THE WORKS, WHERE A MINIMUM TWO MONTH LEAD TIME IS REQUIRED, AS PER REGIONAL POLICY W30-12.
6. WORK OPERATIONS THAT REQUIRE DIVERTING TRAFFIC TO ONE LANE ARE SUBJECT TO TIME RESTRICTIONS AND ,OR NIGHT TIME OPERATIONS AS SPECIFIED IN ROAD OCCUPANCY PERMIT. THROUGH LANES MUST BE MINIMUM 3.5m, UNLESS OTHERWISE APPROVED.
7. FOR TEMPORARY DELINEATION OF TRAFFIC IN OPPOSITE DIRECTIONS A YELLOW CENTRE LINE ON PAVEMENT MUST PAINTED. TRAFFIC CONTROL BARRELS (CONES) ARE NOT PERMITTED FOR THIS USE ON REGIONAL ROADS.
8. NEW JERSEY BARRIERS (NJB) WITH CRASH ATTENUATION DEVICES MUST BE USED ON LONG TERM PROJECTS AS OPPOSED TO TRAFFIC CONTROL DELINEATORS (BARRELS).
9. ACCESS TO EXISTING ENTRANCES AND SIDE STREETS, INCLUDING PEDESTRIAN ACCESS, SHALL BE MAINTAINED. ACCESS REQUIREMENTS MUST COMPLY WITH REGION OF PEEL CONTROLLED ACCESS BY-LAW.
10. LOCATION OF EXISTING UTILITIES TO BE ESTABLISHED BY THE CONTRACTOR. ALL EXISTING UTILITY ELEVATIONS (SANITARY AND WATERMAIN) INCLUDING CENTRE LINE OF THE ROAD ELEVATIONS HAVE TO BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCING ANY WORK ON SITE. ANY DISCREPANCIES SHALL BE REPORTED TO THE REGION IMMEDIATELY.
11. THE THE CONTRACTOR(S) SHALL BE SOLELY RESPONSIBLE FOR LOCATING, SUPPORTING AND PROTECTING ALL UNDERGROUND AND OVERHEAD UTILITIES AND STRUCTURES EXISTING AT THE TIME OF CONSTRUCTION IN THE AREA OF HIS WORK, WHETHER SHOWN ON THE PLANS OR NOT, AND FOR ALL REPAIRS AND CONSEQUENCES RESULTING FROM DAMAGE TO SAME.
12. THE CONTRACTOR(S) SHALL BE SOLELY RESPONSIBLE TO GIVE 72 HOURS WRITTEN NOTICE TO UTILITY AUTHORITY PRIOR TO CROSSING SUCH UTILITIES FOR THE PURPOSE OF INSPECTION. THIS INSPECTION WILL BE FOR THE DURATION OF CONSTRUCTION WITH THE CONTRACTOR RESPONSIBLE FOR ALL COSTS ARISING FROM SUCH INSPECTIONS.
13. ALL ROAD BASE SHALL BE AS PER REGION OF PEEL STD. DWG. 5-1-1 AND 5-1-2.
14. ASPHALT PRESERVATIVE SEALER SUCH AS RE-CLIMATE OR APPROVED EQUIVALENT SHALL BE APPLIED AFTER THE ONE-YEAR MAINTENANCE PERIOD FOR THE TOP COURSE ASPHALT.
15. ALL EXISTING PAVEMENTS, CURBS, SIDEWALKS AND BOULEVARDS, AND OTHER AREAS DISTURBED BY THE WORK, TO BE REINSTATED EQUAL TO EXISTING AND TO THE SATISFACTION OF APPLICABLE AUTHORITY HAVING JURISDICTION OVER THE ROAD ALLOWANCE. EXISTING PAVEMENT AND CURBS TO BE SAW-CUT TO PROVIDE A SMOOTH JOINT.
16. EROSION CONTROL MEASURES TO BE IMPLEMENTED AS REQUIRED.
17. FOR ROAD PROJECTS THAT WILL NOT BE COMPLETED PRIOR TO THE END OF THE CONSTRUCTION SEASON, THE FOLLOWING WILL NEED TO BE CONSIDERED IN ORDER TO WINTERIZE THE CONSTRUCTION PROJECT TO ENSURE SAFE CONDITIONS DURING WINTER:
    a. WHERE APPLICABLE, CURB AND GUTTER SECTIONS ARE TO BE COMPLETED, THE BASE COURSE ASPHALT SHALL BE IN PLACE
    b. CATCHBASINS AND MAINTENANCE HOLES SET TO EXISTING BASE GRADE
    c. STEEL PLATING NOT PERMITTED
    d. HOT MIX ASPHALT (HMA) ONLY
    e. LANE DELINEATION AND PAVEMENT MARKING COMPLETED
    f. WHERE JERSEY BARRIERS USED, OFFSET NO LESS THAN 4.25m FROM EDGE OF TRAVELLED LANE
    g. ROAD AND BOULEVARD MUST BE FREE OF OBSTRUCTIONS AND ACCOMODATE SAFE SNOW PLOW OPERATION CONSIDERING THAT A WING AND PLOW IS 6m WIDE AND 1.52m SNOW STORAGE MINIMUM REQUIRED
    h. ALL CATCHBASIN GRATES SHALL BE SIDE INLET, OPSD 400.081 (LATEST VERSION) UNLESS OTHERWISE NOTED
    i. WINTER SHUT-DOWN MEETINGS WITH THE REGION OF PEEL ROAD MAINTENANCE STAFF ARE REQUIRED PRIOR TO SEASONAL SHUT-DOWN AND SHALL BE ORGANIZED BY THE CONSULTANT OR PROJECT MANAGER OR DESIGNATE.

TRAFFIC SIGNS AND SIGNALS ON REGIONAL ROADS: (NOT APPLICABLE)

1. ALL REQUIRED TRAFFIC SIGN, WHETHER REGULATORY, WARNING, TEMPORARY OR GUIDE/DIRECTIONAL IN NATURE SHAL BE INSTALLED IN ACCORDANCE WITH THE STANDARDS SPECIFICATIONS AND LEGISLATION CONTAINED IN THE OTM MANUALS, THE HTA AND REGION OF PEEL TRAFFIC BY-LAW.
2. ELECTRICAL WORKS SHALL CONFORM TO THE ONTARIO PROVINCIAL STANDARDS (OPS) DRAWINGS AND REGION OF PEEL STANDARD DRAWINGS AND SPECIFICATIONS.
3. TRAFFIC CONTROLLERS MUST BE INSTALLED AS PER APPROVED LOCATIONS. EQUIPMENT MUST NOT ENCROACH ON PRIVATE PROPERTY WITHOUT PERMISSION TO ENTER, EASEMENT, PERMANENT OR TEMPORARY UNDERTAKINGS.

GENERAL NOTES - ROADWORKS

ROADS

A. SINGLE - STAGE CURB & GUTTER TO COMPLY WITH OPSD 600.040
B. TWO - STAGE CURB & GUTTER TO COMPLY WITH OPSD 600.070
C. SIDEWALKS TO COMPLY WITH OPSD-310.010 AND ARE TO BE 1.5 METRES WIDE ON A 150mm COMPACTED GRANULAR "A" BASE. MINIMUM THICKNESS AS FOLLOWS :
   - NORMAL THICKNESS 125mm.
   - RESIDENTIAL DRIVEWAY 150mm
   - COMMERCIAL/INDUSTRIAL DRIVEWAY 200mm
   (REINFORCEMENT AS PER OPSS IF REQUIRED)
D. NATIVE SUBGRADE SHALL HAVE A CROSSFALL OF 3% AND THE MATERIAL SHALL BE APPROVED BY A SOILS CONSULTANT AND IS SUBJECT TO APPROVAL BY THE GENERAL MANAGER OF FINANCE & INFRASTRUCTURE SERVICES.
E. THE ROAD BASE SHALL INCORPORATE 100mm DIAMETER SUBDRAIN WITH FACTORY INSTALLED FILTER FABRIC AS PER TOWN OF CALEDON STANDARD No. 240.
F. ALL CURB RADII TO BE MINIMUM OF 10.0 METRES RESIDENTIAL AND 15.0 METRES INDUSTRIAL AT THE EDGE OF ASPHALT.
G. NATIVE SUBGRADE TO BE COMPACTED TO MINIMUM 95% STANDARD PROCTOR MAXIMUM DRY DENSITY AND SHALL BE PROOF ROLLED.
H. GRADE AND CROSS FALL ADJUSTMENT OF MAINTENANCE HOLE AND CATCH BASIN FRAMES WILL BE MADE USING PRODUCTS SPECIFICALLY MANUFACTURED FOR THAT PURPOSE AS PER OPSD 704.010.
I. NON-COMPRESSIBLE BACK FILL WILL BE USED DURING REBUILDING, ADJUSTING, OR ANY OTHER APPLICABLE CATCH BASIN OR MAINTENANCE HOLE WORKS.
J. CURB AND SIDEWALK CONCRETE SHALL BE 30MPa AT 28 DAYS WITH 7% +/- 1.5% ENTRAINED AIR AND NOT LESS THAN 355 kg/m3 OF CEMENT.(PER OPSS 315 AND 353)

TOWN OF CALEDON						
GENERAL NOTES ROADWORKS	3	TEXT REVISION		MAY 19	APR'D: C.C.	DATE: DEC 1999
	2	STANDARD No. 125 NOW 102		JUNE 08	DRAWN: BJM	SCALE: NTS
	1	NOTES EDIT		MAR. 08		
	NO.	REVISION	APR'D	DATE	STANDARD No. 102	

GENERAL NOTES - STORM SEWERS

A. STORM SEWER TO BE PROVIDED ON ALL ROADS WITH CURB AND GUTTER.
B. PLACE ALL CATCH BASIN LATERALS AT 2% GRADE UNLESS OTHERWISE NOTED. PIPE SIZE MINIMUM 250mm DIA. SINGLE, 300mm DIA. DOUBLE.
C. STORM SEWERS SHALL BE CONSTRUCTED WITH BEDDING AS PER OPSD 802.030 FOR RIGID PIPE OR OPSD 802.010 WITH GRANULAR 'A' FOR FLEXIBLE PIPE UNLESS APPROVED OTHERWISE BY THE GENERAL MANAGER OF FINANCE & INFRASTRUCTURE SERVICES.
D. MAINTENANCE HOLE TOPS (FRAMES) AND CATCHBASIN (FRAMES) ARE TO BE SET TO BASE COURSE ASPHALT AND THEN ADJUSTED TO FINAL GRADE WHEN THE TOP LIFT OF ASPHALT IS PLACED.
E. STORM SEWER TO BE LOCATED OFFSET 1.5m SOUTH OR WEST OF CENTRELINE UNLESS OTHERWISE SPECIFIED.
F. ALL CONNECTIONS TO THE STORM MAIN SHALL BE MADE WITH A STORM MANHOLE OR APPROVED FACTORY TEE CONNECTION AS PER OPSD 708.01 OR 708.03.
G. PIPE MATERIAL TO BE REINFORCED CONCRETE WITH A STRENGTH OF 50 N/m/mm CERTIFIED TO C.S.A. STANDARD A247.2-1982, CLASS 50-D (PREVIOUSLY C.S.A. STANDARD A257.2-1974 CLASS II) OR PVC CERTIFIED TO C.S.A. STANDARDS 182.2 AND 182.4 MAX. PVC PIPE DIA. IS 600mm BIG O BOSS 2000 POLYETHYLENE PIPE WITH GASKETED BELL AND SPIGOT JOINTS CERTIFIED C.S.A. B182.6 FOR STORM SEWERS UP TO 900mm DIA. WHERE ONLY CONNECTION STD CATCHBASINS ARE CONSIDERED.
H. STORM SEWER TO BE MINIMUM 300mm DIA. WITH JOINTS CONFORMING TO C.S.A. STANDARD A 257.3
I. ALL PIPE BEDDING MUST CONFORM TO OPSD MAXIMUM COVER TABLE. NO FLEXIBLE PIPE SEWERS WILL BE INSTALLED WITH A DEPTH COVER GREATER THAN 6m UNLESS SPECIFICALLY APPROVED BY THE DIRECTOR OF PUBLIC WORKS AND ENGINEERING.
J. ALL PIPE HANDLING INSTRUCTIONS MUST BE IN STRICT COMPLIANCE WITH MANUFACTURERS INSTALLATION GUIDES AND THE OCPA OR UNIBELL GUIDELINES.

TOWN OF CALEDON						
GENERAL NOTES STORM SEWERS	3	TEXT REVISION		MAY 19	APR'D: C.C.	DATE: MAR 01
	2	STANDARD No. 120 NOW 101		JUNE 08	DRAWN: BJM	SCALE: NTS
	1	NOTES EDIT		MAR. 08		
	NO.	REVISION	APR'D	DATE	STANDARD No. 101	

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BENCH MARK:

CONSULTANT

wood.

ENGINEER'S STAMP

APPROVED FOR CONSTRUCTION

R. GRODECKI, C.E.T., MITE MANAGER, ENGINEERING SERVICES — DATE

PROJECT NAME

CONTRACT 14-093
SIMPSON ROAD EXTENSION PHASE 3

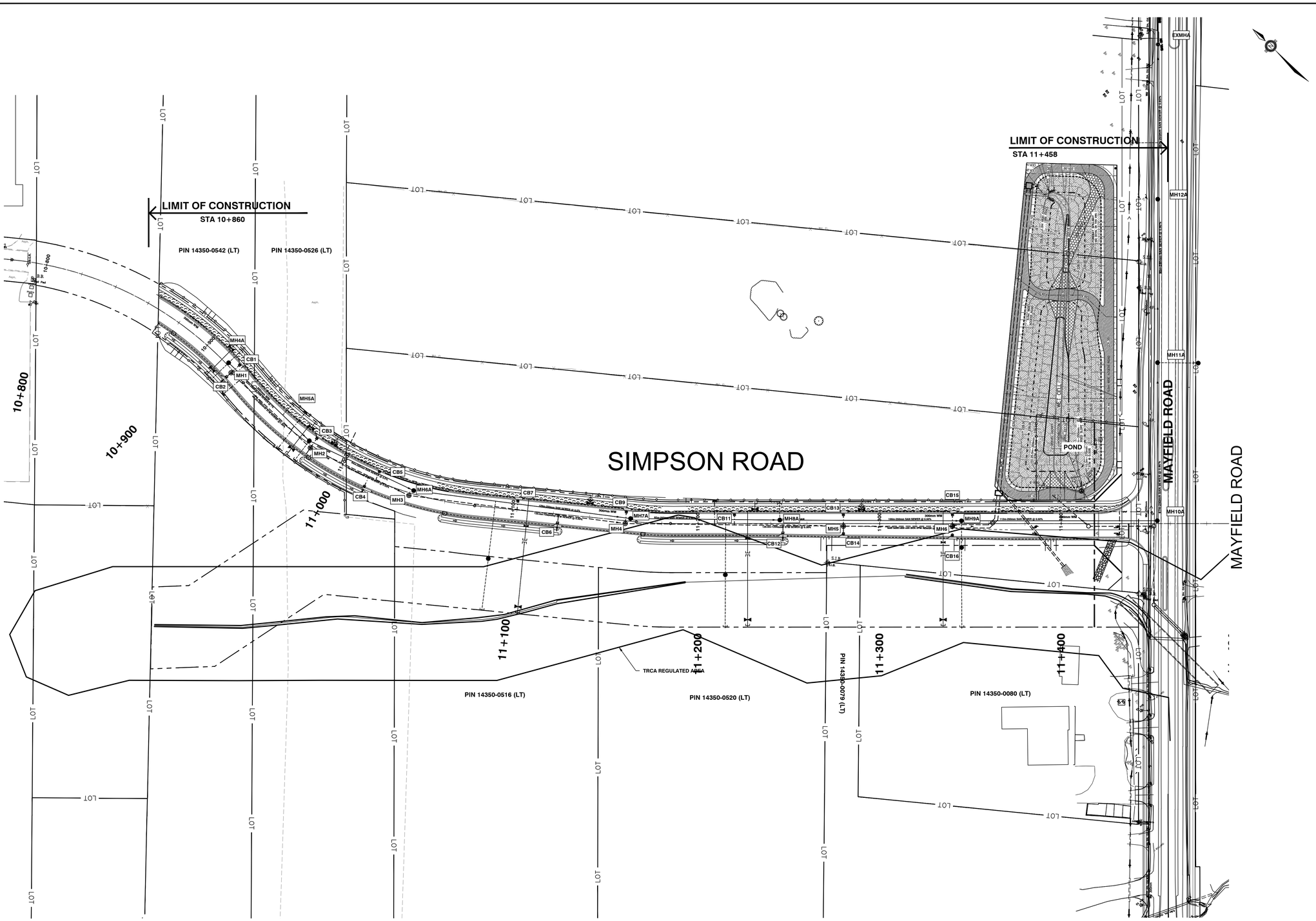
FINANCE AND INFRASTRUCTURE SERVICES

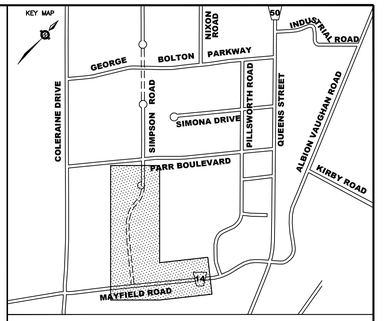
REGION OF PEEL
C02.312

THE CORPORATION OF THE
TOWN OF CALEDON

GENERAL NOTES

SCALE: N.T.S.	PROJECT No. TP113126
DESIGNED BY: F.W. / DRAWN BY: N.H.	
CHECKED BY: D.S. / DATE: NOV. 2020	DRAWNING No. 2





LEGEND

- PROPOSED VALVE
- PROPOSED HYDRANT
- A1 — ADJUST CATCHBASIN/MANHOLE
- CB1 — PROPOSED CATCHBASIN/MANHOLE
- MH1A — PROPOSED SANITARY MANHOLE
- PROPOSED SILT FENCING

NOTE:
REFER TO DWG. C1 FOR EROSION AND SEDIMENT CONTROL NOTES AND DETAILS.

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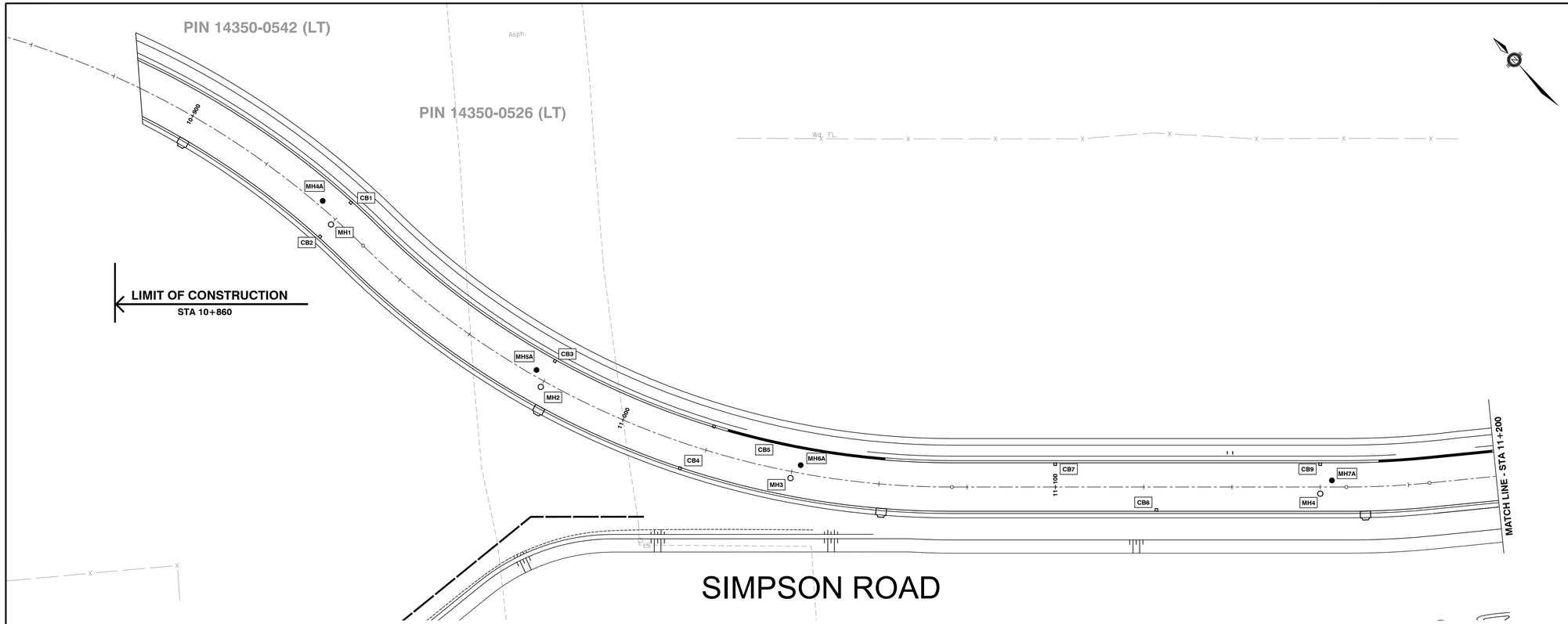
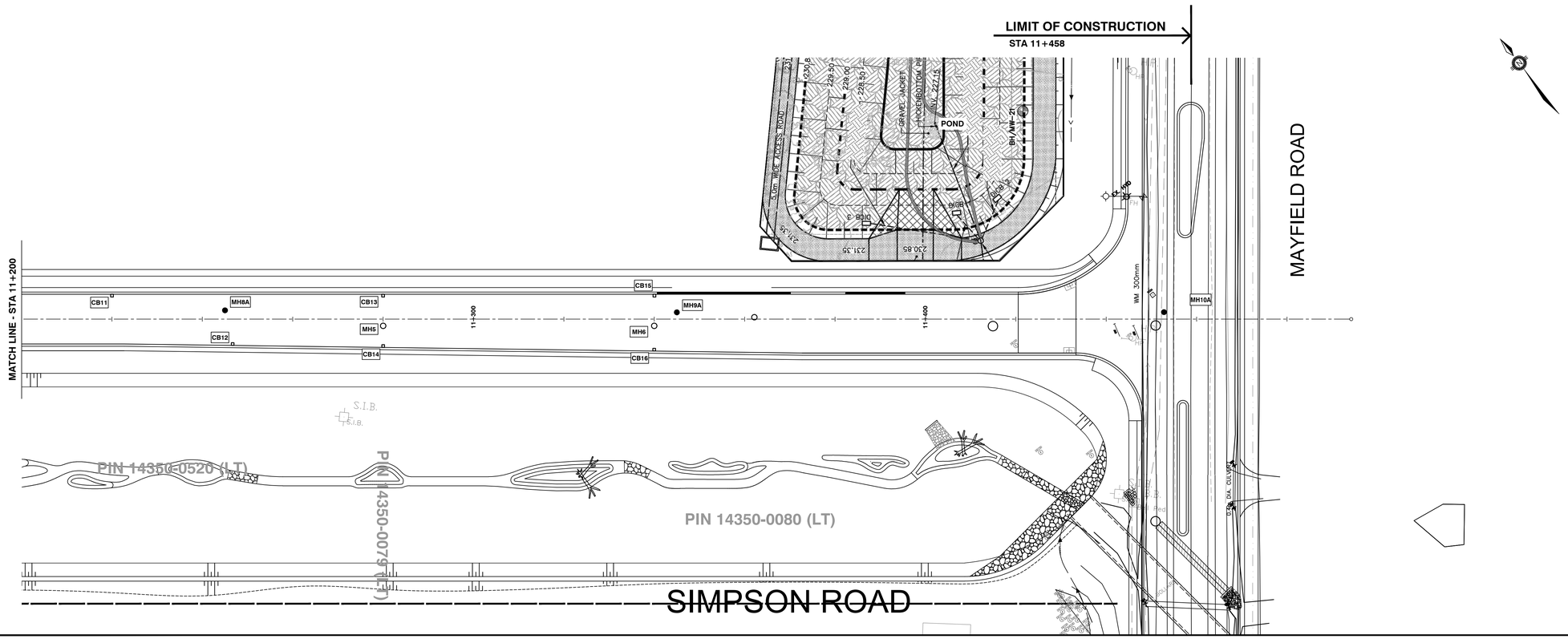
THE CORPORATION OF THE
TOWN OF CALEDON

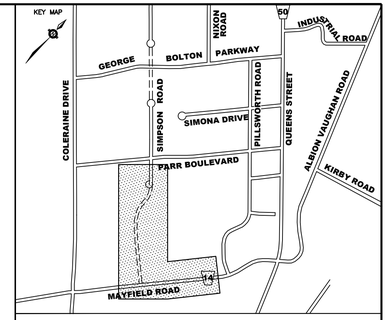
SIMPSON ROAD EROSION AND SEDIMENT CONTROL

STA. 10+860 TO STA. 11+458

SCALE: 1:1000		PROJECT No. TP113126
DESIGNED BY: F.W.	DRAWN BY: N.H.	
CHECKED BY: D.S.	DATE: NOV. 2020	DRAWNING No. 3







LEGEND

- PROPOSED HYDRANT
- A1 — ADJUST CATCHBASIN/MANHOLE
- CB1 — PROPOSED CATCHBASIN/MANHOLE
- MH1A — PROPOSED SANITARY MANHOLE

NOT FOR CONSTRUCTION

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
4	F.W.	NOV. 20	ISSUED FOR 100% CLIENT REVIEW		
3	F.W.	AUG. 20	ISSUED FOR 100% CLIENT REVIEW		
2	F.W.	JUN. 20	ISSUED FOR 100% DETAILED DESIGN FOR ROP – MAYFIELD ROAD COORDINATION REVIEW		
1	F.W.	JAN. 20	ISSUED FOR 100% REVIEW		

BENCH MARK:

CONSULTANT

wood.

ENGINEER'S STAMP

APPROVED FOR CONSTRUCTION

R. GRODECKI, C.E.T., MITE
MANAGER, ENGINEERING SERVICES
DATE

PROJECT NAME

CONTRACT 14-093
SIMPSON ROAD EXTENSION PHASE 3

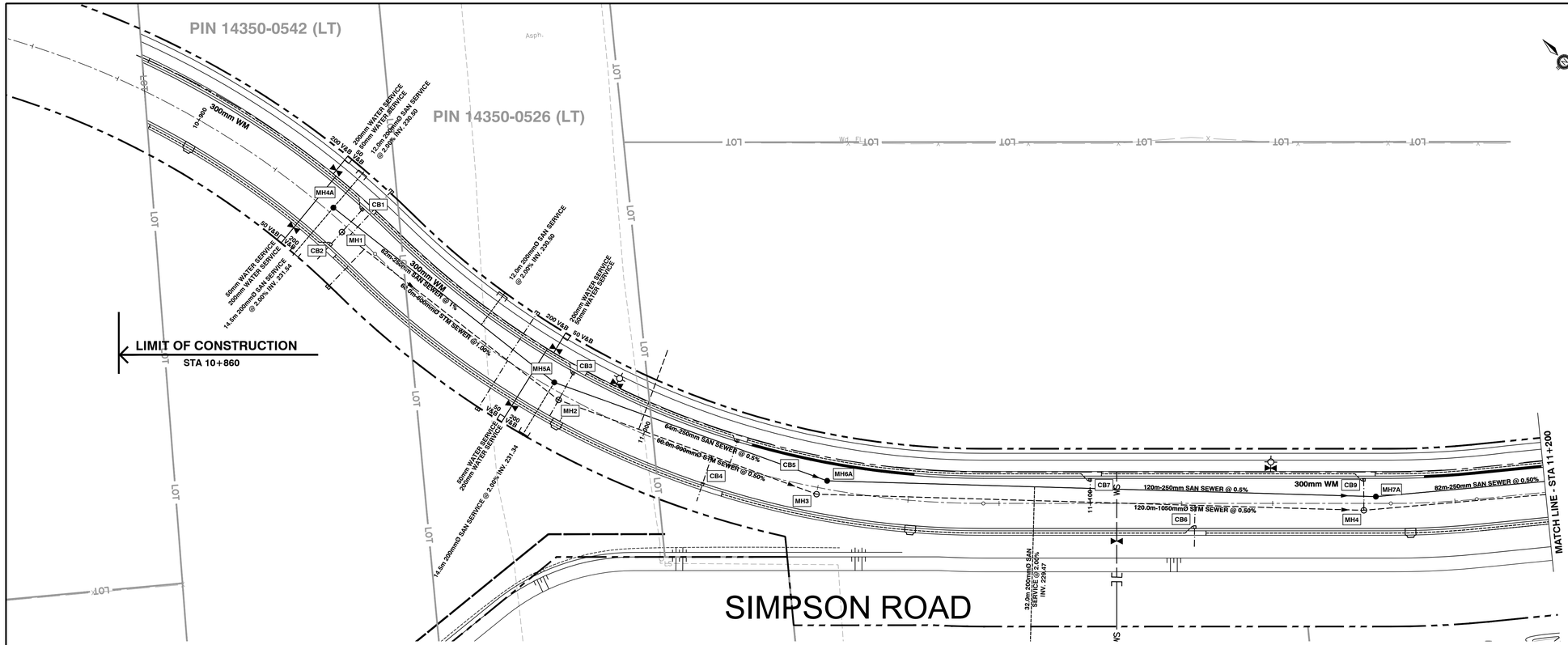
FINANCE AND INFRASTRUCTURE SERVICES

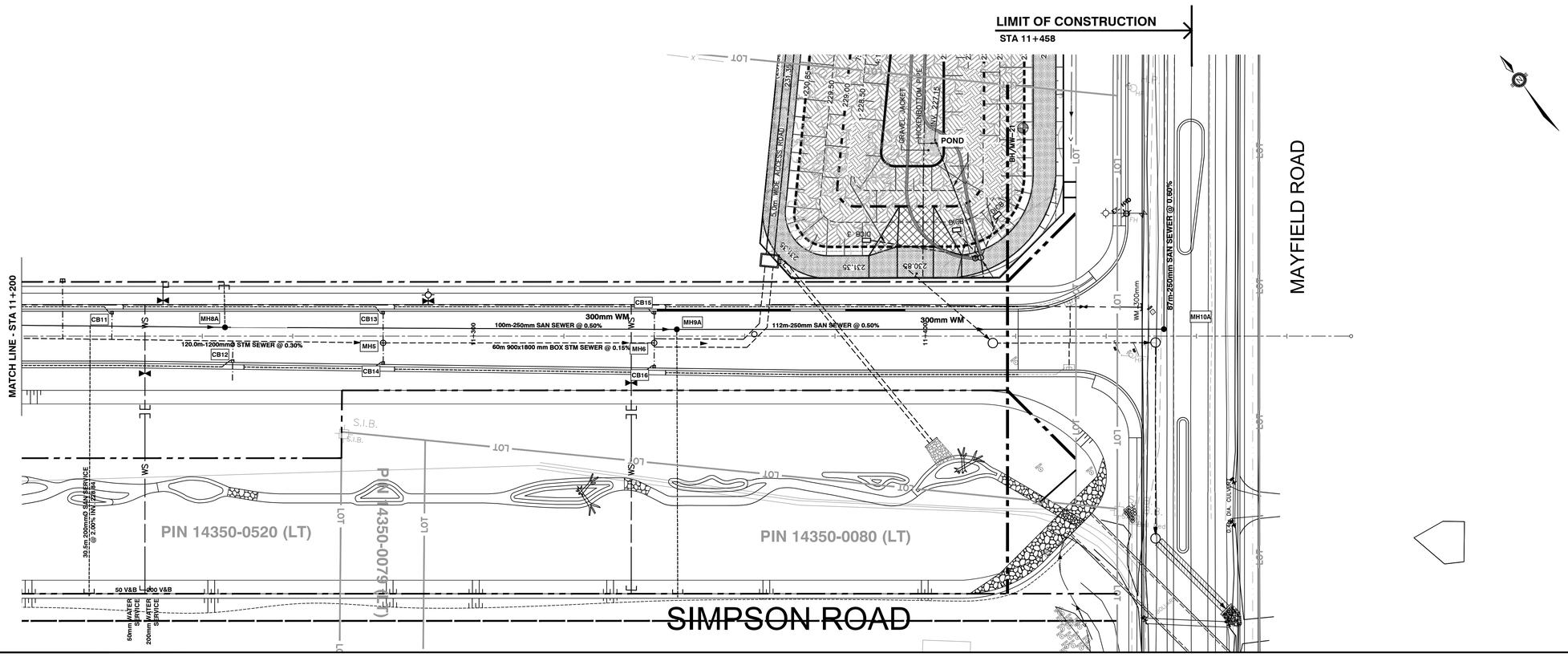
REGION OF PEEL
C02.312

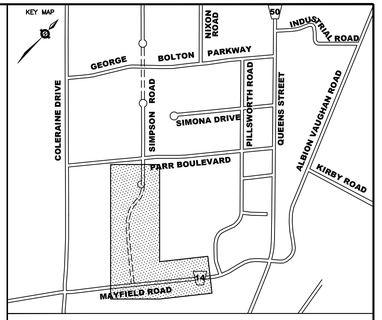
THE CORPORATION OF THE
TOWN OF CALEDON

SIMPSON ROAD
GENERAL PLAN
ABOVE GROUND
STA. 10+860 TO STA. 11+458

SCALE: 1:500		PROJECT No. TP113126
DESIGNED BY: F.W.	DRAWN BY: N.H.	DRAWNING No. 4
CHECKED BY: D.S.	DATE: NOV. 2020	







LEGEND

- PROPOSED VALVE
- PROPOSED HYDRANT
- A1 — ADJUST CATCHBASIN/MANHOLE
- CB1 — PROPOSED CATCHBASIN/MANHOLE
- MH1A — PROPOSED SANITARY MANHOLE

PROJECT STATISTICS		
1. WATERMAIN LENGTH	=	583 m
2. NUMBER OF WATER SERVICES	=	8
3. NUMBER OF HYDRANTS	=	3
4. SANITARY SEWER LENGTH	=	833 m
5. NUMBER OF SANITARY SERVICES	=	8
6. NUMBER OF SANITARY MANHOLES	=	10
7. STORM SEWER LENGTH	=	459 m
8. NUMBER OF STORM MANHOLES	=	7

NOT FOR CONSTRUCTION

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
4	F.W.	NOV. 20	ISSUED FOR 100% CLIENT REVIEW		
3	F.W.	AUG. 20	ISSUED FOR 100% CLIENT REVIEW		
2	F.W.	JUN. 20	ISSUED FOR 100% DETAILED DESIGN FOR ROP – MAYFIELD ROAD COORDINATION REVIEW		
1	F.W.	JAN. 20	ISSUED FOR 100% REVIEW		

BENCH MARK:

CONSULTANT

wood.

ENGINEER'S STAMP

APPROVED FOR CONSTRUCTION

R. GRODECKI, C.E.T., MITE MANAGER, ENGINEERING SERVICES — DATE

PROJECT NAME

CONTRACT 14-093
SIMPSON ROAD EXTENSION PHASE 3

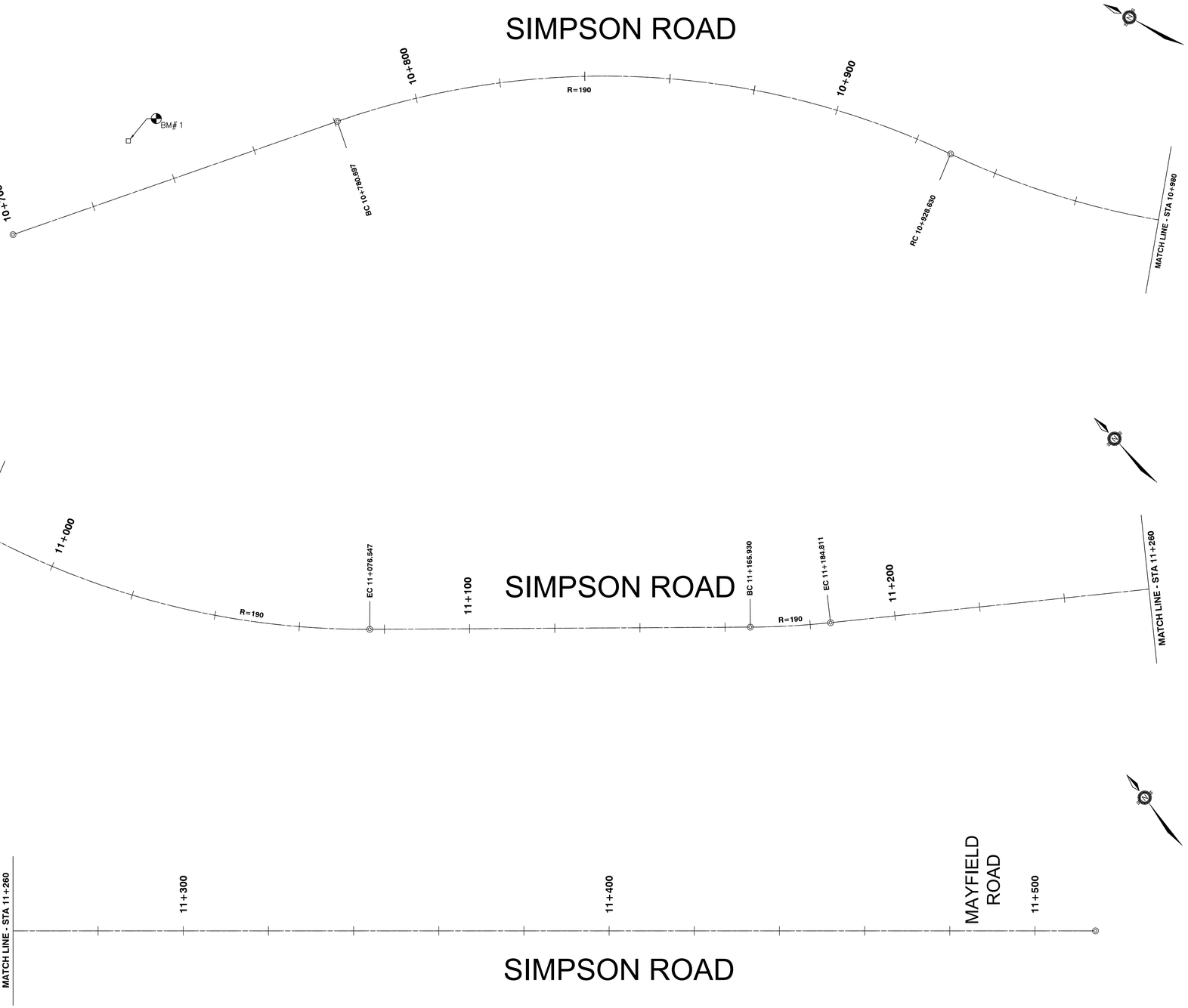
FINANCE AND INFRASTRUCTURE SERVICES

REGION OF PEEL
C02.312

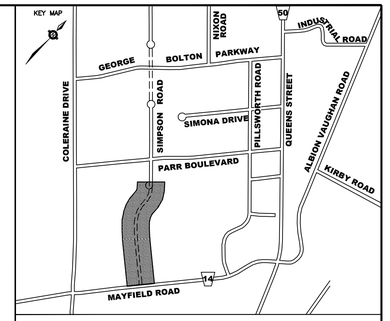
THE CORPORATION OF THE
TOWN OF CALEDON

SIMPSON ROAD
GENERAL PLAN
BELOW GROUND
STA. 10+860 TO STA. 11+458

SCALE: 1:1000		PROJECT No. TP113126
DESIGNED BY: F.W.	DRAWN BY: N.H.	DRAWING No. 5
CHECKED BY: D.S.	DATE: NOV. 2020	



SIMPSON ROAD			
	Station	Offset	Northing Easting
Element: Linear			
Start	10+700.000		4855690.992 603840.5596
BC	10+780.697		4855635.118 603898.7843
Tangential Direction:			S 46°10'50.0754" E
Tangential Length:			80.697
Element: Circular			
BC	10+780.697		4855635.118 603898.7843
PI	10+858.641		4855581.15 603955.0232
CC			4855498.028 603767.2306
RC	10+928.630		4855503.235 603957.1593
Radius:	190		
Delta:	44°36'36.6313"	Right	
Degree of Curvature (Arc):		30°09'20.4242"	
Length:	147.933		
Tangent:	77.944		
Chord:	144.225		
Middle Ordinate:	14.217		
External:	15.366		
Tangent Direction:			S 46°10'50.0754" E
Radial Direction:			S 43°49'09.9244" W
Chord Direction:			S 23°52'31.7598" E
Radial Direction:			S 88°25'46.5559" W
Tangent Direction:			S 1°34'13.4441" E
Element: Circular			
RC	10+928.630		4855503.235 603957.1593
PI	11+006.565		4855425.329 603959.2951
CC			4855508.442 604147.0879
EC	11+076.547		4855371.363 604015.5231
Radius:	190		
Delta:	44°36'19.8917"	Left	
Degree of Curvature (Arc):		30°09'20.4242"	
Length:	147.918		
Tangent:	77.935		
Chord:	144.21		
Middle Ordinate:	14.214		
External:	15.363		
Tangent Direction:			S 1°34'13.4441" E
Radial Direction:			S 88°25'46.5559" W
Chord Direction:			S 23°52'23.3900" E
Radial Direction:			S 43°49'26.6642" W
Tangent Direction:			S 46°10'33.3358" E
Element: Linear			
EC	11+076.547		4855371.363 604015.5231
BC	11+165.930		4855309.47 604080.0102
Tangential Direction:			S 46°10'33.3358" E
Tangential Length:			89.383
Element: Circular			
BC	11+165.930		4855309.47 604080.0102
PI	11+175.378		4855302.928 604086.8269
CC			4855446.549 604211.575
EC	11+184.811		4855297.094 604094.259
Radius:	190		
Delta:	5°41'37.4647"	Left	
Degree of Curvature (Arc):		30°09'20.4242"	
Length:	18.881		
Tangent:	9.448		
Chord:	18.873		
Middle Ordinate:	0.234		
External:	0.235		
Tangent Direction:			S 46°10'33.3358" E
Radial Direction:			S 43°49'26.6642" W
Chord Direction:			S 49°01'22.0680" E
Radial Direction:			S 38°07'49.1996" W
Tangent Direction:			S 51°52'10.8005" E
Element: Linear			
EC	11+184.811		4855297.094 604094.259
PI	11+494.214		4855106.052 604337.6376
Tangential Direction:			S 51°52'10.8005" E
Tangential Length:			309.403



NOT FOR CONSTRUCTION

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
4	F.W.	NOV. 20	ISSUED FOR 100% CLIENT REVIEW		
3	F.W.	AUG. 20	ISSUED FOR 100% CLIENT REVIEW		
2	F.W.	JUN. 20	ISSUED FOR 100% DETAILED DESIGN FOR ROP – MAYFIELD ROAD COORDINATION REVIEW		
1	F.W.	JAN. 20	ISSUED FOR 100% REVIEW		

BENCH MARK:

BM#1
HYDROBOX
N=4855676.820
E=603872.469
ELEVATION=233.448

BM#2
I.B.
N=4855107.787
E=604272.211
ELEVATION=233.448

CONSULTANT

wood.

ENGINEER'S STAMP

APPROVED FOR CONSTRUCTION

R. GRODECKI, C.E.T., MITE
MANAGER, ENGINEERING SERVICES

DATE

PROJECT NAME

CONTRACT 14-093
SIMPSON ROAD EXTENSION PHASE 3

FINANCE AND INFRASTRUCTURE SERVICES

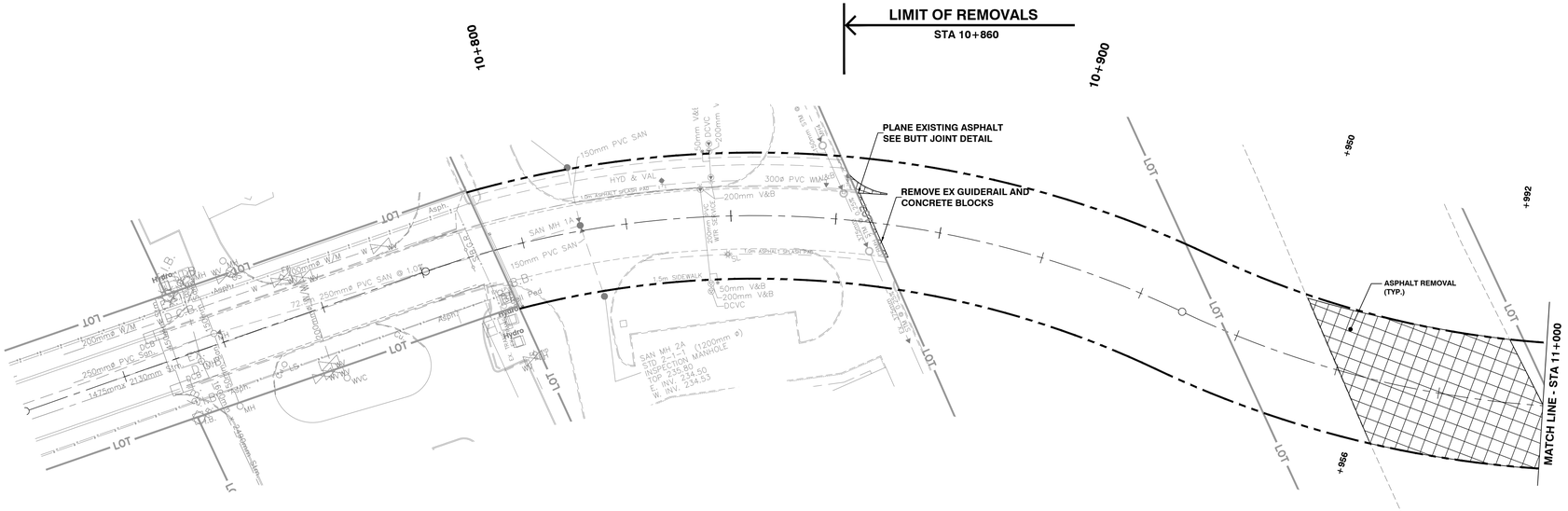
REGION OF PEEL
C02.312

THE CORPORATION OF THE
TOWN OF CALEDON

SIMPSON ROAD ALIGNMENT

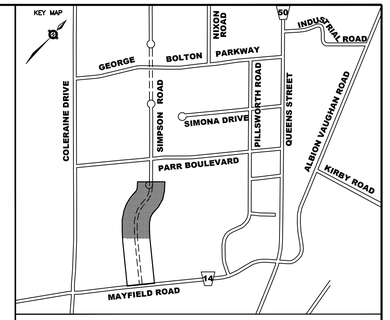
STA. 10+700 TO STA. 11+455

SCALE: 1:500		PROJECT No. TP113126
DESIGNED BY: F.W.	DRAWN BY: N.H.	DRAWNING No. 6
CHECKED BY: D.S.	DATE: NOV. 2020	



SIMPSON ROAD

SIMPSON ROAD



LEGEND

- REMOVAL SYMBOL
- REMOVAL HATCHING
- TREE REMOVAL

NOT FOR CONSTRUCTION

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
4	F.W.	NOV. 20	ISSUED FOR 100% CLIENT REVIEW		
3	F.W.	AUG. 20	ISSUED FOR 100% CLIENT REVIEW		
2	F.W.	JUN. 20	ISSUED FOR 100% DETAILED DESIGN FOR ROP – MAYFIELD ROAD COORDINATION REVIEW		
1	F.W.	JAN. 20	ISSUED FOR 100% REVIEW		

BENCH MARK:

CONSULTANT

wood.

ENGINEER'S STAMP

APPROVED FOR CONSTRUCTION

R. GRODECKI, C.E.T., MITE
MANAGER, ENGINEERING SERVICES

DATE

PROJECT NAME

CONTRACT 14-093
SIMPSON ROAD EXTENSION PHASE 3

FINANCE AND INFRASTRUCTURE SERVICES

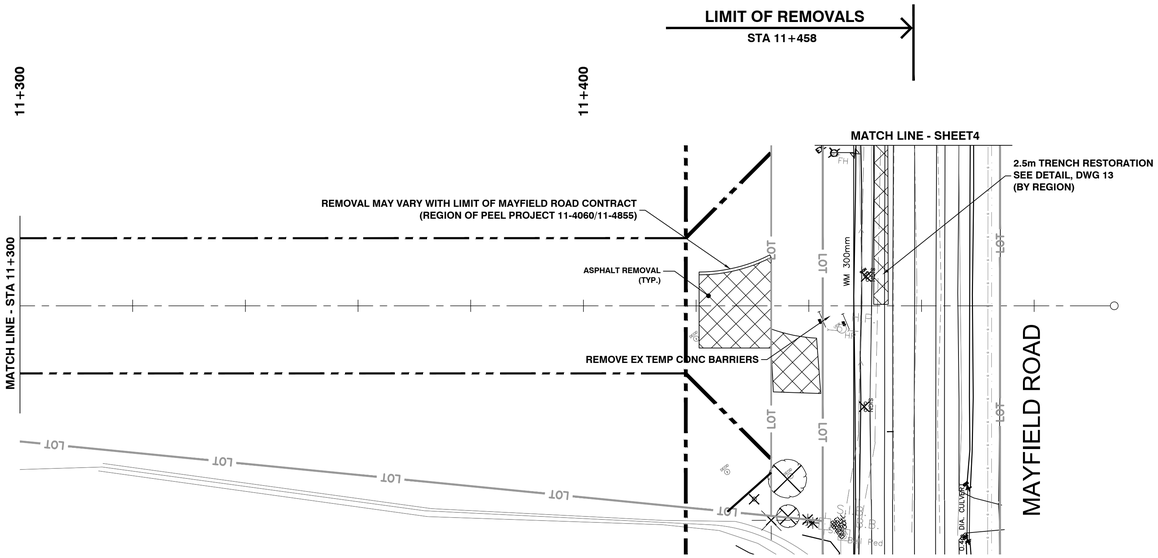
REGION OF PEEL
C02.312

THE CORPORATION OF THE
TOWN OF CALEDON

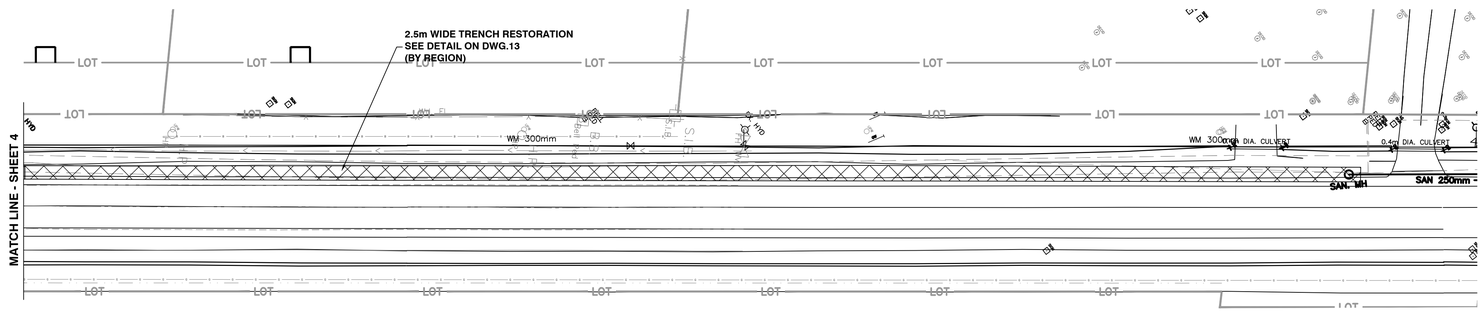
SIMPSON ROAD
REMOVALS

STA. 10+700 TO STA. 11+300

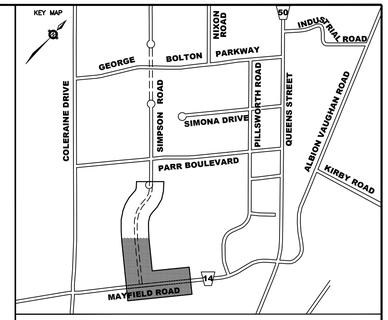
SCALE: 1:500		PROJECT No. TP113126
DESIGNED BY: F.W.	DRAWN BY: N.H.	
CHECKED BY: D.S.	DATE: NOV. 2020	DRAWING No. 7



SIMPSON ROAD



MAYFIELD ROAD



LEGEND

- REMOVAL SYMBOL
- REMOVAL HATCHING
- TREE REMOVAL

NOT FOR CONSTRUCTION

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
4	F.W.	NOV. 20	ISSUED FOR 100% CLIENT REVIEW		
3	F.W.	AUG. 20	ISSUED FOR 100% CLIENT REVIEW		
2	F.W.	JUN. 20	ISSUED FOR 100% DETAILED DESIGN FOR ROP – MAYFIELD ROAD COORDINATION REVIEW		
1	F.W.	JAN. 20	ISSUED FOR 100% REVIEW		

BENCH MARK:

CONSULTANT

wood.

ENGINEER'S STAMP

APPROVED FOR CONSTRUCTION

R. GRODECKI, C.E.T., MITE
MANAGER, ENGINEERING SERVICES
DATE

PROJECT NAME

CONTRACT 14-093
SIMPSON ROAD EXTENSION PHASE 3

FINANCE AND INFRASTRUCTURE SERVICES

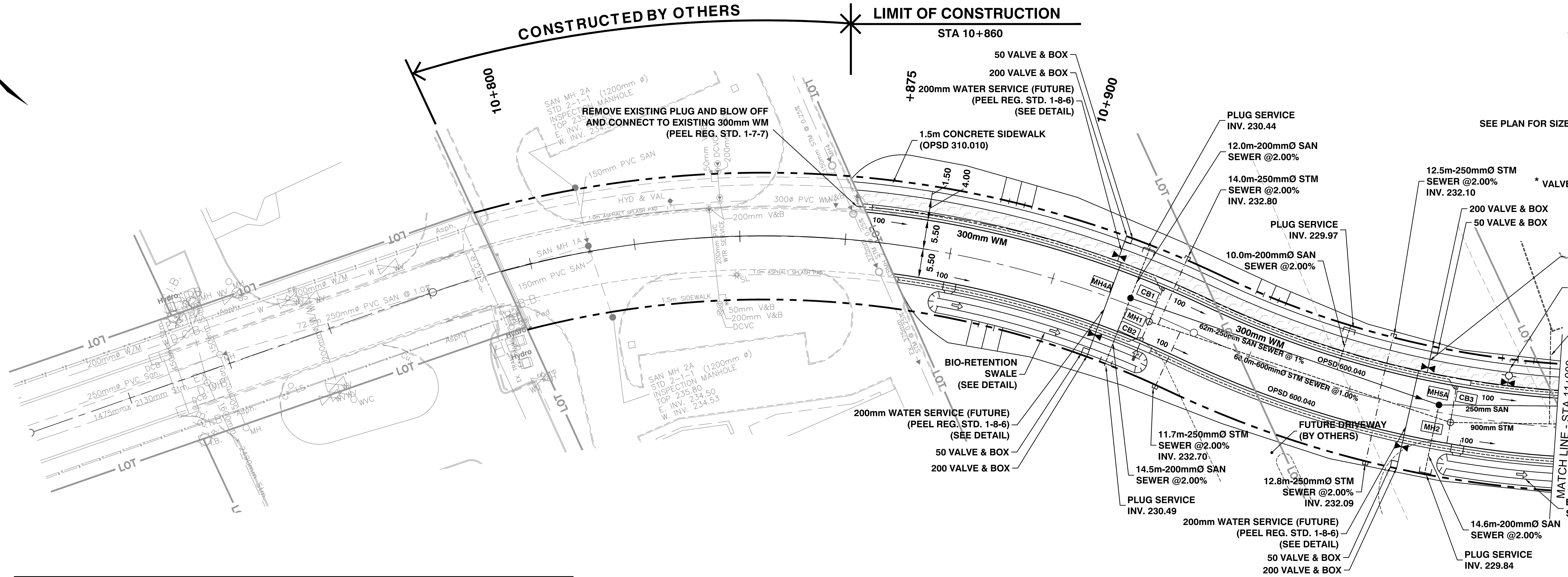
REGION OF PEEL
C02.312

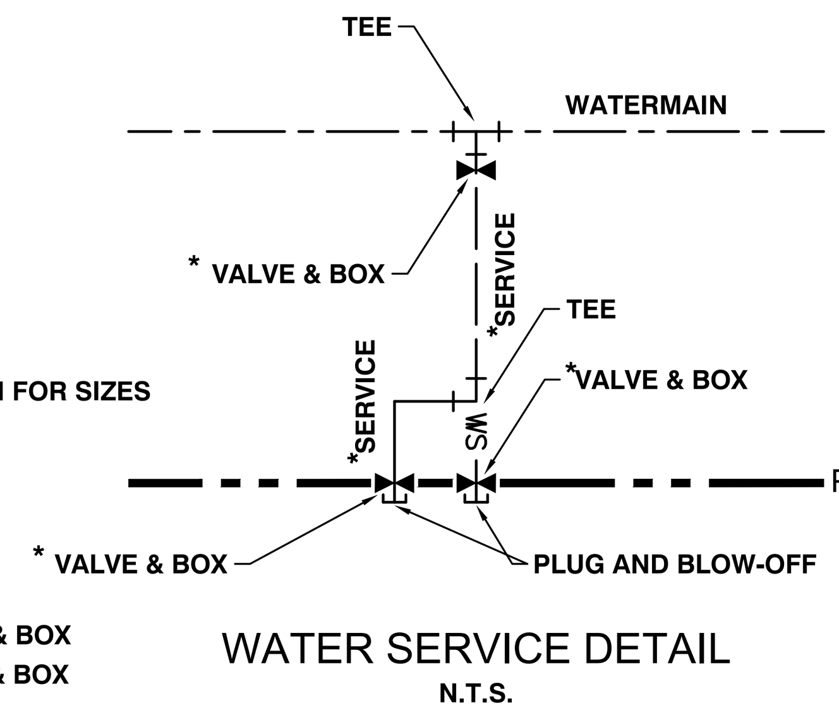
THE CORPORATION OF THE
TOWN OF CALEDON

SIMPSON ROAD
REMOVALS

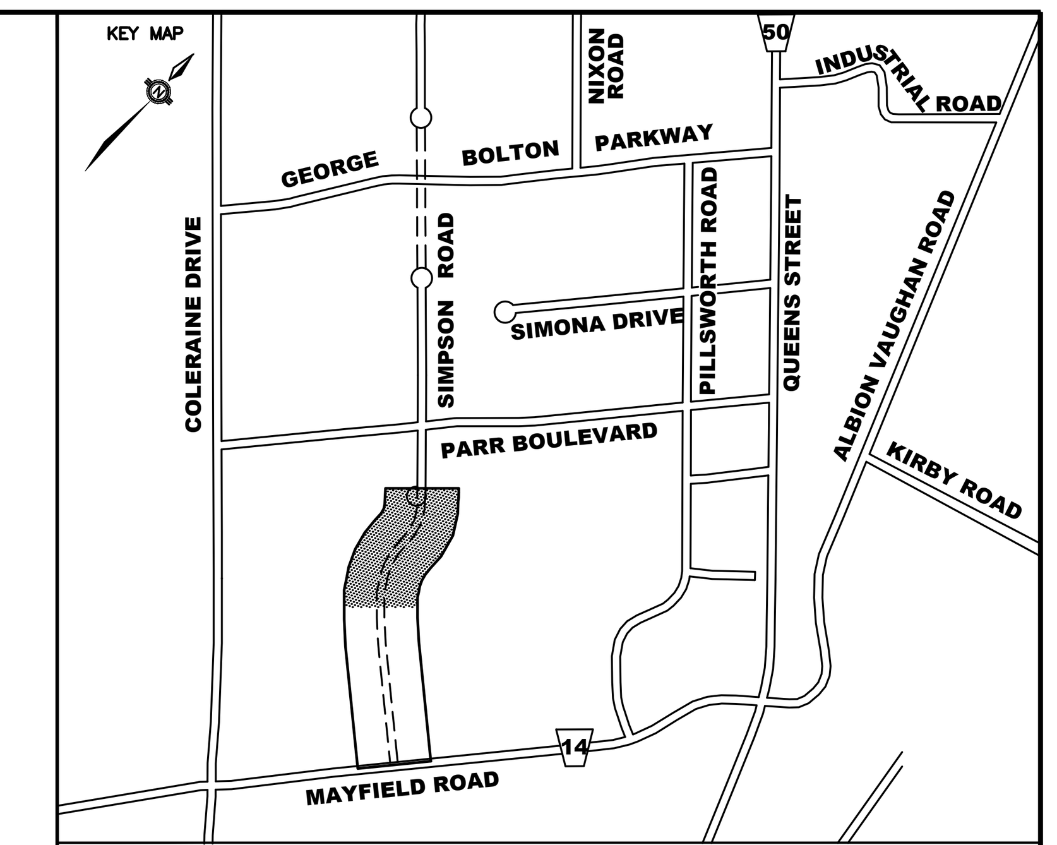
STA. 11+300 TO STA. 11+455

SCALE: 1:500		PROJECT No. TP113126
DESIGNED BY: F.W.	DRAWN BY: N.H.	DRAWING No. 8
CHECKED BY: D.S.	DATE: NOV. 2020	





WATER SERVICE DETAIL
N.T.S.



LEGEND

- PROPOSED PROPERTY LINE
- 100 — PROPOSED SUBDRAIN, DIRECTION AND SIZE (CALEDON STD. NO. 218)
- 825mm STM — PROPOSED STORM SEWER, DIRECTION AND SIZE
- 250mm SAN — PROPOSED SANITARY SEWER, DIRECTION AND SIZE
- 300mm WM — PROPOSED WATERMAIN AND SIZE
- PROPOSED VALVE
- PROPOSED HYDRANT
- A1 — ADJUST CATCHBASIN/MANHOLE
- CB1 — PROPOSED CATCHBASIN/MANHOLE
- MH1A — PROPOSED SANITARY MANHOLE
- FUTURE ENTRANCE
- CONCRETE GUTTER OUTLET OPSD 604.010
- FLOW ARROW

SANITARY SEWER DATA

STRUCT NO	STATION	℄ GRATE OFFSET	STRUCT OPSD	INVERTS INLET	INVERTS OUTLET	FRAME & COVER OPSD	TOP OF FRAME ELEV	REMARKS
MH4A	10+915	1.5 LT	701.010		230.14	401.010	234.07	
MH5A	10+977	1.4 LT	701.010	229.52	229.49	401.010	233.30	

SIMPSON ROAD

STORM SEWER DATA

STRUCT NO	STATION	℄ GRATE OFFSET	STRUCT OPSD	INVERTS INLET	INVERTS OUTLET	FRAME & COVER OPSD	TOP OF FRAME ELEV	REMARKS
CB1	10+920	5.5 LT	705.010		232.42	400.010	233.87	
CB2	10+920	5.5 RT	705.010		232.42	400.010	233.87	
MH1	10+920	1.5 RT	701.011		232.13	401.010	233.94	
CB3	10+980	5.5 LT	705.010		231.77	400.010	233.22	
MH2	10+980	1.5 RT	701.012	231.53	231.21	401.010	233.27	

NOT FOR CONSTRUCTION

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
3	F.W.	AUG. 20	ISSUED FOR 100% CLIENT REVIEW		
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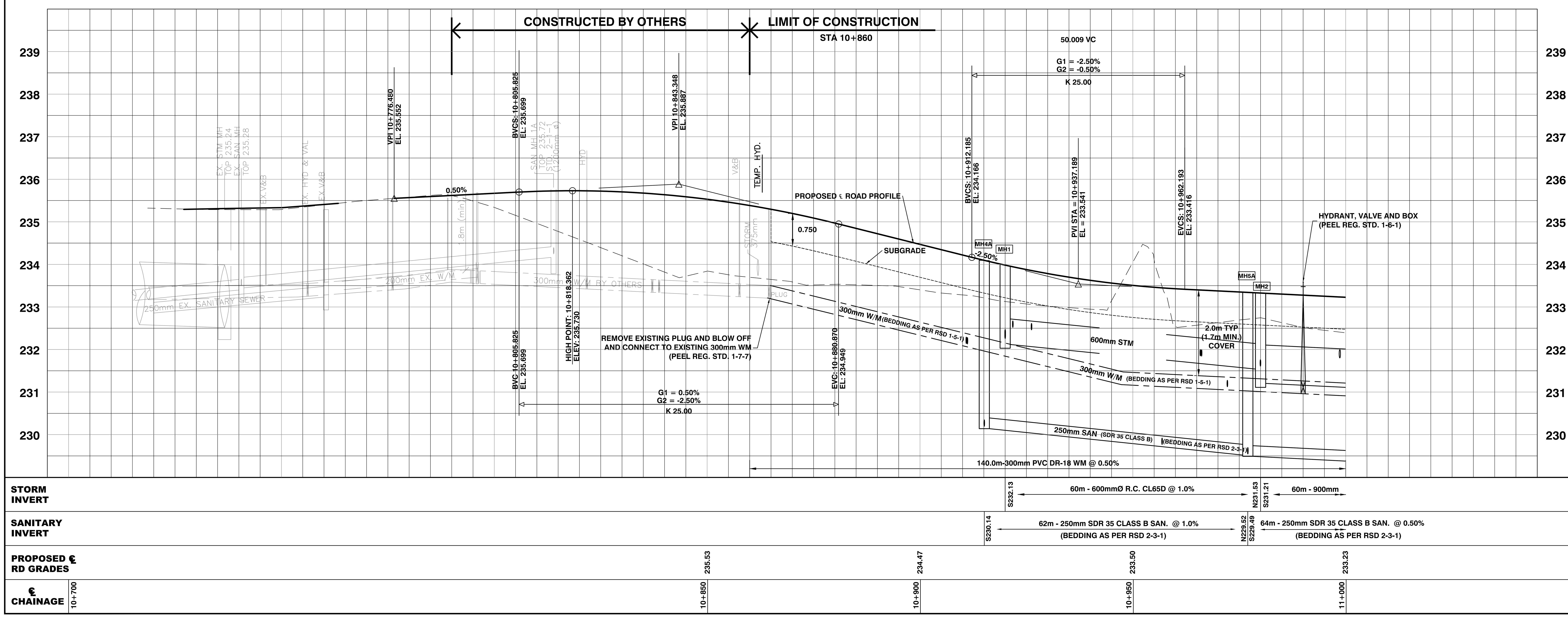
1	F.W.	JAN. 20	ISSUED FOR 100% REVIEW		



BENCH MARK:

CONSULTANT

wood.

ENGINEER'S STAMP

APPROVED FOR CONSTRUCTION

R. GRODECKI, C.E.T., MITE, MANAGER, ENGINEERING SERVICES — DATE

PROJECT NAME

CONTRACT 14-093
SIMPSON ROAD EXTENSION PHASE 3

REGION OF PEEL
C02.312

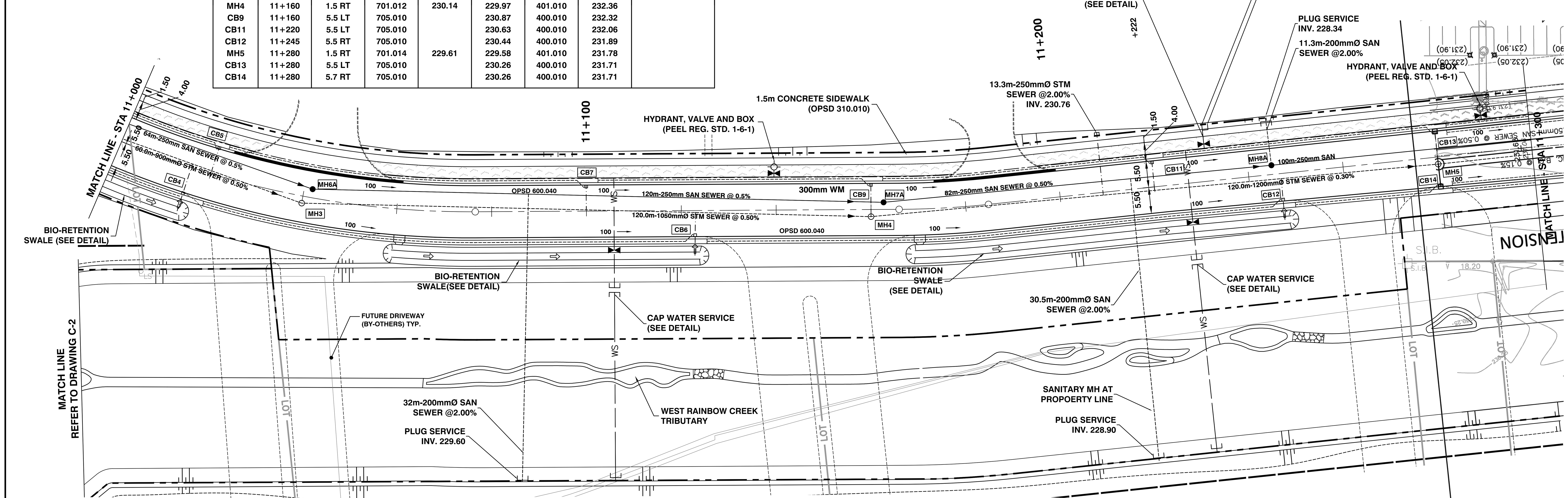
THE CORPORATION OF THE TOWN OF CALEDON

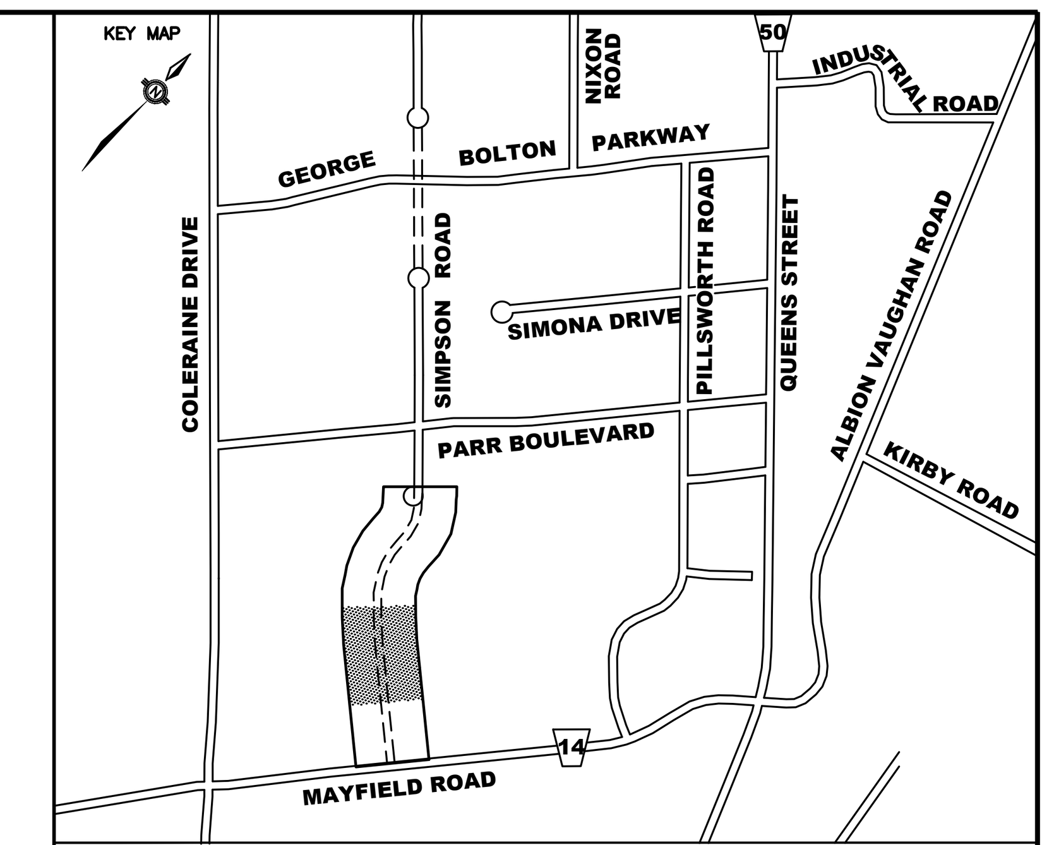
SIMPSON ROAD
NEW CONSTRUCTION
PLAN AND PROFILE
STA. 10+860 TO STA. 11+000

SCALE: HORIZ. 1:500	VERT. 1:50	PROJECT No. TP113126
DESIGNED BY: F.W.	DRAWN BY: B.L.	DRAWNING No. 9
CHECKED BY: D.S.	DATE: AUG. 2020	

STORM SEWER DATA								
STRUCT NO	STATION	℄ GRATE OFFSET	STRUCT OPSD	INVERTS INLET	INVERTS OUTLET	FRAME & COVER OPSD	TOP OF FRAME ELEV	REMARKS
CB4	11+016	5.5 RT	705.010		231.59	400.010	233.05	
CB5	11+020	5.5 LT	705.010		231.56	400.010	233.01	
MH3	11+040	1.5 RT	701.012	230.91	230.74	401.010	232.99	
CB6	11+123	5.5 LT	705.010		231.06	400.010	232.51	
CB7	11+100	5.5 RT	705.010		231.17	400.010	232.62	
MH4	11+160	1.5 RT	701.012	230.14	229.97	401.010	232.36	
CB9	11+160	5.5 LT	705.010		230.87	400.010	232.32	
CB11	11+220	5.5 LT	705.010		230.63	400.010	232.06	
CB12	11+245	5.5 RT	705.010		230.44	400.010	231.89	
MH5	11+280	1.5 RT	701.014	229.61	229.58	401.010	231.78	
CB13	11+280	5.5 LT	705.010		230.26	400.010	231.71	
CB14	11+280	5.7 RT	705.010		230.26	400.010	231.71	

SANITARY SEWER DATA								
STRUCT NO	STATION	℄ GRATE OFFSET	STRUCT OPSD	INVERTS INLET	INVERTS OUTLET	FRAME & COVER OPSD	TOP OF FRAME ELEV	REMARKS
MH6A	11+041	1.8 LT	701.010	229.17	229.14	401.010	232.96	
MH7A	11+161	1.5 LT	701.010	228.54	228.51	401.010	232.38	
MH8A	11+243	1.9 LT	701.010	228.10	228.07	401.010	231.95	

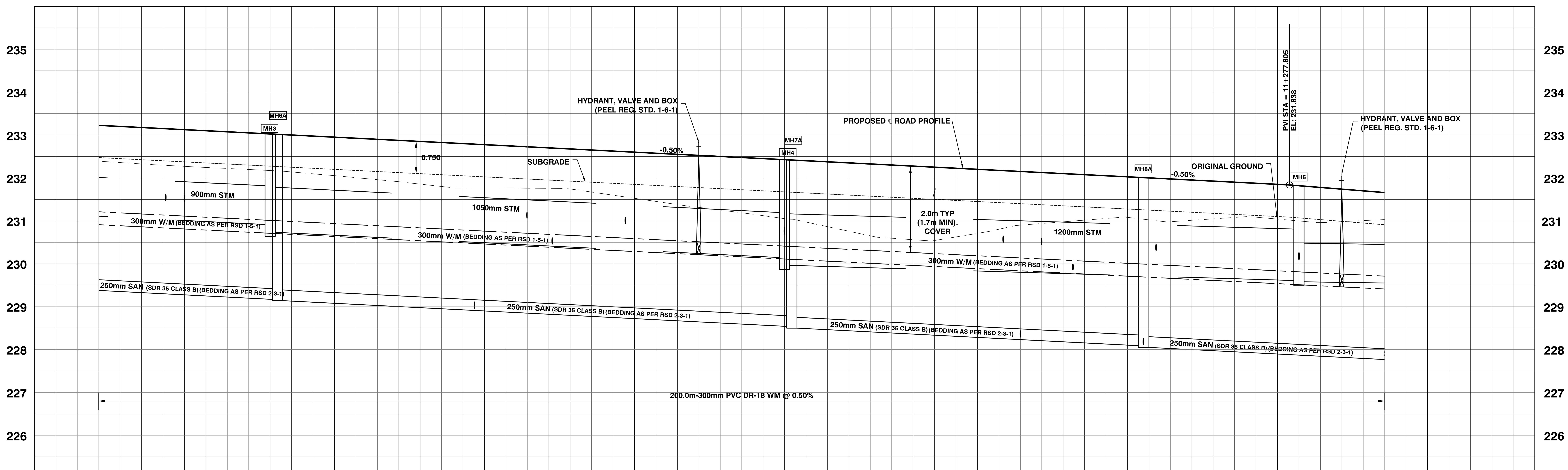




LEGEND

- PROPOSED PROPERTY LINE
- 100 — PROPOSED SUBDRAIN, DIRECTION AND SIZE (CALEDON STD. NO. 218)
- 825mm STM — PROPOSED STORM SEWER, DIRECTION AND SIZE
- 250mm SAN — PROPOSED SANITARY SEWER, DIRECTION AND SIZE
- 300mm WM — PROPOSED WATERMAIN AND SIZE
- PROPOSED VALVE
- PROPOSED HYDRANT
- A1 — ADJUST CATCHBASIN/MANHOLE
- CB1 — PROPOSED CATCHBASIN/MANHOLE
- MH1A — PROPOSED SANITARY MANHOLE
- FUTURE ENTRANCE
- CONCRETE GUTTER OUTLET OPSD 604.010
- FLOW ARROW

SIMPSON ROAD



STORM INVERT	60m - 900mmØ R.C. CL65D @ 0.5%	N230.91 S230.74	120m - 1050mmØ R.C. CL65D @ 0.5%	N230.14 S229.97	120m 1200MMØ R.C. CL65D @ 0.3%	N229.61 S229.58	60m - 1800X900 CONCRETE BOX @ 0.15% (DESIGNED BY OTHER)
SANITARY INVERT	64m - 250mm SDR 35 CLASS B SAN. @ 0.50% (BEDDING AS PER RSD 2-3-1)	N229.17 S229.14	120m - 250mm SDR 35 CLASS B SAN.@ 0.50% (BEDDING AS PER RSD 2-3-1)	N228.54 S228.51	82m - 250mm SDR 35 CLASS B SAN. @ 0.50% (BEDDING AS PER RSD 2-3-1)	N228.10 S228.07	100m - 250mm SDR 35 CLASS B SAN. @ 0.50% (BEDDING AS PER RSD 2-3-1)

PROPOSED ℄ RD GRADES	233.23	232.98	232.73	232.48	232.23	231.98	231.66
℄ CHAINAGE	11+000	11+050	11+100	11+150	11+200	11+250	11+300

NOT FOR CONSTRUCTION

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
3	F.W.	AUG. 20	ISSUED FOR 100% CLIENT REVIEW		
2	F.W.	JUN. 20	ISSUED FOR 100% DETAILED DESIGN FOR ROP – MAYFIELD ROAD COORDINATION REVIEW		
1	F.W.	JAN. 20	ISSUED FOR 100% REVIEW		

BENCH MARK:

CONSULTANT

wood.

ENGINEER'S STAMP

APPROVED FOR CONSTRUCTION

R. GRODECKI, C.E.T., MITE, MANAGER, ENGINEERING SERVICES DATE

PROJECT NAME

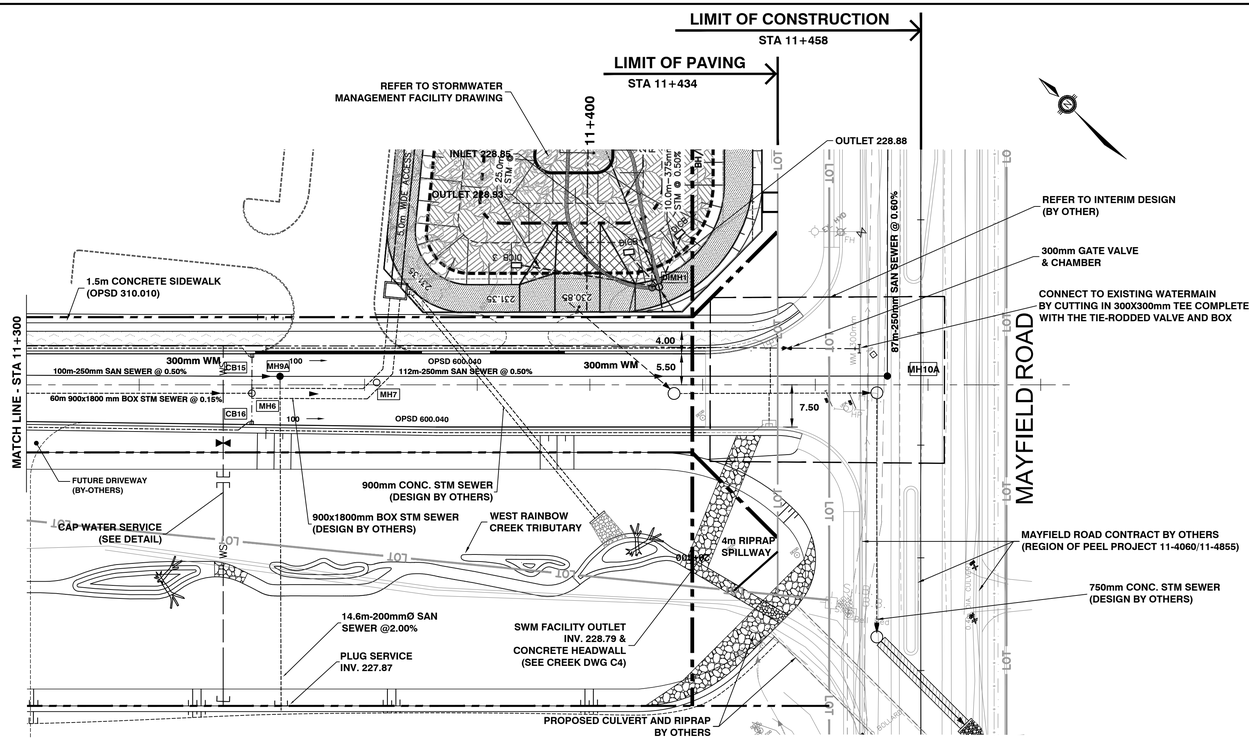
CONTRACT 14-093
SIMPSON ROAD EXTENSION PHASE 3

REGION OF PEEL
C02.312

THE CORPORATION OF THE TOWN OF CALEDON

SIMPSON ROAD
NEW CONSTRUCTION
PLAN AND PROFILE
STA. 11+000 TO STA. 11+300

SCALE: HORIZ. 1:500	VERT. 1:50	PROJECT No. TP113126
DESIGNED BY: F.W.	DRAWN BY: B.L.	DRAWNING No. 10
CHECKED BY: D.S.	DATE: AUG. 2020	



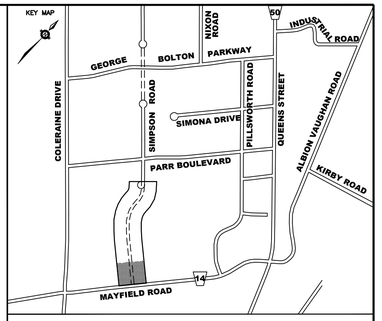
STORM SEWER DATA

STRUCT NO	STATION	℄ GRATE OFFSET	STRUCT OPSD	INVERTS		FRAME & COVER OPSD	TOP OF FRAME ELEV	REMARKS
				INLET	OUTLET			
CB15	11+340	5.5 LT	705.010		229.77	400.010	231.22	
CB16	11+340	7.0 RT	705.010		229.74	400.010	231.19	
TEE MH6	11+340	1.5 RT		229.49	229.49	401.010	231.30	
TEE MH7	11+362	0.5LT		229.45	229.45	401.010	231.15	

SANITARY SEWER DATA

STRUCT NO	STATION	℄ GRATE OFFSET	STRUCT OPSD	INVERTS		FRAME & COVER OPSD	TOP OF FRAME ELEV	REMARKS
				INLET	OUTLET			
MH9A	11+343	1.5 LT	701.010	227.57	227.54	401.010	231.28	
MH10A	11+455	1.5 LT	701.010	226.95	226.86	401.010	230.98 *	

* MATCH ROAD PROFILE FROM MAYFIELD ROAD CONTRACT (REGION OF PEEL PROJECT 11-4060/11-4855)



LEGEND

- PROPOSED PROPERTY LINE
- 100 → PROPOSED SUBDRAIN, DIRECTION AND SIZE (CALEDON STD. NO. 218)
- 825mm STM → PROPOSED STORM SEWER, DIRECTION AND SIZE
- 250mm SAN → PROPOSED SANITARY SEWER, DIRECTION AND SIZE
- 300mm WM PROPOSED WATERMAIN AND SIZE
- PROPOSED VALVE
- PROPOSED HYDRANT
- A1 ADJUST CATCHBASIN/MANHOLE
- CB1 PROPOSED CATCHBASIN/MANHOLE
- MH1A PROPOSED SANITARY MANHOLE
- FUTURE ENTRANCE
- CONCRETE GUTTER OUTLET OPSD 604.010
- FLOW ARROW

NOT FOR CONSTRUCTION

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
3	F.W.	AUG. 20	ISSUED FOR 100% CLIENT REVIEW		
2	F.W.	JUN. 20	ISSUED FOR 100% DETAILED DESIGN FOR ROP – MAYFIELD ROAD COORDINATION REVIEW		
1	F.W.	JAN. 20	ISSUED FOR 100% REVIEW		

BENCH MARK:

CONSULTANT

wood.

ENGINEER'S STAMP

APPROVED FOR CONSTRUCTION

R. GRODECKI, C.E.T., MITE, MANAGER, ENGINEERING SERVICES — DATE

PROJECT NAME

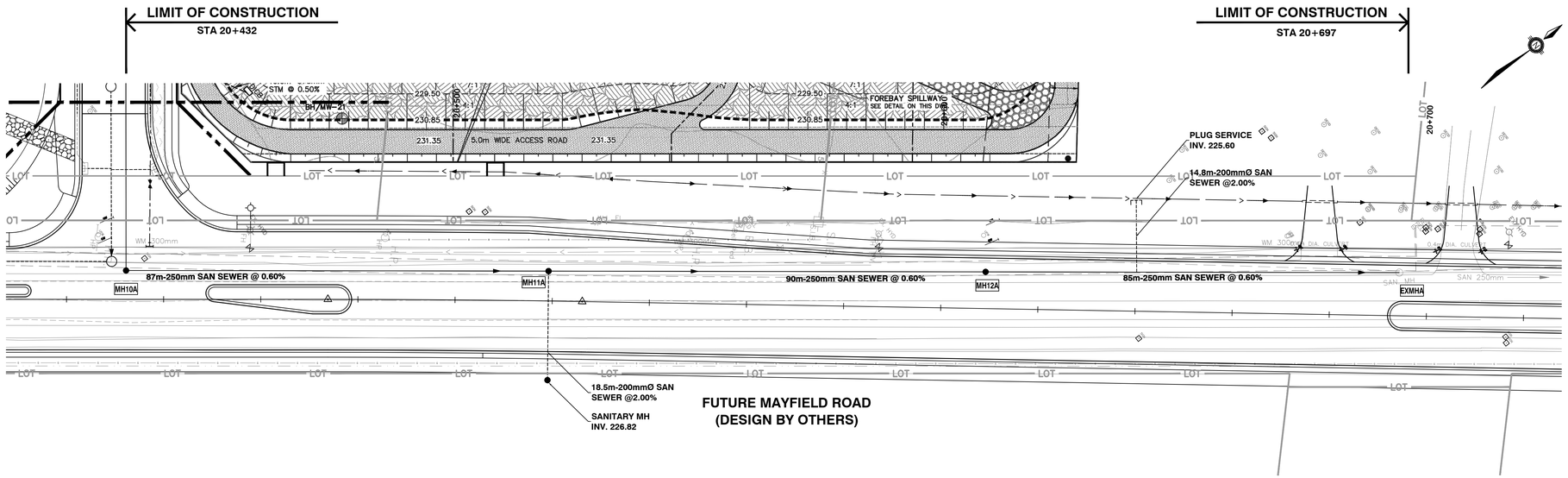
CONTRACT 14-093
SIMPSON ROAD EXTENSION PHASE 3

REGION OF PEEL
C02.312

THE CORPORATION OF THE
TOWN OF CALEDON

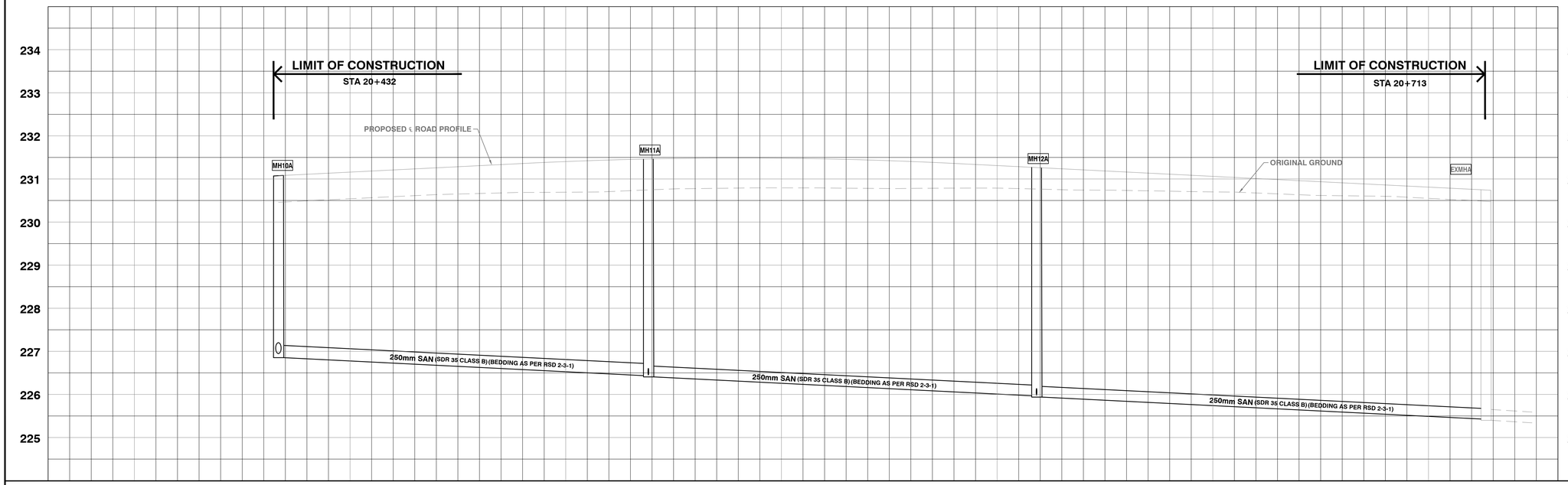
SIMPSON ROAD
NEW CONSTRUCTION
PLAN AND PROFILE
STA. 11+300 TO STA. 11+458

SCALE: HORIZ. 1:500	VERT. 1:50	PROJECT No. TP113126
DESIGNED BY: F.W.	DRAWN BY: B.L.	DRAWING No. 11
CHECKED BY: D.S.	DATE: AUG. 2020	

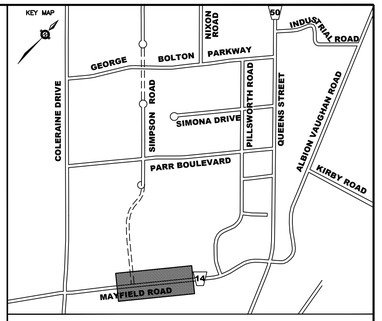


SANITARY SEWER DATA								
STRUCT NO	STATION	℄ GRATE OFFSET	STRUCT OPSD	INVERTS		FRAME & COVER OPSD	TOP OF FRAME ELEV	REMARKS
				INLET	OUTLET			
MH11A	20+519	6.1 LT	701.010	226.44	226.41	401.010	231.43	
MH12A	20+609	7.5 LT	701.010	225.97	225.94	401.010	231.23	
EX.MH	20+713	EX.	EX.	225.43	225.40 (EX.)	EX.	230.64	

MAYFIELD ROAD



STORM INVERT				
SANITARY INVERT	87m - 250mm SDR 35 CLASS B SAN. @ 0.50% (BEDDING AS PER RSD 2-3-1)	W226.44 E226.41	90m - 250mm SDR 35 CLASS B SAN. @ 0.50% (BEDDING AS PER RSD 2-3-1)	W225.97 E225.94	101m - 250mm SDR 35 CLASS B SAN. @ 0.50% (BEDDING AS PER RSD 2-3-1)	W225.43 E225.40
PROPOSED ℄ RD GRADES						
℄ CHAINAGE	20+400	20+450	20+500	20+550	20+600	20+650	20+700



LEGEND

- PROPOSED PROPERTY LINE
- 100 — PROPOSED SUBDRAIN, DIRECTION AND SIZE (CALEDON STD. NO. 218)
- 825mm STM — PROPOSED STORM SEWER, DIRECTION AND SIZE
- 250mm SAN — PROPOSED SANITARY SEWER, DIRECTION AND SIZE
- 300mm WM — PROPOSED WATERMAIN AND SIZE
- PROPOSED VALVE
- PROPOSED HYDRANT
- A1 — ADJUST CATCHBASIN/MANHOLE
- CB1 — PROPOSED CATCHBASIN/MANHOLE
- MH1A — PROPOSED SANITARY MANHOLE
- FUTURE ENTRANCE
- CONCRETE GUTTER OUTLET OPSD 604.010
- FLOW ARROW

NOT FOR CONSTRUCTION

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
3	F.W.	AUG. 20	ISSUED FOR 100% CLIENT REVIEW		
2	F.W.	JUN. 20	ISSUED FOR 100% DETAILED DESIGN FOR ROP – MAYFIELD ROAD COORDINATION REVIEW		
1	F.W.	JAN. 20	ISSUED FOR 100% REVIEW		

BENCH MARK:

CONSULTANT

wood.

ENGINEER'S STAMP

APPROVED FOR CONSTRUCTION

R. GRODECKI, C.E.T., MITE, MANAGER, ENGINEERING SERVICES — DATE

PROJECT NAME

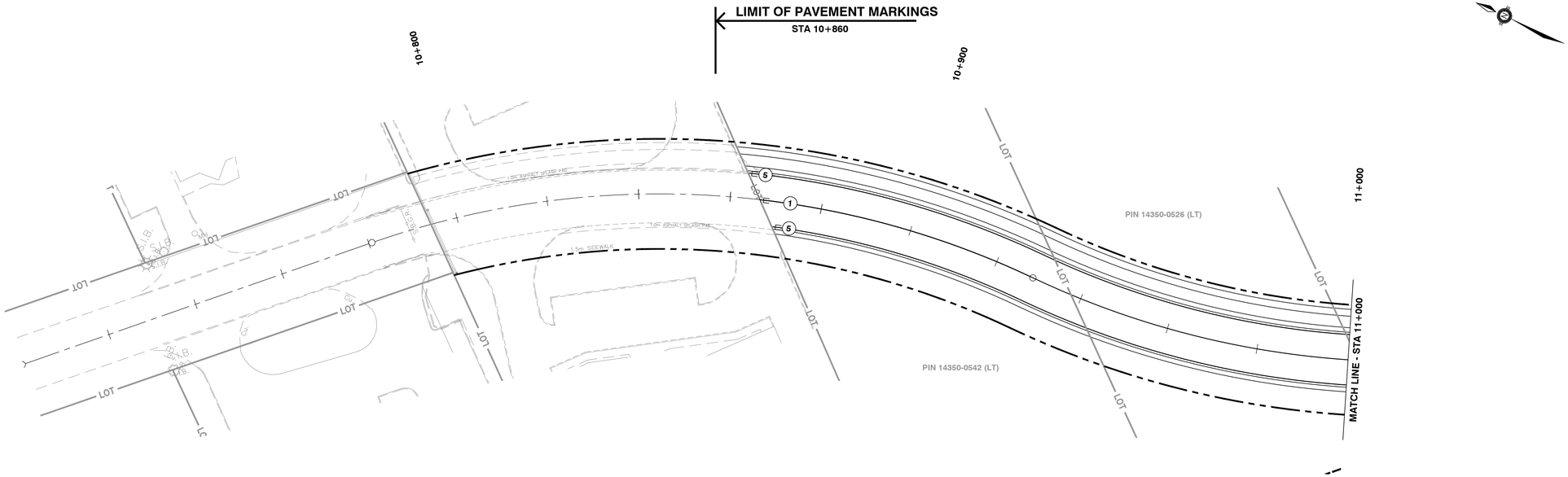
CONTRACT 14-093
SIMPSON ROAD EXTENSION PHASE 3

REGION OF PEEL
C02.312

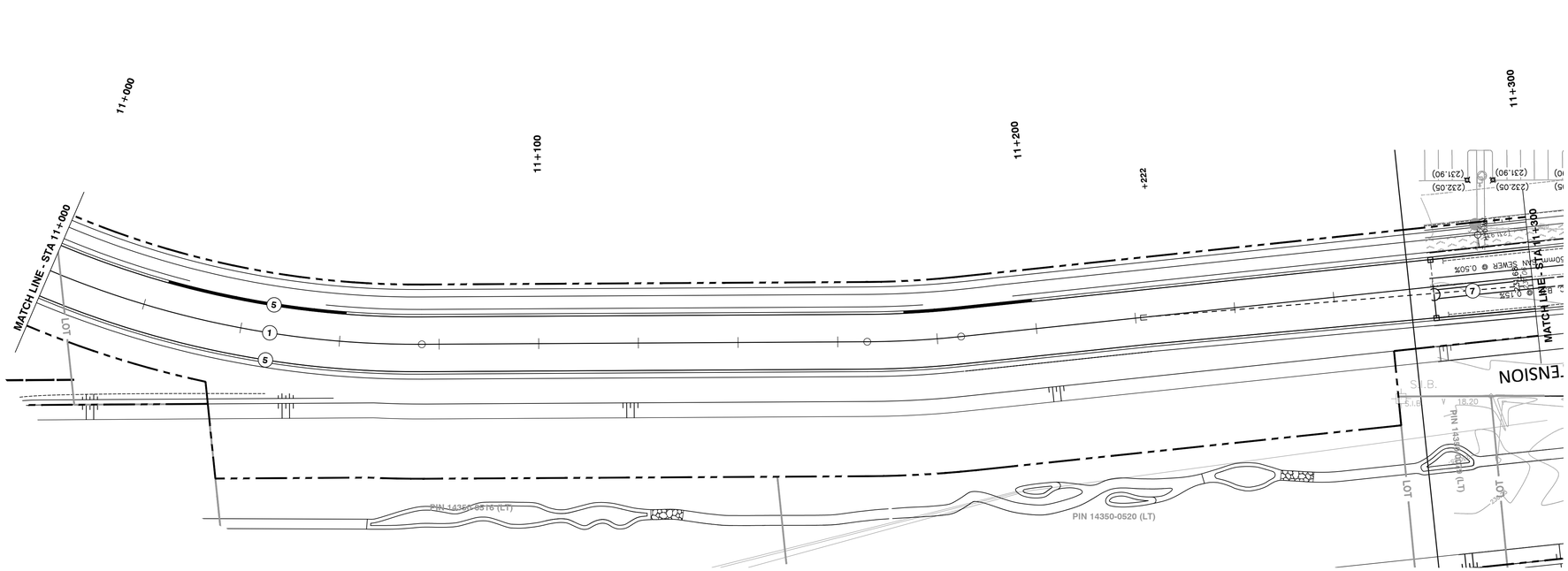
THE CORPORATION OF THE
TOWN OF CALEDON

MAYFIELD ROAD
NEW CONSTRUCTION
PLAN AND PROFILE
STA. 10+000 TO STA. 10+264

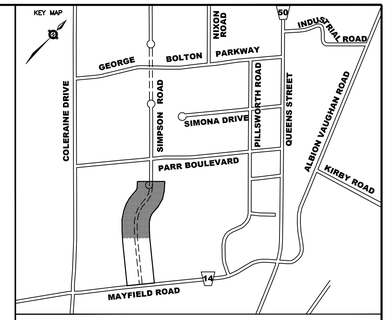
SCALE: HORIZ. 1:500	VERT. 1:50	PROJECT No. TP113126
DESIGNED BY: F.W.	DRAWN BY: B.L.	DRAWNING No. 12
CHECKED BY: D.S.	DATE: AUG. 2020	



SIMPSON ROAD



SIMPSON ROAD



LEGEND

- (1) 10cm SOLID YELLOW
- (5) 10cm SOLID WHITE
- (6) 60cm SOLID WHITE
- (7) 10cm BROKEN WHITE, 3m LINE, 3m GAP, 3m LINE
- END OF PAVEMENT MARKING
- (X) PAVEMENT MARKING
- (X) PAVEMENT MARKING, DURABLE
- TURNING ARROWS, DURABLE

NOT FOR CONSTRUCTION

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
4	F.W.	NOV. 20	ISSUED FOR 100% CLIENT REVIEW		
3	F.W.	AUG. 20	ISSUED FOR 100% CLIENT REVIEW		
2	F.W.	JUN. 20	ISSUED FOR 100% DETAILED DESIGN FOR ROP – MAYFIELD ROAD COORDINATION REVIEW		
1	F.W.	JAN. 20	ISSUED FOR 100% REVIEW		

BENCH MARK:

CONSULTANT

wood.

ENGINEER'S STAMP

APPROVED FOR CONSTRUCTION

R. GRODECKI, C.E.T., MITE
MANAGER, ENGINEERING SERVICES

DATE

PROJECT NAME

CONTRACT 14-093
SIMPSON ROAD EXTENSION PHASE 3

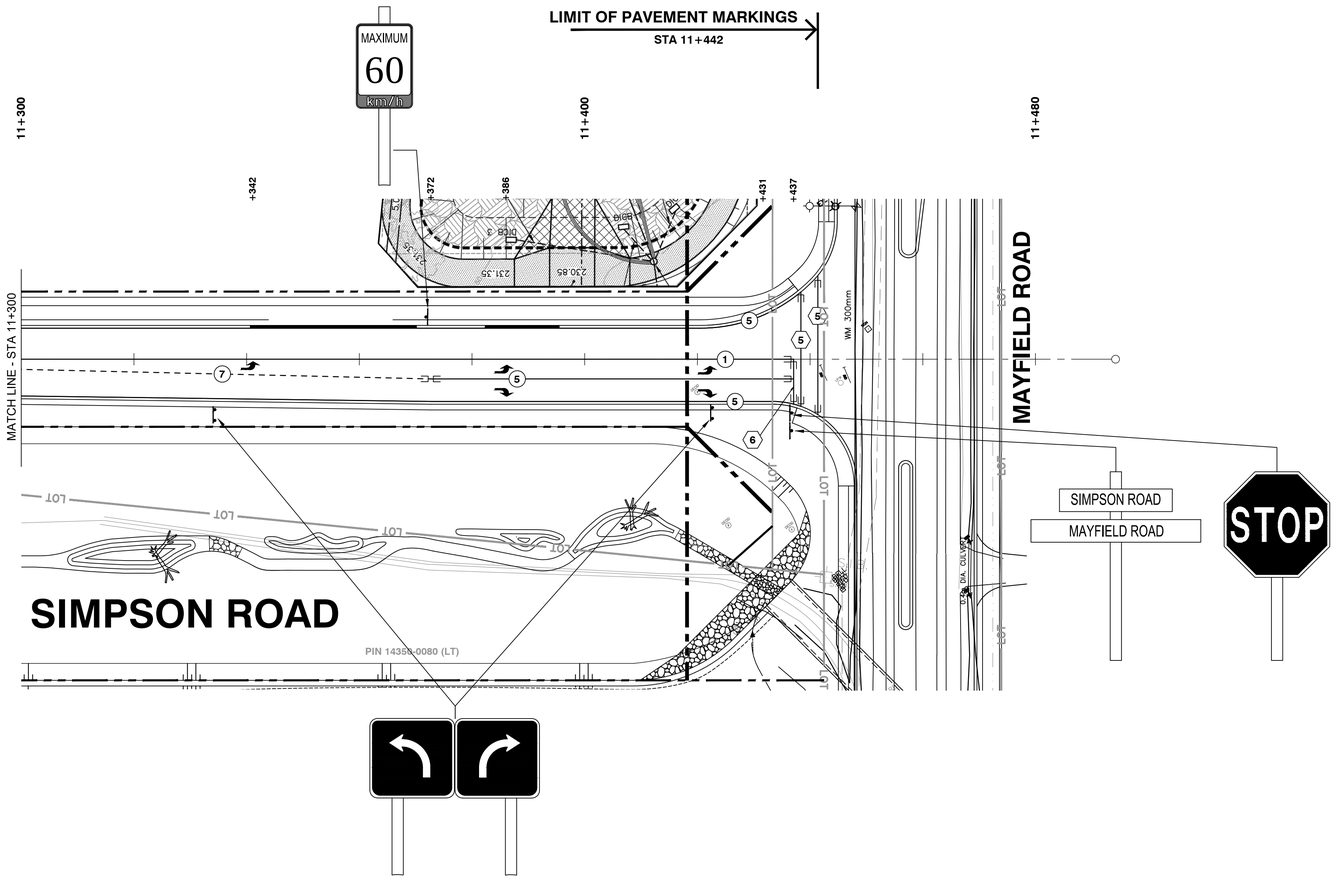
FINANCE AND INFRASTRUCTURE SERVICES

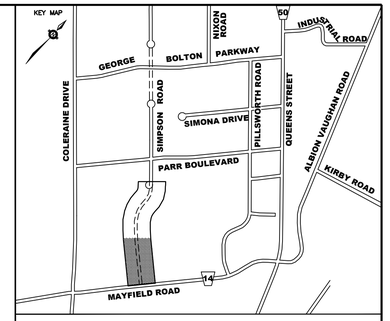
REGION OF PEEL
C02.312

THE CORPORATION OF THE
TOWN OF CALEDON

SIMPSON ROAD
PAVEMENT
MARKINGS AND SIGNS
STA. 10+700 TO STA. 11+300

SCALE: 1:500		PROJECT No. TP113126
DESIGNED BY: F.W.	DRAWN BY: N.H.	DRAWING No. 13
CHECKED BY: D.S.	DATE: NOV. 2020	





LEGEND

- (1) 10cm SOLID YELLOW
- (5) 10cm SOLID WHITE
- (6) 60cm SOLID WHITE
- (7) 10cm BROKEN WHITE, 3m LINE, 3m GAP, 3m LINE
- ⊐⊏ END OF PAVEMENT MARKING
- (x) PAVEMENT MARKING
- (x) PAVEMENT MARKING, DURABLE
- TURNING ARROWS, DURABLE

NOT FOR CONSTRUCTION

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
4	F.W.	NOV. 20	ISSUED FOR 100% CLIENT REVIEW		
3	F.W.	AUG. 20	ISSUED FOR 100% CLIENT REVIEW		
2	F.W.	JUN. 20	ISSUED FOR 100% DETAILED DESIGN FOR ROP – MAYFIELD ROAD COORDINATION REVIEW		
1	F.W.	JAN. 20	ISSUED FOR 100% REVIEW		

BENCH MARK:

CONSULTANT

wood.

ENGINEER'S STAMP

APPROVED FOR CONSTRUCTION

R. GRODECKI, C.E.T., MITE
MANAGER, ENGINEERING SERVICES

DATE

PROJECT NAME

CONTRACT 14-093
SIMPSON ROAD EXTENSION PHASE 3

FINANCE AND INFRASTRUCTURE SERVICES

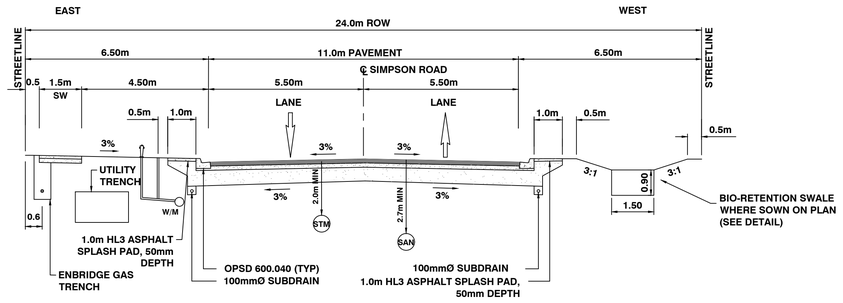
REGION OF PEEL
C02.312

THE CORPORATION OF THE
TOWN OF CALEDON

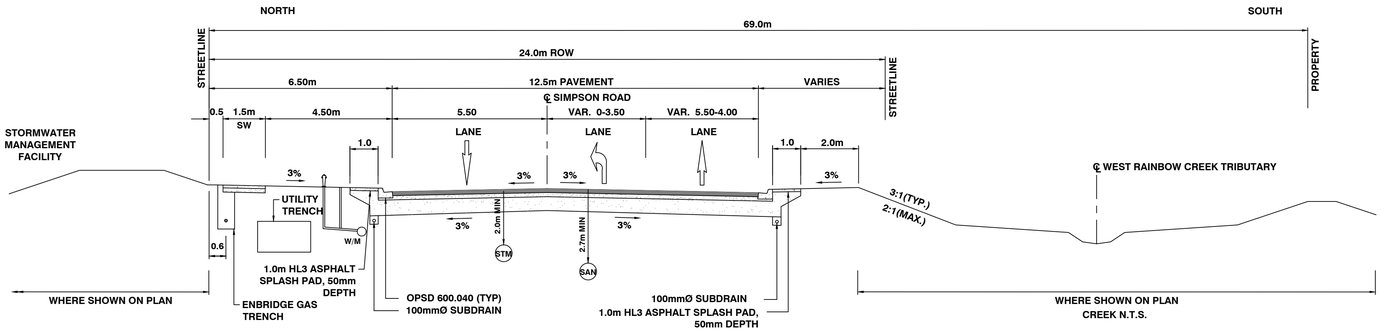
SIMPSON ROAD PAVEMENT MARKINGS AND SIGNS

STA. 11+300 TO STA. 11+455

SCALE: 1:500		PROJECT No. TP113126
DESIGNED BY: F.W.	DRAWN BY: N.H.	DRAWING No. 14
CHECKED BY: D.S.	DATE: NOV. 2020	



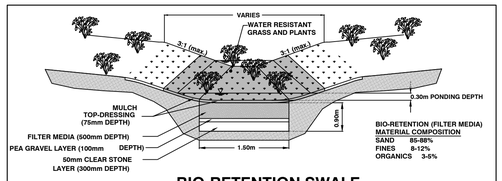
SIMPSON ROAD - EXTENSION
STA 10+860 TO STA 11+223
SCALE 1:100



SIMPSON ROAD - EXTENSION
STA 11+223 TO STA 11+434
SCALE 1:100

PAVEMENT AND GRANULAR SUMMARY

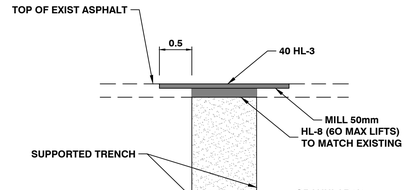
	SURFACE	BINDER	GRANULAR 'A'	GRANULAR 'B'	PAVEMENT REMOVAL
	HL3	HDBC			
SIMPSON ROAD SOUTH STA 10+860 TO STA 11+434	40	50 60	150	450	FULL DEPTH
SPLASH PAD	50				



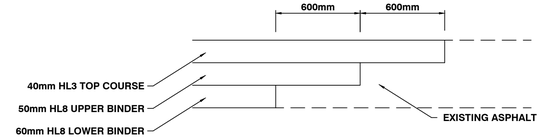
BIO-RETENTION SWALE
N.T.S.

BIO-RETENTION SWALE

1. EROSION AND SEDIMENT CONTROL TO BE CONSTRUCTED AND IN PLACE PRIOR TO ANY GRADING WORKS.
2. STOCK PILING OF MATERIALS TO BE SET BACK A MINIMUM 15m FROM SWALES AND WATERCOURSES. PERIMETER SILT FENCING TO BE PROVIDED AND INSTALLED ACCORDING TO OPSD 219.130.
3. ALL SWALE WORKS TO BE COMPLETED DURING DRY WEATHER.
4. PERIMETER SILT FENCE TO BE INSTALLED AND MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION AND REMOVED ONCE SITE HAS STABILIZED. CONSERVATION AUTHORITY TO BE CONSULTED IN THE DETERMINATION OF SITE STABILIZATION.

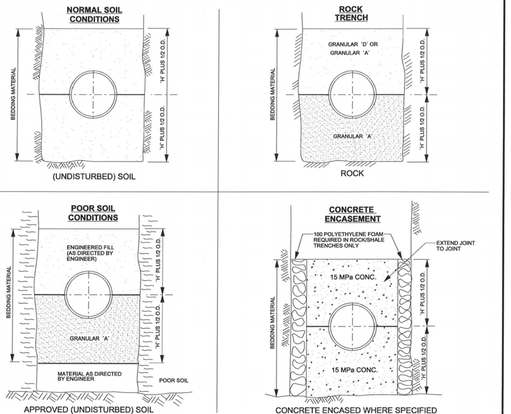


TRENCH RESTORATION DETAIL
ROAD/DRIVEWAY
N.T.S.



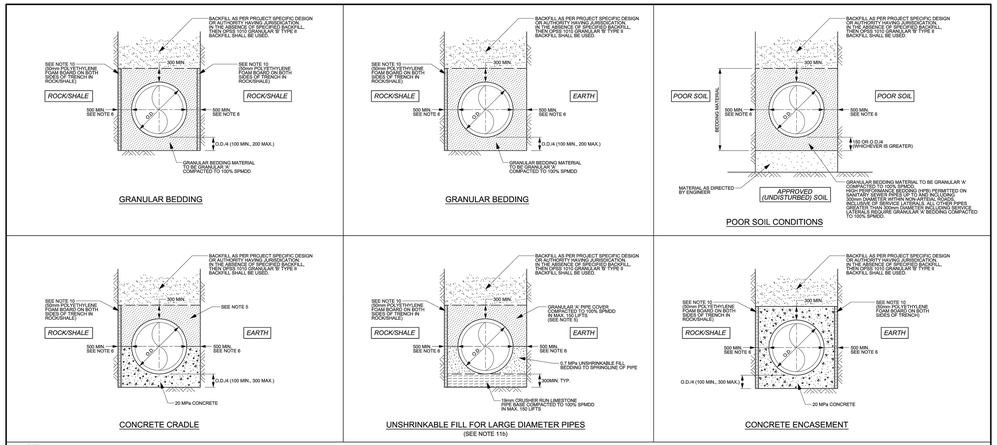
BUTT JOINT DETAIL
N.T.S.

BEDDING DETAILS ARE INTENDED FOR GENERAL INFORMATION. REFER TO CONTRACT SPECIFICATIONS AND GEOTECHNICAL REPORT FOR PROJECT SPECIFIC REQUIREMENTS.



NOTE
1. FOR P.V.C. AND DUCTILE IRON PIPE, BEDDING MATERIAL TO BE GRANULAR D (LIMESTONE SCREENING COLOUR TO BE BETWEEN LIGHT GREY TO WHITE) 150mm ABOVE THE TOP OF PIPE.
2. MATERIAL TO BE PLACED IN TRENCH IN 150mm LAYERS AND COMPACTED TO 100% STANDARD PROCTOR DENSITY.
3. IN CASE OF OVER-EXCAVATION TRENCH TO BE FILLED TO BOTTOM OF PIPE WITH APPROVED MATERIALS IN 150mm LAYERS AND COMPACTED TO 100% STANDARD PROCTOR DENSITY.
4. IN POOR SOILS ENGINEER MAY VARY PIPE FOUNDATION TO SUIT.
5. BACKFILL ABOVE BEDDING AS APPROVED BY PROJECT MANAGER.
6. GRANULAR MATERIAL AS PER OPS SPECIFICATIONS AND REGION OF PEEL CAPITAL WORKS VOLUME 2 SPECIFICATIONS.
7. "H"=150 OR DIA./4 OF WATERMAIN WHICH EVER IS GREATER.
8. MIN. TRENCH WIDTH TO BE O.D. PLUS 600mm MAX. TRENCH WIDTH TO BE O.D. PLUS 750mm, UNLESS PROJECT SPECIFIC BEDDING STATES OTHERWISE.
9. COVER MATERIAL, NO STONES GREATER THAN 25mm WILL BE PERMITTED.
10. APPROVED SOIL AS PER GEOTECHNICAL REPORT RECOMMENDATIONS.
11. TO ADDRESS TIME DEPENDANT DEFORMATION IN ROCK OR SHALE TRENCH CONDITIONS, INSTALL 100mm THICK POLYETHYLENE FOAM FOR ALL CONCRETE ENCASED WATERMAIN INSTALLATIONS. REFER TO PROJECT SPECIFIC REQUIREMENTS. POLYETHYLENE FOAM TO BE EITHER DOW ETHAFOAM 400 OR NORDIC VOID 400 OR APPROVED EQUAL.

Region of Peel Working for you	PUBLIC WORKS STANDARD DRAWING	REV. DATE: APRIL 2014
	APPROVED BY: A.P.	DRAWN BY: AINLEY GROUP
WATERMAIN BEDDING	STD. DWG. NUMBER: 1-5-1	SCALE: N.T.S.



NOTE
1. GRANULAR MATERIAL TO BE PLACED IN TRENCH IN 150mm LIFTS (MAX.) AND COMPACTED TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
2. IN CASE OF OVER-EXCAVATION TRENCH TO BE FILLED TO BOTTOM OF PIPE WITH APPROVED MATERIALS IN 150mm LAYERS AND COMPACTED TO 100% STANDARD PROCTOR DENSITY.
3. IN POOR SOILS PIPE FOUNDATION TO BE PROVIDED AS PER DESIGN. ADDITIONAL BEDDING MODIFICATIONS MAY BE REQUIRED AS PER DESIGN.
4. BACKFILL ABOVE BEDDING AS REQUIRED PER DESIGN. NATIVE BACKFILL NOT PERMITTED UNDER PAVED PORTIONS.
5. COVER MATERIAL TO BE AS PER OPSS 1010 GRANULAR 'A'.
6. MINIMUM TRENCH WIDTH TO BE O.D. PLUS 2 x 500mm. PLUS 2 x 50mm (FOR COMPRESSIBLE MATERIAL IN ROCK/SHALE), UNLESS PROJECT SPECIFIC BEDDING STATES OTHERWISE. PIPE TO BE LOCATED IN THE CENTER OF TRENCH.
7. TRENCH BACKFILL MATERIAL AS PER PROJECT SPECIFIC DESIGN, GEOTECHNICAL REPORT RECOMMENDATIONS AND AUTHORITY HAVING JURISDICTION STANDARDS/REQUIREMENTS.
8. THE CONSULTANT SHALL RECOMMEND THE APPROPRIATE BEDDING REQUIREMENTS BASED ON THE FINDINGS OF THE GEOTECHNICAL INVESTIGATION AND PROVIDE A CROSS-SECTION ILLUSTRATION ON THE FIRST PLAN & PROFILE DRAWING OR GENERAL DETAIL PAGE.
9. IN ROCK EXCAVATION, A MINIMUM OF 150mm GRANULAR MATERIAL BEDDING IS REQUIRED UNDERNEATH THE PIPE (FOR PVC), AND UP TO SPRING LINE FOR CONCRETE PIPE.
10. IN ROCK OR SHALE TRENCH CONDITIONS, INSTALL 50mm THICK POLYETHYLENE FOAM BOARDS, ON BOTH SIDES OF TRENCH, BETWEEN TRENCH WALL AND BACKFILL. REFER TO PROJECT SPECIFIC REQUIREMENTS. POLYETHYLENE FOAM TO BE EITHER DOW ETHAFOAM® 400 OR NORDIC VOID 400 OR APPROVED EQUAL.
11. a) HIGH PERFORMANCE BEDDING PERMITTED ON SANITARY PIPES LESS THAN AND EQUAL TO 300mm DIAMETER WITHIN NON-ARTERIAL ROADS, INCLUSIVE OF SERVICE LATERALS. ALL OTHER PIPES GREATER THAN 300mm DIAMETER, INCLUDING SERVICE LATERALS, SHALL USE GRANULAR 'A' AS PER OPSS 1010 COMPACTED TO 100% SPMDD AS BEDDING AND COVER. ALTERNATIVE FOR LARGE DIAMETER PIPE, SEE NOTE 11b) BELOW.
b) FOR LARGE DIAMETER PIPE (GREATER THAN OR EQUAL TO 750mm) UNSHRINKABLE FILL MAY BE USED TO FILL TRENCH VOID TO THE SPRINGLINE OF THE PIPE DIAMETER. GRANULAR 'A' AS PER OPSS 1010 COMPACTED TO 100% SPMDD TO BE USED TO 300mm OVER PIPE DIAMETER.

BEDDING DETAILS ARE INTENDED FOR GENERAL INFORMATION. REFER TO CONTRACT SPECIFICATIONS AND GEOTECHNICAL REPORT FOR PROJECT SPECIFIC REQUIREMENTS.

Region of Peel working with you	PUBLIC WORKS STANDARD DRAWING	REV. DATE: NOVEMBER 2019
		REVISION NUMBER: 1 — FOR REVISION TRACKING REFER TO STD. DWG. 2-2-1
	APPROVED BY: A.P.	DRAWN BY: AINLEY GROUP
BEDDING AND COVER DETAILS FOR SEWERS	STD. DWG. NUMBER: 2-3-1	SCALE: N.T.S.

NOT FOR CONSTRUCTION

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
5	F.W.	NOV. 20	ISSUED FOR 100% CLIENT REVIEW		
4	F.W.	AUG. 20	ISSUED FOR 100% CLIENT REVIEW		
3	F.W.	JUN. 20	ISSUED FOR 100% DETAILED DESIGN FOR ROP – MAYFIELD ROAD COORDINATION REVIEW		
2	F.W.	JAN. 20	ISSUED FOR 100% REVIEW		
1	M.B.K.	19/09/30	REVISED – TRCA SUBMISSION #4		

BENCH MARK:

CONSULTANT

wood.

ENGINEER'S STAMP

LICENSED PROFESSIONAL ENGINEER — F. K. Y. WONG — 100076535 — 2019/11/15 — PROVINCE OF ONTARIO

APPROVED FOR CONSTRUCTION

ISSUED FOR TRCA PERMIT — 19/09/30
D. LOVERIDGE, PEng — DATE
DIRECTOR OF PUBLIC WORKS

PROJECT NAME

SIMPSON ROAD EXTENSION PHASE 3

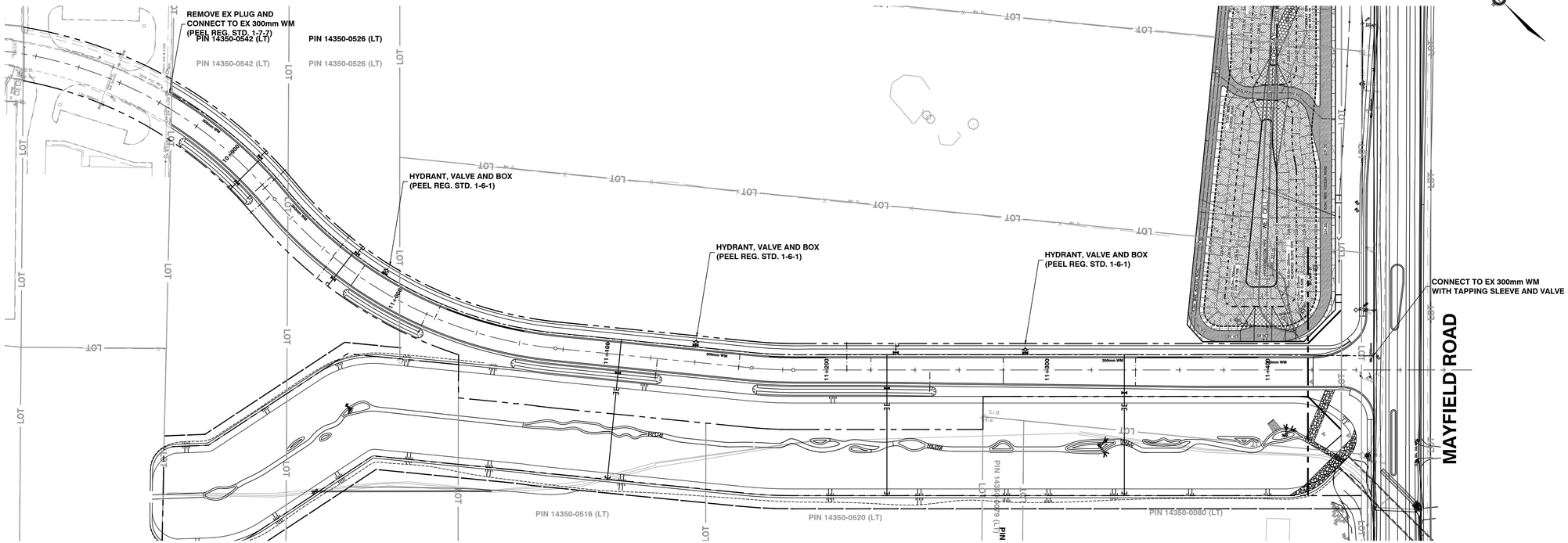
FINANCE AND INFRASTRUCTURE SERVICES

REGION OF PEEL

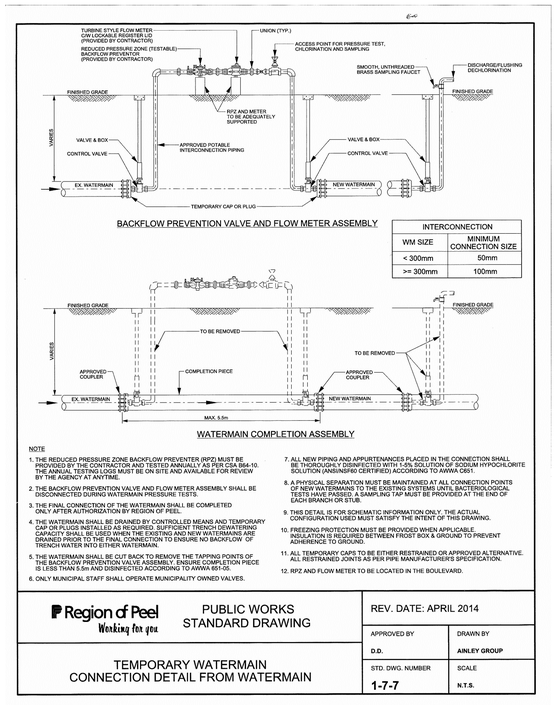
THE CORPORATION OF THE TOWN OF CALEDON

DETAILS

SCALE: AS NOTED		PROJECT No. TP113126
DESIGNED BY: F.W.	DRAWN BY: B.L.	DRAWING No. 15
CHECKED BY: D.S.	DATE: SEPT. 2019	



SIMPSON ROAD



BACKFLOW PREVENTION VALVE AND FLOW METER ASSEMBLY

INTERCONNECTION	
WM SIZE	MINIMUM CONNECTION SIZE
< 300mm	50mm
>= 300mm	100mm

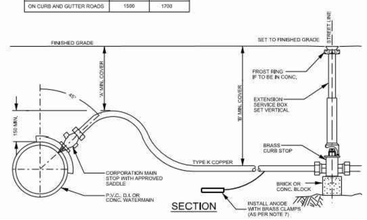
WATERMAIN COMPLETION ASSEMBLY

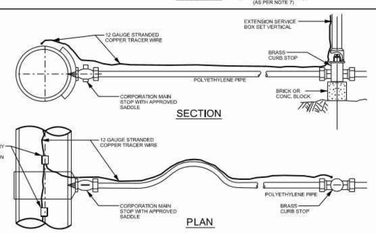
NOTE

1. THE REDUCED PRESSURE ZONE BACKFLOW PREVENTER (RPZ) MUST BE PROVIDED BY THE CONTRACTOR AND TESTED ANNUALLY AS PER CSA B64-10. THE ANNUAL TESTING LOGS MUST BE ON SITE AND AVAILABLE FOR REVIEW BY THE AGENCY AT ANYTIME.
2. THE BACKFLOW PREVENTION VALVE AND FLOW METER ASSEMBLY SHALL BE DISCONNECTED DURING WATERMAIN PRESSURE TESTS.
3. THE FINAL CONNECTION OF THE WATERMAIN SHALL BE COMPLETED ONLY AFTER AUTHORIZATION BY REGION OF PEEL.
4. THE WATERMAIN SHALL BE DRAINED BY CONTROLLED MEANS AND TEMPORARY CAP OR PLUGS INSTALLED AS REQUIRED. SUFFICIENT TRENCH DEWATERING CAPACITY SHALL BE USED WHEN THE EXISTING AND NEW WATERMAINS ARE DRAINED PRIOR TO THE FINAL CONNECTION TO ENSURE NO BACKFLOW OF TRENCH WATER INTO EITHER WATERMAIN.
5. THE WATERMAIN SHALL BE CUT BACK TO REMOVE THE TAPPING POINTS OF THE BACKFLOW PREVENTION VALVE ASSEMBLY. ENSURE COMPLETION PIECE IS LESS THAN 5.5m AND DISINFECTED ACCORDING TO AWWA 651-05.
6. ONLY MUNICIPAL STAFF SHALL OPERATE MUNICIPALITY OWNED VALVES.
7. ALL NEW PIPING AND APPURTENANCES PLACED IN THE CONNECTION SHALL BE THOROUGHLY DISINFECTED WITH 1-5% SOLUTION OF SODIUM HYPOCHLORITE SOLUTION (ANSI/NSF60 CERTIFIED) ACCORDING TO AWWA C651.
8. A PHYSICAL SEPARATION MUST BE MAINTAINED AT ALL CONNECTION POINTS OF NEW WATERMAINS TO THE EXISTING SYSTEMS UNTIL BACTERIOLOGICAL TESTS HAVE PASSED. A SAMPLING TAP MUST BE PROVIDED AT THE END OF EACH BRANCH OR STUB.
9. THIS DETAIL IS FOR SCHEMATIC INFORMATION ONLY. THE ACTUAL CONFIGURATION USED MUST SATISFY THE INTENT OF THIS DRAWING.
10. FREEZING PROTECTION MUST BE PROVIDED WHEN APPLICABLE. INSULATION IS REQUIRED BETWEEN FROST BOX & GROUND TO PREVENT ADHERENCE TO GROUND.
11. ALL TEMPORARY CAPS TO BE EITHER RESTRAINED OR APPROVED ALTERNATIVE. ALL RESTRAINED JOINTS AS PER PIPE MANUFACTURER'S SPECIFICATION.
12. RPZ AND FLOW METER TO BE LOCATED IN THE BOULEVARD.

Region of Peel Working for you	PUBLIC WORKS STANDARD DRAWING	REV. DATE: APRIL 2014	
		APPROVED BY: D.D.	DRAWN BY: AINLEY GROUP
TEMPORARY WATERMAIN CONNECTION DETAIL FROM WATERMAIN		STD. DWG. NUMBER: 1-7-7	SCALE: N.T.S.

	'A'	'B'
ON UNIMPROVED ROADS	1950	2100
ON CURB AND GUTTER ROADS	1590	1700



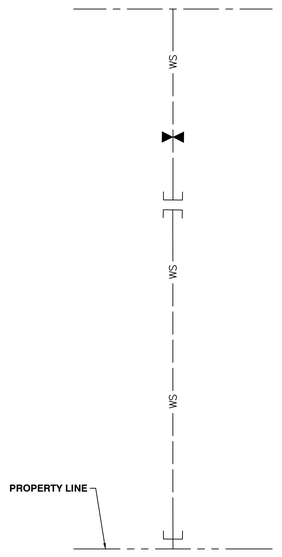


NOTE

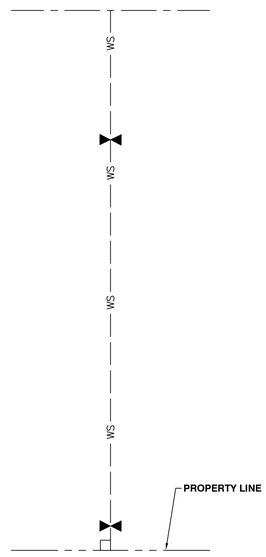
1. ALL SERVICES TO BE AT 90° TO THE WATERMAIN UNLESS OTHERWISE SPECIFIED.
2. WATER SERVICE TO BE A MIN. OF 1100mm UNDER THE BOTTOM OF DITCH.
3. SERVICE BOX TO BE SET TO FINISH GRADE.
4. NO DIRECT TAPPING OF PVC WATERMAINS. ALL CONNECTIONS TO PVC PIPE TO BE MADE USING AN APPROVED WIDE-BAND SERVICE SADDLE.
5. TRACER WIRE TO BE INSTALLED AS PER REGION STANDARDS.
6. ALL WATER SERVICE MATERIALS SHALL BE STORED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
7. ZINC ANODE (Z-12-24) TO BE INSTALLED 1000mm FROM CURB STOP AS PER OPSS 442.

Region of Peel working with you	PUBLIC WORKS STANDARD DRAWING	REV. DATE: MAR. 2018	
		APPROVED BY: E.O.	DRAWN BY: AINLEY GROUP
WATER SERVICE CONNECTION		STD. DWG. NUMBER: 1-7-1	SCALE: N.T.S.

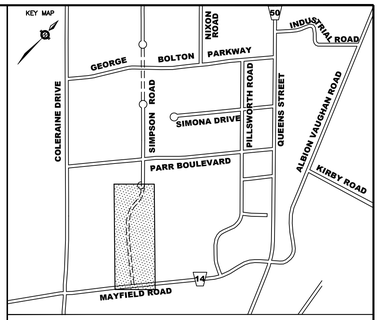
NOTE: MINIMUM CLEARANCE AS PER PEEL REGION 1-7-1 SHALL BE MAINTAINED BELOW PROPOSED CHANNEL.



OPTION A: WATER SERVICE WITHOUT SITE PLAN APPROVED



OPTION B: WATER SERVICE WITH SITE PLAN APPROVED



NOT FOR CONSTRUCTION

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
4	F.W.	NOV. 20	ISSUED FOR 100% CLIENT REVIEW		
3	F.W.	AUG. 20	ISSUED FOR 100% CLIENT REVIEW		
2	F.W.	JUN. 20	ISSUED FOR 100% DETAILED DESIGN FOR ROP – MAYFIELD ROAD COORDINATION REVIEW		
1	F.W.	JAN. 20	ISSUED FOR 100% REVIEW		

BENCH MARK:

CONSULTANT

wood.

ENGINEER'S STAMP

APPROVED FOR CONSTRUCTION

R. GRODECKI, C.E.T., MITE — DATE
MANAGER, ENGINEERING SERVICES

PROJECT NAME

CONTRACT 14-093
SIMPSON ROAD EXTENSION PHASE 3

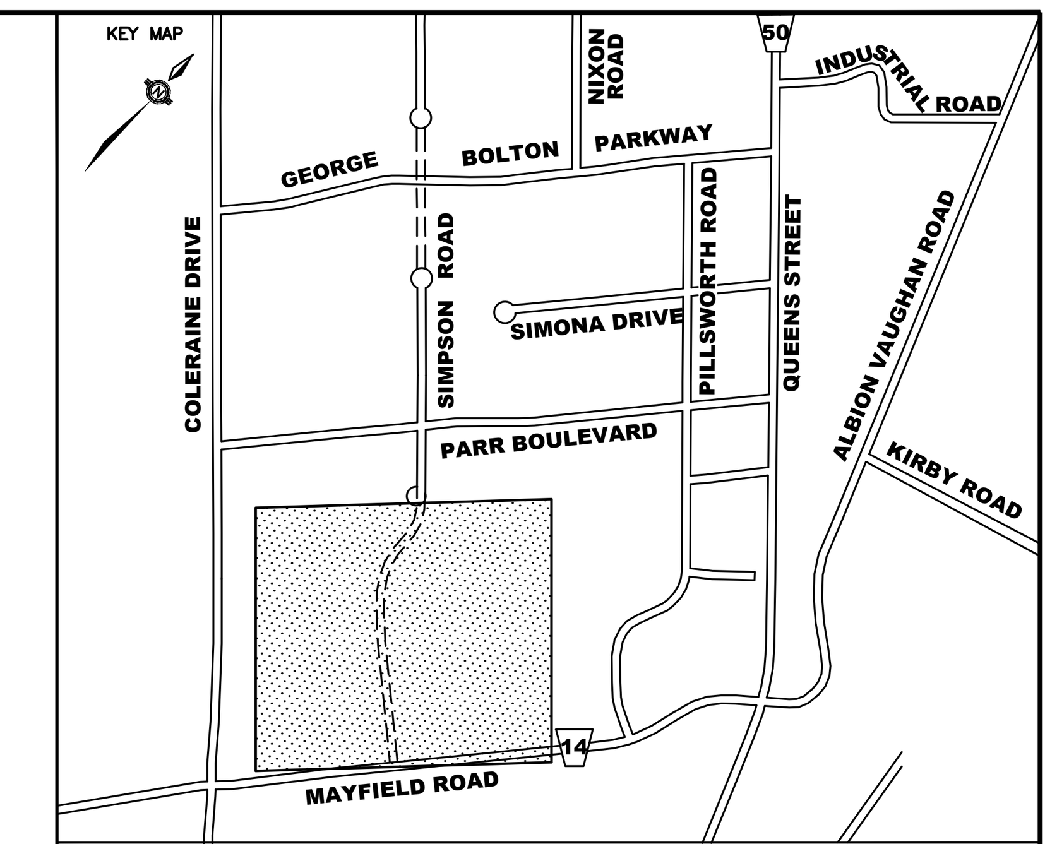
FINANCE AND INFRASTRUCTURE SERVICES

REGION OF PEEL
C02.312

THE CORPORATION OF THE
TOWN OF CALEDON

SIMPSON ROAD
WATER DISTRIBUTION AND COMMISSIONING PLAN

SCALE: 1:750		PROJECT No. TP113126
DESIGNED BY: L.V.	DRAWN BY: N.H.	DRAWING No. 16
CHECKED BY: D.S.	DATE: NOV. 2020	



LEGEND

● MH1A — PROPOSED SANITARY MANHOLE

140 / 2.00 — EQUIVALENT POPULATION (70ppha) / AREA (ha)

—— SANITARY BOUNDARY DRAINAGE AREA

NOT FOR CONSTRUCTION

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
4	F.W.	NOV. 20	ISSUED FOR 100% CLIENT REVIEW		
3	F.W.	AUG. 20	ISSUED FOR 100% CLIENT REVIEW		
2	F.W.	JUN. 20	ISSUED FOR 100% DETAILED DESIGN FOR ROP – MAYFIELD ROAD COORDINATION REVIEW		
1	F.W.	JAN. 20	ISSUED FOR 100% REVIEW		

BENCH MARK:

CONSULTANT

wood.

ENGINEER'S STAMP

APPROVED FOR CONSTRUCTION

R. GRODECKI, C.E.T., MITE — DATE
MANAGER, ENGINEERING SERVICES

PROJECT NAME

CONTRACT 14-093
SIMPSON ROAD EXTENSION PHASE 3

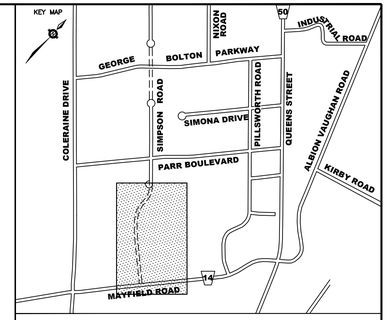
FINANCE AND INFRASTRUCTURE SERVICES

REGION OF PEEL
C02.312

THE CORPORATION OF THE
TOWN OF CALEDON

SANITARY DRAINAGE AREA PLAN

SCALE: 1:1250		PROJECT No. TP113126
DESIGNED BY: L.V.	DRAWN BY: N.H.	DRAWNING No. 17
CHECKED BY: D.S.	DATE: NOV. 2020	



LEGEND

- CB1 — PROPOSED CATCHBASIN/MANHOLE
- 0.9 / 7.57 — RUNOFF COEFFICIENT / AREA (ha)
- STORM BOUNDARY DRAINAGE AREA

NOT FOR CONSTRUCTION

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
4	F.W.	NOV. 20	ISSUED FOR 100% CLIENT REVIEW		
3	F.W.	AUG. 20	ISSUED FOR 100% CLIENT REVIEW		
2	F.W.	JUN. 20	ISSUED FOR 100% DETAILED DESIGN FOR ROP – MAYFIELD ROAD COORDINATION REVIEW		
1	F.W.	JAN. 20	ISSUED FOR 100% REVIEW		

BENCH MARK:

CONSULTANT

wood.

ENGINEER'S STAMP

APPROVED FOR CONSTRUCTION

R. GRODECKI, C.E.T., MITE — DATE
MANAGER, ENGINEERING SERVICES

PROJECT NAME

CONTRACT 14-093
SIMPSON ROAD EXTENSION PHASE 3

FINANCE AND INFRASTRUCTURE SERVICES

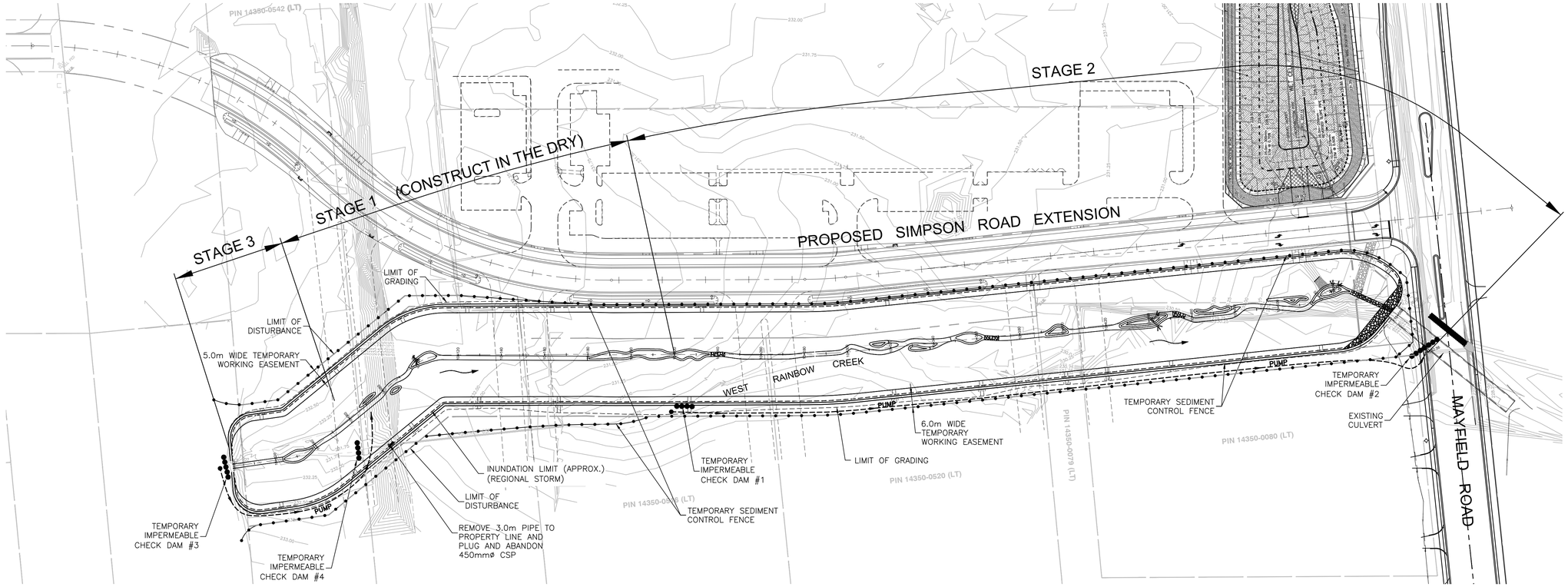
REGION OF PEEL
C02.312

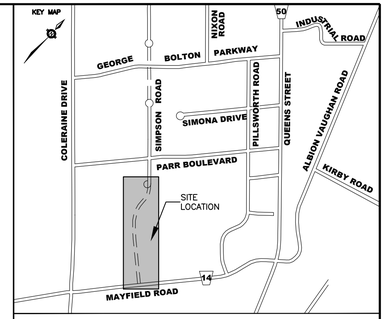
THE CORPORATION OF THE
TOWN OF CALEDON

STORM DRAINAGE AREA PLAN

STA. 10+860 TO STA. 11+458

SCALE: 1:1250		PROJECT No. TP113126
DESIGNED BY: L.V.	DRAWN BY: N.H.	
CHECKED BY: D.S.	DATE: NOV. 2020	DRAWNING No. 18





LEGEND

- SEDIMENT CONTROL FENCE
- TEMPORARY IMPERMEABLE CHECK DAM / COFFER DAM
- RIPRAP
- WOODY DEBRIS
- FLOW DIRECTION
- INUNDATION LIMIT (REGIONAL STORM)
- PROPERTY LINE

GENERAL NOTES:

1. AN ON-SITE PRE-CONSTRUCTION MEETING MUST TAKE PLACE PRIOR TO THE COMMENCEMENT OF ANY WORK. REPRESENTATIVES FROM THE TORONTO REGION CONSERVATION AUTHORITY, THE REGION OF PEEL, THE DESIGN TEAM, AND THE SUCCESSFUL CONTRACTOR MUST BE PRESENT.
2. PRIOR TO COMMENCEMENT OF ALL PHASES OF WORK, INCLUDING STRIPPING AND FILLING, ALL EROSION AND SEDIMENT CONTROLS SHALL BE IN PLACE TO THE SATISFACTION OF THE SITE SUPERVISOR.
3. ALL EROSION AND SEDIMENT CONTROLS MUST BE MAINTAINED DURING CONSTRUCTION AND FULLY REMOVED ONCE ALL DISTURBED AREAS HAVE BEEN STABILIZED.
4. THE CONTRACTOR MUST ABIDE BY THE REGULATIONS SET OUT IN THE ONTARIO GOVERNMENT PUBLICATION "GUIDELINES ON EROSION AND SEDIMENTATION CONTROLS FOR URBAN CONSTRUCTION SITES", AND "EROSION & SEDIMENT CONTROL GUIDELINES FOR URBAN CONSTRUCTION" PREPARED BY THE GREATER GOLDEN HORSESHOE AREA CONSERVATION AUTHORITIES (DECEMBER 2006).
5. REFER TO LANDSCAPING PLANS FOR REVEGETATION STAGING AND SEED MIXES.
6. THE ENTIRE CONSTRUCTION SITE TO BE MONITORED DAILY FOR SEDIMENT AND EROSION CONTROL FOR THE DURATION OF THE CONTRACT. DEFICIENCIES AND/OR BREACHES OF THE EROSION AND SEDIMENT CONTROL MEASURES MUST BE BROUGHT TO THE ATTENTION OF THE SITE ENGINEER AND THE TORONTO REGION CONSERVATION AUTHORITY AND RECTIFIED IMMEDIATELY.
7. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE REGULATIONS AND PERMITTING PROVISION OF TRCA, THE REGION OF PEEL, MNR AND MOECC. THESE ARE TO BE POSTED OR AVAILABLE AT THE CONSTRUCTION SITE.
8. TEMPORARY IMPERMEABLE CHECK DAMS SHALL BE USED AS A COMPONENT OF THE DAM AND PUMP OPERATIONS FOR DEWATERING. IN THE EVENT THAT A TEMPORARY IMPERMEABLE CHECK DAM HAS BEEN PUT IN PLACE, IT SHALL BE REMOVED AS WELL AS ANY TRAPPED SEDIMENT UPON CONSTRUCTION COMPLETION OR AT THE DISCRETION OF THE SITE ENGINEER. UPON COMPLETION OF THE CHANNEL WORKS, THE ENGINEER AND CONTRACTOR ARE TO ENSURE THAT ALL STRUCTURES CONSTRUCTED WITHIN THE STREAM HAVE BEEN COMPLETELY REMOVED.
9. UNDER NO CIRCUMSTANCES SHALL RUNOFF FROM UNVEGETATED SOIL OR EXCAVATED PITS BE DISCHARGED OFF SITE OR DIRECTLY INTO ACTIVE OR TEMPORARILY INACTIVE WATERCOURSES.
10. ALL SEDIMENT CONTROL FENCING MUST BE MAINTAINED UNTIL SUCH TIME THE SITE SUPERVISOR DEEMS THE MEASURE IS NO LONGER NECESSARY.
11. ALL ACCUMULATED SEDIMENT MUST BE REMOVED DURING PERIODS OF LOW-FLOW OR DRY CONDITIONS, PRIOR TO THE REMOVAL OF THE DEWATERING CONTROLS, AND DISPOSED OF IN AN APPROVED ON-SITE LOCATION (TO BE DETERMINED IN THE FIELD).
12. ALL EXCAVATION/GRADING IS TO BE DONE IN THE DRY.
13. ALL DISTURBED AREAS SHALL BE REVEGETATED AS SOON AS WEATHER PERMITS FOLLOWING COMPLETION OF CONSTRUCTION WITH THE EXCEPTION OF SLOPES GREATER THAN 3:1 OR IN SENSITIVE AREAS. THESE AREAS SHALL BE STABILIZED IMMEDIATELY WITH TOPSOIL, SEED AND CURLEX II CL EROSION CONTROL BLANKET OR APPROVED EQUIVALENT.
14. ANY DISTURBANCE TO EXISTING VEGETATION AS PART OF CONSTRUCTION TEMPORARY WORK IS TO BE RESTORED AT THE DIRECTION OF THE LANDSCAPE ARCHITECT AND/OR THE SITE SUPERVISOR.
15. ALL STOCKPILES AND STORAGE AREAS ARE TO BE SURROUNDED BY SEDIMENT CONTROL FENCING OR EQUIVALENT.
16. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT EXCEEDING A 150mm (6 in.) THICKNESS OF LOOSE LIFTS . EACH LAYER SHALL BE COMPACTED BEFORE PLACING SUCCEEDING LAYER.
17. COMPACTION SHALL BE DONE IN ACCORDANCE WITH REGION OF PEEL STANDARDS. RECOMMENDED MINIMUM PERCENTAGE OF STANDARD PROCTOR MAXIMUM DRY DENSITY:
    (a) IN SITU SUBGRADE SOIL - A MINIMUM OF 98%
    (b) GENERAL FILL MATERIAL - A MINIMUM OF 98%
    (c) GRANULAR MATERIAL - A MINIMUM OF 98%
18. EXCAVATED MATERIAL FROM THE CREEK IS TO BE REMOVED OFF-SITE TO A LOCATION SOURCED BY THE CONTRACTOR.
19. LIVE STAKES ARE TO BE INSTALLED WITHIN 48 HRS. OF HARVEST. OTHERWISE THEY SHOULD BE SOAKED FOR 7-10 DAYS TO PROLONG THE WINDOW OF ROOTING OPPORTUNITY.
20. ALL MATERIALS AND EQUIPMENT USED FOR THE PURPOSE OF SITE PREPARATION AND PROJECT COMPLETION SHALL BE OPERATED AND STORED IN A MANNER THAT PREVENTS ANY DELETERIOUS SUBSTANCE (i.e. PETROLEUM PRODUCTS, DEBRIS) FROM ENTERING THE WATERCOURSE.
21. ALL VEHICLE AND EQUIPMENT REFUELING AND MAINTENANCE, STORAGE AND STOCKPILE AREAS AND ANY OTHER TEMPORARY CONSTRUCTION AREAS, SHALL BE CONDUCTED AND/OR LOCATED A MINIMUM OF 30m AWAY FROM THE WATERCOURSE ON FLAT GROUND SO THAT ANY RUNOFF FLOWS AWAY FROM THE CREEK.
22. ONLY CLEAN MATERIAL FREE OF FINE PARTICULATE MATTER SHALL BE PLACED IN THE CREEK.
23. DUE TO LOCAL FISH SPAWNING AND NURSERY PERIODS, NO IN-WATER WORK OR ACTIVITY SHALL TAKE PLACE BETWEEN MARCH 31st TO JULY 1st.
24. DUE TO MITIGATING IMPACTS OF TREE CLEARING ON BREEDING BIRDS, ANY VEGETATION REMOVAL WITH THE CORE BIRD BREEDING SEASON OF MAY 1st TO JULY 31st, MUST BE DONE IN ADHERENCE TO THE MIGRATORY BIRDS CONVENTION ACT. VEGETATION REMOVAL WITHIN THIS TIME MUST BE DONE IN CONSULTATION WITH ENVIRONMENT CANADA, CANADIAN WILDLIFE SERVICES.
25. CONSTRUCTION OF THE LOW-FLOW CHANNEL MUST BE SUPERVISED BY A QUALIFIED FLUVIAL GEOMORPHOLOGIST (OR APPROVED EQUIVALENT).

CONSTRUCTION STAGING NOTES:

1. THE GEOMORPHOLOGIST AND/OR THE ENGINEERS RESPONSIBLE FOR THE DESIGN OF THE CREEK REALIGNMENT DESIGN MUST BE PRESENT DURING CONSTRUCTION AND APPROVE THE COMPLETION OF EACH STAGE.
2. NO FLOWS ARE TO BE REINSTATED INTO NEWLY CONSTRUCTED CHANNEL WORKS UNTIL THE WORK HAS BEEN APPROVED BY TORONTO REGION CONSERVATION AUTHORITY STAFF BASED ON A SITE INSPECTION OR SUBMISSION OF A DETAILED PHOTOGRAPHIC INVENTORY OF THE CHANNEL.
3. DAM AND PUMP FLOW LENGTHS AS STATED WITHIN EACH STAGE OF WORK ARE TO INFORM THE CONTRACTOR OF THE MAXIMUM LENGTH REQUIRED TO DEWATER . THE CONTRACTOR SHALL KEEP CLOSE ATTENTION TO WEATHER PATTERNS DURING CONSTRUCTION AND DAM AND PUMP IN LENGTHS SO THAT CONSTRUCTION CAN BE COMPLETED DURING DRY WEATHER. THE CONTRACTOR SHALL ENSURE THAT ALL TEMPORARY IMPERMEABLE CHECK DAMS ARE REMOVED (AS WELL AS ANY ACCUMULATED SEDIMENT) DURING ALL RAIN EVENTS THAT MAY CAUSE THE CREEK TO OVERTOP THE DAMS.
4. DURING ALL DAM AND PUMP DEWATERING OPERATIONS, FISH RESCUE MUST TAKE PLACE BY A QUALIFIED FISHERIES BIOLOGIST. RESCUE TRAPPED FISH FROM THE EXISTING CREEK BED BETWEEN THE 2 TEMPORARY DEWATERING CONTROLS (TEMPORARY IMPERMEABLE CHECK DAMS) AND RELOCATE FISH BACK INTO THE CREEK AT A POINT DOWNSTREAM OF THE LIMIT OF CONSTRUCTION.
5. DURING THE DEWATERING OPERATIONS, IF PUMPING, ENSURE THAT THE DISCHARGE HOSE (OR FLUME) OUTLETS TO AN APPROPRIATE DISSIPATION AREA SUCH AS A PATIO STONE OR PEA GRAVEL BAG AS OPPOSED TO EXPOSED SOIL, USE FILTER BAGS OR ANY OTHER FILTRATION TECHNIQUE/PRACTISE ED TO TREAT DEWATERING DISCHARGE BEFORE RETURNING IT TO CREEK DOWNSTREAM.
6. PRIOR TO COMMENCEMENT OF CONSTRUCTION, INSTALL ALL EROSION AND SEDIMENTATION CONTROLS.
7. CLEAR AND GRUB ALL WORK AREAS PRIOR TO CONSTRUCTION AS PER OPSS 201.
8. STRIP TOPSOIL FROM WORK AREA AND STOCKPILE IN AN AREA ON SITE TO BE DETERMINED IN THE FIELD IF APPLICABLE.

Stage 1 - Channel Realignment (Constructed In The Dry)

1. INSTALL SEDIMENT FENCING AS SHOWN ALONG THE NORTH BANK OF THE EXISTING CREEK.
2. CONSTRUCT NEW CHANNEL REALIGNMENT FROM STA. 10+060± TO STA. 10+220±.
3. STABILIZE AND REVEGETATE THE NEWLY CONSTRUCTED CHANNEL.
4. COMPLETE BALANCE OF FILL AND GRADING WORK REQUIRED. ALL RESTORATION, STABILIZATION AND LANDSCAPING WORK TO BE CARRIED OUT IMMEDIATELY FOLLOWING GRADING COMPLETION.
5. INSTALL TEMPORARY SEDIMENT CONTROL FENCING ALONG THE NORTH SIDE OF THE NEWLY CONSTRUCTED CHANNEL.

Stage 2 & 3 - Channel Realignment (Dam And Pump)

1. SEQUENCE THE CONSTRUCTION METHOD IN THE SAME MANNER FOR STAGES 2 & 3, STARTING AT THE DOWNSTREAM LIMIT (STAGE 2) AND MOVING THE TEMPORARY IMPERMEABLE CHECK DAMS UPSTREAM TO THE LOCATION FOR STAGE 3 AS SHOWN ON THE ABOVE PLAN.
2. CONSTRUCT A TEMPORARY IMPERMEABLE CHECK DAM AT THE UPSTREAM LIMIT OF THE STAGE TO BE COMPLETED.
3. GUIDE FISH FROM THE WORK AREA BEING DEWATERED AND MAKE SURE THEY HAVE BEEN DISPLACED TO THE CREEK DOWNSTREAM OF THE WORK BELOW THE AREA WHERE THE DOWNSTREAM TEMPORARY IMPERMEABLE CHECK DAM IS TO BE CONSTRUCTED.
4. CONSTRUCT A TEMPORARY IMPERMEABLE CHECK DAM AT THE DOWNSTREAM LIMIT OF THE STAGE TO BE COMPLETED.
5. WORK AREA TO BE KEPT DRY BY APPROPRIATE DEWATERING OPERATION (EG. DAM AND PUMP).
6. PUMP FLOW INTO THE EXISTING CULVERT FOR STAGE 2 AND INTO THE NEWLY CONSTRUCTED CHANNEL FOR STAGE 3 ENSURING THAT THAT THE DISCHARGE HOSE (OR FLUME) OUTLETS TO AN APPROPRIATE DISSIPATION AREA SUCH AS A PATIO STONE OR PEA GRAVEL BAG.
7. CONSTRUCT THE NEW CHANNEL CONNECTING WITH THE NEWLY CONSTRUCTED CHANNEL THAT WAS COMPLETED IN THE DRY (STAGE 1).
8. COMPLETE BALANCE OF FILL AND GRADING WORK REQUIRED. ALL RESTORATION, STABILIZATION AND LANDSCAPING WORK TO BE CARRIED OUT IMMEDIATELY FOLLOWING GRADING COMPLETION.
9. ALL CONSTRUCTION AND RESTORATION WORK MUST BE INSPECTED AND APPROVED BY TORONTO REGION CONSERVATION AUTHORITY STAFF PRIOR TO THE REINSTATEMENT OF CREEK FLOW TO ENSURE STABILIZATION AND REVEGETATION OF THE WORKS AFTER THE COMPLETION OF EACH STAGE.
10. INSTALL TEMPORARY SEDIMENT CONTROL FENCE ALONG THE NORTH AND SOUTH SIDES OF THE NEWLY CONSTRUCTED CHANNEL AFTER THE COMPLETION OF EACH STAGE
11. REMOVE AND DISPOSE OF ALL ACCUMULATED SEDIMENT (OFF-SITE) PRIOR TO THE REMOVAL OF THE TEMPORARY IMPERMEABLE CHECK DAMS.
12. REMOVE THE TEMPORARY IMPERMEABLE CHECK DAMS AND REINSTATE THE CREEK FLOW.

NOT FOR CONSTRUCTION

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
7	M.B.K.	20/11/19	ISSUED FOR 100% CLIENT REVIEW		
6	M.B.K.	20/01/20	ISSUED FOR 100% REVIEW		
5	M.B.K.	19/09/30	REVISED – TRCA SUBMISSION #4		
4	M.B.K.	19/02/19	REVISED – TRCA SUBMISSION #3		
3	J.P.E.	18/11/05	REVISED – TRCA SUBMISSION #2		
2	B.S.	18/05/14	REVISED – TRCA SUBMISSION		
1	B.S.	17/09/05	ISSUED FOR TRCA PERMIT		

BENCH MARK:

CONSULTANT

wood.

ENGINEER'S STAMP

APPROVED FOR CONSTRUCTION

R. GRODECKI, C.E.T., MITE — DATE
MANAGER, ENGINEERING SERVICES

PROJECT NAME

CONTRACT 14-093
SIMPSON ROAD EXTENSION PHASE 3

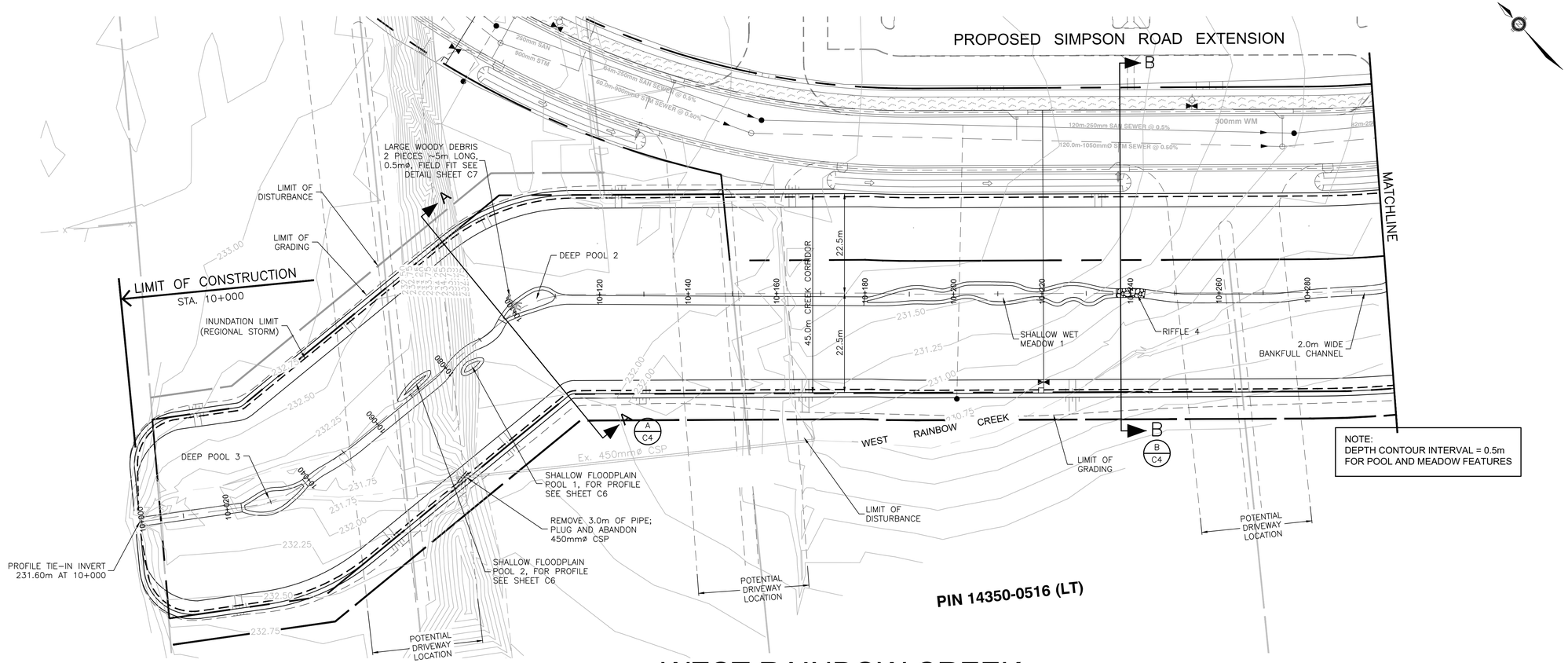
FINANCE AND INFRASTRUCTURE SERVICES

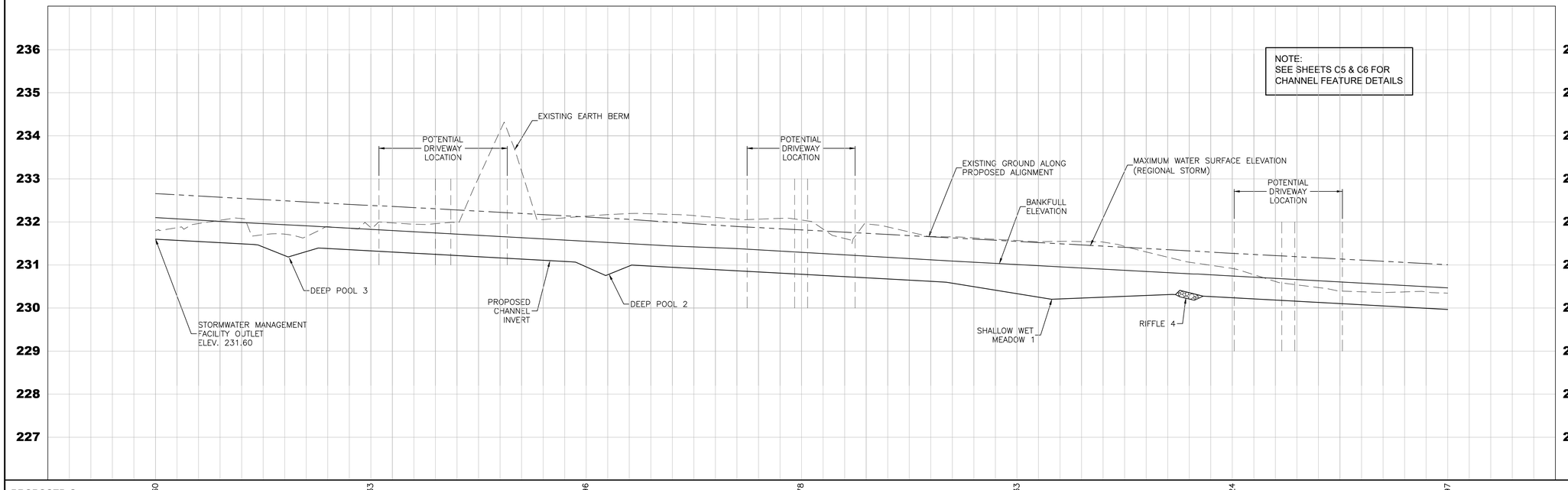
REGION OF PEEL
C02.312

THE CORPORATION OF THE
TOWN OF CALEDON

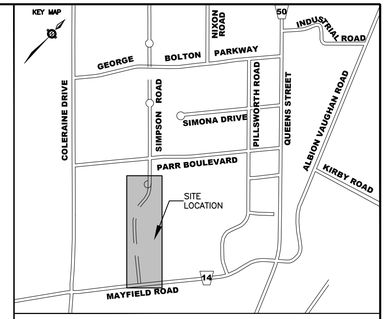
WEST RAINBOW CREEK TRIBUTARY EROSION & SEDIMENT CONTROL & STAGING PLAN

SCALE: 1:1000		PROJECT No. TP113126
DESIGNED BY: M.K./B.D.	DRAWN BY: M.K.	DRAWING No. C1
CHECKED BY: B.B.	DATE: NOV. 2020	





WEST RAINBOW CREEK



INUNDATION LIMIT (REGIONAL STORM)

NOT FOR CONSTRUCTION

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
7	M.B.K.	20/11/19	ISSUED FOR 100% CLIENT REVIEW		
6	M.B.K.	20/01/20	ISSUED FOR 100% REVIEW		
5	M.B.K.	19/09/30	REVISED – TRCA SUBMISSION #4		
4	M.B.K.	19/02/19	REVISED – TRCA SUBMISSION #3		
3	J.P.E.	18/11/05	REVISED – TRCA SUBMISSION #2		
2	B.S.	18/05/14	REVISED – TRCA SUBMISSION		
1	B.S.	17/09/05	ISSUED FOR TRCA PERMIT		

BENCH MARK:

CONSULTANT

wood.

ENGINEER'S STAMP

APPROVED FOR CONSTRUCTION

R. GRODECKI, C.E.T., MITE
MANAGER, ENGINEERING SERVICES

DATE

PROJECT NAME

CONTRACT 14-093
SIMPSON ROAD EXTENSION PHASE 3

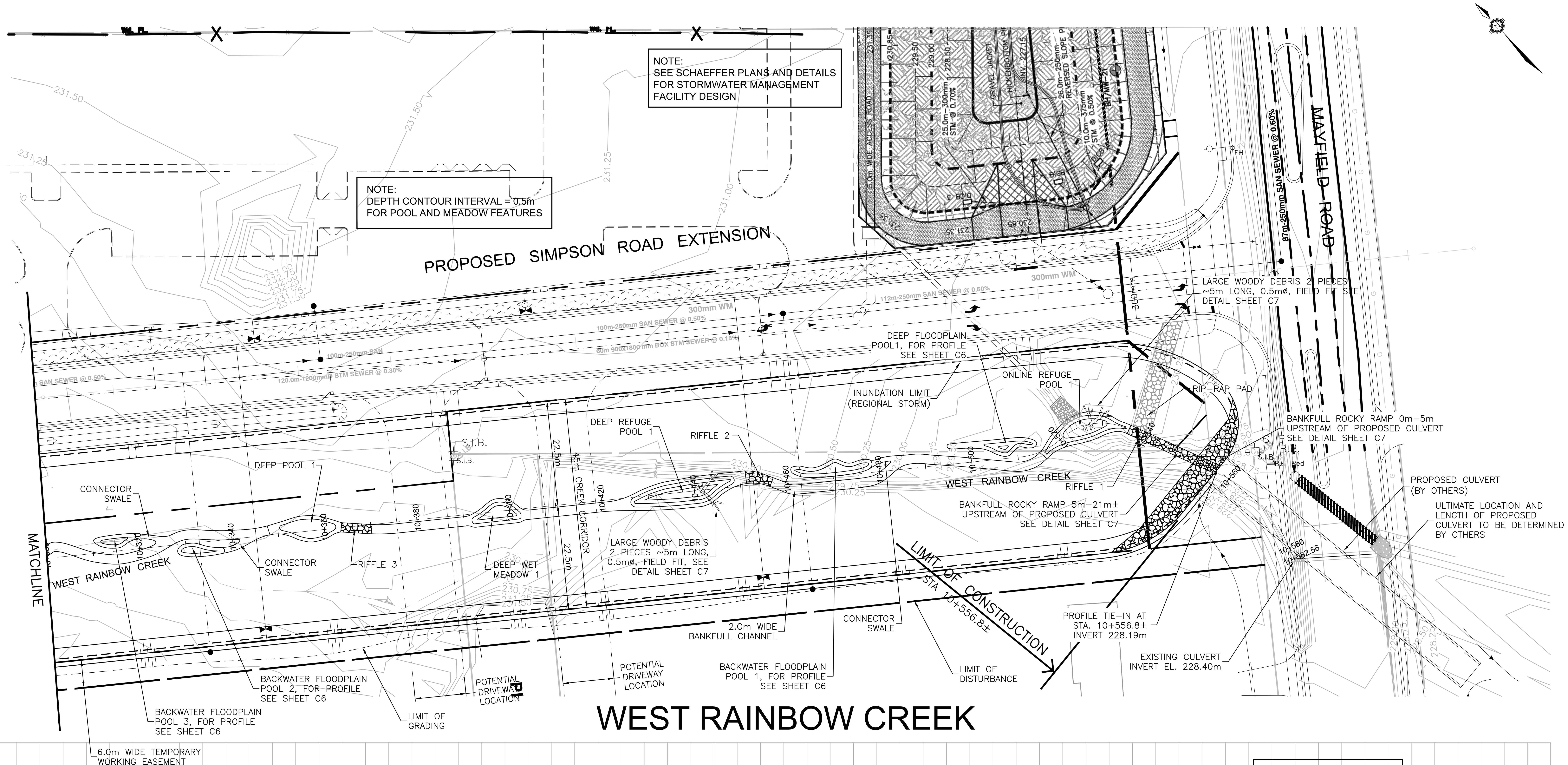
FINANCE AND INFRASTRUCTURE SERVICES

REGION OF PEEL
C02.312

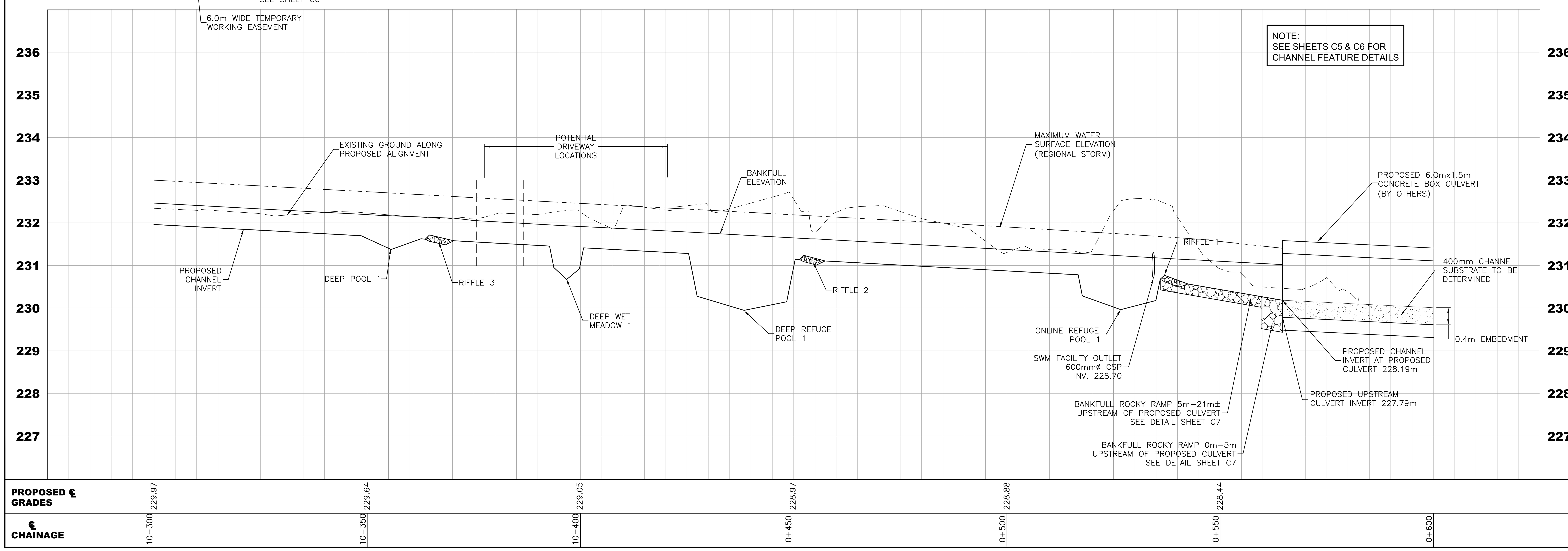
THE CORPORATION OF THE
TOWN OF CALEDON

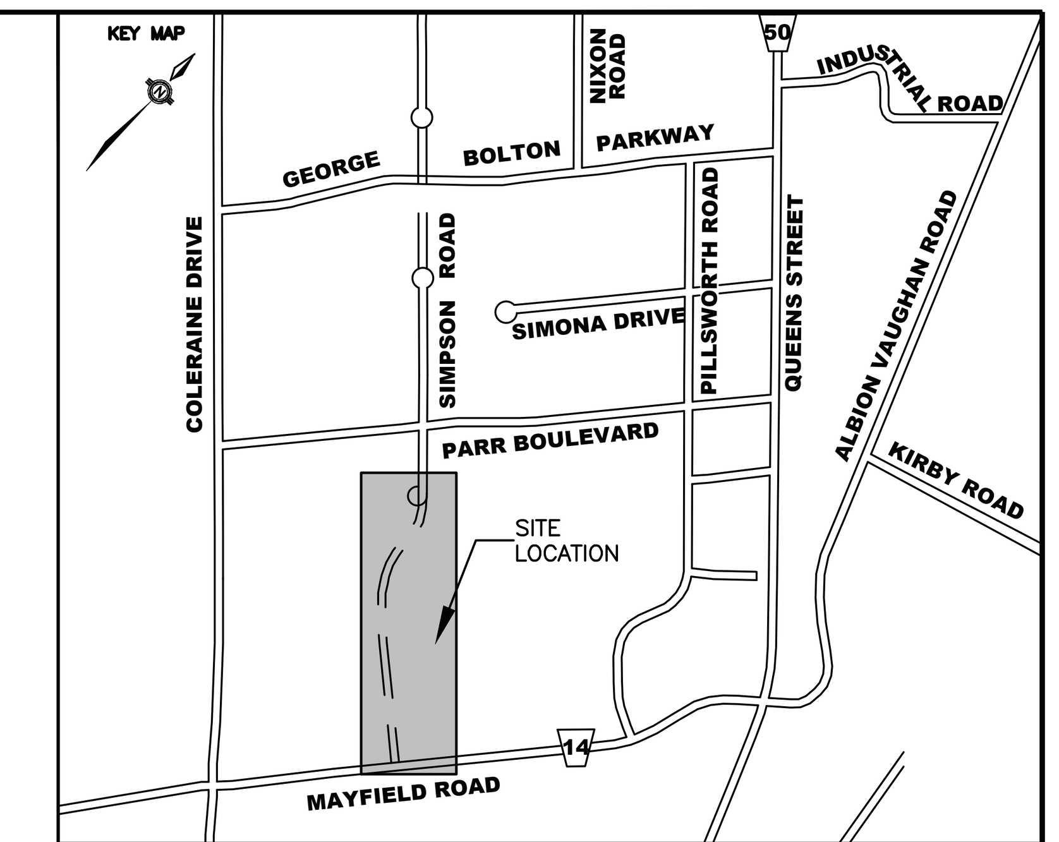
WEST RAINBOW CREEK TRIBUTARY
PLAN AND PROFILE
STA. 10+000 TO STA. 10+300

SCALE: HORIZ. 1:500	VERT. 1:100	PROJECT No. TP113126
DESIGNED BY: M.K./D.B.	DRAWN BY: M.K.	DRAWING No. C2
CHECKED BY: B.B.	DATE: NOV. 2020	



WEST RAINBOW CREEK





— — — INUNDATION LIMIT (REGIONAL STORM)

NOT FOR CONSTRUCTION

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
7	M.B.K.	20/11/19	ISSUED FOR 100% CLIENT REVIEW		
6	M.B.K.	20/01/20	ISSUED FOR 100% REVIEW		
5	M.B.K.	19/09/30	REVISED – TRCA SUBMISSION #4		
4	M.B.K.	19/02/19	REVISED – TRCA SUBMISSION #3		
3	J.P.E.	18/11/05	REVISED – TRCA SUBMISSION #2		
2	B.S.	18/05/14	REVISED – TRCA SUBMISSION		
1	B.S.	17/09/05	ISSUED FOR TRCA PERMIT		

BENCH MARK:

CONSULTANT

wood.

ENGINEER'S STAMP

APPROVED FOR CONSTRUCTION

R. GRODECKI, C.E.T., MITE
MANAGER, ENGINEERING SERVICES

DATE

PROJECT NAME

CONTRACT 14-093
SIMPSON ROAD EXTENSION PHASE 3

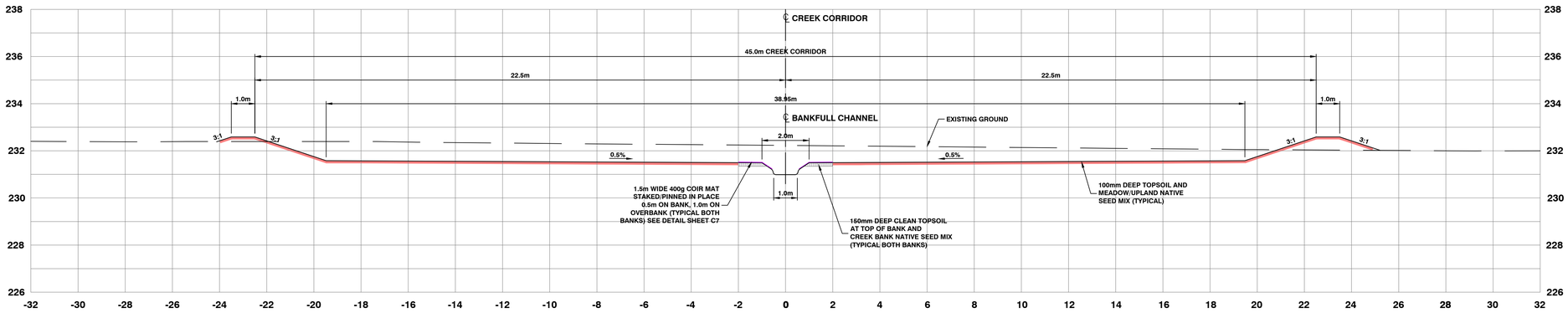
FINANCE AND INFRASTRUCTURE SERVICES

REGION OF PEEL
C02.312

THE CORPORATION OF THE
TOWN OF CALEDON

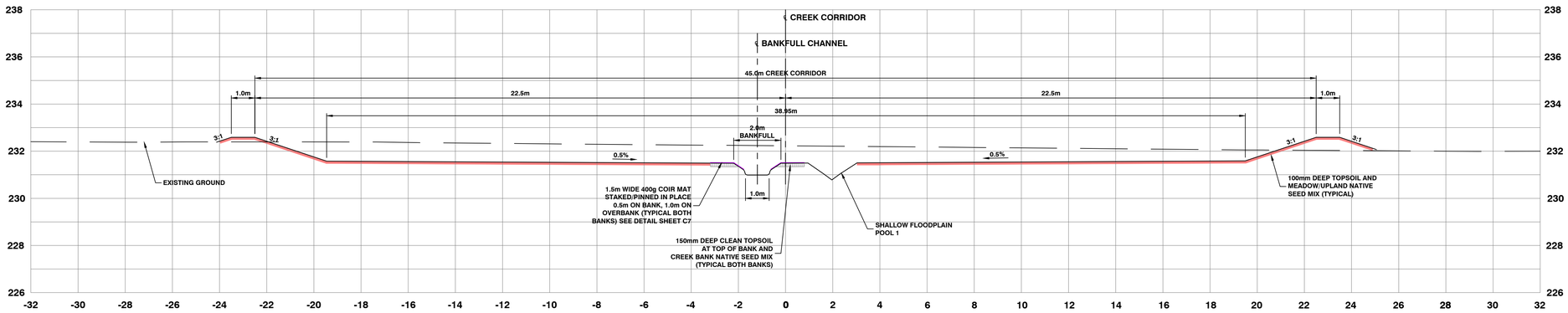
WEST RAINBOW CREEK TRIBUTARY
PLAN AND PROFILE
STA. 10+300 TO STA. 10+588±

SCALE: HORIZ. 1:500	VERT. 1:100	PROJECT No. TP113126
DESIGNED BY: M.K./D.B.	DRAWN BY: M.K.	DRAWING No. C3
CHECKED BY: B.B.	DATE: NOV. 2020	



TYPICAL CREEK CORRIDOR CROSS SECTION

SCALE 1:100



SECTION A-A

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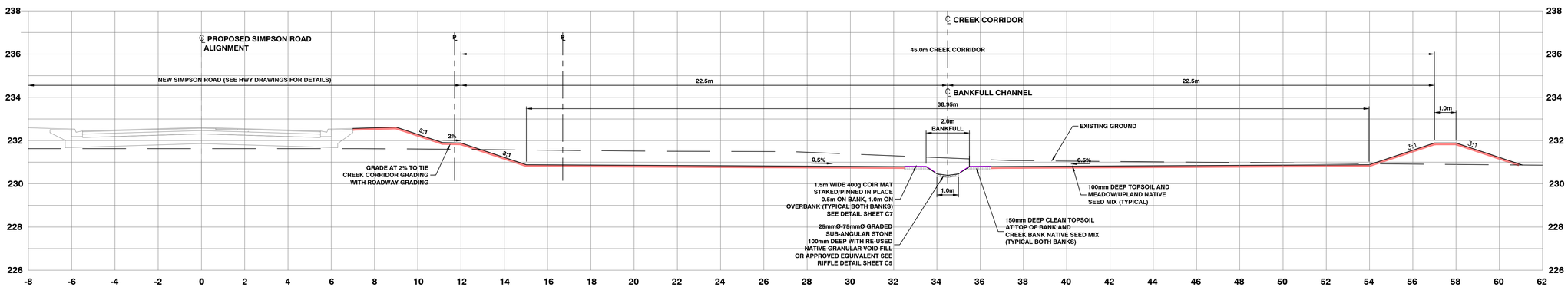


SECTION B-B

SCALE 1:100

NOT FOR CONSTRUCTION

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
7	M.B.K.	20/11/19	ISSUED FOR 100% CLIENT REVIEW		
6	M.B.K.	20/01/20	ISSUED FOR 100% REVIEW		
5	M.B.K.	19/09/30	REVISED – TRCA SUBMISSION #4		
4	M.B.K.	19/02/19	REVISED – TRCA SUBMISSION #3		
3	J.P.E.	18/11/05	REVISED – TRCA SUBMISSION #2		
2	B.S.	18/05/14	REVISED – TRCA SUBMISSION		
1	B.S.	17/09/05	ISSUED FOR TRCA PERMIT		

BENCH MARK:

CONSULTANT

wood.

ENGINEER'S STAMP

APPROVED FOR CONSTRUCTION

R. GRODECKI, C.E.T., MITE
MANAGER, ENGINEERING SERVICES

DATE

PROJECT NAME

CONTRACT 14-093
SIMPSON ROAD EXTENSION PHASE 3

FINANCE AND INFRASTRUCTURE SERVICES

REGION OF PEEL
C02.312

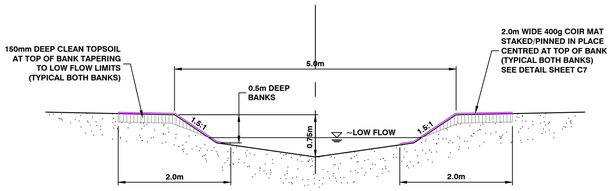
THE CORPORATION OF THE
TOWN OF CALEDON

WEST RAINBOW CREEK TRIBUTARY

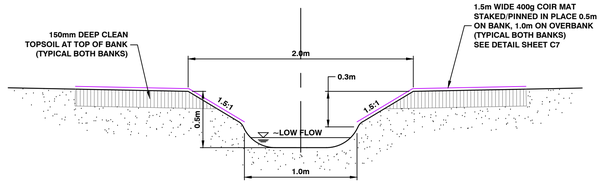
CROSS SECTIONS

SCALE: **AS NOTED**		PROJECT No. **TP113126**
DESIGNED BY: **M.K./B.D.**	DRAWN BY: **M.K.**	DRAWING No. **C4**
CHECKED BY: **B.B.**	DATE: **NOV. 2020**	

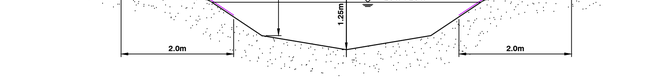
NOTE:
SEED MIX APPLIED UNDER COIR MAT TO BE ONTARIO SEED COMPANY #8215 "BANK SEED MIX", WITH A NURSE CROP OF ANNUAL OATS



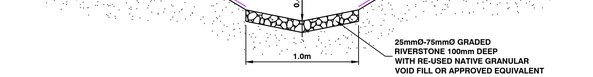
DEEP POOL DETAIL
SHALLOW WET MEADOW DETAIL
SCALE 1:50



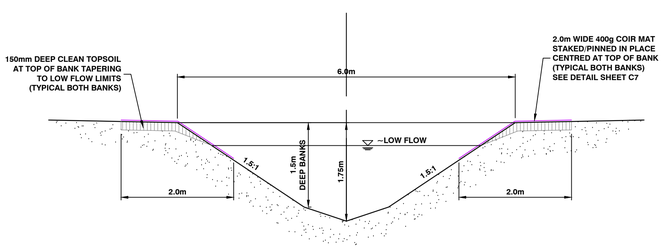
BANKFULL RUN DETAIL
SCALE 1:25



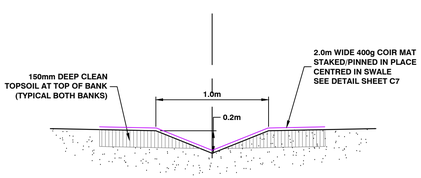
ONLINE REFUGE POOL DETAIL
DEEP WET MEADOW DETAIL
SCALE 1:50



BANKFULL RIFFLE (AT CREST) DETAIL
SCALE 1:25



DEEP REFUGE POOL DETAIL
SCALE 1:50



CONNECTOR SWALE DETAIL
SCALE 1:25

NOT FOR CONSTRUCTION

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
7	M.B.K.	20/11/19	ISSUED FOR 100% CLIENT REVIEW		
6	M.B.K.	20/01/20	ISSUED FOR 100% REVIEW		
5	M.B.K.	19/09/30	REVISED – TRCA SUBMISSION #4		
4	M.B.K.	19/02/19	REVISED – TRCA SUBMISSION #3		
3	J.P.E.	18/11/05	REVISED – TRCA SUBMISSION #2		
2	B.S.	18/05/14	REVISED – TRCA SUBMISSION		
1	B.S.	17/09/05	ISSUED FOR TRCA PERMIT		

BENCH MARK:

CONSULTANT

wood.

ENGINEER'S STAMP

APPROVED FOR CONSTRUCTION

R. GRODECKI, C.E.T., MITE
MANAGER, ENGINEERING SERVICES

DATE

PROJECT NAME

CONTRACT 14-093
SIMPSON ROAD EXTENSION PHASE 3

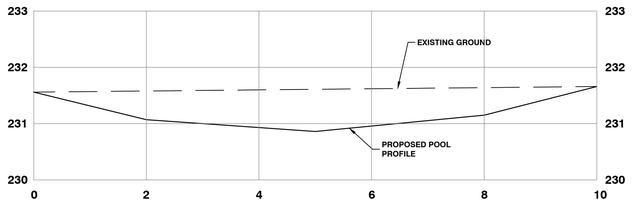
FINANCE AND INFRASTRUCTURE SERVICES

REGION OF PEEL
C02.312

THE CORPORATION OF THE
TOWN OF CALEDON

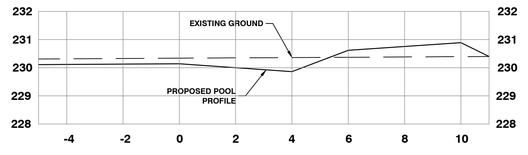
WEST RAINBOW CREEK TRIBUTARY CREEK BANKFULL SECTIONS

SCALE: **AS NOTED**		PROJECT No. **TP113126**
DESIGNED BY: **M.K./B.D.**	DRAWN BY: **M.K.**	DRAWING No. **C5**
CHECKED BY: **B.B.**	DATE: **NOV. 2020**	

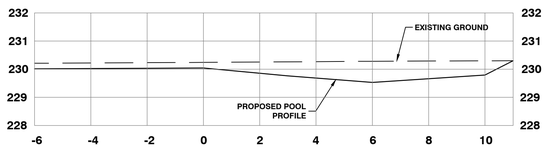


SHALLOW FLOODPLAIN
POOL 2 - PROFILE
SCALE 1:50

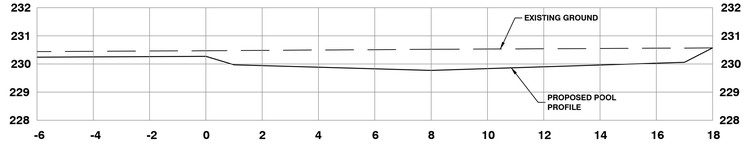
SHALLOW FLOODPLAIN
POOL 1 - PROFILE
SCALE 1:50



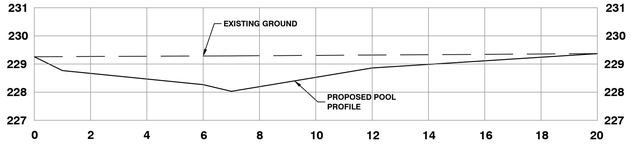
BACKWATER FLOODPLAIN
POOL 3 - PROFILE
SCALE 1:100



BACKWATER FLOODPLAIN
POOL 2 - PROFILE
SCALE 1:100



BACKWATER FLOODPLAIN
POOL 1 - PROFILE
SCALE 1:100



DEEP FLOODPLAIN
POOL 1 - PROFILE
SCALE 1:100

NOT FOR CONSTRUCTION

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
7	M.B.K.	20/11/19	ISSUED FOR 100% CLIENT REVIEW		
6	M.B.K.	20/01/20	ISSUED FOR 100% REVIEW		
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2	B.S.	18/05/14	REVISED – TRCA SUBMISSION		
1	B.S.	17/09/05	ISSUED FOR TRCA PERMIT		

BENCH MARK:

CONSULTANT

wood.

ENGINEER'S STAMP

APPROVED FOR CONSTRUCTION

R. GRODECKI, C.E.T., MITE — DATE
MANAGER, ENGINEERING SERVICES

PROJECT NAME

CONTRACT 14-093
SIMPSON ROAD EXTENSION PHASE 3

FINANCE AND INFRASTRUCTURE SERVICES

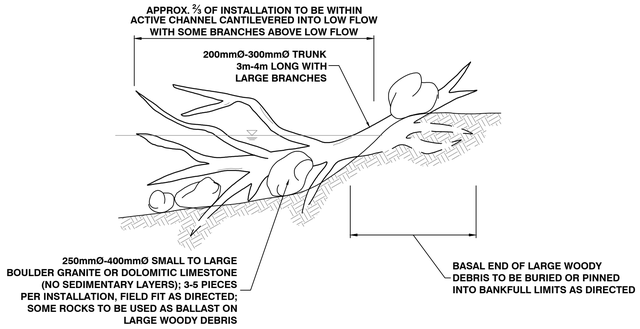
REGION OF PEEL
C02.312

THE CORPORATION OF THE
TOWN OF CALEDON

WEST RAINBOW CREEK TRIBUTARY

POOL PROFILES

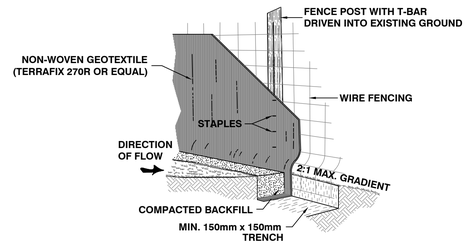
SCALE: **AS NOTED**		PROJECT No.	**TP113126**
DESIGNED BY: **M.K./B.D.**	DRAWN BY: **M.K.**	DRAWING No.	**C6**
CHECKED BY: **B.B.**	DATE: **NOV. 2020**		



NOTES:
1. RE-USED FOUND ON SITE MATERIALS PREFERRED EXCEPT SHALE
2. DISTURBED AREAS TO BE SEEDED AND RESTORED PER APPROVED LANDSCAPE PLANS

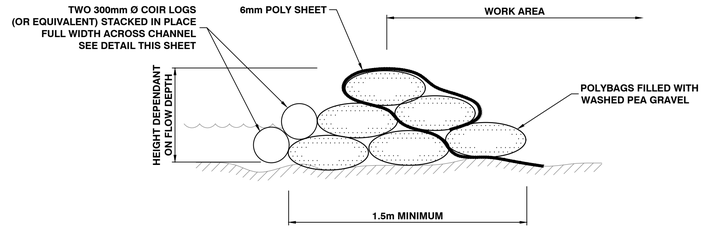
LARGE WOODY DEBRIS AND BOULDER INSTALLATION SECTION VIEW

N.T.S.



TEMPORARY SEDIMENT CONTROL FENCE

N.T.S.



TEMPORARY SANDBAG COFFERDAM

N.T.S.

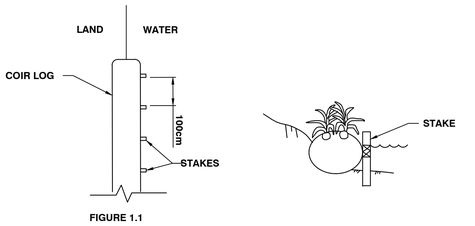


FIGURE 1.1

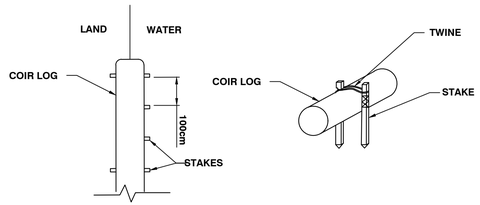


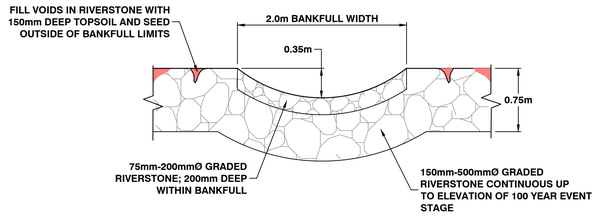
FIGURE 1.2

NOTES:

1. THE WOOD STAKES SHOULD BE PLACED ALONG THE WATER SIDE OF THE COIR LOG AND THE STAKE SHOULD BE PLACED THROUGH THE NETTING, FIGURE 1.1
2. WHERE WATER FLOW IS SLOW MOVING, AS FEW AS 4 STAKES PER 2.28 METRE LOG CAN BE USED. ON MEDIUM WATER FLOW SITES, 6 STAKES SHOULD BE USED AS FIGURE 1.2
3. FOR EROSION CONTROL, TYPICAL CHANNEL TO USE COIR MAT AS PER TERRAFIX GEOSYNTHETICS INC. INSTALLATION GUIDE.

COIR LOG INSTALLATION

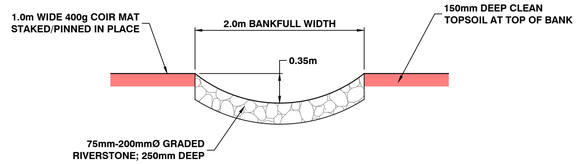
N.T.S.



BANKFULL ROCKY RAMP DETAIL 0m-5m UPSTREAM OF CULVERT

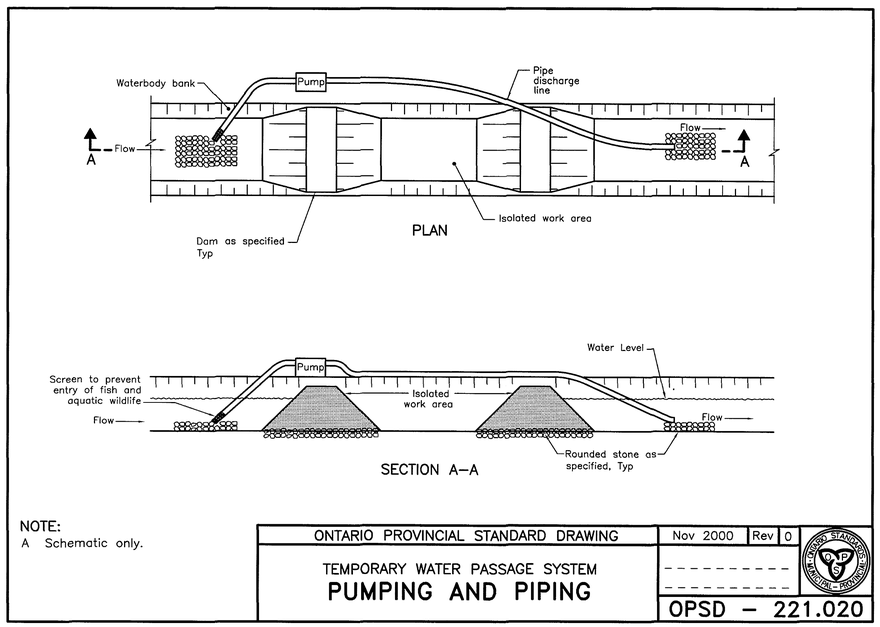
N.T.S.

NOTE:
SEED MIX ADDED TO VOID TOPSOIL FILL AND APPLIED UNDER COIR MAT TO BE ONTARIO SEED COMPANY #8215 BANK SEED MIX, WITH A NURSE CROP OF ANNUAL OATS



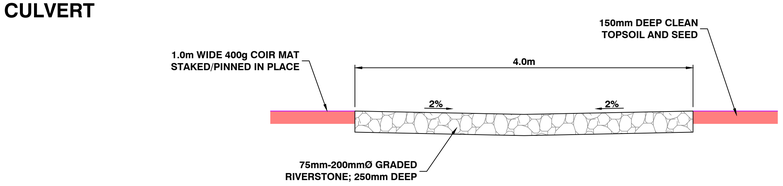
BANKFULL ROCKY RAMP DETAIL 5m-21m± UPSTREAM OF CULVERT

N.T.S.



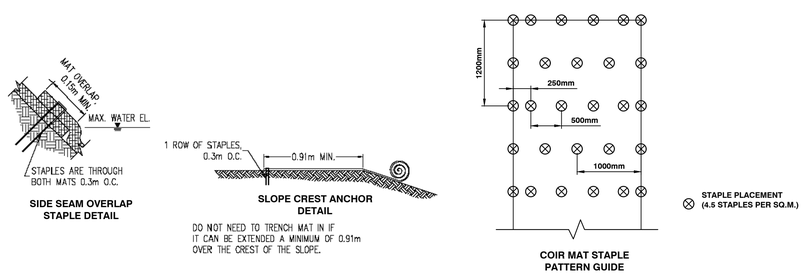
NOTE:
A Schematic only.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2000	Rev 0
TEMPORARY WATER PASSAGE SYSTEM PUMPING AND PIPING		
	OPSD – 221.020	



RIP RAP SPILLWAY AND PAD

N.T.S.



1. FOR COHESIVE SOIL USE A 0.152m WIRE STAPLE AND FOR NON-COHESIVE SOIL USE A 0.203m WIRE STAPLE.
2. FOR BEST RESULTS INSERT STAPLES SO HEADS ARE PARALLEL TO THE FLOW OF WATER.
3. NOT TO SCALE DIMENSIONS IN METRES UNLESS OTHERWISE NOTED.

COIR MAT INSTALLATION

N.T.S.

NOT FOR CONSTRUCTION

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
7	M.B.K.	20/11/19	ISSUED FOR CLIENT REVIEW–100% DETAILED DESIGN		
6	M.B.K.	20/01/20	ISSUED FOR 100% REVIEW		
5	M.B.K.	19/09/30	REVISED – TRCA SUBMISSION #4		
4	M.B.K.	19/02/19	REVISED – TRCA SUBMISSION #3		
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2	B.S.	18/05/14	REVISED – TRCA SUBMISSION		
1	B.S.	17/09/05	ISSUED FOR TRCA PERMIT		

BENCH MARK:

CONSULTANT

wood.

ENGINEER'S STAMP

APPROVED FOR CONSTRUCTION

R. GRODECKI, C.E.T., MITE
MANAGER, ENGINEERING SERVICES

DATE

PROJECT NAME

CONTRACT 14-093
SIMPSON ROAD EXTENSION PHASE 3

FINANCE AND INFRASTRUCTURE SERVICES

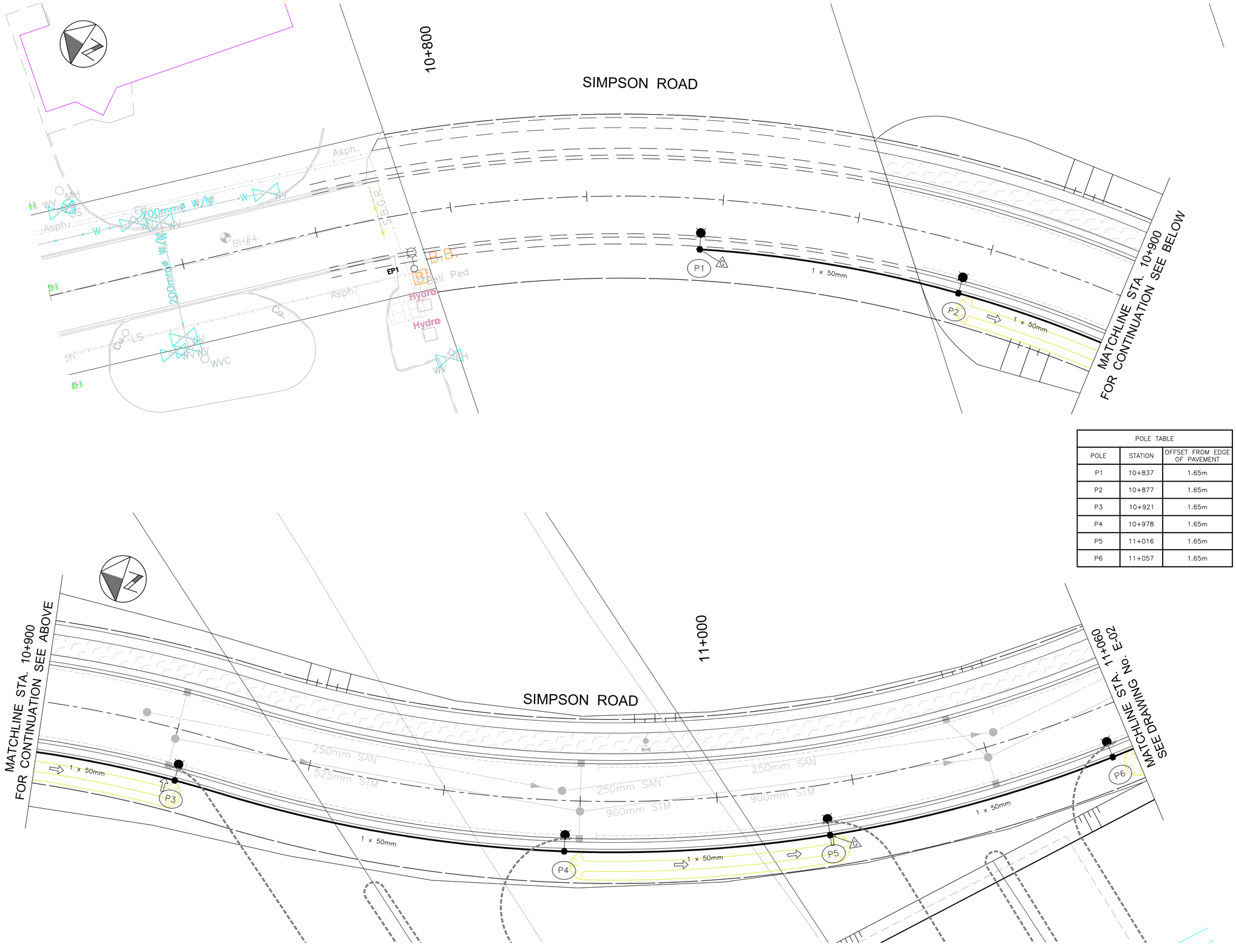
REGION OF PEEL
C02.312

THE CORPORATION OF THE
TOWN OF CALEDON

WEST RAINBOW CREEK TRIBUTARY

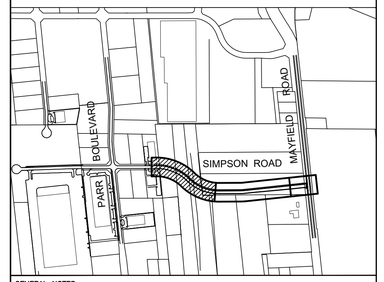
TYPICAL DETAILS

SCALE: AS NOTED		PROJECT No. TP113126
DESIGNED BY: M.K./B.D.	DRAWN BY: M.K.	DRAWING No. C7
CHECKED BY: B.B.	DATE: NOV. 2020	



POLE TABLE		
POLE	STATION	OFFSET FROM EDGE OF PAVEMENT
P1	10+837	1.65m
P2	10+877	1.65m
P3	10+921	1.65m
P4	10+978	1.65m
P5	11+016	1.65m
P6	11+057	1.65m

KEY MAP



GENERAL NOTES

LEGEND:

- PROPOSED 9.9m (32'–5.76") OCTAGONAL SHAPE CONCRETE POLE, c/w 73 W LED LUMINAIRE WITH 2.4m (7'–10.5") BRACKET
- EP — EXISTING POLE, LUMINAIRE, BRACKET & ASSOCIATED WIRING TO BE REMOVED
- EHP — EXISTING LUMINAIRE, BRACKET & ASSOCIATED WIRING TO REMAIN
- PROPOSED SERVICE, MOUNTED ON CONCRETE PAD
- 50mm DIA. DIRECT BURIED RIGID PVC CONDUIT, 610mm MINIMUM BELOW FINISHED GRADE AS PER OPSD–2101.01
- G (2) — PROPOSED 20mm x 3m COPPER CLAD GROUND ROD WITH THERMIT, (2) INDICATES TWO GROUND RODS
- P1 — POLE IDENTIFICATION CODE FOR PROPOSED ILLUMINATION POLE
- R1 — IDENTIFICATION CODE FOR REMOVALS

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
3	U.P.	2020-01-31	ISSUED FOR TENDER		
2	U.P.	2017-07-31	90% SUBMISSION		
1	U.P.	2014-05-31	60% SUBMISSION		

BENCH MARK:

CONSULTANT

U TECH ENGINEERS INC.
60 LEGENDARY CIRCLE,
BRAMPTON, ON L6Y 0S1
TEL: 905-564-8413
WEB: www.utecheng.ca

ENGINEER'S STAMP

LICENSED PROFESSIONAL ENGINEER
U. PADMANATH
100120747
Jan. 31/2020
PROVINCE OF ONTARIO

APPROVED FOR CONSTRUCTION

RYAN GRODECKI, C.E.T., MITE
MANAGER, ENGINEERING SERVICES

DATE

PROJECT NAME

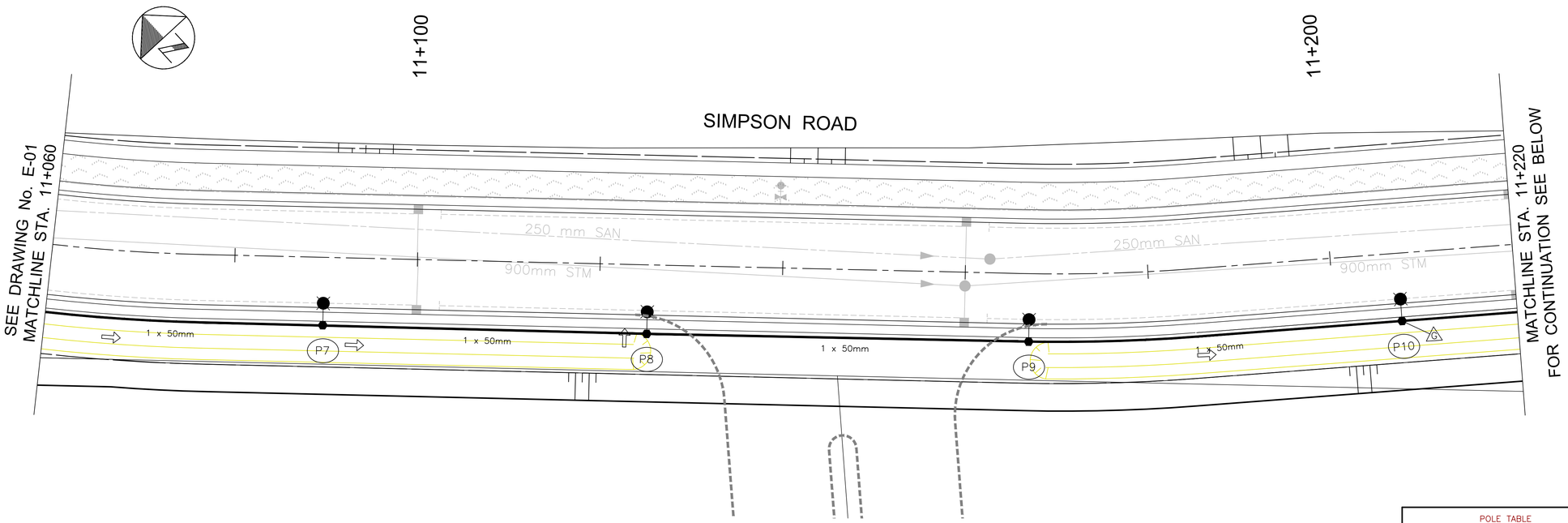
PUBLIC WORKS DEPARTMENT

REGION OF PEEL

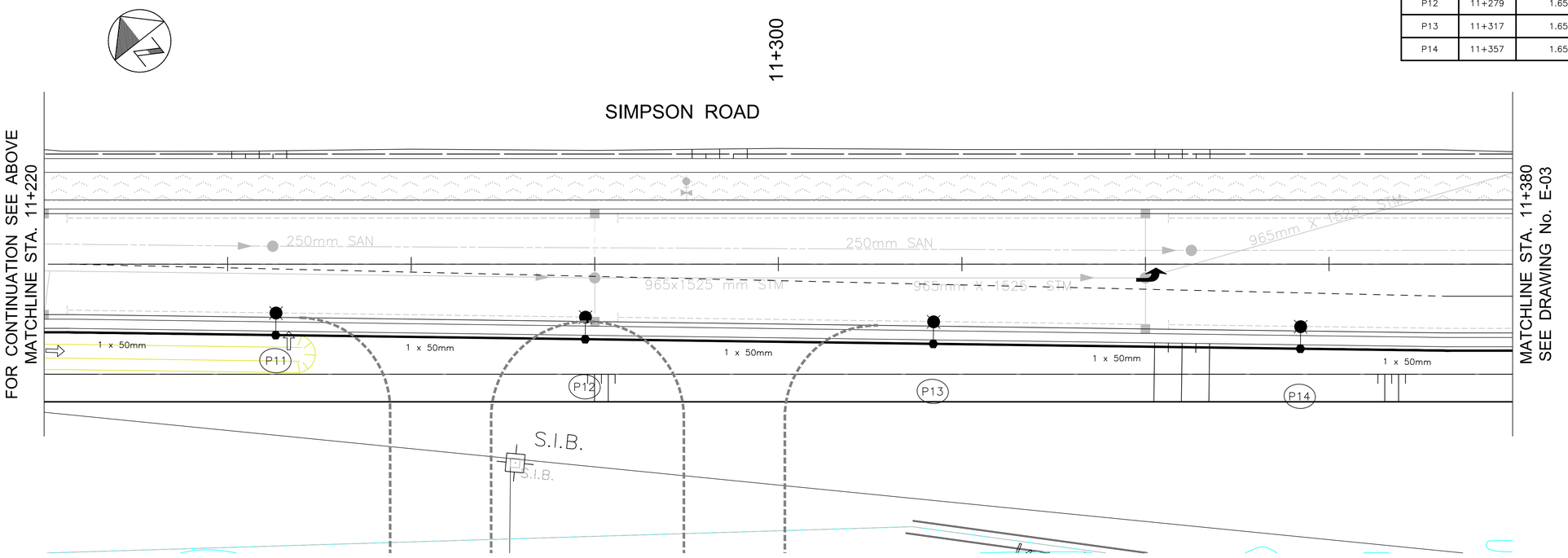
TOWN OF CALEDON

SIMPSON ROAD - SOUTH
ELECTRICAL LAYOUT
STA. 10+760 TO STA. 11+060

SCALE: 1:250	PROJECT No.
DESIGNED BY: U.P. / DRAWN BY: S.S.	DRAWING No. E-01
CHECKED BY: U.P. / DATE: 2014-05-12	



POLE TABLE		
POLE	STATION	OFFSET FROM EDGE OF PAVEMENT
P7	11+092	1.65m
P8	11+126	1.65m
P9	11+167	1.65m
P10	11+207	1.65m
P11	11+245	1.65m
P12	11+279	1.65m
P13	11+317	1.65m
P14	11+357	1.65m



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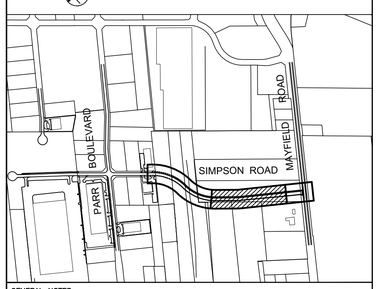

GENERAL NOTES

LEGEND:

- PROPOSED 9.9m (32'–5.76") OCTAGONAL SHAPE CONCRETE POLE, c/w 73 W LED LUMINAIRE WITH 2.4m (7'–10.5") BRACKET
- EP — EXISTING POLE, LUMINAIRE, BRACKET & ASSOCIATED WIRING TO BE REMOVED
- EHP — EXISTING LUMINAIRE, BRACKET & ASSOCIATED WIRING TO REMAIN
- PROPOSED SERVICE, MOUNTED ON CONCRETE PAD
- 50mm DIA. DIRECT BURIED RIGID PVC CONDUIT, 610mm MINIMUM BELOW FINISHED GRADE AS PER OPSD–2101.01
- G (2) — PROPOSED 20mm x 3m COPPER CLAD GROUND ROD WITH THERMIT, (2) INDICATES TWO GROUND RODS
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- R1 — IDENTIFICATION CODE FOR REMOVALS

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
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2	U.P.	2017-07-31	90% SUBMISSION		
1	U.P.	2014-05-31	60% SUBMISSION		

BENCH MARK:

CONSULTANT

U TECH ENGINEERS INC.
60 LEGENDARY CIRCLE, BRAMPTON, ON L6Y 0S1
TEL: 905–564–8413
WEB: www.utecheng.ca

ENGINEER'S STAMP

LICENSED PROFESSIONAL ENGINEER
U. PADMANATH
100120747
Jan. 31/2020
PROVINCE OF ONTARIO

APPROVED FOR CONSTRUCTION

RYAN GRODECKI, C.E.T., MITE
MANAGER, ENGINEERING SERVICES
DATE

PROJECT NAME

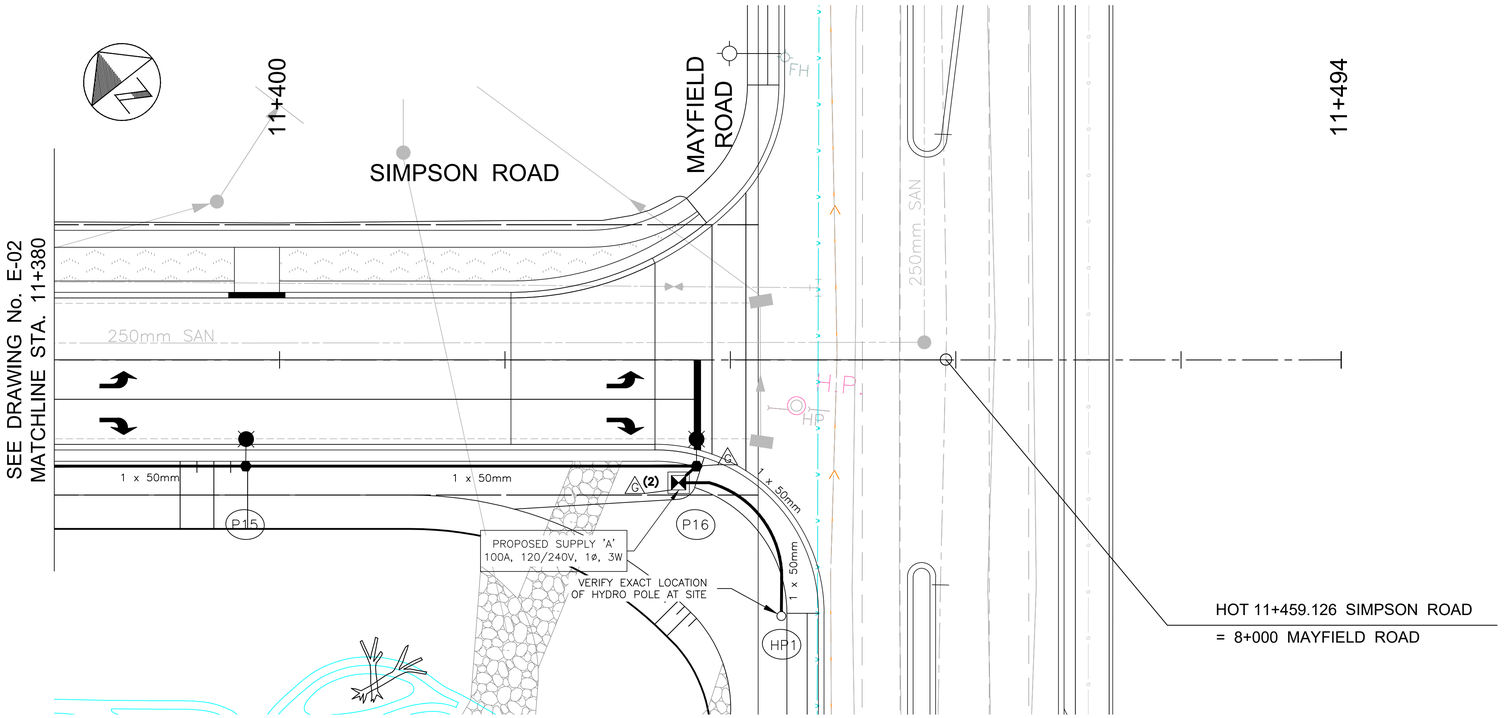
PUBLIC WORKS DEPARTMENT

REGION OF PEEL

TOWN OF CALEDON

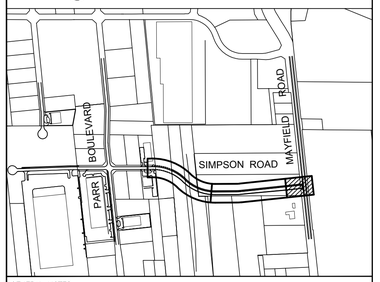
SIMPSON ROAD - SOUTH
ELECTRICAL LAYOUT
STA. 11+060 TO STA. 11+380

SCALE: 1:250		PROJECT No.
DESIGNED BY: U.P.	DRAWN BY: S.S.	DRAWING No. E-02
CHECKED BY: U.P.	DATE: 2014-05-12	



POLE TABLE		
POLE	STATION	OFFSET FROM EDGE OF PAVEMENT
P15	11+397	1.65m
P16	11+437	1.65m

KEY MAP



GENERAL NOTES

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- (P1) — POLE IDENTIFICATION CODE FOR PROPOSED ILLUMINATION POLE
- (R1) — IDENTIFICATION CODE FOR REMOVALS

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
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1	U.P.	2014-05-31	60% SUBMISSION		

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U TECH ENGINEERS INC.
60 LEGENDARY CIRCLE,
BRAMPTON, ON L6Y 0S1
TEL: 905-564-8413
WEB: www.utecheng.ca

ENGINEER'S STAMP

LICENCED PROFESSIONAL ENGINEER
U. PADMANATH
100120747
Jan. 31/2020
PROVINCE OF ONTARIO

APPROVED FOR CONSTRUCTION

RYAN GRODECKI, C.E.T., MITE
MANAGER, ENGINEERING SERVICES

DATE

PROJECT NAME

PUBLIC WORKS DEPARTMENT

REGION OF PEEL

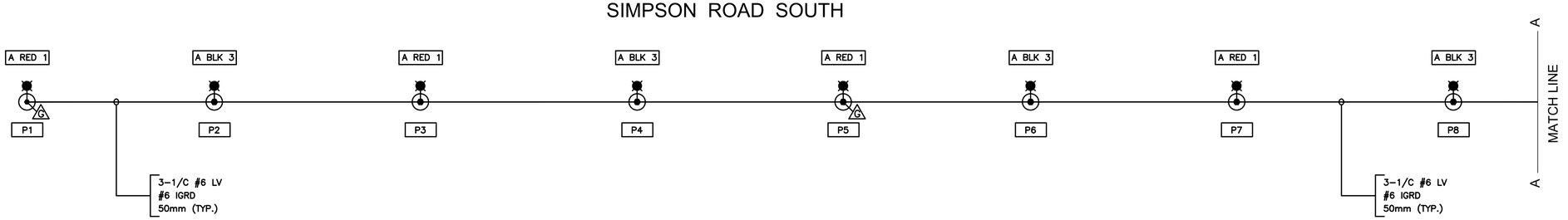
TOWN OF CALEDON

SIMPSON ROAD - SOUTH
ELECTRICAL LAYOUT
STA. 11+380 TO STA. 11+494

SCALE: 1:250		PROJECT No.
DESIGNED BY: U.P.	DRAWN BY: S.S.	DRAWING No. E-03
CHECKED BY: U.P.	DATE: 2014-05-12	

GEORGE BOLTON PARKWAY

SIMPSON ROAD SOUTH

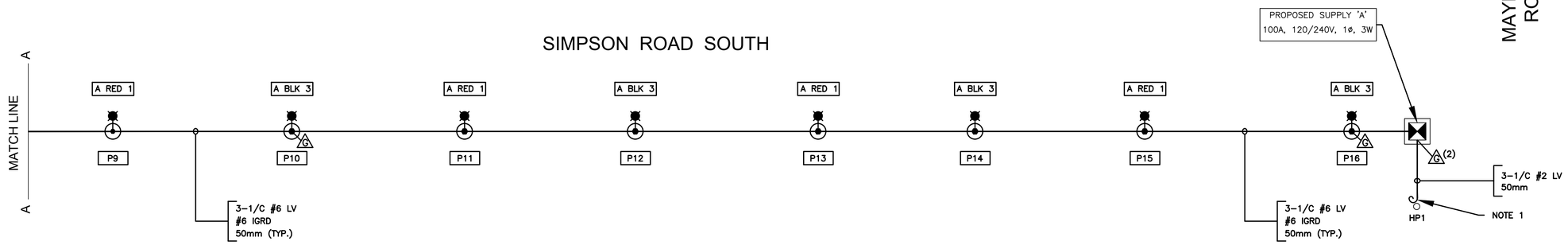


METERED POWER SUPPLY 'A' 100A, 120 /240V, 1ø PH, 3W LOAD SUMMARY									
TOTAL LOAD (W)	LOAD (W)	DESCRIPTION	BREAKER	CIRCUIT No.	CIRCUIT No.	BREAKER	DESCRIPTION	LOAD (W)	TOTAL LOAD (W)
584	8 X 73	P1, P3, P5, P7, P9, P11, P13, P15	30A	RED 1	RED 2	30A	SPARE		
584	8 X 73	P2, P4, P6, P8, P10, P12, P14, P16	30A	BLK 3	BLK 4	30A	SPARE		
				RED 5	RED 6				
				BLK 7	BLK 8				
TOTAL CONNECTED LOAD = 1,168W									

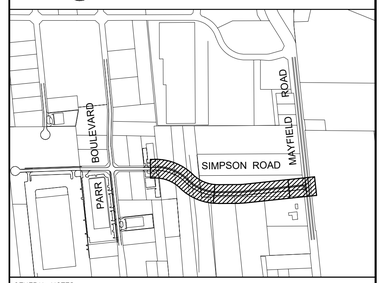
WIRING DIAGRAM NOTES:

1. COIL UP SUFFICIENT LENGTH OF CABLES TO CONNECT HYDRO BY HYDRO AUTHORITY. CO-ORDINATE ALL WORKS ON HYDRO POLE WITH HYDRO AUTHORITY.
2. PROVIDE 10 AMP IN-LINE FUSE/FUSES IN HANDHOLE OF ALL LIGHTING POLES.

SIMPSON ROAD SOUTH



KEY MAP



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TEL: 905-564-8413 WEB: www.utecheng.ca

ENGINEER'S STAMP

LICENSED PROFESSIONAL ENGINEER
U. PADMANATH
100120747
Jan. 31/2020
PROVINCE OF ONTARIO

APPROVED FOR CONSTRUCTION

RYAN GRODEKI, C.E.T., MITE, MANAGER, ENGINEERING SERVICES — DATE

PROJECT NAME

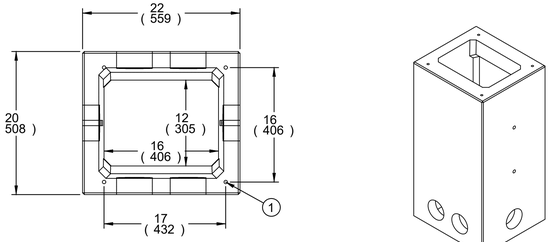
PUBLIC WORKS DEPARTMENT

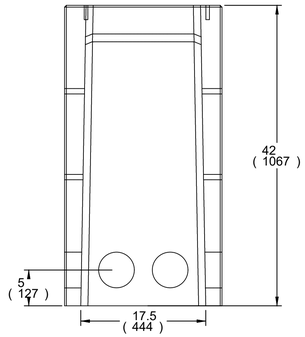
REGION OF PEEL

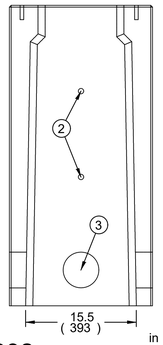
TOWN OF CALEDON

SIMPSON ROAD - SOUTH
WIRING DIAGRAM

SCALE: 1:250		PROJECT No.
DESIGNED BY: U.P.	DRAWN BY: S.S.	DRAWING No. E-04
CHECKED BY: U.P.	DATE: 2014-05-12	







in
(mm)

Call Toll Free: 1-877-269-1332

UTILICON
engineered precast structures

UP2022

PRECAST PEDESTAL FOUNDATION
FOR METERING OR STREETLIGHTING
TYPICAL USE:
Pedestal solutions inc. Model SLM

CONSTRUCTION SPECIFICATIONS

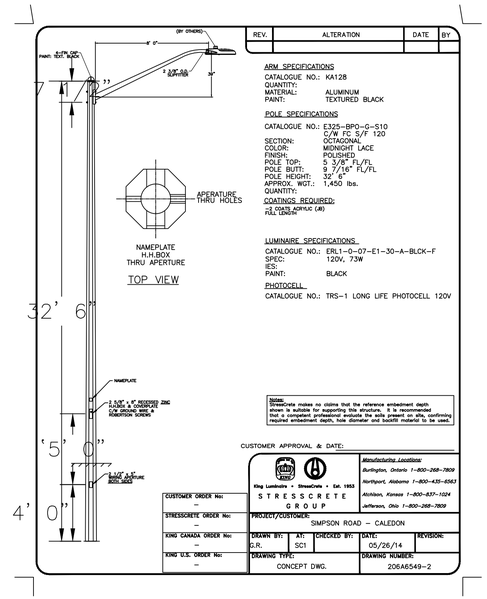
Concrete Properties: 4500 PSI (32 MPa) Min Strength
6-8% Air Entrainment

Weight - 540 lbs / 220kg (Approximate)

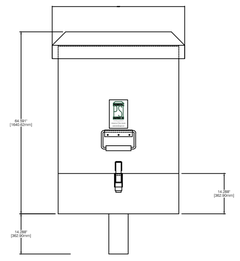
Notes:
1 - Four (4) 1/2" N.C. Nylon threaded inserts
2 - Four (4) 3/4" through holes
3 - Six (6) Cable entry PVC seals

Delivery is made by crane-equipped trucks, excavation must be ready, safe and accessible for unloading from the rear of the truck.
Min overhead clearance of 18ft is required.
ALL UNITS MUST BE HANDLED WITH PROPER LIFTING EQUIPMENT .
(I.E. SPREADER BAR)

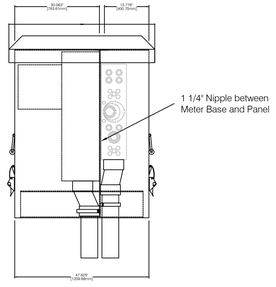
DRAWN BY: RM | July 2010



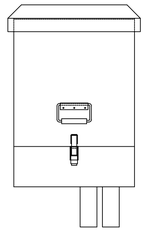
32'–6" POLE WITH LUMINAIRE & BRACKET



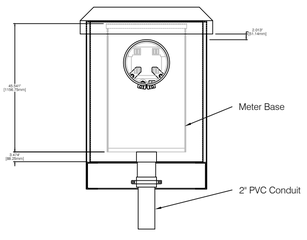
Meterbase Compartment
Outside View
with Panel in place



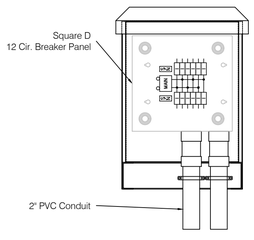
Side View



Distribution Panel Compartment
Outside View
with Panel in place



Meterbase Compartment
Outside View
with Front Panels
Removed



Distribution Panel Compartment
Outside View
with Front Panels Removed

SLM27 Enclosure with Meter

Enclosure Material:
- 14 Gauge (.083") thick zinc coated (galvanized) sheet metal

Paint Colour:
- Byers - Bush Jet Kote BB510GR Electrostatic powder coat finish

Panel:
- Square D cat. # CQO112M100C100 12 cct. 2p 3w Combination service entrance panel

Main Breaker:
- Square D cat. # QOM1-100, 100 amp 2 pole
- Wire range # 12-2 / 0 Al / Cu 22 KA rating

Load Breakers:
- Square D cat. # QO120, 30 amp 1 pole
- Wire range # 14 - # 2 / 0 Al / Cu 10 K A rating

Main Neutral Lug:
- Wire range # 4 - 2 / 0 Al / Cu

Load Neutral Lugs:
- Wire range 1 lug # 4 - 2 / 0 Al / Cu
- 3 lugs # 14 - 1 /0 Al / Cu
- 8 lugs # 14 - #6 Al / Cu

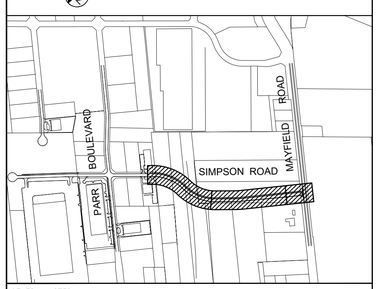
Fasteners:
- 4 - Plated hex head bolts 1 / 2 x 13 x 2" Grade 2 or better
- 4 - Plated 1 / 2" Flat washers
- 4 - Plated 1 / 2" Lock washers for mounting into concrete mounting base

PEDESTAL SOLUTIONS INC.
40 CANAL ROAD
KESWICK, ONT. L4P 1K5
TEL: 905-476-7433
FAX: 905-476-2545

TITLE: PEDESTAL SOLUTIONS INC.
27' STREET LIGHTING METERED
PEDESTAL VIEWS

DRAWN BY: RAD	PART NO.: SLM27
CHECKED BY: CB	DWG NO.: SLM27VIEWS
SCALE: NONE	
	REVISION: B
DATE: MAY 4, 2009	PAGE: 1 OF 1

KEY MAP



GENERAL NOTES

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60 LEGENDARY CIRCLE,
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LICENSED PROFESSIONAL ENGINEER
U. PADMANATH
100120747
Jan. 31/2020
PROVINCE OF ONTARIO

APPROVED FOR CONSTRUCTION

RYAN GRODECKI, C.E.T., MITE
MANAGER, ENGINEERING SERVICES

DATE

PROJECT NAME

PUBLIC WORKS DEPARTMENT

REGION OF PEEL

TOWN OF CALEDON

SIMPSON ROAD - SOUTH
ELECTRICAL DETAILS

SCALE: 1:250		PROJECT No.
DESIGNED BY: U.P.	DRAWN BY: S.S.	DRAWING No. E-05
CHECKED BY: U.P.	DATE: 2014-05-12	

Simpson Road South - Street Trees - Item List

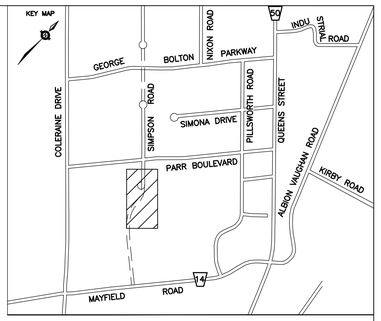
W.B = Wire Basket

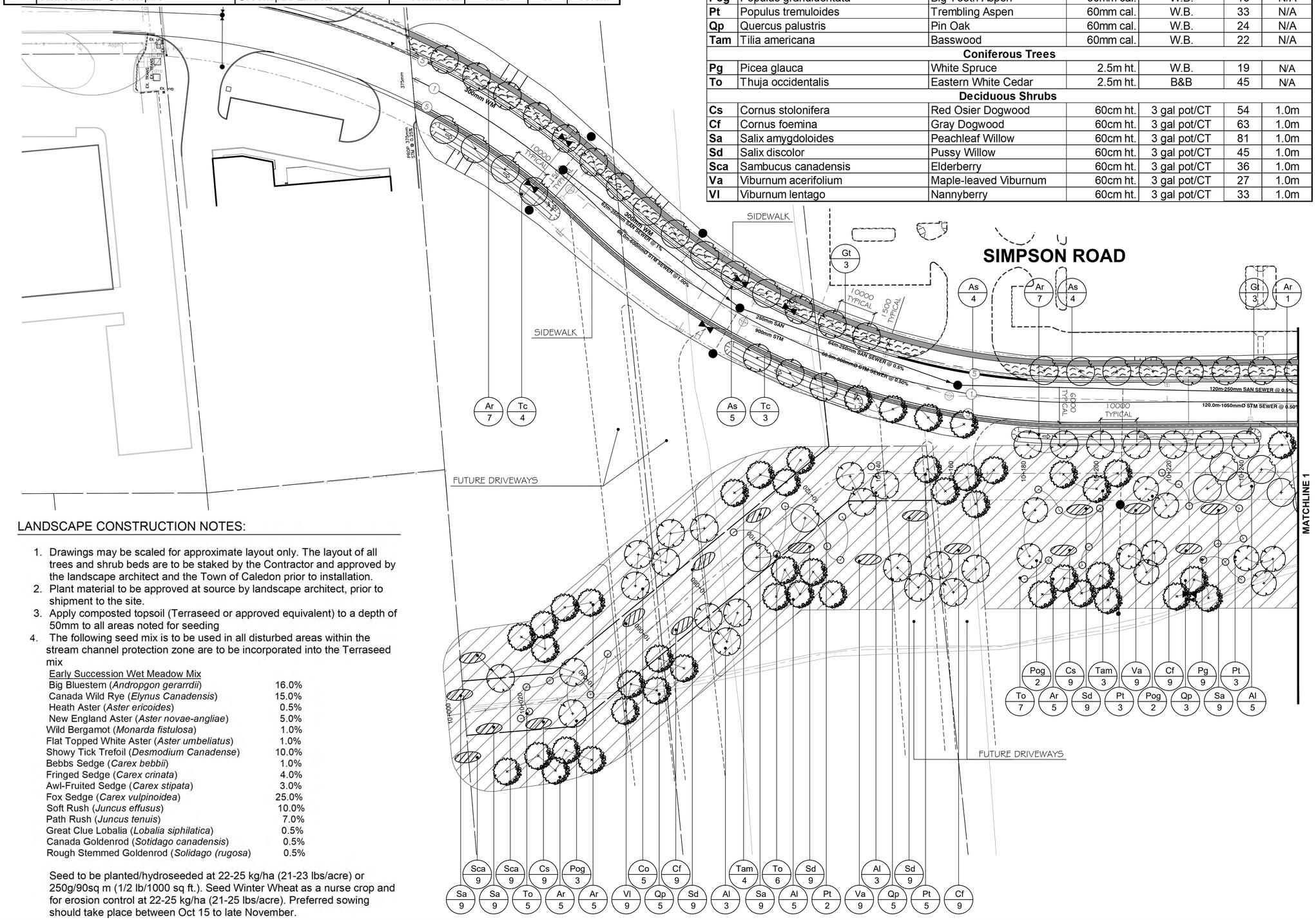
Key	Botanical Name	Common Name	Size	Root Condition	Qty	Typ. Spacing
	Deciduous Trees					
Ar	Acer rubrum 'Karpick'	Karpick Red Maple	60mm cal.	W.B.	21	10.0m
As	Acer saccharum 'Green Mountain'	Green Mountain Maple	60mm cal.	W.B.	27	10.0m
Gt	Gleditsia triacanthos 'Shademaster'	Shademaster Honeylocust	60mm cal.	W.B.	18	10.0m
Tc	Tilia cordata 'Greenspire'	Greenspire Linden	60mm cal.	W.B.	17	10.0m

Simpson Road South - Riparian Zone Planting - Item List

W.B = Wire Basket, B&B =Balled and Burlapped, CT = Container Grown

Key	Botanical Name	Common Name	Size	Root Condition	Qty	Typ. Spacing
	Deciduous Trees					
Ar	Acer rubrum	Red Maple	60mm cal.	W.B.	26	N/A
Al	Amelanchier laevis	Allegheny Serviceberry	60mm cal.	W.B.	25	N/A
Co	Celtis occidentalis	Common Hackberry	60mm cal.	W.B.	13	N/A
Pog	Populus grandidentata	Big Tooth Aspen	60mm cal.	W.B.	13	N/A
Pt	Populus tremuloides	Trembling Aspen	60mm cal.	W.B.	33	N/A
Qp	Quercus palustris	Pin Oak	60mm cal.	W.B.	24	N/A
Tam	Tilia americana	Basswood	60mm cal.	W.B.	22	N/A
	Coniferous Trees					
Pg	Picea glauca	White Spruce	2.5m ht.	W.B.	19	N/A
To	Thuja occidentalis	Eastern White Cedar	2.5m ht.	B&B	45	N/A
	Deciduous Shrubs					
Cs	Cornus stolonifera	Red Osier Dogwood	60cm ht.	3 gal pot/CT	54	1.0m
Cf	Cornus foemina	Gray Dogwood	60cm ht.	3 gal pot/CT	63	1.0m
Sa	Salix amygdoloides	Peachleaf Willow	60cm ht.	3 gal pot/CT	81	1.0m
Sd	Salix discolor	Pussy Willow	60cm ht.	3 gal pot/CT	45	1.0m
Sca	Sambucus canadensis	Elderberry	60cm ht.	3 gal pot/CT	36	1.0m
Va	Viburnum acerifolium	Maple-leaved Viburnum	60cm ht.	3 gal pot/CT	27	1.0m
Vl	Viburnum lentago	Nannyberry	60cm ht.	3 gal pot/CT	33	1.0m





LANDSCAPE CONSTRUCTION NOTES:

1. Drawings may be scaled for approximate layout only. The layout of all trees and shrub beds are to be staked by the Contractor and approved by the landscape architect and the Town of Caledon prior to installation.
2. Plant material to be approved at source by landscape architect, prior to shipment to the site.
3. Apply composted topsoil (Terraseed or approved equivalent) to a depth of 50mm to all areas noted for seeding
4. The following seed mix is to be used in all disturbed areas within the stream channel protection zone are to be incorporated into the Terraseed mix

Early Succession Wet Meadow Mix	
Big Bluestem (*Andropgon gerarrdii*)	16.0%
Canada Wild Rye (*Elynus Canadensis*)	15.0%
Heath Aster (*Aster ericoides*)	0.5%
New England Aster (*Aster novae-angliae*)	5.0%
Wild Bergamot (*Monarda fistulosa*)	1.0%
Flat Topped White Aster (*Aster umbeliatus*)	1.0%
Showy Tick Trefoil (*Desmodium Canadense*)	10.0%
Bebbs Sedge (*Carex bebbii*)	1.0%
Fringed Sedge (*Carex crinata*)	4.0%
Awl-Fruited Sedge (*Carex stipata*)	3.0%
Fox Sedge (*Carex vulpinoidea*)	25.0%
Soft Rush (*Juncus effusus*)	10.0%
Path Rush (*Juncus tenuis*)	7.0%
Great Clue Lobalia (*Lobalia siphilatica*)	0.5%
Canada Goldenrod (*Sotidago canadensis*)	0.5%
Rough Stemmed Goldenrod (*Solidago (rugosa*)	0.5%

Seed to be planted/hydroseeded at 22-25 kg/ha (21-23 lbs/acre) or 250g/90sq m (1/2 lb/1000 sq ft.). Seed Winter Wheat as a nurse crop and for erosion control at 22-25 kg/ha (21-25 lbs/acre). Preferred sowing should take place between Oct 15 to late November.

LEGEND

- MASS PLANTING SHRUB BEDS (CONTINUOUS MULCH)
- NATIVE SEED MIX (SEE CONSTRUCTION NOTES)
- RIGHT OF WAY
- PROPERTY LINE
- ...

NO.	DESCRIPTION	DATE
3	REVISED AS PER NEW DRIVEWAY LOCATIONS	DEC. 07/20
2	REVISED AS PER TOWN OF CALEDON COMMENTS	JAN. 11/20
1	REVISED AS PER TOWN OF CALEDON COMMENTS	NOV. 22/19

JAMES McWILLIAM LANDSCAPE ARCHITECT

PROJECT

SIMPSON ROAD EXTENSION PHASE 3
BOLTON, TOWN OF CALEDON

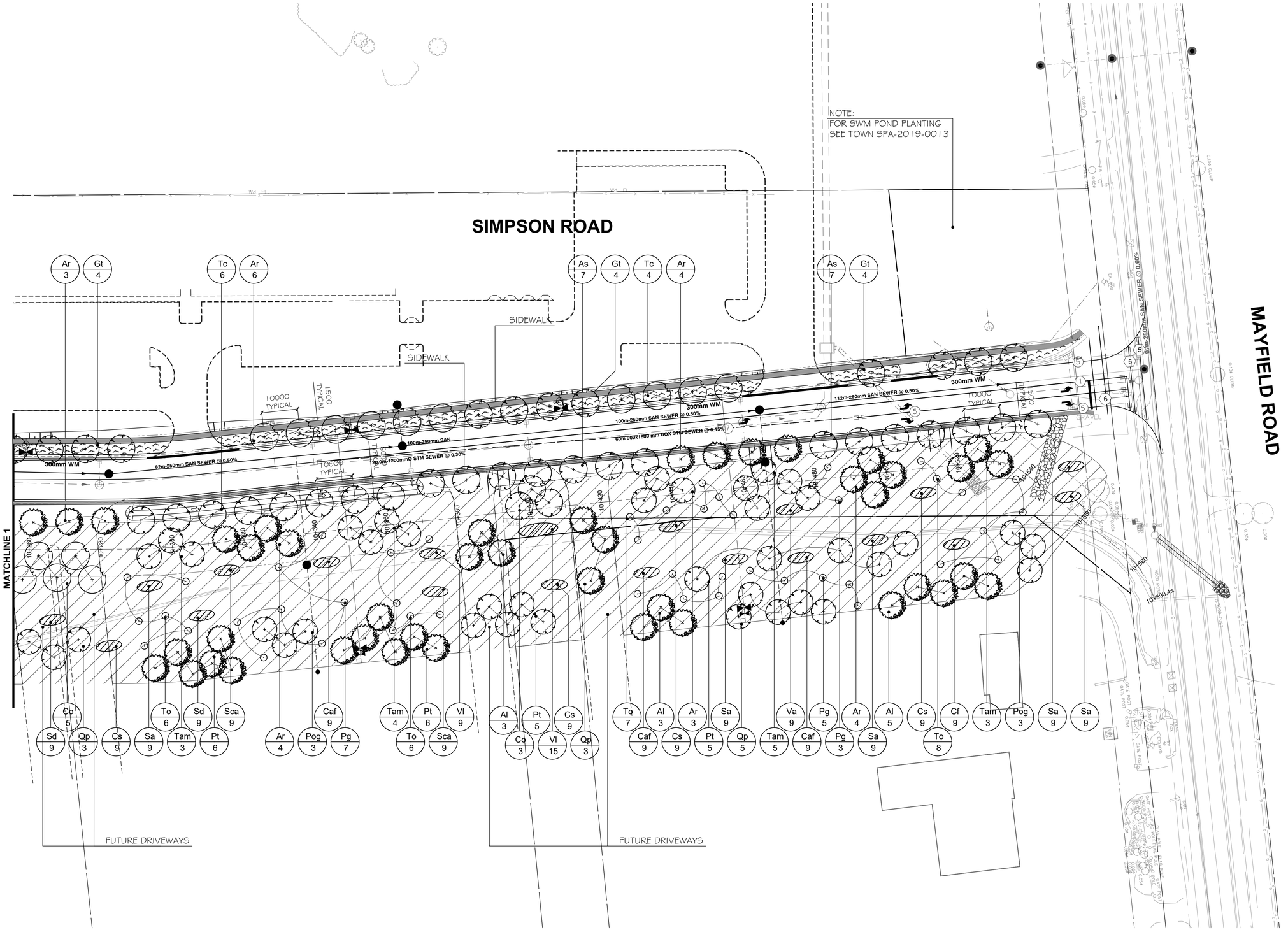
DRAWING

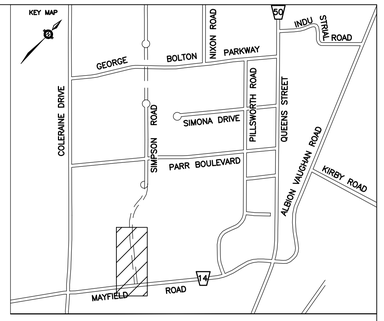
LANDSCAPE PLAN

NORTH

ONTARIO ASSOCIATION OF LANDSCAPE ARCHITECTS — JAMES S. McWILLIAM — OALA MEMBER

SCALE:	1:500
DATE:	JULY 2019
DESIGN BY:	J.S.M.
DRAWN BY:	T.F.G.
SHEET:	L1





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- RIGHT OF WAY
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JAMES McWILLIAM
LANDSCAPE ARCHITECT

PROJECT

SIMPSON ROAD EXTENSION
PHASE 3
BOLTON, TOWN OF CALEDON

DRAWING

LANDSCAPE PLAN

NORTH

ASSOCIATION OF LANDSCAPE ARCHITECTS ONTARIO
JAMES S. McWILLIAM
OALA
MEMBER

SCALE:	1:500
DATE:	JULY 2019
DESIGN BY:	J.S.M.
DRAWN BY:	T.F.G.
SHEET:	L2

GENERAL NOTES - LANDSCAPING

NOTE 1
DEPICTED ON THIS PLAN ARE THE SPECIES AND THE APPROXIMATE LOCATION OF STREET TREE. ONCE DRIVEWAYS, UTILITIES AND LIGHT STANDARDS HAVE BEEN INSTALLED, THE EXACT LOCATION OF STREET TREES WILL BE DETERMINED ON SITE BY THE LANDSCAPE CONSULTANT AND APPROVED BY THE MUNICIPALITY PRIOR TO PLANTING.

NOTE 2
MINIMUM CLEARANCES FOR STREET TREES (WHEN TREES ARE PLANTED 1.5M FROM THE CURB):

2M	FROM WATER HYDRANTS
2M	FROM DRIVEWAYS
2M	FROM NEIGHBOURHOOD MAILBOXES
3M	FROM HYDRO TRANSFORMERS
5M	FROM STREETLIGHTS
15M	MINIMUM FROM STREET LINE (STREET INTERSECTION AS MEASURED FROM BACK OF CURB) AND BEHIND THE DAYLIGHT TRIANGLE AS PER THE GEOMETRIC DESIGN STANDARDS FOR ONTARIO HIGHWAYS
18M	FROM FACE OF ALL WARNING AND REGULATORY SIGNS

NOTE 3
THE TREE PITS AND PLANTING BEDS FOR ALL TREES AND SHRUBS LOCATED WITHIN 1 METRE OF UNDERGROUND UTILITIES ARE TO BE HAND DUG.

TOWN OF CALEDON

GENERAL LANDSCAPING NOTES

APR'D: C.C. DATE: APRIL 2000
DRAWN: BJM SCALE: NTS

NO.	REVISION	APR'D	DATE
2	TEXT REVISION, STD103 NOW 700		JAN 18
1	STANDARD No. 130 NOW 103		JUNE 08

STANDARD No. 700

SPECIFICATIONS continued from previous panel

ii) Replacement plant material and repaired work shall be guaranteed for a minimum **TWO** (2) years from the date of replacement, and will not be granted final acceptance until the guarantee has expired or as otherwise determined by Town Staff.

G. MAINTENANCE

i) The maintenance of all landscape installations throughout the guarantee period shall include but not limited to the following:

1) proper irrigation to ensure optimum growth of trees and shrubs,
2) cultivation and weeding of tree pits and planting beds,
3) insect and disease control, and
4) pruning and fertilizing, as required or as directed by the Municipality or Consulting Landscape Architect.
5) replace all dead plant materials as identified by the Municipality.

H. CERTIFICATE OF ASSUMPTION

i) At the end of the guarantee period, the Contractor shall remove all tree stakes, and bark wrap, and shall add extra mulch where necessary. And/Or additional items as directed by the Municipality.

ii) When these final tasks have been completed, the Consulting Landscape Architect will provide the Town with all items as outlined in the Development Standards. All landscape work will then be inspected by the Municipality and, if satisfied that all work has been completed in accordance with the approved landscape plans, will issue a Certificate of Assumption and release any outstanding funds.

end of specifications

I. Additional Notes:

Refer to the most recent version of the Development standards for any additional requirements and submission items.

TOWN OF CALEDON

STREETSCAPE SPECIFICATIONS STANDARD NOTES PART 3

APR'D: C.C. DATE: JUNE 08
DRAWN: abal SCALE: NTS

NO.	REVISION	APR'D	DATE
2	STANDARD No. 714 NOW 703		JAN 18
1	STANDARD No. 1170.03 NOW 714		JUNE 08

STANDARD No. 703

SPECIFICATIONS continued from previous panel

G. INTERIM ACCEPTANCE

i) One year after Preliminary Acceptance is granted by the Town, the Consulting Landscape Architect shall submit a Certificate of Completion for Interim Acceptance to the Town of Caledon certifying that all maintenance requirements as outlined in Section G and in accordance with the approved plans have been completed.

ii) Upon the receipt of the Certification of Completion, Town Staff will conduct an interim inspection of the site and, provided the works are in satisfactory condition, will grant Interim Acceptance of the landscaping.

H. GUARANTEE

i) All naturalized landscaping shall carry a guarantee/maintenance of **THREE** (3) years, commencing from the date that preliminary acceptance is granted by the Municipality. The Owner shall provide the Municipality with a copy of the maintenance agreement between the Owner and the Contractor. In each of the next three summers, the consulting Landscape Architect shall conduct an inspection and prepare a report, recommending the replacements and/or works needed to achieve the intent of the approved landscape plan. The Landscape Architect shall file a copy of the report with the Municipality. Replacement plant material shall be guaranteed for a period of time determined by the Municipality.

I. MAINTENANCE

i) The maintenance of all landscape installations throughout the guarantee period shall include but not be limited to the following:

1) applying appropriate fertilizer to promote growth,
2) pruning dead or diseased tissue,
3) removing dead plant material,
4) replacing dead coniferous naturalization species to maintain a minimum live-stocking standard of 90%,
5) replacing dead deciduous and shrub naturalization species to maintain a minimum live-stocking standard of 90%, and
6) suppressing weed growth around newly planted trees and shrubs by adding more mulch and/or removing weeds by hand, *not* by cutting the weeds down with power trimmers.

J. CERTIFICATE OF ASSUMPTION

i) At the end of the guarantee period, the Contractor shall remove all tree stakes, rodent guards, and bark wrap, and shall add extra mulch where necessary. Additional items my be included as directed by the municipality.

ii) When these final tasks have been completed, and all items as outlined in the Development Standards have been submitted, all landscape work will be inspected by the Municipality. If satisfied that all work has been completed in accordance with the approved landscape plans, the Municipality will issue a Certificate of Assumption and release any outstanding funds.

end of specifications

K. ADDITIONAL NOTES

Refer to the most recent version of the Development Standards for any additional requirement and submission items.

TOWN OF CALEDON

NATURALIZATION SPECIFICATIONS STANDARD NOTES PART 3

APR'D: C.C. DATE: JUNE 08
DRAWN: abal SCALE: NTS

NO.	REVISION	APR'D	DATE
2	STANDARD No. 717 NOW 706		JAN 18
1	STANDARD No. 1175.03 NOW 717		JUNE 08

STANDARD No. 706

SPECIFICATIONS

A. GENERAL

i) These Specifications are to be read in conjunction with the General Conditions of the contract, as prepared by and available at the offices of McWILLIAM & ASSOCIATES .

ii) Prior to commencing work, the Contractor shall:
1. Become familiar with the plans, details, and specifications of this project,
2. Visit the site to ascertain and take account of existing conditions and any deviations from the plans in work by others, and
3. Finalize all design alternatives in consultation with the Landscape Architect.

iii) Prior to excavating, the Contractor shall verify the location of all underground utilities. In the event of a conflict between a proposed tree location and an underground service, the exact location of the tree shall be determined on site by the landscape architect and/or the Town's representative.

iv) The Contractor shall, at his or her own expense, repair any damage to existing utilities, structures, facilities, etc. done in the performance of his work.

v) All site work shall conform to the *Canadian National Master Construction Specifications*, a copy of which can be obtained from Construction Specifications Canada, 100 Lombard St., Suite 200, Toronto, Ontario M5C 1M3; Tel. (416) 777-2198; Fax (416) 777-2197. It is the responsibility of the Contractor to be thoroughly familiar with these specifications and their implications for this project.

B. PLANT MATERIAL

i) All plants shall be installed true to specified names, sizes, grades, etc., and shall conform to the standards of the Canadian Nursery Landscapes Association.

ii) All plants shall be nursery grown in a hardiness zone appropriate to site conditions, as published by Agriculture Canada, titled 'Map of Plant Hardiness Zones in Canada' .

iii) In the event of a discrepancy in plant quantity between the Planting Plan and the Plant List, the Planting Plan shall govern.

iv) The Contractor shall make plants available for inspection by the Landscape Architect and/or the Town's representative prior to shipping to the site. This does not limit the right of the Landscape Architect and/or the Town's representative to later reject plant material that is of poor quality, damaged during shipping or installation, performing poorly while the guarantee period is still in effect, or otherwise does not conform to the specifications.

v) Plant substitutions must be approved in writing by the Town and the Landscape Architect prior to delivery of the material to the site. All substitutions shall be recorded on the as-recorded drawings and planting chart.

vi) The Contractor shall use standard industry methods for planting trees and shrubs. Trees shall be turned to give the best appearance; they shall also be guyed or staked immediately after planting and as detailed on the drawings.

specifications continued on next panel . . .

TOWN OF CALEDON

STREETSCAPE SPECIFICATIONS STANDARD NOTES PART 1

APR'D: C.C. DATE: JUNE 08
DRAWN: abal SCALE: NTS

NO.	REVISION	APR'D	DATE
3	STANDARD No. 712 NOW 701		JUNE 08
2	STANDARD No. 1170.01 NOW 712		JUNE 08
1	CHANGES TO NOTES VI & VII.		MARCH 08

STANDARD No. 701

SPECIFICATIONS

A. GENERAL

i) These Specifications are to be read in conjunction with the General Conditions of the contract, as prepared by and available at the offices of McWILLIAM & ASSOCIATES .

ii) Prior to commencing work, the Contractor shall:
1. Become familiar with the plans, details, and specifications of this project,
2. Visit the site to ascertain and take account of existing conditions and any deviations from the plans in work by others, and
3. Finalize all design alternatives in consultation with the Consulting Landscape Architect.

iii) Prior to excavating, the Contractor shall verify the location of all underground utilities. In the event of a conflict between a proposed tree location and an underground service, the exact location of the tree shall be determined on site by the Consulting Landscape Architect and/or the Town's representative.

iv) The Contractor shall, at his or her own expense, repair any damage to existing utilities, structures, facilities, etc. done in the performance of his work.

v) All site work shall conform to the *Canadian National Master Construction Specifications*, a copy of which can be obtained from Construction Specifications Canada, 31 Adelaide Street East P.O Box 36, Toronto M5C 2H8; Tel: 1-844-427-2867; Email: admin@csctoronto.ca. It is the responsibility of the Contractor to be thoroughly familiar with these specifications and their implications for this project.

B. PLANT MATERIAL

i) All plants shall be installed true to specified names, sizes, grades, etc., and shall conform to the standards of the Canadian Nursery Landscapes Association.

ii) All plants shall be nursery grown and sourced from a hardiness zone appropriate to site conditions, as published by Agriculture Canada, titled 'Map of Plant Hardiness Zones in Canada'.

iii) In the event of a discrepancy in plant quantity between the Planting Plan and the Plant List, the Planting Plan shall govern.

iv) The Contractor shall make plants available for inspection by the Consulting Landscape Architect and/or the Town's representative prior to shipping to the site. This does not limit the right of the Consulting Landscape Architect and/or the Town's representative to later reject plant material that is of poor quality, damaged during shipping or installation, performing poorly while the guarantee period is still in effect, or otherwise does not conform to the specifications.

v) Plant substitutions must be approved in writing by the Town and the Consulting Landscape Architect prior to delivery of the material to the site. All substitutions shall be recorded on the as-recorded drawings and planting chart.

vi) The Contractor shall use standard industry methods for planting trees and shrubs. Trees shall be turned to give the best appearance if adjacent to streets or pathways. They shall also be guyed or staked immediately after planting and as detailed on the drawings.

specifications continued on next panel . . .

TOWN OF CALEDON

NATURALIZATION SPECIFICATIONS STANDARD NOTES PART 1

APR'D: C.C. DATE: JUNE 08
DRAWN: abal SCALE: NTS

NO.	REVISION	APR'D	DATE
2	STANDARD No. 715 NOW 704		JUNE 18
1	NOTES EDIT., STANDARD No. 1175.01 NOW 715		JUNE 08

STANDARD No. 704

SPECIFICATIONS continued from previous panel

C. BED PREPARATION

i) The Contractor shall scarify the sides and bottom of excavated tree pits and shrub beds prior to backfilling. in areas with heavy clay soils, tree and planting beds shall be backfilled to the specified depths with:

2 Parts "triple mix," delivered to the site, to be well-mixed with . . .
1 Part local topsoil (viz., subdivision topsoil that has been removed and stockpiled.) If topsoil is unavailable, topsoil with clay content shall be imported and mixed with triple mix.

ii) Tree pits shall be constructed with saucers and mulch as detailed.

D. PRELIMINARY ACCEPTANCE

i) When landscaping is completed, the Consulting Landscape Architect shall submit a Certificate of Completion for preliminary acceptance to the Town of Caledon certifying that all landscape works have been 100% completed in accordance with the approved plans.

ii) The Consulting Landscape Architect shall prepare a Summary Chart, indicating the plant species, quantity, location, planting date(s), and any other relevant information, as requested by the Municipality.

iii) Upon receipt of the Certificate of Completion,Town Staff will conduct a preliminary inspection of the site and, provided that the works are in satisfactory condition, will grant preliminary acceptance of the landscaping.

E. INTERIM ACCEPTANCE

i) One year after Preliminary Acceptance is granted by the Town, the Consulting Landscape Architect shall submit a Certificate of Completion for Interim Acceptance to the Town of Caledon certifying that all maintenance requirements as outlined in Section I and in accordance with the approved plans have been completed.

ii) The Consulting Landscape Architect shall update the Summary Chart, indicating any modifications to approved substitutions, maintenance information, and any other relevant information as requested by the Municipality.

iii) Upon the receipt of the Certification of Completion, Town Staff will conduct an interim inspection of the site and, provided the works are in satisfactory condition, will grant Interim Acceptance of the landscaping.

F. GUARANTEE

i) All streetscape landscaping shall carry a guarantee/maintenance of **TWO** (2) years, commencing from the date that written preliminary acceptance is granted by the Town of Caledon. In each of the next two years, the Consulting Landscape Architect shall conduct an inspection and prepare a report, recommending the replacements and/or works needed to achieve the intent of the approved landscape plan. All replacements shall be recorded in the inspection Summary Chart. The Consulting Landscape Architect shall file a copy of the report and/or Summary Chart with the Municipality.

specifications continue on next panel . . .

TOWN OF CALEDON

STREETSCAPE SPECIFICATIONS STANDARD NOTES PART 2

APR'D: C.C. DATE: JUNE 08
DRAWN: abal SCALE: NTS

NO.	REVISION	APR'D	DATE
2	STANDARD No. 713 NOW 702		JAN 18
1	STANDARD No. 1170.02 NOW 713		JUNE 08

STANDARD No. 702

SPECIFICATIONS continued from previous panel

C. BED PREPARATION

i) The Contractor shall scarify the sides and bottom of excavated tree pits and shrub beds prior to backfilling. Due to the heavy clay soil in the Bolton area, tree and planting beds shall be backfilled to the specified depths with:

2 Parts "triple mix," delivered to the site, to be well-mixed with . . .
1 Part local topsoil (viz., subdivision topsoil that has been removed and stockpiled.) If topsoil is unavailable, topsoil with clay content shall be imported and mixed with triple mix.

ii) Tree pits shall be constructed with saucers and mulch as detailed.

D. TOPSOIL AND FINE GRADING

i) The Contractor shall place 100mm of rich topsoil on approved subgrades. Topsoil shall be imported when insufficient amounts are available on site.

ii) Minor grade deficiencies and irregularities shall be eliminated prior to seeding.

E. HYDROSEEDING

i) The Contractor shall apply 2280 kg/ha fibre mulch over the newly seeded area to form a uniform, blotter-like ground cover that allows the absorption and percolation of water.

ii) The area seeded in a single day shall not exceed the area that can be mulched that same day.

iii) The Contractor shall apply the specified seed mixture using accepted industry methods for hydroseeding and at rates recommended by the seed supplier. The type and rate of fertilizer application shall be as recommended in the topsoil test report for the particular area being seeded.

F. PRELIMINARY ACCEPTANCE

i) When landscaping is completed, the Consulting Landscape Architect shall submit a Certificate of Completion for Preliminary Acceptance to the Town of Caledon certifying that all landscape works have been completed in accordance with the approved plans.

ii) Upon receipt of the Certificate of Completion, the Town Staff will conduct a preliminary inspection of the site and, provided that the works are in satisfactory condition, will grant preliminary acceptance of the landscaping.

specifications continued on next panel . . .

TOWN OF CALEDON

NATURALIZATION SPECIFICATIONS STANDARD NOTES PART 2

APR'D: C.C. DATE: JUNE 08
DRAWN: abal SCALE: NTS

NO.	REVISION	APR'D	DATE
2	STANDARD No. 716 NOW 705		APR 19
1	STANDARD No. 1175.02 NOW 716		JUNE 08

STANDARD No. 705

NO.	DESCRIPTION	DATE
3	REVISED AS PER NEW DRIVEWAY LOCATIONS	DEC. 07/20
2	REVISED AS PER TOWN OF CALEDON COMMENTS	JAN. 11/20
1	REVISED AS PER TOWN OF CALEDON COMMENTS	NOV. 22/19

JAMES McWILLIAM
LANDSCAPE ARCHITECT

PROJECT

SIMPSON ROAD EXTENSION
PHASE 3
BOLTON, TOWN OF CALEDON

DRAWING

LANDSCAPE DETAILS

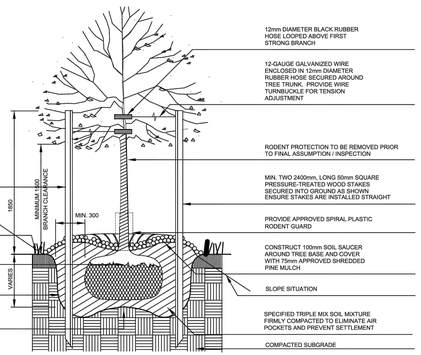
NORTH

ASSOCIATION OF LANDSCAPE ARCHITECTS ONTARIO — JAMES S. McWILLIAM — OALA MEMBER

SCALE:	AS NOTED
DATE:	JULY 2019
DESIGN BY:	J.S.M.
DRAWN BY:	T.F.G.
SHEET:	L3

NOTES:

1. WILTPROOF IN NURSERY PRIOR TO DELIVERY.
2. PRUNING SHALL BE LIMITED TO DEAD, DISEASED OR BROKEN BRANCHES AFTER PLANTING. MAINTAIN ORIGINAL SHAPE OF THE TREE. DO NOT TRIM LEADER BRANCH.
3. SET TOP OF ROOT BALL 75-100mm HIGHER THAN ADJACENT FINISHED GRADE TO ALLOW FOR SETTLEMENT.

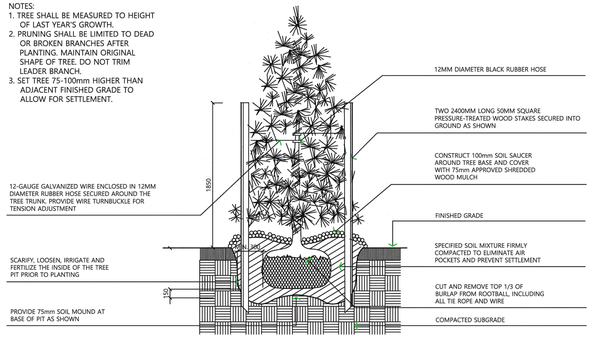


NTS

TOWN OF CALEDON						APR'D: B.B.	DATE: JUNE 08
DECIDUOUS TREE PLANTING	2	STANDARD No. 700 NOW 800		JAN 18		DRAWN: abal	SCALE: NTS
	1	STANDARD No. 1100 NOW 700		JUNE 08			
	NO.	REVISION	APR'D	DATE		STANDARD No. 800	

NOTES:

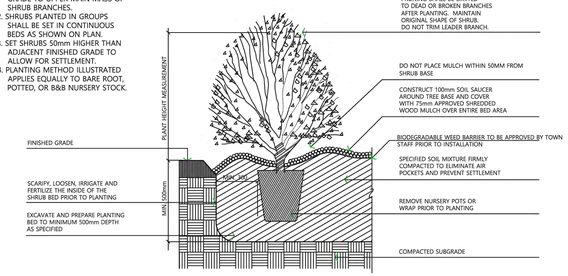
1. TREE SHALL BE MEASURED TO HEIGHT OF LAST YEAR'S GROWTH.
2. PRUNING SHALL BE LIMITED TO DEAD OR BROKEN BRANCHES AFTER PLANTING. MAINTAIN ORIGINAL SHAPE OF TREE. DO NOT TRIM LEADER BRANCH.
3. SET TREE 75-100mm HIGHER THAN ADJACENT FINISHED GRADE TO ALLOW FOR SETTLEMENT.



TOWN OF CALEDON						APR'D: C.C.	DATE: JUNE 08
CONIFEROUS TREE PLANTING	2	STANDARD No. 701 NOW 801		APR 19		DRAWN: ABAL	SCALE: NTS
	1	STANDARD No. 1105 NOW 701		JUNE 08			
	NO.	REVISION	APR'D	DATE		STANDARD No. 801	

NOTES:

1. SHRUB HEIGHT SHALL BE MEASURED FROM FINISHED GRADE TO UPPER MAIN MASS OF SHRUB BRANCHES.
2. SHRUBS PLANTED IN GROUPS SHALL BE SET IN CONTINUOUS BEDS AS SHOWN ON PLAN.
3. SET SHRUBS 50mm HIGHER THAN ADJACENT FINISHED GRADE TO ALLOW FOR SETTLEMENT.
4. PLANTING METHOD ILLUSTRATED APPLIES EQUALLY TO BARE ROOT, POTTED, OR B&B NURSERY STOCK.



TOWN OF CALEDON						APR'D: C.C.	DATE: JUNE 08
SHRUB PLANTING	3	STANDARD No. 702 NOW 802		APR 19		DRAWN: abal	SCALE: NTS
	2	STANDARD No. 1110 NOW 702		JUNE 08			
	1	WEED BARRIER ADDED		MARCH 08			
	NO.	REVISION	APR'D	DATE		STANDARD No. 802	

NO.	DESCRIPTION	DATE
3	REVISED AS PER NEW DRIVEWAY LOCATIONS	DEC. 07/20
2	REVISED AS PER TOWN OF CALEDON COMMENTS	JAN. 11/20
1	REVISED AS PER TOWN OF CALEDON COMMENTS	NOV. 22/19

JAMES McWILLIAM
LANDSCAPE ARCHITECT

PROJECT

SIMPSON ROAD EXTENSION
PHASE 3
BOLTON, TOWN OF CALEDON

DRAWING

LANDSCAPE DETAILS

NORTH

ASSOCIATION OF LANDSCAPE ARCHITECTS ONTARIO
JAMES S. McWILLIAM
OALA
MEMBER

SCALE:	AS NOTED
DATE:	JULY 2019
DESIGN BY:	J.S.M.
DRAWN BY:	T.F.G.
SHEET:	L4

Appendix B

Natural Heritage

Table 1: Field Studies and Natural Inventories (2023)

SURVEY TYPE		DATE
• Headwater Drainage Feature Assessment	• HDFA Round 1	April 19. 2023
	• HDFA Round 2	May 29, 2023
• Amphibian Calling Surveys	• AMC Round 1	April 20, 2023
	• AMC Round 2	May 12, 2023
	• AMC Round 3	June 22, 2023
• Aquatic Assessment & Fish Community Sampling		June 14, 2023
• Breeding Bird Surveys	• BBS Round 1	June 11, 2023
	• BBS Round 2	June 29, 2023
• Summer Botanical Inventory and ELC		July 12, 2023
• Fall Botanical Inventory & ELC Refinements		September 13, 2023

Table 2: Ecological Landscape Characterization (ELC) Community Descriptions

ELC TYPE	COMMUNITY DESCRIPTION	S-RANK (NHIC 2022)
CULTURAL		
Cultural Meadow		
CUM1-1 (a) Mineral Cultural Meadow	• This community lacks a well-defined canopy layer, but did rarely include woody species such as Manitoba Maple (*Acer negundo)* and Staghorn Sumac (*Rhus typhina)* • The dense ground layer included a large diversity of species. Abundant species included Stinking Chamomile (*Anthemis cotula)*, Tufted Vetch (*Vicia cracca)*, Garden Bird's Foot Trefoil (*Lotus corniculata)*, and Common Plantain (*Plantago major).*	N/A
CUM1-1 (b) Mineral Cultural Meadow	• Although also a mineral cultural meadow, this community can be distinguished from the community due to its high level of disturbance. This included a mound of aggregate/crushed asphalt fill covered in invasive Canada Thistle (*Cirsium arvense)*. • Abundant ground layer included Canada Thistle, White Sweet Clover (*Melilotus albus),* Field Sow-Thistle (*Sonchus arvensis* ssp. *arvensis)*, Reed-Canary Grass (*Phalaris arundinacea)*, Stinking Chamomile, Wild Carrot (*Daucus carota)* and Curled Dock (*Rumex crispus)*. • A channelized drainage ditch through this feature is dominated by European Reed (*Phragmites australis* ssp. *australis)* and Blue Cattail (*Typha* x *glauca*).	N/A
Cultural Thicket		
CUT1 Mineral Cultural Thicket	• A sparse canopy consisting primarily of Trembling Aspen (*Populus tremuloides)* and Eastern Cottonwood (*Populus dentata)*. • The shrub layer is the dominant form within this community, and consists of Cottony Willow (*Salix eriocephala)*, Meadow Willow (*Salix petiolaris)*, Bebb's Willow (*Salix bebbiana)* and Nannyberry (*Viburnum lentago)*. • Ground layer had a moderate cover and included Tall Goldenrod (*Solidago altissima* ssp. *altissima)*, Big Bluestem (*Andropodon gerardii)*, Common Milkweed (*Asclepias syriaca)*, Canada Thistle, Tufted Vetch, Fox Sedge (*Carex vulpinoidea)* and Purple Loosestrife (*Lythrum salicaria)*	N/A

ELC TYPE	COMMUNITY DESCRIPTION	S-RANK (NHIC 2022)
MARSH		
Meadow Marsh		
MAM2 Mineral Meadow Marsh	• This community lacked a canopy layer, and consisted of a mixture of wetland graminoids and forbs as the dominant vegetation form. • Dense ground layer vegetation included Reed-Canary Grass, Canada Thistle, Panicled Aster (*Symphyotrichum lanceolatum),* Curled Dock, Redtop (*Agrostis gigantea),* Meadow Fescue (*Lolium pratense)*, Blunt Spikerush (*Eleocharis obtusa)* and Northern Water Plantain (*Alisma triviale)*.	N/A
Shallow Marsh		
MAS2/MAM2 Mineral Shallow Marsh/Mineral Meadow Marsh	• This community lacked a well-defined canopy layer and included only one individual Bebb's Willow specimen. • Abundant ground layer vegetation included European Reed, Broad-Leaved Cattail (*Typha latifolia)*, Reed-Canary Grass, Panicled Aster, Small Duckweed (*Lemna minor)*, Purple Loosestrife, Northern Willowherb (*Epilobium ciliatum* ssp. *ciliatum),* and Common Shephard's Purse (*Capsella bursa-pastoris)*. • Standing water (reaching a maximum depth of 1m+) within the interior of this community along the drainage feature.	N/A

Table X: Master Plant List

													LOCAL / REGIONAL STATUS				
1	x																
2	x	ORDER	FAMILY	LATIN NAME	COMMON NAME	COEFFICIENT OF CONSERVATISM	WETNESS INDEX	OWES WETLAND SPECIES	WEEDINESS INDEX	INVASIVE EXOTIC RANK (Urban Forest Associates 2002)	PROVINCIAL STATUS (S-RANK)	GLOBAL STATUS (G-RANK)	COSSARO (MNRF)	COSEWIC STATUS	PEEL (Varga 2005)	TRCA (TRCA April 2016)	CVC/PEEL (CVC 2002)	PEEL	AUTHORITY
13	x	DICOTYLEDONS	Adoxaceae	Viburnum lentago	Nannyberry	4	0	T			S5	G5			X	L5	X	X	L.
29	x	DICOTYLEDONS	Amaranthaceae	Amaranthus retroflexus	Redroot Amaranth		3		-1		SNA	G5			X	L+	X	I	L.
50	x	DICOTYLEDONS	Amaranthaceae	Chenopodium album	Common Lamb's-Quarters		3		-1		SNA	G5			X	L+	X	I	L.
87	x	DICOTYLEDONS	Anacardiaceae	Rhus typhina	Staghorn Sumac	1	3				S5	G5			X	L5	X	X	L.
113	x	DICOTYLEDONS	Apiaceae	Daucus carota	Wild Carrot		5		-2		SNA	GNR			X	L+	X	I	L.
154	x	DICOTYLEDONS	Apocynaceae	Asclepias incarnata ssp. incarnata	Swamp Milkweed	6	-5	I			S5	G5T5			X	L4	X	X	L.
159	x	DICOTYLEDONS	Apocynaceae	Asclepias syriaca	Common Milkweed	0	5				S5	G5			X	L5	X	X	L.
192	x	DICOTYLEDONS	Asteraceae	Ambrosia artemisiifolia	Common Ragweed	0	3				S5	G5			X	L5	X	X	L.
212	x	DICOTYLEDONS	Asteraceae	Anthemis cotula	Stinking Chamomile		3		-1		SNA	G5			X	L+	X	I	L.
215	x	DICOTYLEDONS	Asteraceae	Arctium minus	Common Burdock		3		-2		SNA	GNR			X	L+	X	I	(Hill) Bernh.
236	x	DICOTYLEDONS	Asteraceae	Artemisia vulgaris	Common Wormwood		5		-1	P	SNA	GU			X	L+	X	I	L.
245	x	DICOTYLEDONS	Asteraceae	Bidens frondosa	Devil's Beggarticks	3	-3	I			S5	G5			X	L5	X	X	L.
276	x	DICOTYLEDONS	Asteraceae	Cichorium intybus	Wild Chicory		5		-1		SNA	GNR			X	L+	X	I	L.
277	x	DICOTYLEDONS	Asteraceae	Cirsium arvense	Canada Thistle		3		-1	1	SNA	G5			X	L+	X	I	(L.) Scop.
285	x	DICOTYLEDONS	Asteraceae	Cirsium vulgare	Bull Thistle		3		-1		SNA	GNR			X	L+	X	I	(Savi) Tenore
308	x	DICOTYLEDONS	Asteraceae	Erigeron annuus	Annual Fleabane	0	3				S5	G5			X	L5	X		(L.) Pers.
309	x	DICOTYLEDONS	Asteraceae	Erigeron canadensis	Canada Horseweed	0	3				S5	G5			X	L5	X	X	(L.)
328	x	DICOTYLEDONS	Asteraceae	Euthamia graminifolia	Grass-Leaved Goldenrod	2	0				S5	G5			X	L5	X	X	(L.) Nutt.
386	x	DICOTYLEDONS	Asteraceae	Lactuca canadensis	Canada Lettuce	3	3				S5	G5			U	L4	X	X	L.
392	x	DICOTYLEDONS	Asteraceae	Lactuca serriola	Prickly Lettuce		3		-1		SNA	GNR			X	L+	I	I	L.
462	x	DICOTYLEDONS	Asteraceae	Solidago altissima var. altissima	Tall Goldenrod	1	3				S5	G5			X	L5	X	X	L.
468	x	DICOTYLEDONS	Asteraceae	Solidago canadensis	Canada Goldenrod	1	3				S5	G5			X		X	X	L.
505	x	DICOTYLEDONS	Asteraceae	Sonchus arvensis ssp. arvensis	Field Sow-Thistle		3				SNA	GNRTNR			X	L+	I	I	L.
508	x	DICOTYLEDONS	Asteraceae	Sonchus oleraceus	Common Sow-Thistle		3		-1		SNA	GNR			X	L+	I	I	L.
521	x	DICOTYLEDONS	Asteraceae	Symphyotrichum lanceolatum	Panicled Aster	3	-3	I			S5	G5			X	L5	X	X	(Willd.) G.L. Nesom
531	x	DICOTYLEDONS	Asteraceae	Symphyotrichum novae-angliae	New England Aster	2	-3				S5	G5			X	L5	X	X	(L.) G.L. Nesom
552	x	DICOTYLEDONS	Asteraceae	Taraxacum officinale	Common Dandelion		3		-2		SNA	G5			X	L+	I	I	F.H. Wiggers
566	x	DICOTYLEDONS	Asteraceae	Tussilago farfara	Coltsfoot		3	T	-2	4	SNA	GNR			X	L+	I	I	L.
684	x	DICOTYLEDONS	Brassicaceae	Brassica nigra	Black Mustard		5		-1		SNA	GNR			X	L+	X	I	(L.) Koch
686	x	DICOTYLEDONS	Brassicaceae	Brassica rapa	Field Mustard		5		-1		SNA	GNR			X	L+	X	I	L.
691	x	DICOTYLEDONS	Brassicaceae	Capsella bursa-pastoris	Common Shepherd's Purse		3		-1		SNA	GNR			X	L+	X	I	(L.) Medikus
725	x	DICOTYLEDONS	Brassicaceae	Erucastrum gallicum	Common Dog Mustard		5		-1		SNA	G5			X	L+	X	I	(Willd.) O. Schulz
734	x	DICOTYLEDONS	Brassicaceae	Lepidium campestre	Field Peppergrass		5		-1		SNA	GNR			X	L+	I	I	(L.) W.T. Aiton
823	x	DICOTYLEDONS	Caprifoliaceae	Lonicera tatarica	Tartarian Honeysuckle		3		-3	1	SNA	GNR			X	L+	I	I	L.
956	x	DICOTYLEDONS	Convolvulaceae	Convolvulus arvensis	Field Bindweed		5		-1	3	SNA	GNR			X	L+	X	I	L.
977	x	DICOTYLEDONS	Cornaceae	Cornus sericea	Red-Osier Dogwood	2	-3	I*			S5	G5			X	L5	X	X	L.
1158	x	DICOTYLEDONS	Fabaceae	Lotus corniculatus	Garden Bird's-Foot Trefoil		3		-2	2	SNA	GNR			X	L+	I	I	L.
1165	x	DICOTYLEDONS	Fabaceae	Medicago lupulina	Black Medick		3		-1	4	SNA	GNR			X	L+	I	I	L.
1169	x	DICOTYLEDONS	Fabaceae	Melilotus albus	White Sweet-Clover		3		-3	2	SNA	G5			X	L+	I	I	Medik.
1171	x	DICOTYLEDONS	Fabaceae	Melilotus officinalis	Yellow Sweet-Clover		3		-1	2	SNA	GNR			X	L+	I	I	(L.) Pallas
1185	x	DICOTYLEDONS	Fabaceae	Securigera varia	Purple Crown-Vetch		5		-2	1	SNA	GNR			X	L+	X	I	(L.) Lassen
1197	x	DICOTYLEDONS	Fabaceae	Trifolium hybridum	Alsike Clover		3		-1		SNA	GNR			X	L+	I	I	L.
1200	x	DICOTYLEDONS	Fabaceae	Trifolium pratense	Red Clover		3		-2	4	SNA	GNR			X	L+	I	I	L.
1202	x	DICOTYLEDONS	Fabaceae	Trifolium repens	White Clover		3		-1	4	SNA	GNR			X	L+	I	I	L.
1206	x	DICOTYLEDONS	Fabaceae	Vicia cracca	Tufted Vetch		5		-1	2	SNA	GNR			X	L+	I	I	L.
1220	x	DICOTYLEDONS	Fagaceae	Quercus macrocarpa	Bur Oak	5	3	T			S5	G5			X	L4	X	X	Michaux
1353	x	DICOTYLEDONS	Lamiaceae	Leonurus cardiaca ssp. cardiaca	Common Motherwort		5		-2		SNA	GNRTNR			X	L+	I	I	L.
1447	x	DICOTYLEDONS	Lythraceae	Lythrum salicaria	Purple Loosestrife		-5	I	-3	1	SNA	G5			X	L+	I	I	L.
1524	x	DICOTYLEDONS	Onagraceae	Epilobium ciliatum ssp. ciliatum	Northern Willowherb	3	-3	I*			S5	G5T5			X	L5	X	X	Raf.
1537	x	DICOTYLEDONS	Onagraceae	Oenothera biennis	Common Evening Primrose	0	3				S5	G5			U	L5	X	X	L.
1647	x	DICOTYLEDONS	Plantaginaceae	Linaria vulgaris	Butter-And-Eggs		5		-1	4	SNA	GNR			X	L+	I	I	Miller
1660	x	DICOTYLEDONS	Plantaginaceae	Plantago lanceolata	English Plantain		3		-1		SNA	G5			X	L+	I	I	L.
1661	x	DICOTYLEDONS	Plantaginaceae	Plantago major	Common Plantain		3		-1		SNA	G5			X	L+	I	I	L.
1713	x	DICOTYLEDONS	Polygonaceae	Fallopia convolvulus	Eurasian Black Bindweed		3		-1		SNA	GNR			X	L+	I	I	(L.) Á. Löve
1727	x	DICOTYLEDONS	Polygonaceae	Persicaria maculosa	Spotted Lady's-Thumb		-3	T	-1		SNA	G3G5			X	L+	I	I	Gray
1748	x	DICOTYLEDONS	Polygonaceae	Reynoutria japonica var. japonica	Japanese Knotweed		3		-1	2	SNA	GNRTNR			X	L+	I	I	Houttuyn
1754	x	DICOTYLEDONS	Polygonaceae	Rumex crispus	Curled Dock		0	T	-2		SNA	GNR			X	L+	I	I	L.
1868	x	DICOTYLEDONS	Ranunculaceae	Ranunculus sceleratus	Cursed Buttercup	2	-5	I			S5	G5			X	L5			L.
1999	x	DICOTYLEDONS	Rosaceae	Geum urbanum	Wood Avens		5		-1		SNA	G5			X	L+	I	I	L.
2009	x	DICOTYLEDONS	Rosaceae	Malus pumila	Common Apple		5		-1		SNA	G5			X	L+	I	I	Miller
2012	x	DICOTYLEDONS	Rosaceae	Physocarpus opulifolius	Eastern Ninebark	5	-3	T			S5	G5			R1	L3	RL	RL	(L.) Maximowicz
2059	x	DICOTYLEDONS	Rosaceae	Prunus virginiana var. virginiana	Chokecherry	2	3				S5	G5T5			X	L5	X	X	L.
2160	x	DICOTYLEDONS	Salicaceae	Populus deltoides ssp. deltoides	Eastern Cottonwood	4	0	T			S5	G5T5			X	L5	X	X	Bartram ex Marshall
2165	x	DICOTYLEDONS	Salicaceae	Populus tremuloides	Trembling Aspen	2	0	T			S5	G5			X	L5	X	X	Michaux
2180	x	DICOTYLEDONS	Salicaceae	Salix bebbiana	Bebb's Willow	4	-3	I			S5	G5			X	L4	X	X	Sargent
2190	x	DICOTYLEDONS	Salicaceae	Salix eriocephala	Cottony Willow	4	-3	T			S5	G5			X	L5	X	X	Michaux
2207	x	DICOTYLEDONS	Salicaceae	Salix petiolaris	Meadow Willow	3	-3	I			S5	G5			X	L4	X	X	J.E. Smith
2228	x	DICOTYLEDONS	Sapindaceae	Acer negundo	Manitoba Maple	0	0	T		1	S5	G5			X	L+?	X	X	L.
2305	x	DICOTYLEDONS	Ulmaceae	Ulmus americana	White Elm	3	-3	T			S5	G4			X	L5	X	X	L.
2397	x	GYMNOSPERMS	Pinaceae	Pinus strobus	Eastern White Pine	4	3	T			S5	G5			X	L4	X	X	L.
2406	x	MONOCOTYLEDONS	Alismataceae	Alisma triviale	Northern Water-Plantain	1	-5	I			S5	G5			X	L5			L.
2429	x	MONOCOTYLEDONS	Araceae	Lemna minor	Small Duckweed	5	-5	I			S5	G5			X	L5	X	X	L.
2708	x	MONOCOTYLEDONS	Cyperaceae	Carex vulpinoidea	Fox Sedge	3	-5	I			S5	G5			X	L5	X	X	Michaux
2764	x	MONOCOTYLEDONS	Cyperaceae	Eleocharis obtusa	Blunt Spikerush	5	-5	I			S5	G5			U	L3	X	X	(Willd.) Schultes
2802	x	MONOCOTYLEDONS	Cyperaceae	Schoenoplectus tabernaemontani	Soft-Stemmed Bulrush	5	-5	I			S5	G5			X	L4	X	X	(C.C. Gmelin) Palla
2871	x	MONOCOTYLEDONS	Juncaceae	Juncus dudleyi	Dudley's Rush	1	-3	T			S5	G5			X	L5	X	X	Wiegand
3008	x	MONOCOTYLEDONS	Poaceae	Agrostis gigantea	Redtop		-3		-2		SNA	G4G5			X	L+	I	I	Roth
3012	x	MONOCOTYLEDONS	Poaceae	Agrostis scabra	Rough Bentgrass	6	0	T			S5	G5			U	L3	R	R	Willdenow
3019	x	MONOCOTYLEDONS	Poaceae	Andropogon gerardii	Big Bluestem	7	3				S4	G5			R5	L3	RL	RL	Vitman
3069	x	MONOCOTYLEDONS	Poaceae	Bromus tectorum	Downy Brome		5		-2		SNA	GNR			X	L+	I	I	L.
3119	x	MONOCOTYLEDONS	Poaceae	Echinochloa crus-galli	Large Barnyard Grass		-3	T	-1		SNA	GNR			X	L+	I	I	(L.) Palisot de Beauvois
3133	x	MONOCOTYLEDONS	Poaceae	Elymus repens	Quackgrass		3		-3	3	SNA	GNR			X	L+	I	I	(L.) Gould
3172	x	MONOCOTYLEDONS	Poaceae	Glyceria grandis var. grandis	Tall Mannagrass	5	-5	I			S5	G5			X	L5	X	X	S. Watson
3183	x	MONOCOTYLEDONS	Poaceae	Hordeum jubatum ssp. jubatum	Foxtail Barley	0	0	T			S5?	G5T5			X	L+	I	I	L.
3197	x	MONOCOTYLEDONS	Poaceae	Lolium pratense	Meadow Fescue		3		-1		SNA	G5			X	L+	I	I	(Hudson) Darbyshire
3234	x	MONOCOTYLEDONS	Poaceae	Phalaris arundinacea var. arundinacea	Reed Canary Grass	0	-3	T		P	S5	GNR			X	L+?	X	X	L.
3238	x	MONOCOTYLEDONS	Poaceae	Phleum pratense ssp. pratense	Common Timothy		3		-1		SNA	GNR			X	L+	I	I	L.
3240	x	MONOCOTYLEDONS	Poaceae	Phragmites australis ssp. australis	European Reed		-3	T		1	SNA	G5T5			X	L+			(Cav.) Trinius ex Steudel
3252	x	MONOCOTYLEDONS	Poaceae	Poa compressa	Canada Bluegrass		3				SNA	GNR			X	L+	X	X	L.
3256	x	MONOCOTYLEDONS	Poaceae	Poa palustris	Fowl Bluegrass	5	-3	I			S5	G5			X	L5	X	X	L.
3287	x	MONOCOTYLEDONS	Poaceae	Sorghastrum nutans	Yellow Indiangrass	8	3				S4	G5			R2	L2	RL	RL	(L.) Nash
3384	x	MONOCOTYLEDONS	Typhaceae	Typha latifolia	Broad-Leaved Cattail	1	-5	I			S5	G5			X	L4	X	X	L.
3385	x	MONOCOTYLEDONS	Typhaceae	Typha x glauca	Blue Cattail		-5	I		P	SNA	GNA			X	L+	X	X	Godron
3544	x																		
3545	x																		

3546	x	STATISTICS		
3547	x	**Species Diversity**		
3548	x	Total Number of Species:	93	
3549	x	Native Species:	43	46%
3550	x	Exotic Species:	50	54%
3551	x	S1-S3 Species:	0	0%
3552	x	S4 Species:	2	5%
3553	x	S5 Species:	41	95%
3555	x	**Floristic Quality Assessment (FQA)**		
3556	x	Mean Co-efficient of Conservatism (CC)	2.8	
3557	x	CC 0 - 3 = lowest sensitivity	27	63%
3558	x	CC 4 - 6 = moderate sensitivity	14	33%
3559	x	CC 7 - 8 = high sensitivity	2	5%
3560	x	CC 9 - 10 = highest sensitivity	0	0%

2	x	ORDER	FAMILY	LATIN NAME	COMMON NAME	COEFFICIENT OF CONSERVATISM	WETNESS INDEX	OWES WETLAND SPECIES	WEEDINESS INDEX	INVASIVE EXOTIC RANK (Urban Forest Associates 2002)	PROVINCIAL STATUS (S-RANK)	GLOBAL STATUS (G-RANK)	COSSARO (MNRF)	COSEWIC STATUS		PEEL (Varga 2005)	TRCA (TRCA April 2016)	CVC/PEEL (CVC 2002)	PEEL	AUTHORITY
3561	x		Floristic Quality Index (FQI)	18																
3563	x		**Weedy & Invasive Species**																	
3564	x		Mean Weediness Index (Oldham et al):	-1.4																
3565	x		-1 = low potential invasiveness	31	62%															
3566	x		-2 = moderate potential invasiveness	11	22%															
3567	x		-3 = high potential invasivenss	4	8%															
3568	x		Mean Exotic Rank (Urban Forest Associates):	2																
3569	x		Category 1	6	12%															
3570	x		Category 2	5	10%															
3571	x		Category 3	2	4%															
3572	x		Category 4	5	10%															
3573	x		Potentially Invasive (P)	3	6%															
3575	x		**Wetland Species**																	
3576	x		Mean Wetness Index	1.0																
3577	x		Upland	16	17%															
3578	x		Facultative upland	41	44%															
3579	x		Facultative	8	9%															
3580	x		Facultative wetland	17	18%															
3581	x		Obligate wetland	11	12%															

No.	X	Common Name	Species Code	Scientific Name	Provincial Status (S Rank)	Global Status (G Rank)	SARO (MECP)	COSEWIC (Federal)	SWH Indicator Species	Highest Breeding Evidence
	X									
	X									
	X	Anseriformes								
	X	*Anatidae*								
		Mallard	MALL	*Anas platyrhynchos*	S5	G5			X	PR-T
	X									
	X	Columbiformes								
	X	*Columbidae*								
		Mourning Dove	MODO	*Zenaida macroura*	S5	G5				PO-H
	X									
	X	Charadriiformes								
	X	*Charadriidae*								
		Killdeer	KILL	*Charadrius vociferus*	S4B	G5				PR-T
	X									
	X	*Scolopacidae*								
		Spotted Sandpiper	SPSA	*Actitis macularius*	S5B	G5			X	PR-T
	X									
	X	Passeriformes								
	X	*Tyrannidae*								
		Willow Flycatcher	WIFL	*Empidonax traillii*	S4B	G5			X	PO-S
	X									
	X	*Hirundinidae*								
		Northern Rough-winged Swallow	NRWS	*Stelgidopteryx serripennis*	S4B	G5			X	PR-P
	X									
	X	*Turdidae*								
		American Robin	AMRO	*Turdus migratorius*	S5	G5				PR-T
	X									
	X	*Sturnidae*								
		European Starling	EUST	*Sturnus vulgaris*	SNA	G5				PR-T
	X									
	X	*Passeridae*								
		House Sparrow	HOSP	*Passer domesticus*	SNA	G5				PO-H
	X									
	X	*Fringillidae*								
		American Goldfinch	AMGO	*Spinus tristis*	S5	G5				PR-P
	X									
	X	*Passerellidae*								
		Chipping Sparrow	CHSP	*Spizella passerina*	S5B, S3N	G5				PO-S
		Savannah Sparrow	SAVS	*Passerculus sandwichensis*	S5B, S3N	G5			X	PR-T
		Song Sparrow	SOSP	*Melospiza melodia*	S5	G5				PR-T
	X									
	X	*Icteridae*								
		Red-winged Blackbird	RWBL	*Agelaius phoeniceus*	S5	G5				PR-T
		Brown-headed Cowbird	BHCO	*Molothrus ater*	S5	G5				PO-H
		Common Grackle	COGR	*Quiscalus quiscula*	S5	G5				PO-H
	X									
	X	*Parulidae*								
		Common Yellowthroat	COYE	*Geothlypis trichas*	S5B, S3N	G5				PR-T
		Yellow Warbler	YWAR	*Setophaga petechia*	S5B	G5				PO-S
	X									
	X	*Cardinalidae*								
		Northern Cardinal	NOCA	*Cardinalis cardinalis*	S5	G5				PO-S
	X									

Species Common Name and Scientific Name:	Chesser, R. T., K. J. Burns, C. Cicero, J. L. Dunn, A. W. Kratter, I. J. Lovette, P. C. Rasmussen, J. V. Remsen, Jr., D. F. Stotz, B. M. Winger, and K. Winker. 2018. Check-list of North American Birds (online). American Ornithological Society. Available online: http://checklist.aou.org/taxa
Species Code:	Consistent with the American Ornithologists' Union. 2018. Species 4-Letter-Codes. Available online: http://www.birdsontario.org/atlas/codes.jsp?lang=en&pg=species
Highest Breeding Evidence:	Codes assigned for breeding evidence are consistent with the Ontario Breeding Bird Atlas (OBBA). 2018. Breeding Evidence Codes. Available online: http://www.birdsontario.org/atlas/codes.jsp?lang=en&pg=breeding&sortorder=aou
S ranks:	Provincial ranks are from the Natural Heritage Information Centre; S1 (critically imperiled), S2 (imperlied), S3 (vulnerable), S4 (apparently secure), S5 (secure); ranks were updated using NHIC species list 2021. Available to download from: https://www.ontario.ca/page/get-natural-heritage-information
G ranks:	Global ranks are from the Natural Heritage Information Centre; G1 (extremely rare), G2 (very rare), G3 (rare to uncommon), G4 (common), G5 (very common); ranks were updated using NHIC species list 2021. Available to download from: https://www.ontario.ca/page/get-natural-heritage-information
SARO (MECP):	Ontario Species at Risk as listed by the Committee on the Status of Species at Risk in Ontario (from Ontario Regulation 230/08 Species at Risk in Ontario website: https://www.ontario.ca/laws/regulation/080230/); END - Endangered; THR - Threatened; SC - Special Concern; NAR - Not at Risk

No.	X	Common Name	Species Code	Scientific Name	Provincial Status (S Rank)	Global Status (G Rank)	SARO (MECP)	COSEWIC (Federal)	SWH Indicator Species	Highest Breeding Evidence
	X									
	X									

COSEWIC: Assessed Species at Risk at the national level as listed by the Committee on the Status of Endangered Wildlife in Canada (from COSEWIC: https://wildlife-species.canada.ca/species-risk-registry/sar/index/default_e.cfm); END - Endangered, THR - Threatened, SC - Special Concern, NAR - Not at Risk

SWH Indicator Species: SWH refers to Significant Wildlife Habitat as defined by the MNRF (2015) Significant Wildlife Habitat Criteria Schedules for Ecoregions 7E and 6E (as appropriate for the Subject Lands). SWH indicator species are identified in this table and any potential SWH is discussed in the text of this report. Available online: http://www.townofnemi.on.ca/wp-content/uploads/2016/02/NEMI-OP-App-C-schedule-6e-jan-2015-access-ver-final-s.pdf

Table 5: Amphibian Call Count Survey Station Results

SURVEY ROUND	STATION NUMBER	SPECIES CODE												WATER	
		NOAM	AMTO	FOTO	GRTR	SPPE	CHFR	WOFR	NLFR	PIFR	GRFR	BULL	MIFR	Present (Y/N)	Depth (CM)
1	AMC 1	X												Y	
1	AMC 2	X												N/A	
1	AMC 3	X												Y	
1	AMC 4	X												Y	
1	AMC 5	X												N/A	
2	AMC 1	X												Y	
2	AMC 2	X												N/A	
2	AMC 3		1 (2)			1 (1)								Y	
2	AMC 4	X												Y	
2	AMC 5	X												N/A	
3	AMC 1	X												Y	
3	AMC 2	X												N/A	
3	AMC 3	X												N/A	
3	AMC 4	X												Y	
3	AMC 5	X												N/A	

LEGEND:

SPECIES CODE	COMMON NAME	SCIENTIFIC NAME
NOAM	No Amphibians	No amphibians despite survey effort
AMTO	American Toad	*Anaxyrus americanus*
FOTO	Fowler's Toad	*Anaxyrus fowleri*
GRTR	Gray Treefrog	*Hyla versicolor*
SPPE	Spring Peeper	*Pseudacris crucifer*
CHFR	Western Chorus Frog	*Pseudacris triseriata*

CALL CODES	
X	No amphibians heard
1	Calls can be counted without error
2	Calls overlap but can be reliably estimated
3	Calls overlap too much to estimate number

Table 5: Amphibian Call Count Survey Station Results

WOFR	Wood Frog	*Lithobates sylvaticus*
NLRF	Northern Leopard Frog	*Lithobates pipiens*
PIFR	Pickerel Frog	*Lithobates palustris*
GRFR	Green Frog	*Lithobates clamitans*
BULL	American Bullfrog	*Lithobates catesbeianus*
MIFR	Mink Frog	*Lithobates septentrionalis*

Note: For each species, the first number is the call code and the second number, which is in brackets, is the number of individuals of that species heard calling.

Table 6: Fish Community Sampling Results (May 31, 2023)

Location	Common Name	Scientific Name	No. Captured	Thermal Regime
EF1	Creek Chub	*Semotilus atromaculatus*	1	Coolwater
EF2	Fathead Minnow	*Pimephales promelas*	1	Warmwater
EF2	Brook Stickleback	*Culaea inconstans*	6	Coolwater
EF3	Fathead Minnow	*Pimephales promelas*	15	Warmwater
EF3	Pumpkinseed	*Lepomis gibbosus*	2	Warmwater

Table 7: Headwater Drainage Feature Classification and Management Recommendations

DRAINAGE FEATURE SEGMENT	STEP 1. HYDROLOGY		STEP 2. RIPARIAN	STEP 3. FISH HABITAT	STEP 4. TERRESTRIAL HABITAT	MANAGEMENT RECOMMENDATION
	FUNCTION	MODIFIERS				
H1S1	FT – 7 FC – 2 (Round 1) FC – 1 (Round 2) **Contributing –** Feature was flowing during early spring but was completely dry during the late spring assessment.		**Limited** – Feature is bordered by disturbed industrial lands.	**Contributing** – No suitable fish habitat is present. Feature may provide contributing functions to support downstream direct fish habitat.	**Limited** – Feature is bordered by disturbed industrial lands.	**Mitigation**
H2S1	FT – 7 FC – 4 (Round 1) FC – 1 (Round 2) **Contributing –** Feature was flowing during early spring but was completely dry during the late spring assessment.		**Limited** – Feature is bordered by disturbed industrial lands.	**Contributing** – No suitable fish habitat is present. Feature may provide contributing functions to support downstream direct fish habitat.	**Limited** – Feature is bordered by disturbed industrial lands.	**Mitigation**

LEGEND:

FT	Feature Types (1-defined natural channel, 2-channelized, 3-multi-thread, 4-no defined feature, 5-tiled drainage, 6-wetland, 7-swale, 8-roadside ditch, 9-online pond outlet)
FC	Flow Conditions (1-no surface water, 2-standing water, 3-interstitial flow, 4-surface flow minimal, 5-surface flow substantial)

Note: Codes correspond with Ontario Stream Assessment Protocol (OSAP) guidelines

Appendix C

Geotechnical Engineering

GEI Consultants

Consulting Engineers and Scientists

Preliminary Geotechnical Investigation

South Simpson Block Plan (Headwaters of West Rainbow Creek) and Master Environmental Servicing Plan Update

Coleraine Drive and Mayfield Road, Caledon, Ontario

Submitted to:
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c/o Ms. Helen Mihailidi
7501 Keele Street, Suite 200
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September 13, 2023
Project No. 2301130

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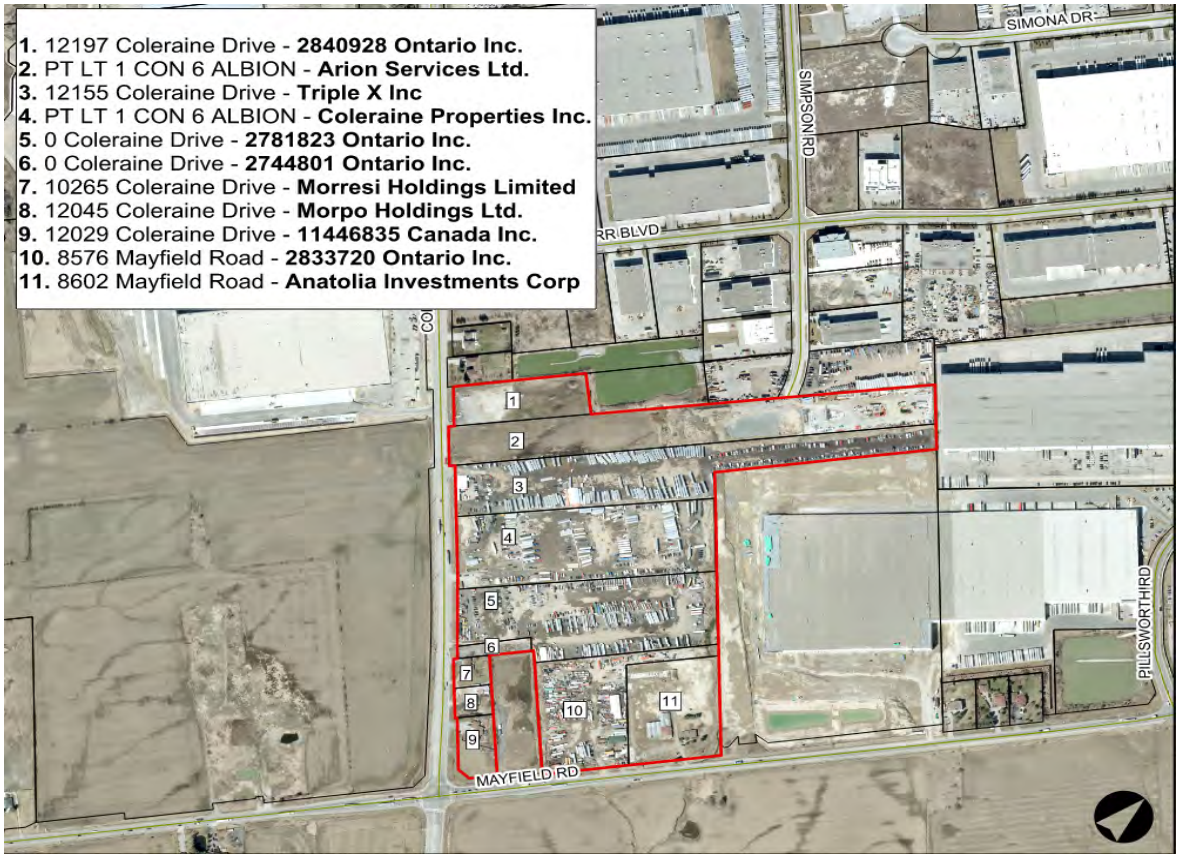
Appendices

1. Introduction

GEI Consultants (GEI) was retained by Simpson Road Landowners Group Inc. (the Client) to complete a geotechnical report in reference to the required Block Plan and Master Environmental Servicing Plan update at South Simpson (Headwaters of West Rainbow Creek). These works are required as part of the submission for a proposed extension of Simpson Road and provide an update to the Master Environmental Servicing Plan 2000 (MESP) and incorporate the revisions made through the Municipal Class EA for Simpson Road (2013). The location of the proposed extension is in the northeastern quadrant of the intersection of Coleraine Drive and Mayfield Road in Caledon, Ontario. A summarized site location plan is enclosed as Figure 1 and below.

The subject lands are designated Prestige Industrial and General Industrial in the Official Plan. The subject lands are a part of the Town of Caledon's South Simpson Secondary Plan Area and are subdivided into eleven (11) distinct properties, separated by different landowners. The Landowner Group consists of landowners of parcels 2, 3, 4, 5 and 11 as shown on the map below. As requested, non-participating landowners within the secondary plan area have not been included. This exclusion is to be confirmed by the Town of Caledon.



The subject lands have an approximate total area of 36.75 ha and are currently occupied by open lands, various truck and transportation uses, and a former garden supply store. The subject lands are bounded by Mayfield Road to the south, Coleraine Drive to the west, and mixed residential, commercial, and undeveloped lands to the east and north. Undeveloped lands exist within a southern parcel located on three sides by subject lands and Mayfield Road to the south.

Local elevations in the northeastern portion of the subject lands are near Elev. 236.0 m, sloping to the south-southeast with elevations near 230.5 m. The maximum difference in elevation across the site is approximately 5.5 m as inferred from Topographic information provided by First Base Solutions and shown in Pre-Development Drainage Plan Drawing DAP-2. An aerial image of the site from 2022 is provided on Figure 2.

It is noted that the site and surround streets are not oriented in true north/south or east west directions and for purposes of this report Mayfield Road is consider to be east/west and Coleraine Drive is consider to be north/south.

GEI was provided the following information in preparation of this report:

- "*Block Planning for the South Simpson Secondary Plan, North-East Corner of Coleraine Drive and Mayfield Road, Ward 5."* Staff-Report 2022-0374, dated July 12, 2022, prepared by Planning Department, Town of Caledon

- *"South Simpson Secondary Plan Area Ownership"* Map, from Schedule "C" to Staff Report 2022-0374 dated May 25, 2022.

- *"Terms of Reference: South Simpson (Headwaters of West Rainbow Creek) Master Environmental Servicing Plan Update".* Town of Caledon

- *"Hydrogeological Appraisal Simpson Road Completion from North of George Bolton Parkway to Mayfield Road Town of Caledon, Ontario"* prepared by AMEC Earth & Environmental Limited dated March 8, 2011.

- *"Simpson Road Extension Phase 3, from 282m South of Parr Boulevard to Mayfield Road, Contract 14-09"* prepared by Wood and commissioned by Region of Peel, dated November 2020.

The proposed development involves the construction of the extension of Simpson Road southerly approximately 600 m to Mayfield Road. A concept plan is shown in Figure 3. The proposed road is to be constructed about 1 to 2 m above existing grade along the alignment and includes associated site servicing, as deep as 4.0 m below existing grade corresponding to about 5 to 6 m below the proposed road grade. The existing open channel will also be re-aligned, and it is understood that the latest concept will have the creek piped underground. The design configuration regarding buildings has not been established at this time but are mainly

assumed to comprise large slab-on-grade structures. It is also assumed that some earthworks will be required to establish the proposed grades when the design concept has been confirmed, as the road will be established through raised grades.

The purpose of the geotechnical investigation was to assess the subsurface soil conditions at the site, and based on this information, provide preliminary geotechnical engineering recommendations in support of the proposed development. This report summarizes the borehole findings, provides design geotechnical engineering recommendations regarding available bearing capacities for foundations, slabs-on-grade and drainage, site servicing installation, and pavement design. Considerations for constructability such as soil excavation, compaction, on-site backfill suitability and temporary groundwater control are also provided.

It is noted that the recommendations provided in this report must be considered preliminary in nature due to the current uncertainty of the design for the project. As the design progresses further geotechnical review and input may be required which might necessitate the need for additional investigation and/or analysis.

A hydrogeological report and monthly groundwater measurements were also a part of the scope and are provided under separate cover.

2. Procedures and Methodology

It is noted that all elevations in this report are metric/geodetic and expressed in metres (m). All measurements are also in metric and expressed in millimetres (mm), metres (m) or kilometres (km).

Prior to the commencement of drilling activities, the borehole locations were staked in the field by GEI based on a plan provided by the Client. Ground surface elevations of the boreholes and horizontal co-ordinates (referencing NAD 83 geodetic datum) were surveyed by GEI with a Topcon FC – 5000 GPS Survey unit.

Underground utilities including natural gas, electrical, telephone, water, etc. were marked out by public and private utility locating companies prior to drilling, co-ordinated by GEI.

The fieldwork for the drilling program was carried out on between May 17 and 19, 2023. Boreholes 1 to 8 were drilled to 6.6 m depth (Elev. 223.8 to 227.3). In addition, shallow Boreholes 4S and 6S were drilled adjacent to Boreholes 4 and 6, respectively to 2.3 m depth (Elev. 228.1 and 229.1) to install secondary wells. Borehole logs are provided in Appendix A and the borehole locations are shown on Figure 2.

The boreholes were advanced by a drilling subcontractor retained by the Client and supervised by GEI using a track-mounted drill rig, solid stem augers, and standard soil sampling equipment. Sampling was conducted using a 51 mm O.D. Split Spoon (SS) sampler. Standard Penetration Test (SPT) “N” Values (N values) were recorded for the sampled intervals as the number of blows required to drive an SS sampler 305 mm into the soil using a 63.5 kg drop hammer falling 750 mm, in accordance with ASTM D1586. In each borehole soil sampling was conducted at 0.75 m intervals for the upper 3.0 m and at 1.5 m intervals thereafter.

Monitoring wells were installed in all boreholes except Borehole 7 by GEI to facilitate long-term groundwater monitoring, each consisting of 50 mm diameter PVC pipe with a 1.5 m long screen and protective casing. As noted above shallow secondary wells installed in Boreholes 4S and 6S. Monitoring well construction is shown on the borehole logs in Appendix A. Boreholes without wells were backfilled in accordance with O.Reg. 903.

The GEI field staff examined, and classified characteristics of the soils encountered in the boreholes, including the presence of fill materials, groundwater observations during and upon completion of the drilling, recorded observations of borehole construction, and processed the recovered samples. All recovered soil samples were logged in the field, carefully packaged, and transported to GEI’s laboratory for more detailed examination and classification.

In GEI's laboratory, the samples were classified as to their visual and textural characteristics. Six (6) representative samples of the major soil units were selected and submitted to our laboratory for grain size analysis. Grain size results are provided in Appendix B.

3. Subsurface Conditions

3.1 General Overview

The detailed soil profiles encountered in the boreholes are indicated on the attached borehole logs in Appendix A, and the geotechnical laboratory results are included in Appendix B. The borehole locations are shown in Figure 2.

It should be noted that the conditions indicated on the borehole logs are for specific locations only and can vary between and beyond the locations. It should be noted that the soil boundaries indicated on the borehole logs are inferred from non-continuous sampling and observations during drilling. These boundaries are intended to reflect approximate transition zones and should not be interpreted as exact planes of geological change.

In addition, the descriptions provided in the borehole logs are inferred from a variety of factors, including visual observations of the soil samples retrieved, laboratory testing, measurements prior to and after drilling, and the drilling process itself (speed of drilling, shaking/grinding of the augers, etc.). The passage of time also may result in changes in conditions interpreted to exist at locations where sampling was conducted.

3.2 Stratigraphy

It is noted that Boreholes 4S and 6S have the same stratigraphy as Boreholes 4D and 6D, respectively, and are not referenced below. In the descriptions below, Boreholes 4 and 6 refer to Boreholes 4D and 6D, respectively.

3.2.1 Pavement

Boreholes 1, 2, 6 and 7 encountered asphalt at the ground surface. The asphalt/recycled asphalt was 25 to 760 mm thick. No underlying granular material was distinguishable.

Granular material was present at the surface of Borehole 8 and was 720 mm thick.

3.2.2 Topsoil

A surficial topsoil layer was at the ground surface at Boreholes 3, 4, 5 and was 25 to 180 mm thick.

3.2.3 Fill

Fill was beneath the surficial soil in Boreholes 1 to 6 and extended to 0.6 to 1.5 m depth (Elev. 229.6 to 233.3). The fill was variable and typically comprised clayey silt, locally sandy

silt or sand. The soil was described as moist and moisture contents were 2 to 23%. The N values, where taken, ranged from 6 to 20, indicating firm to very stiff / loose to compact conditions.

3.2.4 Clayey Silt

Underlying the fill and/or topsoil/pavement, an upper clayey silt unit was present to 1.5 to 2.3 m depth (Elev. 228.9 to 232.3) in all boreholes, except Borehole 2. The consistency was stiff to very stiff with N values of 9 to 29, locally firm in Borehole 6 with N values of 4 to 6. The soil was moist with moisture contents of 13 to 24%.

A lower clayey silt layer was present in Boreholes1 to 3 and 6, beneath the glacial till deposit described below, and extending to the 6.6 m depth of exploration (Elev. 224.9 to 227.3). In Boreholes 4, 5 and 7 the clayey silt unit was penetrated at 6.1 m depth (Elev. 224.3 to 226.5). Two (2) samples of the material from the lower layer were submitted for grain size analysis and the results are provided on Figure B1 in Appendix B. The unit was very stiff with N values of 19 to 20, locally stiff with an N value of 14. The soil was moisture with moisture contents of 10 to 16%.

3.2.5 Glacial Till

A major glacial till deposit was present in all boreholes below the upper clayey silt, locally the fill in Borehole 2, and extended to 4.6 to 6.1 m depth (Elev. 225.3 to 229.) Three (3) samples of the material from the deposit were submitted for grain size analysis and the results are provided on Figure B2 in Appendix B. The deposit varied from clayey silt, some sand to sandy clayey silt with trace gravel. Cobbles and boulder were inferred due to augers grinding. The deposit was very stiff to hard with N values of 15 to 54. The till was moist with moisture contents of 10 to 18%.

A second lower layer of glacial till was revealed in Boreholes 4, 5 and 7 below the lower clayey silt unit at 6.1 m depth (Elev. 224.3 to 226.1) to the 6.6 m depth of exploration (Elev. 223.8 to 226.0). The second till layer was also variable, being sandy silt to sandy clayey silt to clayey silt, with trace gravel. The N values in the lower till layer ranged from 7 to greater than 50 (firm to very stiff, or very dense). The till was moist with moisture contents of 9 to 15%.

3.2.6 Sand and Silt

A discontinuous layer of sand and silt was noted below the till in Borehole 8, from 6.1 m depth to the 6.6 m depth of exploration (Elev. 225.2 to 225.6). A sample of the material from the deposit was submitted for grain size analysis and the results are provided on Figure B3 in Appendix B. The sand and silt was wet, with a moisture content of 13%. The soil was compact with an N value of 24.

3.3 Groundwater

Unstabilized groundwater level measurements and cave measurements were taken upon the completion of drilling of each borehole as shown on the borehole logs in Appendix A. These measurements were taken to provide a rough estimate of the possible excavation and temporary groundwater control constructability considerations that may arise. All boreholes, except Borehole 7 and was outfitted with a monitoring well with 50 mm diameter PVC well and 1.5 m long screen. Secondary wells we also installed in Boreholes 4S and 6S adjacent to Boreholes 4D and 6D with 1.5 m long screens. Monitoring well configuration and groundwater observations are noted on the borehole logs in Appendix A, and a summary is below.

Borehole	Depth of Cave (m) / Elev.	Unstabilized Groundwater Level Depth (m) / Elev.	Depth (m) / Elev. of Groundwater Table, June 7, 2023
1	Open (6.6 / 227.3)	No Water	4.7 / 229.2
2	Open (6.6 / 226.6)	No Water	N/A (well covered)
3	Open (6.6 / 232.1)	No Water	1.3 / 232.1
4D	Open (6.6 / 223.8)	No Water	1.7 / 228.7
4S	Open (2.3 / 228.1)	No Water	1.2 / 229.2
5	Open (6.6 / 224.6)	No Water	1.3 / 229.9
6D	5.4 / 226.0	No Water	1.3 / 230.1
6S	Open (2.3 / 229.1)	2.3 / 229.1	0.5 / 230.9
7	Open (6.6 / 226.0)	5.4 / 227.2	N/A
8	Open (6.6 / 225.2)	5.4 / 226.3	2.0 / 229.7

The stabilized groundwater levels in the monitoring wells were measured at 0.5 to 4.7 m depth in June 2023, corresponding to typically Elev. 229 to 230.

The clayey silt fill, clayey silt and till are typically impermeable. The sand fill and sand and silt are semi-permeable when wet.

GEI is currently conducting monthly groundwater level measurements for a full year and the results will be provided in a summery letter upon completion of the monitoring period.

Groundwater levels are expected to show seasonal fluctuations and vary in response to prevailing climate conditions.

4. Engineering Design Parameters & Analysis

The proposed development involves the construction of the extension of Simpson Road southerly approximately 600 m to Mayfield Road. A concept plan is shown in Figure 3. The proposed road is to be constructed about 1 to 2 m above existing grade along the alignment and includes associated site servicing, as deep as 4.0 m below existing grade corresponding to about 5 to 6 m below the proposed road grade. The existing open channel will also be re-aligned, and it is understood that the latest concept will have the creek piped underground. The design configuration regarding buildings has not been established at this time but are mainly assumed to comprise large slab-on-grade structures. It is also assumed that some earthworks will be required to establish the proposed grades when the design concept has been confirmed, as the road will be established through raised grades.

It is noted that the recommendations provided in this report must be considered preliminary in nature due to the current uncertainty of the design for the project. As the design progresses further geotechnical review and input may be required which might necessitate the need for additional investigation and/or analysis.

4.1 Site Grading

As noted above the site grading was not established at the time of this preliminary report. It is assumed that some grading will be required during the development of the site when the concept plan is established, as the road grade will be raised about 1 to 2 m above existing grade.

In general, it is recommended to remove existing topsoil/organics, fill or other deleterious material and raise grades to the desired level with engineered fill to support buildings, services and pavements.

4.1.1 Engineered Fill

GEI defines “engineered fill” as material that will support foundations, and which is placed and compacted in a specified and controlled manner under full-time supervision of geotechnical engineering staff.

In any location where engineered fill will be placed to raise grades or replace poor/weak soil, the topsoil, vegetation, peat and unsuitable native soil must be fully removed down to competent native soil. The exposed subgrade soil must be proof-rolled and inspected by the geotechnical engineer to ensure all unsuitable material (e.g., organics, weak or soft soil, weathered / disturbed soil, deleterious materials, existing fill) is removed from the engineered fill footprint. Any unsuitable areas must be further sub-excavated and replaced with fill

compacted to targeted 100% Standard Proctor Maximum Dry Density (SPmdd) in building areas and 95% SPmdd in road and servicing areas.

Once the subgrade is approved, engineered fill can be placed. Engineered fill must be placed under the full-time supervision of a geotechnical engineer as required in the Ontario Building Code. The engineered fill may consist of excavated on-site inorganic cohesionless soils provided they have been moisture conditioned to a moisture content within 2% of optimum moisture content and do not contain organics, topsoil/peat or deleterious material. It is recommended that any imported soil consist of Granular B (OPSS.MUNI 1010) and be first used in building areas, with suitable on-site soil used in landscaped or road areas. Engineered fill must be placed in loose lifts of 200 mm or less and compacted as noted above.

In wet subgrade areas, the first lift of engineered fill shall consist of 400 mm of Granular B Type II (OPSS.MUNI 1010). This will help to bridge the weaker subgrade and improve the ability to achieve the compaction specifications for subsequent engineered fill lifts.

The engineered fill must extend a minimum of 1 m out from all sides of the foundations and extend at a 1 horizontal to 1 vertical slope (1H:1V) down to the exposed subgrade. A typical detail for engineered fill pad dimensioning is included in Appendix C.

4.2 Foundation Design

4.2.1 Foundations on Native Soil

The individual lot grading or configuration is to be determined at a later date, and therefore footing levels were not known at the time of this report.

In general, foundations at this site may be constructed as conventional shallow spread and strip footing foundations that bear on the native, undisturbed soil. Existing fill is unsuitable for support of building foundations. For general planning and design purposes, it is recommended that a geotechnical reaction at Serviceability Limit State (SLS) of 150 kPa (for 25 mm or less of total settlement), and a factored geotechnical resistance at Ultimate Limit State (ULS) of 225 kPa be adopted for design. Locally at Boreholes 6 and 7, the upper soil was not suitable to support the bearing resistance values noted above and excavation 1.0 to 1.5 m into the native soil will be required to achieve the bearing resistance noted above.

It is noted that higher bearing resistance are available at depth and can be provided if required.

Final footing elevations must be reviewed by geotechnical personnel from GEI to confirm bearing capacity values. The final site configuration must also be reviewed by GEI to assess the potential for footings to be founded on different soil subgrades, and to assess the potential for differential settlement. It is recommended that all foundations for each individual building

/ structure be set on the same soil subgrade wherever possible, to reduce the potential for differential settlement.

4.2.2 Foundations on Engineered Fill

If the foundations are supported on an engineered fill pad, constructed as discussed in Section 4.1.1, the spread or strip footings can be designed using the underlying native soil bearing capacity shown above, up to a maximum of 150 kPa at SLS and 225 kPa at ULS.

It is recommended that nominal reinforcing steel for stiffening of the foundation walls made on engineered fill be provided to help mitigate minor cracking due to minor differential settlement. The reinforcing steel in the poured concrete foundation walls may consist of 2-15M bars continuous at the top of the foundation wall, and 2-15M bars continuous at the bottom of the foundation walls. Typically, these bars are placed 100 to 200 mm from the top or bottom of the foundation wall, respectively. The reinforcing steel should extend a minimum of 3 m past any transition zones between engineered fill and native soil. A typical reinforcing steel detail for foundation walls placed on engineered fill is provided within Appendix C. The recommended nominal reinforcing steel should not be considered a structural design. The need for different or additional reinforcement should be reviewed by a structural engineer to ensure the original structural design intent of the structure is maintained.

4.2.3 General Foundation Considerations

All footings exposed to ambient air temperature throughout the year must be provided with a minimum of 1.2 m of earth cover or equivalent insulation for frost protection (25 mm of polystyrene insulation is equivalent to 300 mm of soil cover). The minimum strip and spread footing widths to be used shall be dictated as per the Ontario Building Code, regardless of loading considerations. Footings stepped from one level to another must be at a slope not exceeding 7V:10H.

The foundation design parameters provided above are predicated on the assumption that the foundation subgrade surface is undisturbed, and that all peat, earth fill, deleterious, softened, disturbed, organic, and caved material is removed. The foundation excavation must be done in such a way that groundwater is controlled to prevent any disturbance to the foundation base. The groundwater table must be lowered at least 1 m below the founding elevation prior to excavation to prevent disturbance to the foundation subgrade from groundwater seepage.

The foundation subgrade must be reviewed prior to concrete placement to ensure the foundation design parameters provided are applicable, and to provide remedial recommendations if necessary. If the foundation excavation will be open for a prolonged period of time, the foundation subgrade should be protected with a skim coat of lean mix

concrete (applied immediately after inspection by the geotechnical engineer), to ensure that no deterioration will occur due to weather effects.

4.3 Floor Slabs

Based on the discussion in Section 4.1, it is envisioned that the floor slabs will be supported by engineered fill, locally native soils.

The exposed subgrade must be proof-rolled and inspected by the geotechnical engineer. If any soft or weak subgrade areas are identified, or if there are areas containing excessive amounts of deleterious/organic material, they must be locally sub-excavated and backfilled with approved clean earth fill or imported granular material and compacted to a minimum of 98% SPmdd within 2% optimum moisture content.

All building floor slabs must be provided with a capillary moisture barrier and drainage layer. This is made by placing the concrete slab on a minimum 200 mm layer of 19 mm clear stone (OPSS.MUNI 1004) compacted by vibration to a dense state. The upper 50 mm of clear stone can be replaced with 19 mm crusher run limestone for a working surface. The clear stone and the subgrade soil must be separated by a geotextile such as Terrafix 270R (or approved equivalent) to prevent the migration of fines into the clear stone layer which could result in loss of support for the slab. Alternatively, Granular A (OPSS.MUNI 1010) compacted to 100% SPmdd can be utilized without filter cloth.

4.4 Drainage

At this preliminary stage, for the proposed commercial and industrial planned buildings, it assumed that all structures will be slab-on-grade. For new structures that will be slab-on-grade with no basement levels, perimeter and under-slab drainage at the foundation level is not required, provided that the underside of the concrete slab is at least 200 mm above the prevailing grade of the site and the surrounding surfaces slope away from the building at a gradient of at least 2% to promote surface water run-off and to reduce groundwater infiltration adjacent to foundations. To minimize infiltration of surface water, the upper 150 mm of backfill should comprise relatively impervious/cohesive compacted soil material.

4.5 Site Servicing

The preliminary drawings provided show the sanitary service as deep as 4 m below existing grades corresponding to 5 to 6 m below the proposed grades. The watermain and storm were typically only about 2.0 to 2.5 m below existing grade. The creek will also be piped and is assumed to be above the sanitary inverts, based on the drawings provided.

4.5.1 Bedding

The type of material and depth of granular bedding below the pipe will, to some extent, depend on the method of construction used by the contractor. Pipe bedding for flexible pipes should follow the requirements in Ontario Provincial Standard Drawing 802.010 or applicable municipal standards. Pipe bedding for rigid pipes should follow the requirements in Ontario Provincial Standard Drawings 802.030 to 802.032 or applicable municipal standards.

A subgrade consisting of the inorganic native soil or engineering fill will provide adequate support for pipes with the bedding requirements as laid out in the above referenced OPS drawings. Where disturbance of the trench base has occurred from groundwater seepage, construction traffic, etc., or if loose native soil is present at the invert level, the material should be sub-excavated and replaced with suitably compacted granular fill. If weak zones are encountered, additional bedding materials and differing construction practices may be required and should be determined during construction. Any zones of peat or organic soil should be sub-excavated and replaced with approved earth fill or imported granular material compacted to 95% SPmdd. Details on temporary groundwater control are provided in section 5.2.

Regardless of whether flexible or rigid pipes are implemented, granular bedding and cover material should consist of a well graded, free draining material, such as Granular “A” (OPSS.MUNI 1010). All granular bedding must be compacted to a minimum of 95% SPmdd.

4.5.2 Backfill

Excavated native inorganic cohesionless soil may be re-used as backfill in trenches, provided it is moisture conditioned so that the moisture content is within 2% of optimum. Additional soil compaction details are provided in Section 5.3. The backfill should be compacted to a minimum of 95% SPmdd. In confined areas the layer thickness will have to be reduced to utilize smaller compaction equipment efficiently or by using granular material instead of locally sourced fill. Any backfill that is frozen, contains a high percentage of organic material (topsoil, peat, etc.) or moisture, or has otherwise unsuitable deleterious inclusion should not be used as backfill. The maximum cobble or boulder size should not exceed half of the loose lift thickness (i.e., all particles with a diameter greater than 100 mm should be removed). Cohesive site soil can be used as backfill but likely will require “drying” prior to use to achieve prior to compaction. The “drying” methods will require time and may not be practical.

Where trenches are within the traveled portions of a roadway, backfill within the frost penetration depth of 1.2 m should consist of native, non-organic, excavated material consistent with the soils surrounding the trench. If this technique is not undertaken, then frequently problems arise with yearly differential frost heave movements between the trench backfill and the adjacent native soil. This would occur, for example, if imported granular material is used to backfill trenches which is less susceptible to frost effects compared to the native soils on

site. Alternatively, if different soil is used as the backfill due to issues with achieving compaction, a frost taper of 10H:1V can be implemented to help mitigate the potential for differential settlement and frost heave.

4.6 Pavement Design

4.6.1 Subgrade Preparation

Simpson Road north of the proposed extension, supports an industrial and commercial and a heavy-duty design is warranted. The design drawings provided, noted a pavement design comprising 150 mm of asphalt (3 lifts) overt 150 mm of granular base over 450 mm of granular subbase.

Based on the boreholes and preliminary road profiles provided the pavement subgrade will typically comprise the engineered fill material used to rase the road grade to design level. If site soils are utilized the material will be moderate to highly frost susceptible, will not promote good drainage and require a thicker pavement structure. If a "pit run" material or Granular B Type I (OPSS.MUNI 1010) is utilized to raise grades, then the pavement structure can likely be reduced.

The subgrade must be inspected and approved by the geotechnical engineer at the time of construction. If the subgrade does not comprise engineered fill, the exposed pavement subgrade should be compacted to a minimum 95% SPmdd. If any soft or weak subgrade areas are identified, or if there are areas containing excessive amounts of moisture or deleterious/organic material, they must be locally sub-excavated and backfilled with approved clean earth fill or imported granular material and compacted to a minimum of 95% SPmdd.

The long-term performance of the pavement structure is highly dependent upon the subgrade support conditions. Stringent construction control procedures must be maintained to ensure that uniform subgrade moisture and density conditions are achieved as much as possible when fill is placed, and the natural subgrade is not disturbed or weakened after it is exposed.

4.6.2 Drainage

Control of surface water is an important factor in achieving a good pavement life. The need for adequate subgrade drainage cannot be over-emphasized. The subgrade must be free of depressions and sloped (at a minimum grade of 2 percent) to provide effective drainage toward subdrains. Grading adjacent to pavement areas should be designed to ensure that water is not allowed to pond adjacent to the outside edges of the pavement.

Continuous pavement subdrains should be provided along both sides of the roadway and drained into respective catchbasins to facilitate drainage of the subgrade and the granular materials. The subdrain invert should be maintained at least 0.3 m below subgrade level. To

minimize the problems of differential movement between the pavement and catchbasins/manholes due to frost action, the backfill around the structures should consist of free-draining OPSS Granular B. Typical pavement drainage details are provided in Appendix C.

4.6.3 Pavement Structure

The industry pavement design methods are based on a design life of 15 to 20 years for typical weather conditions depending on actual traffic volumes. The following pavement thickness designs are provided on the above noted considerations with heavy duty traffic assumed, and subgrade comprising of the native moderate to highly frost susceptible soil used to raise the grades:

Pavement Layer	Compaction Requirements	Minimum Component Thickness
Surface Course Asphaltic Concrete: HL3 (OPSS 1150) with PG 58-28 Asphalt Cement (OPSS.MUNI 1101)	OPSS 310	40 mm
Binder Course Asphaltic Concrete: HDBC (OPSS 1150) with PG 58-28 Asphalt Cement (OPSS.MUNI 1101)	OPSS 310	50 mm over 60 mm
Base Course: Granular A (OPSS.MUNI 1010)	100% SPmdd (ASTM-D698)	150 mm
Subbase Course: Granular B Type I (OPSS.MUNI 1010)	100% SPmdd (ASTM- D698)	450 mm

The granular materials should be placed in lifts 200 mm thick or less and be compacted to a minimum of 100% SPmdd for both granular base and subbase. Asphalt materials should be rolled and compacted as per OPSS 310. The granular and asphalt pavement materials and their placement should conform to OPSS 310, 501, 1010 and 1150.

If the pavement construction occurs in wet, winter or inclement weather, it may be necessary to provide additional subgrade support for heavy construction traffic by increasing the thickness of the granular subbase, base or both. Further, traffic areas for construction equipment may experience unstable subgrade conditions. These areas may be stabilized utilizing additional thickness of granular materials.

It should be noted that in addition to adherence of the above pavement design recommendations, a close control on the pavement construction process will also be required

in order to obtain the desired pavement life. Therefore, it is recommended that regular inspection and testing should be conducted during the pavement construction to confirm material quality, thickness, and to ensure adequate compaction.

Frost tapers of 10H:1V should be implemented between areas of differing pavement thickness and tie-in areas to existing pavement.

Smooth transitions are required in all areas where the new pavement meets the existing asphalt surface. Asphalt joints shall follow OPSS.MUNI 310. Longitudinal asphalt joints should be milled into the existing asphalt a minimum of 0.5 m for each lift. Transverse joint shall be milled into the existing asphalt a minimum 0.5 m for each lift. Successive joints should be staggered.

5. Constructability Considerations

5.1 Excavations

Excavations for the project site are anticipated to extend about 4.5 m below existing grade to account for the services and bedding. Below the surficial topsoil or asphalt, excavations are anticipated to encounter fill over a cohesive clayey silt unit over a glacial till deposit. Harder digging and cobbles and boulders can be expected in the till deposit.

Excavations must be carried out in accordance with the Occupational Health and Safety Act, Ontario Regulation 213/91 (as amended), Construction Projects, Part III - Excavations, Section 222 through 242. Where workers must enter a trench or excavation the soil must be suitably sloped and/or braced in accordance with the OHSA. These regulations designate four (4) broad classifications of soils to stipulate appropriate measures for excavation safety. If more than one soil type is encountered in an excavation, the most conservative soil type must be followed for sloping the sidewalls of the excavation. Excavations for the site should be completed considering a Type 3 soil geometry, 1H:1V from the base of the excavation, assuming that the soils are dewatered prior to excavation.

Excavation sidewalls will need to be continuously reviewed for evidence of instability and groundwater seepage, particularly following periods of heavy rain or thawing. When required, remedial action must be taken to ensure the continued stability of excavation slopes and the safety of the workers.

Minimum support system requirements for steeper excavations are stipulated in Sections 235 through 238 and 241 of the OHSA and include provisions for timbering, shoring and moveable trench boxes. To reduce the potential for instability of the trench excavations, materials excavated from the service trenches and/or other fill materials or heavy equipment should not be placed near the crest of the trench excavations.

It is important to note that soil encountered in the construction excavations may vary significantly across the site. Our preliminary soil classifications are based solely on the materials encountered in the boreholes advanced on site. The contractor should verify that similar conditions exist throughout the proposed area of excavation. If different subsurface conditions are encountered at the time of construction, we recommend that GEI be contacted immediately to evaluate the conditions encountered.

5.2 Temporary Construction Groundwater Control

As noted above, excavation is envisioned to extend to about 4.5 m below existing grade.

The stabilized groundwater levels in the monitoring wells were measured at 0.5 to 4.7 m depth in June 2023, corresponding to typically Elev. 229 to 230.

Based on the above, excavation for the watermain and storm sewer will typically extend to or just above/below the ground water levels noted. The sanitary sewer excavation will extend about 2.0 to 2.5 m below the ground water table.

It is important to control the groundwater adequately. If the groundwater table is not controlled during construction, the base of the excavation foundation pipe bed may become unstable. For trench excavation as described above the excavation will extend through the typically cohesive soil.

No major groundwater problems are anticipated for the installation of watermain or storm sewer. Any water seepage should be controllable by the use of conventional sump pumping.

Deeper excavation for sanitary sewer will be below the groundwater level noted, however will still be within cohesive soil and seepage volumes are not expected to be great. In addition to conventional sump pumping, pumping from keg wells or the likes may be required in sandy areas where greater seepage may occur.

As noted above, it is recommended to carry out the work during the dry time of the year when the groundwater table is lowest, to mitigate groundwater control measures. Also reducing the size of the excavation that is open at any one time will aid in reducing groundwater control requirements.

The exact scenario where certain groundwater control techniques will work are directly correlated to how coarse/fine the native soils are in an excavation, and both the lateral and vertical extent of the wet cohesionless deposits encountered as noted above. If the groundwater table is not controlled during construction, the base of the excavations will be unstable, leading to difficulties in excavating and placement of pipes, footings, and providing safety for the workers.

Based on the above, a Permit-to-Take-Water (PTTW) is likely not required. Registry on the Environmental Activity and Sector Registry (EASR) may be prudent, so a work stoppage is not required.

Further recommendations are provided in our hydrogeological report.

5.3 Compaction Specifications

SPmdd is the specification to indicate the degree to which soil or aggregate is compacted. To achieve the specified SPmdd as indicated in this report, all soils or aggregates must be placed in lift thicknesses no greater than 200 mm. If this is not the case, only the upper portion of the lift will be adequately compacted, and the lower portion of the lift has a high probability of not meeting compaction specifications. In addition, industry standard equipment used to determine the degree of compaction consists of nuclear densometers. These devices have an inherent limitation in that they cannot test beyond 300 mm in depth, and so the degree of compaction beyond this depth cannot be quantitatively determined.

Along with lift thickness, ensuring that the soil or aggregate is within 2% of its optimum moisture content ensures that the specified compaction can be reached. If the soil or aggregate is too dry/wet, it is either very difficult or impossible to reach the specified compaction. This is especially true for when higher compaction specifications such as 98% and 100% SPmdd are required.

Moisture can be increased by adding water and mixing the soil prior to re-use, blending the soil with wetter material, or by importing soil to the site that is at optimum and can be readily compacted.

Moisture can be reduced by tilling or spreading out the soil to dry or blending it with drier material. In-situ moisture contents can change based on the season and local groundwater levels and can also change for stockpiled material due to precipitation.

Site soils are mainly cohesive and may require longer drying times which may be impractical.

In addition to the above compaction specifications, in any areas where compacted fill will be placed over the exposed native soil subgrade, any loose, soft, wet, organic or unstable areas should be sub-excavated, and backfilled with clean earth fill or Granular 'B' (OPSS.MUNI 1010) compacted to a minimum of 95% SPmdd. This recommendation applies to site servicing and pavement subgrades. Where structures/buildings require upfilling beneath the structure the fill should be compacted to 100% SPmdd.

5.4 Quality Verification Services

On-site quality verification services are an integral part of the geotechnical design function, and for foundations, engineered fill and retaining walls, are required under the Ontario Building Code. Quality verification services are used to confirm that construction is being conducted in general conformance with the requirements as outlined in the drawings, reports and specifications prepared for the proposed development.

GEI Consultants can provide all the on-site quality verification services outlined below:

- The subgrade for shallow foundations for commercial buildings must be field reviewed by the geotechnical engineer as required by the municipal regulating authority.
- Installation of retaining structures over 1.0 m high and related backfilling operations must be field reviewed on a continuous basis by the geotechnical engineer as required in the OBC.
- Full-time monitoring, testing and inspection of engineered fill placement is required by the geotechnical engineer per the OBC.
- Part-time monitoring of the subgrade support capabilities, material quality, lift thickness, moisture content, degree of compaction, etc. is recommended for the following areas to ensure the recommendations within this report are followed and they perform adequately in the long-term;
    - Slab-on-grades;
    - Pavement structure (granular and asphalt); and
    - Bedding/backfilling of site servicing.
- Testing of the concrete (compressive strength, slump, air content, etc.) and testing of the asphalt (asphalt content and gradation) are recommended to ensure that the quality of the materials being brought to site meet the requirements of the project.

5.5 Site Work

The soils found at this site may become weakened when subjected to traffic, particularly when wet. If there is site work carried out during periods of wet weather, then it can be expected that the subgrade will be disturbed unless an adequate granular working surface is provided to protect the integrity of the subgrade soils from construction traffic. Subgrade preparation works cannot be adequately accomplished during wet weather and the project must be scheduled accordingly. The disturbance caused by the traffic can result in the removal of disturbed soil and use of granular fill material for site restoration or underfloor fill that is not intrinsic to the project requirements.

The most severe loading conditions on the subgrade may occur during construction. Consequently, special provisions such as end dumping and forward spreading of earth and aggregate fills, restricted construction lanes, and half-loads during paving and other work may be required, especially if construction is carried out during unfavourable weather.

If construction proceeds during freezing weather conditions, adequate temporary frost protection for the founding subgrade and concrete must be provided. The soil at this site is susceptible to frost damage. Consideration must be given to frost effects, such as heave or softening, on exposed soil surfaces in the context of this particular project development.

6. Limitations and Conclusions

6.1 Limitations

The recommendations and comments provided are necessarily on-going as new information of underground conditions becomes available. More specific information with respect to the conditions between samples, or the lateral and vertical extent of materials may become apparent during excavation operations. The interpretation of the borehole information must, therefore, be validated during excavation operations. Consequently, conditions not observed during this investigation may become apparent. Should this occur, GEI should be contacted to assess the situation and additional testing and reporting may be required.

GEI should be retained for a general review of the final design drawings and specifications to verify that this report has been properly interpreted and implemented. If not accorded the privilege of making this review, GEI will assume no responsibility for interpretation of the recommendations in the report.

The comments given in this report are intended only for the guidance of the design engineers. The number of boreholes required to determine the localized underground conditions between boreholes affecting construction costs, techniques, sequencing, equipment, scheduling, etc. could be greater than has been carried out for design purposes. Contractors bidding on or undertaking the works should, in this light, decide on their own investigations, as well as their own interpretations of the factual borehole results, so that they may draw their own conclusions as to how the subsurface conditions may affect them.

This report was authorized by, and prepared by GEI for, the account of the Simpson Road Landowners Group Inc. (as provided in the signed agreement). Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. GEI accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this project.

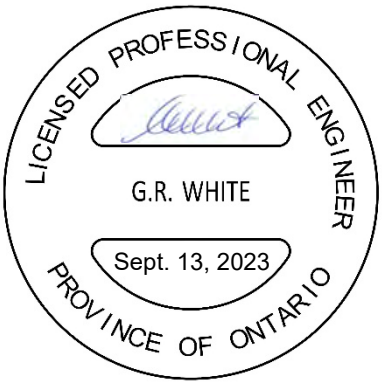
6.2 Conclusion

It is recognized that municipal/regional governing bodies, in their capacity as the planning and building authority under Provincial statues, will make use of and rely upon this report, cognizant of the limitations thereof, both as are expressed and implied.

We trust this report is complete within our terms of reference, and the information presented is sufficient for your present purposes. If you have any questions, or when we may be of further assistance, please do not hesitate to contact our office.

Yours Truly,

GEI Consultants



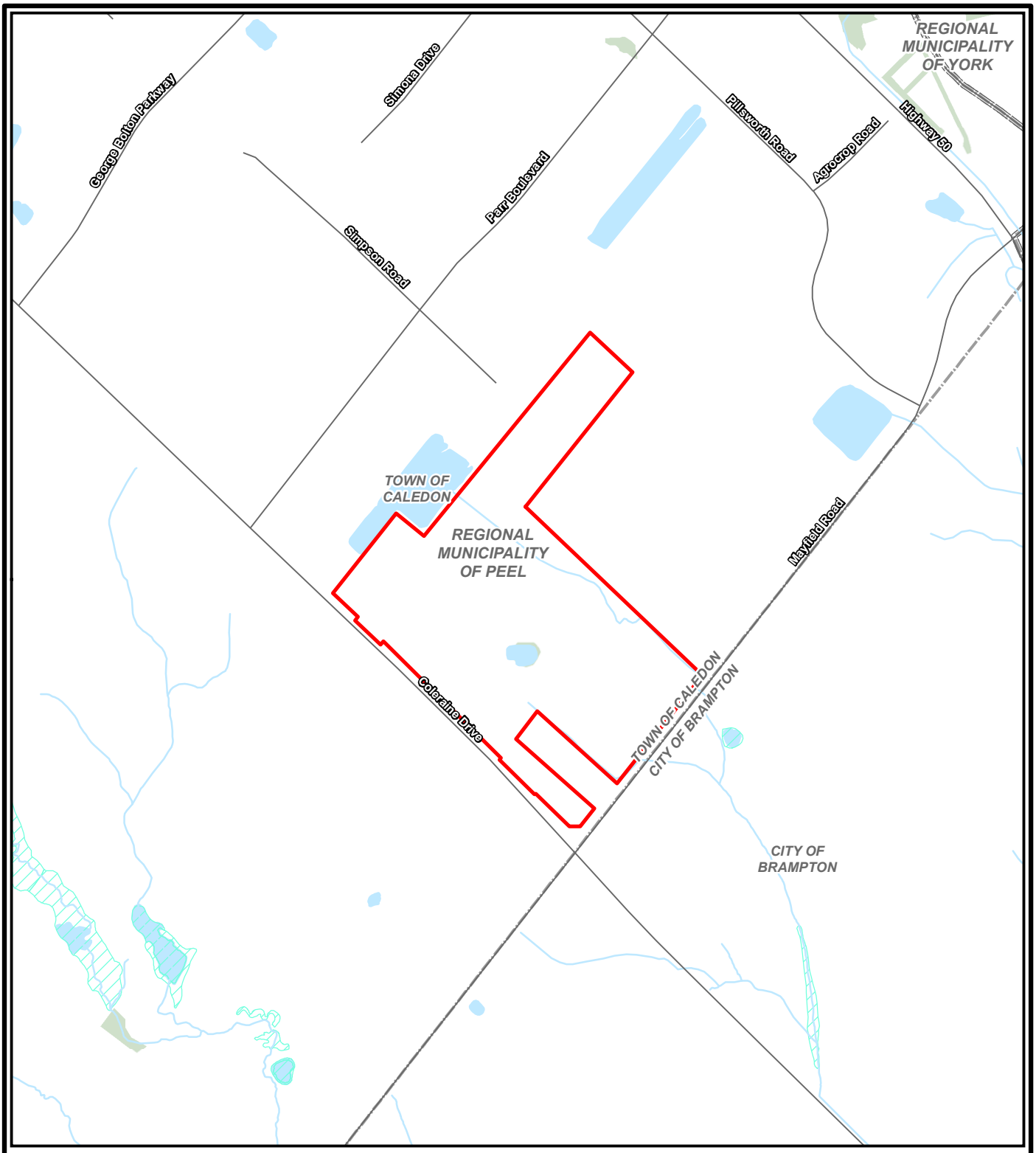
Geoffrey R. White, P.Eng.
Geotechnical Practice Lead

Figures

Site Location Plan

Borehole Location Plan

Site Plan Concept



NOTES:
1. Coordinate System: NAD 1983 UTM Zone 17N.
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2023.

Legend

- Subject Area
- Road
- Watercourse
- Waterbody
- Wooded Area
- Wetland - Not evaluated per OWES

N

0 100 200 m

1:10,000

Natural Heritage, Geotechnical, Hydrogeological and Civil Services - South Simpson (Headwaters of West Rainbow Creek), Caledon, Master Environmental Servicing Plan

Simpson Road Landowners Group Inc.

GEI Consultants

SITE LOCATION PLAN

Project 2301130 | Sept 2023 | Fig. 1

NOTES:

1. Coordinate System: NAD 1983 UTM Zone 17N.
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2023, © Caledon Open Data, 2023.
3. Orthoimagery © First Base Solutions, 2023. Imagery taken in 2022.

Legend

- Subject Area
- Borehole/Monitoring Well Location
- Borehole Location

N

0 100 200 m

1:10,000

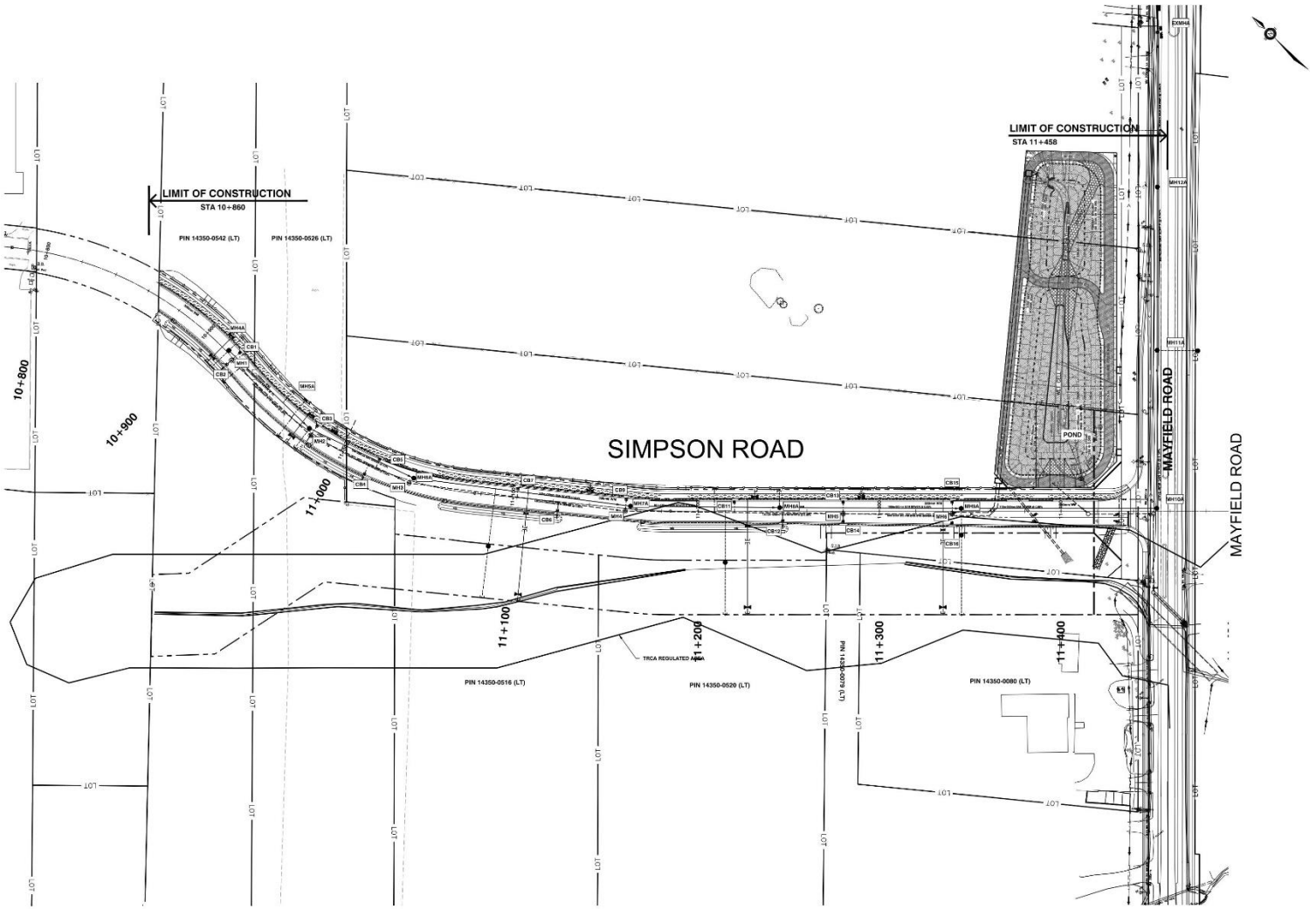
Natural Heritage, Geotechnical, Hydrogeological and Civil Services - South Simpson (Headwaters of West Rainbow Creek), Caledon, Master Environmental Servicing Plan

Simpson Road Landowners Group Inc.

GEI Consultants

BOREHOLE LOCATION PLAN (AERIAL)

Project 2301130 | Sept 2023 | Fig. 2



GEI Consultants

647 Welham Rd, Unit 14, Barrie, ON, L4N 0B7
P: (705) 719-7994

Client: Simpson Road Landowners Group Inc.	Scale: N.T.S.
	Date: Sept. 2023
Project: South Simpson Road Extension Block Plan	Drawn By: M.H
	Project No: 2301130
Title: Site Plan Concept	Figure 3

Appendix A

Borehole Logs

RECORD OF BOREHOLE No. 1

Project Number: **2301130**
Project Client: **Simpson Road Landowners Group Inc.**
Project Name: **South Simpson -Headwaters W Rainbow Ck**
Project Location: **Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Track Mount** Drilling Machine: **Solid Stem Augers**
Logged By: **TA** Northing: **4855660.1** Date Started: **May 17/23**
Reviewed By: **GW** Easting: **604127.8** Date Completed: **May 17/23**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)
	0.0 / 233.9					0	
	0.2 / 233.6 RECYCLED ASPHALT: 250 mm						
	FILL: Sandy silt, trace gravel, compact, brown, moist 0.6 / 233.3	AS	1				
	CLAYEY SILT: Some sand, very stiff, brown, moist	SS	2	95	16		
	1.5 / 232.3					1.5	232.5
	CLAYEY SILT GLACIAL TILL: Some sand, inferred cobbles and boulders, very stiff to hard, brown, moist	SS	3	90	26		
		SS	4	100	34		
						3	231
		SS	5	100	54		
	4.6 / 229.3					4.5	229.5
	CLAYEY SILT: Trace sand, very stiff, grey, moist	SS	6	100	21		
	6.6 / 227.3	SS	7	100	22	6	228
	Borehole Terminated at 6.6 m						

FIELD TESTING
Shear Strength Testing (kPa)
× Other Test
+ Pocket Penetrometer
▲ Field Vane (Intact)
△ Field Vane (Remolded)
40 80 120 160
Penetration Testing
○ SPT ● DCPT
10 20 30 40

LAB TESTING
△ Combustible Organic Vapour (ppm)
▲ Combustible Organic Vapour (%LEL)
◇ Total Organic Vapour (ppm)
100 200 300 400
Atterberg Limits
PL ○ Water Content (%) LL
10 20 30 40

Instrumentation Installation

COMMENTS & GRAIN SIZE DISTRIBUTION (%)

GR	SA	SI	CL

First Water Strike SS5

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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jun 7/23 at depth of: 4.7 m.
Groundwater Elevation: 229.2 m

RECORD OF BOREHOLE No. 2

Project Number: **2301130**
Project Client: **Simpson Road Landowners Group Inc.**
Project Name: **South Simpson -Headwaters W Rainbow Ck**
Project Location: **Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Track Mount** Drilling Machine: **Solid Stem Augers**
Logged By: **TA** Northing: Date Started: **May 18/23**
Reviewed By: **GW** Easting: Date Completed: **May 18/23**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	FIELD TESTING (Shear Strength Testing (kPa); Penetration Testing SPT/DCPT)	LAB TESTING (Combustible Organic Vapour (ppm); Combustible Organic Vapour (%LEL); Total Organic Vapour (ppm); Atterberg Limits PL/LL; Water Content (%))	Instrumentation Installation	COMMENTS & GRAIN SIZE DISTRIBUTION (%) GR	SA	SI	CL
	0.0 233.2													
	RECYCLED ASPHALT: 700 mm	SS	1	40	19	0		19	13					
	0.7 232.5						232.5							
	FILL: Clayey silt, trace gravel, very stiff, brown, moist	SS	2	80	20			20						
	1.5 231.7					1.5			14					
	SANDY CLAYEY SILT GLACIAL TILL: Trace gravel, inferred cobbles and boulders, hard, grey, moist	SS	3	45	43			43						
							231		14					
		SS	4	100	47			47			5	21	42	32
						3			13					
		SS	5	100	44			44						
							229.5							
	4.6 228.6					4.5			13					
	CLAYEY SILT: Trace sand, very stiff, grey, very moist	SS	6	100	21			21			First Water Strike SS6			
							228							
	6.6 226.6					6			14					
		SS	7	100	19			19						
	Borehole Terminated at 6.6 m													

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Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on: Well covered at depth of: -
Cave depth after auger removal: Open
Groundwater Elevation:

RECORD OF BOREHOLE No. 3

Project Number:	**2301130**						
Project Client:	**Simpson Road Landowners Group Inc.**						
Project Name:	**South Simpson -Headwaters W Rainbow Ck**	Drilling Method:	**Track Mount**	Drilling Machine:	**Solid Stem Augers**		
Project Location:	**Caledon, ON**	Logged By:	**TA**	Northing:	**4855211.7**	Date Started:	**May 17/23**
Drilling Location:	**See Borehole Location Plan**	Reviewed By:	**GW**	Easting:	**603689.4**	Date Completed:	**May 17/23**
Local Benchmark:							

LITHOLOGY PROFILE			SOIL SAMPLING						FIELD TESTING	LAB TESTING		COMMENTS & GRAIN SIZE DISTRIBUTION (%)			
Lithology Plot	DESCRIPTION		Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	Shear Strength Testing (kPa); Penetration Testing (SPT, DCPT)	Combustible Organic Vapour (ppm); Combustible Organic Vapour (%LEL); Total Organic Vapour (ppm); Atterberg Limits; Water Content (%)	Instrumentation Installation	GR	SA	SI	CL
	0.0	233.4					0								
	TOPSOIL: 75 mm	233.3													
	FILL: Clayey silt, trace sand, firm, brown, moist	0.8 232.6	SS	1	20	6			6	17					
	CLAYEY SILT: Some sand, very stiff, grey, moist	1.5 231.8	SS	2	65	20	1.5	232.5	20	15					
	CLAYEY SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, hard, grey to brown, moist		SS	3	100	31		231	31	16					
			SS	4	100	47	3		47	13		8	18	42	32
			SS	5	80	38		229.5	38	18					
	SANDY CLAYEY SILT: Trace gravel, very stiff, grey, moist	4.6 228.8	SS	6	100	29	4.5	228	29	13		4	20	45	31
		6.6 226.8	SS	7	100	21	6		21	14					
	Borehole Terminated at 6.6 m														

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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jun 7/23 at depth of: 1.3 m.
Groundwater Elevation: 232.1 m

RECORD OF BOREHOLE No. 4-D

Project Number:	**2301130**				
Project Client:	**Simpson Road Landowners Group Inc.**				
Project Name:	**South Simpson -Headwaters W Rainbow Ck**	Drilling Method: **Track Mount**		Drilling Machine: **Solid Stem Augers**	
Project Location:	**Caledon, ON**	Logged By: **TA**	Northing: **4855082.3**	Date Started: **May 18/23**	
Drilling Location:	**See Borehole Location Plan**	Reviewed By: **GW**	Easting: **604231.5**	Date Completed: **May 18/23**	
Local Benchmark:					

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING	LAB TESTING		COMMENTS & GRAIN SIZE DISTRIBUTION (%)				
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	Shear Strength Testing (kPa): Other Test, Pocket Penetrometer, Field Vane (Intact), Field Vane (Remolded); Penetration Testing: SPT, DCPT	Combustible Organic Vapour (ppm), Combustible Organic Vapour (%LEL), Total Organic Vapour (ppm); Atterberg Limits; Water Content (%)	Instrumentation Installation		GR	SA	SI	CL
	0.0 230.4					0	230.4								
	TOPSOIL: 25 mm														
	FILL: Clayey silt, trace sand, stiff, brown, moist	SS	1	75	11			11 12	23 24						
	0.8 229.6														
	CLAYEY SILT: Some sand, stiff, brown with grey spotting, moist	SS	2	100	12	1.5	229.5								
	1.5 228.9														
	CLAYEY SILT GLACIAL TILL: Some sand, inferred cobbles and boulders, very stiff to hard, brown, moist	SS	3	90	26			26	13						
						3	228								
		SS	4	90	26			26	10						
		SS	5	90	41			41	13						
	4.6 225.8					4.5	226.5								
	CLAYEY SILT: Some sand, very stiff, grey, moist	SS	6	100	24			24	12		First Water Strike SS6				
	6.1 224.3					6	225								
	SANDY SILT GLACIAL TILL: Trace clay, trace gravel, inferred cobbles and boulders, very dense, grey, moist	SS	7	95	50+			50+	9						
	6.6 223.8 Borehole Terminated at 6.6 m														

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Groundwater depth encountered on completion of drilling: Dry

Cave depth after auger removal: Open

Groundwater depth observed on: Jun 7/23 at depth of: 1.7 m.

Groundwater Elevation: 228.7 m

Scale: **1 :75**

RECORD OF BOREHOLE No. 4-S

Project Number:	**2301130**						
Project Client:	**Simpson Road Landowners Group Inc.**						
Project Name:	**South Simpson -Headwaters W Rainbow Ck**	Drilling Method:	**Track Mount**		Drilling Machine:	**Solid Stem Augers**	
Project Location:	**Caledon, ON**	Logged By:	**TA**	Northing:	**4855081.4**	Date Started:	**May 18/23**
Drilling Location:	**See Borehole Location Plan**	Reviewed By:	**GW**	Easting:	**604231.5**	Date Completed:	**May 18/23**
Local Benchmark:							

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING	LAB TESTING		COMMENTS & GRAIN SIZE DISTRIBUTION (%)
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	Shear Strength Testing (kPa): Other Test, Pocket Penetrometer, Field Vane (Intact), Field Vane (Remolded); 40 80 120 160; Penetration Testing: SPT, DCPT; 10 20 30 40	Combustible Organic Vapour (ppm), Combustible Organic Vapour (%LEL), Total Organic Vapour (ppm); 100 200 300 400; Atterberg Limits: PL, LL; Water Content (%); 10 20 30 40	Instrumentation Installation	GR SA SI CL
	0.0 230.4					0					
	TOPSOIL: 25 mm										
	FILL: Clayey silt, trace sand, stiff, brown, moist										
	0.8 229.6						229.5				Descriptions copied from BH 4-D
	CLAYEY SILT: Some sand, stiff, brown with grey spotting, moist										
	1.5 228.8					1.5					
	CLAYEY SILT GLACIAL TILL: Some sand, inferred cobbles and boulders, very stiff to hard, brown, moist										
	2.3 228.1										
	Borehole Terminated at 2.3 m										

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Groundwater depth encountered on completion of drilling: Dry

Cave depth after auger removal: Open

Groundwater depth observed on: Jun 7/23 at depth of: 1.2 m.

Groundwater Elevation: 229.2 m

RECORD OF BOREHOLE No. 5

Project Number: **2301130**
Project Client: **Simpson Road Landowners Group Inc.**
Project Name: **South Simpson -Headwaters W Rainbow Ck**
Project Location: **Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Track Mount** Drilling Machine: **Solid Stem Augers**
Logged By: **TA** Northing: **4855105.3** Date Started: **May 18/23**
Reviewed By: **GW** Easting: **604103.3** Date Completed: **May 18/23**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	FIELD TESTING (Shear Strength Testing (kPa); Penetration Testing SPT/DCPT)	LAB TESTING (Combustible Organic Vapour (ppm); Combustible Organic Vapour (%LEL); Total Organic Vapour (ppm); Atterberg Limits PL/LL; Water Content (%))	Instrumentation Installation	COMMENTS & GRAIN SIZE DISTRIBUTION (%) GR	SA	SI	CL
	0.0 231.2													
	0.2 TOPSOIL: 180 mm 231.0													
	FILL: 25 mm Gravel over clayey silt, trace gravel, firm, brown, moist 0.8 230.4	SS	1	85	6	0	231	6	22					
	CLAYEY SILT: Some sand, very stiff, brown to grey, moist	SS	2	100	19			19	14					
		SS	3	100	29	1.5	229.5	29	13					
	2.3 228.9													
	CLAYEY SILT GLACIAL TILL: Some sand, inferred cobbles and boulders, very stiff to hard, grey, moist	SS	4	100	21			21	14					
		SS	5	100	43	3	228	43	13		First Water Strike SS5			
	4.6 226.6													
	CLAYEY SILT: Some sand, trace gravel, firm to very stiff, grey, moist	SS	6	100	21	4.5	226.5	21	13		2	17	48	33
	6.1 225.1													
	CLAYEY SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, very stiff, grey, moist 6.6 224.6	SS	7	100	19	6	225	19	15					
	Borehole Terminated at 6.6 m													

Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jun 7/23 at depth of: 1.3 m.
Groundwater Elevation: 229.9 m

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RECORD OF BOREHOLE No. 6-D

Project Number:	**2301130**				
Project Client:	**Simpson Road Landowners Group Inc.**				
Project Name:	**South Simpson -Headwaters W Rainbow Ck**	Drilling Method: **Track Mount**		Drilling Machine:	**Solid Stem Augers**
Project Location:	**Caledon, ON**	Logged By: **TA**	Northing: **4855285.3**	Date Started:	**May 19/23**
Drilling Location:	**See Borehole Location Plan**	Reviewed By: **GW**	Easting: **604062.3**	Date Completed:	**May 19/23**
Local Benchmark:					

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING		LAB TESTING			COMMENTS & GRAIN SIZE DISTRIBUTION (%)			
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	Shear Strength Testing (kPa): Other Test, Pocket Penetrometer, Field Vane (Intact), Field Vane (Remolded); Penetration Testing: SPT, DCPT		Combustible Organic Vapour (ppm), Combustible Organic Vapour (%LEL), Total Organic Vapour (ppm); Atterberg Limits; Water Content (%)		Instrumentation Installation		GR	SA	SI	CL
	0.0 231.4					0	231										
	ASPHALT: 25 mm																
	FILL: Sand, trace silt, loose, brown, moist	AS	1							2							
	0.8 230.7																
	CLAYEY SILT: Trace organics, firm, brown, wet	SS	2	55	4			4			24						
						1.5	229.5						First Water Strike SS2				
	- - - Some sand, brown to grey - - -	SS	3	100	6			6			23						
	2.3 229.1																
	CLAYEY SILT GLACIAL TILL: Some sand, inferred cobbles and boulders, very stiff to hard, grey, wet to moist	SS	4	100	24			24			15						
		SS	5	100	44	3	228		44		14						
		SS	6	100	36	4.5	226.5		36		15						
	6.1 225.3																
	CLAYEY SILT: Some sand, very stiff, grey, wet	SS	7	100	30	6	225		30		10						
	6.6 224.9																
	Borehole Terminated at 6.6 m																

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Groundwater depth encountered on completion of drilling: 5.4 m. Cave depth after auger removal: Open

Groundwater depth observed on: Jun 7/23 at depth of: 1.3 m. Groundwater Elevation: 230.1 m

RECORD OF BOREHOLE No. 6-S

Project Number:	**2301130**						
Project Client:	**Simpson Road Landowners Group Inc.**						
Project Name:	**South Simpson -Headwaters W Rainbow Ck**	Drilling Method:	**Track Mount**		Drilling Machine:	**Solid Stem Augers**	
Project Location:	**Caledon, ON**	Logged By:	**TA**	Northing:	**4855284.8**	Date Started:	**May 19/23**
Drilling Location:	**See Borehole Location Plan**	Reviewed By:	**GW**	Easting:	**604061.4**	Date Completed:	**May 19/23**
Local Benchmark:							

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	Instrumentation Installation	COMMENTS & GRAIN SIZE DISTRIBUTION (%)
	0.0 231.4					0	231		
	ASPHALT: 25 mm FILL: Sand, trace silt, loose, brown, moist 0.8 230.7								Descriptions copied from BH 6-D
	CLAYEY SILT: Trace organics, firm, brown, wet - - - Some sand, brown to grey - - - 2.3 229.1					1.5	229.5		First Water Strike SS2
	Borehole Terminated at 2.3 m								

FIELD TESTING
Shear Strength Testing (kPa)
× Other Test
+ Pocket Penetrometer
▲ Field Vane (Intact)
△ Field Vane (Remolded)
40 80 120 160
Penetration Testing
○ SPT ● DCPT
10 20 30 40

LAB TESTING
△ Combustible Organic Vapour (ppm)
▲ Combustible Organic Vapour (%LEL)
◇ Total Organic Vapour (ppm)
100 200 300 400
Atterberg Limits
PL LL
○ Water Content (%)
10 20 30 40

COMMENTS & GRAIN SIZE DISTRIBUTION (%)
GR | SA | SI | CL

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Groundwater depth encountered on completion of drilling: 2.3 m. Cave depth after auger removal: Open

Groundwater depth observed on: Jun 7.23 at depth of: 0.5 m. Groundwater Elevation: 230.9 m

Scale: **1 :75**

RECORD OF BOREHOLE No. 7

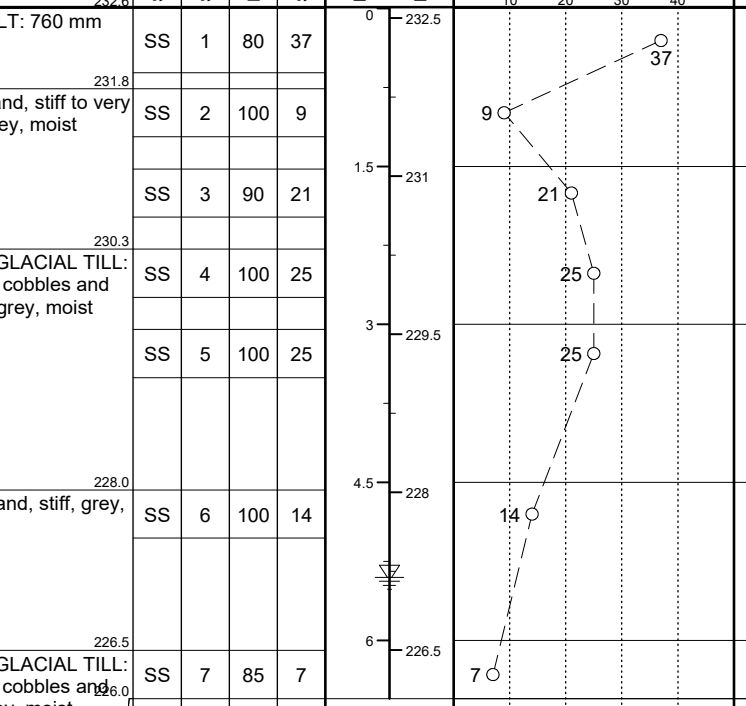
Project Number: **2301130**
Project Client: **Simpson Road Landowners Group Inc.**
Project Name: **South Simpson -Headwaters W Rainbow Ck**
Project Location: **Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Track Mount** Drilling Machine: **Solid Stem Augers**
Logged By: **TA** Northing: **4855220.4** Date Started: **May 19/23**
Reviewed By: **GW** Easting: **603844.3** Date Completed: **May 19/23**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	Instrumentation Installation	COMMENTS & GRAIN SIZE DISTRIBUTION (%) GR	SA	SI	CL
	0.0 232.6 RECYCLED ASPHALT: 760 mm	SS	1	80	37	0	232.5					
	0.8 231.8 CLAYEY SILT: Some sand, stiff to very stiff, brown and grey, moist	SS	2	100	9	1.5	231					
		SS	3	90	21							
	2.3 230.3 SANDY CLAYEY SILT GLACIAL TILL: Some gravel, inferred cobbles and boulders, very stiff, grey, moist	SS	4	100	25	3	229.5		First Water Strike SS4			
		SS	5	100	25							
	4.6 228.0 CLAYEY SILT: Trace sand, stiff, grey, moist	SS	6	100	14	4.5	228					
	6.1 226.5 SANDY CLAYEY SILT GLACIAL TILL: Trace gravel, inferred cobbles and boulders, firm, grey, moist	SS	7	85	7	6	226.5		5	22	45	28
	6.6 226.0 Borehole Terminated at 6.6 m											

FIELD TESTING: Shear Strength Testing (kPa) — Other Test; Pocket Penetrometer; Field Vane (Intact); Field Vane (Remolded); 40 80 120 160. Penetration Testing — SPT; DCPT; 10 20 30 40.

LAB TESTING: Combustible Organic Vapour (ppm); Combustible Organic Vapour (%LEL); Total Organic Vapour (ppm); 100 200 300 400. Atterberg Limits — PL; LL. Water Content (%); 10 20 30 40.



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Groundwater depth encountered on completion of drilling: 5.4 m. Cave depth after auger removal: Open
Groundwater depth observed on: Groundwater Elevation:

Scale: **1 :75**

RECORD OF BOREHOLE No. 8

Project Number:	**2301130**				
Project Client:	**Simpson Road Landowners Group Inc.**				
Project Name:	**South Simpson -Headwaters W Rainbow Ck**	Drilling Method:	**Track Mount**	Drilling Machine:	**Solid Stem Augers**
Project Location:	**Caledon, ON**	Logged By:	**TA**	Northing: **4855027.8**	Date Started: **May 17/23**
Drilling Location:	**See Borehole Location Plan**	Reviewed By:	**GW**	Easting: **603918.9**	Date Completed: **May 17/23**
Local Benchmark:					

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING	LAB TESTING		COMMENTS & GRAIN SIZE DISTRIBUTION (%)				
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	Shear Strength Testing (kPa): × Other Test, + Pocket Penetrometer, ▲ Field Vane (Intact), △ Field Vane (Remolded); 40 80 120 160; Penetration Testing: ○ SPT ● DCPT; 10 20 30 40	△ Combustible Organic Vapour (ppm), ▲ Combustible Organic Vapour (%LEL), ◇ Total Organic Vapour (ppm); 100 200 300 400; Atterberg Limits PL LL; ○ Water Content (%); 10 20 30 40	Instrumentation Installation		GR	SA	SI	CL
	0.0 231.7					0									
	GRANULAR: 720 mm	AS	1						10						
	0.7 231.0						231								
	CLAYEY SILT: Some sand, stiff, brown, moist	SS	2	80	10			10	15						
	1.5 230.2					1.5									
	CLAYEY SILT GLACIAL TILL: Some sand, inferred cobbles and boulders, very stiff to hard, brown, moist	SS	3	100	28			28	15						
							229.5								
		SS	4	100	35			35	13						
						3									
		SS	5	100	20			20	13						
							228								
						4.5									
	- - - Grey - - -	SS	6	45	15			15	16		First Water Strike SS5				
							226.5								
	6.1 225.6					6									
	SAND AND SILT: Trace clay, compact, grey, wet	SS	7	100	24			24	13			0	43	53	4
	6.6 225.2														
	Borehole Terminated at 6.6 m														

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Groundwater depth encountered on completion of drilling: 5.4 m. Cave depth after auger removal: Open

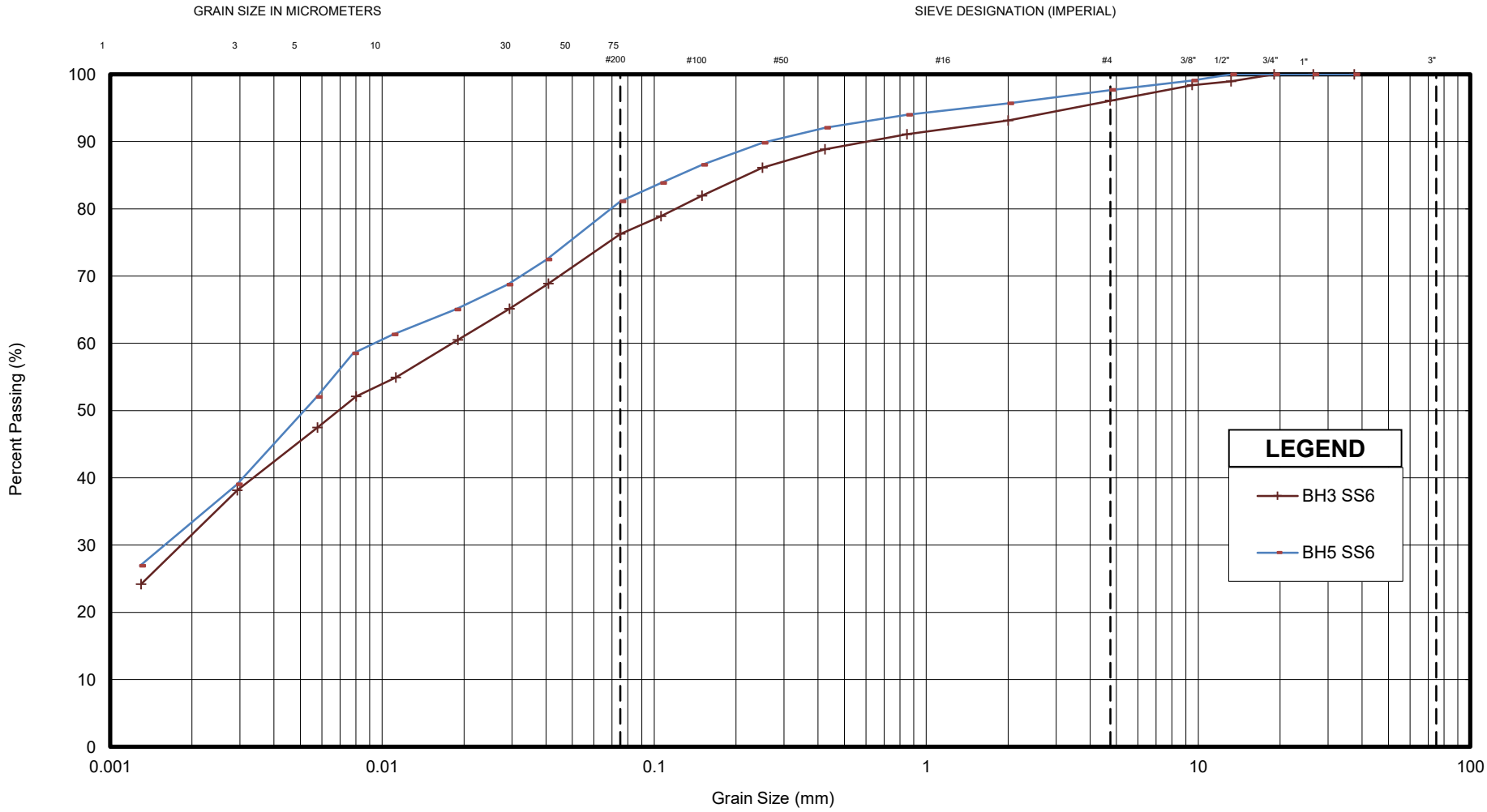
Groundwater depth observed on: Jun 7/23 at depth of: 2.0 m. Groundwater Elevation: 229.7 m

Appendix B

Geotechnical Laboratory Testing

UNIFIED SOIL CLASSIFICATION SYSTEM

CLAY AND SILT	SAND			GRAVEL	
	Fine	Medium	Coarse	Fine	Coarse



Sample	Description	Gr.	Sa.	Si.	Cl.	D_{10}	D_{30}	D_{60}	C_u	C_c
BH3 SS6	SANDY CLAYEY SILT, Trace Gravel	4	20	45	31	-	0.002	0.018	-	-
BH5 SS6	CLAYEY SILT, Some Sand, Trace Gravel	2	17	48	33	-	0.002	0.009	-	-

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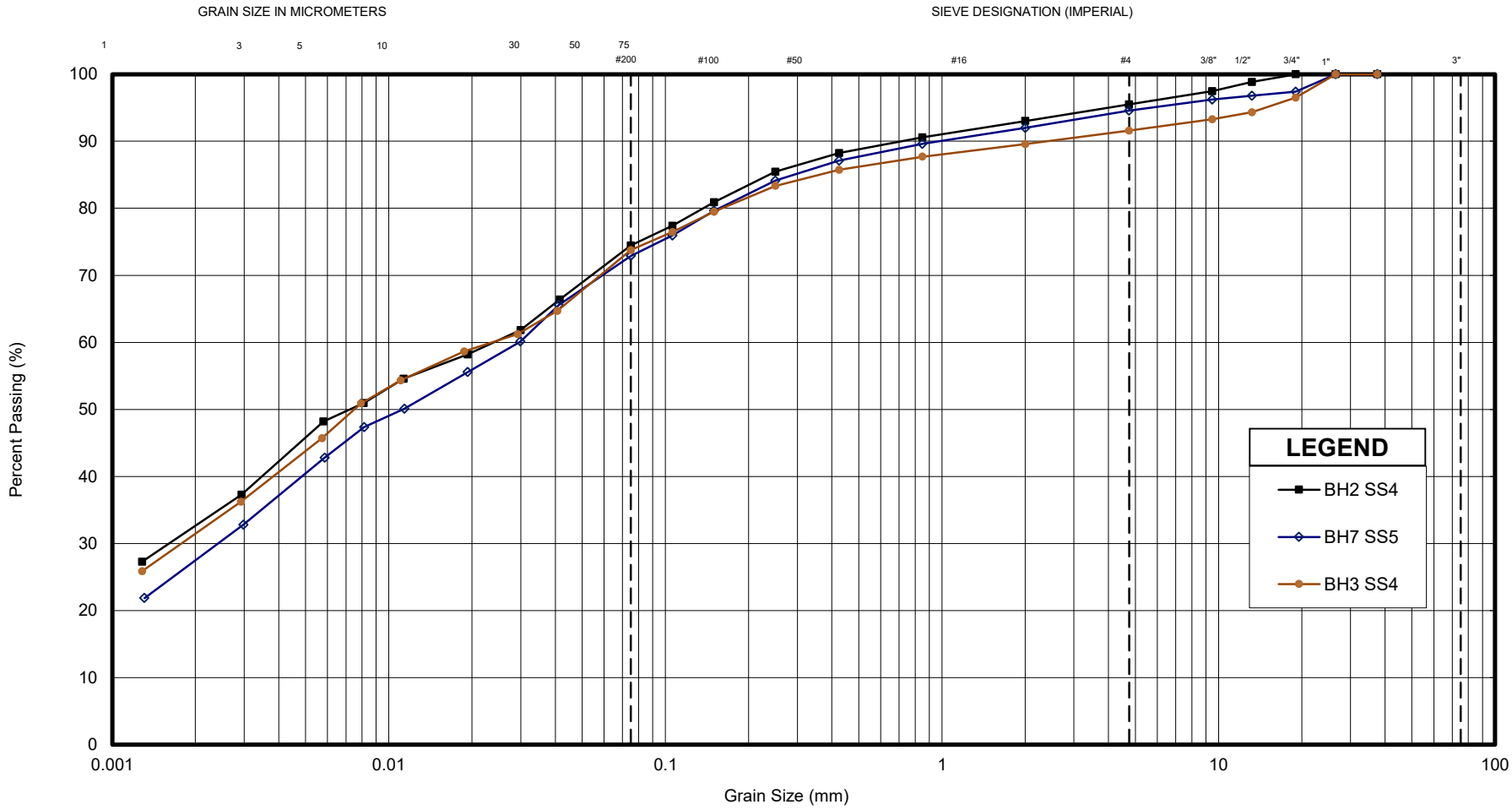
GRAIN SIZE DISTRIBUTION - South Simpson (Headwaters of West Rainbow Creek)

CLAYEY SILT

FIGURE No.	B1
REF. No.	2301130
DATE	Sept. 2023

UNIFIED SOIL CLASSIFICATION SYSTEM

CLAY AND SILT	SAND			GRAVEL	
	Fine	Medium	Coarse	Fine	Coarse



Sample	Description	Gr.	Sa.	Si.	Cl.	D_{10}	D_{30}	D_{60}	C_u	C_c
BH2 SS4	SANDY CLAYEY SILT, Trace Gravel	5	21	42	32	-	0.002	0.024	-	-
BH7 SS7	SANDY CLAYEY SILT, Trace Gravel	5	22	45	28	-	0.002	0.030	-	-
BH3 SS4	CLAYEY SILT, Some Sand, Trace Gravel	8	18	42	32	-	0.002	0.024	-	-

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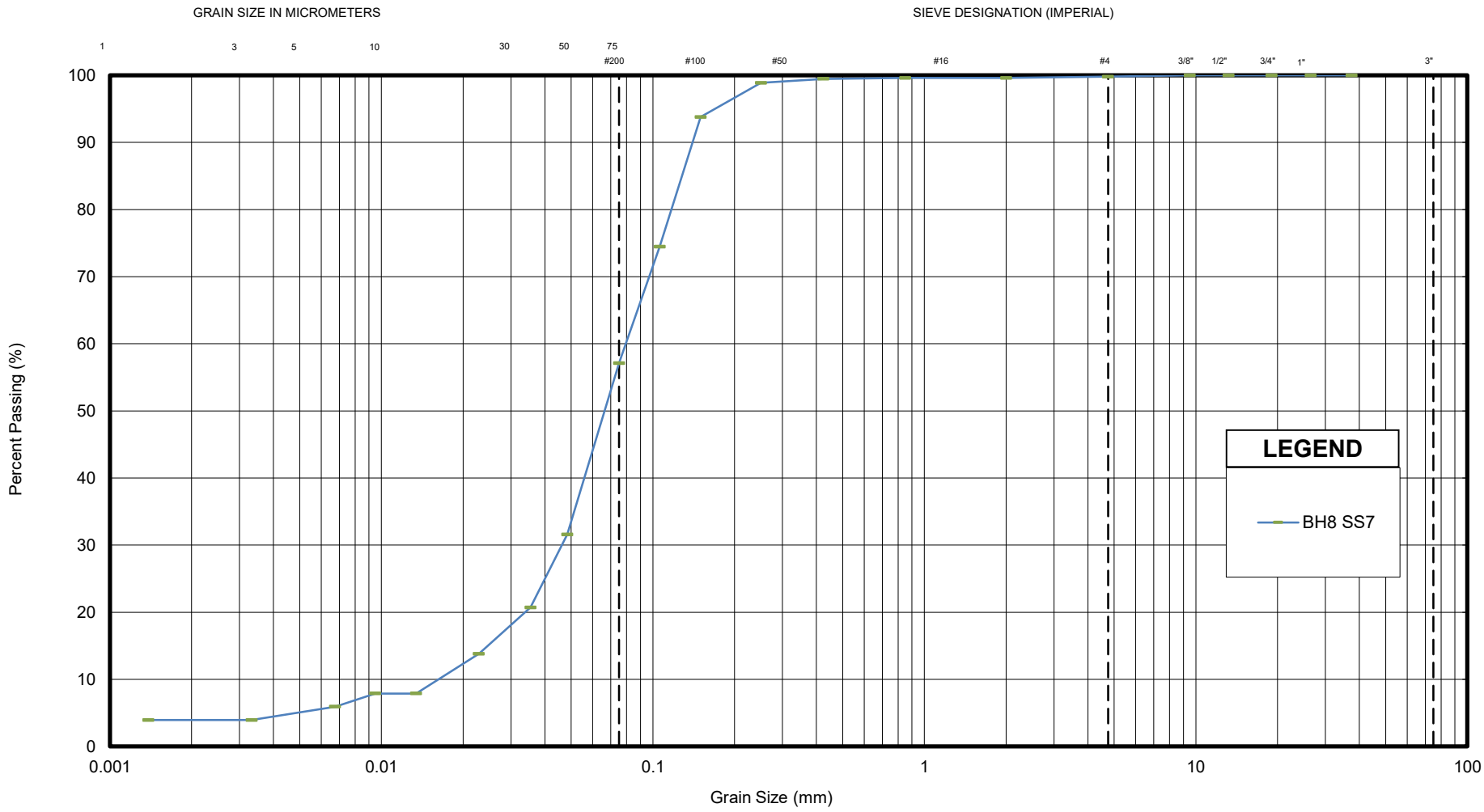
GRAIN SIZE DISTRIBUTION - South Simpson (Headwaters of West Rainbow Creek)

GLACIAL TILL

FIGURE No.	B2
REF. No.	2301130
DATE	Sept. 2023

UNIFIED SOIL CLASSIFICATION SYSTEM

CLAY AND SILT	SAND			GRAVEL	
	Fine	Medium	Coarse	Fine	Coarse



Sample	Description	Gr.	Sa.	Si.	Cl.	D_{10}	D_{30}	D_{60}	C_u	C_c
BH8 SS7	SAND AND SILT, Trace Clay	-	43	53	4	0.016	0.046	0.079	4.9	1.7

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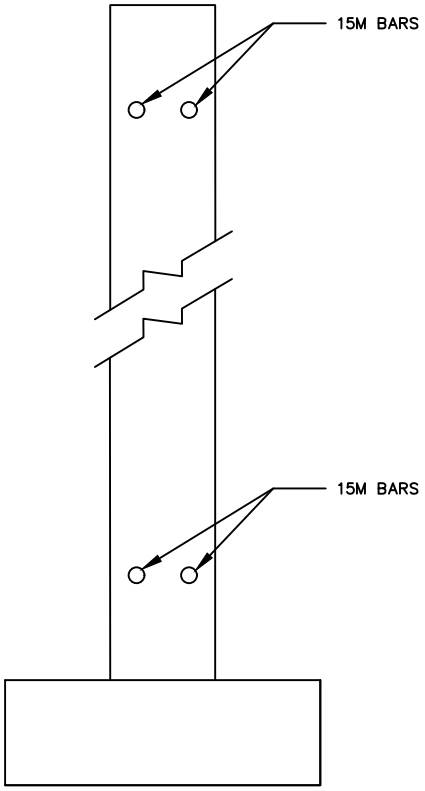
GRAIN SIZE DISTRIBUTION - South Simpson (Headwaters of West Rainbow Creek)

SAND AND SILT

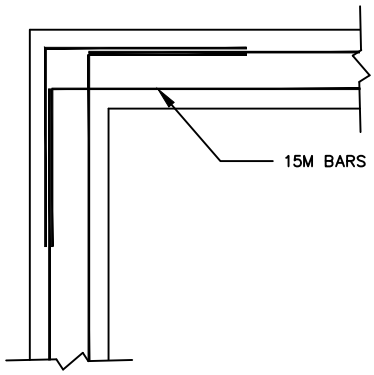
FIGURE No.	B3
REF. No.	2301130
DATE	Sept. 2023

Appendix C

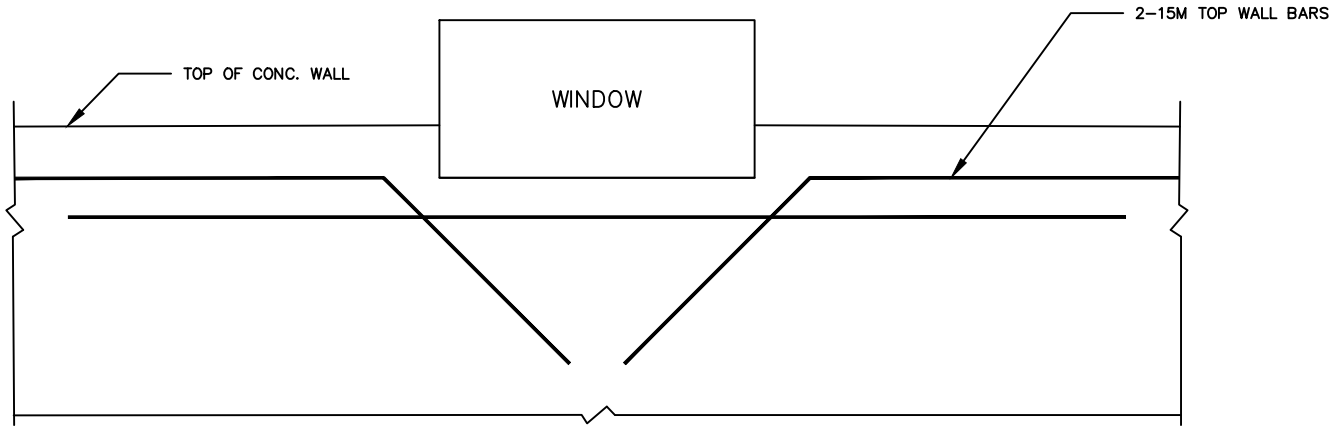
Typical Details



TYPICAL REINFORCED WALL



TYPICAL SPLICING AT CORNERS



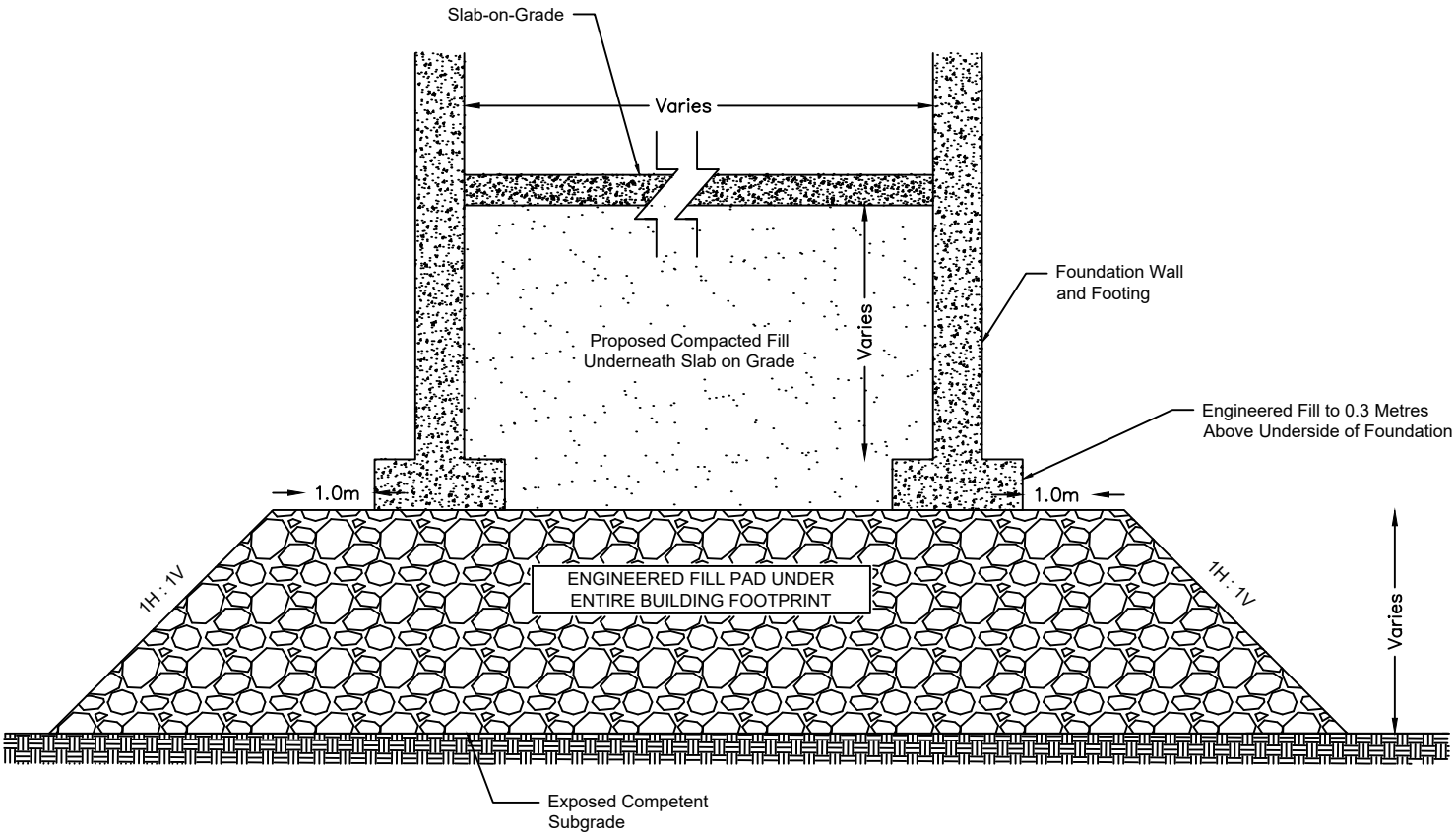
TYPICAL WINDOW REINFORCING

GEI Consultants
647 Welham Rd, Unit 14, Barrie, ON, L4N 0B7

FOUNDATION WALL REINFORCING ON ENGINEERED FILL TYPICAL DETAIL

Notes:

1. Engineered Fill compacted to 100% Standard Proctor Maximum Dry Density (SPMDD) and inspected under the full time supervision of GEI.
2. Engineered fill must be placed in loose lifts of 200 mm or less and then compacted as noted above.
3. Interior non-structural compacted fill compacted to 98% SPMDD with recommended part-time inspection.



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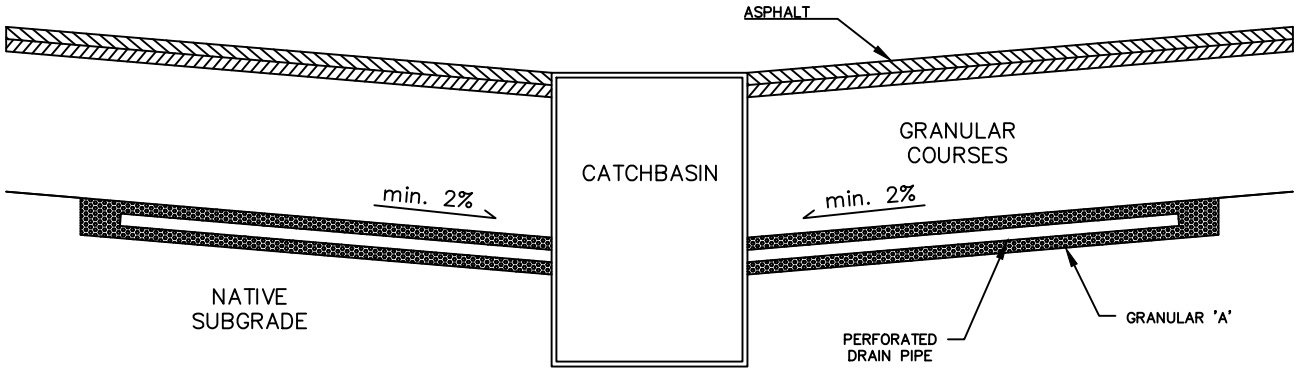
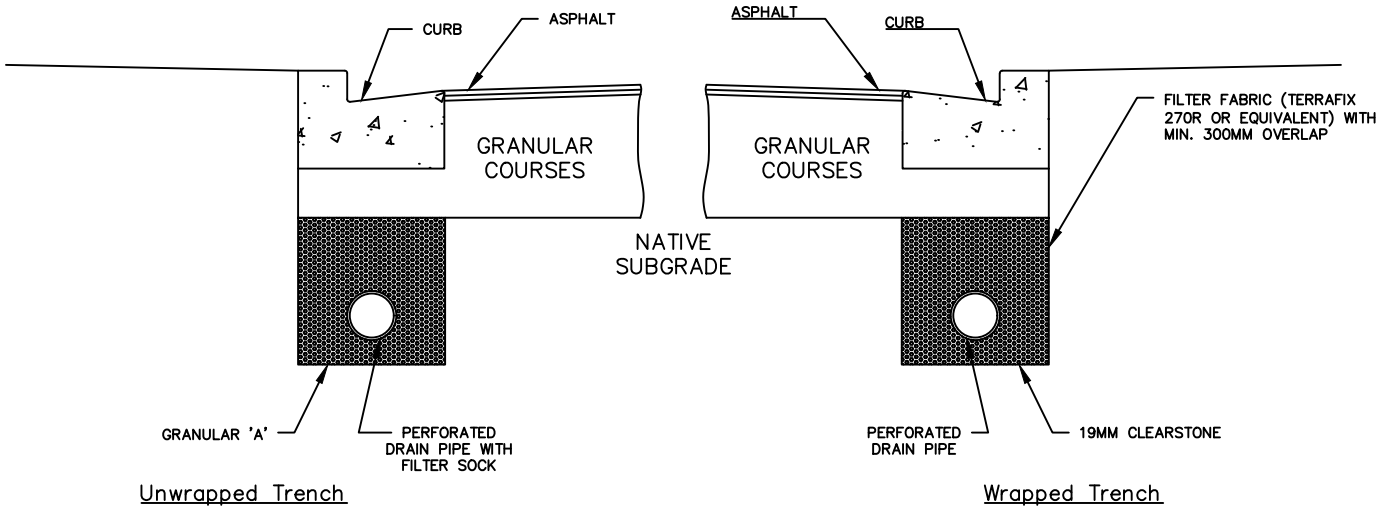
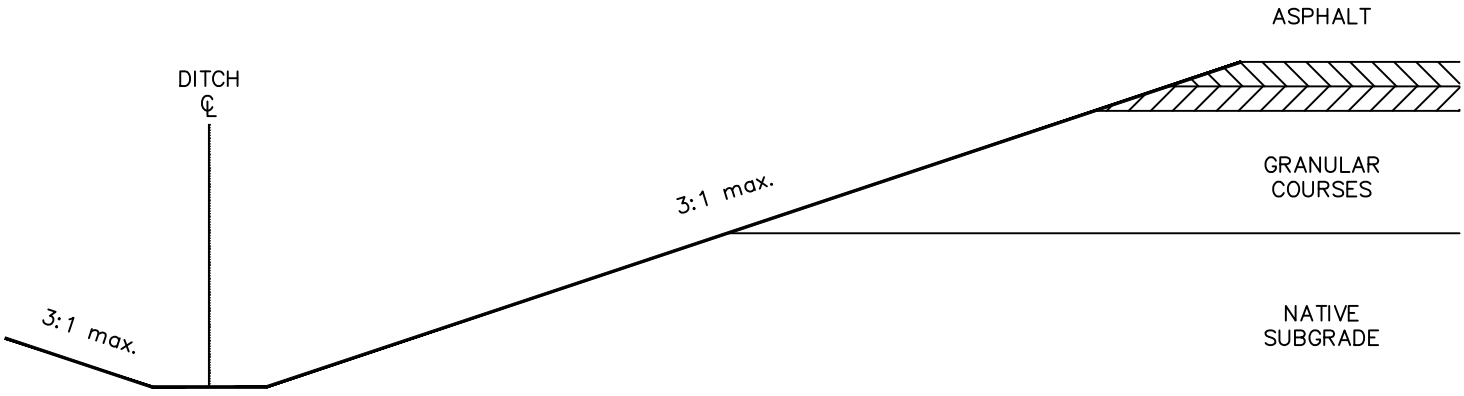
ENGINEERED FILL PAD DIMENSIONING TYPICAL DETAIL





Urban Cross Sections



Rural Cross Section

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PAVEMENT DRAINAGE ALTERNATIVES TYPICAL DETAILS

GEI Consultants

Consulting Engineers and Scientists

Hydrogeological Investigation

South Simpson (Headwaters of West Rainbow Creek), Block Plan and Master Environmental Servicing Plan Update

Northern corner of Coleraine Drive and Mayfield Road, Caledon, Ontario

Submitted to:
Simpson Road Landowners Group Inc.
c/o Helen Mihailidi
7501 Keele Street, Suite 200
Vaughan, ON L4K 1Y2

Submitted by:
GEI Consultants Ltd.
647 Welham Road, Unit 14
Barrie, Ontario, L4N 0B7

October 11, 2023
Project No. 2301130

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Figures

Appendices

1. Introduction

GEI Consultants Ltd. (GEI) was retained by Simpson Road Landowners Group Inc. (the Client) to complete a hydrogeological investigation to support a Block Plan and Master Environmental Servicing Plan update at South Simpson (Headwaters of West Rainbow Creek). These works are required as part of the submission for a proposed extension of Simpson Road and provide an update to the Master Environmental Servicing Plan 2000 (MESP) and incorporate the revisions made through the Municipal Class EA for Simpson Road (2013). All are intended to support future development of the study area identified in Schedule "C" of the Terms of Reference (TOR). Simpson Road is generally located north of the intersection of Coleraine Drive and Mayfield Road in Caledon, Ontario. A summarized site location plan as described by Schedule "C" is enclosed as Figure 1.

The subject lands are designated Prestige Industrial and General Industrial in the Official Plan. The subject lands are a part of the Town of Caledon's South Simpson Secondary Plan Area and are subdivided into eleven (11) distinct properties, separated by different landowners. The Landowner Group consists of landowners of parcels 2, 3, 4, 5 and 11 on the map by Weston Consulting (Weston). As requested, non-participating landowners within the secondary plan area have not been included in this study. This exclusion is to be confirmed by the Town of Caledon.

The subject lands have an approximate total area of 36.75 ha (90.70 acres) and are currently occupied by open lands, various truck and transportation uses, and a former garden supply store. The subject lands are bounded by Mayfield Road to the south, Coleraine Drive to the west, and mixed residential, commercial, and undeveloped lands to the east and north. Undeveloped lands exist within a southern parcel located on three sides by subject lands and Mayfield Road to the south.

Local elevations in the northeastern portion of the subject lands are near Elev. 236.0 m, sloping to the south-southeast with elevations near 230.5 m. The maximum difference in elevation across the site is approximately 5.5 m as inferred from Topographic information provided by First Base Solutions and shown in Pre-Development Drainage Plan Drawing DAP-2. An aerial image of the site from 2022 is provided on Figure 2.

Historical study and contemporary documents related to this development file were available for review. GEI was provided the following information in preparation of this report:

- "*Block Planning for the South Simpson Secondary Plan, North-East Corner of Coleraine Drive and Mayfield Road, Ward 5*." Staff-Report 2022-0374, dated July 12, 2022, prepared by Planning Department, Town of Caledon
- *"South Simpson Secondary Plan Area Ownership"* Map, from Schedule "C" to Staff Report 2022-0374 dated May 25, 2022.
- *"Terms of Reference: South Simpson (Headwaters of West Rainbow Creek) Master Environmental Servicing Plan Update"*. Town of Caledon

- *"Hydrogeological Appraisal Simpson Road Completion from North of George Bolton Parkway to Mayfield Road Town of Caledon, Ontario"* prepared by AMEC Earth & Environmental Limited dated March 8, 2011.
- *"Simpson Road Extension Phase 3, from 282m South of Parr Boulevard to Mayfield Road, Contract 14-09"* prepared by Wood and commissioned by Region of Peel, dated November 2020.

The proposed development involves the construction of an approximate 600 m length of road that will be oriented in a north-northwest/south-southeast direction and connects Simpson Road as it currently exists in the north to Mayfield Road in the south. It includes site servicing and associated bedding as much as 4.5 mbgs along Simpson Road.

The hydrogeological investigation consisted of 1) borehole drilling and monitoring well installations to characterize existing soils and groundwater subsurface and 2) staff gauge installations at surface to monitor baseflow conditions in the Rainbow Creek Tributary that run approximately parallel to the proposed road extension.

This report includes monthly groundwater and surface water monitoring, and infiltration testing. GEI is completing a geotechnical report concurrently under separate cover.

1.1 Purpose and Scope of Work

The main objectives of the Hydrogeological Investigation were to:

a) Establish the local hydrogeological settings of the Site;
b) Provide an assessment of anticipated construction dewatering flow rates based on the site servicing plan provided from the Client;
c) Assess use of Low Impact Development (LID) measures;
d) Assess groundwater quality and compare the results to the applicable Provincial Water Quality Objective (PWQO), Ontario Drinking Water Objective (ODWO), and O.Reg.153/04, as amended, Site Condition Standards (SCSs);
e) Qualitatively assess the potential impact to the nearby structures, water bodies and water users, if any, and comment on future regulatory agency involvement;
f) Assess private servicing feasibility; and
g) Prepare a hydrogeological investigation report.

To achieve the investigation objectives, GEI carried out the following scope of work:

a) Conduct a background desktop review of pertinent geological and hydrogeological resources, Ministry of Environment, Conservation and Parks (MECP) Water Well Records, previous reports, and proposed Site plan drawings.
b) Visit the site and note existing site conditions, site setting, topography, drainage, water features, and potential water wells within 500 m of the site, if any.
c) Utilization of eight (8) advanced boreholes with five (5) monitoring wells installed during the field investigation and two (2) nested piezometers, each including one (1) shallow well and one (1) deep piezometer.

d) Install and utilize two (2) staff gauges and two (2) level loggers to monitor surface water elevations, to be included in a later subsequent letter report.
e) Revisit the site and measure groundwater levels, perform hydraulic conductivity testing at three (3) monitoring wells, and retrieve representative groundwater samples.
f) Submit one (1) representative unfiltered groundwater sample for laboratory testing to compare against the chemical parameters as defined in the Peel Storm and Sanitary Sewer Use Bylaw; one (1) representative unfiltered groundwater samples compared to PWQO standards for metals; O.Reg. 153/04, as amended, for PHCs and VOCs; and for general Total Suspended Solids (TSS).
g) Submit one (1) representative filtered groundwater sample for laboratory testing to compare against the PWQO standards for metals and TSS.
h) Evaluate the background information, and field and laboratory data to assess construction dewatering requirements.
i) Prepare a hydrogeological investigation report.

1.2 Regulatory Requirements for Water Taking

1.2.1 Water Taking – Temporary

The volume of water entering the excavation during construction will be based on both groundwater infiltration and precipitation events. Based on O.Reg. 63/16, the following dewatering limits and requirements are as follows:

- Construction Dewatering less than 50,000 L/day: The takings of both groundwater and stormwater does not require a hydrogeological report, does not require registration on the Environmental Activity and Sector Registry (EASR), and does not require a Permit to Take Water (PTTW) from the MECP.
- Construction Dewatering greater than 50,000 L/day and less than 400,000 L/day: The taking of groundwater and/or stormwater requires a hydrogeological report and registration on the EASR but does not require a PTTW from the MECP.
- Construction Dewatering greater than 400,000 L/day: The taking of groundwater and/or stormwater requires a hydrogeological report and requires a PTTW from the MECP.

1.2.2 Source Water Protection

The site is in the Toronto Source Protection Area, the CTC Source Protection Region, and is in the jurisdiction of the Toronto and Region Conservation Authority (TRCA). The following documents should be used in determination of the regulatory requirements when it comes to maintaining hydrogeological function at this site:

- "*Approved CTC Source Protection Plan*", dated February 23, 2022, by the CTC Source Protection Committee.
- *"Approved Assessment Report: Toronto and Region Source Protection Area,"* dated February 23, 2022, by the CTC Source Protection Committee.

Based on Source Water Protection online mapping, the following is noted:

- Wellhead Protection Area (WHPA): The site is not located within a WHPA Zone, Q1 or Q2 (Figure 3).
- Intake Protection Zone (IPZ): The study area is not located within IPZ (Figure 4).
- Highly Vulnerable Aquifer (HVA): The site is not located within an HVA (Figure 5).
- Significant Groundwater Recharge Area (SGRA): The site is not located within an SGRA (Figure 6).
- The site is not located within the Oak Ridges Moraine or Niagara Escarpment planning areas.

2. Background Review

The subject lands are irregular in shape and have an approximate total area of 36.75 ha (90.70 acres). They are currently occupied by open lands, various truck and transportation uses, and a former garden supply store. The subject lands are bounded by Mayfield Road to the south, Coleraine Drive to the west, and mixed residential, commercial, and undeveloped lands to the east and north. Undeveloped lands exist within a southern parcel located on three sides by subject lands and Mayfield Road to the south.

The site does not lie within any Well Head Protection Area (WHPA) as shown on Figure 3. The site is not within an Intake Protection Zone (IPZ) as shown on Figure 4. A Highly Vulnerable Aquifer (HVA) does not underly the site as shown on Figure 5. The site is not within a Significant Groundwater Recharge Area (SGRA), as shown on Figure 6. The site is not located within the designated areas of the Oak Ridges Moraine Conservation Act or Niagara Escarpment Planning and Development Act.

2.1 Topography and Drainage

Local elevations in the northeastern portion of the subject lands are near Elev. 236.0 m, sloping to the south-east with elevations near 230.5 m. The maximum difference in elevation across the site is approximately 5.5 m as inferred from Topographic information provided by First Base Solutions and shown in Pre-Development Drainage Plan Drawing DAP-2.

As shown in the Ontario Watershed Information Tool and Ontario Watershed Boundaries mapping, the subject lands are located in a headwater drainage area associated with the larger Black Creek – Humber River Outlet Watershed (02HC-02) and Humber River – Don River Watershed (02HC). Two sub-catchment areas are located in the southern half of the subject area. Both serve as headwater areas to the larger Black Creek – Humber River Outlet Watershed.

It is expected that surficial runoff from the site is captured primarily within the storm water pond where it travels through the linked headwater tributary then travels south-south east approximately 6 km before migrating south east toward Woodbridge where it connects with the main Humber River channel, which is defined southeast of the Site, some 13 km away.

The level of water use is classified as “Low” under the summer low flow and “Low” under the average annual flow conditions for purposes of Ontario Regulation 387/04 (Water Taking and Transfer) under the Ontario Water Resources Act. Storm water management ponds appear to capture surficial runoff from the adjacent commercial / industrial lands. An unevaluated wetland exists south of Mayfield Road and was observed to be hydraulically connected at the surface to West Rainbow Creek Tributary through a culvert running under Mayfield Road. The Rainbow Creek tributary runs approximately parallel to the prevailing direction of surface water flow in the primary watershed and the proposed Simpson Road extension. This tributary was instrumented with two (2) staff gauges and two (2) water level loggers to evaluate surface water elevations. Based on field observations, it appears this tributary is hydraulically connected to surface water features southeast of Mayfield Road through a culvert that runs under Mayfield Road.

2.2 Site Physiographic, Geologic and Hydrogeological Settings

The site is in the physiographic region denoted as bevelled till plains of the Peel Plain Physiographic Region per Chapman and Putnam, 1984. Quaternary geology mapping from the Ontario Geological Society indicates cohesive clay to silt textured glacial till deposits across the site.

Historic aerial imagery shows earthworks and industrial development across large portions of the site to accommodate the current industrial land use which suggests that some surficial zones of earth fill should be expected. Water well records from the site and surrounding area indicate that clays, clay gravels and hard tills extend deeper than 15 m below grade.

The bedrock in the general area corresponds to the Georgian Bay Formation, consisting of shale and limestone lithology. Based on the MECP Water Well Records in the area bedrock was anticipated at a depth of approximately 20 to 52 m below existing grade. Drift thickness mapping (C. Gao, et al., 2006. Bedrock topography and overburden thickness mapping, southern Ontario; Ontario Geological Survey, Miscellaneous Release – Data 207.) shows approximately 35 m of drift material overlying bedrock.

2.3 MECP Water Well Records and Existing Water Wells

MECP water well records were obtained within 500 m of the site area to assess the general nature of the groundwater resource in near vicinity of the site, and historical/current uses of wells in the area. Forty-nine (49) well records were found. The approximate MECP well locations are shown on Figure 7 and a well records summary table is included in Appendix A.

The wells were installed for the following uses:

- Sixteen (16) of the records indicate domestic use.
- Seventeen (17) of the records indicate monitoring use/test hole.
- One (1) of the records indicate not used.
- Fourteen (14) of the records did not specify the use and are of unknown use.

The stratigraphic descriptions within the MECP water well records may show discrepancies due to the methodology in which they are determined (observations of cuttings and lacking consistency of soil descriptions between different drillers). Though this is the case, an overall sense of the deep stratigraphy can be determined by looking at commonalities between most stratigraphic descriptions and where the wells were terminated in an aquifer.

As much as approximately 30 mbgs, the well records typically indicate brown clays and loams near surface (< 4 mbgs) underlain by grey clays and clay silts to gravel (potentially glacial till in some locations (5 – 30 mbgs). Shale bedrock was encountered in multiple wells at depths ranging from 36 to 48 mbgs. The domestic supply well records do not show screen installation depths, though fresh water was noted at 12 to 44 mbgs.

2.4 Site Condition Standards

The MECP has developed a set of Soil, Ground water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011) and O. Reg. 153/04, as amended. The standards consist of nine tables (Table 1 through Table 9) that provide criteria for maximum concentrations of various contaminants. In general, the applicable O. Reg. 153/04, as amended, SCSs depend on the site location, land use, soil texture, bedrock depth and the applicable potable or non-potable ground water condition at the investigation site.

In order to determine the Site Sensitivity, Sections 41 and 43.1 of O. Reg. 153/04, as amended, were evaluated by GEI as shown in the following table:

CRITERIA	RESULT
Current Property Use	Vacant/Undeveloped
Potable vs. Non-Potable Ground Water	Potable
Proximity of Areas of Natural Significance	>30 m
Proximity to a Water Body	<30 m
Shallow Soil Condition	No
Land Use	Residential/Parkland/Institutional (RPI)
Applicable Site Condition Standard	Table 8: Generic Site Condition Standards For Use within 30 m of a Water Body in a Potable Ground Water Condition for RPI / Industrial/Commercial/Community (ICC) land use (Table 8 RPI/ICC)

2.5 Visual Inspection of the Site

The site is irregular in shape have an approximate total area of 36.75 ha (90.70 acres). The subject lands are bounded by Mayfield Road to the south, Coleraine Drive to the west, and mixed residential, commercial, and undeveloped lands to the east and north. Undeveloped lands exist in a southern parcel located on three sides by subject lands and Mayfield Road to the south. Agricultural lands exist primarily to the south and west of Coleraine Drive and Mayfield Rd. The site currently contains a mix of various truck and transportation uses, open and residential lands, and a former garden supply store which is consistent with other land uses in the area.

The topography within the study region (within 500 m of the site) is consistent with surficial geological mapping and the developmental history of the site as evidenced in the aerial photo record. Local to the site, the northwestern portion of the site is near Elev. 236.0 m, sloping to the southeast at an elevation near 230.5 m, with a maximum difference in elevation across the site of about 5.5 m shown in Pre-Development Drainage Plan Drawing DAP-2.

3. Procedures and Methodology

All elevations in this report are geodetic/metric and expressed in metres (m). All measurements are also in metric and expressed in millimetres (mm), metres (m) or kilometers (km). Boreholes appear in short form as BH and those in which wells were installed are presented as BH/MW.

The borehole locations were laid out in the field by GEI staff prior to commencement of drilling operations. The locations of underground utilities were coordinated with private and public locating companies.

Borehole ground surface elevations and coordinates (referencing NAD 83 geodetic datum) were surveyed by GEI with a Topcon HiPer SR GPS Survey unit. The elevations are provided on the borehole logs in Appendix B. Borehole locations are shown on Figure 2.

The fieldwork for the drilling program was carried out between May 17 and May 19, 2023. A total of eight (8) boreholes were drilled to a maximum depth of 6 m (Elev. 223.8). At select borehole locations a deep well and a shallow well were installed to allow for nested wells to be installed as described below. Borehole logs are provided in Appendix B.

The boreholes were advanced by a drilling subcontractor retained and supervised by GEI using a track-mounted drill rig, solid and hollow stem augers, and standard soil sampling equipment. Sampling was conducted using a 51 mm O.D. Split Spoon (SS) sampler. Standard Penetration Test (SPT) “N” Values (N values) were recorded for the sampled intervals as the number of blows required to drive an SS sampler 305 mm into the soil using a 63.5 kg drop hammer falling 750 mm, in accordance with ASTM D1586. In each borehole soil sampling was conducted at 0.75 m intervals for the upper 3.0 m and at 1.5 m intervals thereafter.

Five (5) monitoring wells were installed within select boreholes on site. Though included in the Borehole Log, one monitoring well became inaccessible during re-grading, and thus only four (4) wells are operational. Nested monitoring wells / piezometers were installed in two (2) boreholes. The “D” signifies the deep well and the “S” signifies the shallow piezometer such that both deep and shallow conditions can be monitored. The wells/piezometers were installed on site to facilitate long-term groundwater monitoring, sampling, and in-situ testing. Monitoring well construction is shown on the borehole logs in Appendix B.

GEI field staff examined and classified characteristics of the soils encountered in the boreholes, including the presence of fill materials, groundwater observations during and upon completion of the drilling, recorded observations of borehole construction, and processed the recovered samples. All recovered soil samples were logged in the field, carefully packaged, and transported to GEI’s laboratory for more detailed examination and classification.

In GEI’s laboratory, the samples were classified as to their visual and textural characteristics. Six (6) representative samples of the major soil units were selected and submitted to our laboratory for grain size analysis. Grain size results are provided in Appendix C. Four of the samples were submitted for Atterberg Limits tests and the results area also provided in Appendix C.

3.1 Groundwater Monitoring

Groundwater levels will be measured in four (4) monitoring wells and two (2) nested monitoring wells / piezometers each month for one (1) year to determine the seasonally high groundwater levels.

Measures conducted up to the point of this reporting, are included in Section 4.2, Supplemental Groundwater Level Monitoring Report, will be issued following the completion of the 12-month groundwater level monitoring program.

3.2 Surface Water Monitoring

A baseflow monitoring program is being carried out. Nested piezometers (at Boreholes 4 and 6), staff gauges and level loggers. Staff gauges and level loggers were installed in West Rainbow Creek at locations near Borehole 4 and Borehole 6 (SG4 and SG6, respectively) to evaluate groundwater elevations and baseflow conditions. A supplemental report under separate cover will be provided upon completion of the monitoring program that incorporates measures captured through spring, summer, and fall seasons.

3.3 Hydraulic Conductivity Testing

Rising head tests were completed in the BH/MW 3 and BH/MW 8 on June 8th, and in BH/MW 6S on July 3, 2023. Water was manually purged from monitoring wells using LDPE piping and a foot valve. The static water level was measured prior to the start of testing, and the change in water level was monitored using an electronic level logger. The level loggers were left in the monitoring wells for several hours to allow for adequate recovery of the groundwater. The test data were used to estimate the horizontal hydraulic conductivity (K) of the soils at the well screen depths.

The semi-log plot for drawdown versus time for the tests are provided in Appendix D and results are discussed in Section 4.3.

3.4 Groundwater Chemical Sampling

To establish baseline conditions and assess the suitability for discharge of pumped groundwater to surface during potential dewatering activities, the following groundwater samples were collected from nested BH/MW 4D on June 8, 2023 and tested relative to the Peel Region storm and sanitary sewer use by-laws PWQO, and/or O.Reg.153/04, as amended, Table 1 SCSs (the most stringent SCSs):

- One (1) unfiltered groundwater sample was collected from Nested BH/MW 4d analyzed against Peel Region storm and sanitary sewer use by-laws; PWQO metals; O.Reg.153/04, as amended, PHCs and VOCs; and general Total Suspended Solids (TSS).
- One (1) filtered groundwater samples were collected from Nested BH/MW 4d and analyzed against PWQO metals and TSS only.

Prior to collection of the samples, approximately three (3) standing well volumes of groundwater were purged from the well. The samples were collected and placed into pre-cleaned laboratory-supplied vials and/or bottles provided with analytical test group specific preservatives, as required. Dedicated nitrile gloves were used during sample handling. The field filtered samples were run through a 75 µm filter. The samples were submitted to CALA- accredited Eurofins Environmental Laboratory for analysis. The results of the groundwater chemistry are presented in the Laboratory Certificates of Analysis provided in Appendix E.

4. Subsurface Conditions

The borehole locations are shown on Figure 2 and detailed subsurface conditions are presented on the borehole logs in Appendix B. The soil conditions encountered at the borehole locations are summarized below. A stratigraphic cross-section across the property as aligned on Figure 2 is included as Figure 8. The stratigraphy discussed in Sections 4.1.1 and 4.1.2 below pertain only to Boreholes 1 to 8 advanced by GEI in 2023.

It should be noted that the conditions indicated on the borehole logs are for specific locations only and can vary between and beyond the locations. It should be noted that the soil boundaries indicated on the borehole logs and subsurface profile are inferred from non-continuous sampling and observations during drilling. These boundaries are intended to reflect approximate transition zones and should not be interpreted as exact planes of geological change.

In addition, the descriptions provided in the borehole logs are inferred from a variety of factors that include visual observations of the soil samples retrieved, laboratory testing, measurements prior to and after drilling, and the drilling process itself (speed of drilling, shaking/grinding of the augers, etc.). The passage of time also may result in changes in conditions interpreted to exist at locations where sampling was conducted.

4.1 Stratigraphy and Hydrostratigraphy

The site is predominantly underlain by deposits of clayey silt and silt glacial till with coarse grained lenses at depth. Surface materials are mainly comprised of an asphalt / granular driving surface and are underlain by a variable fill layer associated with grading/leveling of the properties to approximately 1 mbgs. Topsoil was encountered locally at the surface. These near-surface materials capped layers of clayey silt and variably textured silt glacial tills which interbed with sands at depth. Materials are described below and visualized in Borehole Logs (Appendix B) and the Site Cross Section (Figure 8) in greater vertical dimension. Textural qualities of key materials are shown in Geotechnical Laboratory Results (Appendix C).

Moisture contents across the site vary uniformly through the soil column, ranging between 9 and 18% vertically, with median and average values of 14%. Slightly elevated moisture contents (22 to 24%) occur in near surface materials where less compaction (lower SPT-N values) can increase localized infiltration.

4.1.1 Surface Structure and Earth Fill

Non-native surface materials include 700 mm of asphalt (BH2), 250 mm of recycled asphalt (BH1), 25 to 760 mm of combination asphalt granular (BH6, BH7), and 720 mm granular (BH8).

A surficial topsoil layer was at the ground surface in BH3, NP's 4S and 4D and BH5 ranging in thickness from 25 to 180 mm.

Earth fill was encountered in all BH's / NP's with the exception of BH 7 where Asphalt/Granular combination materials extended to native materials. Earth fill of brown clayey silt to sand with trace gravel was stiff and encountered in remaining boreholes, 40 to 80 mm in thickness, as deep as 1.5 mbgs.

Previous reporting has indicated that this layer may participate in water perching. Evidence of this was not observed during the current field investigation. NP's 4 and 6, located near to West Rainbow Creek tributary exhibited elevated moisture contents (near surface) relative to subsurface layer moisture contents.

4.1.2 Clayey Silt

Upper cohesive clayey silt deposits were encountered beneath non-native materials in Boreholes 1, 3, 4, 5, 6, 7, and 8, and were found at approximately 0.8 mbgs to approximately 2.3 mbgs. The deposits were 0.78 to 1.5 m in thickness. Materials were variable in consistency (firm to very stiff), moisture content (moist to wet), and colour (brown to grey). Some sand was observed across Boreholes 1, 3, 4, 5, 7, 8 with minor incidence of trace organics, and trace gravel. N-values measured in these deposits ranged from 4 to 29.

These materials are suspected to actively participate as an actively diffusive recharging layer when compaction permits infiltration from overlying fill and granular materials. These materials are also found at depth below silt glacial till materials (described in Section 4.1.3), occurring with some sand, grey, moist to wet (nearer to West Rainbow Creek tributary) and being very stiff. It is suspected they act similarly as when found shallower. Most wells were installed in these materials.

4.1.3 Silt Glacial Till

Silt Glacial Till deposits were 0.8 to 4.6 m thick and encountered in all boreholes 1.5 to 2.3 mbgs. These deposits were typically encountered below and between clayey silt layers, and exhibited similar textural properties, albeit with an increased presence of gravel. Trace to some sand and inferred cobbles and boulders were also observed. In BH 8 this layer is underlain by sand and silt at 6.1 mbgs. N values ranged from 15 to 54. These soils were more consistently grey than overlying clayey silts and were moist to wet.

These materials are suspected to actively participate as a slow diffusing recharging layer, acting in functional concert with clayey silt materials above which share much of the same textural quality (as shown in Appendix C) and presumable bedding characteristics. Materials closer to West Rainbow Creek tributary and farther downstream exhibit greater wetness than farther upstream.

4.2 Groundwater Level Monitoring

Unstabilized groundwater level measurements and cave measurements were taken upon completion of drilling of each borehole as shown on the borehole logs in Appendix B. These measurements provide a rough estimate of the possible excavation and temporary groundwater control constructability considerations that may arise.

Monitoring wells were operational in four (4) GEI boreholes and two (2) nested piezometers/ monitoring wells to facilitate the measurements of stabilized groundwater levels. A 50 mm diameter PVC monitoring well was installed in all monitoring wells and 25 mm diameter PVC monitoring well was installed in all nested piezometers with a 1.5 m long screen. Monitoring well and nested piezometer construction and groundwater measurements are shown on the borehole logs in Appendix B, and the results are summarized in the table below. Please note, the well in Borehole 2 was covered during grading activities, becoming inaccessible following installation. The number of wells remaining is sufficient to carry out the required analysis.

Borehole / Monitoring Well	Well Screen Location (From - To)				Unit Screened	Unstabilized Groundwater Level	
	Depth (m bgs)		Elev. (m)			Depth (m)	Elev. (m)
BH/MW 1	4.6	6.1	229.2	227.7	Clayey Silt	Dry	--
BH/MW 2	4.6	6.1	--	--	Clayey Silt	Dry	--
BH/MW 3	4.6	6.1	228.8	227.3	Sandy Clayey Silt	Dry	--
BH/MW 4S	0.8	2.3	229.6	228.1	Clayey Silt	Dry	--
BH/MW 4D	4.6	6.1	225.8	224.3	Clayey Silt	Dry	--
BH/MW5	4.6	6.1	226.6	225.1	Clayey Silt	Dry	--
BH/MW6S	0.8	2.3	230.6	229.1	Clayey Silt	5.4	226.0
BH/MW6D	4.6	6.1	226.8	225.3	Clayey Silt Glacial Till	5.4	226.0
BH /MW 8	4.6	6.1	227.1	225.6	Clayey Silt Glacial Till	5.4	226.3

The stabilized groundwater levels in the installed monitoring wells were measured to range between approximately Elev. 228.7 and Elev. 232.1 or between 0.5 and 4.7 mbgs. Groundwater levels are expected to show seasonal fluctuations and vary in response to prevailing climate conditions.

A groundwater contour plan is provided as Figure 9, based on the late spring groundwater level measurements from June 2023. Based on this plan, local groundwater flow trends approximately south-east towards the West Humber River.

The groundwater monitoring data to date is provided below.

Borehole / Monitoring Well	Stabilized Groundwater Levels							
	June 7, 2023		July 10, 2023		Aug 22, 2023		Sept 20, 2023	
	Depth (m)	Elev. (m)	Depth (m)	Elev. (m)	Depth (m)	Elev. (m)	Depth (m)	Elev. (m)
BH/MW 1	4.6	229.1	2.7	231.1	2.8	231.0	2.9	230.9
BH/MW 2	--	--	-	-	-	-	-	-
BH/MW 3	1.3	232.0	1.6	231.7	1.4	232.0	1.6	231.7
BH/MW 4S	1.2	229.2	2.3	228.1	2.5	228.0	2.8	227.7

Borehole / Monitoring Well	Stabilized Groundwater Levels							
	June 7, 2023		July 10, 2023		Aug 22, 2023		Sept 20, 2023	
	Depth (m)	Elev. (m)	Depth (m)	Elev. (m)	Depth (m)	Elev. (m)	Depth (m)	Elev. (m)
BH/MW 4D	1.7	228.7	0.9	229.5	1.0	229.3	1.4	229.0
BH/MW5	1.3	229.9	0.3	230.9	0.5	230.7	0.9	230.3
BH/MW6S	0.5	230.9	2.2	229.2	1.8	229.6	1.5	229.9
BH/MW6D	1.3	230.1	0.4	231.0	0.4	231.0	0.7	230.8
BH /MW 8	2	229.7	2.0	229.8	2.0	229.8	2.0	229.8

4.3 Hydraulic Conductivity Testing

Hydraulic conductivity values were calculated from the rising head test data using Hvorslev's solution (1951). The semi-log plots for the results are provided in Appendix D and are summarized in the table below.

Borehole / Monitoring Well	Well Screen Location (From - To)				Unit Screened	Hydraulic Conductivity (K) (m/s)
	Depth (m bgs)		Elev. (m)			
BH/MW 3	4.6	6.1	228.8	227.3	Sandy Clayey Silt	1.3×10^{-8}
BH/MW 6S	0.8	2.3	230.6	229.1	Clayey Silt	1.9×10^{-5}
BH/MW 8	4.6	6.1	227.1	225.6	Clayey Silt Glacial Till	5.8×10^{-6}

Commonly reported ranges of hydraulic conductivity for material textures observed in BH/MW's are as follows from Freeze and Cherry (1979):

- Clay: 10^{-9} m/s to 10^{-12} m/s
- Silt: 10^{-5} m/s to 10^{-9} m/s

The reported textural properties and in-situ hydraulic conductivities fall within the reported ranges common for deposits consisting of clay and silt to clayey silt.

The site is predominantly underlain by lower-permeability deposits of clayey silt to silt and clay, or cohesive glacial till. A conservative hydraulic conductivity reflective of more permeable materials is considered applicable given the potential for hydrostratigraphic variability between boreholes. Based on the above observations and the stratigraphy that is expected to be encountered predominantly during excavation, the recommended hydraulic conductivity to use for dewatering calculations is 1.9×10^{-5} m/s.

4.4 Groundwater Quality

To assess the suitability for discharge of pumped groundwater to the surface or the existing storm/sanitary sewer system during dewatering activities, one (1) unfiltered and one (1) filtered groundwater sample was collected from Nested BH/MW 4D on June 8, 2023.

For the assessment purposes, the analytical results were compared to Peel Region Storm and Sanitary Sewer Use Bylaw 53-2010; PWQO; and/or the applicable O.Reg. 153/04, as amended, Table 1 SCSs. The results of the groundwater chemistry are presented in the laboratory Certificates of Analysis provided in Appendix E and are summarized below.

Exceedances						
Monitoring Well Sample Location	**Parameters Tested**	**O.Reg. 153/04, as amended, Table 1 All Types of Property Uses SCSs**	**Peel Region Sewer Use By-Law Criteria**		**PWQO**	
			Storm	**Sanitary**	**Interim**	
BH4D (Unfiltered)	Metals, TSS, PHCs, VOCs	No Exceedances	TSS, Manganese	TSS	Uranium, Cobalt, Aluminum	Iron
BH4D (Filtered)	Metals, TSS	--	Manganese	--	Uranium, Cobalt	No Exceedances

The unfiltered groundwater sample collected from BH/MWs 4D met Peel Region Storm and Sanitary Sewer Use Bylaw, PWQO and O.Reg. 153/04, as amended, Table 1 SCSs for all parameters tested except for:

- BH/MW 4D
  - Peel Region Storm Sewer Use Bylaw - TSS, Manganese
  - Peel Region Sanitary Sewer Use Bylaw - TSS
  - Interim PWQO – Uranium, Cobalt, Aluminum
  - PWQO – Iron

The filtered groundwater samples met PWQO for all parameters tested except for:

- BH/MW 4D
  - Interim PWQO – Uranium, Cobalt

If pumped groundwater will be discharged to surface, it must be suitably treated to remove the parameter exceedances prior to discharge (treatment methods to be determined by the dewatering contractor or civil engineer).

The above chemical results suggest treatment of the dewatering discharge water by filtration may reduce the concentration of metals sufficiently to meet the applicable Peel Region Storm and Sanitary Sewer Use By Law and PWQO for most parameters. However, some dissolved metals may naturally occur within the groundwater; concentrations of Manganese, Uranium, and Cobalt

were not reduced to acceptable concentrations by field filtering in 4D. Treatment of the dewatering discharge water by filtration or sedimentation to reduce the concentration of suspended solids, and thus reduce the concentrations of non-dissolved metals, is necessary and may be effective in achieving compliance with the Peel Region Storm and Sanitary Sewer Use By Law and PWQO. Other treatment methods may be necessary to reduce the concentration of dissolved analytes.

It is expected that during construction dewatering, the pumped water is to be first discharged to a silt bag or sedimentation tank at a minimum before being discharged to surface.

4.5 Preliminary Infiltration Rates

Determination of percolation rates are based on the "*Ministry of Municipal Affairs and Housing (MMAH) Supplementary Guidelines SB-6, Percolation Time and Soil Descriptions, September 14, 2012*". The boreholes indicate that the site is predominantly underlain by clayey silt to silt and clay, or cohesive glacial till (C.L.). Cohesionless deposits of sand, silt to silty sand were encountered near grade locally in the northeastern part of the site (generally S.M.). The Unified Soil Classification System classifications for the predominant soils encountered on-site are summarized below with the interpreted unfactored percolation rates (T-Time) and unfactored infiltration rates:

Unified Soil Classification System Classification	Unfactored Percolation Rate (T-Time) (mins/cm)	Unfactored Infiltration Rate (mm/hr)
S.M. Silty sand, sand-silt mixtures	8 to 20	30 to 75
C.L. Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays	Over 50	Lower than 12

The infiltration rate is not applicable below the groundwater table, and infiltration into earth fill or weathered / disturbed soil is not recommended. Appendix C of *"Low Impact Development Stormwater Management and Planning Design Guide"* (Version 1.0, 2010, by CVC and TRCA) suggests safety factors to be applied to infiltration rates. The safety factor applicable to the site is expected to be 2.5 but could be higher due to the underlying cohesive deposits and must be confirmed once the final location and elevation of LID measures are known.

It should be noted that these rates are based on published values and not on site-specific data. Once designs for LID features are further along or potential locations and types of LID features are decided, in-situ infiltration testing (typically Guelph Permeameter testing) should be conducted at the specific locations and elevations of the LID features being considered to ensure that the designed features are appropriate for the site.

5. Discussion and Analysis

5.1 Construction Dewatering Calculations

5.1.1 Excavations and Temporary Groundwater Control

New construction plan and profile drawings for the Simpson Road extension were available for review in exaction and dewatering estimates. The limits of construction for Simpson Road extend between Station 10+860 and Station 11+458 at Mayfield Rd, or approximately 600 m. It includes site servicing and associated bedding as much as 4.5 mbgs along Simpson Road.

The stabilized groundwater levels in the installed monitoring wells were measured to range between approximately Elev. 228.7 and Elev. 232.0, or 0.5 and 4.7 mbgs. Groundwater levels are expected to show seasonal fluctuations and vary in response to prevailing climate conditions.

For conservative estimates, the construction dewatering calculation is based on an open cut excavation at the present time. To excavate under dry conditions, the water level is anticipated to be lowered at least to a minimum of approximately 1.0 m below the proposed excavation depth. Based on the soil encountered during the borehole drilling program (predominantly clayey silt to silt and clay, or cohesive glacial till) a hydraulic conductivity of 1.9×10^{-5} m/s has been applied to the site.

Additional dewatering capacity may be required to maintain dry conditions within the excavation during and following significant precipitation events. It should be noted that the dewatering estimates provided in this report are based on the assumed site servicing depths. GEI must be provided with final site servicing and grading plans to verify the design assumptions or update the water taking estimates as needed. The exact scenario where these groundwater control techniques will work are estimates only and are directly correlated to how coarse/fine the native soils are in an excavation, and both the lateral and vertical extent of the cohesionless deposits encountered. If the groundwater table is not controlled during construction, the base of the excavations will probably be unstable, leading to difficulties in excavating and placement of pipes or footings. A dewatering contractor must review and assess the subsurface conditions to verify which dewatering techniques will work for the site and proposed utility installations, based on their experience and interpretation of the data. A test dig could be carried out to assist prospective contractors determine the most appropriate dewatering methods based on their own means and methods.

5.1.2 Construction Dewatering Calculation Assumptions

The assumptions used for the calculation of the dewatering rates for the proposed development are presented below:

- Existing grades are at an elevation of 230.4 to 233.8 based on the survey of the boreholes on site.
- The lowest ground surface elevation measured on-site is 230.4 at BH/MW 4.
- The highest water elevation measured on-site is 232.0 at BH/MW 3.

- A hydraulic conductivity of 1.9 x 10^{-5} m/s has been applied to the site and is based on the soils encountered during the borehole drilling program.
- The assumed storm and sanitary sewers and water main servicing will require open cut excavations as deep as 4.5 mbgs based on drawings along Simpson Road
- Groundwater levels should be lowered a minimum of 0.5 m below the excavation base.
- The highest groundwater level measured on-site to date is 0.5 mbgs at BH/MW 6.
- The total water table drawdown (including the 0.5 m below the excavation base) would be as much as 4.5 m for the typical scenario.
- It has been assumed that surface water will be managed sufficiently such that all surface water is diverted around the proposed excavations and surface water entering the proposed excavation would be minimal.
- The dewatering contractor may use smaller dewatering zones for general site servicing construction, thus limiting the dewatering discharge rates.

5.1.3 Radius of Influence

The Radius of Influence (ROI) for the construction dewatering is based on the empirical Sichardt equation. This equation is used to predict the distance at which the drawdown resulting from pumping is negligible. This equation is empirical and was developed to provide representative flow rates using the steady state flow dewatering equations, as discussed below.

It is noted that in steady state conditions, the radius of influence of pumping will extend until boundary flow conditions are reached and provide sufficient water inputs to the aquifer, such as recharge and surface water bodies. As a result, the distance of influence calculated using Sichardt equation is used to provide a representative flow rate calculation, but it is not precise in determining the actual radius influenced by pumping.

The ROI of pumping (dewatering) for radial flow is calculated based on the Sichardt equation, which is described as follows:

$$R_0 = 3000\ (\mathrm{H} - \mathrm{h})\sqrt{\mathrm{K}}$$

Where:

K	= Hydraulic conductivity (m/s)
H	= Static Saturated Head (m)
h	= Dynamic Saturated Head (m)
R_0	= Radius of influence (m)

Based on the Sichardt equation, the typical 4.5 m of drawdown and a hydraulic conductivity of 1.9 x 10^{-5} m/s recommended for calculations at this site, the ROI is approximately 86 m from the centre of the excavation. Calculation details are provided in Appendix F, and are summarized below:

Dewatering Scenario	ROI (m)
Assumed Site Servicing Trench in Clayey Silts	86

The ROI calculation is a conservative methodology and is calculated based on the assumption of active pumping during the construction dewatering. It should be noted that most of the water will be pumped during the first stage of the construction period or when a rain event occurs.

5.1.4 Temporary Dewatering Flow Rate Equation

The Dupuit-Forcheimer and equivalent well method for radial and linear flow from an unconfined aquifer for a fully penetrating excavation was used to obtain a flow rate estimate for the proposed linear infrastructure on Parcel A, and is expressed as follows:

$$Q = \frac{\pi K(H^2 - h^2)}{In\,{}^{R_0}/_{r_s}} + 2\left[\frac{xK(H^2 - h^2)}{2L}\right]$$

Where:

Q	= Rate of pumping (m³/s)
x	= Length of excavation (m)
L	= Length of Influence (m)
K	= Hydraulic conductivity (m/s)
H	= Head beyond the influence of pumping (static groundwater elevation) (m)
h	= Head above base of aquifer at the excavation (m)
R_0	= Radius of Influence (m)
r_s	= Equivalent well radius (m)

It is expected that the initial dewatering rate will be higher in order to remove groundwater from within the overburden formation. The dewatering rates are expected to decrease once the target water level is achieved in the excavation footprint as groundwater will have been removed locally from storage resulting in lower seepage rates into the excavation.

Based on the assumptions provided in this report, the results of the dewatering rate estimates are summarized below, and calculation details are provided in Appendix F:

Dewatering Scenario (per 100 m of Trench Length)	**Construction Dewatering Flow Rate Without Safety Factor**	**Construction Dewatering Flow Rate Including Safety Factor of 2.0**	**Construction Dewatering Flow Rate Including Safety Factor of 2.0 and a 10 mm Rainfall Event**
	L/day	**L/day**	**L/day**
Assumed Site Servicing Trench in Clayey Silts	182,050	364,100	367,100

The total construction dewatering flow rate includes a factor of safety of 2.0 to account for seasonal fluctuations in the groundwater table and variation in hydrogeological properties beyond those encountered during the course of this study. This total dewatering flow rate also provides additional capacity for the dewatering contractors. A 10 mm rain event was also included. This rate should be considered contingency volume subject to the timing and season of the construction.

Given that the predicted construction dewatering volume is more than 50,000 L/day and less than 400,000 L/day, registry on the EASR system at the MECP is expected to be required at the time of construction.

The above dewatering rate estimates can be verified and updated should road servicing details or other development details change; at that point a recommendation with respect to the total volume of water takings to be requested for the site can be determined. Should the development of the proposed site extend further, additional boreholes and monitoring wells may be required to further investigate the extent of local permeable deposits that could yield higher flow rates than encountered during the current investigation. Given that a posting on the EASR / PTTW from the MECP is already required, an update may be advisable depending on the future development scheme or future subsurface investigation results.

It is the responsibility of the contractor to ensure dry conditions are maintained in the excavation at all times. Additional pumping capacity may be required to maintain dry conditions within the excavation during and following significant precipitation events. Additionally, the presence of near-surface fill material could hold significant groundwater.

The contractor is responsible for selecting the dewatering method based on their preferred means and methods after reviewing the information provided in this report.

5.2 Impact Assessment

5.2.1 Impacts to Nearby Groundwater Users

Based on the MECP Water Well Record database, active private well use associated with farm and residential use may be present in the vicinity of the site. It is not anticipated that private water wells will be within the estimated dewatering zone of influence which will extend only an estimated 86 m from trench locations. Dewatering activities will be limited to the upper 5.0 m of soils, and private and domestic water wells in the area are reportedly screened between 12 to 41.5 m below grade.

A private well survey for the houses within a 500 m radius surrounding the site should be conducted prior to activity to confirm the current use and condition of these wells by talking to the landowner and by visual well inspection.

As a precautionary measure even if impacts to the wells are not anticipated, if private well owners issue complaints regarding shortages or other interference with their water well, the complaints will be investigated, and if the problem is deemed to be related to the construction dewatering, a temporary supply of water may be required to be provided to the well owner until construction dewatering has been completed.

5.2.2 Natural Environment

Within this analysis there are two distinct regions of importance: the larger subject area and the development zone / dewatering area. Within the larger subject area, there are two storm water facilities and a third centrally mapped feature which display as waterbodies in Figures 3 to 7. These are excluded from discussion of the natural environment, following from the definition of “waterbody” within O.Reg 153/04 governing Records of Site Condition, which is a river or similar

watercourse or a pond or lake, but does not include a pond constructed on the property for the purpose of controlling surface water drainage. Most relevant to the discussion of local impacts to the natural environment as a consequence of the South Simpson Road Extension are those that pertain to the development zone / dewatering area along South Simpson Road and an unevaluated wetland which exists south of Mayfield Road which was observed to be hydraulically connected at the surface to West Rainbow Creek Tributary through a culvert.

West Rainbow Creek tributary, which runs parallel to the proposed development area is located 15 to 25 m from the proposed road extension road. It is understood that this Tributary, as part of the development plan, will undergo a post development channel redesign which includes connections between existing storm water management ponds and ties into shallow floodplain pools to the northwest near Parr Boulevard and to the southeast, on north and south sides of Mayfield Road at the proposed Simpson Road and Mayfield Road intersection. The southeastern outlet of the West Rainbow Creek Tributary is currently designed to flow into two unevaluated wetlands south of Mayfield Road, one close to the region of include, and one further afield, within 500 m of the study area boundary.

GEI is completing an additional scope of work through 2023 that includes installing and monitoring staff gauges within West Rainbow Creek Tributary and monitoring the nested piezometers installed near these locations to quantify seepage into features on site. This future data will be used to determine the amount of potential baseflow into the surface water features and will help evaluate any potential impacts related to the local hydrologic regime.

While the amount of baseflow entering the tributaries (if any) is expected to be minimal due to the low-permeability soils encountered near surface across most of the site, the distance from south Simpson Road to the watercourse (15 to 25 m) is within the radius of influence (of approximately 127 m). West Rainbow Creek tributary may be temporarily impacted by dewatering depending on the duration of dewatering, but effects are not expected to be permanent as each excavation will require dewatering for short periods of duration. Saturated Hydraulic Conductivities in materials that underlie the tributary are low and would already restrict groundwater inputs into the headwater feature, notwithstanding surface water inputs (i.e. precipitation).

No other impacts to local surface water features are expected at this time. The dewatering will be of short duration and any pumped water can be discharged into the surface water features after treatment to offset drawdown effects.

5.2.3 Land Stability

When drawing down the water table by 4.5 m, settlement of the soil within the radius of influence must be calculated based on the increase in effective stress (10 kPa per m of drawdown) from reducing the pore water pressures. Settlement has the potential to damage buried utilities, building foundations, or cause subsidence in adjacent lands. The maximum amount of settlement will occur adjacent to the dewatering system where the maximum drawdown occurs, and the amount of settlement will decrease exponentially to zero towards the radius of influence limit.

The estimated total settlement of the soil is assessed to be as much as 5 to 10 mm at the dewatering location. Due to the cohesive nature of some of the soils on site, settlement may not occur immediately and could be time dependent.

A review of aerial mapping shows that there is only one building in near proximity to the site, about 60 m to the east. Due to the exponential decrease in drawdown with distance, the estimated settlement for the off-site buildings east of the site is 5 mm or less. It is assumed that the residential dwellings in the west will be removed before any dewatering activities begin, however should this not be the case, the estimated settlement for the on-site buildings may be as much as 5 to 10 mm or less.

Based on the above, settlement related impacts to nearby buildings are not expected.

Another cause of significant dewatering related settlement is due to pumping of fines through the system. It is imperative that any dewatering systems shall be designed and installed adequately to ensure no soil is conveyed through the system. Sufficient filtering techniques will need to be incorporated at the entry point to avoid migration of fines in the pumping/dewatering system.

6. Limitations and Closure

6.1 Limitations

The recommendations and comments provided are necessarily on-going as new information of underground conditions becomes available. More specific information with respect to the conditions between samples, or the lateral and vertical extent of materials may become apparent during excavation operations. The interpretation of the borehole information must, therefore, be validated during excavation operations. Consequently, conditions not observed during this investigation may become apparent. Should this occur, GEI should be contacted to assess the situation and additional testing and reporting may be required.

GEI should be retained for a general review of the final design drawings and specifications to verify that this report has been properly interpreted and implemented. If not accorded the privilege of making this review, GEI will assume no responsibility for interpretation of the recommendations in the report.

The comments given in this report are intended only for the guidance of the design engineers. The number of boreholes and monitoring wells required to determine the localized underground conditions between boreholes and wells affecting construction costs, techniques, sequencing, equipment, scheduling, etc. could be greater than has been carried out for design purposes. Contractors bidding on or undertaking the works should, in this light, decide on their own investigations, as well as their own interpretations of the factual borehole results, so that they may draw their own conclusions as to how the subsurface conditions may affect them.

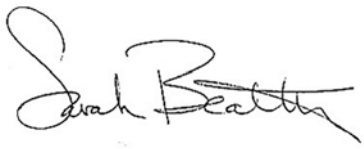
This report was authorized by, and prepared by GEI for, the account of Simpson Road Landowners Group Inc. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. GEI accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this project.

6.2 Closure

We trust that this information is satisfactory for your purposes. Should you have any questions or comments, please do not hesitate to contact our office.

Yours truly,

GEI Consultants



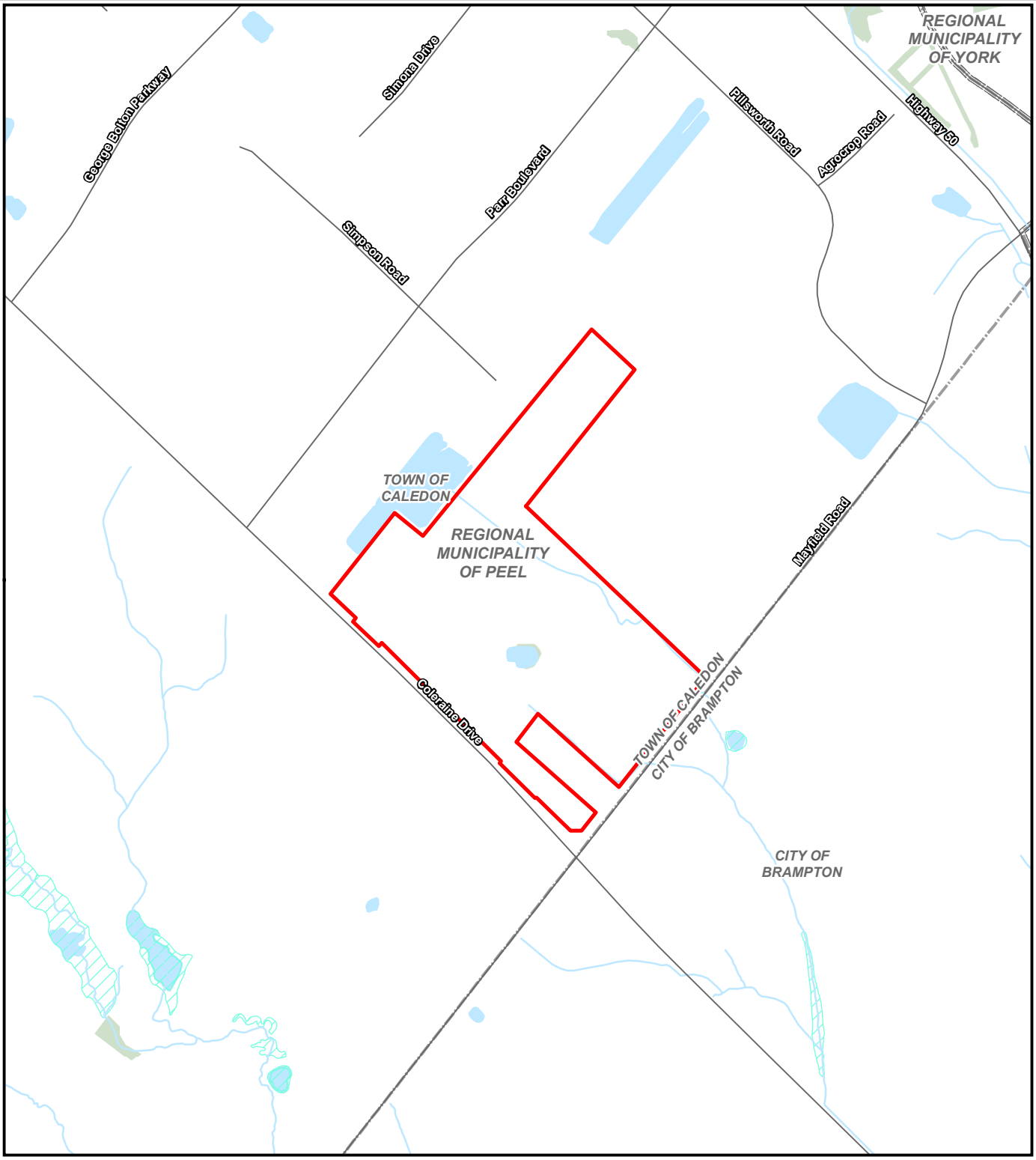
Sarah Beatty, PhD
Hydrogeologic Project Manager

Reviewed By:

Kimberly Gilder, B.Sc., P.Geo.
Senior Hydrogeologist

Geoffrey R. White, P.Eng.
Geotechnical Practice Lead

Figures



NOTES:

1. Coordinate System: NAD 1983 UTM Zone 17N.
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2023.

Legend

- Subject Area
- Road
- Watercourse
- Waterbody
- Wooded Area
- Wetland - Not evaluated per OWES

N

0 100 200 m

1:10,000

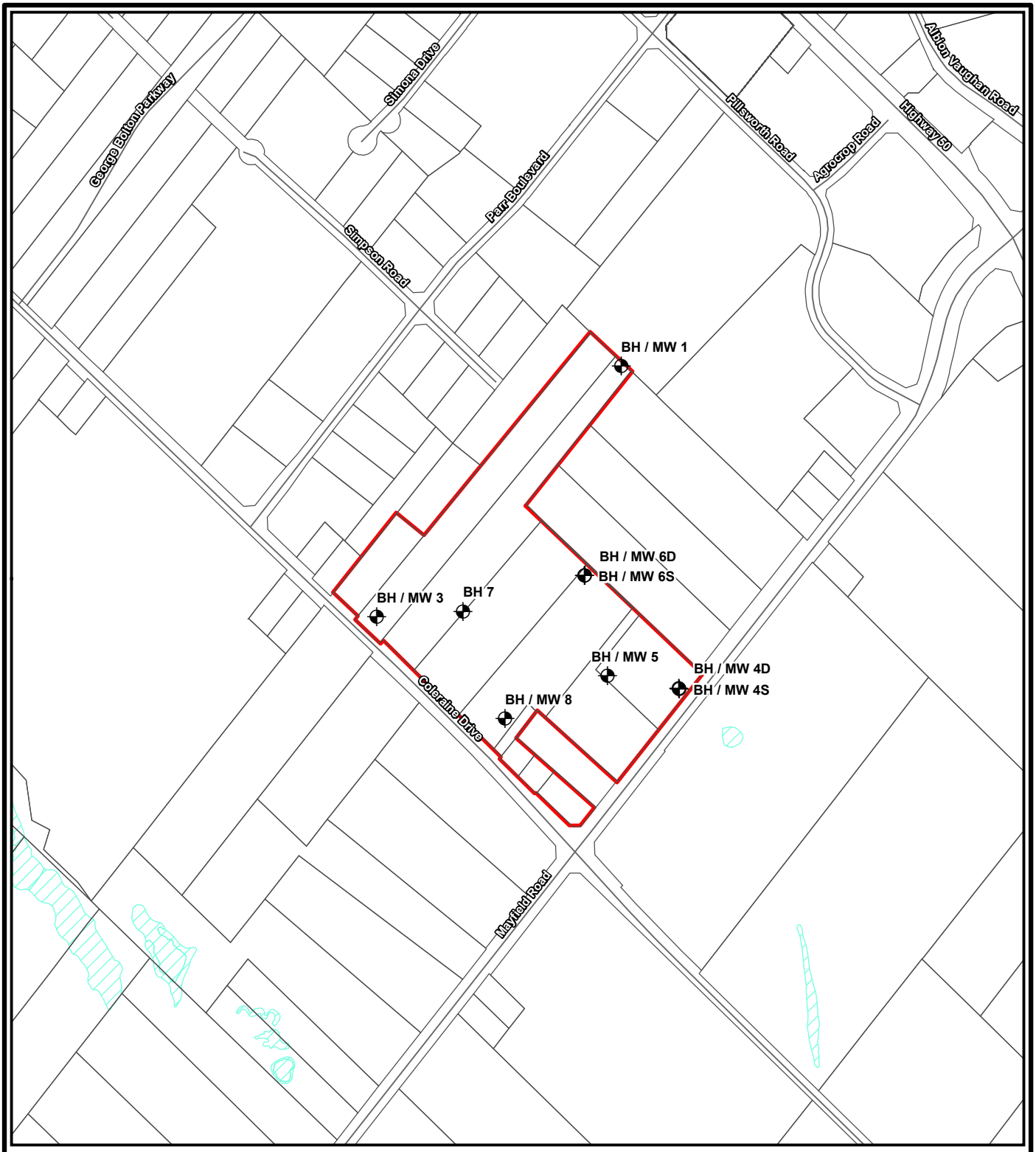
Natural Heritage, Geotechnical, Hydrogeological and Civil Services - South Simpson (Headwaters of West Rainbow Creek), Caledon, Master Environmental Servicing Plan

Simpson Road Landowners Group Inc.

GEI Consultants

SITE LOCATION PLAN

Project 2301130 | July 2023 | Fig. 1



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3. Orthoimagery © First Base Solutions, 2023. Imagery taken in 2022.

Legend

- Subject Area
- Road
- Wetland - Not evaluated per OWES
- Borehole/Monitoring Well Location
- Lot Fabric (Town of Caledon, 2023)

N

0 100 200 m

1:10,000

Natural Heritage, Geotechnical, Hydrogeological and Civil Services - South Simpson (Headwaters of West Rainbow Creek), Caledon, Master Environmental Servicing Plan

Simpson Road Landowners Group Inc.

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BOREHOLE LOCATION PLAN (AERIAL)

Project 2301130

September 2023

Fig. 2a

NOTES:

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Legend

- Subject Area
- Borehole/Monitoring Well Location

N

0 100 200 m

1:10,000

Natural Heritage, Geotechnical, Hydrogeological and Civil Services - South Simpson (Headwaters of West Rainbow Creek), Caledon, Master Environmental Servicing Plan

Simpson Road Landowners Group Inc.

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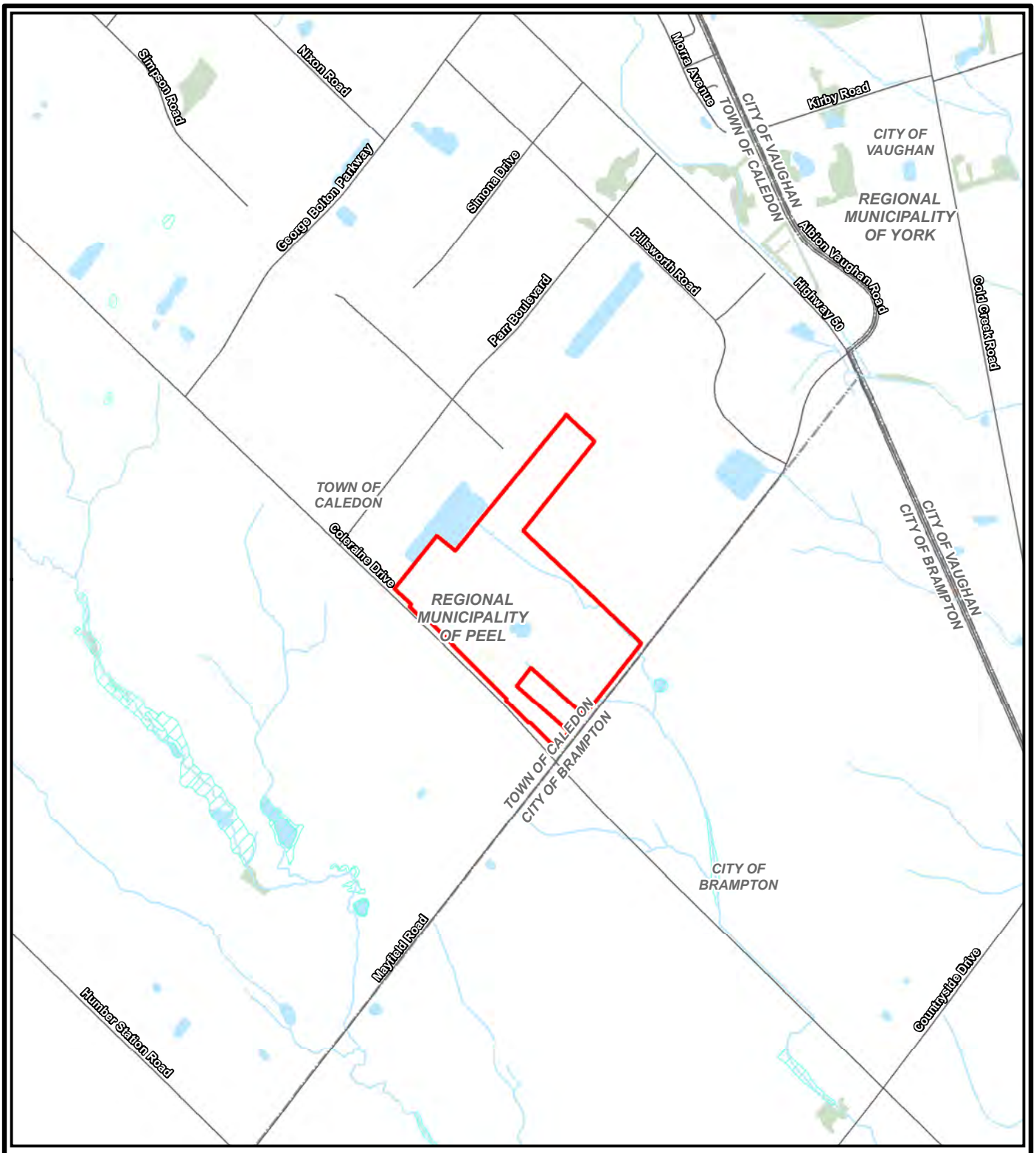
Project 2301130

BOREHOLE LOCATION PLAN (AERIAL)

July 2023

Fig. 2b



NOTES:
1. Coordinate System: NAD 1983 UTM Zone 17N.
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Legend

- Subject Area
- Road
- Watercourse
- Waterbody
- Wooded Area
- Wetland - Not evaluated per OWES

- Site in not within a Wellhead Protection Zone -

Wellhead Protection Area (MECP)

Zone
- A
- B
- C
- C1
- D
- Q1
- Q2

N

0 150 300 m

1:15,000

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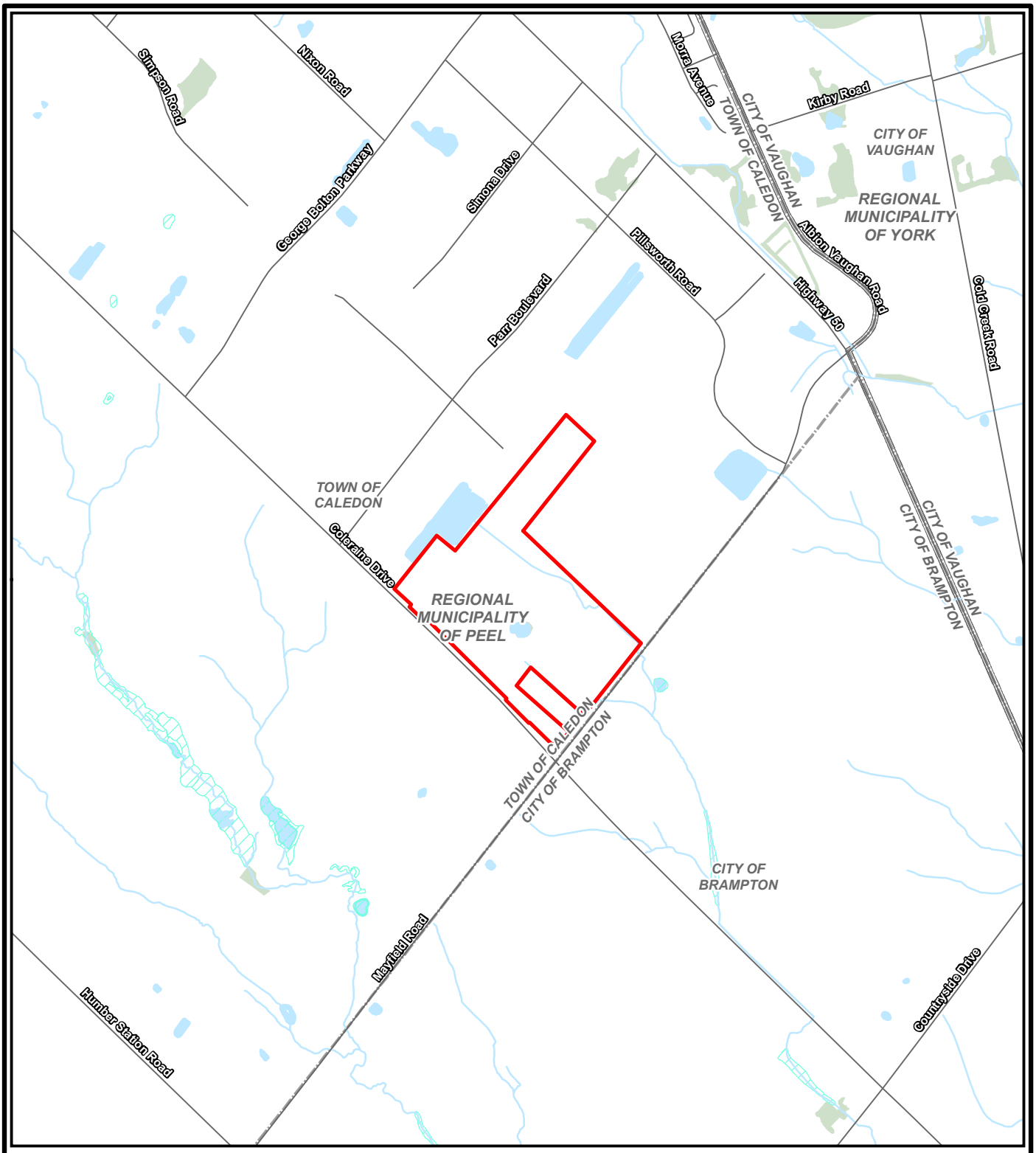
WELLHEAD PROTECTION AREA

Project 2301130 | July 2023 | Fig. 3



NOTES:

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Legend

- Subject Area
- Road
- Watercourse
- Waterbody
- Wooded Area
- Wetland - Not evaluated per OWES

- Site in not within an Intake Protection Zone -

Intake Protection Zone (MECP)

- Intake Protection Zone 1
- Intake Protection Zone 2
- Intake Protection Zone 3

N

0 150 300 m

1:15,000

Natural Heritage, Geotechnical, Hydrogeological and Civil Services - South Simpson (Headwaters of West Rainbow Creek), Caledon, Master Environmental Servicing Plan

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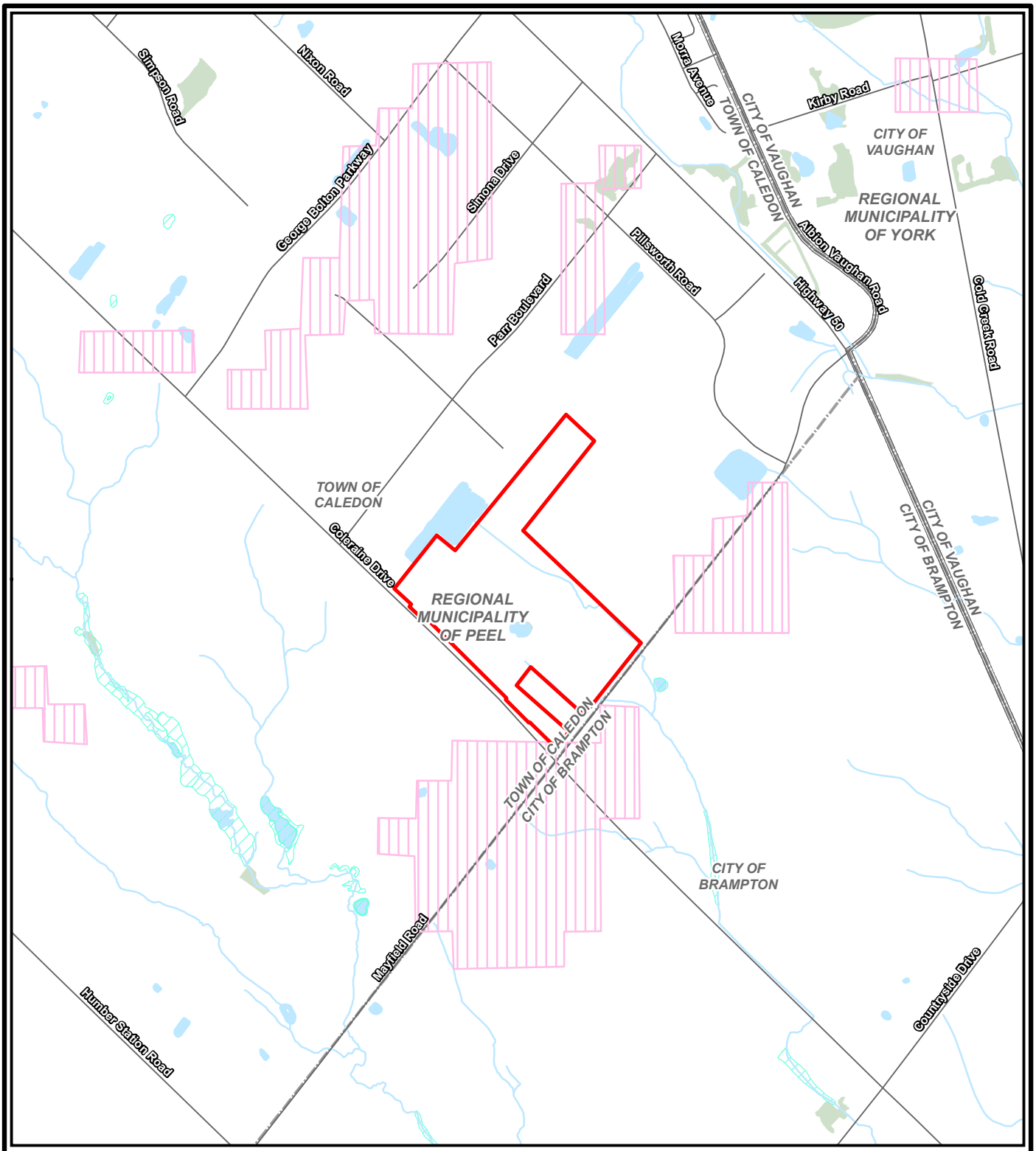
INTAKE PROTECTION ZONE

Project 2301130 | July 2023 | Fig. 4



NOTES:

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Legend

- Subject Area
- Road
- Watercourse
- Waterbody
- Wooded Area
- Wetland - Not evaluated per OWES
- Highly Vulnerable Aquifer (MECP)

N

0 150 300 m

1:15,000

Natural Heritage, Geotechnical, Hydrogeological and Civil Services - South Simpson (Headwaters of West Rainbow Creek), Caledon, Master Environmental Servicing Plan

Simpson Road Landowners Group Inc.

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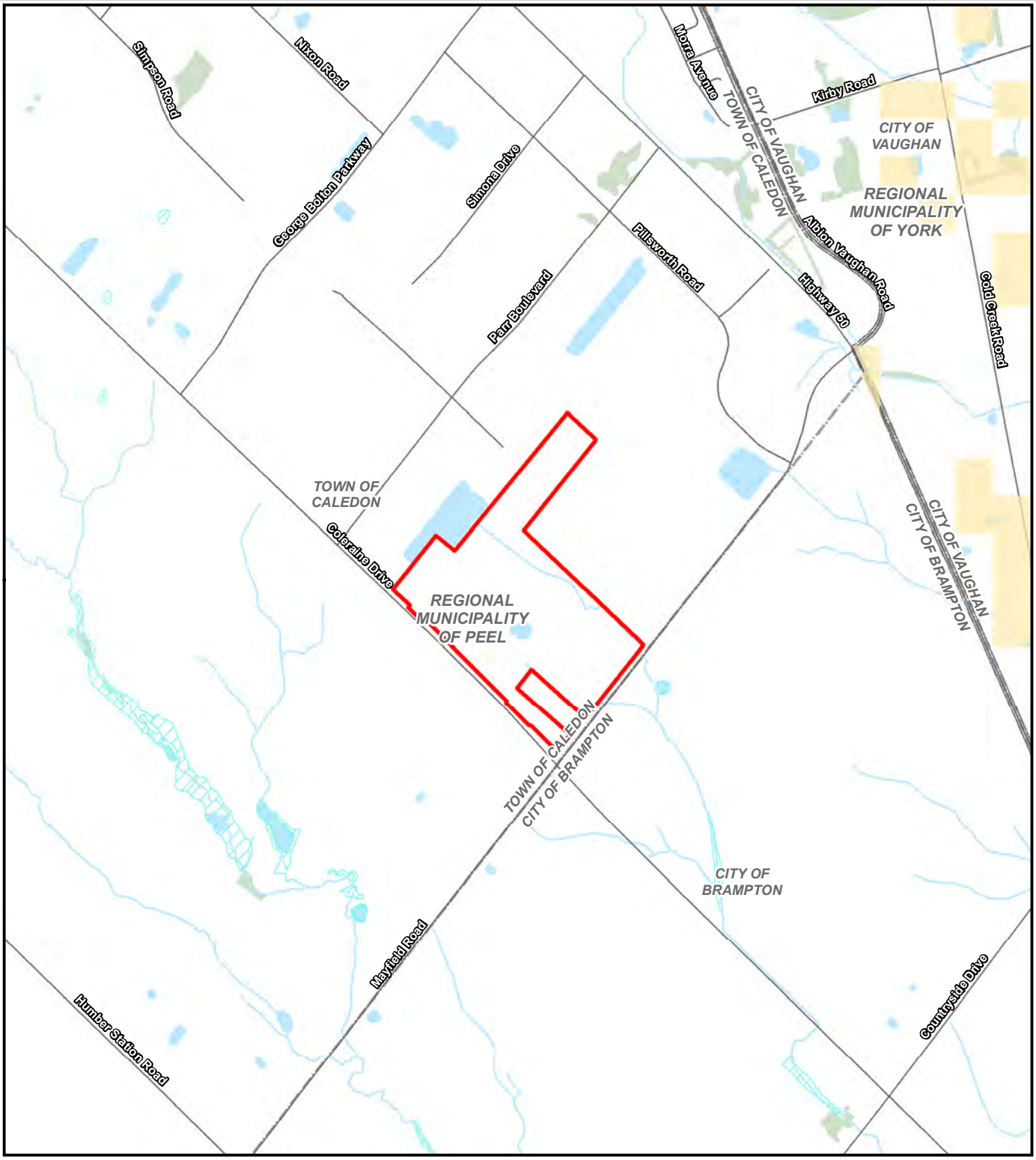
Project 2301130

HIGHLY VULNERABLE AQUIFER

July 2023

Fig. 5



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Legend

- Subject Area
- Road
- Watercourse
- Waterbody
- Wooded Area
- Wetland - Not evaluated per OWES
- Significant Groundwater Recharge Area (TRCA)
- Vulnerability Score
- N/A
- 0
- 2, 4
- 6

N

0 150 300 m

1:15,000

Natural Heritage, Geotechnical, Hydrogeological and Civil Services - South Simpson (Headwaters of West Rainbow Creek), Caledon, Master Environmental Servicing Plan

Simpson Road Landowners Group Inc.

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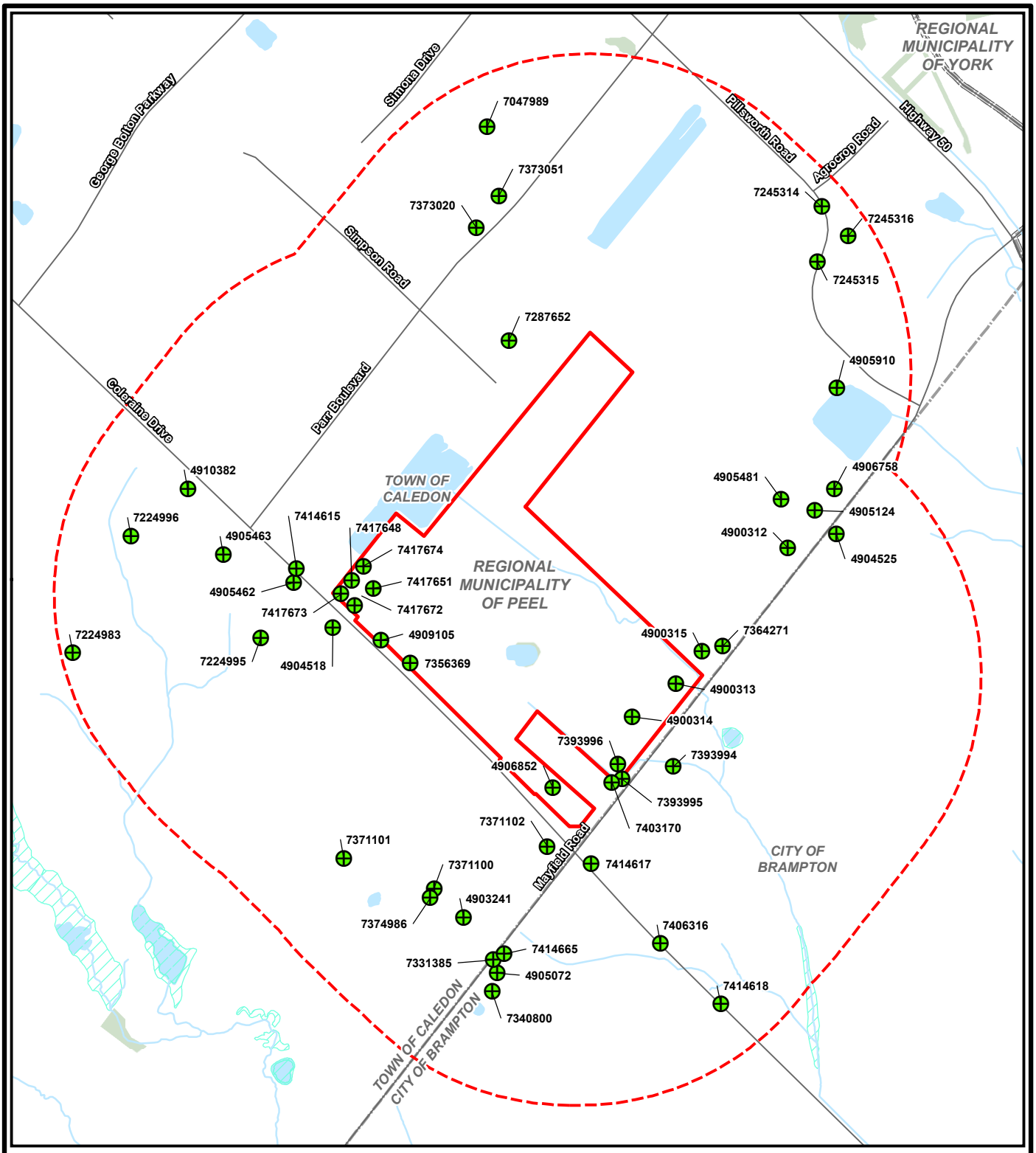
SIGNIFICANT GROUNDWATER RECHARGE AREA

Project 2301130 | July 2023 | Fig. 6



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Legend

- Subject Area
- Subject Area +500m
- MECP Well Records within 500m of Subject Area
- Road
- Watercourse
- Waterbody
- Wooded Area
- Wetland - Not evaluated per OWES

N

0 150 300 m

1:10,000

Natural Heritage, Geotechnical, Hydrogeological and Civil Services - South Simpson (Headwaters of West Rainbow Creek), Caledon, Master Environmental Servicing Plan

Simpson Road Landowners Group Inc.

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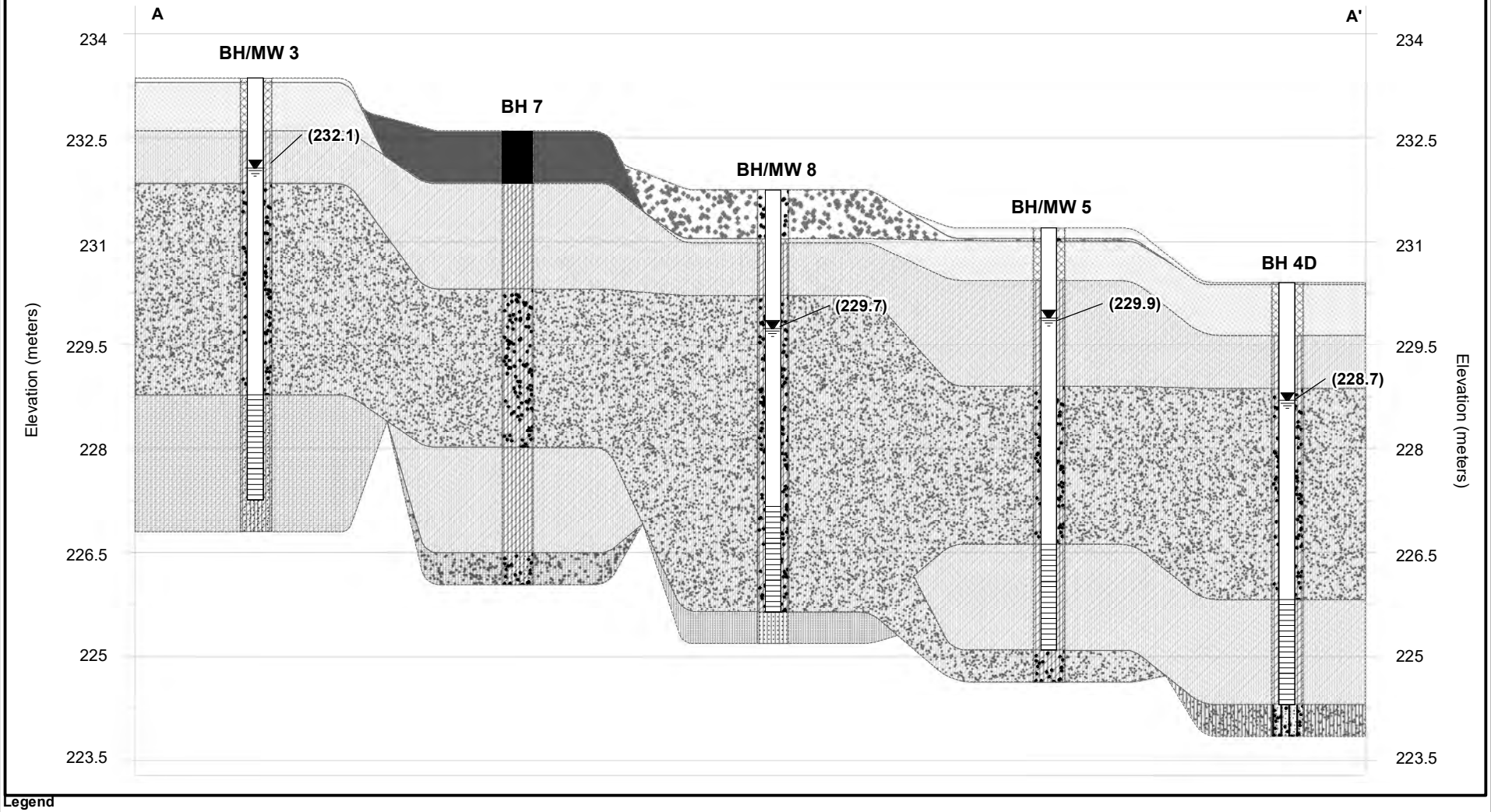
MECP WELL RECORD LOCATIONS

Project 2301130 | July 2023 | Fig. 7



Legend

Water Level In Monitoring Well

Strata

- Asphalt/Granular
- Granular
- Fill
- Topsoil
- Clayey Silt
- Clayey Silt Glacial Till
- Sandy Clayey Silt
- Sandy Clayey Silt Glacial Till
- Sand and Silt
- Sandy Silty Glacial Till

[xx.xx] Water Level (masl)

NOTES:
1. Subsurface conditions known only at borehole locations.
2. Horizontal distances are not to scale

Natural Heritage, Geotechnical, Hydrogeological and Civil Services - South Simpson (Headwaters of West Rainbow Creek), Caledon, Master Environmental Servicing Plan

Simpson Road Landowners Group Inc.

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Project 2301130

GEOLOGICAL CROSS SECTION A-A'

September 2023

Fig. 8

NOTES:

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Legend

- Subject Area
- Borehole/Monitoring Well Location
- Groundwater Contour (metres ASL)
- (xx.xx) Groundwater Level (metres ASL)
- Interpreted Direction of Groundwater Flow

N

0 100 200 m

1:10,000

Natural Heritage, Geotechnical, Hydrogeological and Civil Services - South Simpson (Headwaters of West Rainbow Creek), Caledon, Master Environmental Servicing Plan

Simpson Road Landowners Group Inc.

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GROUNDWATER CONTOUR MAP

Project 2301130

September 2023

Fig. 9

Appendix A

MECP Water Well Records

TOWNSHIP CON LOT	UTM	DATE CNTR	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
CALEDON TOWN (ALBION CON 06 001	17 604427 4855336 W	1958/12 1325	30	FR 0058	48///:	DO		4900312 ()	BRWN CLAY 0015 HPAN 0058 PEAT 0068
CALEDON TOWN (ALBION CON 06 001	17 604226 4855092 W	1962/10 1325	30	FR 0062	50//1/ 1:0	DO		4900313 ()	BRWN CLAY 0012 BLUE CLAY 0062 BLUE FSND 0071
CALEDON TOWN (ALBION CON 06 001	17 604147 4855033 W	1963/07 4823	4 4	FR 0119	40/12 0/1/12 :0	DO		4900314 ()	LOAM 0001 YLLW CLAY 0005 YLLW CLAY MSND STNS 0012 BLUE CLAY STNS 0040 BLUE CLAY SILT 0107 GREY CLAY MSND GRVL 0116 SHLE 0120
CALEDON TOWN (ALBION CON 06 001	17 604273 4855150 W	1966/02 3108	4 4	FR 0145	84/13 5/3/2: 0	DO		4900315 ()	BLUE CLAY 0003 YLLW CLAY 0016 BLUE CLAY 0115 CSND 0123 BLUE SHLE 0147
CALEDON TOWN (ALBION CON 05 001	17 603845 4854673 W	1969/06 1307	30	FR 0057	20///:	DO		4903241 ()	BRWN LOAM 0010 GREY CLAY 0056 GREY MSND 0057
CALEDON TOWN (ALBION CON 06 002	17 603611 4855193 W	1974/08 1307	30	FR 0040	12/38/ 2/1:0	DO		4904518 ()	BRWN LOAM 0010 GREY CLAY 0038 CSND 0040
CALEDON TOWN (ALBION CON 06 001	17 604514 4855361 W	1974/11 1307	30	FR 0080	40/78/ 0/1:0	DO		4904525 ()	BRWN LOAM 0012 GREY CLAY 0078 GREY FSND 0080
BRAMPTON CITY (TORON CON 11 017	17 603905 4854573 W	1977/03 3814	30	FR 0065	53/63/ 1/1:0	DO		4905072 ()	BRWN LOAM 0012 GREY CLAY 0062 GREY SHLE WBRG 0065

TOWNSHIP CON LOT	UTM	DATE CNTR	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
CALEDON TOWN (ALBION CON 06 001	17 604475 4855403 W	1977/05 3108	6	UK 0136	84/13 8/4/4: 0	DO		4905124 ()	BLCK LOAM 0002 YLLW CLAY 0012 BLUE CLAY 0110 CSND SHLE DRTY 0133 BLUE SHLE 0139
CALEDON TOWN (ALBION CON 05 002	17 603540 4855273 W	1978/05 3814	30	FR 0070	45//3/ 1:0	DO		4905462 ()	UNKN 0070
CALEDON TOWN (ALBION CON 05 002	17 603414 4855323 W	1978/05 3814	30	FR 0052	35//2/ 1:0	DO		4905463 ()	UNKN 0052
CALEDON TOWN (ALBION CON 06 001	17 604415 4855423 W	1978/11 1663	5	FR	60/10 5/2/2: 0	DO		4905481 ()	BLCK LOAM 0001 BRWN CLAY GRVL 0014 BLUE CLAY GRVL 0048 BLUE CLAY 0101 GREY CSND GRVL 0106 BLUE CLAY GRVL 0112 BLUE CLAY 0120 GREY FSND 0127 BLUE CLAY 0130
CALEDON TOWN (ALBION CON 06 001	17 604515 4855623 W	1981/03 1663	5	FR 0101	//1/2: 0	DO	0103 3	4905910 ()	BRWN LOAM 0001 YLLW CLAY GRVL 0016 BLUE CLAY GRVL 0048 GREY CLAY SILT 0101 GREY SAND GRVL SILT 0107 BLUE CLAY GRVL SAND 0136 GREY SHLE 0170
CALEDON TOWN (ALBION CON 06 001	17 604510 4855442 W	1987/09 1663	6	FR 0122	90/12 5/2/2: 0	DO	0124 3	4906758 (09130)	BRWN CLAY SAND 0002 BRWN CLAY GRVL 0016 BLUE CLAY GRVL 0051 BLUE CLAY 0072 BLUE CLAY SILT 0102 GREY GRVL LOOS 0110 0115 0119 0122 0127 0140
CALEDON TOWN (ALBION CON 06 001	17 604005 4854905 W	1988/03 4919	30 30	FR 0065	10/70/ /1:0	DO		4906852 (25634)	BRWN LOAM HARD 0001 BRWN CLAY HARD 0020 GREY CLAY HARD 0075

TOWNSHIP CON LOT	UTM	DATE CNTR	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
CALEDON TOWN (ALBION CON 06 006	17 603697 4855170 W	2003/02 7088	6 6	SA 0133	30///:	DO		4909105 (252315)	GREY GRVL FILL 0001 BRWN CLAY SAND 0012 GREY CLAY SAND 0076 BLUE CLAY 0102 GREY GRVL SLTY 0112 GREN GRVL CLAY 0113 BLUE SHLE 0147
CALEDON TOWN (ALBION	17 603350 4855442 W	2006/11 6809	2				0015 5	4910382 (Z51263) A052542	BRWN LOAM 0001 BRWN SILT TILL 0010 GREY CLAY SILT 0020
CALEDON TOWN (ALBION	17 603144 4855147 W	2014/06 7472	2.04			MO	0015 10	7224983 (Z189603) A165999	BRWN CLAY SILT LOOS 0015 GREY SILT CLAY PCKD 0025
CALEDON TOWN (ALBION	17 603481 4855174 W	2014/06 7472	2.04			MO	0010 10	7224995 (Z189602) A165998	BRWN CLAY SILT LOOS 0015 GREY SILT CLAY PCKD 0020
CALEDON TOWN (ALBION	17 603248 4855357 W	2014/06 7472						7224996 (Z189601) A165997	
CALEDON TOWN (ALBION CON 06 001	17 604487 4855947 W	2015/07 7360	2	UT 0005		MO	0005 10	7245314 (Z208147) A182032	CLAY SILT 0005 SAND WBRG 0010 CLAY SILT 0015
CALEDON TOWN (ALBION CON 06 001	17 604480 4855849 W	2015/07 7360	2			MO	0020 10	7245315 (Z208148) A182063	CLAY SILT 0005 CLAY SILT 0020
CALEDON TOWN (ALBION CON 06 001	17 604535 4855896 W	2015/07 7360	2			MO	0010 10	7245316 (Z208149) A182090	CLAY SILT 0005 CLAY SILT 0020
CALEDON TOWN (ALBION	17 603926 4855708 W	2017/04 7215						7287652 (C37477) A218567 P	

TOWNSHIP CON LOT	UTM	DATE CNTR	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
BRAMPTON CITY (TORON CON 11 017	17 603898 4854597 W	2019/03 7360	2			MO	0010 10	7331385 (Z309301) A266676	GRVL SNDY 0004 SAND 0010 CLAY TILL 0020
BRAMPTON CITY (TORON CON 11 017	17 603896 4854540 W	2019/09 7147	35.4	UT 0003				7340800 (QRV7WFD9) _NO_TAG A	
CALEDON TOWN (ALBION	17 603749 4855129 W	2020/03 7523	6.21 6.21			NU		7356369 (Z333748) A207322 A	BLCK LOAM 0001 BRWN CLAY SAND 0015 GREY SILT 0035 GREY SAND GRVL 0135 RED SHLE 0164
CALEDON TOWN (ALBION	17 604310 4855160 W	6946						7364271 (Z340885) A301730 P	
CALEDON TOWN (ALBION CON 05 001	17 603792 4854725 W	2020/10 7732	1.97	UT 0013			0008 10	7371100 (JDHP8SJJ) _NO_TAG A	
CALEDON TOWN (ALBION CON 05 001	17 603630 4854779 W	2020/10 7732	1.97	UT 0017			0015 10	7371101 (U465GQJ2) _NO_TAG A	
CALEDON TOWN (ALBION CON 05 001	17 603995 4854800 W	2020/10 7732	1.97	UT 0004			0016 10	7371102 (AKYKFSA6) _NO_TAG A	
CALEDON TOWN (ALBION CON 06 002	17 603868 4855910 W	2020/11 6607	2.00			MO	0010 10	7373020 (9BUBW7QL) A293647	BRWN SILT CLAY HARD 0015 GREY SILT CLAY HARD 0020

TOWNSHIP CON LOT	UTM	DATE CNTR	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
CALEDON TOWN (ALBION CON 06 002	17 603908 4855966 W	2020/11 6607	2.00			MO	0010 10	7373051 (LJER9BFV) A293279	BRWN SILT CLAY HARD 0020
CALEDON TOWN (ALBION	17 603785 4854709 W	2020/11 7241						7374986 (Z351107) A308998 P	
BRAMPTON CITY (TORON	17 604221 4854943 W	2021/05 7215						7393994 (Z346498) A317280 P	
CALEDON TOWN (ALBION CON 06 001	17 604129 4854921 W	2021/05 7215						7393995 (Z346510) A317278 P	
CALEDON TOWN (ALBION CON 06 001	17 604122 4854947 W	2021/05 7215						7393996 (Z346497) A317281 P	
CALEDON TOWN (ALBION	17 604111 4854915 W	2021/07 6988						7403170 (Z356021) A314334 P	
BRAMPTON CITY (TORON CON 12 017	17 604198 4854626 W	2021/10 7360	2	UT 0035		MO	0050 10	7406316 (4AOHDINP) A319821	---- 0000 FILL GRVL 0007 TILL CLAY 0050 SHLE 0060
CALEDON TOWN (ALBION CON 06 002	17 603545 4855298 W	2022/02 7360	2			MO	0010 5	7414615 (LSZYI96U) A330866	BRWN TILL HARD 0005 GREY TILL HARD 0015
BRAMPTON CITY (TORON CON 12 017	17 604073 4854770 W	2022/02 7360	2			MO	0010 5	7414617 (X6GMGUJT) A344018	BRWN TILL HARD 0005 GREY TILL HARD 0015

TOWNSHIP CON LOT	UTM	DATE CNTR	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
BRAMPTON CITY (TORON CON 11 017	17 604306 4854517 W	2022/02 7360	2			MO	0010 5	7414618 (6FSF8AGS) A344030	BRWN TILL HARD 0005 GREY TILL HARD 0015
BRAMPTON CITY (TORON CON 11 017	17 603918 4854608 W	2022/03 7732	1.97	UT 0003			0010 10	7414665 (5CJ4VKQ9) _NO_TAG A	
CALEDON TOWN (ALBION CON 06 001	17 603644 4855277 W	2022/03 7360	2			MO	0010 10	7417648 (CMBUCOM Y) A306595	BRWN CLAY 0010 GREY TILL 0020
CALEDON TOWN (ALBION CON 06 001	17 603683 4855263 W	2022/03 7360	2			MO	0010 10	7417651 (CAM3SEOK) A343289	BRWN CLAY 0010 GREY TILL 0020
CALEDON TOWN (ALBION CON 06 001	17 603649 4855232 W	2022/03 7360	2			MO	0010 10	7417672 (895IRXSP) A345738	BRWN CLAY 0010 GREY TILL 0020
CALEDON TOWN (ALBION CON 06 001	17 603625 4855253 W	2022/03 7360	2			MO	0010 10	7417673 (QCDOOCFD) A345745	BRWN CLAY 0010 GREY TILL 0020
CALEDON TOWN (ALBION CON 06 001	17 603665 4855303 W	2022/03 7360	2			MO	0010 10	7417674 (DOR88VVJ) A345746	BRWN CLAY 0010 GREY TILL 0020
MINTO CON 4 LOT 40	17 603887 4856091	2007	6	FR 0142	142/2 5/2	DO	0010 10	7047989 AO49962	GRAVEL & STONES 025 CLAY & STONES 0059 LIMESTONE 147

Appendix B

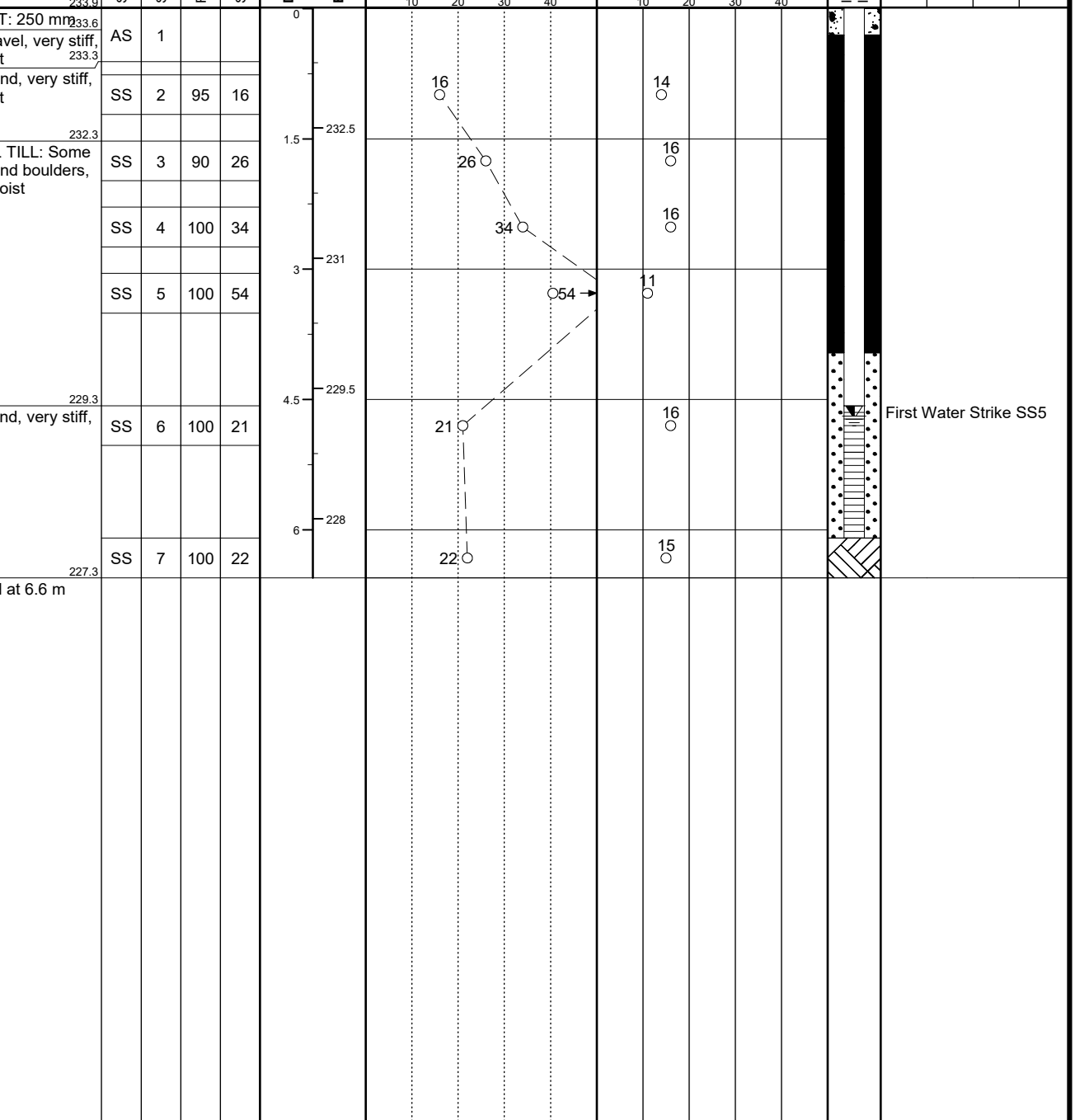
Borehole Logs

RECORD OF BOREHOLE No. 1

Project Number: **2301130**
Project Client: **Simpson Road Landowners Group Inc.**
Project Name: **South Simpson (Headwaters of West**
Project Location: **Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Track Mount** Drilling Machine: **Solid Stem Augers**
Logged By: **TA** Northing: **4855660.1** Date Started: **May 17/23**
Reviewed By: **GW** Easting: **604127.8** Date Completed: **May 17/23**

Depth	Description	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	Elevation (m)
0.0						233.9
0.2	RECYCLED ASPHALT: 250 mm					233.6
0.6	FILL: Sandy silt, trace gravel, very stiff, brown, moist	AS	1			233.3
	CLAYEY SILT: Some sand, very stiff, brown, moist	SS	2	95	16	
1.5						232.3
	CLAYEY SILT GLACIAL TILL: Some sand, inferred cobbles and boulders, hard, brown, moist	SS	3	90	26	
		SS	4	100	34	
		SS	5	100	54	
4.6						229.3
	CLAYEY SILT: Trace sand, very stiff, grey, moist	SS	6	100	21	
6.6		SS	7	100	22	227.3
	Borehole Terminated at 6.6 m					



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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jun 7/23 at depth of: 4.69 m.
Groundwater Elevation: 229.2 m

Borehole details presented do not constitute a thorough understanding of all potential conditions present and require interpretative assistance from a qualified geotechnical engineer. Also, borehole information should be read in conjunction with the geotechnical report for which it was commissioned and the accompanying 'Explanation of Boring Log'.

Scale: **1 :75**
Page: **1 of 1**

RECORD OF BOREHOLE No. 2

Project Number: **2301130**
Project Client: **Simpson Road Landowners Group Inc.**
Project Name: **South Simpson (Headwaters of West**
Project Location: **Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Track Mount** Drilling Machine: **Solid Stem Augers**
Logged By: **TA** Northing: Date Started: **May 18/23**
Reviewed By: **GW** Easting: Date Completed: **May 18/23**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	FIELD TESTING (Shear Strength Testing (kPa); Penetration Testing SPT/DCPT)	LAB TESTING (Combustible Organic Vapour (ppm); Combustible Organic Vapour (%LEL); Total Organic Vapour (ppm); Atterberg Limits PL/LL; Water Content (%))	Instrumentation Installation	COMMENTS & GRAIN SIZE DISTRIBUTION (%) GR	SA	SI	CL
	0.0 0.0													
	ASPHALT: 700 mm	SS	1	40	19	0		19	13					
	0.7 -0.7													
	FILL: CLAYEY SILT: Trace gravel, very stiff, brown, moist	SS	2	80	20			20						
	1.5 -1.5					1.5			14					
	CLAYEY SILT GLACIAL TILL: Trace sand, inferred cobbles and boulders, stiff to hard, grey spotting, moist	SS	3	45	43			43						
	2.3 -2.3								14					
	SANDY CLAYEY SILT: Trace gravel, hard, moist	SS	4	100	47			47			5	21	42	32
						3			13					
		SS	5	100	44			44						
	4.6 -4.6					4.5			13					
	CLAYEY SILT: Trace sand, stiff, grey, very moist	SS	6	100	21			21			First Water Strike SS6			
						6								
	6.6 -6.6	SS	7	100	19			19	14					
	Borehole Terminated at 6.6 m													

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Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on:
Cave depth after auger removal: Open
Groundwater Elevation:

Borehole details presented do not constitute a thorough understanding of all potential conditions present and require interpretative assistance from a qualified geotechnical engineer. Also, borehole information should be read in conjunction with the geotechnical report for which it was commissioned and the accompanying 'Explanation of Boring Log'.

Scale: **1 :75**
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RECORD OF BOREHOLE No. 3

Project Number:	**2301130**						
Project Client:	**Simpson Road Landowners Group Inc.**						
Project Name:	**South Simpson (Headwaters of West**	Drilling Method:	**Track Mount**	Drilling Machine:	**Solid Stem Augers**		
Project Location:	**Caledon, ON**	Logged By:	**TA**	Northing:	**4855211.7**	Date Started:	**May 17/23**
Drilling Location:	**See Borehole Location Plan**	Reviewed By:	**GW**	Easting:	**603689.4**	Date Completed:	**May 17/23**
Local Benchmark:							

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING	LAB TESTING		COMMENTS & GRAIN SIZE DISTRIBUTION (%)			
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	Shear Strength Testing (kPa); Penetration Testing (SPT, DCPT)	Combustible Organic Vapour (ppm); Combustible Organic Vapour (%LEL); Total Organic Vapour (ppm); Atterberg Limits; Water Content (%)	Instrumentation Installation	GR	SA	SI	CL
	0.0 233.4 0.1 233.3 TOPSOIL: 75 mm FILL: Clayey silt, trace sand, firm, brown, moist 0.8 232.6	SS	1	20	6	0	232.5	6	17					
	CLAYEY SILT: Some sand, firm to very stiff, grey, moist 1.5 231.8	SS	2	65	20	1.5	231	20	15					
	CLAYEY SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, hard, grey to brown, moist	SS	3	100	31	3	229.5	31	16					
		SS	4	100	47	4.5	228	47	13		8	18	42	32
	4.6 228.8 SANDY CLAYEY SILT: Trace gravel, firm to very stiff, grey, moist	SS	5	80	38	6		38	18					
		SS	6	100	29			29	13		4	20	45	31
	6.6 226.8 Borehole Terminated at 6.6 m	SS	7	100	21			21	14					

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Groundwater depth encountered on completion of drilling: Dry

Cave depth after auger removal: Open

Groundwater depth observed on: Jun 7/23 at depth of: 1.3 m.

Groundwater Elevation: 232.1 m

RECORD OF BOREHOLE No. 4-D

Project Number:	2301130						
Project Client:	Simpson Road Landowners Group Inc.						
Project Name:	South Simpson (Headwaters of West	Drilling Method:	Track Mount	Drilling Machine:	Solid Stem Augers		
Project Location:	Caledon, ON	Logged By:	TA	Northing:	4855082.3	Date Started:	May 18/23
Drilling Location:	See Borehole Location Plan	Reviewed By:	GW	Easting:	604231.5	Date Completed:	May 18/23
Local Benchmark:							

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING	Instrumentation Installation	COMMENTS & GRAIN SIZE DISTRIBUTION (%)
	0.0 230.4							Shear Strength Testing (kPa): × Other Test; + Pocket Penetrometer; ▲ Field Vane (Intact); △ Field Vane (Remolded)	△ Combustible Organic Vapour (ppm); ▲ Combustible Organic Vapour (%LEL); ◇ Total Organic Vapour (ppm)		GR SA SI CL
	TOPSOIL: 25 mm	SS	1	75	11	0	230.4	11	23		
	FILL: Clayey silt, trace sand, firm, brown, moist										
	0.8 229.6	SS	2	100	12		229.5	12	24		
	CLAYEY SILT: Some sand, stiff, brown with grey spotting, moist					1.5					
	1.5 228.9	SS	3	90	26			26	13		
	CLAYEY SILT GLACIAL TILL: Some sand, inferred cobbles and boulders, very stiff to hard, brown, moist						228				
		SS	4	90	26			26	10		
						3					
		SS	5	90	41			41	13		
	4.6 225.8						226.5				
	CLAYEY SILT: Some sand, firm to very stiff, grey, moist	SS	6	100	24	4.5		24	12		First Water Strike SS6
	6.1 224.3						225				
	SANDY SILTY GLACIAL TILL: Trace clay, inferred cobbles and boulders, hard, grey, moist	SS	7	95	50+	6		50+	9		
	6.6 223.8 Borehole Terminated at 6.6 m										

Penetration Testing: ○ SPT ● DCPT (10 20 30 40)

Atterberg Limits: PL ○ Water Content (%) LL (10 20 30 40)

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Groundwater depth encountered on completion of drilling: Dry

Cave depth after auger removal: Open

Groundwater depth observed on: Jun 7/23 at depth of: 1.7 m.

Groundwater Elevation: 228.7 m

Scale: **1 :75**

RECORD OF BOREHOLE No. 4-S

Project Number:	**2301130**						
Project Client:	**Simpson Road Landowners Group Inc.**						
Project Name:	**South Simpson (Headwaters of West**	Drilling Method:	**Track Mount**	Drilling Machine:	**Solid Stem Augers**		
Project Location:	**Caledon, ON**	Logged By:	**TA**	Northing:	**4855081.4**	Date Started:	**May 18/23**
Drilling Location:	**See Borehole Location Plan**	Reviewed By:	**GW**	Easting:	**604231.5**	Date Completed:	**May 18/23**
Local Benchmark:							

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING	LAB TESTING		COMMENTS & GRAIN SIZE DISTRIBUTION (%)
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	Shear Strength Testing (kPa): Other Test, Pocket Penetrometer, Field Vane (Intact), Field Vane (Remolded); 40 80 120 160; Penetration Testing: SPT, DCPT; 10 20 30 40	Combustible Organic Vapour (ppm), Combustible Organic Vapour (%LEL), Total Organic Vapour (ppm); 100 200 300 400; Atterberg Limits: PL, LL; Water Content (%); 10 20 30 40	Instrumentation Installation	GR SA SI CL
	0.0 230.4					0					
	TOPSOIL: 25 mm										
	FILL: Clayey silt, trace sand, firm, brown, moist										
	0.8 229.6						229.5				
	CLAYEY SILT: Some sand, stiff, brown with grey spotting, moist										
	1.5 228.8					1.5					
	CLAYEY SILT GLACIAL TILL: Some sand, inferred cobbles and boulders, very stiff to hard, brown, moist										
	2.3 228.1										
	Borehole Terminated at 2.3 m										

Descriptions copied from BH 4-D

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Groundwater depth encountered on completion of drilling: Dry

Cave depth after auger removal: Open

Groundwater depth observed on: Jun 7/23 at depth of: 1.2 m.

Groundwater Elevation: 229.2 m

RECORD OF BOREHOLE No. 5

Project Number: **2301130**
Project Client: **Simpson Road Landowners Group Inc.**
Project Name: **South Simpson (Headwaters of West**
Project Location: **Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Track Mount** Drilling Machine: **Solid Stem Augers**
Logged By: **TA** Northing: **4855105.3** Date Started: **May 18/23**
Reviewed By: **GW** Easting: **604103.3** Date Completed: **May 18/23**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	FIELD TESTING (Shear Strength Testing (kPa); Penetration Testing SPT/DCPT)	LAB TESTING (Combustible Organic Vapour (ppm); Combustible Organic Vapour (%LEL); Total Organic Vapour (ppm); Atterberg Limits PL/LL; Water Content (%))	Instrumentation Installation	COMMENTS & GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
	0.0 231.2										
	0.2 TOPSOIL: 180 mm 231.0 GRAVEL: 25 mm FILL: 555 mm 0.8 230.4	SS	1	85	6	0	231	6	22		
	CLAYEY SILT: Some sand, firm to stiff, brown to grey, moist	SS	2	100	19			19	14		
		SS	3	100	29	1.5	229.5	29	13		
	2.3 228.9										
	CLAYEY SILT GLACIAL TILL: Some sand, inferred cobbles and boulders, very stiff to hard, grey, moist	SS	4	100	21			21	14		
		SS	5	100	43	3	228	43	13		First Water Strike SS5
	4.6 226.6										
	CLAYEY SILT: Some sand, trace gravel, firm to very stiff, grey, moist	SS	6	100	21	4.5	226.5	21	13		2 17 48 33
	6.1 225.1										
	CLAYEY SILT GLACIAL TILL: Some sand, inferred cobbles and boulders, very stiff to hard, grey, moist	SS	7	100	19	6	225	19	15		
	6.6 224.6 Borehole Terminated at 6.6 m										

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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jun 7/23 at depth of: 1.3 m.
Groundwater Elevation: 229.9 m

RECORD OF BOREHOLE No. 6-D

Project Number: **2301130**
Project Client: **Simpson Road Landowners Group Inc.**
Project Name: **South Simpson (Headwaters of West**
Project Location: **Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Track Mount** Drilling Machine: **Solid Stem Augers**
Logged By: **TA** Northing: **4855285.3** Date Started: **May 19/23**
Reviewed By: **GW** Easting: **604062.3** Date Completed: **May 19/23**

Depth	Description	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	Elevation (m)
0.0						231.4
0.8	ASPHALT: 25 mm GRANULAR: Sand FILL: Sand, trace silt	AS	1			230.7
	CLAYEY SILT: Trace organics, firm, brown, wet	SS	2	55	4	
	- - - Some sand, brown to grey - - -	SS	3	100	6	
2.3						229.1
	CLAYEY SILT GLACIAL TILL: Some sand, inferred cobbles and boulders, very stiff to hard, grey, wet to moist	SS	4	100	24	
		SS	5	100	44	
		SS	6	100	36	
6.1						225.3
6.6	CLAYEY SILT: Some sand, very stiff, grey, wet	SS	7	100	30	224.9
	Borehole Terminated at 6.6 m					

Depth (m): 0, 1.5, 3, 4.5, 6

Shear Strength Testing (kPa): Other Test; Pocket Penetrometer; Field Vane (Intact); Field Vane (Remolded); 40 80 120 160

Penetration Testing: SPT; DCPT; 10 20 30 40

Combustible Organic Vapour (ppm); Combustible Organic Vapour (%LEL); Total Organic Vapour (ppm); 100 200 300 400

Atterberg Limits: PL; LL

Water Content (%): 10 20 30 40

Instrumentation Installation

COMMENTS & GRAIN SIZE DISTRIBUTION (%): GR SA SI CL

First Water Strike SS2

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Groundwater depth encountered on completion of drilling: 5.4 m. Cave depth after auger removal: Open

Groundwater depth observed on: Jun 7/23 at depth of: 1.3 m. Groundwater Elevation: 230.1 m

Borehole details presented do not constitute a thorough understanding of all potential conditions present and require interpretative assistance from a qualified geotechnical engineer. Also, borehole information should be read in conjunction with the geotechnical report for which it was commissioned and the accompanying 'Explanation of Boring Log'.

Scale: **1 :75**

RECORD OF BOREHOLE No. 6-S

Project Number:	**2301130**						
Project Client:	**Simpson Road Landowners Group Inc.**						
Project Name:	**South Simpson (Headwaters of West**	Drilling Method:	**Track Mount**	Drilling Machine:	**Solid Stem Augers**		
Project Location:	**Caledon, ON**	Logged By:	**TA**	Northing:	**4855284.8**	Date Started:	**May 19/23**
Drilling Location:	**See Borehole Location Plan**	Reviewed By:	**GW**	Easting:	**604061.4**	Date Completed:	**May 19/23**
Local Benchmark:							

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING	LAB TESTING		COMMENTS & GRAIN SIZE DISTRIBUTION (%)
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	Shear Strength Testing (kPa): Other Test, Pocket Penetrometer, Field Vane (Intact), Field Vane (Remolded); 40 80 120 160; Penetration Testing: SPT, DCPT; 10 20 30 40	Combustible Organic Vapour (ppm), Combustible Organic Vapour (%LEL), Total Organic Vapour (ppm); 100 200 300 400; Atterberg Limits: PL, LL; Water Content (%); 10 20 30 40	Instrumentation Installation	GR SA SI CL
	0.0 231.4					0	231				
	ASPHALT: 25 mm GRANULAR: Sand FILL: Sand, trace silt 0.8 230.7										Descriptions copied from BH 6-D
	CLAYEY SILT: Trace organics, firm, brown, wet - - - Some sand, brown to grey - - - 2.3 229.1					1.5	229.5				First Water Strike SS2
	Borehole Terminated at 2.3 m										

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Groundwater depth encountered on completion of drilling: 5.4 m. Cave depth after auger removal: Open

Groundwater depth observed on: Jun 7.23 at depth of: 0.5 m. Groundwater Elevation: 230.9 m

Borehole details presented do not constitute a thorough understanding of all potential conditions present and require interpretative assistance from a qualified geotechnical engineer. Also, borehole information should be read in conjunction with the geotechnical report for which it was commissioned and the accompanying 'Explanation of Boring Log'.

Scale: **1 :75**

RECORD OF BOREHOLE No. 7

Project Number:	2301130						
Project Client:	Simpson Road Landowners Group Inc.						
Project Name:	South Simpson (Headwaters of West	Drilling Method:	Track Mount	Drilling Machine:	Solid Stem Augers		
Project Location:	Caledon, ON	Logged By:	TA	Northing:	4855220.4	Date Started:	May 19/23
Drilling Location:	See Borehole Location Plan	Reviewed By:	GW	Easting:	603844.3	Date Completed:	May 19/23
Local Benchmark:							

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	FIELD TESTING (Shear Strength Testing (kPa); Penetration Testing SPT/DCPT)	LAB TESTING (Combustible Organic Vapour (ppm); Combustible Organic Vapour (%LEL); Total Organic Vapour (ppm); Atterberg Limits PL–LL; Water Content (%))	Instrumentation Installation	COMMENTS & GRAIN SIZE DISTRIBUTION (%) GR	SA	SI	CL
	0.0 232.6													
	ASPHALT/GRANULAR: 760 mm	SS	1	80	37	0	232.5	37	5					
	0.8 231.8													
	CLAYEY SILT: Some sand, firm to very stiff, brown and grey, moist	SS	2	100	9			9	15					
		SS	3	90	21	1.5	231	21	15					
	2.3 230.3													
	CLAYEY SILT GLACIAL TILL: Some sand, inferred cobbles and boulders, very stiff, grey, moist	SS	4	100	25			25	14		First Water Strike SS4			
		SS	5	100	25	3	229.5	25	14					
	4.6 228.0													
	CLAYEY SILT: Trace sand, stiff, grey, moist	SS	6	100	14	4.5	228	14	15					
	6.1 226.5													
	SANDY CLAYEY SILT GLACIAL TILL: Some gravel, inferred cobbles and boulders, very stiff, grey, moist	SS	7	85	7	6	226.5	7	15		5	22	45	28
	6.6 226.0													
	Borehole Terminated at 6.6 m													

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Barrie, Ontario L4N 0B7
T : (705) 719-7994
www.geiconsultants.com

Groundwater depth encountered on completion of drilling: 5.4 m. Cave depth after auger removal: Open

Groundwater depth observed on: Groundwater Elevation:

RECORD OF BOREHOLE No. 8

Project Number:	**2301130**						
Project Client:	**Simpson Road Landowners Group Inc.**						
Project Name:	**South Simpson (Headwaters of West**	Drilling Method:	**Track Mount**	Drilling Machine:	**Solid Stem Augers**		
Project Location:	**Caledon, ON**	Logged By:	**TA**	Northing:	**4855027.8**	Date Started:	**May 17/23**
Drilling Location:	**See Borehole Location Plan**	Reviewed By:	**GW**	Easting:	**603918.9**	Date Completed:	**May 17/23**
Local Benchmark:							

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING	LAB TESTING		COMMENTS & GRAIN SIZE DISTRIBUTION (%)			
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	Shear Strength Testing (kPa); Penetration Testing (SPT / DCPT)	Combustible Organic Vapour (ppm); Combustible Organic Vapour (%LEL); Total Organic Vapour (ppm); Atterberg Limits; Water Content (%)	Instrumentation Installation		GR	SA	SI	CL
	GRANULAR: 720 mm	AS	1			0	231								
	0.7 231.0 / 0.8 231.8 FILL: 40 mm														
	CLAYEY SILT: Some sand, stiff to very stiff, brown, moist	SS	2	80	10	1.5	230.2	10	10 / 15						
	CLAYEY SILT GLACIAL TILL: Some sand, inferred cobbles and boulders, hard, brown, moist	SS	3	100	28		229.5	28	15						
		SS	4	100	35	3		35	13						
		SS	5	100	20		228	20	13						
	- - - Stiff, grey - - -	SS	6	45	15	4.5	226.5	15	16		First Water Strike SS5				
	6.1 225.6 SAND AND SILT: Trace clay, compact, grey, wet 6.6 225.2	SS	7	100	24	6		24	13			0	43	53	4
	Borehole Terminated at 6.6 m														

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www.geiconsultants.com

Groundwater depth encountered on completion of drilling: 5.4 m. Cave depth after auger removal: Open

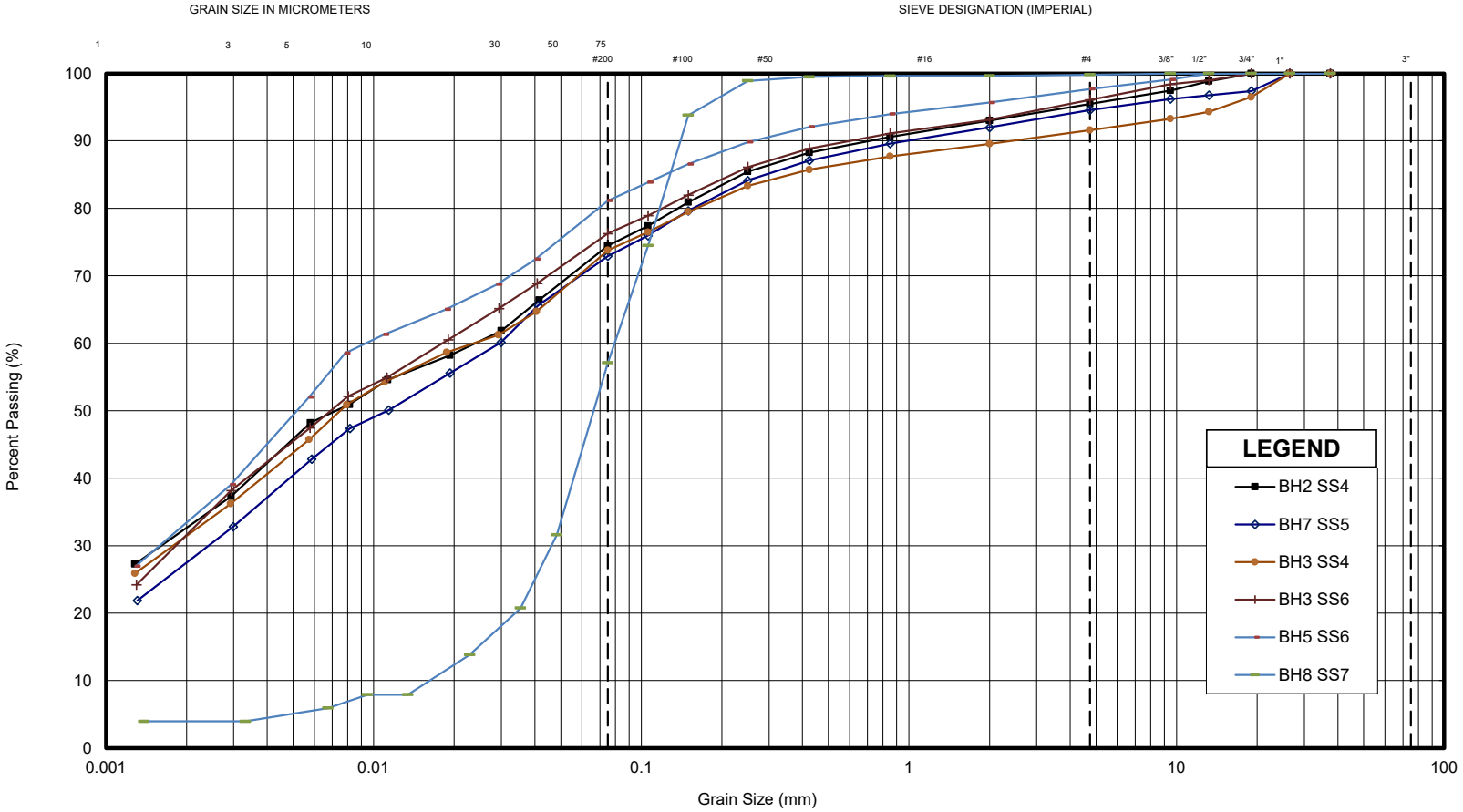
Groundwater depth observed on: Jun 7/23 at depth of: 2.0 m. Groundwater Elevation: 229.7 m

Appendix C

Geotechnical Laboratory Testing

UNIFIED SOIL CLASSIFICATION SYSTEM

CLAY AND SILT	SAND			GRAVEL	
	Fine	Medium	Coarse	Fine	Coarse



Sample	Description	Gr.	Sa.	Si.	Cl.	D_{10}	D_{30}	D_{60}	C_u	C_c
BH2 SS4	SANDY CLAYEY SILT, Trace Gravel	5	21	42	32	-	0.002	0.024	-	-
BH7 SS7	SANDY CLAYEY SILT, Trace Gravel	5	22	45	28	-	0.002	0.030	-	-
BH3 SS4	CLAYEY SILT, Some Sand, Trace Gravel	8	18	42	32	-	0.002	0.024	-	-
BH3 SS6	SANDY CLAYEY SILT, Trace Gravel	4	20	45	31	-	0.002	0.018	-	-
BH5 SS6	CLAYEY SILT, Some Sand, Trace Gravel	2	17	48	33	-	0.002	0.009	-	-
BH8 SS7	SAND AND SILT, Trace Clay	-	43	53	4	0.016	0.046	0.079	4.9	1.7

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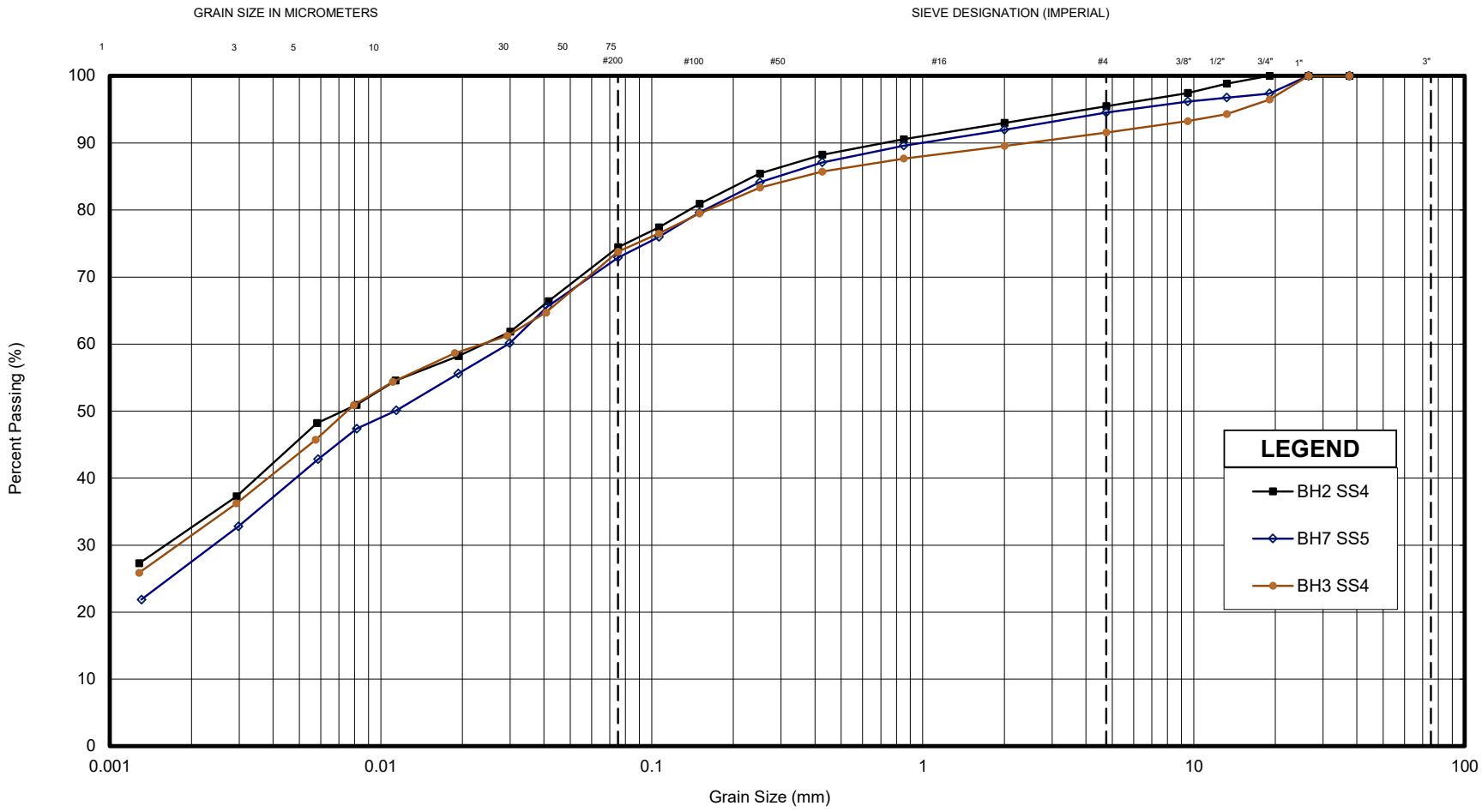
GRAIN SIZE DISTRIBUTION - South Simpson (Headwaters of West Rainbow Creek)

Master Graph

FIGURE No.	App C - Master
REF. No.	2301130
DATE	August 2023

UNIFIED SOIL CLASSIFICATION SYSTEM

CLAY AND SILT	SAND			GRAVEL	
	Fine	Medium	Coarse	Fine	Coarse



Sample	Description	Gr.	Sa.	Si.	Cl.	D_{10}	D_{30}	D_{60}	C_u	C_c
BH2 SS4	SANDY CLAYEY SILT, Trace Gravel	5	21	42	32	-	0.002	0.024	-	-
BH7 SS7	SANDY CLAYEY SILT, Trace Gravel	5	22	45	28	-	0.002	0.030	-	-
BH3 SS4	CLAYEY SILT, Some Sand, Trace Gravel	8	18	42	32	-	0.002	0.024	-	-

GEI Consultants

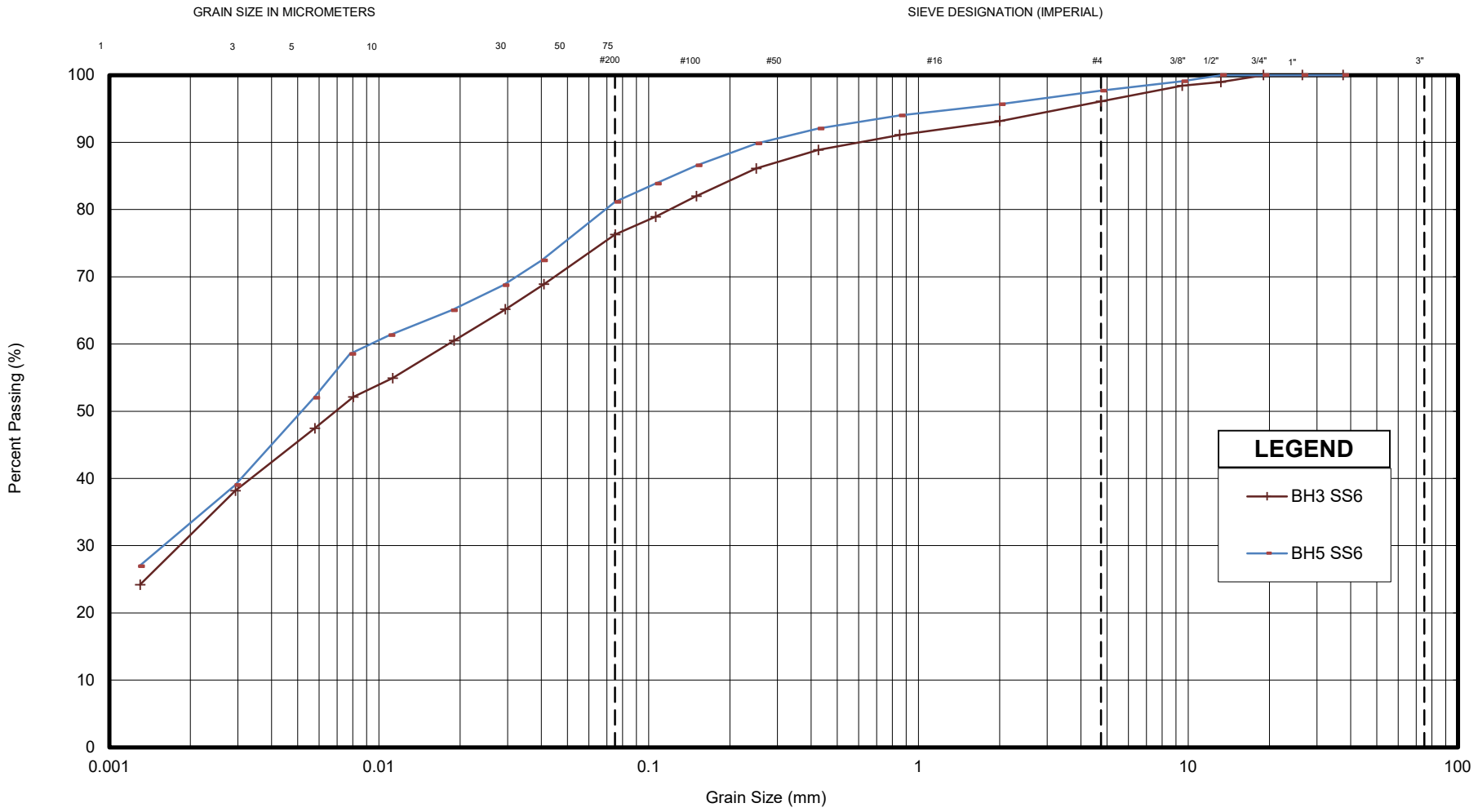
GRAIN SIZE DISTRIBUTION - South Simpson (Headwaters of West Rainbow Creek)

GLACIAL TILL

FIGURE No.	App C - A
REF. No.	2301130
DATE	App C - Master

UNIFIED SOIL CLASSIFICATION SYSTEM

CLAY AND SILT	SAND			GRAVEL	
	Fine	Medium	Coarse	Fine	Coarse



Sample	Description	Gr.	Sa.	Si.	Cl.	D_{10}	D_{30}	D_{60}	C_u	C_c
BH3 SS6	SANDY CLAYEY SILT, Trace Gravel	4	20	45	31	-	0.002	0.018	-	-
BH5 SS6	CLAYEY SILT, Some Sand, Trace Gravel	2	17	48	33	-	0.002	0.009	-	-

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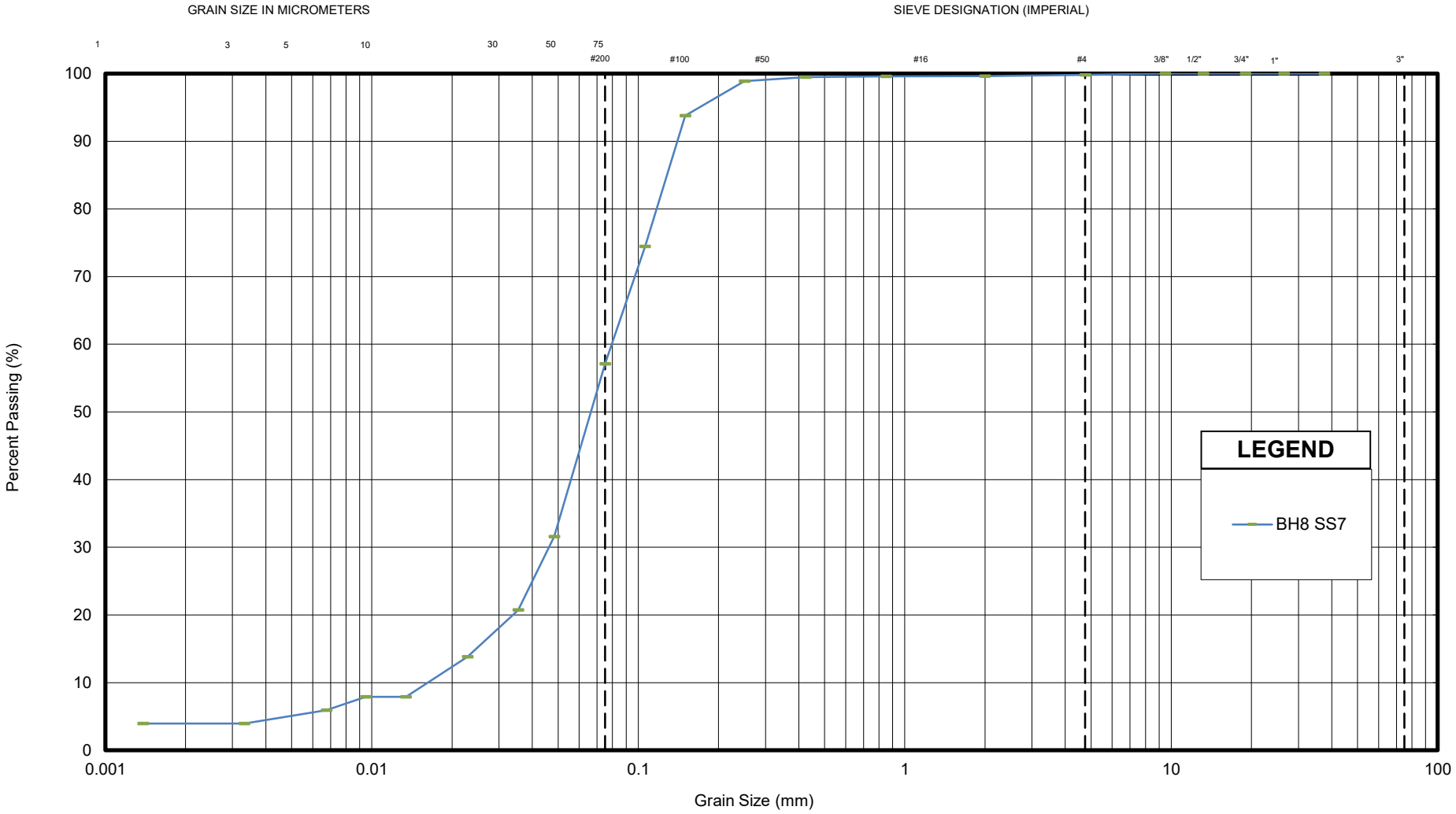
GRAIN SIZE DISTRIBUTION - South Simpson (Headwaters of West Rainbow Creek)

CLAYEY SILT

FIGURE No.	APP C - B
REF. No.	2301130
DATE	August 2023

UNIFIED SOIL CLASSIFICATION SYSTEM

CLAY AND SILT	SAND			GRAVEL	
	Fine	Medium	Coarse	Fine	Coarse



Sample	Description	Gr.	Sa.	Si.	Cl.	D_{10}	D_{30}	D_{60}	C_u	C_c
BH8 SS7	SAND AND SILT, Trace Clay	-	43	53	4	0.016	0.046	0.079	4.9	1.7

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GRAIN SIZE DISTRIBUTION - South Simpson (Headwaters of West Rainbow Creek)

SAND AND SILT

FIGURE No.	App C - C
REF. No.	2301130
DATE	August 2023

Appendix D

Rising Head Test Results

Hydrogeological Investigation
South Simpson (Headwaters of West Rainbow Creek),
Northeast corner of Coleraine Drive and Mayfield Road, Caledon, ON
Project No.: 2301130

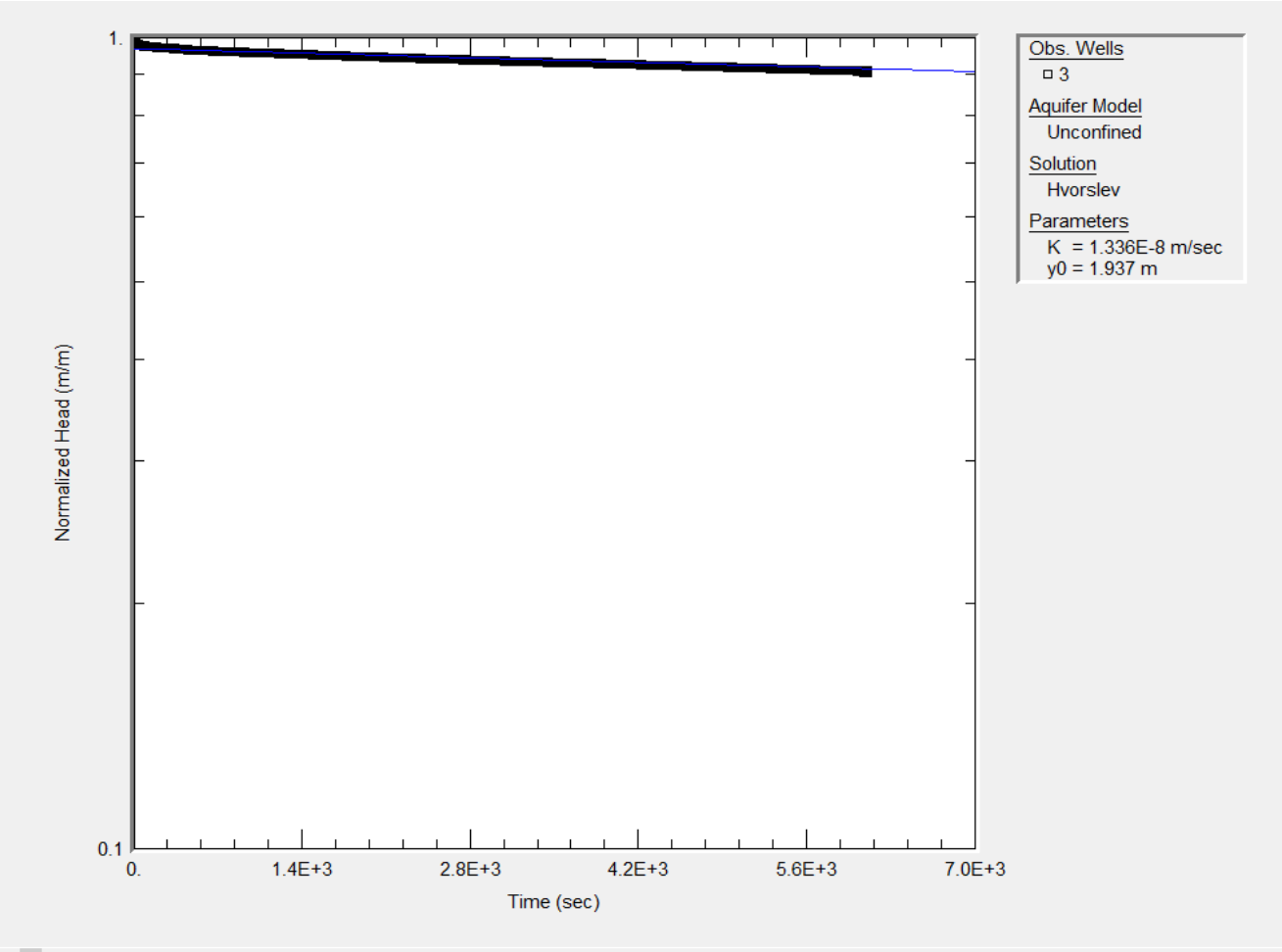
GEI Consultants

Estimation of K by Slug Test, based on Horslev equation

Date:	July 3, 2023
Conducted by:	S. Patrick

Well Number:	MW3	
Well Screen Bottom:	6.10	mbgs
Top of Pipe:	0.88	mags
Well Casing Diameter:	5.08	cm
Well Elevation:	233.3	masl
Static Water Level:	2.33	mbgs
$K = r^2\ln(L/R)/(2LTo) =$	**$1.3x10^{-8}$**	m/s

** this is the ground elevation



Hydrogeological Investigation
South Simpson (Headwaters of West Rainbow Creek),
Northeast corner of Coleraine Drive and Mayfield Road, Caledon, ON
Project No.: 2301130

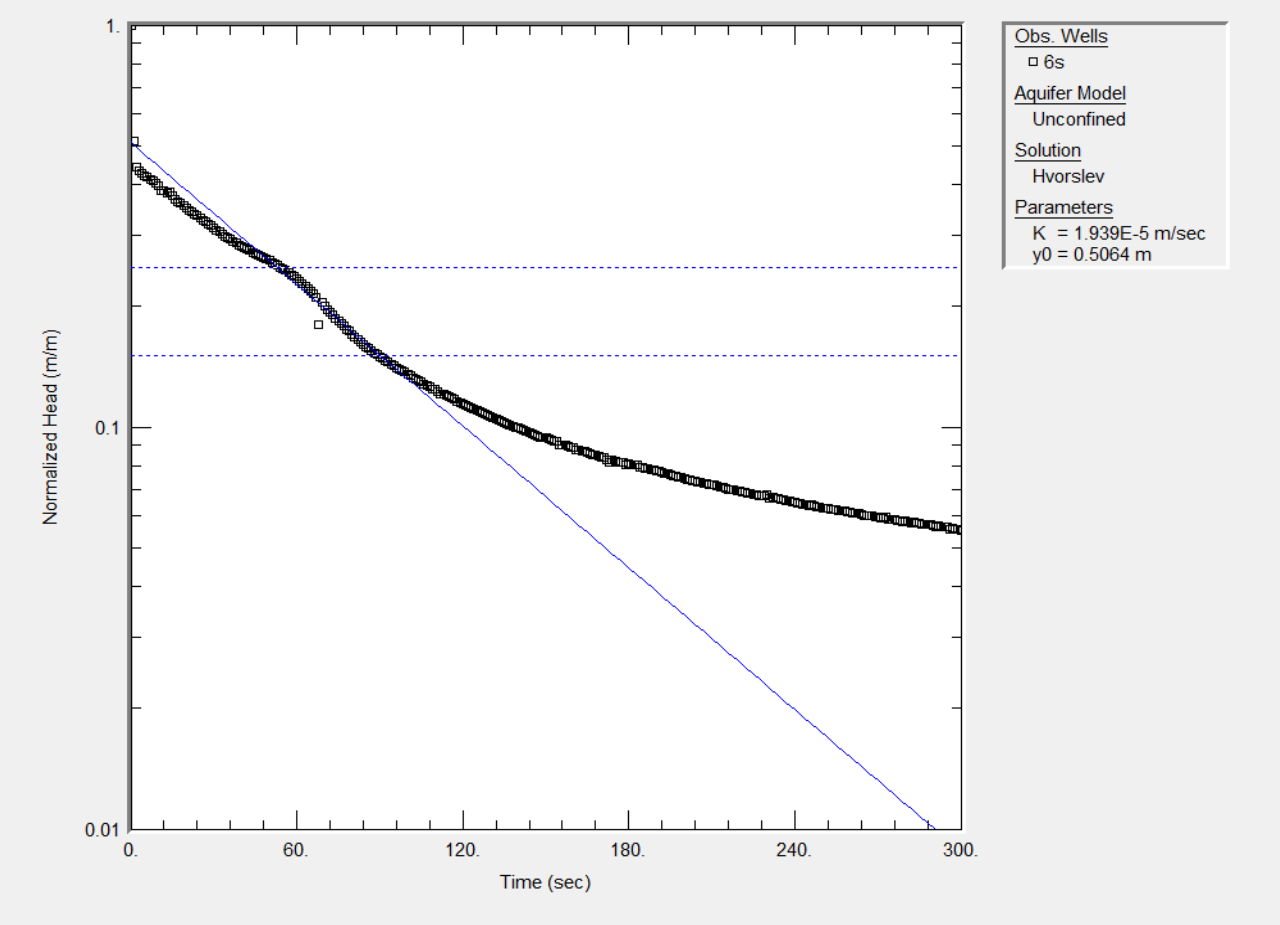
GEI Consultants

Estimation of K by Slug Test, based on Dagan equation

Date:	June 8, 2023
Conducted by:	S. Patrick

Well Number:	MW6S	
Well Screen Bottom:	2.30	mbgs
Top of Pipe:	0.00	mags
Well Casing Diameter:	5.08	cm
Well Elevation:	231.4	masl
Static Water Level:	0.62	mbgs
$K = r^2\ln(L/R)/(2LTo) =$	**1.9×10^{-5}**	m/s

** this is the ground elevation



Hydrogeological Investigation
South Simpson (Headwaters of West Rainbow Creek),
Northeast corner of Coleraine Drive and Mayfield Road, Caledon, ON
Project No.: 2301130

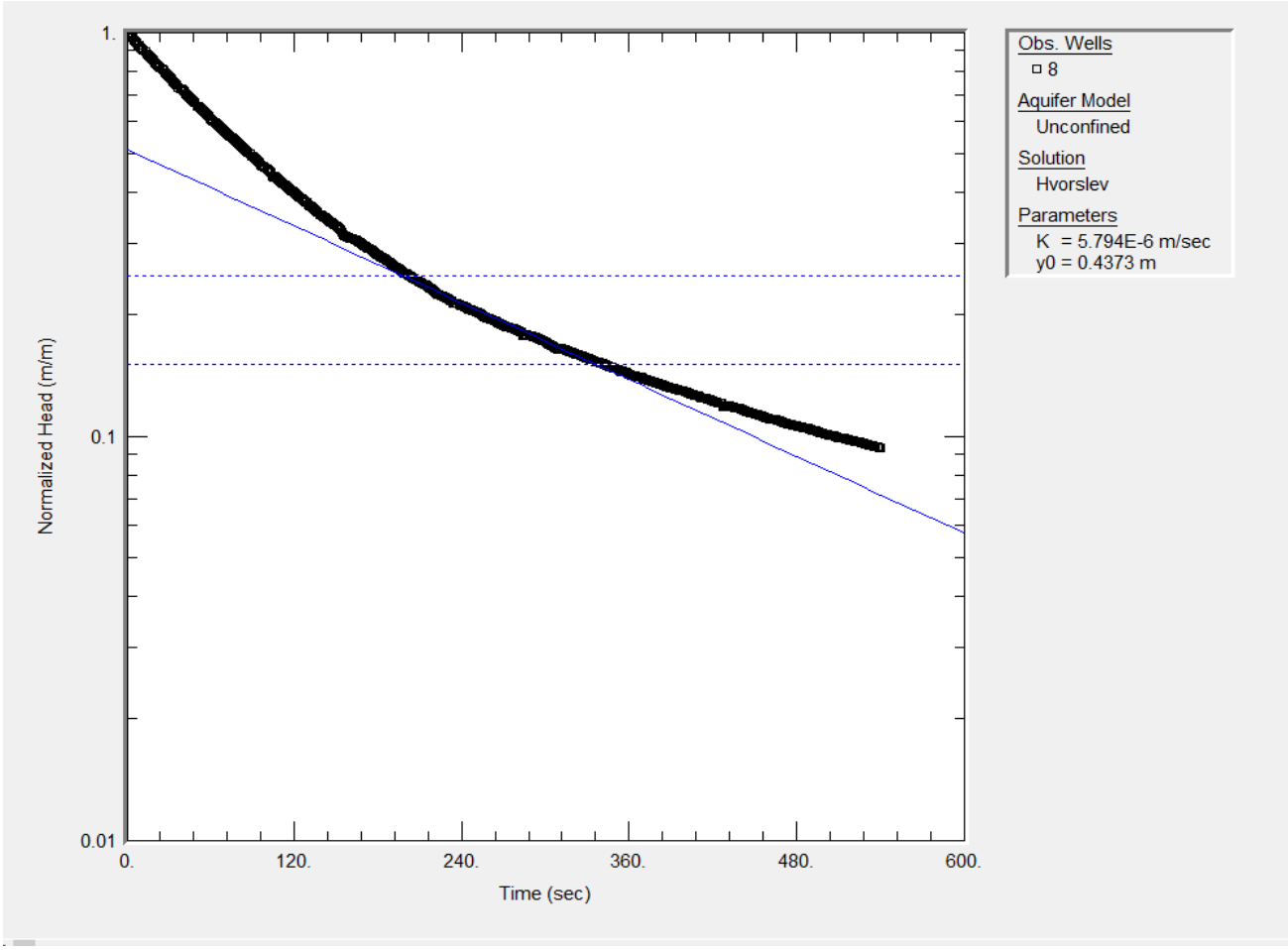
GEI Consultants

Estimation of K by Slug Test, based on Horslev equation

Date:	June 8, 2023
Conducted by:	S. Patrick

Well Number:	MW8	
Well Screen Bottom:	6.10	mbgs
Top of Pipe:	0.00	mags
Well Casing Diameter:	5.08	cm
Well Elevation:	234.7	masl
Static Water Level:	1.99	mbgs
$K = r^2\ln(L/R)/(2LTo)$ =	**$5.8x10^{-6}$**	m/s

** this is the ground elevation



Appendix E

Water Quality Laboratory Certificate Of Analysis And Chain Of Custody

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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: ---

REPORT No. B23-03752 (i)

Report To:

GEI Consultants
647 Welham Rd, Unit 14,
Barrie ON L4N 0B7 Canada
Attention: Sarah Griffith

Caduceon Environmental Laboratories
112 Commerce Park Drive
Barrie ON L4N 8W8
Tel: 705-252-5743
Fax: 705-252-5746

DATE RECEIVED: 08-Jun-23
DATE REPORTED: 29-Jun-23
SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.:

P.O. NUMBER: 2301130
WATERWORKS NO.

Parameter	Qty	Site Analyzed	Analyst Initials	Date Analyzed	Lab Method	Reference Method
Cyanide	1	Kingston	kwe	13-Jun-23	A-CN-001 (k)	SM 4500CN
Anions	1	Holly Lane	pcu	14-Jun-23	A-IC-01 (o)	SM4110C
pH	1	Holly Lane	SYL	12-Jun-23	A-PH-01 (o)	SM 4500H
A - Wet Chem	1	Kingston	JWF	14-Jun-23	A-TPTKN-001 (N)(k)	E3516.2
A - Wet Chem	1	Kingston	JWF	14-Jun-23	A-TPTKN-001 (P)(k)	E3516.2
Total Suspended Solids	2	Kingston	mci	12-Jun-23	A-TSS-001 (k)	SM2540D
B - Bacteriological	1	Barrie	NME	09-Jun-23	B-EC-001 (b)	SM9222D
Comment	1	Default Site	CS	14-Jun-23	C-Arochlor Comment	-
BOD	1	Kingston	JWF	12-Jun-23	C-BOD-001 (k)	SM 5210B
SVOC	1	Kingston	esi	13-Jun-23	C-NAB-W-001 (k)	EPA 8270
Oil & Grease	1	Kingston	TMM	14-Jun-23	C-O&G-001 (k)	SM 5520
PCB's	1	Kingston	CS	14-Jun-23	C-PCB-03 K	EPA 8082
Phenolics (4-aap)	1	Kingston	kwe	14-Jun-23	C-PHEN-01 (k)	MOEE 3179
Chromium (VI)	2	Holly Lane	ST	15-Jun-23	D-CRVI-01 (o)	MOE E3056
Mercury	2	Holly Lane	APR	14-Jun-23	D-HG-02 (o)	SM 3112 B
Metals - ICP-OES	2	Holly Lane	aoz	16-Jun-23	D-ICP-01 (o)	SM 3120
Metals - ICP-MS	2	Holly Lane	TPR	14-Jun-23	D-ICPMS-01 (o)	EPA 200.8
Subcontracted	1	Default Site	CWp	29-Jun-23	S-Nonylphenols	Subcontract

Peel Sanitary/Storm - Peek Sanitary/Storm Sewer
Peel Sanitary Sewer - Peel Sanitary Sewer
Peel Storm Sewer - Peel Storm Sewer

Christine Burke
Lab Manager

R.L. = Reporting Limit
Test methods may be modified from specified reference method unless indicated by an *
Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

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Attention: Sarah Griffith

Caduceon Environmental Laboratories
112 Commerce Park Drive
Barrie ON L4N 8W8
Tel: 705-252-5743
Fax: 705-252-5746

DATE RECEIVED: 08-Jun-23
DATE REPORTED: 29-Jun-23
SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.:
P.O. NUMBER: 2301130
WATERWORKS NO.

	Client I.D.		MW4d	MW4d-F			Peel Sanitary/Storm	
	Sample I.D.		B23-03752-1	B23-03752-2			Peel Sanitary Sewer	Peel Storm Sewer
	Date Collected		08-Jun-23	08-Jun-23				
Parameter	**Units**	**R.L.**						
E coli	cfu/100mL	1	< 2					200
pH @25°C	pH Units		7.67				10.0	9.0
BOD(5 day)	mg/L	3	< 3				300	15
Cyanide (Total)	mg/L	0.005	< 0.005				2	0.02
Fluoride	mg/L	0.1	< 0.1				10	
Total Kjeldahl Nitrogen	mg/L	0.1	0.2				100	1
Oil and Grease-Anim/Veg. (Calculation)	mg/L	1.0	1.3				150	
Oil and Grease-Mineral	mg/L	1.0	< 1.0				15	
Oil & Grease-Total	mg/L	1.0	1.5					
Phenolics	mg/L	0.001	< 0.001				1.0	0.008
Phosphorus-Total	mg/L	0.01	0.04				10	0.4
Total Suspended Solids	mg/L	3	**380**	< 3			350	15
Aluminum	mg/L	0.01	0.48	0.07			50	
Hardness (as CaCO3)	mg/L	1	907	895				
Antimony	mg/L	0.0001	0.0002	0.0002			5	
Arsenic	mg/L	0.0001	0.0021	0.0013			1	0.02
Beryllium	mg/L	0.002	< 0.002	< 0.002				
Boron	mg/L	0.005	0.051	0.046				
Cadmium	mg/L	).000015	0.000023	< 0.000015			0.7	0.008
Chromium	mg/L	0.001	0.001	< 0.001			5	0.08
Chromium (VI)	mg/L	0.001	< 0.001	< 0.001	1			
Cobalt	mg/L	0.0001	0.0016	0.0012			5	
Copper	mg/L	0.0001	0.0014	0.0002			3	0.05

Peel Sanitary/Storm - Peek Sanitary/Storm Sewer
Peel Sanitary Sewer - Peel Sanitary Sewer
Peel Storm Sewer - Peel Storm Sewer

Christine Burke
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Attention: Sarah Griffith

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Barrie ON L4N 8W8
Tel: 705-252-5743
Fax: 705-252-5746

DATE RECEIVED: 08-Jun-23
DATE REPORTED: 29-Jun-23
SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.:
P.O. NUMBER: 2301130
WATERWORKS NO.

	Client I.D.		MW4d	MW4d-F			Peel Sanitary/Storm	
	Sample I.D.		B23-03752-1	B23-03752-2			Peel Sanitary Sewer	Peel Storm Sewer
	Date Collected		08-Jun-23	08-Jun-23				
Parameter	**Units**	**R.L.**						
Iron (Total)	mg/L	0.005	1.82	0.123				
Lead	mg/L	0.00002	0.00039	0.00007			3	0.120
Manganese (Total)	mg/L	0.001	**0.203**	**0.175**			5	0.05
Mercury	mg/L	0.00002	< 0.00002	< 0.00002			0.01	0.0004
Molybdenum	mg/L	0.0001	0.0017	0.0017			5	
Nickel	mg/L	0.0002	0.0039	0.0029			3	0.08
Selenium	mg/L	0.001	0.001	0.002			1	0.02
Silver	mg/L	0.0001	< 0.0001	< 0.0001			5	0.12
Sulphate	mg/L	1	204				1500	
Thallium	mg/L	0.00005	< 0.00005	< 0.00005				
Tin	mg/L	0.05	< 0.05	< 0.05			5	
Titanium	mg/L	0.005	0.011	< 0.005			5	
Tungsten	mg/L	0.01	< 0.01	< 0.01				
Uranium	mg/L	0.00005	0.00661	0.00772				
Vanadium	mg/L	0.0001	0.0015	0.0007				
Zinc	mg/L	0.005	0.012	< 0.005			3	0.04
Zirconium	mg/L	0.003	< 0.003	< 0.003				
Poly-Chlorinated Biphenyls (PCB's)	mg/L	0.00005	< 0.00005				0.001	0.0004
Aroclor	-		-					
Nonylphenols	mg/L	0.001	< 0.001 [2]				0.02	
Nonylphenol Ethoxylates	mg/L	0.01	< 0.01 [2]				0.2	
Nonylphenol Monoethoxylate	µg/L	10	< 10 [2]					

Peel Sanitary/Storm - Peek Sanitary/Storm Sewer
Peel Sanitary Sewer - Peel Sanitary Sewer
Peel Storm Sewer - Peel Storm Sewer

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Lab Manager

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Attention: Sarah Griffith

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112 Commerce Park Drive
Barrie ON L4N 8W8
Tel: 705-252-5743
Fax: 705-252-5746

DATE RECEIVED: 08-Jun-23
DATE REPORTED: 29-Jun-23
SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.:
P.O. NUMBER: 2301130
WATERWORKS NO.

	Client I.D.		MW4d	MW4d-F			Peel Sanitary/Storm	
	Sample I.D.		B23-03752-1	B23-03752-2			Peel Sanitary Sewer	Peel Storm Sewer
	Date Collected		08-Jun-23	08-Jun-23				
Parameter	**Units**	**R.L.**						
Nonylphenol Diethoxylate	µg/L	10	< 10 [2]					
Bis(2-ethylhexyl) Phthalate	mg/L	0.005	< 0.005				0.012	0.0088
Di-n-butyl Phthalate	mg/L	0.001	< 0.001				0.08	0.015

1 Chromium (VI) result is based on total Chromium

2 Subcontracted to SGS Lakefield

Peel Sanitary/Storm - Peek Sanitary/Storm Sewer
Peel Sanitary Sewer - Peel Sanitary Sewer
Peel Storm Sewer - Peel Storm Sewer

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DATE RECEIVED: 08-Jun-23
DATE REPORTED: 29-Jun-23
SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.:
P.O. NUMBER: 2301130
WATERWORKS NO.

Summary of Exceedances

Peel Sanitary Sewer

MW4d	Found Value	Limit
Total Suspended Solids (mg/L)	380	350

Peel Storm Sewer

MW4d	Found Value	Limit
Total Suspended Solids (mg/L)	380	15
Manganese (Total) (mg/L)	0.203	0.05
MW4d-F	Found Value	Limit
Manganese (Total) (mg/L)	0.175	0.05

Peel Sanitary/Storm - Peek Sanitary/Storm Sewer
Peel Sanitary Sewer - Peel Sanitary Sewer
Peel Storm Sewer - Peel Storm Sewer

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C.O.C.: ---

REPORT No. B23-03752 (i)

Rev. 1

Report To:

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647 Welham Rd, Unit 14,
Barrie ON L4N 0B7 Canada
Attention: Sarah Griffith

Caduceon Environmental Laboratories
112 Commerce Park Drive
Barrie ON L4N 8W8
Tel: 705-252-5743
Fax: 705-252-5746

DATE RECEIVED: 08-Jun-23
DATE REPORTED: 29-Jun-23
SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.:

P.O. NUMBER: 2301130
WATERWORKS NO.

Parameter	Qty	Site Analyzed	Analyst Initials	Date Analyzed	Lab Method	Reference Method
Chromium (VI)	2	Holly Lane	ST	15-Jun-23	D-CRVI-01 (o)	MOE E3056
Mercury	2	Holly Lane	APR	14-Jun-23	D-HG-02 (o)	SM 3112 B
Metals - ICP-OES	2	Holly Lane	aoz	16-Jun-23	D-ICP-01 (o)	SM 3120
Metals - ICP-MS	2	Holly Lane	TPR	14-Jun-23	D-ICPMS-01 (o)	EPA 200.8

PWQO - Provincial Water Quality Objectives
Interim PWQO - Interim PWQO
PWQO - Provincial Water Quality Objectives

Christine Burke
Lab Manager

R.L. = Reporting Limit
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Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: ---

REPORT No. B23-03752 (i)

Rev. 1

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DATE RECEIVED: 08-Jun-23
DATE REPORTED: 29-Jun-23
SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.:
P.O. NUMBER: 2301130
WATERWORKS NO.

	Client I.D.		MW4d	MW4d-F			PWQO	
	Sample I.D.		B23-03752-1	B23-03752-2			Interim PWQO	PWQO
	Date Collected		08-Jun-23	08-Jun-23				
Parameter	**Units**	**R.L.**						
Hardness (as CaCO3)	mg/L	1	907	895				
Aluminum	µg/L	10	**480**	70			75	
Antimony	µg/L	0.1	0.2	0.2			20	
Arsenic	µg/L	0.1	2.1	1.3			5	5
Beryllium	µg/L	2	< 2	< 2				11
Boron	µg/L	5	51	46			200	
Cadmium	µg/L	0.015	0.023	< 0.015			0.1	0.2
Chromium	µg/L	1	1	< 1				
Chromium (VI)	µg/L	1	< 1	< 1 [1]				1
Cobalt	µg/L	0.1	**1.6**	**1.2**			0.9	
Copper	µg/L	0.1	1.4	0.2			5	
Iron (Total)	µg/L	5	**1820**	123				300
Lead	µg/L	0.02	0.39	0.07			1	5
Manganese (Total)	µg/L	1	203	175				
Mercury	µg/L	0.02	< 0.02	< 0.02				0.2
Molybdenum	µg/L	0.1	1.7	1.7			40	
Nickel	µg/L	0.2	3.9	2.9				25
Selenium	µg/L	1	1	2				100
Silver	µg/L	0.1	< 0.1	< 0.1				0.1
Thallium	µg/L	0.05	< 0.05	< 0.05			0.3	0.3
Tin	µg/L	50	< 50	< 50				
Titanium	µg/L	5	11	< 5				
Tungsten	µg/L	10	< 10	< 10			30	
Uranium	µg/L	0.05	**6.61**	**7.72**			5	

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Interim PWQO - Interim PWQO
PWQO - Provincial Water Quality Objectives

Christine Burke
Lab Manager

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DATE RECEIVED: 08-Jun-23
DATE REPORTED: 29-Jun-23
SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.:
P.O. NUMBER: 2301130
WATERWORKS NO.

	Client I.D.		MW4d	MW4d-F			PWQO	
	Sample I.D.		B23-03752-1	B23-03752-2			Interim PWQO	PWQO
	Date Collected		08-Jun-23	08-Jun-23				
Parameter	**Units**	**R.L.**						
Vanadium	µg/L	0.1	1.5	0.7			6	
Zinc	µg/L	5	12	< 5			20	30
Zirconium	µg/L	3	< 3	< 3			4	

1 Chromium (VI) result is based on total Chromium

PWQO - Provincial Water Quality Objectives
Interim PWQO - Interim PWQO
PWQO - Provincial Water Quality Objectives

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SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.:
P.O. NUMBER: 2301130
WATERWORKS NO.

Summary of Exceedances

Interim PWQO

MW4d	Found Value	Limit
Uranium (µg/L)	6.61	5
Cobalt (µg/L)	1.6	0.9
Aluminum (µg/L)	480	75

MW4d-F	Found Value	Limit
Uranium (µg/L)	7.72	5
Cobalt (µg/L)	1.2	0.9

Provincial Water Quality Objectives

MW4d	Found Value	Limit
Iron (Total) (µg/L)	1820	300

PWQO - Provincial Water Quality Objectives
Interim PWQO - Interim PWQO
PWQO - Provincial Water Quality Objectives

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Barrie ON L4N 8W8
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DATE RECEIVED: 08-Jun-23
DATE REPORTED: 29-Jun-23
SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.:

P.O. NUMBER: 2301130
WATERWORKS NO.

Parameter	Qty	Site Analyzed	Analyst Initials	Date Analyzed	Lab Method	Reference Method
PHC(F2-F4)	1	Kingston	KPR	14-Jun-23	C-PHC-W-001 (k)	MOE E3421
VOC's	1	Richmond Hill	JE	12-Jun-23	C-VOC-02 (rh)	EPA 8260
PHC(F1)	1	Richmond Hill	JE	12-Jun-23	C-VPHW-01 (rh)	MOE E3421

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 1 - GW (µg/L) - Table 1 - Ground Water

Christine Burke
Lab Manager

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DATE REPORTED: 29-Jun-23
SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.:
P.O. NUMBER: 2301130
WATERWORKS NO.

	Client I.D. Sample I.D. Date Collected		MW4d B23-03752-1 08-Jun-23				O. Reg. 153 Tbl. 1 - GW (µg/L)	
Parameter	**Units**	**R.L.**						
Acetone	µg/L	30	< 30				2700	
Benzene	µg/L	0.5	< 0.5				0.5	
Bromodichloromethane	µg/L	2	< 2				2	
Bromoform	µg/L	5	< 5				5	
Bromomethane	µg/L	0.5	< 0.5				0.89	
Carbon Tetrachloride	µg/L	0.2	< 0.2				0.2	
Monochlorobenzene (Chlorobenzene)	µg/L	0.5	< 0.5				0.5	
Chloroform	µg/L	1	< 1				2	
Dibromochloromethane	µg/L	2	< 2				2	
Dichlorobenzene,1,2-	µg/L	0.5	< 0.5				0.5	
Dichlorobenzene,1,3-	µg/L	0.5	< 0.5				0.5	
Dichlorobenzene,1,4-	µg/L	0.5	< 0.5				0.5	
Dichlorodifluoromethane	µg/L	2	< 2				590	
Dichloroethane,1,1-	µg/L	0.5	< 0.5				0.5	
Dichloroethane,1,2-	µg/L	0.5	< 0.5				0.5	
Dichloroethylene,1,1-	µg/L	0.5	< 0.5				0.5	
Dichloroethene, cis-1,2-	µg/L	0.5	< 0.5				1.6	
Dichloroethene, trans-1,2-	µg/L	0.5	< 0.5				1.6	
Dichloropropane,1,2-	µg/L	0.5	< 0.5				0.5	
Dichloropropene, cis-1,3-	µg/L	0.5	< 0.5					
Dichloropropene, trans-1,3-	µg/L	0.5	< 0.5					

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 1 - GW (µg/L) - Table 1 - Ground Water

Christine Burke
Lab Manager

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SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.:
P.O. NUMBER: 2301130
WATERWORKS NO.

	Client I.D. / Sample I.D. / Date Collected		MW4d B23-03752-1 08-Jun-23				O. Reg. 153 Tbl. 1 - GW (µg/L)	
Parameter	**Units**	**R.L.**						
Dichloropropene 1,3-cis+trans	µg/L	0.5	< 0.5				0.5	
Ethylbenzene	µg/L	0.5	< 0.5				0.5	
Dibromoethane,1,2-(Ethylene Dibromide)	µg/L	0.2	< 0.2				0.2	
Hexane	µg/L	5	< 5				5	
Methyl Ethyl Ketone	µg/L	20	< 20				400	
Methyl Isobutyl Ketone	µg/L	20	< 20				640	
Methyl-t-butyl Ether	µg/L	2	< 2				15	
Dichloromethane (Methylene Chloride)	µg/L	5	< 5				5	
Styrene	µg/L	0.5	< 0.5				0.5	
Tetrachloroethane,1,1,1,2-	µg/L	0.5	< 0.5				1.1	
Tetrachloroethane,1,1,2,2-	µg/L	0.5	< 0.5				0.5	
Tetrachloroethylene	µg/L	0.5	< 0.5				0.5	
Toluene	µg/L	0.5	< 0.5				0.8	
Trichloroethane,1,1,1-	µg/L	0.5	< 0.5				0.5	
Trichloroethane,1,1,2-	µg/L	0.5	< 0.5				0.5	
Trichloroethylene	µg/L	0.5	< 0.5				0.5	
Trichlorofluoromethane	µg/L	5	< 5				150	
Vinyl Chloride	µg/L	0.2	< 0.2				0.5	
Xylene, m,p-	µg/L	1.0	< 1.0					
Xylene, o-	µg/L	0.5	< 0.5					
Xylene, m,p,o-	µg/L	1.1	< 1.1				72	

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 1 - GW (µg/L) - Table 1 - Ground Water

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Lab Manager

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JOB/PROJECT NO.:
P.O. NUMBER: 2301130
WATERWORKS NO.

	Client I.D. Sample I.D. Date Collected		MW4d B23-03752-1 08-Jun-23				O. Reg. 153 Tbl. 1 - GW (µg/L)	
Parameter	**Units**	**R.L.**						
PHC F1 (C6-C10)	µg/L	25	< 25				420	
PHC F2 (>C10-C16)	µg/L	50	< 50				150	
PHC F3 (>C16-C34)	µg/L	400	< 400				500	
PHC F4 (>C34-C50)	µg/L	400	< 400				500	

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 1 - GW (µg/L) - Table 1 - Ground Water

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Summary of Exceedances

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Tbl. 1 - GW (µg/L) - Table 1 - Ground Water

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GENERAL SAMPLE SUBMISSION FORM

CADUCEON ENVIRONMENTAL LABORATORIES
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SAMPLES SUBMITTED TO:

Kingston	
Ottawa	
Richmond Hill	
Barrie	X
Windsor	

TESTING REQUIREMENTS

	O'Reg 153/04	Table (1 - 9)		Record of Site	
	O'Reg 406/19	Table (1 - 9.1)		SPLP Table (1-9.1)	
	RPI		ICC		Agricultural
	Coarse		Medium/Fine		O'Reg 558 TCLP
	MISA		PWQO		Landfill Monitoring
X	Other:		Region of Peel Combined Sewer		

REPORT NUMBER (Lab Use)

B23-03752

Are any samples to be submitted intended for Human Consumption under any Drinking Water Regulations? [ ] Yes [✓] No (If yes, submit all Drinking Water Samples on a Drinking Water Chain of Custody)

Organization: GEI Consultants Ltd	Address: 647 Welham Road, Unit 14, Barrie, ON, L4N 0B7	Invoicing Address (if different):
Contact: S Griffith		
Tel: 226-791-5382 / Fax:		
Email: sgriffith@geiconsultants.com	Quote #:	Project Name or #: 2301130
Additional Info (email, cell, etc):	P.O. #:	Additional Info:

ANALYSES REQUESTED

Region of Peel Combined Sewer	E. Coli	Metals	TSS	PHCs	VOCs	Suspected Highly Contaminated

TURNAROUND SERVICE REQUESTED (see back page)

*Must be arranged in advance

	Platinum*	200% Surcharge
	Gold*	100% Surcharge
	Silver	50% Surcharge
	Bronze	25% Surcharge
X	Standard	5-7 days
	Specific Date:	

* Sample Matrix Legend: WW=Waste Water, SW=Surface Water, GW=Groundwater, LS=Liquid Sludge, SS=Solid Sludge, S=Soil, Sed=Sediment, PC=Paint Chips, F=Filter, Oil = Oil

Lab No.	Sample Source and/or Sample Identification	S.P.L. (Watertrax)	Sample Matrix *	Date Collected (yy-mm-dd)	Time Collected	Indicate Test For Each Sample By Using A Check Mark In The Box Provided	X	Field pH	Field Temp.	# Bottles/ Sample	Field Filtered Y/N
1	MW 4d		GW	23-06-08	PM	X X X X				16	N
2	MW4d-F		" "	11	11	X X				4	Y
	Bacti → B (EC)										
	1x 1L amber (w NaHSO4) → SGS (NP/NPE)										
	vials → RH										
	K: 2x 1L amber unpres. + 1x Oil & Grease + CN + nut + phenols + 500ml (PHC) amber + 2x (1x Filtered) Genchem										
	O: 1x Genchem + metals + CrVI + Hg										

SAMPLE SUBMISSION INFORMATION

	Sampled by:	Submitted by:
Print:	SCOTT PATRICK	SCOTT PATRICK
Sign:		
	26-06-08	26-06-08
	Date (yy-mm-dd)/Time:	Date (yy-mm-dd)/Time:

SHIPPING INFORMATION

Courier (Client account)	
Courier (Caduceon account)	
Drop Off	X
Caduceon (Pick-up)	

Invoice

# of Pieces

REPORTING / INVOICING

Report by Fax	
Report by Email	X
Invoice by Email	X
Invoice by Mail	

SAMPLE RECEIVING INFORMATION (LABORATORY USE ONLY)

Received By (print):	Nathalie	Signature:	Na
Date Received (yy-mm-dd):	23-06-08	Time Received:	16:25
Laboratory Prepared Bottles:	[✓] Yes	[ ] No	✓
Sample Temperature °C:	9.0	Labeled by:	BA

Comments:

G

Appendix F

Preliminary Dewatering Calculations

Hydrogeological Investigation
South Simpson (Headwaters of West Rainbow Creek)
Project No.: 2201130

Equivalent Well Radius Method

Site Servicing - Excavation Depth 4.5 m

Inputs

Rs (m)	Ro (m)	H (m)	h (m)	K (m/s)	Trench Length, x (m)	Trench Width, b (m)
1.7	86.3	7.6	1.0	1.90E-05	100	3

Elevations (m)

Ground Surface	230.4
Highest Water Level	232.0
Base of Excavation	225.9
Drawdown Target	225.4
Aquifer Bottom	224.4

Groundwater Flows		
Flow Rate, Q=	0.0021	m3/s
Q=	182,049	L/day
Safety Factor	2	
Q factored =	**364,097**	L/day

Precipitation		
Rainfall Event	10	mm
Excavation Area	300	m2
Rainfall Q =	**3,000**	L/day

TOTAL Factored Q : 367,097 L/day

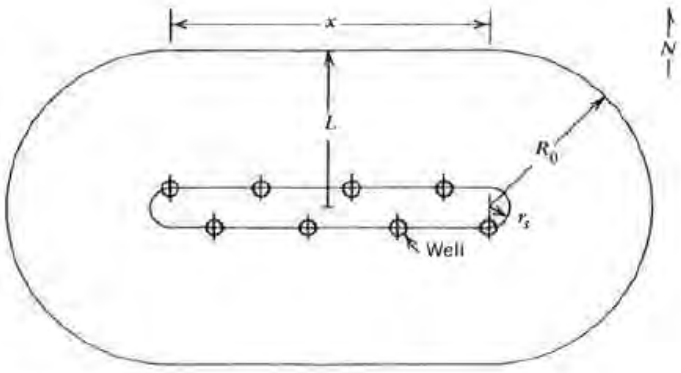


Figure 6.8 Approximate analysis of long, narrow systems.

of the actual system is finite, the end effects must be considered. This can be done by assuming that at each end of the system there is a flow equal to one half the flow to a circular well of radius r_s. The total flow to the system may be approximated by adding Eqs. 6.1 and 6.6 for a confined aquifer, or Eqs. 6.3 and 6.7 for a water table aquifer:

$$Q = \frac{2\pi KB(H - h)}{\ln R_0/r_s} + 2\left[\frac{xKB(H - h)}{L}\right] \qquad (6.10a)$$

$$Q = \frac{\pi K(H^2 - h^2)}{\ln R_0/r_s} + 2\left[\frac{xK(H^2 - h^2)}{2L}\right] \qquad (6.10b)$$

Appendix D

Stormwater Management

D.1: Background Information

D.2: Existing Flows Calculations

D.3: Draining to Box Culvert

D.4: Draining to Existing Storm Sewers

D.5: Draining to Existing Pond

D.6: Water Balance Calculations

D.1. Background Information

N

7TH LINE
5 ADJALA SIDERD
9 HWY
19 SIDERD
CONCESSION 11 RD
18 SIDERD
27 HWY
CONCESSION 8 RD
17 SIDERD
JANE ST
KEELE ST
16 SIDERD
BLOOMINGTON RD
BETHESDA SIDERD
STOUFFVILLE RD
LESLIE ST
BAYVIEW AVE
YONGE ST
BATHURST ST
DUFFERIN ST
KIRBY RD
TESTON RD
MAJOR MACKENZIE DR
RUTHERFORD RD
LANGSTAFF RD
7 HWY
STELLES AVE
FINCH AVE
SHEPPARD AVE
WILSON AVE
LAWRENCE AVE
EGLINTON AVE
ST.CLAIR AVE
BLOOR ST
QUEEN ST
LAKE SHORE BLVD
THE QUEENSWAY
401 HWY
RATHBURN RD
BURNHAMTHORPE RD
BLOOR ST
DERRY RD
AIRPORT RD
STEELES AVE
QUEEN ST
HEART LAKE RD
BOVAIRD DR
MAYFIELD RD
WANLESS DR
HURONTARIO ST
KING ST
CREDITVIEW RD
OLD SCHOOL RD
MISSISSAUGA RD
HERITAGE RD
WINSTON CHURCHILL BLVD
4TH LINE
3RD LINE
CHARLESTON SIDERD
HORSESHOE HILL RD
HEART LAKE RD
ESCARPMENT SIDERD
THE GRANGE SIDERD
KENNEDY RD
OLDE BASELINE RD
BOSTON MILLS RD
TENTH LINE
NINTH LINE
EIGHTH LINE
TRAFALGAR RD
FIFTH LINE
SIXTH LINE
FOURTH LINE

Legend

- Flow Node
- General River
- Subcatchment

TORONTO AND REGION Conservation for The Living City

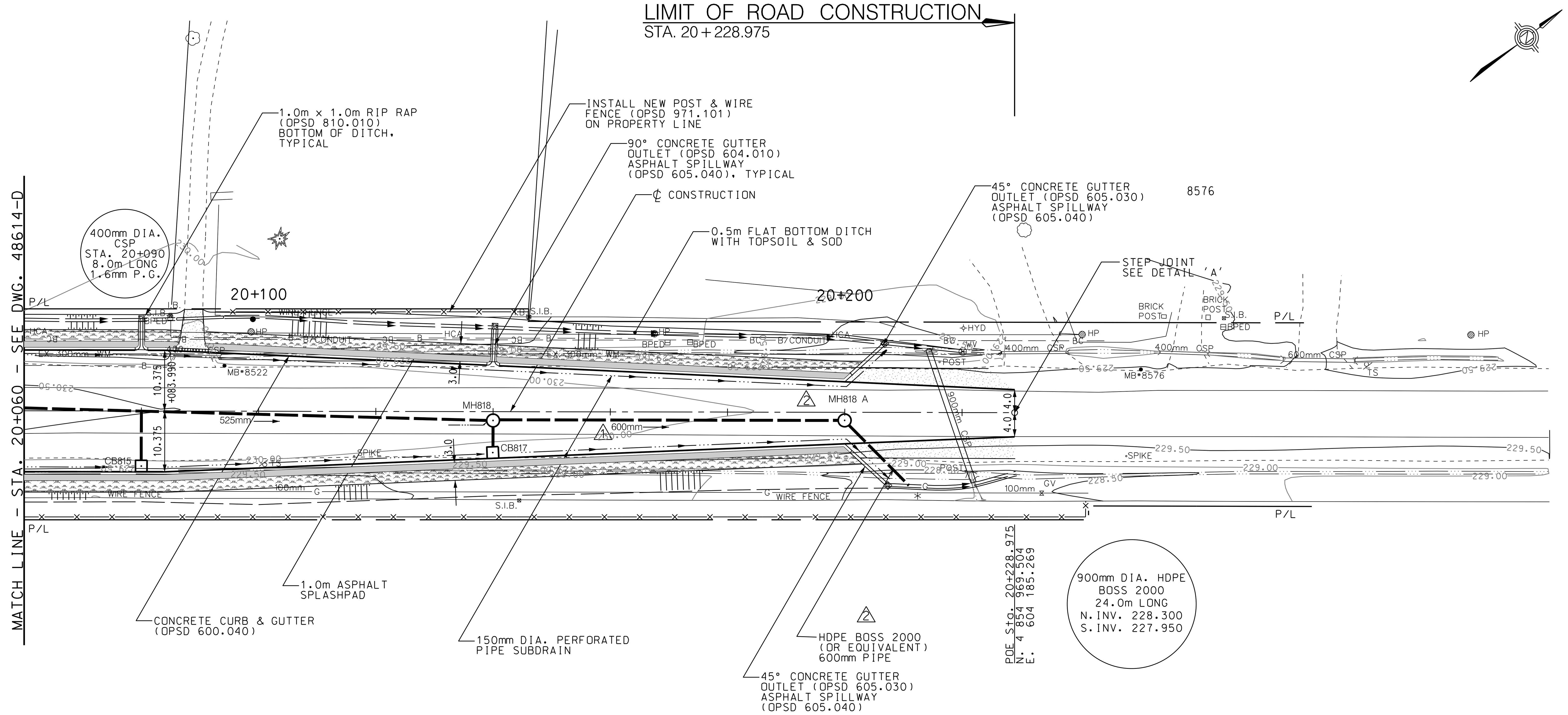
CIVICA

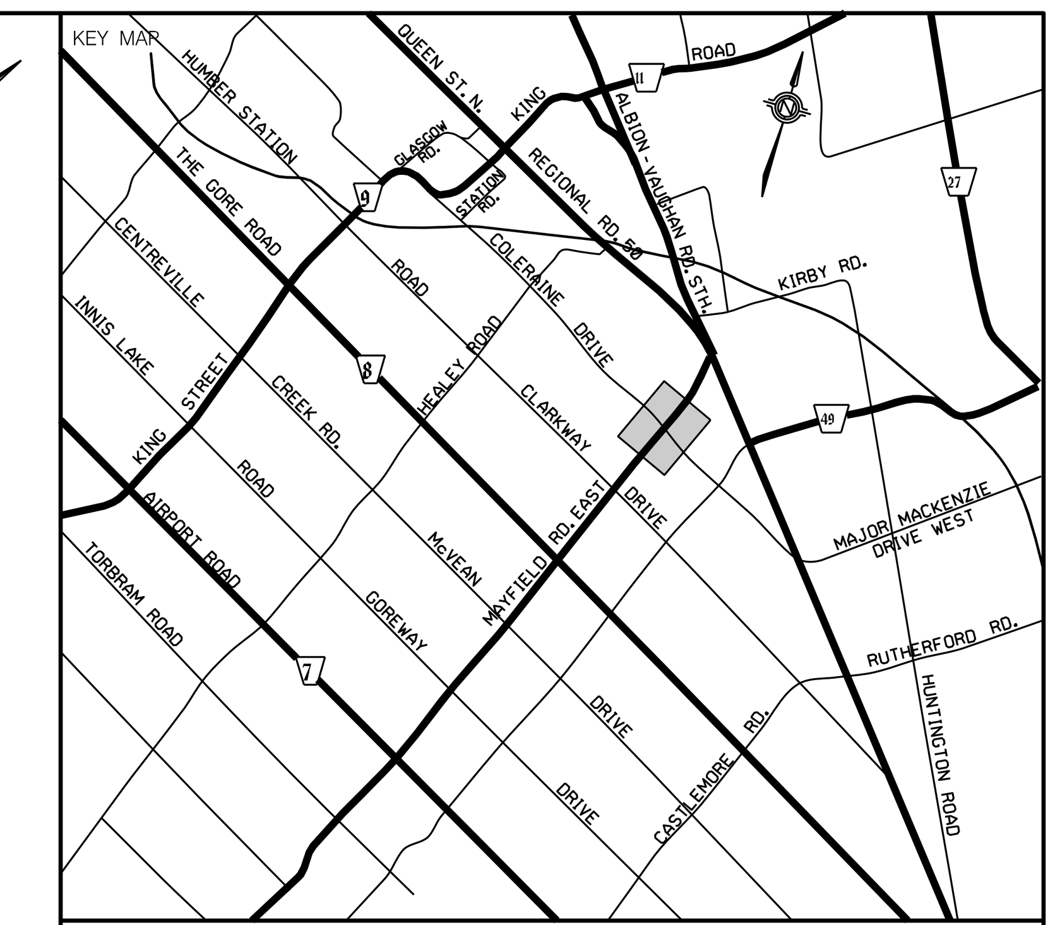
Humber River Hydrology

Figure 2.1 Catchments for Existing Scenario

Drawn By: M.Y. Date: Dec. 20, 2017

0 1.25 2.5 5 Kilometers





DISCLAIMER
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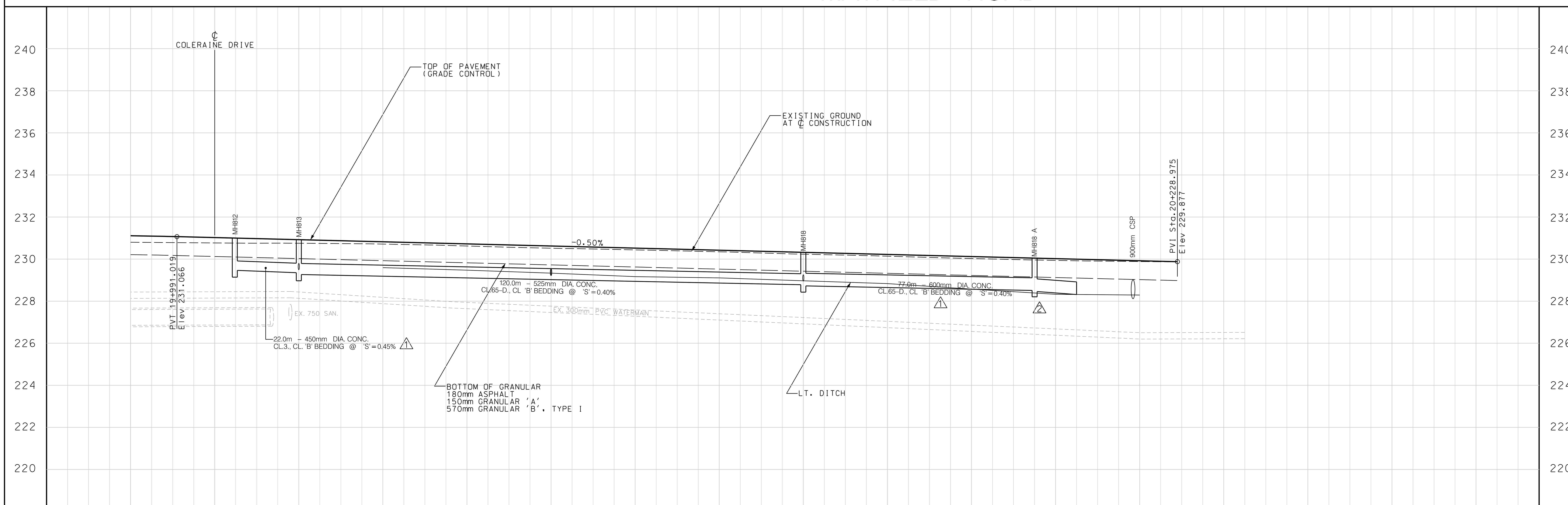
MAYFIELD ROAD



℄ CHAINAGE	STORM INVERT	PROPOSED ℄ ROAD GRADES	EXISTING ℄ ROAD GRADES
19+980		231.109	230.80
20+000		231.022	230.77
(MH812)	229.516 / 229.466		
20+020	229.349 / 229.269	230.922	230.75
20+040		230.822	230.71
20+060		230.722	230.62
20+080		230.622	230.52
20+100		230.522	230.44
20+120		230.422	230.35
20+140	228.758 / 228.728	230.322	230.23
20+160		230.222	230.14
20+180		230.122	230.03
(MH818 A)	228.488 / 228.438		
20+200		230.022	229.94
(outlet)	228.300		
20+220		229.922	229.88

GENERAL NOTES

(1) FOR STORM SEWER DATA SEE SHEET 20

AS-BUILT DRAWING
CONTRACTOR: FERMAR PAVING LTD.
WORK COMMENCED: APRIL 2008
WORK COMPLETED: OCTOBER 2009
These As-Built Drawings have been prepared based on inspections and observations undertaken by MRC staff during key stages of construction and on information submitted, in part, by others. While this information is believed to be reliable, MRC is not responsible for its accuracy, or for errors or omissions that may have been incorporated into this drawing as a result.

THE LOCATION OF UTILITIES IS APPROXIMATE ONLY AND THE EXACT LOCATION SHOULD BE DETERMINED BY CONSULTING THE MUNICIPAL AUTHORITIES AND UTILITY COMPANIES CONCERNED. THE CONTRACTOR SHALL PROVE THE LOCATION OF UTILITIES AND SHALL BE RESPONSIBLE FOR ADEQUATE PROTECTION FROM DAMAGE.

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR`D
1	W.J.B.	05/18/07	ADDENDUM 1.	M.W.S.	
2	W.J.B.	19/17/07	OUTLET REVISED	M.W.S.	

APPROVED FOR CONSTRUCTION

DATE :________ APPROVED BY:________
C.A. Campbell, C.E.T.
Director

BENCH MARK:

Designed by

PROJECT NAME
COLERAINE DRIVE WIDENING AND RECONSTRUCTION

CONSULTANT
McCORMICK RANKIN CORPORATION

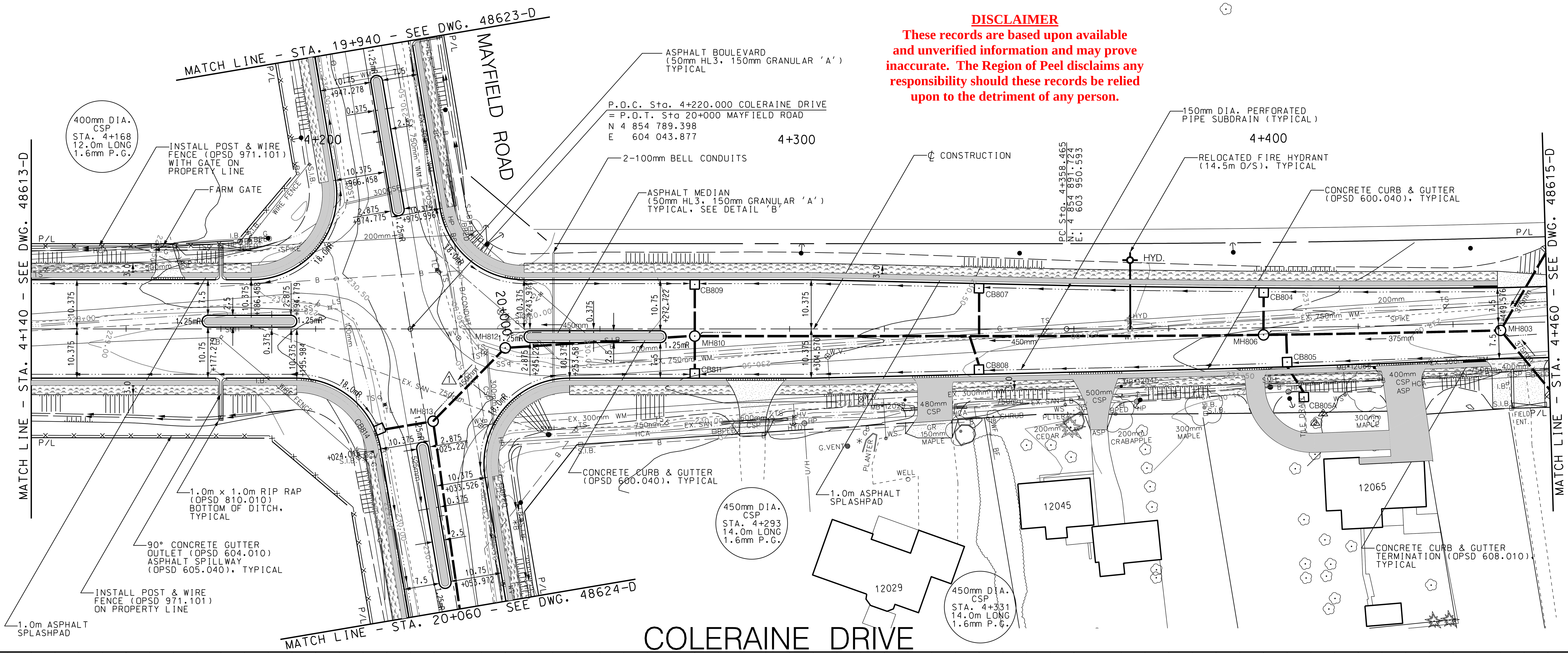
IN THE REGION OF PEEL

THE CORPORATION OF THE
TOWN OF CALEDON

MAYFIELD ROAD
GRADING, PAVEMENT AND DRAINAGE
STA. 20+060 TO STA. 20+228.975
AREA: C-02

SCALE: HORIZ. 1:500 VERT. 1:100			PROJECT No. 01-4230
DESIGNED BY: W.J.B.	DRAWN BY: A.K.S.		DRAWING No. 48624-D
CHECKED BY: M.W.S.	DATE: MAY, 2007		

FILE: $FILE$
DATE: 27/11/2013



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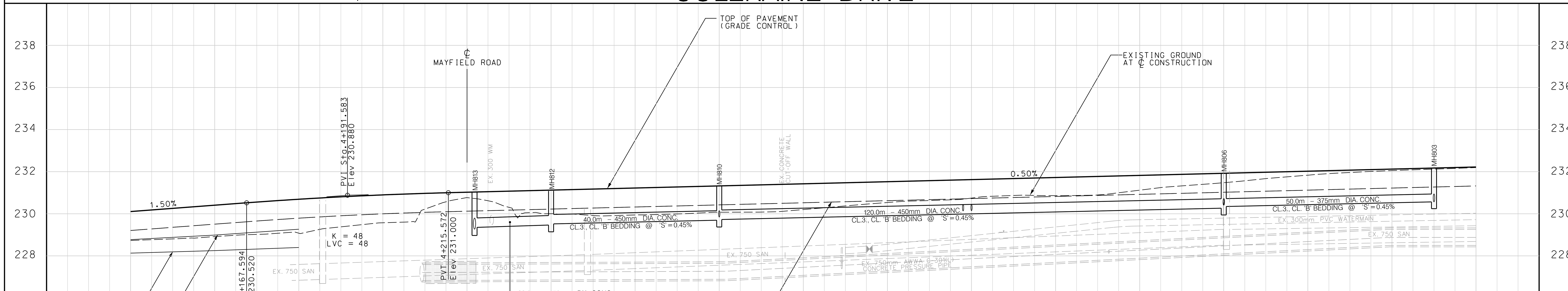
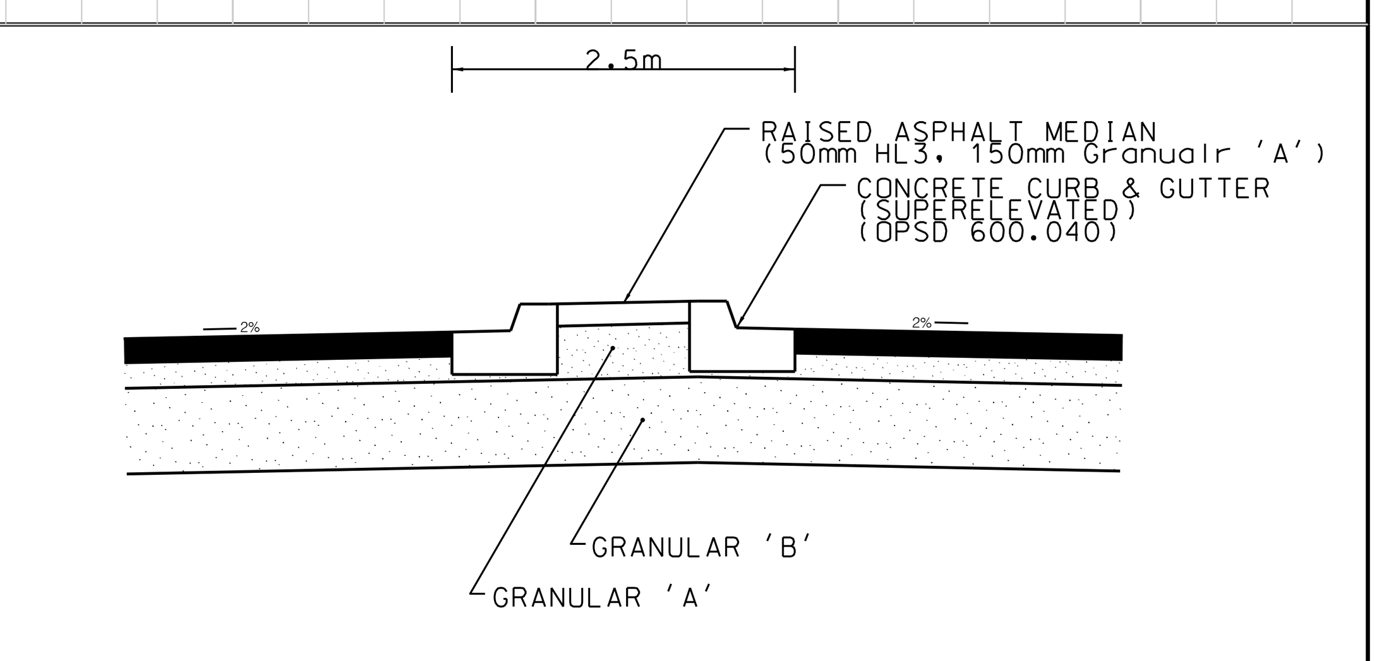
COLERAINE DRIVE



FOR MAYFIELD ROAD PROFILE
SEE DWG. No. 18 & 19

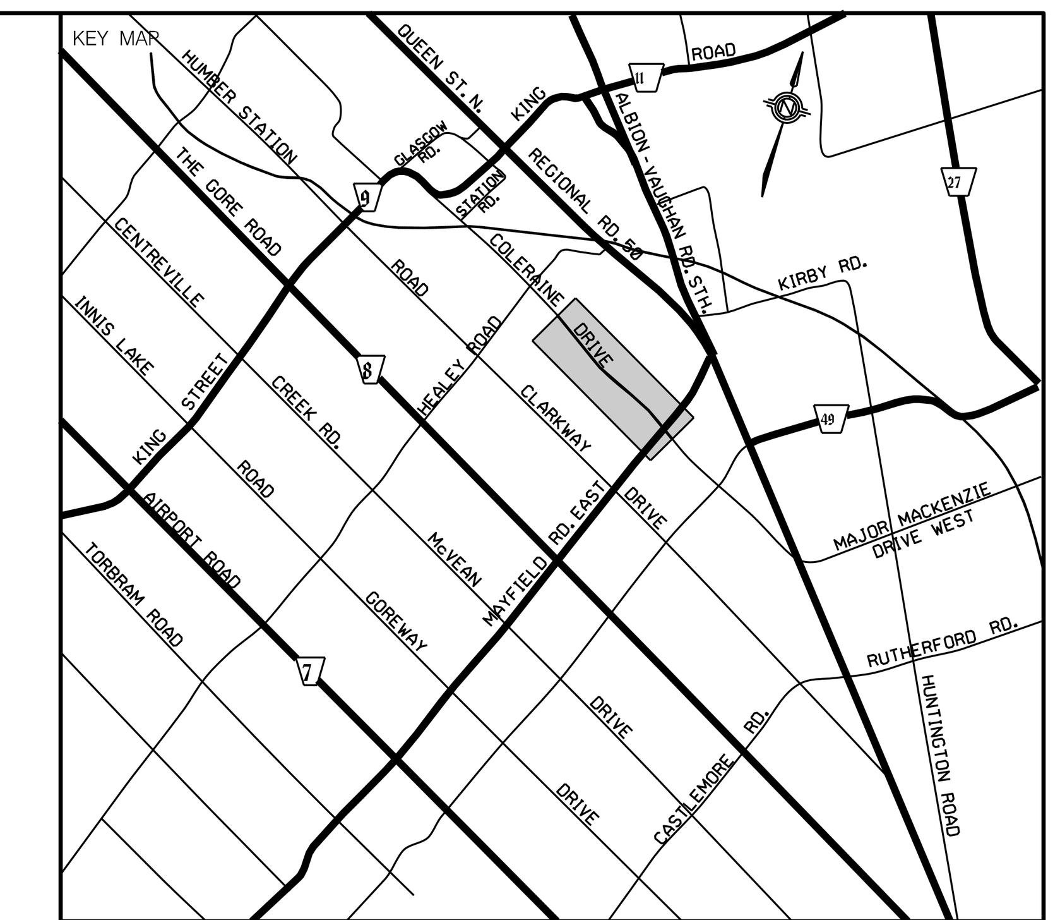


MEDIAN ISLAND - DETAIL 'B'
N.T.S.

℄ CHAINAGE	STORM INVERT	PROPOSED ℄ ROAD GRADES	EXISTING ℄ ROAD GRADES
4+140		230.106	228.73
4+160		230.406	228.91
4+180		230.690	229.08
4+200		230.897	229.57
4+220	229.269 / 229.349	231.022	230.77
4+240	229.466 / 229.516	231.122	230.00
4+260		231.222	229.94
4+280	229.616 / 229.726	231.322	230.08
4+300		231.422	230.20
4+320		231.522	230.53
4+340		231.622	230.75
4+360		231.722	230.86
4+380		231.822	231.12
4+400	230.266 / 230.341	231.922	231.48
4+420		232.022	231.83
4+440		232.122	232.05
	230.566		
4+460		232.222	232.19

FILE: $FILES$
DATE: 27/11/2013

KEY MAP



GENERAL NOTES

(1) FOR STORM SEWER DATA SEE SHEET 20

AS-BUILT DRAWING
CONTRACTOR: FERMAR PAVING LTD.
WORK COMMENCED: APRIL 2008
WORK COMPLETED: OCTOBER 2009
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NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
1	W.J.B.	05/18/07	ADDENDUM 1.	M.W.S.	
2	W.J.B.	09/17/07	DRIVEWAY REVISED, CB ADDED	M.W.S.	

APPROVED FOR CONSTRUCTION

DATE :______ APPROVED BY:______
C.A. Campbell, C.E.T.
Director

BENCH MARK:

Designed by

PROJECT NAME
COLERAINE DRIVE WIDENING AND RECONSTRUCTION

CONSULTANT
McCORMICK RANKIN CORPORATION

IN THE REGION OF PEEL

THE CORPORATION OF THE
TOWN OF CALEDON

COLERAINE DRIVE
GRADING, PAVEMENT AND DRAINAGE
STA. 4+140 TO STA. 4+460

AREA: C-02

SCALE: HORIZ. 1:500	VERT. 1:100	PROJECT No. 01-4230
DESIGNED BY: W.J.B.	DRAWN BY: A.K.S.	DRAWING No. 48614-D
CHECKED BY: M.W.S.	DATE: MAY, 2007	

Simpson Road Landowners Group
Inc.C/O: Helen Mihailidi
7501 Keele Street, Suite 200
Vaughan, ON
L4K 1Y2

May 17, 2024
Reference: 20-717

Attention: Simpson Road Landowners Group

Reference: Simpson Road Extension and Rainbow Creek Culvert Feasibility Study

Dear Simpson Road Landowners Group,

Greck and Associates Limited (Greck) is pleased to provide this technical letter report in support of the proposed endeavor to continue development within The Town of Caledon's Phase 3 Simpson Industrial Secondary Plan Area. Specifically, our work examines the technical feasibility of draining the Simpson Road Industrial Area through a new extended underground culvert system that is to be located under the Simpson Road Extension. This solution would effectively replace the current Secondary Plan proposal to construct an open channel system along the future Simpson Road right-of-way. We offer information to assess the feasibility of a new culvert conveyance system as it pertains specifically to drainage and flood hazard.

It is our understanding that the Phase 3 area includes several landowners and parcels of land that are being contemplated for industrial development to utilize new/future access from Simpson Road in lieu of Coleraine Drive. As part of the Phase 3 Simpson Industrial Secondary Plan Area, Simpson Road is to be extended southerly to Mayfield Road. This new extension and intersection are required to provide necessary access to industrial properties to improve traffic conditions on Coleraine Drive to the west.

Included as part of the Phase 3 Simpson Industrial Secondary Plan Submission were detailed design drawings prepared by Wood, dated September 14, 2021. These drawings illustrate the proposed Simpson Road extension along with a proposed open channel re-alignment for the headwater reach of Rainbow Creek.

The result of this study has determined that a single 1.8m high by x 2.4m wide box culvert extending from the Equity Prestige Business Park SWM Pond through the Simpson Road right-of-way can convey upstream regulatory runoff and service the lands draining to Mayfield Road / Rainbow Creek. The installation of this culvert system would remove the need for an open channel system to convey flows to Mayfield Road through the subject properties.

Preliminary hydrologic and hydraulic analysis was undertaken using the Toronto and Region Conservation Authority's (TRCA) Visual Otthymo (VO) model. Greck prepared a

new PCSWMM, HECRAS and updated the VO model to design the new culvert system and quantify potential drainage and flood hazard impacts downstream. It was found that replacing 526m of routed channel will result in a 4.1% to 0.1% flow increase up to 7km downstream (Huntington Road and Rutherford Road). This flow change translates to a maximum flood elevation increase of 9cm for the regulatory flood event.

Background

The subject properties that form the Simpson Industrial Secondary Plan Area are within the headwaters of the Rainbow Creek tributary. We understand that earlier phases located north of the subject properties are now entirely developed industrial lands that drain into the constructed Stormwater Management Facility (SWMF) located immediately north of 0 Coleraine Drive. The facility referred to as the Equity Prestige Business Park SWM Pond, outlets directly into Rainbow Creek. The SWM pond outfall is the origin of the drainage feature. Outflows from the SWMF are conveyed in a south easterly direction through the subject properties (Phase 3 Lands) towards Mayfield Road where flows are then conveyed by an existing 1300mm diameter culvert under Mayfield Road.

The property east of the subject properties has been developed and is serviced by a SWM pond located at the northeast corner of Mayfield Road and the Rainbow Creek drainage feature. This SWM pond discharges to an existing 1300 diameter Mayfield Road culvert which drains Rainbow Creek southbound across Mayfield Road, see **Figure 1**.

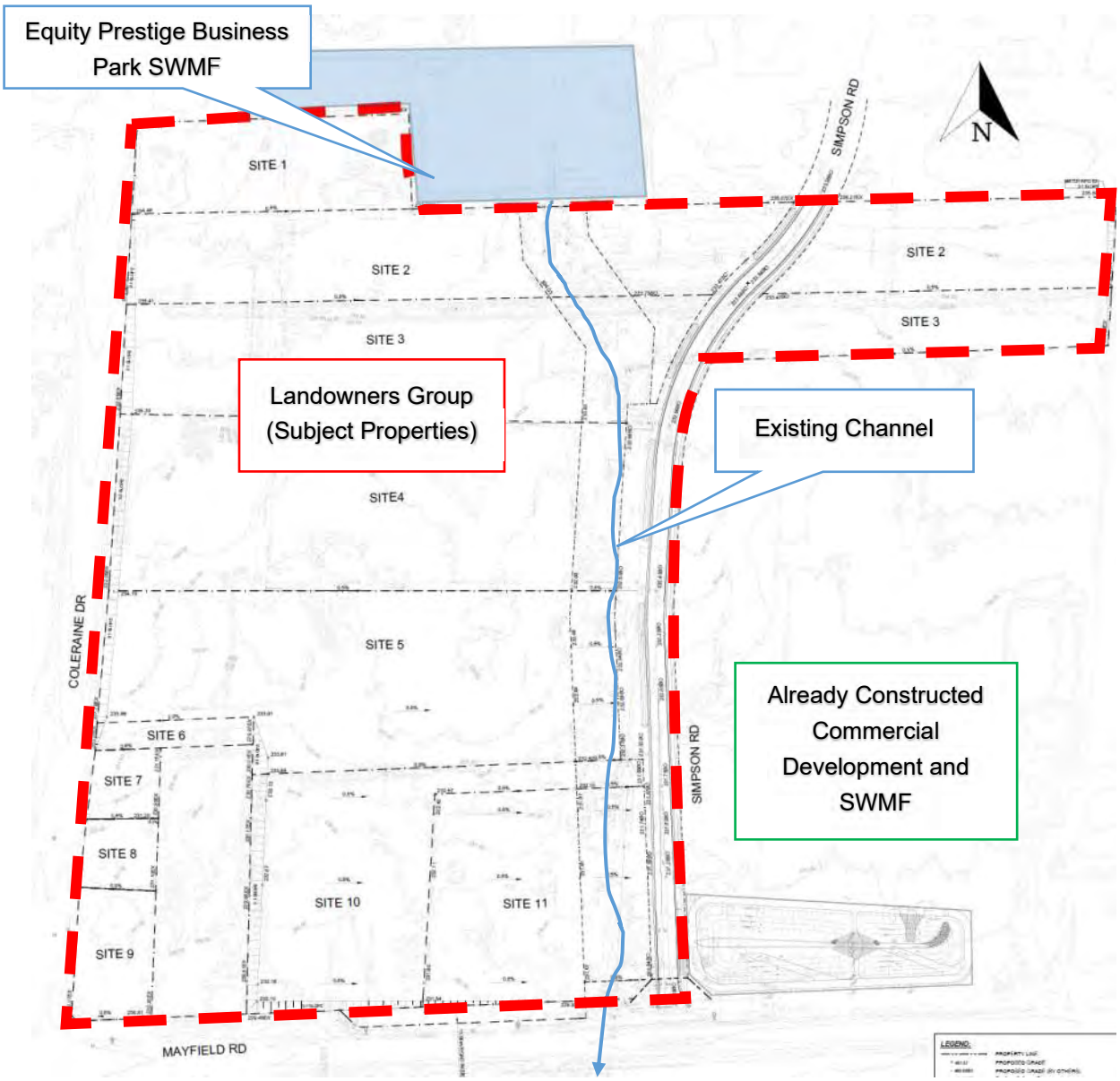


FIGURE 1: SIMPSON ROAD EXTENSION AND SIMPSON SECONDARY PLAN AREA – GEI PARCEL MAP

The existing channel is noted to have limited ecological value and functions more as an ephemeral channel (ditch), conveying wet weather flow only. The ecological significance of the feature is being further characterised by environmental consultants; see ecology study submitted under separate cover. Historical photography shows that the entire drainage area to Rainbow Creek upstream of Mayfield Road was once agricultural lands with no defined watercourse present, see **Figure 2**.

FIGURE 2 - 1954 AIR PHOTO OF SOUTHERN ONTARIO
HTTPS://MAPS.LIBRARY.UTORONTO.CA/DATAPUB/ONTARIO/APS_1954/ZIPPED/437.793.ZIP

As part of the Phase 3 Simpson Industrial Secondary Plan, detailed design drawings were prepared by Wood, dated September 14, 2021. These drawings illustrate the proposed Simpson Road extension along with a proposed channel re-alignment for the headwater drainage feature known as Rainbow Creek. The design proposes channel modifications that include a 45m wide by 1m deep corridor with a 2m wide bank full/low flow channel, see **Figure 3**.

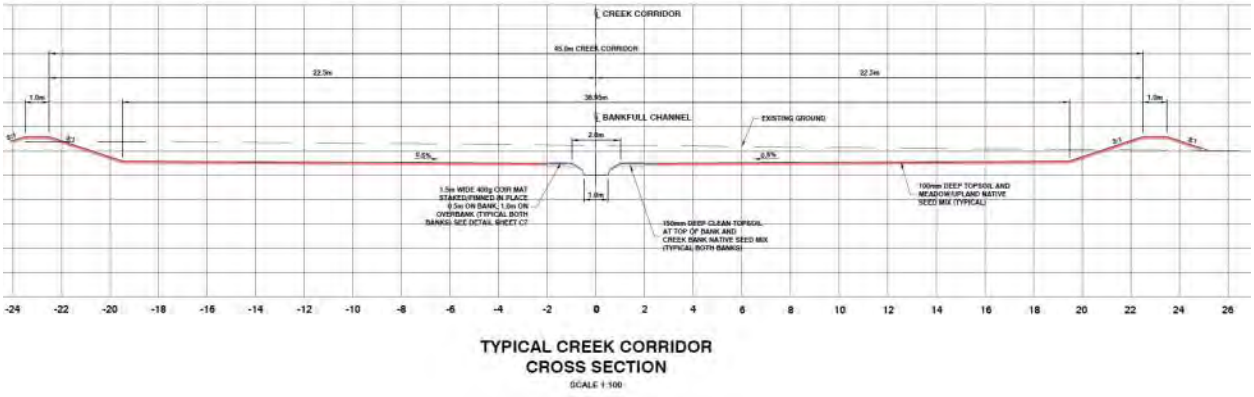


FIGURE 3 – TYPICAL CREEK CORRIDOR CROSS SECTION (WOOD, DRAWING C4, 2021)

It is our understanding that there was no hydraulic or hydrologic reporting in support of the proposed channel design however, a fluvial geomorphological report was prepared by Aqua Logic Revised March 5, 2015 & February 11, 2019. As per this report it can be concluded that the valley width is attributed to both meander amplitude and flood storage requirements. No technical analysis was provided to quantify hydrology and hydraulics impacts. We note the hydraulic modelling and channel design work provided as part of the past secondary plan did not include driveways and crossing structures.

The proposed channel was to be 560m long, 1m deep, and 45m wide, requiring 2.52ha of land along the southeast side of Simpson Road. The channel would originate from the Equity Prestige Business Park SWMF flowing downstream to Mayfield Road, see **Figure 4**.

FIGURE 4 – PROPOSED 45M WIDE CHANNEL (WOOD, DRAWING C1, 2021)

Illustrated in **Figure 4**, by Greck, are four areas (red) that show the proposed driveway locations identified by Wood. These areas are roughly 39m-50m wide along the channel. On average, the 39m width shown in red includes a total 30m wide driveway for two 15m wide industrial driveways per OPSD standards, 6m for two 3:1 side slopes into a 1m deep valley and 3m for property setbacks. Based on a 560m open channel system, roughly 30% or 167m of channel would need to be filled to accommodate the industrial crossings shown. Each crossing would require a minimum 1.8m by 2.4m wide box culvert to convey flows without overtopping onto Simpson Road.

It should be noted that to our knowledge the ecological, hydrological, and hydraulic impacts related to the overall channel design, crossings, and intended segregation were not quantified and reported on to obtain approval for the secondary plan channel design and road extension.

Proposed Culvert System Design

The Landowners Group has requested the proposed bypass culvert system to support the secondary plan. The purpose of the secondary plan is to maintain the current utilization of land for industrial use with improved accessibility. The current proposed open channel design conflicts with these primary objectives by sterilizing a significant portion of land to low probability floodplain and culvert crossings.

To accommodate and support the existing and proposed needs of the Secondary Plan Area, a culvert system is proposed instead of an open channel design. The conceptual culvert system design has considered the following:

- Provides sufficient drainage of regulatory runoff (100-year uncontrolled and Regional).
- Accommodates the Simpson Road Extension with minor deviation to already approved road profile and servicing modifications.

The proposed culvert system includes three (3) parts starting from upstream working downstream, See the Conceptual Culvert Conveyance System drawing appended to this report and **Figure 5** below:

- Part 1 – is a proposed 5.9m long open channel reach immediately downstream of the Equity Prestige Business Park SWM Pond, located on public land. This short channel system will receive outflow from the SWM Pond and is located along the current channel and natural low point. At the end of this open channel reach will be the beginning of the concrete culvert system. The culvert inlet will feature a high-capacity inlet to reduce inlet losses and promote pressure head. The inlet will feature a high-capacity grate capable of passing 100% design flow even if 50% blocked/clogged.

    - Note that the proposed culvert inlet will be constructed on City property and the Equity Park SWM Pond outlet will need to be modified (approved in concept by The City), which consists of a 750mm diameter outlet pipe. The 750mm diameter outlet pipe will be cut back to the edge of the 37.0m wide emergency spillway berm, and a new headwall for the 750mm diameter outlet pipe will be installed with concrete or armor stone up to the emergency spillway elevation.

    - The proposed culvert system high-capacity inlet will be installed at the property line.

    - A retaining wall or vegetated channel with a top elevation of 234.0 m will be installed from the west and east edge of the emergency spillway to the proposed high-capacity inlet to direct the pond overflow into the culvert system. A concept design of the modified pond outlet and culvert system inlet are provided in the Conceptual Culvert Conveyance System Drawing (Drawing C101) appended to this report .

- Part 2 – includes a 526m long 1.8m x 2.4m (rise x span) concrete box culvert at a 0.5% slope. The box culvert will extend from the SWM pond outfall channel towards Simpson Road to the east before bending southwards along the Simpson Road Extension and towards Mayfield Road. The culvert will daylight and outlet into an open channel reach approximately 50m upstream of Mayfield Road.

- Part 3 – is a proposed 35m long open channel reach to be located immediately upstream of the Mayfield Road culvert crossing into Rainbow Creek. This portion of the system will receive outflow from the proposed culvert before outletting to

the future culvert under Mayfield Road. This reach is located in the existing channel system which is the natural low point for the area. This reach also exists to receive overland flow from Simpson Road. Erosion control measures such as concrete headwall blocks (dragon teeth) and/or appropriately sized stone and rip-rap will be installed to immediately dissipate energy and long-term erosional forces upon daylighting from the culvert outfall.

It should be noted that the entire culvert system and all open channel areas as described above will be owned and maintained by the municipality. Easements will be required on private property as required to maintain this infrastructure.

Hydraulic Modelling - Proposed Culvert System

The proposed culvert system design was modelled using PCSWMM software. The model included the three (3) parts as stated above. An open channel (inlet), box culvert and open channel (outlet). The PCSWMM model included the following input parameters:

TABLE 1 – PCSWMM MODELLING INPUT PARAMETERS

Section	Input Parameter	Value	Justification
Open Channel	Baseline Flow	10.2 m^3/s	From VO modelling catchment 24.11, 100-year event
Box Culvert	Baseline Flow	1.5 m^3/s	Target flow rate of 1.05m^3/s provided by GEI for subject properties
Box Culvert	Conduit Length	526m	Length of box culvert based on preliminary layout of pipe.
Box Culvert	Roughness	0.013	Typical value for concrete pipe (PCSWMM Support)
Box Culvert	Entry Loss Coefficient	0.2	Typical value for box culvert with wingwalls (PCSWMM Support)
Box Culvert	Exit Loss Coefficient	1.0	Typical value (HEC-RAS Hydraulic Reference Manual)
Box Culvert	Average Loss Coefficient	0.7	From Table 23.6 of Minor Loss Coefficients for Storm Drain Modelling with SWMM by William H Frost (2006)
Open Channel	Roughness	0.035	Typical value for natural channels (PCSWMM Support)

Figure 5 illustrates the model profile under regulatory peak flow conditions (100 year, 6hr AES). Note, no flooding occurs.

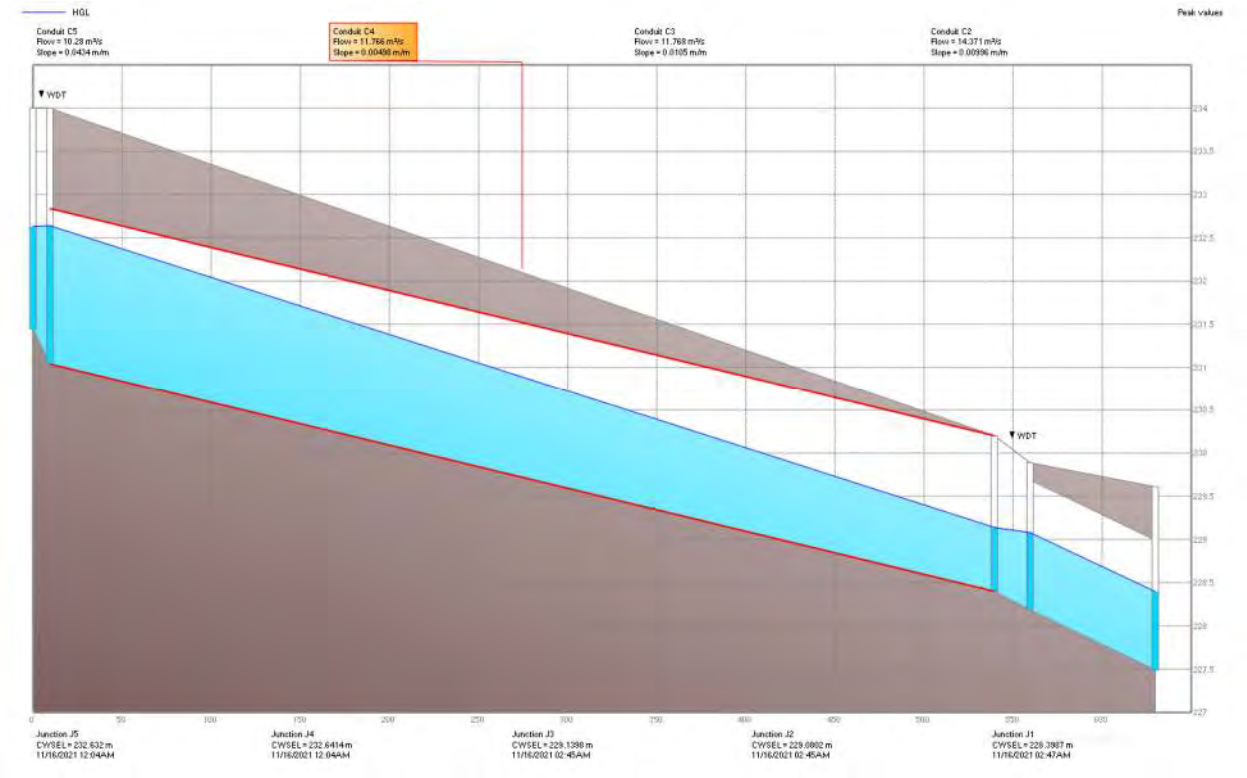


FIGURE 5 – PROPOSED CULVERT PROFILE UNDER REGULATORY PEAK FLOW CONDITIONS

The downstream boundary condition in the PCSWMM model is based on the hydraulic modelling results of the downstream open channel which was modeled in HEC-RAS. The HEC-RAS model includes an open channel sufficient in size and slope to convey the regulatory event from the culvert system outlet to the future culvert crossing proposed on Mayfield Road. It should be noted that based on Wood's drawings and Mayfield Road expansion work drawings, a 6m x 1.8m concrete box culvert is proposed under future widened Mayfield Road. Currently, there is a 1.3m diameter CSP.

Based on PCSWMM and hydraulic modelling results the upstream (Part 1) and downstream (Part 2) open channel reaches must be trapezoidal in shape with a minimum 1.3m wide base and 35m wide top width featuring 3:1 vegetated slopes and a minimum 0.5% channel gradient. This results in a channel depth of 1.64m which includes a minimum freeboard depth of 0.3m above the calculated regulatory flood elevation. These basic sizing parameters are illustrated in the Conceptual Culvert Conveyance System Drawing (Drawing C101) appended. See **Figure 6** for a typical cross section of the open channel.

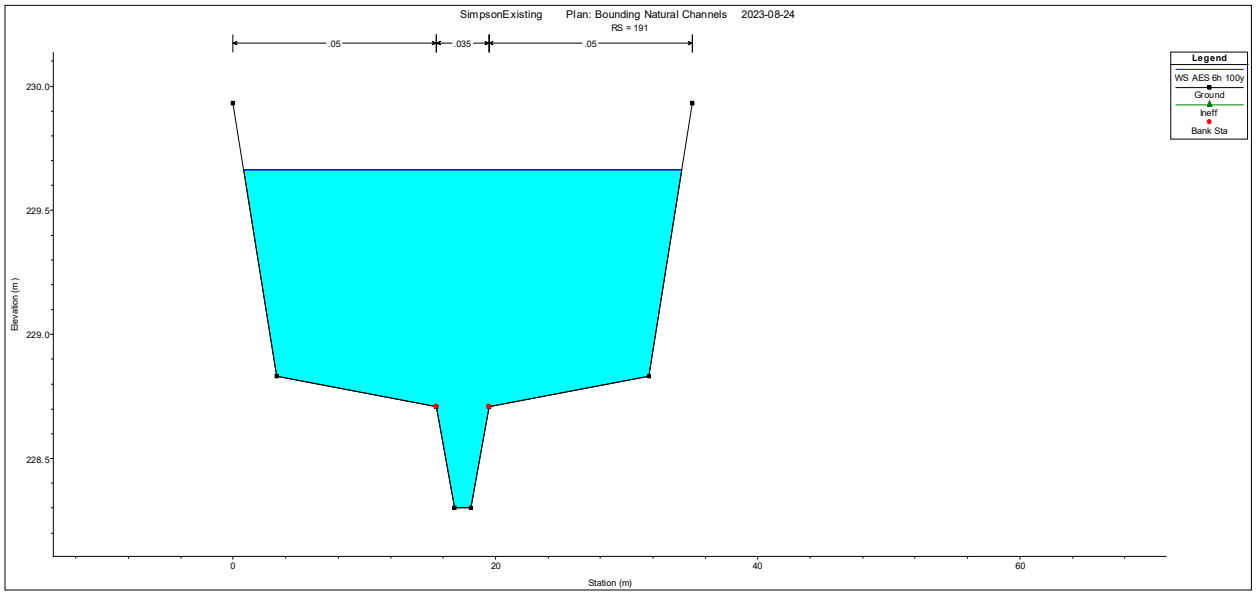


FIGURE 6 – TYPICAL CROSS SECTION OF THE OPEN CHANNEL

Emergency Flood Conditions

An emergency spill path was contemplated in the unlikely event that all SWM is incapacitated, and the proposed culvert conveyance system is incapacitated under uncontrolled flow conditions. A new hydraulic scenario in HEC-RAS was created to assess this overland flow condition.

This emergency spill considered future concept grading conditions for the subject properties provided by GEI, the current proposed Simpson Road design drawings by Wood, and as-built grades for easterly neighbouring lands (100 Pillsworth Road). During this unlikely scenario not only are all stormwater management facilities unfunctional, but the culvert system itself and the proposed high-capacity inlet grate is 100% blocked. Under this scenario, flood water must be conveyed by sheet flow to spill from the Equity Prestige Business Park SWM Pond eastward towards Simpson Road. Runoff will concentrate on Simpson Road and then drain southwards towards Mayfield Road before spilling back into the proposed open channel immediately upstream of Mayfield Road, see the Conceptual Culvert Conveyance System Drawing (Drawing C101).

We note that in this scenario not all flows are contained within the Simpson Road right-of-way (ROW). Some flows are expected to spill outside of the ROW onto the Subject Lands and the neighbouring lands to the east. Hydraulic results suggest maximum flood depths from the crown of Simpson Road will reach 0.18m to 0.32m and a peak velocity of 1.4m/s.

In accordance with MNRF Technical Guidelines, **Figure 7** illustrates risk thresholds for typical flood risk assessment.

Table 4 Flood Risk Criteria

Risk Level	Low	Medium	High *
Depth	≤ 0.3 m	> 0.3 m and ≤ 0.8 m	> 0.8 m
Velocity	≤ 1.7 m/s	≤ 1.7 m/s	> 1.7 m/s
Depth-Velocity Product	≤ 0.37 m^2/s	≤ 0.37 m^2/s	> 0.37 m^2/s

* Exceedance of any one of the criteria results in high risk.

FIGURE 7: TABLE 4 FROM FLOODPLAIN SPILL ASSESSMENT PREPARED BY MATRIX

For areas classified as low risk, ingress and egress are feasible for pedestrian and vehicular traffic. For medium risk areas, ingress and egress are feasible for pedestrian traffic and emergency vehicles but not private vehicles. For high-risk areas, ingress and egress are not feasible for pedestrian nor vehicular traffic.

Currently, preliminary grading of the subject properties and the Simpson Road alignment result in a medium risk scenario. Best effort should be made to accommodate conveyance during detail design to improve flood risk during this unlikely emergency scenario. This may include dedicating and grading lot frontage (driveways, parking and grassed areas) on private property to better accommodate and convey emergency spill to relieve flooding on Simpson Road and other external properties.

Hydrologic Modelling

The hydrology model was updated with the proposed culvert system to assess impacts to peak flows.

TRCA's most recent hydrologic modelling was provided to Greck. The modelling was prepared by Civica, dated 2018. To assess acceptable impacts of the proposed culvert system, including channel routing and attenuation, Greck ran 4 (four) modelling scenarios with the Regional and 100-year Uncontrolled Flows (6hr AES) under the future land use scenario:

- Scenario 1: Future Conditions – Untouched Civica Model (route channel)
- Scenario 2: Future Conditions – Removed 500m of channel (modified route channel)
- Scenario 3: Future Proposed Open Channel by Wood (500m of modified route channel)
- Scenario 4: Future Proposed 1.8m x 2.4m box culvert (500m route pipe)

The following results were obtained at ADDHYD #7413 in the VO modelling (the flow location that receives all routed flows and drainage catchments), see **Table 2** and **Figure 8**.

TABLE 2 - DOWNSTREAM FLOW COMPARISON FOR ALTERNATIVE FLOW ROUTING

Scenario	Regional Flow (m^3/s)	100 Year Uncontrolled Flow (m^3/s)
1 - Future Conditions	25.316	29.632
2 - No Channel Routing (removed 560m of channel)	26.151	31.251
3 - Proposed 393m of 45m wide Open Channel by Wood	25.651	29.695
4 - Proposed 494m of 1.8m x 2.4m box culvert	26.059	30.906

The result of this exercise demonstrates that the proposed culvert system will result in a maximum downstream peak flow increase for the 100 year and regulatory event by 4.30% and 2.93% respectively. This is primarily because the open channel offers more cross-sectional area / floodplain to attenuate flow during major return events i.e. flood storage.

To further assess the impacts of attenuation between the proposed open channel and culvert system, flow results were compared to the rest of the reach and greater watershed system downstream, see **Table 3** and **Figure 8**.

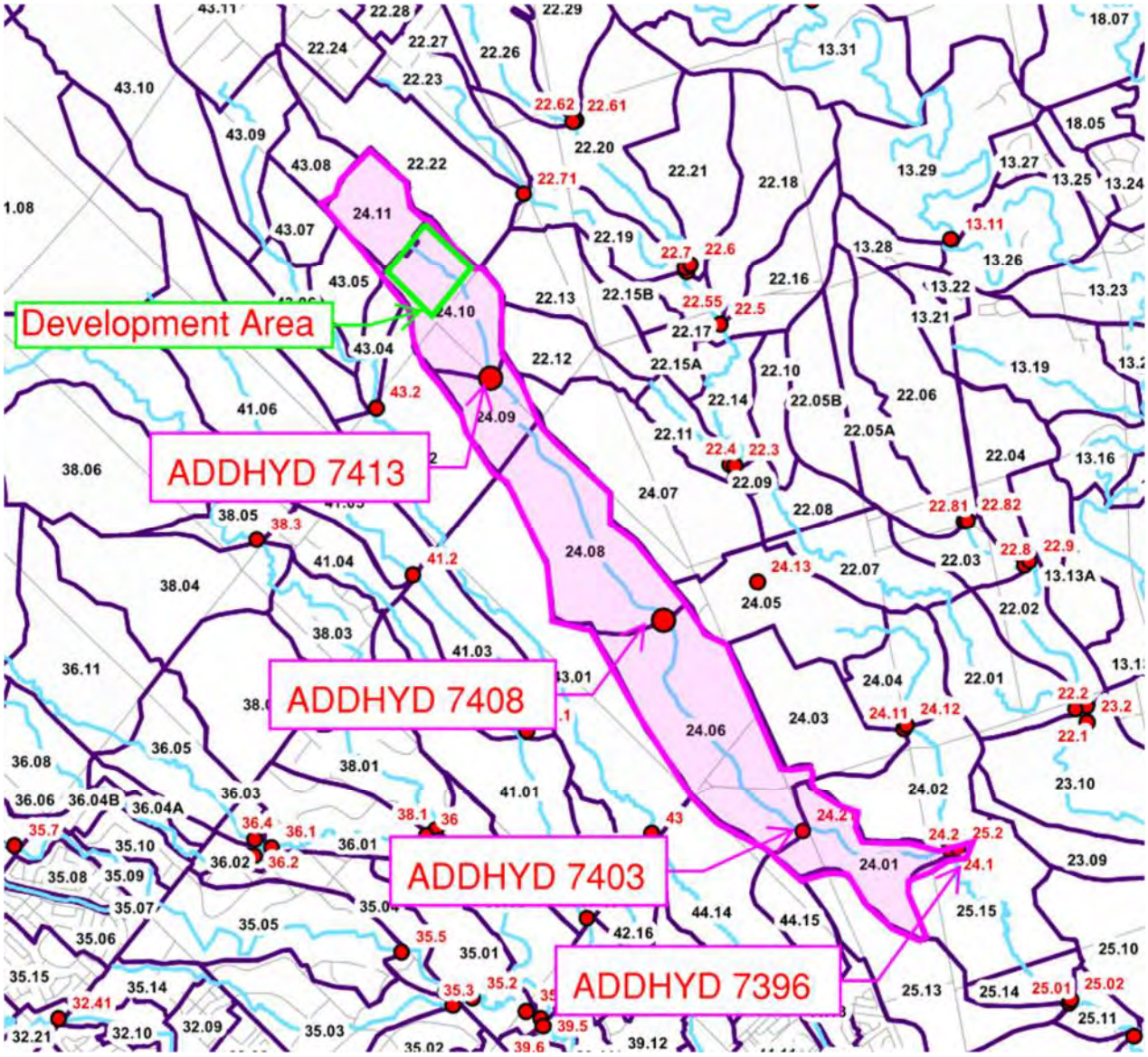


Figure 8 - Impacted Sub-watershed and Relevant Flow Nodes

TABLE 3 – REGIONAL SUB-WATERSHED FLOW IMPACT COMPARISON FOR ALTERNATIVE ROUTING

ADDYD	*Future Regional* (m^3/s)				
	Existing	**Secondary Plan Channel**		**Culvert System**	
7413	25.316	25.651	1.3%	26.059	2.9%
7408	37.666	37.65	0.0%	38.005	0.9%
7403	55.87	55.998	0.2%	56.273	0.7%
7396	122.15	122.159	0.0%	122.333	0.1%

It was found that the Regional flow governs (Regulatory) downstream of Countryside Drive. Flow increases eventually reduce to 0.1% approximately 7km downstream when the subject reach joins with another similarly sized tributary at Huntington Road and Rutherford Road (NHYD 7396).

Downstream Flood Hazard Impact Assessment

A downstream flood hazard impact assessment was completed for the proposed culvert conveyance system.

TRCA provided the following downstream hydraulic model and flood maps for the subject Rainbow Creek reach:

- Humber River Map Sheet 23 by Aquafor Beech Limited, dated 2019
- Humber River Map Sheet 150, 151 and 152 by Hatch Acres, dated 2006
- HEC-RAS Region of Peel model for the Humber River Tributaries

The flood maps are dated 2006, which makes them older than the 2018 hydrologic model by Civica. As such, flows in the HEC-RAS model had to be updated with Civica's 2018 VO model to assess downstream impacts as it pertains to flood hazard elevation.

All hydraulic modelling and updates were completed using CivilGEO GeoHEC-RAS software. GeoHEC-RAS utilizes the United States Army Corps of Engineers, HEC-RAS software. This version utilizes the 6.3.1 engine of HEC-RAS. RIVER 4 – REACH 1 corresponds to the channel downstream of the Simpson Road extension. Only this reach was assessed as part of the downstream impact analysis as **Table 3** above demonstrates that the flow impacts eventually reduce to 0.1%.

Internal flow change locations in TRCA original HEC-RAS model also had to be updated as per the VO model catchment delineation to input the new updated flows from the 2018 hydrologic modelling. Updating TRCA's existing hydraulic modelling was not the focus of this report however, it should be noted that on average the 2018 flows were 12.6% lower and resulted in average flood elevation decrease of 6cm, for the subject reach, see **Table 5** . In all instances, the new 2018 flows resulted in a greater change to flood hazard than the proposed culvert system. These changes are representative of new internal flow change locations and presumably catchment parameters such as area, imperviousness, time of concentration...etc.

Figure 9 shows a schematic of the subject reach overlaid with the VO catchments and flow data used to update the HEC-RAS model.

Figure 9:
Model Overlay

Simpson Road Extension, Bolton, Ontario

Project #: 21-717

0 0.5 1 km

Legend

- Internal Flow Change NEW
- Internal Flow Change OLD
- Cross Sections Regional
- River Reaches
- VO STANDHYD River 4 Reach 1

24.11

24.10

24.09

24.08

24.06

24.01

RIVER 4

VO ADDHYD 7413
Future = 25.316m3/s
Future w bypass = 26.0587m3/s
HEC-RAS XS 24.49

VO ADDHYD 7408
Future = 37.6656m3/s
Future w bypass = 38.0047m3/s
HEC-RAS XS 24.42

VO ADDHYD 7403
Future = 55.8703m3/s
Future w bypass = 56.2733m3/s
HEC-RAS XS 24.30

VO ADDHYD 7581
Future = 59.0110m3/s
Future w bypass = 59.1937m3/s
HEC-RAS XS 24.145

D/S boundary condition set to TRCA's original model WSEL at HEC-RAS XS 24

Deleted internal flow changes and added purple flow changes to HEC-RAS model to account for updated Humber River Hydrology VO model catchments.

DEM Source: Land Information Ontario Lidar DTM GTA 2014 Package B

Basemap Image: Google Maps 2024

Greck

April 2024

To support our work, some minor updates to the subject reach (hydraulic model) were updated to better represent current conditions and flood results. This included shifting and re-aligning some cross sections at hydraulic crossings where bounding cross sections were cut too close to the road deck. This results in underestimating the conveyance area of the hydraulic crossing approach and exit.

Any updated cross-sections were cut using publicly available 0.5m grid generated digital terrain model (DTM) obtained through Land Information Ontario. The corresponding data package for the subject reach is “Lidar DTM GTA 2014 Package B”. The DTM has the vegetation and buildings filtered, therefore representing a “bare earth” model; the vertical datum of the DTM is CGVD2013 Geoid.

The HEC-RAS model and flood maps provided by the TRCA were prepared in the CGVD28 datum. The Vertical Datum Transformation Tool from the Government of Canada was used to adjust the DTM from the CGVD2013 to CGVD28 datum; the closest station to the subject reach is the TORT TORONTO station which is located approximately 11km southeast. The DTM was raised +0.414m to be in the CGVD28 datum.

Note that Manning’s n, expansion, and contraction coefficients were maintained as per the TRCA original model. **Table 4** provides a summary of the updated cross sections for RIVER 4 – REACH 1.

TABLE 4 – SUMMARY OF UPDATED CROSS SECTIONS

Crossing ID	Change
24.425 (culvert)	• Recut section 24.42 at the toe of road embankment to more accurately model geometry at the culvert exit. • Updated ineffective flow areas at bounding sections 24.43 and 24.42 to better model contraction and expansion at culvert approach and exit. • Shortened culvert length based on aerial imagery.
24.305 (culvert)	• Recut 24.305 road deck to account for updated Cadetta Rd alignment. • Updated culvert alignment based on aerial imagery. • Recut right bank of 24.30 to not cross realigned road deck. • Updated ineffective flow areas at bounding sections 24.31 and 24.30 to better model contraction and expansion at culvert approach and exit.
24.205 (bridge)	• Recut section 24.21 and 24.20 at the toe of road embankment to more accurately model geometry at culvert approach and exit respectively. • Recut 24.205 road deck to account for widened Castlemore Road. Bridge span of 10.3m was measured on aerial imagery; bridge opening appears to be rectangular based on Google Earth view. Bridge invert and obvert were maintained as per TRCA original model. A 1m high railing was added at the bridge opening; height was estimated based on aerial imagery and engineering judgement. • Updated ineffective flow areas at bounding sections 24.21 and 24.20 to better model contraction and expansion at culvert approach and exit. • Changed bridge methodology to “Pressure and/or weir flow” as this structure causes backwater.
24.16	• Shifted section slightly upstream such that it is at the toe of the road embankment to more accurately model geometry at culvert approach.

Table 5 shows the comparison of flows and flood elevations between the Existing Condition TRCA model (Original), the modified Existing Condition Greck model with the updated flows from the Civica VO model (New), and the Proposed Condition Greck model (New w Culvert System) with the updated flows with the Simpson Road culvert system.

TABLE 5 – COMPARISON OF FLOWS AND FLOOD ELEVATIONS FOR REGIONAL EVENT

	Flow (m^3/s)			Flood Elevation (m)			Difference (m)	
Cross Section ID	Original	New	New w Culvert System	Original	New	New w Culvert System	New - Original	New – New w Culvert
24.49	46.8	25.32	26.06	224.15	223.91	223.92	-0.24	0.01
24.48	46.8	25.32	26.06	223.24	223.16	223.17	-0.08	0.01
24.475	Culvert							
24.47	46.8	25.32	26.06	223.30	223.09	223.10	-0.21	0.01
24.46	46.8	25.32	26.06	222.99	222.72	222.73	-0.27	0.01
24.45	46.8	25.32	26.06	222.42	222.31	222.32	-0.11	0.01
24.44	46.8	25.32	26.06	221.08	220.91	220.91	-0.17	0
24.43	46.8	25.32	26.06	220.98	220.85	220.86	-0.13	0.01
24.425	Culvert							
24.42	46.8	25.32	26.06	219.72	219.46	219.47	-0.26	0.01
24.41	46.8	25.32	26.06	218.16	217.90	217.91	-0.26	0.01
24.40	46.8	25.32	26.06	217.17	216.86	216.87	-0.31	0.01
24.39	46.8	25.32	26.06	216.17	215.91	215.92	-0.26	0.01
24.38	46.8	25.32	26.06	214.91	214.64	214.65	-0.27	0.01
24.37	46.8	25.32	26.06	212.93	212.68	212.69	-0.25	0.01
24.36	46.8	25.32	26.06	212.10	211.75	211.76	-0.35	0.01
24.35	46.8	25.32	26.06	210.95	210.81	210.82	-0.14	0.01
24.34	46.8	25.32	26.06	210.33	209.98	210.00	-0.35	0.02
24.33	46.8	25.32	26.06	210.07	209.77	209.78	-0.3	0.01
24.32	48.3	25.32	26.06	209.40	208.89	208.92	-0.51	0.03
24.31	48.3	25.32	26.06	208.44	208.46	208.46	0.02	0
24.305	Culvert							
24.30	48.3	37.67	38	208.39	208.30	208.30	-0.09	0
24.29	48.3	55.87	56.27	207.69	207.74	207.74	0.05	0
24.28	48.3	55.87	56.27	207.15	207.22	207.22	0.07	0
24.27	48.3	55.87	56.27	206.14	206.22	206.22	0.08	0
24.26	48.3	55.87	56.27	205.13	205.20	205.20	0.07	0
24.25	52.3	55.87	56.27	204.21	204.24	204.25	0.03	0
24.24	52.3	55.87	56.27	204.10	204.11	204.12	0.02	0
24.235	Culvert							

24.23	52.3	55.87	56.27	203.47	203.49	203.49	0.01	0.01
24.22	52.3	55.87	56.27	203.18	203.13	203.09	-0.08	0.02
24.21	52.3	55.87	56.27	202.82	202.93	203.02	0.22	0.02
24.205	Bridge							
24.20	52.3	55.87	56.27	201.82	201.85	201.86	0.03	0.01
24.19	52.3	55.87	56.27	201.38	201.35	201.44	-0.03	0.09
24.18	52.3	55.87	56.27	199.83	200.00	200.00	0.17	0
24.17	52.3	55.87	56.27	199.81	199.98	200.00	0.17	0.02
24.16	52.3	55.87	56.27	199.72	199.86	199.88	0.14	0.02
24.155	Culvert							
24.15	52.3	55.87	56.27	198.29	198.32	198.32	0.03	0
24.145	52.3	59.01	59.19	198.32	198.34	198.35	0.02	0.01
24.14	56.2	59.01	59.19	198.18	198.20	198.20	0.02	0
24.13	56.2	59.01	59.19	198.25	198.28	198.28	0.03	0
24.12	56.2	59.01	59.19	198.25	198.27	198.28	0.02	0.01
24.11	56.2	59.01	59.19	198.24	198.26	198.27	0.02	0.01
24.105	Culvert							
24.10	56.2	59.01	59.19	195.73	195.80	195.81	0.07	0.01
24.09	56.2	59.01	59.19	194.87	194.94	194.95	0.07	0.01
24.08	56.2	59.01	59.19	194.55	194.57	194.57	0.02	0
24.07	56.2	59.01	59.19	194.63	194.66	194.66	0.03	0
24.06	56.2	59.01	59.19	194.58	194.60	194.60	0.02	0
24.055	Culvert							
24.05	56.2	59.01	59.19	191.50	191.53	191.53	0.03	0
24.04	56.2	59.01	59.19	190.79	190.81	190.81	0.02	0
24.03	56.2	59.01	59.19	190.56	190.58	190.58	0.02	0
24.02	56.2	59.01	59.19	190.54	190.56	190.56	0.02	0
24.015	Culvert							
24.01	56.2	59.01	59.19	188.67	188.70	188.69	0.03	-0.01
24.00	56.2	59.01	59.19	188.28	188.28	188.28	0	0

*Grey cells indicate a section that was updated in HEC-RAS.

Overall, the proposed culvert system results in negligible impact downstream. The maximum increase in flood elevation found was less than 9cm which is within a typical freeboard of 30cm. The majority of the reach experiences a 1cm to 3cm increase in flood elevation. The change in flood elevation reduces to less than 1cm downstream of Highway 50. A review of floodplain mapping for this reach indicates that no buildings will be directly or significantly impacted due to the proposed culvert system.

Conclusions and Recommendations

It was determined that a culvert conveyance system can be constructed as part of the proposed future Simpson Road alignment and current development plans. This culvert system includes a 526m long 1.8m by 2.4m box culvert that will conservatively convey uncontrolled regulatory flow for the entire drainage area upstream of Mayfield Road, outletting to the headwaters of Rainbow Creek. A downstream impact assessment determined that any flow increase due to lost hydrological flow attenuation (routing) would result in a negligible change in elevation and flood risk downstream.

It is recommended that the following also be considered from a feasibility, planning and approval perspective as it pertains to the proposed culvert conveyance system:

- There is no provincial minimum upstream drainage area requirement for the development of riverine flood hazard limits. However, during the 1970's and 1980's a minimum drainage area of 125 ha was deemed acceptable. We note the drainage area under study, upstream of Mayfield Road, is approximately 100ha.
- Recognition of existing development trends that have already occurred in the headwaters.
- Historically, evidence of a defined watercourse feature began south of Mayfield Road.
- Ecological factors.
- Geomorphological factors.
- Economic and Social needs.
- Land use functionality and practicality.

We trust this report offers sufficient information to assess the feasibility of a new culvert conveyance system with respect to the Simpson Road Secondary Plan.

Sincerely,
GRECK AND ASSOCIATES LIMITED

Eric Greck, P.Eng.
President

Jennifer Chan, P.Eng.
Water Resources Engineer

Attachments

- Plan and Profile Drawing of Culvert System
  - Details of Culvert System Inlet

FUT. SIMPSON ROAD

PART 1 – PLAN 43R-34749

FUT. SIMPSON ROAD SERVICING AND ROAD WORKS DESIGN BY OTHERS

FUT. CURB CUT (TYP.)

526.48m CONCRETE BOX CULVERT @ 0.50% – 2.4m(W) X 1.8m (H)

FUT. SANITARY AND STORM SEWER LOCATIONS TO BE SHIFTED TO MAINTAIN REQUIRED SEPARATION FROM BOX CULVERT

CULVERT WALL TO BE 1.5m FROM FUT. EDGE OF PAVEMENT

1.5m

PR. STORM SERVICE FOR DEVELOPMENT PROPERTIES

0.5% 1.0%

FUT. SANITARY SERVICE BY OTHERS (TYP.)

FUT. WATER SERVICE BY OTHERS (TYP.)

CURRENT NATURAL CHANNEL EASEMENT AS PER SECONDARY PLAN. TO BE REMOVED.

EX. RAINBOW CREEK CENTRELINE

DEVELOPMENT PROPERTIES

PR. HIGH INLET CAPACITY TRASH GUARD. TIE INTO TOP OF PR. RETAINING WALL

PR. RETAINING WALL (TYP.) MATCH INTO EX. SWM POND ACCESS ROAD GRADE

EX. HEADWALL TO BE REMOVED

PR. HEADWALL

BOX CULVERT INV. 231.04 C/W HIGH INLET CAPACITY GRATE

EX. 750mm PVC STM AND HEADWALL TO BE CUT BACK TO SWM POND ACCESS ROAD

EX. STORM WATER POND EAST OF SIMPSON ROAD

CONTROLLED OUTLET

FUT. 9m WIDE RIP-RAP SPILL WAY AS PER WOOD DWG TP113126-C3 TO BE WIDENED AS SHOWN

EMERGENCY POND OVERFLOW

EXPAND EX. CURB CUT FOR MAJOR OVERLAND FLOW ROUTE

TIE EMERGENCY POND OVERFLOW

OUTLET INV. 228.40

TOP OF SLOPE ELEV. = FLOODLINE + 0.3m FREEBOARD (TYP.)

TOP OF SLOPE TO MATCH INTO EX. GRADE MAX SIDE SLOPE 3:1 (TYP.)

MATCH INTO FUT. CONC. BOX CULVERT INV. 228.19

FUT. 6.0m (W) X 1.5m (H) CONCRETE BOX CULVERT BY OTHERS

MAYFIELD ROAD

SITE 2

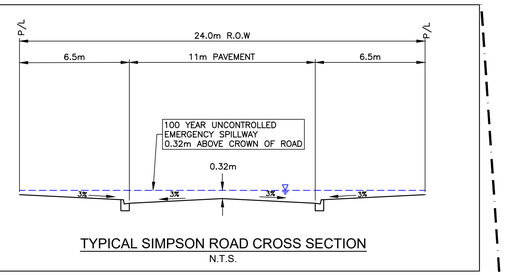
SITE 3

SITE 4

SITE 5

SITE 10

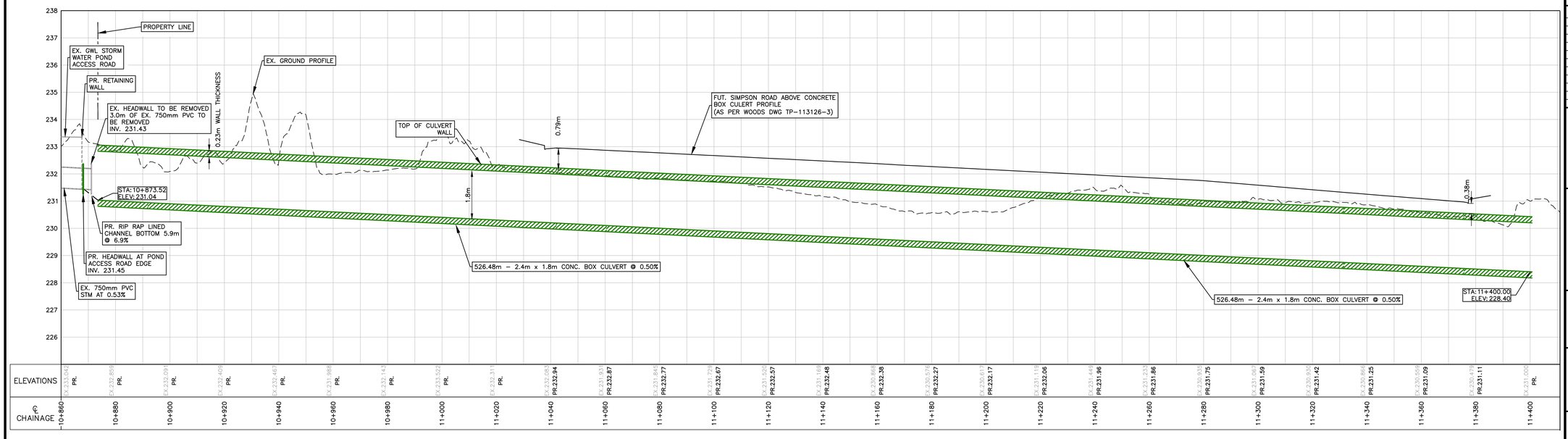
SITE 11



TYPICAL SIMPSON ROAD CROSS SECTION
N.T.S.

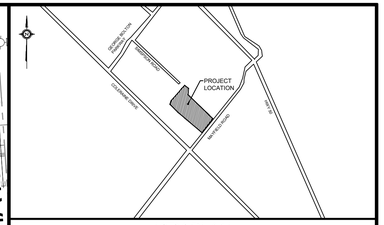
NOTE:
STORM DRAINAGE FROM EQUITY PRESTIGE BUSINESS PARK SWM FACILITY TO BE CONVEYED VIA PROPOSED CULVERT SYSTEM

PR. CULVERT CONVEYANCE SYSTEM, PROFILE



ELEVATIONS	EX. 232.042	EX. 232.859	EX. 232.091	EX. 232.409	EX. 232.467	EX. 231.988	EX. 232.143	EX. 233.522	EX. 232.311	EX. 232.083	EX. 231.931	EX. 231.972	EX. 231.729	EX. 231.620	EX. 231.169	EX. 230.868	EX. 230.272	EX. 230.617	EX. 231.119	EX. 231.448	EX. 231.233	EX. 230.935	EX. 231.190	EX. 230.930	EX. 230.868	EX. 230.559	EX. 230.479	EX. 231.002
	PR.	PR.	PR.	PR.	PR.	PR.	PR.	PR.	PR.	PR.232.94	PR.232.87	PR.232.77	PR.232.67	PR.232.57	PR.232.48	PR.232.38	PR.232.27	PR.232.17	PR.232.06	PR.231.96	PR.231.86	PR.231.75	PR.231.59	PR.231.42	PR.231.25	PR.231.09	PR.231.11	PR.
℄ CHAINAGE	10+860	10+880	10+900	10+920	10+940	10+960	10+980	11+000	11+020	11+040	11+060	11+080	11+100	11+120	11+140	11+160	11+180	11+200	11+220	11+240	11+260	11+280	11+300	11+320	11+340	11+360	11+380	11+400

NOTE:
EQUITY PARK STORM WATER POND OUTLET ELEVATIONS ADJUSTED FROM CGVD 28:78 TO CGG2013 VIA TOWN OF CALEDON BENCHMARK 758086.



KEY PLAN
N.T.S.

LEGEND

EXISTING	PROPOSED	
MH1		STORM MANHOLE
MH1A		SANITARY MANHOLE
CB		SINGLE CATCHBASIN
DCB		DOUBLE CATCHBASIN
FD		SINGLE FLOOR DRAIN
HYD&V		FIRE HYDRANT
VB		VALVE & BOX
		STORM SEWER
		EASEMENT
		RIGHT OF WAY
		LOT LINE
		FENCE LINE
		CURB/SIDEWALK
		RETAINING WALL
		TOP OF SLOPE
		BOTTOM OF SLOPE
		MAJOR CONTOUR LABEL
		MINOR CONTOUR LABEL
		PONDING FACILITY
		DOWNSPOUT & ROOF LEADER
		SWALE
		OVERLAND FLOW
		TREE

BENCHMARK
SURVEY INFORMATION SOURCE :

EXISTING GROUND INFORMATION FROM LIDAR INFORMATION PROVIDED BY GEI CONSULTANTS IN AUGUST 2023

ALL FUTURE SIMPSON ROAD GRADING INFORMATION AS PER WOODS DRAWINGS DATED SEPTEMBER 2023

ALL SUBJECT LANDS GRADING AS PER DRAWINGS BY GEI CONSULTANTS DAATED JULY 2023

LEGAL BOUNDARIES AND LEGAL INFORMATION AS PER INFORMATION PROVIDED BY GEI CONSULTANTS

NO.	REVISION	DATE	BY	APPROVED
1	ISSUED FOR REVIEW	2024/05/17	EG	
2	ISSUED FOR REVIEW-PROFILE ADDED	2023/08/16	EG	
3	ISSUED FOR REVIEW-CULVERT UPSIZED	2023/08/25	EG	
4	ISSUED FOR REVIEW	2023/10/11	EG	

Greck
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LICENSED PROFESSIONAL ENGINEER
May 17, 2024
E.J. GRECK
100148911
PROVINCE OF ONTARIO

LICENSED PROFESSIONAL ENGINEER
J. K. Y. CHAN
100516103
May 17, 2024
PROVINCE OF ONTARIO

CLIENT NAME:
SIMPSON ROAD LANDOWNERS GROUP INC.
7501 KEELE STREET, SUITE 200
VAUGHAN, ON
L4K 1Y2

PROJECT NAME:
SIMPSON ROAD SECONDARY PLAN

CONCEPTUAL CULVERT CONVEYANCE SYSTEM

DESIGNED BY:	JC	SCALES:		PROJECT No.	20-717
CHECKED BY:	EG	HORIZONTAL:	1:750	DRAWING No.	C101
DRAWN BY:	DV	VERTICAL:	1:75	SHEET No.	01
DATE:	OCT 11, 2023	SHEET SIZE:	24"x36"		

STORMWATER MANAGEMENT POND REPORT

SIMPSON ROAD EXTENSION

PROPOSED SWM POND

TOWN OF CALEDON

PROJECT 2019-4841 **AUGUST 2020**

Revision	Description	Prepared		Checked	
		By	Date	By	Date
2.0	Revised Report as per Agency comments	M. Ventresca	August 2020	K. Shahbikian	August 2020
1.0	Revised Report as per Agency comments	M. Ventresca K. Swain	April 2020	K. Shahbikian	April 2020
0.0	Original Report	M. Ventresca	Jan. 2020	K. Shahbikian	Jan. 2020

SCHAEFFERS
CONSULTING ENGINEERS
6 Ronrose Drive
Concord, Ontario L4K 4R3

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APPENDICES

1.0 Introduction

1.1 Study Objectives

This Stormwater Management (SWM) Pond Report has been prepared in support of the detailed design of the proposed stormwater management facility located at the North corner of the intersection of the future Simpson Road extension and Mayfield Road within the Town of Caledon.

This report demonstrates that the proposed SWM Pond is designed in accordance with the Town of Caledon, Toronto and Region Conservation Authority (TRCA), and the Ministry of Environment (MOE) stormwater management design criteria for stormwater quality, quantity, and erosion control. Furthermore, the report demonstrates compliancy with the neighbouring site plan functional servicing and stormwater management report. Please refer to the attached drawings in **Appendix C** and refer to the key plan illustrating the location of the proposed pond.

1.2 Background

The following documents were considered in preparing the proposed functional servicing strategy for the proposed development:

- *Stormwater Management Planning and Design Manual,* prepared by Ministry of the Environment Conservation and Parks MECP (March 2003);
- *Town of Caledon Development Standards Manual, Version 5.0,* prepared by Town of Caledon (May 2019);
- *Stormwater Management Criteria,* prepared by Toronto and Region Conservation Authority TRCA (August 2012);
- *Groundwater Monitoring Program Report, Proposed Industrial Building*, *100 Pillsworth Road, Caledon,* prepared by Forward Engineering & Associates Inc. (September 2019);
- *Geotechnical Investigation Report, Subsurface Geotechnical Investigation Proposed Industrial Building*, *100 Pillsworth Road, Caledon,* prepared by Forward Engineering & Associates Inc. (September 2019);
- *Functional Servicing and Stormwater Management Report, 100 Pillsworth Phase 3 Addition, Caledon,* prepared by MTE Consultants Inc. (March 2019);
- *Simpson Road Extension Stormwater Management Facility* prepared by Wood Group PLC (formerly Amec Foster Wheeler) (December 2017);

1.3 Proposed Development Plan

The Town of Caledon has identified an opportunity to satisfy the Town's Simpson Road extension works in conjunction with the detailed stormwater management schemes of the neighbouring private lands. The Town of Caledon is to provide quantity and quality control for the road ROW area, however in order to optimize the available land, the proposed SWM Pond located at the intersection of the future Simpson Road Extension and Mayfield Road is to provide volumes that will satisfy the criteria of the entire development tributary area of approximately 16.64ha.

Currently, the southern site plan at 100 Pillsworth Road is proceeding with detailed design, and has also been planned to drain to the proposed pond (see **Appendix B** for relevant FSR report excerpts). Therefore, this report will serve as a coordination document that details the SWM Pond design and ensures that capacity is available for all the intended tributary participants.

2.0 Stormwater Management Pond Design

The following sections provide details of the stormwater management (SWM) pond design for the proposed SWM facility at the northern corner of the intersection of Mayfield Road and the future Simpson Road Extension.

2.1 Existing Conditions

The proposed location for the Simpson Road extension pond currently consists of undeveloped farm lands, containing predominantly low-lying vegetation with sparse amounts of trees spread throughout. The area currently drains southwards from the property, and under Mayfield Road where it drains to a tributary of the larger Humber River. The site's location has been identified as being within Humber River Sub-basin 36 as per the SWM Criteria from the TRCA (August, 2012).

2.2 Design Criteria

The Town of Caledon and Toronto and Region Conservation Authority Design Standards require the following stormwater management (SWM) criteria for developments, and are consistent with the criteria used for the original pond design by *Amec Foster Wheeler Environment & Infrastructure*;

- **Quality Control** 80% long term TSS removal for 90% of the cumulative annual runoff;
- **Erosion Control** 25 mm extended detention for forty eight (48) hours;
- **Quantity Control** Provided in accordance with the unitary rates established for the Humber River by the TRCA. The rates are determined based on the equations for Humber River Sub-basin 36 which applies to the site's location. The target rates are presented in **Section 2.4**;
- Furthermore a few different storm distributions should be modelled as per Town and TRCA requirements. These include:
    - 6-hour, 12 hours & 24-hour AES Storm;
    - 6-hour & 12-hour SCS Storm;
    - 4-hour Chicago Storm.

2.3 Proposed Conditions

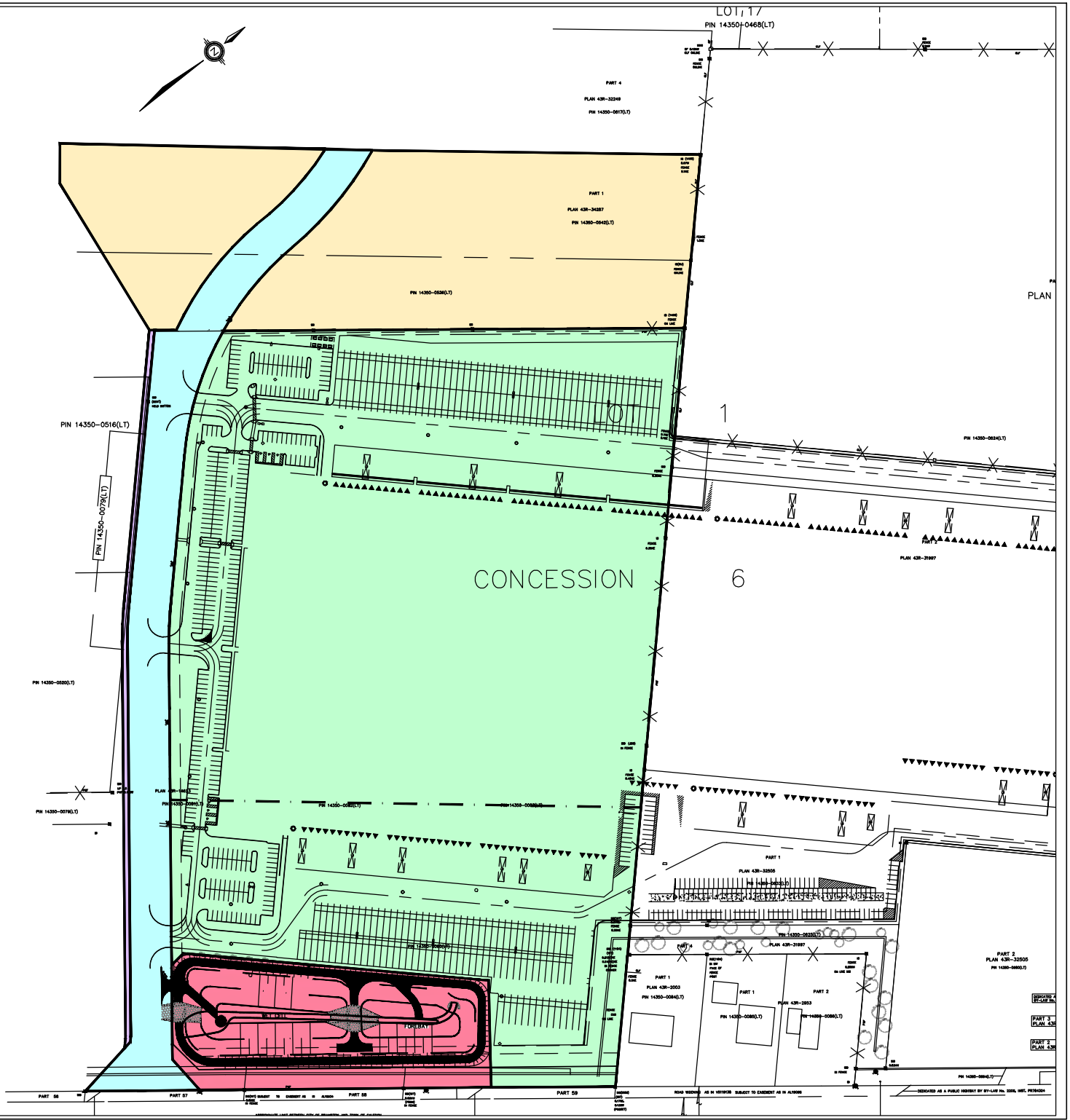
The design of the proposed SWM Pond was originally done by *Amec Foster Wheeler Environment & Infrastructure* in August, 2017. The original pond design was discussed in a SWM brief, attached in **Appendix B** for reference, where the Humber River unitary rates were applied to size the pond. At the time of this analysis the pond was sized to incorporate the two (2) proposed site plans to the north of the proposed SWM facility as well as the Simpson Road Extension. The original design concept was consistent with the Simpson Road Environmental Study Report (AMEC Environment & Infrastructure, December 2012), as well as the Bolton South Industrial Lands Master Environmental Servicing Plan.

As part of the updated design, the SWM pond design has been updated with the latest detailed information from the site plan immediately north of the proposed SWM Pond, this design report is provided in **Appendix B** for reference. This includes an overall 16.64ha tributary area, which will all be controlled to the pond.

Furthermore, the proposed SWM facility will be appropriately sized to provide quality controls for the incoming storm flows. The provided permanent pool volume will be sized based on a target 80% TSS removal or "enhanced" protection level, as per the 2003 MOE design guidelines. Erosion control will be provided extended detention of the 25mm 4hour Chicago storm event over a 48hour period. The pond will be equipped with an appropriately sized spillway and sediment forebay.

Table 2-1 presented below summarizes the post development drainage plan for the subject site. The imperviousness calculations for each block are presented in **Appendix A** for reference. Please refer to below for a schematic illustration of the drainage area to the proposed SWM Pond.

Michael Ventresca



SIMPSON ROAD EXTENSION
SWM POND DESIGN
TOWN OF CALEDON

LEGEND

- CONTROLLED SIMPSON ROAD EXTENSION AREA
  A = 14500m² TIMP = 80%
- CONTROLLED NORTHERN SITE PLAN AREA
  A = 32200m² TIMP = 92.4%
- CONTROLLED SOUTHERN SITE PLAN AREA
  A = 105700m² TIMP = 90.5%
- CONTROLLED SWM POND AREA
  A = 12700m TIMP = 50%

TOTAL CONTROLLED SWM POND TRIBUTARY AREA
A = 165100m²

- UNCONTROLLED SIMPSON ROAD EXTENSION AREA
  A = 1250m² CN = 82, I_A = 5

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FIGURE 2-1
PROPOSED STORMWATER
DRAINAGE PLAN

2019-4841	AUGUST 2020	SCALE: N.T.S.

Table 2-1: Post- Development Catchment Area Summary

Catchment ID	Hydrograph Method	Area (ha)	Imperviousness TIMP (%)	CN	Comment
201	STANDHYD	5.27	99%	82	South Site Plan Roof Area
202	STANDHYD	6.57	81%	82	South Site Plan Parking, SWM Pond & Landscape.
203	STANDHYD	2.095	80%	82	North Site Plan Parking & Landscape
204	STANDHYD	1.45	80%	82	Simpson Road Extension
205	STANDHYD	1.125	99%	82	North Site Plan Rooftop Area*
206	NASHYD	0.125	N/A	82	Other Area
Total	-	16.635	-	-	-

**Accounts for 35% of the North Site Plan area as assumed in the 2017 AMEC Brief.*

2.4 Allowable Release Rates

The pond's allowable release rates were established based on the Humber River Watershed Sub-Basin-36 Unit flow equations. A total pre-development drainage area of 16.64ha was used to determine the allowable release. **Table 2-2** below presents the pre-development flow rates as calculated using the unit flow equations.

Table 2-2: Total Allowable Release Rates

Design Storm Event	Humber River Watershed Sub-Basin 36 Unit Flow Equations	Target Unit Release Rate ($m^3/s/ha$)	Target Release Rates (m^3/s)
2 - Year	Q = 9.506 - 0.719 ln(A)	0.0075	0.125
5 - Year	Q = 14.652 - 1.136 ln(A)	0.0115	0.191
10 - Year	Q = 17.957 - 1.373 ln(A)	0.0141	0.235
25 - Year	Q = 22.639 - 1.741 ln(A)	0.0177	0.295
50 - Year	Q = 26.566 - 2.082 ln(A)	0.0207	0.345
100 - Year	Q = 29.912 - 2.316 ln(A)	0.0234	0.389

Note that the 0.125ha area downstream of the SWM Pond will not be controlled and therefore the peak flows from this area are subtracted from the unit flow rates to calculate the allowable release rates of the SWM Pond. The largest peak flow rate from all the relevant design storms was taken for this uncontrolled are to be subtracted from the unit flow rates.

Table 2-3: Pond Allowable Release Rates

Design Storm Event	Design Storm	Target Release Rates (m^3/s)	Uncontrolled Flow Rate (m^3/s)	Adjusted Pond Release Rate (m^3/s)
2 - Year	12 Hour SCS	0.125	0.0042	0.121
5 - Year	12 Hour SCS	0.191	0.0083	0.183
10 - Year	6 Hour SCS	0.235	0.0107	0.224
25 - Year	6 Hour SCS	0.295	0.0147	0.280
50 - Year	6 Hour SCS	0.345	0.0174	0.328
100 - Year	6 Hour SCS	0.389	0.0205	0.369

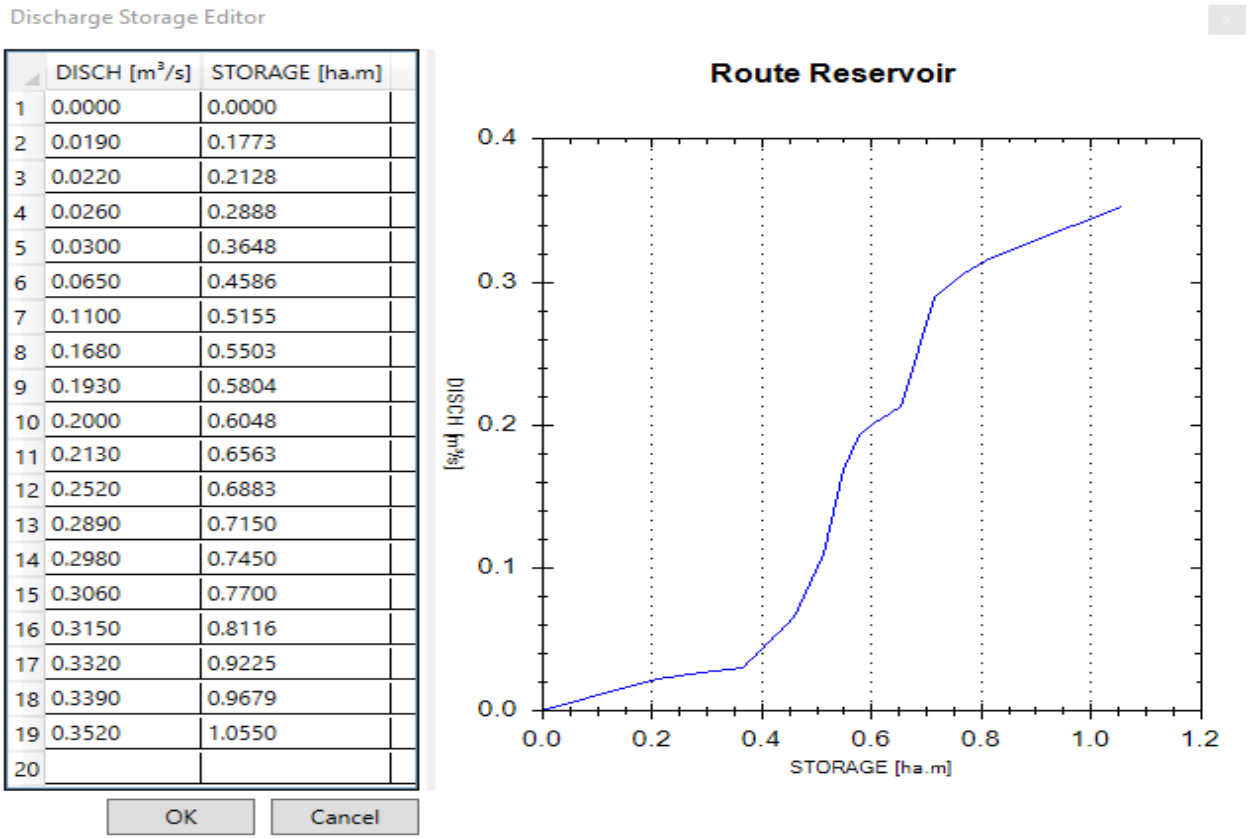
2.5 Erosion Control

The erosion target release rate was established based on the detention of the run-off from a 4-hour 25mm storm event for forty eight (48) hours. As per the calculations presented in **Appendix A**, the required erosion control volume based on the 25mm 4-hour erosion event is estimated to be 3,582m^3 and the target release rate is calculated to be 0.031m^3/s. The entire control area of 16.51ha was considered when estimating the erosion control volume. In order to meet the required erosion control target release rate, it is proposed to have a reverse slope hickenbottom pipe with one (1) 130mmØ orifice plate at the lip invert elevation of 229.0masl. Detailed calculations are attached in **Appendix A**, for reference.

2.6 Quantity Control

As mentioned, quantity control for the controlled 16.64ha area is provided through a proposed multi-orifice structure. The following section describes the measures used to provide quantity control. In order to meet the prescribed unitary rates, the following stage-storage discharge rating curve was used in VO modeling of the pond.

Figure 2-2: Rating Curve used in Visual OTTHYMO



Based on the provided stage-storage-discharge curve the following **Table 2-4** through **Table 2-9** summarize the pond's performance during each of the modeled storm events. Note that the bolded entries indicate the controlling/critical storm for each return period. Associated VO model output has been provided in **Appendix A** for reference.

Table 2-4: SWM Pond Storage Requirements – 12 hr AES

Storm	Required Unitary Release Rate	12-hr AES Release Rate	VO Required Storage	Provided Storage
	Flow (m^3/s)	Flow (m^3/s)	Volume (m^3)	Volume (m^3)
2-Year	0.121	0.082	4,804	4,850
5-Year	0.183	0.173	5,558	5,850
10-Year	0.224	0.200	6,056	6,350
25-Year	0.280	0.243	6,807	7,150
50-Year	0.328	0.292	7,248	7,900
100-Year	0.369	0.308	7,812	10,550

Table 2-5: SWM Pond Storage Requirements – 12 hr SCS

Storm	Required Unitary Release Rate	12-hr SCS Release Rate	VO Required Storage	Provided Storage
	Flow (m^3/s)	Flow (m^3/s)	Volume (m^3)	Volume (m^3)
2-Year	0.121	0.065	4,590	4,850
5-Year	0.183	**0.179**	**5,638**	5,850
10-Year	0.224	0.203	6,175	6,350
25-Year	0.280	0.277	7,068	7,150
50-Year	0.328	0.304	7,629	7,900
100-Year	0.369	0.320	8,418	10,550

Table 2-6: SWM Pond Storage Requirements – 24-hr AES

Storm	Required Unitary Release Rate	24-hr AES Release Rate	VO Required Storage	Provided Storage
	Flow (m^3/s)	Flow (m^3/s)	Volume (m^3)	Volume (m^3)
2-Year	0.121	**0.086**	**4,850**	4,850
5-Year	0.183	0.173	5,564	5,850
10-Year	0.224	0.199	6,006	6,350
25-Year	0.280	0.237	6,762	7,150
50-Year	0.328	0.289	7,152	7,900
100-Year	0.369	0.303	7,622	10,550

Table 2-7: SWM Pond Storage Requirements – 6-hr AES

Storm	Required Unitary Release Rate	6-hr AES Release Rate	VO Required Storage	Provided Storage
	Flow (m^3/s)	Flow (m^3/s)	Volume (m^3)	Volume (m^3)
2-Year	0.121	0.058	4,389	4,850
5-Year	0.183	0.137	5,317	5,850
10-Year	0.224	0.186	5,718	6,350
25-Year	0.280	0.211	6,485	7,150
50-Year	0.328	0.268	7,002	7,900
100-Year	0.369	0.299	7,498	10,550

Table 2-8: SWM Pond Storage Requirements – 6-hr SCS

Storm	Required Unitary Release Rate	6-hr SCS Release Rate	VO Required Storage	Provided Storage
	Flow (m^3/s)	Flow (m^3/s)	Volume (m^3)	Volume (m^3)
2-Year	0.121	0.059	4,431	4,850
5-Year	0.183	0.176	5,598	5,850
10-Year	0.224	**0.204**	**6,198**	6,350
25-Year	0.280	**0.280**	**7,105**	7,150
50-Year	0.328	**0.307**	**7,739**	7,900
100-Year	0.369	**0.322**	**8,625**	10,550

Table 2-9: SWM Pond Storage Requirements – 4hr Chicago

Storm	Required Unitary Release Rate	4-hr Chicago Release Rate	VO Required Storage	Provided Storage
	Flow (m^3/s)	Flow (m^3/s)	Volume (m^3)	Volume (m^3)
2-Year	0.121	0.051	4,203	4,850
5-Year	0.183	0.154	5,417	5,850
10-Year	0.224	0.197	5,962	6,350
25-Year	0.280	0.260	6,942	7,150
50-Year	0.328	0.300	7,499	7,900
100-Year	0.369	0.318	8,334	10,550

As the provided stage-storage-discharge curve and structure produces site flows below the prescribed release rates, it is expected that the proposed pond structure will be sufficient to provide adequate quantity controls on site. Note that the provide storage volumes are shown for the precise water levels that correspond with the release calculated in the hydrology model. The details on the outlet structure and pond volumes can be seen in the design calculations included in **Appendix A** and the provided volumes can be referenced on drawing SWM-1 in **Appendix C**.

2.7 Outlet Control Structure Design

In order to achieve the target release rate specified in **Section 2.4**, the following control structure is proposed. As part of the outlet control structure, an initial 130mmØ orifice plate will be provided via a reverse sloped pipe within the pond to provide the extended detention of the 25mm event. Following this three (3) sets of orifices and DICB's have been proposed in order to meet the required release rates. A summary of the proposed outlet structure is provided in the following, **Table 2-10**. See drawings SWM 2 and SWM-3 in **Appendix C** for details.

Table 2-10: SWM Pond Outlet Control Structure Details

Component	Aperture Description	Size	Invert Elevation (m)
25mm Extended Detention	Reverse slope pipe Orifice Plate	130 mmØ	229.00
2-yr to 100-yr	3 x DICB (3:1 inclined Grate)	1.2 x 0.6 m	229.85 230.00 230.30
2-yr to 100-yr	Orifice Plate	210 mmØ 215 mmØ 175mmØ	229.40 229.40 229.40

Pond Outlet in the Interim Condition

Prior to the proposed Mayfield Road expansion works, the SWM pond will outlet at the temporary headwall (TEMP HW-2) seen on drawing SWM-1 in **Appendix C**.

Pond Outlet in the Ultimate Condition

In the ultimate condition, the interim outlet TEMP HW-2 will be decommissioned and the storm outlet sewer is proposed to be extended to the proposed Headwall (HW-3) downstream of the expanded Mayfield Road ROW.

By-Pass System for Maintenance

It is proposed to have a bypass system for ease of maintenance for the SWM Pond. The bypass pipe is proposed from HW-1 to CTL.MH-9, this way the inflow to the SWM Pond can be temporarily plugged and diverted straight into the watercourse west of the SWM Pond during a period of maintenance. Please refer to drawing SWM-1 in **Appendix C** for details.

2.8 Quality Control

Water quality storage requirements for the proposed SWM Pond's permanent pool have been determined in accordance with Table 3.2 of the MOE SWMPD Manual (March, 2003) for the *Enhanced* quality control of the area of 16.51ha. The required and provided permanent pool volumes are summarized in **Table 2-11**. Permanent pool storage calculations are provided in **Appendix A**. The design drawings for SWM Pond are provided in **Appendix C**.

Table 2-11: Permanent Pool Requirements

Level of Protection	Enhanced (80%)
Drainage Area (Catchment 200+206+209E)	16.51 ha
Weighted Imperviousness	88%
Total Storage Volume Requirement	255 m^3/ha
Minimum Extended Detention Storage Volume Requirement	40 m^3/ha
Permanent Pool Requirement	215 m^3/ha
Required Permanent Pool Storage Volume	3,550 m^3
Provided Permanent Pool Storage Volume	3,601 m^3

2.9 Emergency Spillway

The proposed SWM pond has been designed with an emergency spillway to allow stormwater runoff to safely exit the facility in the event that the outlet fails to function or the storm event is greater than the facility's design (100-year return period). The bottom of the emergency spillway is placed at a lip elevation of 230.85masl, which is above the proposed 100-year high water level of 230.75masl; the top of the spillway is 231.35masl. It will convey flows out of the pond should the water elevation in the pond rise above the provided 100-year water elevation. The flows were compared between the 100-year storm uncontrolled inflows to the pond and it was found that the critical flow occurred from the 100-year 4-hour Chicago storm. During this event a peak flow of 5.00 m^3/s, while the maximum conveyance capacity of the proposed spillway is 7.76 m^3/s refer to **Table 2-12** below and the associated calculations provided in **Appendix A**. Based on this calculation the minimum rip-rap sizing required is a D_{50} of 100mm. Detailed drawings of the spillway are provided in Drawing SWM-1, provided in **Appendix C**.

Table 2-12: SWM Pond Emergency Spillway Design

Bottom width (m)	Top Width (m)	Depth (m)	100-year (4Hr Chic) Inflow (m^3/s)	Capacity (m^3/s)
8	20.5	0.5	5.01	7.76

2.10 Sediment Forebay Design

The function of the sediment forebay is to facilitate maintenance and improve pollutant removal by trapping larger particles from stormwater runoff near the inlet of the pond. The sizing of the sediment forebay is based on the settling length and dispersion length calculations provided in the MOE SWMPD Manual (March 2003). The forebay length should be greater than or equal to the larger of the settling and dispersion lengths.

Sediment forebay sizing calculations for the forebay is provided in **Appendix A** and summarized in **Table 2-13**. The forebay design includes; a forebay length of 54m, measured from forebay inlet to forebay outlet, and an average width of 23m. **Table 2-13** demonstrates that the SWM Pond has provided a forebay of sufficient length, with length to width ratios of at least 2:1 and permanent pool depths of 1.85 m.

Table 2-13: Sediment Forebay Details

Description	Forebay Size
Provided Length-to-Width Ratio	2:1
Provided Permanent Pool Depth	1.85
Required Settling Length	14 m
Required Dispersion Length	23 m
Provided Forebay Length	54 m
Maximum Forebay Width to meet 2:1 requirement	27 m
Provided Forebay Width	23 m

3.0 SUMMARY

This stormwater management report provides an overview of the proposed stormwater management pond design for the Simpson Road extension, the Anatolia industrial building located at 100 Pillsworth Road, as well as the future industrial building immediately north of the Anatolia Development, located within the Town of Caledon. This report demonstrates that the stormwater management pond is adequately designed to service the three (3) tributary developments mentioned above:

Stormwater Management Pond

The proposed stormwater management pond is to provide water quantity controls as per the Humber River Unitary rates for sub-basin 36. Quality control to an enhanced treatment level in accordance with the MECP standards through the implementation of a permanent pool, as well as erosion control for the entire 16.51ha tributary area will be provided within the pond through the extended detention of 4-hour 25mm event for forty eight (48) hours.

Should you have any questions or comments please do not hesitate to call the undersigned.

Respectfully Submitted,

SCHAEFFER & ASSOCIATES LTD.

August 17, 2020

Michael Ventresca, M.Eng., EIT.,
Water Resources Analyst

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Partner

Appendix A
SWM Pond Calculations

Project: 2019-4841

Project Name: Simpson Road Extension SWM Pond

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DICB & Orifice Plate Outlet Structure

	Extended Detention	Outlet 1	DICB 1	Outlet 2	DICB 2	Outlet 3	DICB 3
Invert Elevation / Lip Elevation	229.00	229.40	229.85	229.40	230.00	229.40	230.30
Diameter (mm) / Length (m)	130	210	1.2	215	1.2	175	1.2
Max Area (m^2)	0.013	0.035	-	0.036	-	0.024	-
Number	1	1		1		1	
Coefficient.	0.62	0.62	-	0.62	-	0.62	-
Starting Flow Elevation.(m)	229.00	229.85	-	230.00	-	230.30	-
Top Elevation (m)	232.00	232.00	232.00	232.00	232.00	232.00	232.00

Stage-Storage-Discharge:

Stage		Extended Detention		Outlet 1		DICB 1			Outlet 2		DICB 2			Outlet 3		DICB 3			Pond Storage	Total Flow	VO5 Storage (12HR AES)	VO5 Flow (12HR AES)	VO5 Storage (12HR SCS)	VO5 Flow (12HR SCS)	VO5 Storage (24HR AES)	VO5 Flow (24HR) AES	VO5 Storage (6HR AES)	VO5 Flow (6HR AES)	VO5 Storage (6HR SCS)	VO5 Flow (6HR SCS)	VO5 Storage (Chicago)	VO5 Flow (Chicago)
Water Elevation (m)	Water Elevation Above Perm. Pool (m)	Head (m)	Q (m^3/s)	Head (m)	Q (m^3/s)	Head (m)	Q / m width* ($m^3/s/m$)	Q (m^3/s)	Head (m)	Q (m^3/s)	Head (m)	Q / m width* ($m^3/s/m$)	Q (m^3/s)	Head (m)	Q (m^3/s)	Head (m)	Q / m width* ($m^3/s/m$)	Q (m^3/s)	(m^3)	(m^3/s)	(m^3)	(m^3/s)	(m^3)	(m^3/s)	(m^3)	(m^3/s)	(m^3)	(m^3/s)	(m^3)	(m^3/s)	(m^3)	(m^3/s)
229.00	0.00	na	0.0000	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0	0.000												
229.05	0.05	na	0.0051	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	253	0.005												
229.10	0.10	0.03	0.0101	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	507	0.010												
229.15	0.15	0.09	0.0106	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	760	0.011												
229.20	0.20	0.13	0.0134	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1,013	0.013												
229.25	0.25	0.19	0.0157	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1,267	0.016												
229.30	0.30	0.24	0.0177	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1,520	0.018												
229.35	0.35	0.28	0.0195	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1,773	0.019												
229.36	0.36	0.30	0.0199	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1,844	0.020												
229.37	0.37	0.31	0.0201	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1,875	0.020												
229.42	0.42	0.35	0.0217	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	2,128	0.022												
229.47	0.47	0.40	0.0232	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	2,381	0.023												
229.52	0.52	0.46	0.0246	0.02	na	na	na	na	0.01	na	na	na	na	0.03	na	na	na	na	2,635	0.025												
229.57	0.57	0.50	0.0259	0.06	na	na	na	na	0.06	na	na	na	na	0.08	na	na	na	na	2,888	0.026												
229.62	0.62	0.56	0.0272	0.11	na	na	na	na	0.11	na	na	na	na	0.13	na	na	na	na	3,141	0.027												
229.67	0.67	0.60	0.0284	0.16	na	na	na	na	0.16	na	na	na	na	0.18	na	na	na	na	3,395	0.028												
229.72	0.72	0.65	0.0295	0.21	na	na	na	na	0.21	na	na	na	na	0.23	na	na	na	na	3,648	0.030												
229.75	0.75	0.69	0.0302	0.24	na	na	na	na	0.24	na	na	na	na	0.26	na	na	na	na	**3,800**	**0.030**												
229.87	0.87	0.80	0.0327	0.36	0.0574	0.02	0.020	0.012	0.36	na	na	na	na	0.38	na	na	na	na	4,429	0.044							4389	0.058			4203	0.051
229.90	0.90	0.83	0.0333	0.39	0.0598	0.05	0.053	0.032	0.39	na	na	na	na	0.41	na	na	na	na	4,586	0.065									4431	0.059		
229.92	0.92	0.85	0.0337	0.41	0.0613	0.07	0.082	0.049	0.41	na	na	na	na	0.43	na	na	na	na	4,692	0.083			4590	0.065									
229.95	0.95	0.88	0.0343	0.44	0.0635	0.10	0.14	0.18	0.44	na	na	na	na	0.46	na	na	na	na	**4,850**	**0.098**	4804	0.082			**4850**	**0.086**						
230.01	1.01	0.95	0.0354	0.51	0.0676	0.16	0.29	0.27	0.50	0.071	0.01	0.012	0.007	0.52	na	na	na	na	5,155	0.110												
230.06	1.06	1.00	0.0364	0.56	0.0709	0.21	0.45	0.33	0.55	0.074	0.06	0.068	0.041	0.57	na	na	na	na	5,406	0.148							5317	0.137				
230.07	1.07	1.01	0.0366	0.57	0.0715	0.22	0.49	0.34	0.56	0.075	0.07	0.083	0.050	0.58	na	na	na	na	5,456	0.158											5417	0.154
230.08	1.08	1.02	0.0367	0.58	0.0721	0.23	0.52	0.35	0.57	0.075	0.08	0.099	0.059	0.59	na	na	na	na	5,503	0.168												
230.11	1.11	1.05	0.0373	0.61	0.0740	0.26	0.65	0.38	0.60	0.077	0.11	0.158	0.202	0.62	na	na	na	na	**5,654**	**0.189**	5558	0.173	**5638**	**0.179**	5564	0.173			5598	0.176		
230.13	1.13	1.06	0.0375	0.62	0.0749	0.28	0.71	0.39	0.62	0.078	0.13	0.192	0.226	0.64	na	na	na	na	5,729	0.191							5718	0.186				
230.14	1.14	1.07	0.0378	0.635	0.0758	0.29	0.78	0.40	0.63	0.079	0.14	0.230	0.247	0.65	na	na	na	na	5,804	0.193												
230.15	1.15	1.08	0.0380	0.644	0.0763	0.30	0.83	0.41	0.64	0.080	0.15	0.254	0.259	0.66	na	na	na	na	5,850	0.194												
230.17	1.17	1.10	0.0383	0.664	0.0775	0.32	0.93	0.43	0.66	0.081	0.17	0.312	0.284	0.68	na	na	na	na	5,949	0.197												
230.19	1.19	1.12	0.0386	0.684	0.0787	0.34	1.04	0.44	0.68	0.082	0.19	0.376	0.307	0.70	na	na	na	na	6,048	0.200					6006	0.199					5962	0.197
230.21	1.21	1.14	0.0390	0.704	0.0798	0.36	1.15	0.46	0.70	0.084	0.21	0.445	0.328	0.72	na	na	na	na	6,147	0.202	6056	0.200										
230.25	1.25	1.19	0.0397	0.745	0.0821	0.40	1.40	0.49	0.74	0.086	0.25	0.605	0.368	0.76	na	na	na	na	**6,350**	**0.208**			6175	0.203					**6198**	**0.204**		
230.29	1.29	1.22	0.0403	0.785	0.0843	0.44	1.66	0.51	0.78	0.088	0.29	0.784	0.403	0.80	na	na	na	na	6,563	0.213							6485	0.211				
230.31	1.31	1.25	0.0407	0.805	0.0853	0.46	1.80	0.53	0.80	0.089	0.31	0.882	0.419	0.82	0.060	0.01	0.012	0.007	6,670	0.222												
230.33	1.33	1.27	0.0410	0.825	0.0864	0.48	1.95	0.54	0.82	0.090	0.33	0.986	0.435	0.84	0.061	0.03	0.029	0.018	6,777	0.235					6762	0.237						
230.35	1.35	1.28	0.0413	0.845	0.0874	0.50	2.10	0.55	0.84	0.092	0.35	1.096	0.450	0.86	0.061	0.05	0.053	0.032	6,883	0.252	6807	0.243										
230.37	1.37	1.31	0.0416	0.865	0.0885	0.52	2.26	0.56	0.86	0.093	0.37	1.212	0.465	0.88	0.062	0.07	0.082	0.049	6,990	0.272											6942	0.260
230.39	1.39	1.32	0.0420	0.885	0.0895	0.54	2.43	0.57	0.88	0.094	0.39	1.333	0.479	0.90	0.063	0.09	0.117	0.070	7,097	0.288			7068	0.277			7002	0.268				
230.40	1.40	1.34	0.0421	0.895	0.0900	0.55	2.51	0.58	0.89	0.094	0.40	1.396	0.486	0.91	0.063	0.10	0.137	0.185	**7,150**	**0.289**									**7105**	**0.283**		
230.43	1.43	1.36	0.0426	0.924	0.0914	0.58	2.76	0.60	0.92	0.096	0.43	1.585	0.505	0.94	0.064	0.13	0.202	0.231	7,294	0.294	7248	0.292			7152	0.289						
230.44	1.44	1.38	0.0427	0.935	0.0920	0.59	2.86	0.60	0.93	0.096	0.44	1.662	0.513	0.95	0.064	0.14	0.230	0.247	7,350	0.295												
230.46	1.46	1.40	0.0431	0.955	0.0930	0.61	3.05	0.61	0.95	0.097	0.46	1.803	0.526	0.97	0.065	0.16	0.285	0.273	7,450	0.298												
230.48	1.48	1.41	0.0434	0.975	0.0939	0.630	3.238	0.625	0.97	0.098	0.48	1.950	0.539	0.99	0.066	0.18	0.346	0.297	7,550	0.301							7498	0.299			7499	0.300
230.49	1.49	1.43	0.0435	0.985	0.0944	0.640	3.336	0.631	0.98	0.099	0.49	2.026	0.545	1.00	0.066	0.19	0.379	0.308	7,600	0.303												
230.51	1.51	1.44	0.0438	1.005	0.0954	0.660	3.535	0.641	1.00	0.100	0.51	2.182	0.557	1.02	0.067	0.21	0.448	0.329	7,700	0.306			7629	0.304	7622	0.303						
230.53	1.53	1.47	0.0441	1.025	0.0963	0.680	3.740	0.652	1.02	0.101	0.53	2.344	0.569	1.04	0.067	0.23	0.523	0.349	**7,800**	**0.309**									**7739**	**0.307**		
230.55	1.55	1.49	0.0444	1.045	0.0972	0.700	3.950	0.662	1.04	0.102	0.55	2.511	0.581	1.06	0.068	0.25	0.605	0.368	7,900	0.312	7812	0.308										
230.57	1.57	1.51	0.0448	1.069	0.0984	0.724	4.216	0.674	1.07	0.103	0.57	2.724	0.595	1.09	0.069	0.27	0.712	0.389	8,116	0.315												
230.60	1.60	1.53	0.0452	1.095	0.100	0.750	4.502	0.687	1.09	0.104	0.60	2.955	0.609	1.11	0.070	0.30	0.832	0.411	8,342	0.319											8334	0.318
230.65	1.65	1.59	0.0459	1.145	0.102	0.800	5.089	0.711	1.14	0.107	0.65	3.434	0.636	1.16	0.071	0.35	1.096	0.450	**8,783**	**0.325**			8418	0.320					**8625**	**0.323**		
230.70	1.70	1.63	0.0466	1.195	0.104	0.850	5.713	0.734	1.19	0.109	0.70	3.950	0.662	1.21	0.073	0.40	1.396	0.486	9,225	0.332												
230.75	1.75	1.69	0.0473	1.246	0.106	0.901	6.392	0.757	1.24	0.111	0.75	4.518	0.688	1.26	0.074	0.45	1.742	0.520	9,679	0.339												
230.85	1.85	1.78	0.0487	1.345	0.110	1.000	7.799	0.800	1.34	0.116	0.85	5.713	0.734	1.36	0.077	0.55	2.511	0.581	10,550	0.352												

na - not applicable

* - from MTO Design Chart 4.20 for grate slope of 6 :1

Storm Event

SCE File: 2019-4841

Revised: 2020-07-24

Project # **4841** **Simpson Road Extension**

Date: **7/24/2020**

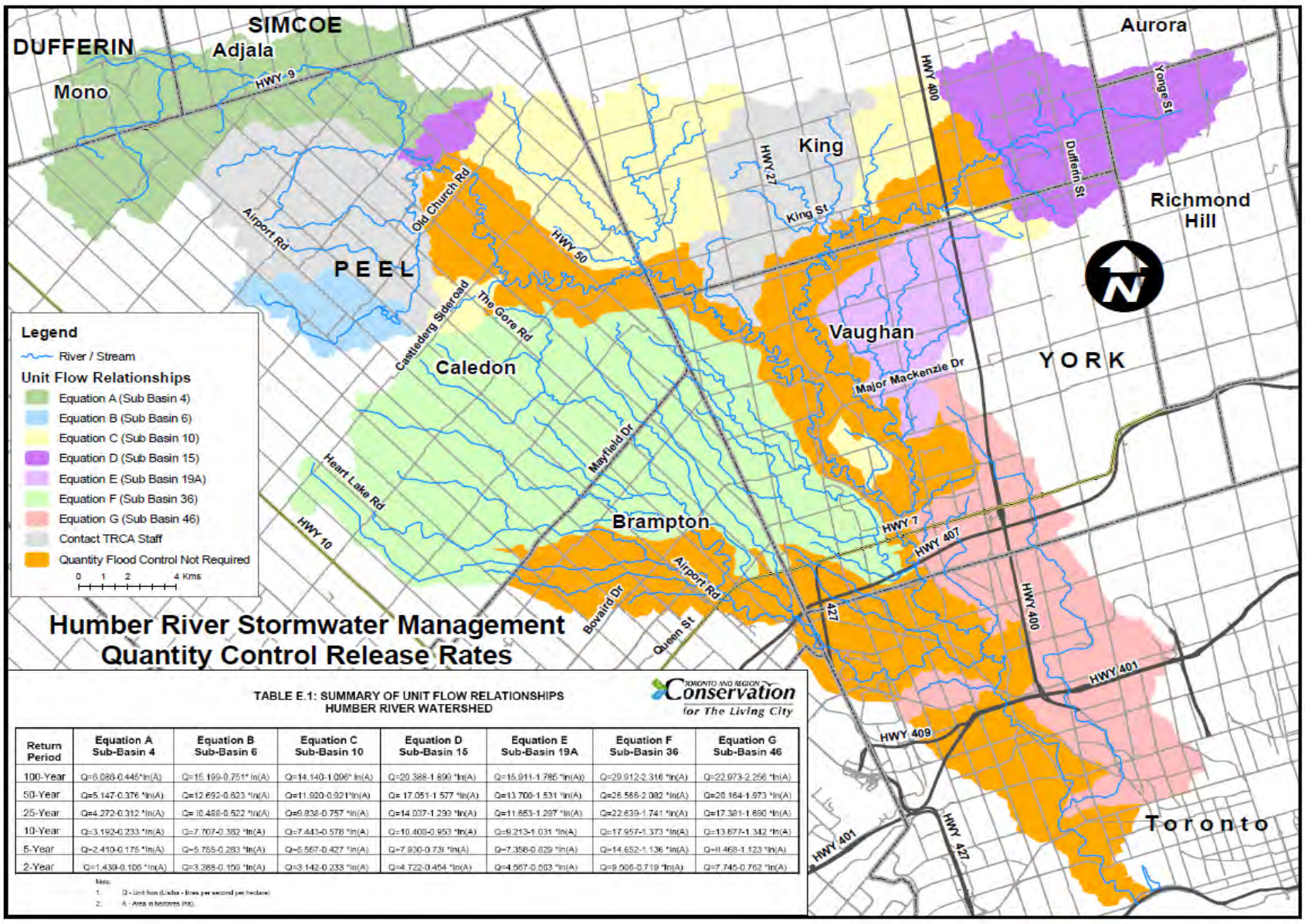
Pre-Development Parameters		**Post Development Parameters**	
Total Site	16.64	**Total Post Development area**	**16.64 ha**
Total Area	**16.64**		
		Controlled Area	16.51 ha
		Uncontrolled Area	0.13 ha

	Target Release Rate	Actual Release Rate (SWM Pond)	SWM Pond Storage Volume		
			Required Storage Volume	Project Water Level	Provided Storage Volume
Storm event	(m^3/s)	(m^3/s)	(m^3)	(m)	(m^3)
Permanent Pool	--	--	3550	229.00	3750
Erosion Control[1]	0.031	0.030	3582	229.75	3800
2 - Year	0.125	0.098	4850	229.95	4850
5 - Year	0.191	0.189	5638	230.15	5850
10 - Year	0.235	0.208	6198	230.25	6350
25 - Year	0.295	0.289	7105	230.40	7150
50 - Year	0.345	0.309	7739	230.55	7900
100 - Year	0.389	0.352	8625	230.85	10550

Simpson Road Extension
SWM Pond
ALLOWABLE RELEASE RATES

Pre-development Drainage Area = 16.64 ha

Design Storm Event	*Humber River Watershed Sub-Basin 36 Unit Flow Equations*	*Target Unit Release Rate ($m^3/s/ha$)*	*Target Release Rates (m^3/s)*
2 - Year	Q = 9.506 - 0.719 ln(A)	0.0075	0.125
5 - Year	Q = 14.652 - 1.136 ln(A)	0.0115	0.191
10 - Year	Q = 17.957 - 1.373 ln(A)	0.0141	0.235
25 - Year	Q = 22.639 - 1.741 ln(A)	0.0177	0.295
50 - Year	Q = 26.566 - 2.082 ln(A)	0.0207	0.345
100 - Year	Q = 29.912 - 2.316 ln(A)	0.0234	0.389



Return Period	Equation A Sub-Basin 4	Equation B Sub-Basin 6	Equation C Sub-Basin 10	Equation D Sub-Basin 15	Equation E Sub-Basin 19A	Equation F Sub-Basin 36	Equation G Sub-Basin 46
100-Year	Q=8.086-0.446*ln(A)	Q=15.199-0.751* ln(A)	Q=14.140-1.096* ln(A)	Q=20.388-1.899 *ln(A)	Q=15.911-1.785 *ln(A))	Q=29.912-2.316 *ln(A)	Q=22.973-2.256 *ln(A)
50-Year	Q=5.147-0.376 *ln(A)	Q=12.692-0.623 *ln(A)	Q=11.920-0.921*ln(A)	Q= 17.051-1.577 *ln(A)	Q=13.709-1.531 *ln(A)	Q=26.566-2.082 *ln(A)	Q=20.164-1.973 *ln(A)
25-Year	Q=4.272-0.312 *ln(A)	Q= 10.486-0.522 *ln(A)	Q=9.838-0.757 *ln(A)	Q=14.037-1.299 *ln(A)	Q=11.663-1.297 *ln(A)	Q=22.639-1.741 *ln(A)	Q=17.381-1.690 *ln(A)
10-Year	Q=3.192-0.233 *ln(A)	Q=7.707-0.382 *ln(A)	Q=7.443-0.578 *ln(A)	Q=10.408-0.953 *ln(A)	Q=9.213-1.031 *ln(A)	Q=17.957-1.373 *ln(A)	Q=13.877-1.342 *ln(A)
5-Year	Q=2.410-0.175 *ln(A)	Q=5.755-0.283 *ln(A)	Q=5.557-0.427 *ln(A)	Q=7.830-0.731 *ln(A)	Q=7.358-0.829 *ln(A)	Q=14.652-1.136 *ln(A)	Q=11.468-1.123 *ln(A)
2-Year	Q=1.439-0.106 *ln(A)	Q=3.288-0.156 *ln(A)	Q=3.142-0.233 *ln(A)	Q=4.722-0.454 *ln(A)	Q=4.567-0.583 *ln(A)	Q=9.506-0.719 *ln(A)	Q=7.745-0.762 *ln(A)

Note:
1. Q - Unit flow (Units - litres per second per hectare)
2. A - Area in hectares (ha).

Simpson Road Extension
WATER QUALITY REQUIREMENT CALCULATIONS
SWM Pond (Ultimate)

Table: Water Quality Storage Requirements Based on Receiving Waters

Protection Level	SWMP Type	Storage Volume (m^3/ha) for Impervious Level					
		0%	35%	55%	70%	85%	100%
Level 1	Wet Pond	53	140	190	225	250	275

* For wet ponds, all of the storage, except for 40 m^3/ha represents the permanent pool volume.
The 40 m^3/ha represents extended detention storage.

Input:

Estimated Imperviousness = 88%
Area = 16.51 ha

Level of Protection : 1
SWMP Type : Wet Pond

Calculation:

Total Storage Volume Required =	**255**	**m^3/ha →**	**4,210**	**m^3**
Permanent Pool Volume =	**215**	**m^3/ha →**	**3,550**	**m^3**
Active Storage Volume =	40	m^3/ha →	660	m^3

Proposed Conditio Hydrological Modelling Parameters

Catch ID	*Description*	Hydrograph Method	Area, A (ha)	Perv. CN	Perv. Ia (mm)	Imperviousness (%) TIMP	Imperviousness (%) XIMP	A*TIMP	A*XIMP	Peak (Tp (hrs)
1. Controlled Area										
201	South Site Plan Roof Area	STANDHYD	5.27	82	5	*99*	*99*	5.22	5.22	
202	South Site Plan Parking and Landscape	STANDHYD	6.57	82	5	*81*	*81*	5.32	5.32	
203	North Site plan Parking and Landscape	STANDHYD	2.10	82	5	*80*	*80*	1.68	1.68	
204	Simpson Road Extension	STANDHYD	1.45	82	5	*80*	*80*	1.16	1.16	
205	North Siteplan Roff Area (35% of NorthSite Plan Area)	STANDHYD	1.125	82	5	*99*	*99*	1.11	1.11	
	Sub Total		**16.51**					**14.49**	**14.49**	
1. Uncontrolled Area										
206	External Area	NASHYD	0.125	82	5	0		0		0.25
	Sub Total		**0.125**							
	Total		**16.635**							

0.877574

NB:

Parameters adopted from:

100 Pillsworth Road Phase 3 Addition, Functional Servicing and Stormwater Management Report, dated March 1, 2009 and Simpson Road Extension Stormwater Management Facility Memo, dated August 31, 2017.

Simpson Road Extension
EROSION CONTROL CALCULATIONS
SWM POND 1

Based on 25mm Storm Event Releasing over 48-Hour Period

Run: Erosion Show All Runs

Run	NHYD	DT [hr]	AREA [ha]	PKFW [m^3/s]	TP [hr]	RV [mm]	DWF [m^3/s]
Erosion	266	0.0833	16.5100	0.9525	1.5000	21.6968	0.0000

Input:

Area =	16.51	ha
R.V =	21.6968	mm
Draw Down Time =	48	hrs

Calculations:

Required Storage =	3,582	m^3
Average Outflow =	0.021	m^3/s
Peak Outflow =	0.031	m^3/s (Estimated at 1.5 times Average Outflow)

Simpson Road Extension - SWM Pond
EMERGENCY SPILLWAY CAPACITY/EROSION TREATMENT

Weir Parameters

Weir Length (L) (Longitudinal)	7	m	
Crest Bottom Length (B)	**8**	m	(Perpendicular to Flow)
Crest Top Length (B)	**20.5**	m	(Perpendicular to Flow)
Q_{100} (100-year peak flow)	**5.01**	m^3/s	
Crest Elevation	230.85	m	
Top of Weir Elevation	231.35	m	
Depth of Weir	0.50	m	

Weir Calculations ($Q = Cd * b * H^{3/2}$)

Water Level (H)	H/L	Cd	Q
0.10	0.014	1.40	0.631
0.20	0.029	1.43	1.823
0.30	0.043	1.50	3.512
0.40	0.057	1.53	5.516
0.50	0.071	1.54	7.759

With a flow width (B) of	14.25	m
And a depth of	0.50	m
Maximum flow is	7.76	m^3/s

See MTO Drainage Manual - Chapter 8 - Pp 121-123

Erosion Treatment

Bottom Width	=	14	m
Side Slope	=	3.00	:1
Depth	=	0.50	m
Flow Area	=	7.88	m^2
Wetted Perimeter	=	17.41	m
Max Flow	=	7.76	m^3/s
Maximum Velocity	=	0.99	m/s
1/R	=	2.21	
Tractive force, T	=	3.34	kg/m^2 (From MTO Design Chart 2.24)
Stone Size, D_{50}	=	100	mm
Critical Shear Stress, T_{cb}	=	0.0642 x D50	(MTO, Equation 5.31)
	=	6.42	kg/m^2

O.K. - the critical shear stress capacity of the stone is greater than the tractive force of the flow

Simpson Road Extension - SWM Pond
EMERGENCY SPILLWAY CAPACITY/EROSION TREATMENT

Weir Parameters

Weir Length (L) (Longitudinal)	7	m	
Crest Bottom Length (B)	**5**	m	(Perpendicular to Flow)
Crest Top Length (B)	**17.5**	m	(Perpendicular to Flow)
Q_{100} (100-year peak flow)	**5.01**	m^3/s	
Q_{REG} (Regional peak flow)	**6.13**	m^3/s	
Crest Elevation	229.00	m	
Top of Weir Elevation	229.50	m	
Depth of Weir	0.50	m	

Weir Calculations ($Q = Cd * b * H^{3/2}$)

Water Level (H)	H/L	Cd	Q
0.050	0.007	1.40	0.176
0.100	0.014	1.40	0.498
0.200	0.029	1.43	1.439
0.300	0.043	1.50	2.773
0.400	0.057	1.53	4.354
0.500	0.071	1.54	6.125

With a flow width (B) of	5.00	m
And a depth of	0.30	m
Maximum flow is	6.13	m^3/s

See MTO Drainage Manual - Chapter 8 - Pp 121-123

Erosion Treatment

Bottom Width	=	5	m
Side Slope	=	3.00	:1
Depth	=	0.50	m
Flow Area	=	3.25	m^2
Wetted Perimeter	=	8.16	m
Max Flow	=	6.13	m^3/s
Maximum Velocity	=	1.88	m/s
1/R	=	2.51	
Tractive force, T	=	4.93	kg/m^2 (From MTO Design Chart 2.24)
Stone Size, D_{50}	=	100	mm
Critical Shear Stress, T_{cb}	=	0.0642 x D50	(MTO, Equation 5.31)
	=	6.42	kg/m^2

O.K. - the critical shear stress capacity of the stone is greater than the tractive force of the flow

PROJECT NO: *Simpson Road Extension*
DESCRIPTION: *SWM Pond*
DATE: *December 2017*

SCHAEFFERS
CONSULTING ENGINEERS

FOREBAY SETTLING LENGTH

ref: SWM Planning & Design Manual (MOE, March 2003)

$Dist = (rQ_p / V_s)^{1/2}$, where

Dist = forebay length (m)
r = Length to width ratio of forebay (>2:1)
Q_p = peak flowrate from the pond during design quality storm (m^3/s)
V_s = settling velocity in the forebay (m/s)

r =	2		(2:1)
Q_p =	0.031	m^3/s	(required erosion outflow rate)
V_s =	0.0003	m	(based on 150μm particles)

Dist = 14 metres

DISPERSION LENGTH

ref: SWM Planning & Design Manual (MOE, March 2003)

$D = 8Q / dV_f$, where

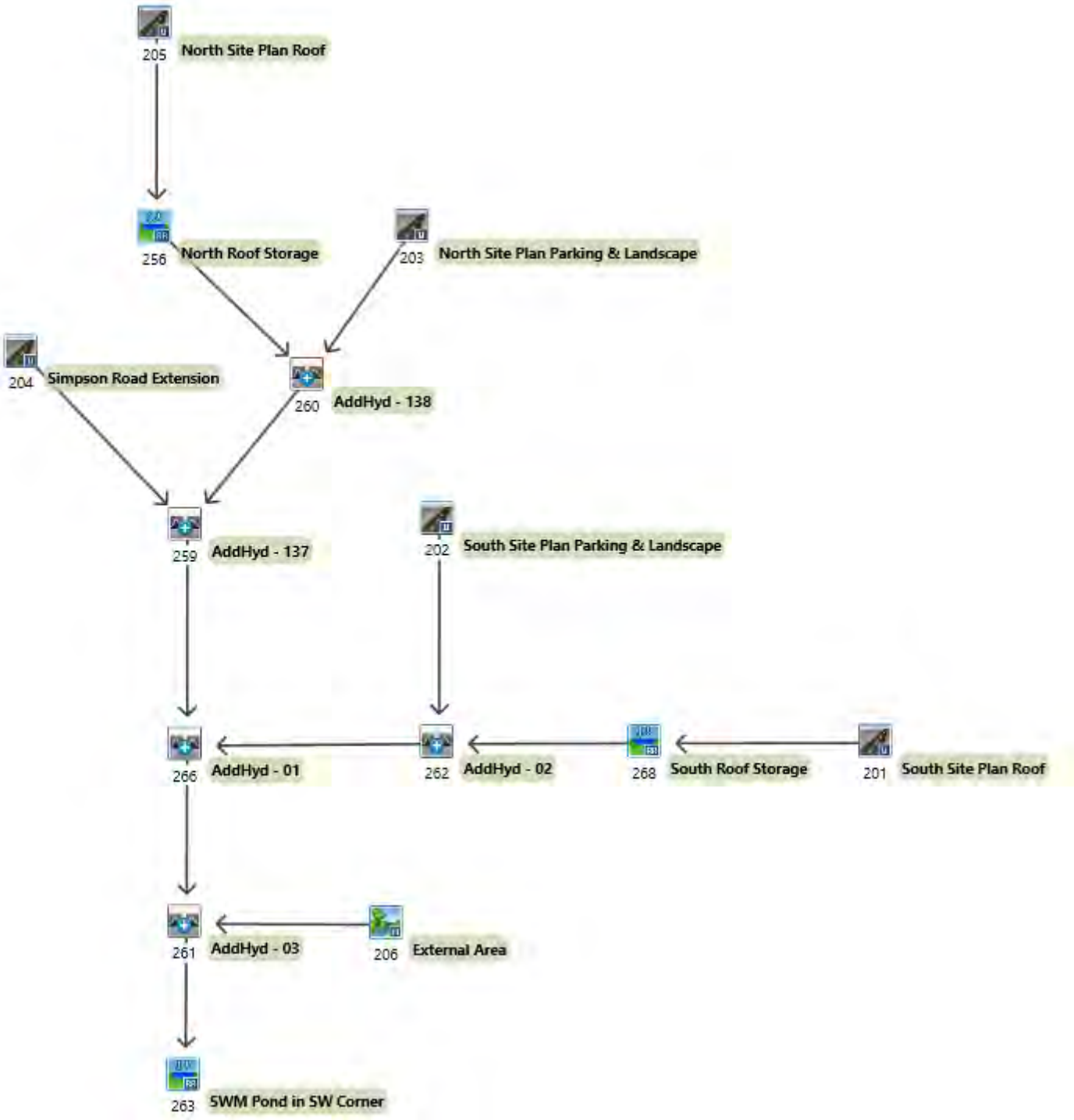
D = length of dispersion (m)
Q = 5 year inlet flowrate (m^3/s)
d = depth of permanent pool in forebay (m)
V_f = desired velocity in the forebay (m/s)

Q =	2.646	m^3/s	(from hydrologic model)
d =	1.85	m	
V_f =	0.5	m/s	(MOEE empirical value)

D = 23 m

Forebay Length Required: 23 metres
Forebay Length Provided: 54 metres

VO MODEL OUTPUT & CD



SCHAEFFERS
CONSULTING ENGINEERS

Post-development Visual OTTHYMO™ Schematic
4 Hour Chicago 2-100 Year

Job #: 2018-4841	**Date: July 2020**

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       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


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DATE: 07/06/2020                          TIME: 04:29:09

USER:


COMMENTS: _____________________________________________________________

--------------------------------------------------------------------------------
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  ***********************************************
  ** SIMULATION : 10 Year Chicago               **
  ***********************************************

--------------------
| CHICAGO STORM    |    IDF curve parameters: A=2221.000
| Ptotal= 58.62 mm |                          B=  12.000
--------------------                          C=   0.908
                       used in:   INTENSITY =  A / (t + B)^C

                       Duration of storm  =  4.00 hrs
                       Storm time step    = 10.00 min
                       Time to peak ratio =  0.33

                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.17    2.39 |  1.17   37.17 |  2.17    8.06 |  3.17    3.05
                0.33    2.89 |  1.33  134.16 |  2.33    6.42 |  3.33    2.75
                0.50    3.65 |  1.50   50.03 |  2.50    5.30 |  3.50    2.50
                0.67    4.89 |  1.67   24.37 |  2.67    4.50 |  3.67    2.29
                0.83    7.23 |  1.83   15.14 |  2.83    3.89 |  3.83    2.11
                1.00   12.87 |  2.00   10.64 |  3.00    3.42 |  4.00    1.96


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                                ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.39 | 1.083   37.17 | 2.083    8.06 |  3.08    3.05
                0.167    2.39 | 1.167   37.17 | 2.167    8.06 |  3.17    3.05
                0.250    2.89 | 1.250  134.16 | 2.250    6.42 |  3.25    2.75
                0.333    2.89 | 1.333  134.16 | 2.333    6.42 |  3.33    2.75
                0.417    3.65 | 1.417   50.03 | 2.417    5.30 |  3.42    2.50
                0.500    3.65 | 1.500   50.03 | 2.500    5.30 |  3.50    2.50
                0.583    4.89 | 1.583   24.37 | 2.583    4.50 |  3.58    2.29
                0.667    4.89 | 1.667   24.37 | 2.667    4.50 |  3.67    2.29
                0.750    7.23 | 1.750   15.14 | 2.750    3.89 |  3.75    2.11
                0.833    7.23 | 1.833   15.14 | 2.833    3.89 |  3.83    2.11
                0.917   12.87 | 1.917   10.64 | 2.917    3.42 |  3.92    1.96
                1.000   12.87 | 2.000   10.64 | 3.000    3.42 |  4.00    1.96

    Unit Hyd Qpeak  (cms)=   0.019

    PEAK FLOW       (cms)=   0.010 (i)
    TIME TO PEAK    (hrs)=   1.583
    RUNOFF VOLUME    (mm)=  26.257
    TOTAL RAINFALL   (mm)=  58.616
    RUNOFF COEFFICIENT   =   0.448

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CHICAGO STORM    |    IDF curve parameters: A=2221.000
| Ptotal= 58.62 mm |                          B=  12.000
--------------------                          C=   0.908
                       used in:   INTENSITY =  A / (t + B)^C

                       Duration of storm  =  4.00 hrs
                       Storm time step    = 10.00 min
                       Time to peak ratio =  0.33

                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.17    2.39 |  1.17   37.17 |  2.17    8.06 |  3.17    3.05
                0.33    2.89 |  1.33  134.16 |  2.33    6.42 |  3.33    2.75
                0.50    3.65 |  1.50   50.03 |  2.50    5.30 |  3.50    2.50
                0.67    4.89 |  1.67   24.37 |  2.67    4.50 |  3.67    2.29
                0.83    7.23 |  1.83   15.14 |  2.83    3.89 |  3.83    2.11
                1.00   12.87 |  2.00   10.64 |  3.00    3.42 |  4.00    1.96


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0205)|   Area    (ha)=   1.12
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------

                                IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=        1.11          0.01
```

```
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      86.60        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.39	1.083	37.17	2.083	8.06	3.08	3.05
0.167	2.39	1.167	37.17	2.167	8.06	3.17	3.05
0.250	2.89	1.250	134.16	2.250	6.42	3.25	2.75
0.333	2.89	1.333	134.16	2.333	6.42	3.33	2.75
0.417	3.65	1.417	50.03	2.417	5.30	3.42	2.50
0.500	3.65	1.500	50.03	2.500	5.30	3.50	2.50
0.583	4.89	1.583	24.37	2.583	4.50	3.58	2.29
0.667	4.89	1.667	24.37	2.667	4.50	3.67	2.29
0.750	7.23	1.750	15.14	2.750	3.89	3.75	2.11
0.833	7.23	1.833	15.14	2.833	3.89	3.83	2.11
0.917	12.87	1.917	10.64	2.917	3.42	3.92	1.96
1.000	12.87	2.000	10.64	3.000	3.42	4.00	1.96

```
     Max.Eff.Inten.(mm/hr)=     134.16        55.75
               over (min)        5.00         5.00
     Storage Coeff.  (min)=       2.08 (ii)    3.08 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.31         0.27
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.41         0.00          0.415 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.33           1.33
     RUNOFF VOLUME    (mm)=      57.62        26.28          57.30
     TOTAL RAINFALL   (mm)=      58.62        58.62          58.62
     RUNOFF COEFFICIENT   =       0.98         0.45           0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0256)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0470      0.0750

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0205)    1.125      0.415      1.33      57.30
   OUTFLOW: ID= 1 (  0256)    1.125      0.030      2.00      56.95

                 PEAK   FLOW   REDUCTION [Qout/Qin](%)=  7.19
                 TIME SHIFT OF PEAK FLOW         (min)= 40.00
                 MAXIMUM  STORAGE   USED       (ha.m.)=  0.0476

--------------------------------------------------------------------------------
--------------------
| CHICAGO STORM    |    IDF curve parameters: A=2221.000
| Ptotal= 58.62 mm |                          B=  12.000
--------------------                          C=   0.908
                        used in:   INTENSITY =  A / (t + B)^C

                        Duration of storm  =  4.00 hrs
                        Storm time step    = 10.00 min
                        Time to peak ratio =  0.33
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	2.39	1.17	37.17	2.17	8.06	3.17	3.05
0.33	2.89	1.33	134.16	2.33	6.42	3.33	2.75
0.50	3.65	1.50	50.03	2.50	5.30	3.50	2.50
0.67	4.89	1.67	24.37	2.67	4.50	3.67	2.29
0.83	7.23	1.83	15.14	2.83	3.89	3.83	2.11
1.00	12.87	2.00	10.64	3.00	3.42	4.00	1.96

```
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0203)|   Area    (ha)=   2.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.68         0.42
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     118.18        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.39	1.083	37.17	2.083	8.06	3.08	3.05
0.167	2.39	1.167	37.17	2.167	8.06	3.17	3.05
0.250	2.89	1.250	134.16	2.250	6.42	3.25	2.75
0.333	2.89	1.333	134.16	2.333	6.42	3.33	2.75
0.417	3.65	1.417	50.03	2.417	5.30	3.42	2.50
0.500	3.65	1.500	50.03	2.500	5.30	3.50	2.50
0.583	4.89	1.583	24.37	2.583	4.50	3.58	2.29
0.667	4.89	1.667	24.37	2.667	4.50	3.67	2.29
0.750	7.23	1.750	15.14	2.750	3.89	3.75	2.11
0.833	7.23	1.833	15.14	2.833	3.89	3.83	2.11
0.917	12.87	1.917	10.64	2.917	3.42	3.92	1.96
1.000	12.87	2.000	10.64	3.000	3.42	4.00	1.96

```
     Max.Eff.Inten.(mm/hr)=     134.16        55.75
               over (min)        5.00        10.00
     Storage Coeff.  (min)=       2.51 (ii)    6.11 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.29         0.15
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.62         0.05          0.657 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42           1.33
     RUNOFF VOLUME    (mm)=      57.62        26.28          51.35
     TOTAL RAINFALL   (mm)=      58.62        58.62          58.62
     RUNOFF COEFFICIENT   =       0.98         0.45           0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
```

```
      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  82.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
--------------------
| ADD HYD  (  0260)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0203):     2.10   0.657     1.33    51.35
     + ID2= 2 (  0256):     1.12   0.030     2.00    56.95
       ================================================
       ID = 3 (  0260):     3.22   0.675     1.33    53.30

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
--------------------
| CHICAGO STORM    |    IDF curve parameters: A=2221.000
| Ptotal= 58.62 mm |                          B=  12.000
--------------------                          C=   0.908
                        used in:   INTENSITY =  A / (t + B)^C

                        Duration of storm  =  4.00 hrs
                        Storm time step    = 10.00 min
                        Time to peak ratio =  0.33
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	2.39	1.17	37.17	2.17	8.06	3.17	3.05
0.33	2.89	1.33	134.16	2.33	6.42	3.33	2.75
0.50	3.65	1.50	50.03	2.50	5.30	3.50	2.50
0.67	4.89	1.67	24.37	2.67	4.50	3.67	2.29
0.83	7.23	1.83	15.14	2.83	3.89	3.83	2.11
1.00	12.87	2.00	10.64	3.00	3.42	4.00	1.96

```
--------------------
| CALIB            |
| STANDHYD (  0204)|   Area    (ha)=   1.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.16         0.29
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      98.32        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.39	1.083	37.17	2.083	8.06	3.08	3.05
0.167	2.39	1.167	37.17	2.167	8.06	3.17	3.05
0.250	2.89	1.250	134.16	2.250	6.42	3.25	2.75
0.333	2.89	1.333	134.16	2.333	6.42	3.33	2.75
0.417	3.65	1.417	50.03	2.417	5.30	3.42	2.50
0.500	3.65	1.500	50.03	2.500	5.30	3.50	2.50
0.583	4.89	1.583	24.37	2.583	4.50	3.58	2.29
0.667	4.89	1.667	24.37	2.667	4.50	3.67	2.29
0.750	7.23	1.750	15.14	2.750	3.89	3.75	2.11
0.833	7.23	1.833	15.14	2.833	3.89	3.83	2.11
0.917	12.87	1.917	10.64	2.917	3.42	3.92	1.96
1.000	12.87	2.000	10.64	3.000	3.42	4.00	1.96

```
     Max.Eff.Inten.(mm/hr)=     134.16        55.75
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       2.25 (ii)    5.85 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.30         0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.43         0.04          0.458 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42           1.33
     RUNOFF VOLUME    (mm)=      57.62        26.28          51.35
     TOTAL RAINFALL   (mm)=      58.62        58.62          58.62
     RUNOFF COEFFICIENT   =       0.98         0.45           0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
--------------------
| ADD HYD  (  0259)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0204):     1.45   0.458     1.33    51.35
     + ID2= 2 (  0260):     3.22   0.675     1.33    53.30
       ================================================
       ID = 3 (  0259):     4.67   1.133     1.33    52.70

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
--------------------
| CHICAGO STORM    |    IDF curve parameters: A=2221.000
| Ptotal= 58.62 mm |                          B=  12.000
--------------------                          C=   0.908
                        used in:   INTENSITY =  A / (t + B)^C

                        Duration of storm  =  4.00 hrs
                        Storm time step    = 10.00 min
                        Time to peak ratio =  0.33
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	2.39	1.17	37.17	2.17	8.06	3.17	3.05
0.33	2.89	1.33	134.16	2.33	6.42	3.33	2.75
0.50	3.65	1.50	50.03	2.50	5.30	3.50	2.50
0.67	4.89	1.67	24.37	2.67	4.50	3.67	2.29
0.83	7.23	1.83	15.14	2.83	3.89	3.83	2.11
1.00	12.87	2.00	10.64	3.00	3.42	4.00	1.96

```
| CALIB           |
| STANDHYD (  0201)|   Area    (ha)=   5.27
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.22         0.05
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     187.44        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.39	1.083	37.17	2.083	8.06	3.08	3.05
0.167	2.39	1.167	37.17	2.167	8.06	3.17	3.05
0.250	2.89	1.250	134.16	2.250	6.42	3.25	2.75
0.333	2.89	1.333	134.16	2.333	6.42	3.33	2.75
0.417	3.65	1.417	50.03	2.417	5.30	3.42	2.50
0.500	3.65	1.500	50.03	2.500	5.30	3.50	2.50
0.583	4.89	1.583	24.37	2.583	4.50	3.58	2.29
0.667	4.89	1.667	24.37	2.667	4.50	3.67	2.29
0.750	7.23	1.750	15.14	2.750	3.89	3.75	2.11
0.833	7.23	1.833	15.14	2.833	3.89	3.83	2.11
0.917	12.87	1.917	10.64	2.917	3.42	3.92	1.96
1.000	12.87	2.000	10.64	3.000	3.42	4.00	1.96

```
     Max.Eff.Inten.(mm/hr)=     134.16        55.75
               over (min)         5.00         5.00
     Storage Coeff.  (min)=     3.31 (ii)    4.31 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.26         0.23
                                                      *TOTALS*
     PEAK FLOW       (cms)=       1.87         0.01        1.883 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.33         1.33
     RUNOFF VOLUME    (mm)=      57.62        26.28        57.30
     TOTAL RAINFALL   (mm)=      58.62        58.62        58.62
     RUNOFF COEFFICIENT   =       0.98         0.45         0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0268)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000    |   0.1959     0.1883
                         0.0980     0.0369    |   0.2939     0.4335

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0201)    5.270     1.883      1.33      57.30
   OUTFLOW: ID= 1 (  0268)    5.270     0.200      1.92      57.29

     PEAK   FLOW   REDUCTION [Qout/Qin](%)= 10.61
     TIME SHIFT OF PEAK FLOW         (min)= 35.00
     MAXIMUM  STORAGE   USED       (ha.m.)=  0.1986

--------------------------------------------------------------------------------
--------------------
| CHICAGO STORM    |    IDF curve parameters: A=2221.000
| Ptotal= 58.62 mm |                          B=  12.000
--------------------                          C=   0.908
                         used in:   INTENSITY =  A / (t + B)^C

                         Duration of storm  =  4.00 hrs
                         Storm time step    = 10.00 min
                         Time to peak ratio =  0.33
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	2.39	1.17	37.17	2.17	8.06	3.17	3.05
0.33	2.89	1.33	134.16	2.33	6.42	3.33	2.75
0.50	3.65	1.50	50.03	2.50	5.30	3.50	2.50
0.67	4.89	1.67	24.37	2.67	4.50	3.67	2.29
0.83	7.23	1.83	15.14	2.83	3.89	3.83	2.11
1.00	12.87	2.00	10.64	3.00	3.42	4.00	1.96

```
--------------------------------------------------------------------------------
--------------------
| CALIB           |
| STANDHYD (  0202)|   Area    (ha)=   6.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.32         1.25
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     209.28        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.39	1.083	37.17	2.083	8.06	3.08	3.05
0.167	2.39	1.167	37.17	2.167	8.06	3.17	3.05
0.250	2.89	1.250	134.16	2.250	6.42	3.25	2.75
0.333	2.89	1.333	134.16	2.333	6.42	3.33	2.75
0.417	3.65	1.417	50.03	2.417	5.30	3.42	2.50
0.500	3.65	1.500	50.03	2.500	5.30	3.50	2.50
0.583	4.89	1.583	24.37	2.583	4.50	3.58	2.29
0.667	4.89	1.667	24.37	2.667	4.50	3.67	2.29
0.750	7.23	1.750	15.14	2.750	3.89	3.75	2.11
0.833	7.23	1.833	15.14	2.833	3.89	3.83	2.11
0.917	12.87	1.917	10.64	2.917	3.42	3.92	1.96
1.000	12.87	2.000	10.64	3.000	3.42	4.00	1.96

```
     Max.Eff.Inten.(mm/hr)=     134.16        55.75
               over (min)         5.00        10.00
     Storage Coeff.  (min)=     3.54 (ii)    7.05 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.26         0.14
                                                      *TOTALS*
     PEAK FLOW       (cms)=       1.90         0.15        2.011 (iii)
```

```
     TIME TO PEAK    (hrs)=       1.33         1.42          1.33
     RUNOFF VOLUME    (mm)=      57.62        26.28         51.66
     TOTAL RAINFALL   (mm)=      58.62        58.62         58.62
     RUNOFF COEFFICIENT   =       0.98         0.45          0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

-------------------
| ADD HYD  (  0262)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0202):     6.57   2.011     1.33    51.66
     + ID2= 2 (  0268):     5.27   0.200     1.92    57.29
       ================================================
       ID = 3 (  0262):    11.84   2.160     1.33    54.17

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

-------------------
| ADD HYD  (  0266)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0259):     4.67   1.133     1.33    52.70
     + ID2= 2 (  0262):    11.84   2.160     1.33    54.17
       ================================================
       ID = 3 (  0266):    16.51   3.293     1.33    53.75

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
-------------------
| RESERVOIR(  0263)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                        0.0000     0.0000    |   0.2130     0.6563
                        0.0190     0.1773    |   0.2520     0.6883
                        0.0220     0.2128    |   0.2890     0.7150
                        0.0260     0.2888    |   0.2980     0.7450
                        0.0300     0.3648    |   0.3060     0.7700
                        0.0650     0.4586    |   0.3150     0.8127
                        0.1100     0.5155    |   0.3320     0.9290
                        0.1680     0.5503    |   0.3390     0.9767
                        0.1930     0.5804    |   0.3520     1.0680
                        0.2000     0.6048    |   0.0000     0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0266)    16.510     3.293      1.33      53.75
   OUTFLOW: ID= 1 (  0263)    16.510     0.197      4.08      53.61

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.00
                  TIME SHIFT OF PEAK FLOW         (min)=165.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.5962

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-------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0206):     0.12   0.010     1.58    26.26
     + ID2= 2 (  0263):    16.51   0.197     4.08    53.61
       ================================================
       ID = 3 (  0261):    16.64   0.198     4.00    53.40

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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================================================================================
============================

      V    V   I    SSSSS  U   U    A    L              (v 5.0.2025)
      V    V   I    SS     U   U   A A   L
       V  V    I     SS    U   U  AAAAA  L
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
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                *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\8504cf40-631c-4016-80fa-66a7da8228b7\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\8504cf40-631c-4016-80fa-66a7da8228b7\s


DATE: 07/06/2020                          TIME: 04:29:09

USER:



COMMENTS: _____________________________________________________________


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  **********************************************
  ** SIMULATION : 100 Year Chicago              **
  **********************************************

-------------------
| CHICAGO STORM    |    IDF curve parameters: A=4688.000
| Ptotal= 89.87 mm |                          B=  17.000
-------------------                          C=   0.962
                         used in:   INTENSITY =  A / (t + B)^C
```

```
                     Duration of storm  =  4.00 hrs
                     Storm time step    = 10.00 min
                     Time to peak ratio =  0.33

                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.17    2.89 |  1.17   62.12 |  2.17   12.48 |  3.17    3.91
                0.33    3.67 |  1.33  196.54 |  2.33    9.60 |  3.33    3.44
                0.50    4.88 |  1.50   83.09 |  2.50    7.66 |  3.50    3.05
                0.67    6.96 |  1.67   41.25 |  2.67    6.29 |  3.67    2.73
                0.83   11.02 |  1.83   25.07 |  2.83    5.28 |  3.83    2.47
                1.00   21.03 |  2.00   17.06 |  3.00    4.51 |  4.00    2.24


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    2.89 | 1.083   62.12 | 2.083   12.48 |  3.08    3.91
               0.167    2.89 | 1.167   62.12 | 2.167   12.48 |  3.17    3.91
               0.250    3.67 | 1.250  196.54 | 2.250    9.60 |  3.25    3.44
               0.333    3.67 | 1.333  196.54 | 2.333    9.60 |  3.33    3.44
               0.417    4.88 | 1.417   83.09 | 2.417    7.66 |  3.42    3.05
               0.500    4.88 | 1.500   83.09 | 2.500    7.66 |  3.50    3.05
               0.583    6.96 | 1.583   41.25 | 2.583    6.29 |  3.58    2.73
               0.667    6.96 | 1.667   41.25 | 2.667    6.29 |  3.67    2.73
               0.750   11.02 | 1.750   25.07 | 2.750    5.28 |  3.75    2.47
               0.833   11.02 | 1.833   25.07 | 2.833    5.28 |  3.83    2.47
               0.917   21.03 | 1.917   17.06 | 2.917    4.51 |  3.92    2.24
               1.000   21.03 | 2.000   17.06 | 3.000    4.51 |  4.00    2.24

     Unit Hyd Qpeak  (cms)=   0.019

     PEAK FLOW       (cms)=   0.021 (i)
     TIME TO PEAK    (hrs)=   1.583
     RUNOFF VOLUME    (mm)=  51.175
     TOTAL RAINFALL   (mm)=  89.870
     RUNOFF COEFFICIENT   =   0.569

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CHICAGO STORM    |    IDF curve parameters: A=4688.000
| Ptotal= 89.87 mm |                          B=  17.000
--------------------                          C=   0.962
                     used in:   INTENSITY =  A / (t + B)^C

                     Duration of storm  =  4.00 hrs
                     Storm time step    = 10.00 min
                     Time to peak ratio =  0.33

                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.17    2.89 |  1.17   62.12 |  2.17   12.48 |  3.17    3.91
                0.33    3.67 |  1.33  196.54 |  2.33    9.60 |  3.33    3.44
                0.50    4.88 |  1.50   83.09 |  2.50    7.66 |  3.50    3.05
                0.67    6.96 |  1.67   41.25 |  2.67    6.29 |  3.67    2.73
                0.83   11.02 |  1.83   25.07 |  2.83    5.28 |  3.83    2.47
                1.00   21.03 |  2.00   17.06 |  3.00    4.51 |  4.00    2.24


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0205)|   Area    (ha)=   1.12
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------

                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.11          0.01
     Dep. Storage     (mm)=       1.00          5.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      86.60         40.00
     Mannings n           =      0.013         0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    2.89 | 1.083   62.12 | 2.083   12.48 |  3.08    3.91
               0.167    2.89 | 1.167   62.12 | 2.167   12.48 |  3.17    3.91
               0.250    3.67 | 1.250  196.54 | 2.250    9.60 |  3.25    3.44
               0.333    3.67 | 1.333  196.54 | 2.333    9.60 |  3.33    3.44
               0.417    4.88 | 1.417   83.09 | 2.417    7.66 |  3.42    3.05
               0.500    4.88 | 1.500   83.09 | 2.500    7.66 |  3.50    3.05
               0.583    6.96 | 1.583   41.25 | 2.583    6.29 |  3.58    2.73
               0.667    6.96 | 1.667   41.25 | 2.667    6.29 |  3.67    2.73
               0.750   11.02 | 1.750   25.07 | 2.750    5.28 |  3.75    2.47
               0.833   11.02 | 1.833   25.07 | 2.833    5.28 |  3.83    2.47
               0.917   21.03 | 1.917   17.06 | 2.917    4.51 |  3.92    2.24
               1.000   21.03 | 2.000   17.06 | 3.000    4.51 |  4.00    2.24

     Max.Eff.Inten.(mm/hr)=     196.54       110.60
               over (min)        5.00         5.00
     Storage Coeff.  (min)=      1.79 (ii)    2.65 (ii)
     Unit Hyd. Tpeak (min)=      5.00         5.00
     Unit Hyd. peak  (cms)=      0.32         0.29
                                                        *TOTALS*
     PEAK FLOW       (cms)=      0.61         0.00        0.610 (iii)
     TIME TO PEAK    (hrs)=      1.33         1.33         1.33
     RUNOFF VOLUME    (mm)=     88.87        51.22        88.49
     TOTAL RAINFALL   (mm)=     89.87        89.87        89.87
     RUNOFF COEFFICIENT   =      0.99         0.57         0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0256)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
```

```
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0470     0.0750

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0205)      1.125     0.610      1.33      88.49
   OUTFLOW: ID= 1 (  0256)      1.125     0.047      2.00      88.14

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  7.67
                  TIME SHIFT OF PEAK FLOW         (min)= 40.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0748

--------------------------------------------------------------------------------
--------------------
| CHICAGO STORM    |    IDF curve parameters: A=4688.000
| Ptotal= 89.87 mm |                          B=  17.000
--------------------                          C=   0.962
                         used in:   INTENSITY =  A / (t + B)^C

                         Duration of storm  =  4.00 hrs
                         Storm time step    = 10.00 min
                         Time to peak ratio =  0.33

                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.17    2.89 |  1.17   62.12 |  2.17   12.48 |  3.17    3.91
                0.33    3.67 |  1.33  196.54 |  2.33    9.60 |  3.33    3.44
                0.50    4.88 |  1.50   83.09 |  2.50    7.66 |  3.50    3.05
                0.67    6.96 |  1.67   41.25 |  2.67    6.29 |  3.67    2.73
                0.83   11.02 |  1.83   25.07 |  2.83    5.28 |  3.83    2.47
                1.00   21.03 |  2.00   17.06 |  3.00    4.51 |  4.00    2.24


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0203)|   Area    (ha)=   2.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.68         0.42
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     118.18        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    2.89 | 1.083   62.12 | 2.083   12.48 |  3.08    3.91
               0.167    2.89 | 1.167   62.12 | 2.167   12.48 |  3.17    3.91
               0.250    3.67 | 1.250  196.54 | 2.250    9.60 |  3.25    3.44
               0.333    3.67 | 1.333  196.54 | 2.333    9.60 |  3.33    3.44
               0.417    4.88 | 1.417   83.09 | 2.417    7.66 |  3.42    3.05
               0.500    4.88 | 1.500   83.09 | 2.500    7.66 |  3.50    3.05
               0.583    6.96 | 1.583   41.25 | 2.583    6.29 |  3.58    2.73
               0.667    6.96 | 1.667   41.25 | 2.667    6.29 |  3.67    2.73
               0.750   11.02 | 1.750   25.07 | 2.750    5.28 |  3.75    2.47
               0.833   11.02 | 1.833   25.07 | 2.833    5.28 |  3.83    2.47
               0.917   21.03 | 1.917   17.06 | 2.917    4.51 |  3.92    2.24
               1.000   21.03 | 2.000   17.06 | 3.000    4.51 |  4.00    2.24
```

```
     Max.Eff.Inten.(mm/hr)=     196.54       110.60
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       2.16 (ii)    5.25 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.31         0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.91         0.11          1.000 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42           1.33
     RUNOFF VOLUME    (mm)=      88.87        51.22          81.34
     TOTAL RAINFALL   (mm)=      89.87        89.87          89.87
     RUNOFF COEFFICIENT   =       0.99         0.57           0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0260)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0203):     2.10   1.000     1.33    81.34
     + ID2= 2 (  0256):     1.12   0.047     2.00    88.14
       ================================================
       ID = 3 (  0260):     3.22   1.028     1.33    83.71

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CHICAGO STORM    |    IDF curve parameters: A=4688.000
| Ptotal= 89.87 mm |                          B=  17.000
--------------------                          C=   0.962
                         used in:   INTENSITY =  A / (t + B)^C

                         Duration of storm  =  4.00 hrs
                         Storm time step    = 10.00 min
                         Time to peak ratio =  0.33

                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.17    2.89 |  1.17   62.12 |  2.17   12.48 |  3.17    3.91
                0.33    3.67 |  1.33  196.54 |  2.33    9.60 |  3.33    3.44
                0.50    4.88 |  1.50   83.09 |  2.50    7.66 |  3.50    3.05
                0.67    6.96 |  1.67   41.25 |  2.67    6.29 |  3.67    2.73
                0.83   11.02 |  1.83   25.07 |  2.83    5.28 |  3.83    2.47
                1.00   21.03 |  2.00   17.06 |  3.00    4.51 |  4.00    2.24


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--------------------
| CALIB            |
| STANDHYD (  0204)|   Area    (ha)=   1.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.16         0.29
     Dep. Storage     (mm)=       1.00         5.00
```

Average Slope	(%)=	1.00	2.00
Length	(m)=	98.32	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.89	1.083	62.12	2.083	12.48	3.08	3.91
0.167	2.89	1.167	62.12	2.167	12.48	3.17	3.91
0.250	3.67	1.250	196.54	2.250	9.60	3.25	3.44
0.333	3.67	1.333	196.54	2.333	9.60	3.33	3.44
0.417	4.88	1.417	83.09	2.417	7.66	3.42	3.05
0.500	4.88	1.500	83.09	2.500	7.66	3.50	3.05
0.583	6.96	1.583	41.25	2.583	6.29	3.58	2.73
0.667	6.96	1.667	41.25	2.667	6.29	3.67	2.73
0.750	11.02	1.750	25.07	2.750	5.28	3.75	2.47
0.833	11.02	1.833	25.07	2.833	5.28	3.83	2.47
0.917	21.03	1.917	17.06	2.917	4.51	3.92	2.24
1.000	21.03	2.000	17.06	3.000	4.51	4.00	2.24

Max.Eff.Inten.(mm/hr)=		196.54	110.60	
over (min)		5.00	10.00	
Storage Coeff. (min)=		1.93 (ii)	5.02 (ii)	
Unit Hyd. Tpeak (min)=		5.00	10.00	
Unit Hyd. peak (cms)=		0.31	0.16	
				TOTALS
PEAK FLOW	(cms)=	0.63	0.08	0.695 (iii)
TIME TO PEAK	(hrs)=	1.33	1.42	1.33
RUNOFF VOLUME	(mm)=	88.87	51.22	81.34
TOTAL RAINFALL	(mm)=	89.87	89.87	89.87
RUNOFF COEFFICIENT	=	0.99	0.57	0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0259)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0204):		1.45	0.695	1.33	81.34
+ ID2= 2 (0260):		3.22	1.028	1.33	83.71
ID = 3 (0259):		4.67	1.723	1.33	82.98

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CHICAGO STORM	Ptotal= 89.87 mm

IDF curve parameters: A=4688.000
B= 17.000
C= 0.962
used in: INTENSITY = A / (t + B)^C

Duration of storm = 4.00 hrs

Storm time step = 10.00 min
Time to peak ratio = 0.33

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	2.89	1.17	62.12	2.17	12.48	3.17	3.91
0.33	3.67	1.33	196.54	2.33	9.60	3.33	3.44
0.50	4.88	1.50	83.09	2.50	7.66	3.50	3.05
0.67	6.96	1.67	41.25	2.67	6.29	3.67	2.73
0.83	11.02	1.83	25.07	2.83	5.28	3.83	2.47
1.00	21.03	2.00	17.06	3.00	4.51	4.00	2.24

CALIB	STANDHYD (0201)	ID= 1 DT= 5.0 min

Area (ha)= 5.27
Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.22	0.05
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	187.44	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.89	1.083	62.12	2.083	12.48	3.08	3.91
0.167	2.89	1.167	62.12	2.167	12.48	3.17	3.91
0.250	3.67	1.250	196.54	2.250	9.60	3.25	3.44
0.333	3.67	1.333	196.54	2.333	9.60	3.33	3.44
0.417	4.88	1.417	83.09	2.417	7.66	3.42	3.05
0.500	4.88	1.500	83.09	2.500	7.66	3.50	3.05
0.583	6.96	1.583	41.25	2.583	6.29	3.58	2.73
0.667	6.96	1.667	41.25	2.667	6.29	3.67	2.73
0.750	11.02	1.750	25.07	2.750	5.28	3.75	2.47
0.833	11.02	1.833	25.07	2.833	5.28	3.83	2.47
0.917	21.03	1.917	17.06	2.917	4.51	3.92	2.24
1.000	21.03	2.000	17.06	3.000	4.51	4.00	2.24

Max.Eff.Inten.(mm/hr)=		196.54	110.60	
over (min)		5.00	5.00	
Storage Coeff. (min)=		2.84 (ii)	3.70 (ii)	
Unit Hyd. Tpeak (min)=		5.00	5.00	
Unit Hyd. peak (cms)=		0.28	0.25	
				TOTALS
PEAK FLOW	(cms)=	2.79	0.02	2.807 (iii)
TIME TO PEAK	(hrs)=	1.33	1.33	1.33
RUNOFF VOLUME	(mm)=	88.87	51.22	88.49
TOTAL RAINFALL	(mm)=	89.87	89.87	89.87
RUNOFF COEFFICIENT	=	0.99	0.57	0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------------------------------------------------------------------
-------------------
| RESERVOIR(  0268)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.1959      0.1883
                         0.0980     0.0369   |   0.2939      0.4335

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0201)     5.270     2.807      1.33      88.49
   OUTFLOW: ID= 1 (  0268)     5.270     0.251      2.00      88.48

                 PEAK   FLOW   REDUCTION [Qout/Qin](%)=  8.96
                 TIME SHIFT OF PEAK FLOW         (min)= 40.00
                 MAXIMUM  STORAGE   USED       (ha.m.)=  0.3273

--------------------------------------------------------------------------------
-------------------
| CHICAGO STORM    |    IDF curve parameters: A=4688.000
| Ptotal= 89.87 mm |                          B=  17.000
-------------------                          C=   0.962
                       used in:   INTENSITY =  A / (t + B)^C

                       Duration of storm  =  4.00 hrs
                       Storm time step    = 10.00 min
                       Time to peak ratio =  0.33

               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.17    2.89 |  1.17   62.12 |  2.17   12.48 |  3.17    3.91
               0.33    3.67 |  1.33  196.54 |  2.33    9.60 |  3.33    3.44
               0.50    4.88 |  1.50   83.09 |  2.50    7.66 |  3.50    3.05
               0.67    6.96 |  1.67   41.25 |  2.67    6.29 |  3.67    2.73
               0.83   11.02 |  1.83   25.07 |  2.83    5.28 |  3.83    2.47
               1.00   21.03 |  2.00   17.06 |  3.00    4.51 |  4.00    2.24


--------------------------------------------------------------------------------
-------------------
| CALIB            |
| STANDHYD (  0202)|   Area    (ha)=   6.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
-------------------

                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.32         1.25
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     209.28        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.89 | 1.083   62.12 | 2.083   12.48 |  3.08    3.91
              0.167    2.89 | 1.167   62.12 | 2.167   12.48 |  3.17    3.91
              0.250    3.67 | 1.250  196.54 | 2.250    9.60 |  3.25    3.44
              0.333    3.67 | 1.333  196.54 | 2.333    9.60 |  3.33    3.44
              0.417    4.88 | 1.417   83.09 | 2.417    7.66 |  3.42    3.05
              0.500    4.88 | 1.500   83.09 | 2.500    7.66 |  3.50    3.05
              0.583    6.96 | 1.583   41.25 | 2.583    6.29 |  3.58    2.73
              0.667    6.96 | 1.667   41.25 | 2.667    6.29 |  3.67    2.73
              0.750   11.02 | 1.750   25.07 | 2.750    5.28 |  3.75    2.47
              0.833   11.02 | 1.833   25.07 | 2.833    5.28 |  3.83    2.47
              0.917   21.03 | 1.917   17.06 | 2.917    4.51 |  3.92    2.24
              1.000   21.03 | 2.000   17.06 | 3.000    4.51 |  4.00    2.24

     Max.Eff.Inten.(mm/hr)=     196.54       110.60
                 over (min)        5.00        10.00
     Storage Coeff.  (min)=       3.04 (ii)    6.05 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.27         0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.83         0.31          3.087 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42           1.33
     RUNOFF VOLUME    (mm)=      88.87        51.22          81.72
     TOTAL RAINFALL   (mm)=      89.87        89.87          89.87
     RUNOFF COEFFICIENT   =       0.99         0.57           0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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-------------------
| ADD HYD  (  0262)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0202):     6.57   3.087     1.33    81.72
     + ID2= 2 (  0268):     5.27   0.251     2.00    88.48
       ================================================
       ID = 3 (  0262):    11.84   3.280     1.33    84.72

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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-------------------
| ADD HYD  (  0266)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0259):     4.67   1.723     1.33    82.98
     + ID2= 2 (  0262):    11.84   3.280     1.33    84.72
       ================================================
       ID = 3 (  0266):    16.51   5.003     1.33    84.23

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
-------------------
| RESERVOIR(  0263)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.2130      0.6563
                         0.0190     0.1773   |   0.2520      0.6883
                         0.0220     0.2128   |   0.2890      0.7150
                         0.0260     0.2888   |   0.2980      0.7450
```

```
                      0.0300     0.3648   |   0.3060      0.7700
                      0.0650     0.4586   |   0.3150      0.8127
                      0.1100     0.5155   |   0.3320      0.9290
                      0.1680     0.5503   |   0.3390      0.9767
                      0.1930     0.5804   |   0.3520      1.0680
                      0.2000     0.6048   |   0.0000      0.0000

                           AREA     QPEAK     TPEAK       R.V.
                           (ha)     (cms)     (hrs)       (mm)
  INFLOW : ID= 2 (  0266)     16.510      5.003      1.33      84.23
  OUTFLOW: ID= 1 (  0263)     16.510      0.318      3.83      84.09

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.36
                TIME SHIFT OF PEAK FLOW         (min)=150.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.8335

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-------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0206):     0.12   0.021     1.58    51.17
     + ID2= 2 (  0263):    16.51   0.318     3.83    84.09
       ================================================
       ID = 3 (  0261):    16.64   0.319     3.67    83.84

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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================================================================================
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      V    V   I    SSSSS  U   U    A    L              (v 5.0.2025)
      V    V   I    SS     U   U   A A   L
       V  V    I     SS    U   U  AAAAA  L
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
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                *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\29bd5170-cfb7-467d-aabf-cbae28c2ed47\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\29bd5170-cfb7-467d-aabf-cbae28c2ed47\s


DATE: 07/06/2020                          TIME: 04:29:09

USER:
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COMMENTS: _____

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  ***********************************************
  ** SIMULATION : 2 Year Chicago                **
  ***********************************************

--------------------
| CHICAGO STORM    |    IDF curve parameters: A=1070.000
| Ptotal= 34.22 mm |                          B=   7.850
--------------------                          C=   0.876
                         used in:   INTENSITY =  A / (t + B)^C

                         Duration of storm  =  4.00 hrs
                         Storm time step    = 10.00 min
                         Time to peak ratio =  0.33

    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.17    1.53 |  1.17   19.60 |  2.17    4.48 |  3.17    1.89
    0.33    1.81 |  1.33   85.72 |  2.33    3.65 |  3.33    1.73
    0.50    2.22 |  1.50   26.59 |  2.50    3.08 |  3.50    1.59
    0.67    2.87 |  1.67   12.64 |  2.67    2.66 |  3.67    1.47
    0.83    4.06 |  1.83    7.99 |  2.83    2.34 |  3.83    1.37
    1.00    6.86 |  2.00    5.76 |  3.00    2.10 |  4.00    1.29

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    1.53 | 1.083   19.60 | 2.083    4.48 |  3.08    1.89
   0.167    1.53 | 1.167   19.60 | 2.167    4.48 |  3.17    1.89
   0.250    1.81 | 1.250   85.72 | 2.250    3.65 |  3.25    1.73
   0.333    1.81 | 1.333   85.72 | 2.333    3.65 |  3.33    1.73
   0.417    2.22 | 1.417   26.59 | 2.417    3.08 |  3.42    1.59
   0.500    2.22 | 1.500   26.59 | 2.500    3.08 |  3.50    1.59
   0.583    2.87 | 1.583   12.64 | 2.583    2.66 |  3.58    1.47
   0.667    2.87 | 1.667   12.64 | 2.667    2.66 |  3.67    1.47
   0.750    4.06 | 1.750    7.99 | 2.750    2.34 |  3.75    1.37
   0.833    4.06 | 1.833    7.99 | 2.833    2.34 |  3.83    1.37
   0.917    6.86 | 1.917    5.76 | 2.917    2.10 |  3.92    1.29
   1.000    6.86 | 2.000    5.76 | 3.000    2.10 |  4.00    1.29

    Unit Hyd Qpeak  (cms)=   0.019

    PEAK FLOW       (cms)=   0.004 (i)
    TIME TO PEAK    (hrs)=   1.583
    RUNOFF VOLUME    (mm)=  10.033
    TOTAL RAINFALL   (mm)=  34.218
    RUNOFF COEFFICIENT   =   0.293

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| CHICAGO STORM    |    IDF curve parameters: A=1070.000
| Ptotal= 34.22 mm |                          B=   7.850
--------------------                          C=   0.876
                       used in:   INTENSITY =  A / (t + B)^C

                       Duration of storm  =  4.00 hrs
                       Storm time step    = 10.00 min
                       Time to peak ratio =  0.33
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	1.53	1.17	19.60	2.17	4.48	3.17	1.89
0.33	1.81	1.33	85.72	2.33	3.65	3.33	1.73
0.50	2.22	1.50	26.59	2.50	3.08	3.50	1.59
0.67	2.87	1.67	12.64	2.67	2.66	3.67	1.47
0.83	4.06	1.83	7.99	2.83	2.34	3.83	1.37
1.00	6.86	2.00	5.76	3.00	2.10	4.00	1.29

```
| CALIB            |
| STANDHYD (  0205)|   Area    (ha)=   1.12
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.11	0.01
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	86.60	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.53	1.083	19.60	2.083	4.48	3.08	1.89
0.167	1.53	1.167	19.60	2.167	4.48	3.17	1.89
0.250	1.81	1.250	85.72	2.250	3.65	3.25	1.73
0.333	1.81	1.333	85.72	2.333	3.65	3.33	1.73
0.417	2.22	1.417	26.59	2.417	3.08	3.42	1.59
0.500	2.22	1.500	26.59	2.500	3.08	3.50	1.59
0.583	2.87	1.583	12.64	2.583	2.66	3.58	1.47
0.667	2.87	1.667	12.64	2.667	2.66	3.67	1.47
0.750	4.06	1.750	7.99	2.750	2.34	3.75	1.37
0.833	4.06	1.833	7.99	2.833	2.34	3.83	1.37
0.917	6.86	1.917	5.76	2.917	2.10	3.92	1.29
1.000	6.86	2.000	5.76	3.000	2.10	4.00	1.29

Max.Eff.Inten.(mm/hr)=		85.72	20.65	
over (min)		5.00	5.00	
Storage Coeff. (min)=		2.49 (ii)	3.69 (ii)	
Unit Hyd. Tpeak (min)=		5.00	5.00	
Unit Hyd. peak (cms)=		0.29	0.25	
				TOTALS
PEAK FLOW	(cms)=	0.26	0.00	0.262 (iii)
TIME TO PEAK	(hrs)=	1.33	1.33	1.33
RUNOFF VOLUME	(mm)=	33.22	10.05	32.98
TOTAL RAINFALL	(mm)=	34.22	34.22	34.22
RUNOFF COEFFICIENT	=	0.97	0.29	0.96

```
***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  82.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| RESERVOIR(  0256)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0470      0.0750

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0205)      1.125     0.262      1.33      32.98
   OUTFLOW: ID= 1 (  0256)      1.125     0.017      2.00      32.63

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.51
                TIME SHIFT OF PEAK FLOW         (min)= 40.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.0273

--------------------
| CHICAGO STORM    |    IDF curve parameters: A=1070.000
| Ptotal= 34.22 mm |                          B=   7.850
--------------------                          C=   0.876
                       used in:   INTENSITY =  A / (t + B)^C

                       Duration of storm  =  4.00 hrs
                       Storm time step    = 10.00 min
                       Time to peak ratio =  0.33
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	1.53	1.17	19.60	2.17	4.48	3.17	1.89
0.33	1.81	1.33	85.72	2.33	3.65	3.33	1.73
0.50	2.22	1.50	26.59	2.50	3.08	3.50	1.59
0.67	2.87	1.67	12.64	2.67	2.66	3.67	1.47
0.83	4.06	1.83	7.99	2.83	2.34	3.83	1.37
1.00	6.86	2.00	5.76	3.00	2.10	4.00	1.29

```
| CALIB            |
| STANDHYD (  0203)|   Area    (ha)=   2.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.68	0.42
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	118.18	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.53	1.083	19.60	2.083	4.48	3.08	1.89
0.167	1.53	1.167	19.60	2.167	4.48	3.17	1.89
0.250	1.81	1.250	85.72	2.250	3.65	3.25	1.73
0.333	1.81	1.333	85.72	2.333	3.65	3.33	1.73
0.417	2.22	1.417	26.59	2.417	3.08	3.42	1.59
0.500	2.22	1.500	26.59	2.500	3.08	3.50	1.59
0.583	2.87	1.583	12.64	2.583	2.66	3.58	1.47
0.667	2.87	1.667	12.64	2.667	2.66	3.67	1.47
0.750	4.06	1.750	7.99	2.750	2.34	3.75	1.37
0.833	4.06	1.833	7.99	2.833	2.34	3.83	1.37
0.917	6.86	1.917	5.76	2.917	2.10	3.92	1.29
1.000	6.86	2.000	5.76	3.000	2.10	4.00	1.29

Max.Eff.Inten.(mm/hr)=		85.72	20.65	
over (min)		5.00	10.00	
Storage Coeff. (min)=		3.00 (ii)	7.31 (ii)	
Unit Hyd. Tpeak (min)=		5.00	10.00	
Unit Hyd. peak (cms)=		0.28	0.13	
				TOTALS
PEAK FLOW	(cms)=	0.39	0.02	0.401 (iii)
TIME TO PEAK	(hrs)=	1.33	1.42	1.33
RUNOFF VOLUME	(mm)=	33.22	10.05	28.58
TOTAL RAINFALL	(mm)=	34.22	34.22	34.22
RUNOFF COEFFICIENT	=	0.97	0.29	0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0260)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (0203):	2.10	0.401	1.33	28.58
	+ ID2= 2 (0256):	1.12	0.017	2.00	32.63
	ID = 3 (0260):	3.22	0.411	1.33	30.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CHICAGO STORM	IDF curve parameters: A=1070.000
Ptotal= 34.22 mm	B= 7.850
	C= 0.876

used in: INTENSITY = A / (t + B)^C

Duration of storm = 4.00 hrs
Storm time step = 10.00 min
Time to peak ratio = 0.33

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	1.53	1.17	19.60	2.17	4.48	3.17	1.89
0.33	1.81	1.33	85.72	2.33	3.65	3.33	1.73
0.50	2.22	1.50	26.59	2.50	3.08	3.50	1.59
0.67	2.87	1.67	12.64	2.67	2.66	3.67	1.47
0.83	4.06	1.83	7.99	2.83	2.34	3.83	1.37
1.00	6.86	2.00	5.76	3.00	2.10	4.00	1.29

CALIB	
STANDHYD (0204)	Area (ha)= 1.45
ID= 1 DT= 5.0 min	Total Imp(%)= 80.00 Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.16	0.29
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	98.32	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.53	1.083	19.60	2.083	4.48	3.08	1.89
0.167	1.53	1.167	19.60	2.167	4.48	3.17	1.89
0.250	1.81	1.250	85.72	2.250	3.65	3.25	1.73
0.333	1.81	1.333	85.72	2.333	3.65	3.33	1.73
0.417	2.22	1.417	26.59	2.417	3.08	3.42	1.59
0.500	2.22	1.500	26.59	2.500	3.08	3.50	1.59
0.583	2.87	1.583	12.64	2.583	2.66	3.58	1.47
0.667	2.87	1.667	12.64	2.667	2.66	3.67	1.47
0.750	4.06	1.750	7.99	2.750	2.34	3.75	1.37
0.833	4.06	1.833	7.99	2.833	2.34	3.83	1.37
0.917	6.86	1.917	5.76	2.917	2.10	3.92	1.29
1.000	6.86	2.000	5.76	3.000	2.10	4.00	1.29

Max.Eff.Inten.(mm/hr)=		85.72	20.65	
over (min)		5.00	10.00	
Storage Coeff. (min)=		2.69 (ii)	7.00 (ii)	
Unit Hyd. Tpeak (min)=		5.00	10.00	
Unit Hyd. peak (cms)=		0.29	0.14	
				TOTALS
PEAK FLOW	(cms)=	0.27	0.01	0.280 (iii)
TIME TO PEAK	(hrs)=	1.33	1.42	1.33
RUNOFF VOLUME	(mm)=	33.22	10.05	28.58
TOTAL RAINFALL	(mm)=	34.22	34.22	34.22
RUNOFF COEFFICIENT	=	0.97	0.29	0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0259)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3					

```
       ID1= 1 (  0204):     1.45   0.280     1.33    28.58
     + ID2= 2 (  0260):     3.22   0.411     1.33    30.00
       ================================================
       ID = 3 (  0259):     4.67   0.691     1.33    29.56

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CHICAGO STORM    |    IDF curve parameters: A=1070.000
| Ptotal= 34.22 mm |                          B=   7.850
--------------------                          C=   0.876
                       used in:   INTENSITY =  A / (t + B)^C

                       Duration of storm  =  4.00 hrs
                       Storm time step    = 10.00 min
                       Time to peak ratio =  0.33

                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.17    1.53 |  1.17   19.60 |  2.17    4.48 |  3.17    1.89
                0.33    1.81 |  1.33   85.72 |  2.33    3.65 |  3.33    1.73
                0.50    2.22 |  1.50   26.59 |  2.50    3.08 |  3.50    1.59
                0.67    2.87 |  1.67   12.64 |  2.67    2.66 |  3.67    1.47
                0.83    4.06 |  1.83    7.99 |  2.83    2.34 |  3.83    1.37
                1.00    6.86 |  2.00    5.76 |  3.00    2.10 |  4.00    1.29



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0201)|   Area    (ha)=   5.27
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.22         0.05
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     187.44        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    1.53 | 1.083   19.60 | 2.083    4.48 |  3.08    1.89
               0.167    1.53 | 1.167   19.60 | 2.167    4.48 |  3.17    1.89
               0.250    1.81 | 1.250   85.72 | 2.250    3.65 |  3.25    1.73
               0.333    1.81 | 1.333   85.72 | 2.333    3.65 |  3.33    1.73
               0.417    2.22 | 1.417   26.59 | 2.417    3.08 |  3.42    1.59
               0.500    2.22 | 1.500   26.59 | 2.500    3.08 |  3.50    1.59
               0.583    2.87 | 1.583   12.64 | 2.583    2.66 |  3.58    1.47
               0.667    2.87 | 1.667   12.64 | 2.667    2.66 |  3.67    1.47
               0.750    4.06 | 1.750    7.99 | 2.750    2.34 |  3.75    1.37
               0.833    4.06 | 1.833    7.99 | 2.833    2.34 |  3.83    1.37
               0.917    6.86 | 1.917    5.76 | 2.917    2.10 |  3.92    1.29
               1.000    6.86 | 2.000    5.76 | 3.000    2.10 |  4.00    1.29

     Max.Eff.Inten.(mm/hr)=      85.72        20.65
               over (min)        5.00        10.00
     Storage Coeff.  (min)=      3.96 (ii)    5.16 (ii)
     Unit Hyd. Tpeak (min)=      5.00        10.00
     Unit Hyd. peak  (cms)=      0.24         0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=      1.16         0.00          1.166 (iii)
     TIME TO PEAK    (hrs)=      1.33         1.42           1.33
     RUNOFF VOLUME    (mm)=     33.22        10.05          32.99
     TOTAL RAINFALL   (mm)=     34.22        34.22          34.22
     RUNOFF COEFFICIENT   =      0.97         0.29           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0268)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1959     0.1883
                          0.0980     0.0369   |   0.2939     0.4335

                                    AREA     QPEAK     TPEAK       R.V.
                                    (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (  0201)      5.270     1.166      1.33      32.99
     OUTFLOW: ID= 1 (  0268)      5.270     0.144      1.75      32.97

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 12.36
                    TIME SHIFT OF PEAK FLOW         (min)= 25.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.1084

--------------------------------------------------------------------------------
--------------------
| CHICAGO STORM    |    IDF curve parameters: A=1070.000
| Ptotal= 34.22 mm |                          B=   7.850
--------------------                          C=   0.876
                       used in:   INTENSITY =  A / (t + B)^C

                       Duration of storm  =  4.00 hrs
                       Storm time step    = 10.00 min
                       Time to peak ratio =  0.33

                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.17    1.53 |  1.17   19.60 |  2.17    4.48 |  3.17    1.89
                0.33    1.81 |  1.33   85.72 |  2.33    3.65 |  3.33    1.73
                0.50    2.22 |  1.50   26.59 |  2.50    3.08 |  3.50    1.59
                0.67    2.87 |  1.67   12.64 |  2.67    2.66 |  3.67    1.47
                0.83    4.06 |  1.83    7.99 |  2.83    2.34 |  3.83    1.37
                1.00    6.86 |  2.00    5.76 |  3.00    2.10 |  4.00    1.29



--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0202)|   Area    (ha)=   6.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.32         1.25
     Dep. Storage     (mm)=       1.00         5.00
```

```
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     209.28        40.00
     Mannings n            =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    1.53 | 1.083   19.60 | 2.083    4.48 |  3.08    1.89
              0.167    1.53 | 1.167   19.60 | 2.167    4.48 |  3.17    1.89
              0.250    1.81 | 1.250   85.72 | 2.250    3.65 |  3.25    1.73
              0.333    1.81 | 1.333   85.72 | 2.333    3.65 |  3.33    1.73
              0.417    2.22 | 1.417   26.59 | 2.417    3.08 |  3.42    1.59
              0.500    2.22 | 1.500   26.59 | 2.500    3.08 |  3.50    1.59
              0.583    2.87 | 1.583   12.64 | 2.583    2.66 |  3.58    1.47
              0.667    2.87 | 1.667   12.64 | 2.667    2.66 |  3.67    1.47
              0.750    4.06 | 1.750    7.99 | 2.750    2.34 |  3.75    1.37
              0.833    4.06 | 1.833    7.99 | 2.833    2.34 |  3.83    1.37
              0.917    6.86 | 1.917    5.76 | 2.917    2.10 |  3.92    1.29
              1.000    6.86 | 2.000    5.76 | 3.000    2.10 |  4.00    1.29

     Max.Eff.Inten.(mm/hr)=      85.72        20.65
               over (min)        5.00        10.00
     Storage Coeff.  (min)=      4.23 (ii)    8.43 (ii)
     Unit Hyd. Tpeak (min)=      5.00        10.00
     Unit Hyd. peak  (cms)=      0.24         0.12
                                                      *TOTALS*
     PEAK FLOW       (cms)=      1.17         0.05       1.208 (iii)
     TIME TO PEAK    (hrs)=      1.33         1.42        1.33
     RUNOFF VOLUME    (mm)=     33.22        10.05       28.81
     TOTAL RAINFALL   (mm)=     34.22        34.22       34.22
     RUNOFF COEFFICIENT   =      0.97         0.29        0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0262)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0202):     6.57   1.208     1.33    28.81
     + ID2= 2 (  0268):     5.27   0.144     1.75    32.97
       ================================================
       ID = 3 (  0262):    11.84   1.324     1.33    30.66

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0266)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0259):     4.67   0.691     1.33    29.56
     + ID2= 2 (  0262):    11.84   1.324     1.33    30.66
       ================================================
       ID = 3 (  0266):    16.51   2.015     1.33    30.35

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| RESERVOIR(  0263)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.2130      0.6563
                          0.0190     0.1773   |   0.2520      0.6883
                          0.0220     0.2128   |   0.2890      0.7150
                          0.0260     0.2888   |   0.2980      0.7450
                          0.0300     0.3648   |   0.3060      0.7700
                          0.0650     0.4586   |   0.3150      0.8127
                          0.1100     0.5155   |   0.3320      0.9290
                          0.1680     0.5503   |   0.3390      0.9767
                          0.1930     0.5804   |   0.3520      1.0680
                          0.2000     0.6048   |   0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0266)     16.510     2.015      1.33      30.35
   OUTFLOW: ID= 1 (  0263)     16.510     0.051      5.08      30.21

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  2.52
                  TIME SHIFT OF PEAK FLOW         (min)=225.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.4203

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0206):     0.12   0.004     1.58    10.03
     + ID2= 2 (  0263):    16.51   0.051     5.08    30.21
       ================================================
       ID = 3 (  0261):    16.64   0.051     5.08    30.06

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
================================================================================
============================

      V    V   I    SSSSS  U   U    A    L              (v 5.0.2025)
      V    V   I    SS     U   U   A A   L
       V  V    I     SS    U   U  AAAAA  L
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****
```

```
  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\d0e94bad-d0c1-4b0d-a3e4-fac57b58e0c0\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\d0e94bad-d0c1-4b0d-a3e4-fac57b58e0c0\s

DATE: 07/06/2020                          TIME: 04:29:09

USER:


COMMENTS: _____________________________________________________________
```

```
  ************************************************
  ** SIMULATION : 25 Year Chicago               **
  ************************************************

--------------------
| CHICAGO STORM    |    IDF curve parameters: A=3158.000
| Ptotal= 71.59 mm |                          B=  15.000
--------------------                          C=   0.933
                       used in:   INTENSITY =  A / (t + B)^C

                       Duration of storm  =  4.00 hrs
                       Storm time step    = 10.00 min
                       Time to peak ratio =  0.33
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	2.68	1.17	47.76	2.17	10.11	3.17	3.51
0.33	3.31	1.33	156.47	2.33	7.92	3.33	3.13
0.50	4.28	1.50	63.86	2.50	6.44	3.50	2.81
0.67	5.90	1.67	31.72	2.67	5.38	3.67	2.55
0.83	9.00	1.83	19.56	2.83	4.59	3.83	2.33
1.00	16.53	2.00	13.56	3.00	3.99	4.00	2.15

```
--------------------
| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.68	1.083	47.76	2.083	10.11	3.08	3.51
0.167	2.68	1.167	47.76	2.167	10.11	3.17	3.51
0.250	3.31	1.250	156.47	2.250	7.92	3.25	3.13
0.333	3.31	1.333	156.47	2.333	7.92	3.33	3.13
0.417	4.28	1.417	63.86	2.417	6.44	3.42	2.81
0.500	4.28	1.500	63.86	2.500	6.44	3.50	2.81
0.583	5.90	1.583	31.72	2.583	5.38	3.58	2.55
0.667	5.90	1.667	31.72	2.667	5.38	3.67	2.55
0.750	9.00	1.750	19.56	2.750	4.59	3.75	2.33
0.833	9.00	1.833	19.56	2.833	4.59	3.83	2.33
0.917	16.53	1.917	13.56	2.917	3.99	3.92	2.15
1.000	16.53	2.000	13.56	3.000	3.99	4.00	2.15

```
     Unit Hyd Qpeak  (cms)=   0.019

     PEAK FLOW       (cms)=   0.014 (i)
     TIME TO PEAK    (hrs)=   1.583
     RUNOFF VOLUME    (mm)=  36.209
     TOTAL RAINFALL   (mm)=  71.589
     RUNOFF COEFFICIENT   =   0.506

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
--------------------
| CHICAGO STORM    |    IDF curve parameters: A=3158.000
| Ptotal= 71.59 mm |                          B=  15.000
--------------------                          C=   0.933
                       used in:   INTENSITY =  A / (t + B)^C

                       Duration of storm  =  4.00 hrs
                       Storm time step    = 10.00 min
                       Time to peak ratio =  0.33
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	2.68	1.17	47.76	2.17	10.11	3.17	3.51
0.33	3.31	1.33	156.47	2.33	7.92	3.33	3.13
0.50	4.28	1.50	63.86	2.50	6.44	3.50	2.81
0.67	5.90	1.67	31.72	2.67	5.38	3.67	2.55
0.83	9.00	1.83	19.56	2.83	4.59	3.83	2.33
1.00	16.53	2.00	13.56	3.00	3.99	4.00	2.15

```
--------------------
| CALIB            |
| STANDHYD (  0205)|   Area    (ha)=   1.12
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------

                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.11         0.01
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      86.60        40.00
     Mannings n             =     0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.68	1.083	47.76	2.083	10.11	3.08	3.51
0.167	2.68	1.167	47.76	2.167	10.11	3.17	3.51
0.250	3.31	1.250	156.47	2.250	7.92	3.25	3.13
0.333	3.31	1.333	156.47	2.333	7.92	3.33	3.13
0.417	4.28	1.417	63.86	2.417	6.44	3.42	2.81
0.500	4.28	1.500	63.86	2.500	6.44	3.50	2.81
0.583	5.90	1.583	31.72	2.583	5.38	3.58	2.55
0.667	5.90	1.667	31.72	2.667	5.38	3.67	2.55

	0.750	9.00	1.750	19.56	2.750	4.59	3.75	2.33
	0.833	9.00	1.833	19.56	2.833	4.59	3.83	2.33
	0.917	16.53	1.917	13.56	2.917	3.99	3.92	2.15
	1.000	16.53	2.000	13.56	3.000	3.99	4.00	2.15

Max.Eff.Inten.(mm/hr)=	156.47	75.73		
over (min)	5.00	5.00		
Storage Coeff. (min)=	1.96 (ii)	2.90 (ii)		
Unit Hyd. Tpeak (min)=	5.00	5.00		
Unit Hyd. peak (cms)=	0.31	0.28		
			TOTALS	
PEAK FLOW (cms)=	0.48	0.00	0.485 (iii)	
TIME TO PEAK (hrs)=	1.33	1.33	1.33	
RUNOFF VOLUME (mm)=	70.59	36.24	70.24	
TOTAL RAINFALL (mm)=	71.59	71.59	71.59	
RUNOFF COEFFICIENT =	0.99	0.51	0.98	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0256)				
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0470	0.0750

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0205)	1.125	0.485	1.33	70.24
OUTFLOW: ID= 1 (0256)	1.125	0.037	2.08	69.89

PEAK FLOW REDUCTION [Qout/Qin](%)= 7.58
TIME SHIFT OF PEAK FLOW (min)= 45.00
MAXIMUM STORAGE USED (ha.m.)= 0.0587

CHICAGO STORM	IDF curve parameters: A=3158.000
Ptotal= 71.59 mm	B= 15.000
	C= 0.933

used in: INTENSITY = A / (t + B)^C

Duration of storm = 4.00 hrs
Storm time step = 10.00 min
Time to peak ratio = 0.33

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	2.68	1.17	47.76	2.17	10.11	3.17	3.51
0.33	3.31	1.33	156.47	2.33	7.92	3.33	3.13
0.50	4.28	1.50	63.86	2.50	6.44	3.50	2.81
0.67	5.90	1.67	31.72	2.67	5.38	3.67	2.55
0.83	9.00	1.83	19.56	2.83	4.59	3.83	2.33
1.00	16.53	2.00	13.56	3.00	3.99	4.00	2.15

CALIB	
STANDHYD (0203)	Area (ha)= 2.10
ID= 1 DT= 5.0 min	Total Imp(%)= 80.00 Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.68	0.42
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	118.18	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.68	1.083	47.76	2.083	10.11	3.08	3.51
0.167	2.68	1.167	47.76	2.167	10.11	3.17	3.51
0.250	3.31	1.250	156.47	2.250	7.92	3.25	3.13
0.333	3.31	1.333	156.47	2.333	7.92	3.33	3.13
0.417	4.28	1.417	63.86	2.417	6.44	3.42	2.81
0.500	4.28	1.500	63.86	2.500	6.44	3.50	2.81
0.583	5.90	1.583	31.72	2.583	5.38	3.58	2.55
0.667	5.90	1.667	31.72	2.667	5.38	3.67	2.55
0.750	9.00	1.750	19.56	2.750	4.59	3.75	2.33
0.833	9.00	1.833	19.56	2.833	4.59	3.83	2.33
0.917	16.53	1.917	13.56	2.917	3.99	3.92	2.15
1.000	16.53	2.000	13.56	3.000	3.99	4.00	2.15

Max.Eff.Inten.(mm/hr)=	156.47	75.73		
over (min)	5.00	10.00		
Storage Coeff. (min)=	2.36 (ii)	5.75 (ii)		
Unit Hyd. Tpeak (min)=	5.00	10.00		
Unit Hyd. peak (cms)=	0.30	0.15		
			TOTALS	
PEAK FLOW (cms)=	0.72	0.07	0.780 (iii)	
TIME TO PEAK (hrs)=	1.33	1.42	1.33	
RUNOFF VOLUME (mm)=	70.59	36.24	63.72	
TOTAL RAINFALL (mm)=	71.59	71.59	71.59	
RUNOFF COEFFICIENT =	0.99	0.51	0.89	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0260)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
	ID1= 1 (0203):	2.10	0.780	1.33	63.72
	+ ID2= 2 (0256):	1.12	0.037	2.08	69.89
	ID = 3 (0260):	3.22	0.802	1.33	65.88

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| CHICAGO STORM    |    IDF curve parameters: A=3158.000
| Ptotal= 71.59 mm |                          B=  15.000
                                              C=   0.933
                     used in:   INTENSITY =  A / (t + B)^C

                     Duration of storm  =  4.00 hrs
                     Storm time step    = 10.00 min
                     Time to peak ratio =  0.33
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	2.68	1.17	47.76	2.17	10.11	3.17	3.51
0.33	3.31	1.33	156.47	2.33	7.92	3.33	3.13
0.50	4.28	1.50	63.86	2.50	6.44	3.50	2.81
0.67	5.90	1.67	31.72	2.67	5.38	3.67	2.55
0.83	9.00	1.83	19.56	2.83	4.59	3.83	2.33
1.00	16.53	2.00	13.56	3.00	3.99	4.00	2.15

```
| CALIB            |
| STANDHYD (  0204)|   Area    (ha)=   1.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.16	0.29
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	98.32	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.68	1.083	47.76	2.083	10.11	3.08	3.51
0.167	2.68	1.167	47.76	2.167	10.11	3.17	3.51
0.250	3.31	1.250	156.47	2.250	7.92	3.25	3.13
0.333	3.31	1.333	156.47	2.333	7.92	3.33	3.13
0.417	4.28	1.417	63.86	2.417	6.44	3.42	2.81
0.500	4.28	1.500	63.86	2.500	6.44	3.50	2.81
0.583	5.90	1.583	31.72	2.583	5.38	3.58	2.55
0.667	5.90	1.667	31.72	2.667	5.38	3.67	2.55
0.750	9.00	1.750	19.56	2.750	4.59	3.75	2.33
0.833	9.00	1.833	19.56	2.833	4.59	3.83	2.33
0.917	16.53	1.917	13.56	2.917	3.99	3.92	2.15
1.000	16.53	2.000	13.56	3.000	3.99	4.00	2.15

Max.Eff.Inten.(mm/hr)	=	156.47	75.73	
over (min)		5.00	10.00	
Storage Coeff. (min)	=	2.11 (ii)	5.50 (ii)	
Unit Hyd. Tpeak (min)	=	5.00	10.00	
Unit Hyd. peak (cms)	=	0.31	0.16	
				TOTALS
PEAK FLOW	(cms)=	0.50	0.05	0.543 (iii)
TIME TO PEAK	(hrs)=	1.33	1.42	1.33
RUNOFF VOLUME	(mm)=	70.59	36.24	63.72
TOTAL RAINFALL	(mm)=	71.59	71.59	71.59
RUNOFF COEFFICIENT	=	0.99	0.51	0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
| ADD HYD  (  0259)|
|   1 +  2 =  3    |
```

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0204):		1.45	0.543	1.33	63.72
+ ID2= 2 (0260):		3.22	0.802	1.33	65.88
ID = 3 (0259):		4.67	1.345	1.33	65.21

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| CHICAGO STORM    |    IDF curve parameters: A=3158.000
| Ptotal= 71.59 mm |                          B=  15.000
                                              C=   0.933
                     used in:   INTENSITY =  A / (t + B)^C

                     Duration of storm  =  4.00 hrs
                     Storm time step    = 10.00 min
                     Time to peak ratio =  0.33
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	2.68	1.17	47.76	2.17	10.11	3.17	3.51
0.33	3.31	1.33	156.47	2.33	7.92	3.33	3.13
0.50	4.28	1.50	63.86	2.50	6.44	3.50	2.81
0.67	5.90	1.67	31.72	2.67	5.38	3.67	2.55
0.83	9.00	1.83	19.56	2.83	4.59	3.83	2.33
1.00	16.53	2.00	13.56	3.00	3.99	4.00	2.15

```
| CALIB            |
| STANDHYD (  0201)|   Area    (ha)=   5.27
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.22	0.05
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	187.44	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.68	1.083	47.76	2.083	10.11	3.08	3.51
0.167	2.68	1.167	47.76	2.167	10.11	3.17	3.51

```
              0.250    3.31 | 1.250  156.47 | 2.250    7.92 |  3.25    3.13
              0.333    3.31 | 1.333  156.47 | 2.333    7.92 |  3.33    3.13
              0.417    4.28 | 1.417   63.86 | 2.417    6.44 |  3.42    2.81
              0.500    4.28 | 1.500   63.86 | 2.500    6.44 |  3.50    2.81
              0.583    5.90 | 1.583   31.72 | 2.583    5.38 |  3.58    2.55
              0.667    5.90 | 1.667   31.72 | 2.667    5.38 |  3.67    2.55
              0.750    9.00 | 1.750   19.56 | 2.750    4.59 |  3.75    2.33
              0.833    9.00 | 1.833   19.56 | 2.833    4.59 |  3.83    2.33
              0.917   16.53 | 1.917   13.56 | 2.917    3.99 |  3.92    2.15
              1.000   16.53 | 2.000   13.56 | 3.000    3.99 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=     156.47        75.73
               over (min)        5.00         5.00
     Storage Coeff.  (min)=      3.11 (ii)    4.05 (ii)
     Unit Hyd. Tpeak (min)=      5.00         5.00
     Unit Hyd. peak  (cms)=      0.27         0.24
                                                      *TOTALS*
     PEAK FLOW       (cms)=      2.20         0.01       2.215 (iii)
     TIME TO PEAK    (hrs)=      1.33         1.33        1.33
     RUNOFF VOLUME    (mm)=     70.59        36.24       70.25
     TOTAL RAINFALL   (mm)=     71.59        71.59       71.59
     RUNOFF COEFFICIENT   =      0.99         0.51        0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0268)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1959      0.1883
                          0.0980     0.0369   |   0.2939      0.4335

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0201)      5.270      2.215      1.33      70.25
   OUTFLOW: ID= 1 (  0268)      5.270      0.220      1.92      70.23

                 PEAK   FLOW   REDUCTION [Qout/Qin](%)=  9.96
                 TIME SHIFT OF PEAK FLOW         (min)= 35.00
                 MAXIMUM  STORAGE   USED       (ha.m.)=  0.2498

--------------------------------------------------------------------------------
--------------------
| CHICAGO STORM    |    IDF curve parameters: A=3158.000
| Ptotal= 71.59 mm |                          B=  15.000
--------------------                          C=   0.933
                         used in:   INTENSITY =  A / (t + B)^C

                         Duration of storm  =  4.00 hrs
                         Storm time step    = 10.00 min
                         Time to peak ratio =  0.33

               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.17    2.68 |  1.17   47.76 |  2.17   10.11 |  3.17    3.51
               0.33    3.31 |  1.33  156.47 |  2.33    7.92 |  3.33    3.13
               0.50    4.28 |  1.50   63.86 |  2.50    6.44 |  3.50    2.81
               0.67    5.90 |  1.67   31.72 |  2.67    5.38 |  3.67    2.55
               0.83    9.00 |  1.83   19.56 |  2.83    4.59 |  3.83    2.33
               1.00   16.53 |  2.00   13.56 |  3.00    3.99 |  4.00    2.15

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0202)|   Area    (ha)=   6.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.32         1.25
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     209.28        40.00
     Mannings n            =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    2.68 | 1.083   47.76 | 2.083   10.11 |  3.08    3.51
               0.167    2.68 | 1.167   47.76 | 2.167   10.11 |  3.17    3.51
               0.250    3.31 | 1.250  156.47 | 2.250    7.92 |  3.25    3.13
               0.333    3.31 | 1.333  156.47 | 2.333    7.92 |  3.33    3.13
               0.417    4.28 | 1.417   63.86 | 2.417    6.44 |  3.42    2.81
               0.500    4.28 | 1.500   63.86 | 2.500    6.44 |  3.50    2.81
               0.583    5.90 | 1.583   31.72 | 2.583    5.38 |  3.58    2.55
               0.667    5.90 | 1.667   31.72 | 2.667    5.38 |  3.67    2.55
               0.750    9.00 | 1.750   19.56 | 2.750    4.59 |  3.75    2.33
               0.833    9.00 | 1.833   19.56 | 2.833    4.59 |  3.83    2.33
               0.917   16.53 | 1.917   13.56 | 2.917    3.99 |  3.92    2.15
               1.000   16.53 | 2.000   13.56 | 3.000    3.99 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=     156.47        75.73
               over (min)        5.00        10.00
     Storage Coeff.  (min)=      3.33 (ii)    6.63 (ii)
     Unit Hyd. Tpeak (min)=      5.00        10.00
     Unit Hyd. peak  (cms)=      0.26         0.14
                                                      *TOTALS*
     PEAK FLOW       (cms)=      2.23         0.21       2.397 (iii)
     TIME TO PEAK    (hrs)=      1.33         1.42        1.33
     RUNOFF VOLUME    (mm)=     70.59        36.24       64.06
     TOTAL RAINFALL   (mm)=     71.59        71.59       71.59
     RUNOFF COEFFICIENT   =      0.99         0.51        0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0262)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
```

```
       ID1= 1 (  0202):     6.57   2.397     1.33    64.06
     + ID2= 2 (  0268):     5.27   0.220     1.92    70.23
       ================================================
       ID = 3 (  0262):    11.84   2.563     1.33    66.81

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0266)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0259):     4.67   1.345     1.33    65.21
     + ID2= 2 (  0262):    11.84   2.563     1.33    66.81
       ================================================
       ID = 3 (  0266):    16.51   3.908     1.33    66.35

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0263)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.2130      0.6563
                         0.0190     0.1773   |   0.2520      0.6883
                         0.0220     0.2128   |   0.2890      0.7150
                         0.0260     0.2888   |   0.2980      0.7450
                         0.0300     0.3648   |   0.3060      0.7700
                         0.0650     0.4586   |   0.3150      0.8127
                         0.1100     0.5155   |   0.3320      0.9290
                         0.1680     0.5503   |   0.3390      0.9767
                         0.1930     0.5804   |   0.3520      1.0680
                         0.2000     0.6048   |   0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0266)    16.510     3.908      1.33      66.35
   OUTFLOW: ID= 1 (  0263)    16.510     0.260      4.00      66.21

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.66
                  TIME SHIFT OF PEAK FLOW         (min)=160.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.6942

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0206):     0.12   0.014     1.58    36.21
     + ID2= 2 (  0263):    16.51   0.260     4.00    66.21
       ================================================
       ID = 3 (  0261):    16.64   0.261     4.00    65.98

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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 FINISH
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       V    V   I    SSSSS  U   U    A    L              (v 5.0.2025)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****

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DATE: 07/06/2020                          TIME: 04:29:09

USER:



COMMENTS: _____

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  ********************************************
  ** SIMULATION : 5 Year Chicago              **
  ********************************************

--------------------
| CHICAGO STORM    |    IDF curve parameters: A=1593.000
| Ptotal= 49.55 mm |                          B=  11.000
--------------------                          C=   0.879
                        used in:   INTENSITY =  A / (t + B)^C

                        Duration of storm  =  4.00 hrs
                        Storm time step    = 10.00 min
                        Time to peak ratio =  0.33

                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.17    2.35 |  1.17   30.47 |  2.17    7.17 |  3.17    2.93
                0.33    2.80 |  1.33  109.68 |  2.33    5.81 |  3.33    2.67
                0.50    3.46 |  1.50   40.71 |  2.50    4.87 |  3.50    2.45
                0.67    4.52 |  1.67   20.28 |  2.67    4.19 |  3.67    2.26
                0.83    6.48 |  1.83   12.91 |  2.83    3.67 |  3.83    2.10
                1.00   11.07 |  2.00    9.28 |  3.00    3.26 |  4.00    1.96
```

```
| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
                     U.H. Tp(hrs)=   0.25
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.35	1.083	30.47	2.083	7.17	3.08	2.93
0.167	2.35	1.167	30.47	2.167	7.17	3.17	2.93
0.250	2.80	1.250	109.68	2.250	5.81	3.25	2.67
0.333	2.80	1.333	109.68	2.333	5.81	3.33	2.67
0.417	3.46	1.417	40.71	2.417	4.87	3.42	2.45
0.500	3.46	1.500	40.71	2.500	4.87	3.50	2.45
0.583	4.52	1.583	20.28	2.583	4.19	3.58	2.26
0.667	4.52	1.667	20.28	2.667	4.19	3.67	2.26
0.750	6.48	1.750	12.91	2.750	3.67	3.75	2.10
0.833	6.48	1.833	12.91	2.833	3.67	3.83	2.10
0.917	11.07	1.917	9.28	2.917	3.26	3.92	1.96
1.000	11.07	2.000	9.28	3.000	3.26	4.00	1.96

```
Unit Hyd Qpeak  (cms)=   0.019

PEAK FLOW       (cms)=   0.007 (i)
TIME TO PEAK    (hrs)=   1.583
RUNOFF VOLUME    (mm)=  19.767
TOTAL RAINFALL   (mm)=  49.553
RUNOFF COEFFICIENT   =   0.399

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| CHICAGO STORM    |    IDF curve parameters: A=1593.000
| Ptotal= 49.55 mm |                          B=  11.000
                     used in:   INTENSITY =  A / (t + B)^C
                                C=   0.879
                     Duration of storm  =  4.00 hrs
                     Storm time step    = 10.00 min
                     Time to peak ratio =  0.33
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	2.35	1.17	30.47	2.17	7.17	3.17	2.93
0.33	2.80	1.33	109.68	2.33	5.81	3.33	2.67
0.50	3.46	1.50	40.71	2.50	4.87	3.50	2.45
0.67	4.52	1.67	20.28	2.67	4.19	3.67	2.26
0.83	6.48	1.83	12.91	2.83	3.67	3.83	2.10
1.00	11.07	2.00	9.28	3.00	3.26	4.00	1.96

```
| CALIB            |
| STANDHYD (  0205)|   Area    (ha)=   1.12
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
                              IMPERVIOUS    PERVIOUS (i)
Surface Area     (ha)=       1.11         0.01
Dep. Storage     (mm)=       1.00         5.00
Average Slope     (%)=       1.00         2.00
Length            (m)=      86.60        40.00
Mannings n           =      0.013        0.250
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.35	1.083	30.47	2.083	7.17	3.08	2.93
0.167	2.35	1.167	30.47	2.167	7.17	3.17	2.93
0.250	2.80	1.250	109.68	2.250	5.81	3.25	2.67
0.333	2.80	1.333	109.68	2.333	5.81	3.33	2.67
0.417	3.46	1.417	40.71	2.417	4.87	3.42	2.45
0.500	3.46	1.500	40.71	2.500	4.87	3.50	2.45
0.583	4.52	1.583	20.28	2.583	4.19	3.58	2.26
0.667	4.52	1.667	20.28	2.667	4.19	3.67	2.26
0.750	6.48	1.750	12.91	2.750	3.67	3.75	2.10
0.833	6.48	1.833	12.91	2.833	3.67	3.83	2.10
0.917	11.07	1.917	9.28	2.917	3.26	3.92	1.96
1.000	11.07	2.000	9.28	3.000	3.26	4.00	1.96

```
Max.Eff.Inten.(mm/hr)=     109.68        39.07
          over (min)         5.00         5.00
Storage Coeff.  (min)=       2.26 (ii)    3.34 (ii)
Unit Hyd. Tpeak (min)=       5.00         5.00
Unit Hyd. peak  (cms)=       0.30         0.26
                                                  *TOTALS*
PEAK FLOW       (cms)=       0.34         0.00       0.338 (iii)
TIME TO PEAK    (hrs)=       1.33         1.33        1.33
RUNOFF VOLUME    (mm)=      48.55        19.79       48.26
TOTAL RAINFALL   (mm)=      49.55        49.55       49.55
RUNOFF COEFFICIENT   =       0.98         0.40        0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  82.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| RESERVOIR(  0256)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
                         (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0470     0.0750

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0205)     1.125      0.338      1.33      48.26
   OUTFLOW: ID= 1 (  0256)     1.125      0.025      2.08      47.91

          PEAK   FLOW   REDUCTION [Qout/Qin](%)=  7.31
          TIME SHIFT OF PEAK FLOW         (min)= 45.00
          MAXIMUM  STORAGE   USED       (ha.m.)=  0.0394
```

```
| CHICAGO STORM    |    IDF curve parameters: A=1593.000
| Ptotal= 49.55 mm |                          B=  11.000
--------------------                          C=   0.879
                       used in:   INTENSITY =  A / (t + B)^C

                       Duration of storm  =  4.00 hrs
                       Storm time step    = 10.00 min
                       Time to peak ratio =  0.33
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	2.35	1.17	30.47	2.17	7.17	3.17	2.93
0.33	2.80	1.33	109.68	2.33	5.81	3.33	2.67
0.50	3.46	1.50	40.71	2.50	4.87	3.50	2.45
0.67	4.52	1.67	20.28	2.67	4.19	3.67	2.26
0.83	6.48	1.83	12.91	2.83	3.67	3.83	2.10
1.00	11.07	2.00	9.28	3.00	3.26	4.00	1.96

```
--------------------
| CALIB            |
| STANDHYD (  0203)|   Area    (ha)=   2.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.68	0.42
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	118.18	40.00
Mannings n	=	0.013	0.250

```
    NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.35	1.083	30.47	2.083	7.17	3.08	2.93
0.167	2.35	1.167	30.47	2.167	7.17	3.17	2.93
0.250	2.80	1.250	109.68	2.250	5.81	3.25	2.67
0.333	2.80	1.333	109.68	2.333	5.81	3.33	2.67
0.417	3.46	1.417	40.71	2.417	4.87	3.42	2.45
0.500	3.46	1.500	40.71	2.500	4.87	3.50	2.45
0.583	4.52	1.583	20.28	2.583	4.19	3.58	2.26
0.667	4.52	1.667	20.28	2.667	4.19	3.67	2.26
0.750	6.48	1.750	12.91	2.750	3.67	3.75	2.10
0.833	6.48	1.833	12.91	2.833	3.67	3.83	2.10
0.917	11.07	1.917	9.28	2.917	3.26	3.92	1.96
1.000	11.07	2.000	9.28	3.000	3.26	4.00	1.96

Max.Eff.Inten.(mm/hr)=		109.68	39.07	
over (min)		5.00	10.00	
Storage Coeff. (min)=		2.72 (ii)	6.63 (ii)	
Unit Hyd. Tpeak (min)=		5.00	10.00	
Unit Hyd. peak (cms)=		0.29	0.14	
				TOTALS
PEAK FLOW	(cms)=	0.50	0.04	0.529 (iii)
TIME TO PEAK	(hrs)=	1.33	1.42	1.33
RUNOFF VOLUME	(mm)=	48.55	19.79	42.80
TOTAL RAINFALL	(mm)=	49.55	49.55	49.55
RUNOFF COEFFICIENT	=	0.98	0.40	0.86

```
***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  82.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| ADD HYD  (  0260)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0203):     2.10   0.529     1.33    42.80
     + ID2= 2 (  0256):     1.12   0.025     2.08    47.91
       ==========================================================
       ID = 3 (  0260):     3.22   0.543     1.33    44.58

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------
| CHICAGO STORM    |    IDF curve parameters: A=1593.000
| Ptotal= 49.55 mm |                          B=  11.000
--------------------                          C=   0.879
                       used in:   INTENSITY =  A / (t + B)^C

                       Duration of storm  =  4.00 hrs
                       Storm time step    = 10.00 min
                       Time to peak ratio =  0.33
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	2.35	1.17	30.47	2.17	7.17	3.17	2.93
0.33	2.80	1.33	109.68	2.33	5.81	3.33	2.67
0.50	3.46	1.50	40.71	2.50	4.87	3.50	2.45
0.67	4.52	1.67	20.28	2.67	4.19	3.67	2.26
0.83	6.48	1.83	12.91	2.83	3.67	3.83	2.10
1.00	11.07	2.00	9.28	3.00	3.26	4.00	1.96

```
--------------------
| CALIB            |
| STANDHYD (  0204)|   Area    (ha)=   1.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.16	0.29
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	98.32	40.00
Mannings n	=	0.013	0.250

```
    NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.35	1.083	30.47	2.083	7.17	3.08	2.93
0.167	2.35	1.167	30.47	2.167	7.17	3.17	2.93
0.250	2.80	1.250	109.68	2.250	5.81	3.25	2.67
0.333	2.80	1.333	109.68	2.333	5.81	3.33	2.67

0.417	3.46	1.417	40.71	2.417	4.87	3.42	2.45
0.500	3.46	1.500	40.71	2.500	4.87	3.50	2.45
0.583	4.52	1.583	20.28	2.583	4.19	3.58	2.26
0.667	4.52	1.667	20.28	2.667	4.19	3.67	2.26
0.750	6.48	1.750	12.91	2.750	3.67	3.75	2.10
0.833	6.48	1.833	12.91	2.833	3.67	3.83	2.10
0.917	11.07	1.917	9.28	2.917	3.26	3.92	1.96
1.000	11.07	2.000	9.28	3.000	3.26	4.00	1.96

			TOTALS
Max.Eff.Inten.(mm/hr)=	109.68	39.07	
over (min)	5.00	10.00	
Storage Coeff. (min)=	2.44 (ii)	6.34 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.30	0.15	
PEAK FLOW (cms)=	0.35	0.03	0.369 (iii)
TIME TO PEAK (hrs)=	1.33	1.42	1.33
RUNOFF VOLUME (mm)=	48.55	19.79	42.80
TOTAL RAINFALL (mm)=	49.55	49.55	49.55
RUNOFF COEFFICIENT =	0.98	0.40	0.86

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0259)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0204):		1.45	0.369	1.33	42.80
+ ID2= 2 (0260):		3.22	0.543	1.33	44.58
ID = 3 (0259):		4.67	0.912	1.33	44.03

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CHICAGO STORM	IDF curve parameters: A=1593.000
Ptotal= 49.55 mm	B= 11.000
	C= 0.879

used in: INTENSITY = A / (t + B)^C

Duration of storm = 4.00 hrs
Storm time step = 10.00 min
Time to peak ratio = 0.33

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	2.35	1.17	30.47	2.17	7.17	3.17	2.93
0.33	2.80	1.33	109.68	2.33	5.81	3.33	2.67
0.50	3.46	1.50	40.71	2.50	4.87	3.50	2.45
0.67	4.52	1.67	20.28	2.67	4.19	3.67	2.26
0.83	6.48	1.83	12.91	2.83	3.67	3.83	2.10
1.00	11.07	2.00	9.28	3.00	3.26	4.00	1.96

CALIB / STANDHYD (0201) / ID= 1 DT= 5.0 min	Area (ha)= 5.27	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.22	0.05
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	187.44	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.35	1.083	30.47	2.083	7.17	3.08	2.93
0.167	2.35	1.167	30.47	2.167	7.17	3.17	2.93
0.250	2.80	1.250	109.68	2.250	5.81	3.25	2.67
0.333	2.80	1.333	109.68	2.333	5.81	3.33	2.67
0.417	3.46	1.417	40.71	2.417	4.87	3.42	2.45
0.500	3.46	1.500	40.71	2.500	4.87	3.50	2.45
0.583	4.52	1.583	20.28	2.583	4.19	3.58	2.26
0.667	4.52	1.667	20.28	2.667	4.19	3.67	2.26
0.750	6.48	1.750	12.91	2.750	3.67	3.75	2.10
0.833	6.48	1.833	12.91	2.833	3.67	3.83	2.10
0.917	11.07	1.917	9.28	2.917	3.26	3.92	1.96
1.000	11.07	2.000	9.28	3.000	3.26	4.00	1.96

				TOTALS
Max.Eff.Inten.(mm/hr)=	109.68	39.07		
over (min)	5.00	5.00		
Storage Coeff. (min)=	3.59 (ii)	4.67 (ii)		
Unit Hyd. Tpeak (min)=	5.00	5.00		
Unit Hyd. peak (cms)=	0.26	0.22		
PEAK FLOW (cms)=	1.52	0.01		1.523 (iii)
TIME TO PEAK (hrs)=	1.33	1.33		1.33
RUNOFF VOLUME (mm)=	48.55	19.79		48.27
TOTAL RAINFALL (mm)=	49.55	49.55		49.55
RUNOFF COEFFICIENT =	0.98	0.40		0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0268)		OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
IN= 2---> OUT= 1		0.0000	0.0000	0.1959	0.1883
DT= 5.0 min		0.0980	0.0369	0.2939	0.4335

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)		5.270	1.523	1.33	48.27
OUTFLOW: ID= 1 (0268)		5.270	0.178	1.83	48.25

```
                PEAK   FLOW   REDUCTION [Qout/Qin](%)= 11.67
                TIME SHIFT OF PEAK FLOW         (min)= 30.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.1605

--------------------------------------------------------------------------------
-------------------
| CHICAGO STORM    |    IDF curve parameters: A=1593.000
| Ptotal= 49.55 mm |                          B=  11.000
-------------------                          C=   0.879
                        used in:   INTENSITY =  A / (t + B)^C

                        Duration of storm  =  4.00 hrs
                        Storm time step    = 10.00 min
                        Time to peak ratio =  0.33

              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.17    2.35 |  1.17   30.47 |  2.17    7.17 |  3.17    2.93
              0.33    2.80 |  1.33  109.68 |  2.33    5.81 |  3.33    2.67
              0.50    3.46 |  1.50   40.71 |  2.50    4.87 |  3.50    2.45
              0.67    4.52 |  1.67   20.28 |  2.67    4.19 |  3.67    2.26
              0.83    6.48 |  1.83   12.91 |  2.83    3.67 |  3.83    2.10
              1.00   11.07 |  2.00    9.28 |  3.00    3.26 |  4.00    1.96


--------------------------------------------------------------------------------
-------------------
| CALIB            |
| STANDHYD (  0202)|   Area    (ha)=   6.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
-------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.32         1.25
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     209.28        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.35 | 1.083   30.47 | 2.083    7.17 |  3.08    2.93
              0.167    2.35 | 1.167   30.47 | 2.167    7.17 |  3.17    2.93
              0.250    2.80 | 1.250  109.68 | 2.250    5.81 |  3.25    2.67
              0.333    2.80 | 1.333  109.68 | 2.333    5.81 |  3.33    2.67
              0.417    3.46 | 1.417   40.71 | 2.417    4.87 |  3.42    2.45
              0.500    3.46 | 1.500   40.71 | 2.500    4.87 |  3.50    2.45
              0.583    4.52 | 1.583   20.28 | 2.583    4.19 |  3.58    2.26
              0.667    4.52 | 1.667   20.28 | 2.667    4.19 |  3.67    2.26
              0.750    6.48 | 1.750   12.91 | 2.750    3.67 |  3.75    2.10
              0.833    6.48 | 1.833   12.91 | 2.833    3.67 |  3.83    2.10
              0.917   11.07 | 1.917    9.28 | 2.917    3.26 |  3.92    1.96
              1.000   11.07 | 2.000    9.28 | 3.000    3.26 |  4.00    1.96

     Max.Eff.Inten.(mm/hr)=     109.68        39.07
               over (min)        5.00        10.00
     Storage Coeff.  (min)=       3.83 (ii)    7.64 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.25         0.13
                                                        *TOTALS*
     PEAK FLOW       (cms)=       1.53         0.10          1.609 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42           1.33
     RUNOFF VOLUME    (mm)=      48.55        19.79          43.09
     TOTAL RAINFALL   (mm)=      49.55        49.55          49.55
     RUNOFF COEFFICIENT   =       0.98         0.40           0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

-------------------
| ADD HYD  (  0262)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0202):     6.57   1.609     1.33    43.09
     + ID2= 2 (  0268):     5.27   0.178     1.83    48.25
       ================================================
       ID = 3 (  0262):    11.84   1.743     1.33    45.38

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

-------------------
| ADD HYD  (  0266)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0259):     4.67   0.912     1.33    44.03
     + ID2= 2 (  0262):    11.84   1.743     1.33    45.38
       ================================================
       ID = 3 (  0266):    16.51   2.655     1.33    45.00

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
-------------------
| RESERVOIR(  0263)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.2130      0.6563
                         0.0190     0.1773   |   0.2520      0.6883
                         0.0220     0.2128   |   0.2890      0.7150
                         0.0260     0.2888   |   0.2980      0.7450
                         0.0300     0.3648   |   0.3060      0.7700
                         0.0650     0.4586   |   0.3150      0.8127
                         0.1100     0.5155   |   0.3320      0.9290
                         0.1680     0.5503   |   0.3390      0.9767
                         0.1930     0.5804   |   0.3520      1.0680
                         0.2000     0.6048   |   0.0000      0.0000

                                    AREA     QPEAK     TPEAK       R.V.
                                    (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0266)     16.510      2.655      1.33      45.00
   OUTFLOW: ID= 1 (  0263)     16.510      0.154      4.17      44.86

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.78
                  TIME SHIFT OF PEAK FLOW         (min)=170.00
```

```
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.5417

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--------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0206):      0.12   0.007     1.58    19.77
     + ID2= 2 (  0263):     16.51   0.154     4.17    44.86
       ================================================
       ID = 3 (  0261):     16.64   0.154     4.17    44.67

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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================================================================================
============================

      V    V   I    SSSSS  U   U    A    L             (v 5.0.2025)
      V    V   I    SS     U   U   A A   L
       V  V    I     SS    U   U  AAAAA  L
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
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                *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\09f510bb-7666-4313-abe8-5fb20fee11a6\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\09f510bb-7666-4313-abe8-5fb20fee11a6\s


DATE: 07/06/2020                          TIME: 04:29:09

USER:


COMMENTS: _____________________________________________________________


--------------------------------------------------------------------------------
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  ***********************************************
  ** SIMULATION : 50 Year Chicago               **
  ***********************************************

--------------------
| CHICAGO STORM    |    IDF curve parameters: A=3886.000
| Ptotal= 80.32 mm |                          B=  16.000
--------------------                          C=   0.950
                       used in:   INTENSITY =  A / (t + B)^C
                                  Duration of storm  =  4.00 hrs
                                  Storm time step    = 10.00 min
                                  Time to peak ratio =  0.33

 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.17    2.76 |  1.17   54.62 |'  2.17   11.20 |  3.17    3.68
 0.33    3.46 |  1.33  176.19 |'  2.33    8.68 |  3.33    3.25
 0.50    4.54 |  1.50   73.10 |'  2.50    6.99 |  3.50    2.91
 0.67    6.37 |  1.67   36.22 |'  2.67    5.78 |  3.67    2.62
 0.83    9.92 |  1.83   22.14 |'  2.83    4.89 |  3.83    2.38
 1.00   18.63 |  2.00   15.18 |'  3.00    4.21 |  4.00    2.18

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
0.083    2.76 | 1.083   54.62 | 2.083   11.20 |  3.08    3.68
0.167    2.76 | 1.167   54.62 | 2.167   11.20 |  3.17    3.68
0.250    3.46 | 1.250  176.19 | 2.250    8.68 |  3.25    3.25
0.333    3.46 | 1.333  176.19 | 2.333    8.68 |  3.33    3.25
0.417    4.54 | 1.417   73.10 | 2.417    6.99 |  3.42    2.91
0.500    4.54 | 1.500   73.10 | 2.500    6.99 |  3.50    2.91
0.583    6.37 | 1.583   36.22 | 2.583    5.78 |  3.58    2.62
0.667    6.37 | 1.667   36.22 | 2.667    5.78 |  3.67    2.62
0.750    9.92 | 1.750   22.14 | 2.750    4.89 |  3.75    2.38
0.833    9.92 | 1.833   22.14 | 2.833    4.89 |  3.83    2.38
0.917   18.63 | 1.917   15.18 | 2.917    4.21 |  3.92    2.18
1.000   18.63 | 2.000   15.18 | 3.000    4.21 |  4.00    2.18

    Unit Hyd Qpeak  (cms)=   0.019

    PEAK FLOW       (cms)=   0.017 (i)
    TIME TO PEAK    (hrs)=   1.583
    RUNOFF VOLUME    (mm)=  43.241
    TOTAL RAINFALL   (mm)=  80.320
    RUNOFF COEFFICIENT   =   0.538

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CHICAGO STORM    |    IDF curve parameters: A=3886.000
| Ptotal= 80.32 mm |                          B=  16.000
--------------------                          C=   0.950
                       used in:   INTENSITY =  A / (t + B)^C

                                  Duration of storm  =  4.00 hrs
                                  Storm time step    = 10.00 min
                                  Time to peak ratio =  0.33

 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
```

0.17	2.76	1.17	54.62	2.17	11.20	3.17	3.68
0.33	3.46	1.33	176.19	2.33	8.68	3.33	3.25
0.50	4.54	1.50	73.10	2.50	6.99	3.50	2.91
0.67	6.37	1.67	36.22	2.67	5.78	3.67	2.62
0.83	9.92	1.83	22.14	2.83	4.89	3.83	2.38
1.00	18.63	2.00	15.18	3.00	4.21	4.00	2.18

CALIB	
STANDHYD (0205)	Area (ha)= 1.12
ID= 1 DT= 5.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.11	0.01
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	86.60	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.76	1.083	54.62	2.083	11.20	3.08	3.68
0.167	2.76	1.167	54.62	2.167	11.20	3.17	3.68
0.250	3.46	1.250	176.19	2.250	8.68	3.25	3.25
0.333	3.46	1.333	176.19	2.333	8.68	3.33	3.25
0.417	4.54	1.417	73.10	2.417	6.99	3.42	2.91
0.500	4.54	1.500	73.10	2.500	6.99	3.50	2.91
0.583	6.37	1.583	36.22	2.583	5.78	3.58	2.62
0.667	6.37	1.667	36.22	2.667	5.78	3.67	2.62
0.750	9.92	1.750	22.14	2.750	4.89	3.75	2.38
0.833	9.92	1.833	22.14	2.833	4.89	3.83	2.38
0.917	18.63	1.917	15.18	2.917	4.21	3.92	2.18
1.000	18.63	2.000	15.18	3.000	4.21	4.00	2.18

Max.Eff.Inten.(mm/hr)=		176.19	92.36	
over (min)		5.00	5.00	
Storage Coeff. (min)=		1.87 (ii)	2.76 (ii)	
Unit Hyd. Tpeak (min)=		5.00	5.00	
Unit Hyd. peak (cms)=		0.32	0.28	
				TOTALS
PEAK FLOW	(cms)=	0.54	0.00	0.546 (iii)
TIME TO PEAK	(hrs)=	1.33	1.33	1.33
RUNOFF VOLUME	(mm)=	79.32	43.28	78.96
TOTAL RAINFALL	(mm)=	80.32	80.32	80.32
RUNOFF COEFFICIENT	=	0.99	0.54	0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0256)
IN= 2---> OUT= 1

DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0470	0.0750

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0205)	1.125	0.546	1.33	78.96
OUTFLOW: ID= 1 (0256)	1.125	0.042	2.08	78.61

PEAK FLOW REDUCTION [Qout/Qin](%)= 7.61
TIME SHIFT OF PEAK FLOW (min)= 45.00
MAXIMUM STORAGE USED (ha.m.)= 0.0664

CHICAGO STORM	IDF curve parameters: A=3886.000
Ptotal= 80.32 mm	B= 16.000
	C= 0.950

used in: INTENSITY = A / (t + B)^C

Duration of storm = 4.00 hrs
Storm time step = 10.00 min
Time to peak ratio = 0.33

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	2.76	1.17	54.62	2.17	11.20	3.17	3.68
0.33	3.46	1.33	176.19	2.33	8.68	3.33	3.25
0.50	4.54	1.50	73.10	2.50	6.99	3.50	2.91
0.67	6.37	1.67	36.22	2.67	5.78	3.67	2.62
0.83	9.92	1.83	22.14	2.83	4.89	3.83	2.38
1.00	18.63	2.00	15.18	3.00	4.21	4.00	2.18

CALIB	
STANDHYD (0203)	Area (ha)= 2.10
ID= 1 DT= 5.0 min	Total Imp(%)= 80.00 Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.68	0.42
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	118.18	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

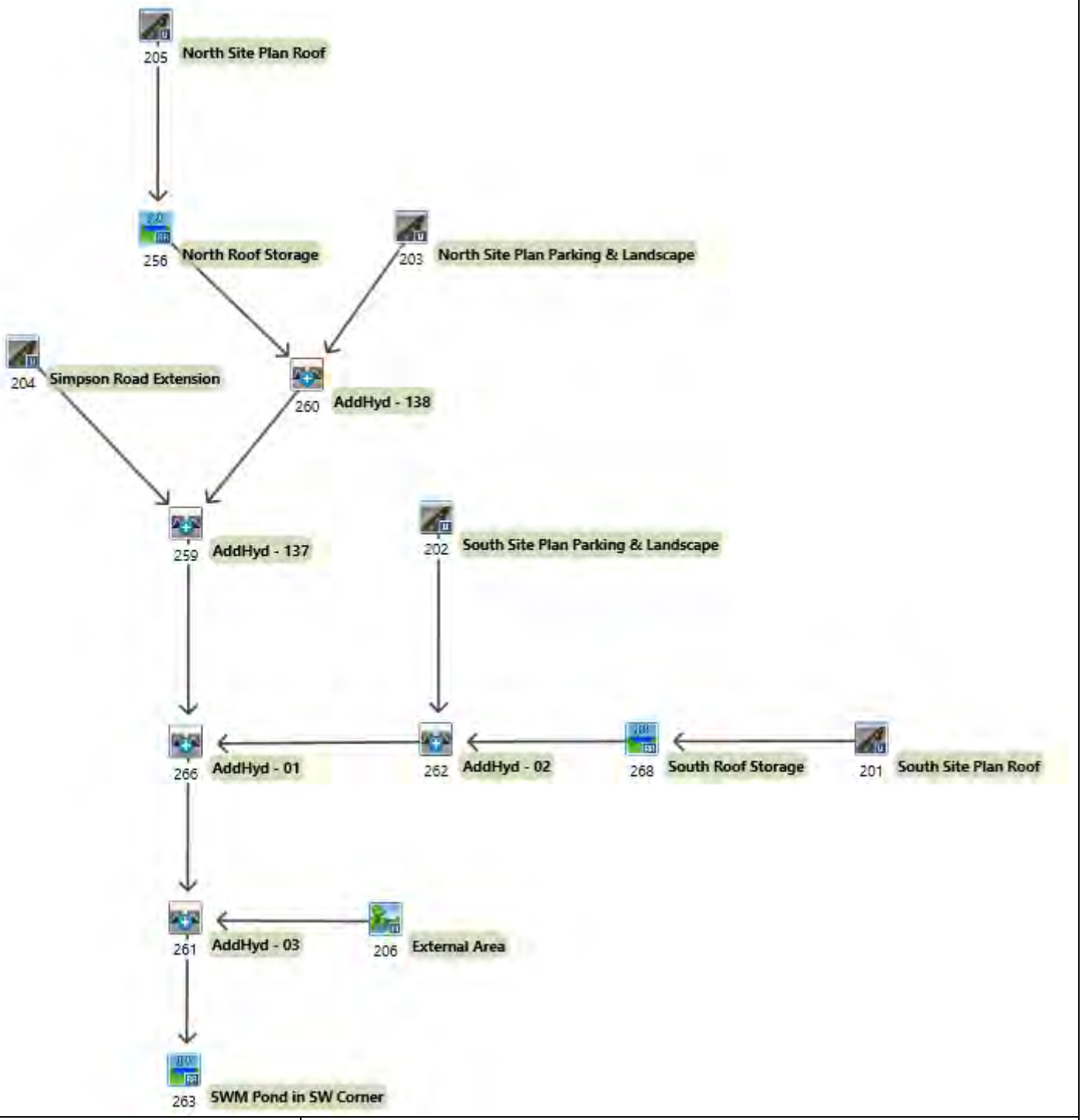
---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.76	1.083	54.62	2.083	11.20	3.08	3.68
0.167	2.76	1.167	54.62	2.167	11.20	3.17	3.68
0.250	3.46	1.250	176.19	2.250	8.68	3.25	3.25
0.333	3.46	1.333	176.19	2.333	8.68	3.33	3.25
0.417	4.54	1.417	73.10	2.417	6.99	3.42	2.91
0.500	4.54	1.500	73.10	2.500	6.99	3.50	2.91
0.583	6.37	1.583	36.22	2.583	5.78	3.58	2.62
0.667	6.37	1.667	36.22	2.667	5.78	3.67	2.62
0.750	9.92	1.750	22.14	2.750	4.89	3.75	2.38
0.833	9.92	1.833	22.14	2.833	4.89	3.83	2.38
0.917	18.63	1.917	15.18	2.917	4.21	3.92	2.18

```
               1.000   18.63 | 2.000   15.18 | 3.000    4.21 |  4.00    2.18

     Max.Eff.Inten.(mm/hr)=     176.19        92.36
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       2.25 (ii)    5.48 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.30         0.16
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.81         0.09          0.888 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42           1.33
     RUNOFF VOLUME    (mm)=      79.32        43.28          72.11
     TOTAL RAINFALL   (mm)=      80.32        80.32          80.32
     RUNOFF COEFFICIENT   =       0.99         0.54           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0260)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0203):     2.10   0.888     1.33    72.11
     + ID2= 2 (  0256):     1.12   0.042     2.08    78.61
       ================================================
       ID = 3 (  0260):     3.22   0.912     1.33    74.38

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CHICAGO STORM    |    IDF curve parameters: A=3886.000
| Ptotal= 80.32 mm |                          B=  16.000
--------------------                          C=   0.950
                       used in:   INTENSITY =  A / (t + B)^C

                       Duration of storm  =  4.00 hrs
                       Storm time step    = 10.00 min
                       Time to peak ratio =  0.33

                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.17    2.76 |  1.17   54.62 |'  2.17   11.20 |  3.17    3.68
                 0.33    3.46 |  1.33  176.19 |'  2.33    8.68 |  3.33    3.25
                 0.50    4.54 |  1.50   73.10 |'  2.50    6.99 |  3.50    2.91
                 0.67    6.37 |  1.67   36.22 |'  2.67    5.78 |  3.67    2.62
                 0.83    9.92 |  1.83   22.14 |'  2.83    4.89 |  3.83    2.38
                 1.00   18.63 |  2.00   15.18 |'  3.00    4.21 |  4.00    2.18


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0204)|   Area    (ha)=   1.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------

                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.16         0.29
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      98.32        40.00
     Mannings n            =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                                  ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    2.76 | 1.083   54.62 | 2.083   11.20 |  3.08    3.68
                 0.167    2.76 | 1.167   54.62 | 2.167   11.20 |  3.17    3.68
                 0.250    3.46 | 1.250  176.19 | 2.250    8.68 |  3.25    3.25
                 0.333    3.46 | 1.333  176.19 | 2.333    8.68 |  3.33    3.25
                 0.417    4.54 | 1.417   73.10 | 2.417    6.99 |  3.42    2.91
                 0.500    4.54 | 1.500   73.10 | 2.500    6.99 |  3.50    2.91
                 0.583    6.37 | 1.583   36.22 | 2.583    5.78 |  3.58    2.62
                 0.667    6.37 | 1.667   36.22 | 2.667    5.78 |  3.67    2.62
                 0.750    9.92 | 1.750   22.14 | 2.750    4.89 |  3.75    2.38
                 0.833    9.92 | 1.833   22.14 | 2.833    4.89 |  3.83    2.38
                 0.917   18.63 | 1.917   15.18 | 2.917    4.21 |  3.92    2.18
                 1.000   18.63 | 2.000   15.18 | 3.000    4.21 |  4.00    2.18

     Max.Eff.Inten.(mm/hr)=     176.19        92.36
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       2.02 (ii)    5.25 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.31         0.16
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.56         0.06          0.617 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42           1.33
     RUNOFF VOLUME    (mm)=      79.32        43.28          72.11
     TOTAL RAINFALL   (mm)=      80.32        80.32          80.32
     RUNOFF COEFFICIENT   =       0.99         0.54           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0259)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0204):     1.45   0.617     1.33    72.11
     + ID2= 2 (  0260):     3.22   0.912     1.33    74.38
       ================================================
       ID = 3 (  0259):     4.67   1.530     1.33    73.68

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CHICAGO STORM    |    IDF curve parameters: A=3886.000
| Ptotal= 80.32 mm |                          B=  16.000
--------------------                          C=   0.950
                       used in:   INTENSITY =  A / (t + B)^C
```

```
                    Duration of storm  =  4.00 hrs
                    Storm time step    = 10.00 min
                    Time to peak ratio =  0.33

               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.17    2.76 |  1.17   54.62 |  2.17   11.20 |  3.17    3.68
               0.33    3.46 |  1.33  176.19 |  2.33    8.68 |  3.33    3.25
               0.50    4.54 |  1.50   73.10 |  2.50    6.99 |  3.50    2.91
               0.67    6.37 |  1.67   36.22 |  2.67    5.78 |  3.67    2.62
               0.83    9.92 |  1.83   22.14 |  2.83    4.89 |  3.83    2.38
               1.00   18.63 |  2.00   15.18 |  3.00    4.21 |  4.00    2.18


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0201)|   Area    (ha)=   5.27
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.22         0.05
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     187.44        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.76 | 1.083   54.62 | 2.083   11.20 |  3.08    3.68
              0.167    2.76 | 1.167   54.62 | 2.167   11.20 |  3.17    3.68
              0.250    3.46 | 1.250  176.19 | 2.250    8.68 |  3.25    3.25
              0.333    3.46 | 1.333  176.19 | 2.333    8.68 |  3.33    3.25
              0.417    4.54 | 1.417   73.10 | 2.417    6.99 |  3.42    2.91
              0.500    4.54 | 1.500   73.10 | 2.500    6.99 |  3.50    2.91
              0.583    6.37 | 1.583   36.22 | 2.583    5.78 |  3.58    2.62
              0.667    6.37 | 1.667   36.22 | 2.667    5.78 |  3.67    2.62
              0.750    9.92 | 1.750   22.14 | 2.750    4.89 |  3.75    2.38
              0.833    9.92 | 1.833   22.14 | 2.833    4.89 |  3.83    2.38
              0.917   18.63 | 1.917   15.18 | 2.917    4.21 |  3.92    2.18
              1.000   18.63 | 2.000   15.18 | 3.000    4.21 |  4.00    2.18

     Max.Eff.Inten.(mm/hr)=     176.19        92.36
               over (min)        5.00         5.00
     Storage Coeff.  (min)=      2.97 (ii)    3.86 (ii)
     Unit Hyd. Tpeak (min)=      5.00         5.00
     Unit Hyd. peak  (cms)=      0.28         0.25
                                                    *TOTALS*
     PEAK FLOW       (cms)=      2.49         0.01      2.506 (iii)
     TIME TO PEAK    (hrs)=      1.33         1.33       1.33
     RUNOFF VOLUME    (mm)=     79.32        43.28      78.96
     TOTAL RAINFALL   (mm)=     80.32        80.32      80.32
     RUNOFF COEFFICIENT   =      0.99         0.54       0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.

     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0268)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1959      0.1883
                          0.0980     0.0369   |   0.2939      0.4335

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0201)      5.270     2.506      1.33      78.96
   OUTFLOW: ID= 1 (  0268)      5.270     0.235      1.92      78.94

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  9.39
                TIME SHIFT OF PEAK FLOW         (min)= 35.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.2870

--------------------------------------------------------------------------------
--------------------
| CHICAGO STORM    |    IDF curve parameters: A=3886.000
| Ptotal= 80.32 mm |                          B=  16.000
--------------------                          C=   0.950
                         used in:   INTENSITY =  A / (t + B)^C

                         Duration of storm  =  4.00 hrs
                         Storm time step    = 10.00 min
                         Time to peak ratio =  0.33

               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.17    2.76 |  1.17   54.62 |  2.17   11.20 |  3.17    3.68
               0.33    3.46 |  1.33  176.19 |  2.33    8.68 |  3.33    3.25
               0.50    4.54 |  1.50   73.10 |  2.50    6.99 |  3.50    2.91
               0.67    6.37 |  1.67   36.22 |  2.67    5.78 |  3.67    2.62
               0.83    9.92 |  1.83   22.14 |  2.83    4.89 |  3.83    2.38
               1.00   18.63 |  2.00   15.18 |  3.00    4.21 |  4.00    2.18


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0202)|   Area    (ha)=   6.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.32         1.25
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     209.28        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.76 | 1.083   54.62 | 2.083   11.20 |  3.08    3.68
              0.167    2.76 | 1.167   54.62 | 2.167   11.20 |  3.17    3.68
              0.250    3.46 | 1.250  176.19 | 2.250    8.68 |  3.25    3.25
              0.333    3.46 | 1.333  176.19 | 2.333    8.68 |  3.33    3.25
```

```
               0.417    4.54 | 1.417   73.10 | 2.417    6.99 |  3.42    2.91
               0.500    4.54 | 1.500   73.10 | 2.500    6.99 |  3.50    2.91
               0.583    6.37 | 1.583   36.22 | 2.583    5.78 |  3.58    2.62
               0.667    6.37 | 1.667   36.22 | 2.667    5.78 |  3.67    2.62
               0.750    9.92 | 1.750   22.14 | 2.750    4.89 |  3.75    2.38
               0.833    9.92 | 1.833   22.14 | 2.833    4.89 |  3.83    2.38
               0.917   18.63 | 1.917   15.18 | 2.917    4.21 |  3.92    2.18
               1.000   18.63 | 2.000   15.18 | 3.000    4.21 |  4.00    2.18

     Max.Eff.Inten.(mm/hr)=     176.19        92.36
               over (min)        5.00        10.00
     Storage Coeff.  (min)=      3.17 (ii)    6.32 (ii)
     Unit Hyd. Tpeak (min)=      5.00        10.00
     Unit Hyd. peak  (cms)=      0.27         0.15
                                                        *TOTALS*
     PEAK FLOW       (cms)=      2.53         0.26         2.734 (iii)
     TIME TO PEAK    (hrs)=      1.33         1.42          1.33
     RUNOFF VOLUME    (mm)=     79.32        43.28         72.47
     TOTAL RAINFALL   (mm)=     80.32        80.32         80.32
     RUNOFF COEFFICIENT   =      0.99         0.54          0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

-------------------
| ADD HYD  (  0262)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0202):     6.57   2.734     1.33    72.47
     + ID2= 2 (  0268):     5.27   0.235     1.92    78.94
       ================================================
       ID = 3 (  0262):    11.84   2.914     1.33    75.35

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

-------------------
| ADD HYD  (  0266)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0259):     4.67   1.530     1.33    73.68
     + ID2= 2 (  0262):    11.84   2.914     1.33    75.35
       ================================================
       ID = 3 (  0266):    16.51   4.443     1.33    74.88

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
-------------------
| RESERVOIR(  0263)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------       (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000    |   0.2130      0.6563
                         0.0190     0.1773    |   0.2520      0.6883
                         0.0220     0.2128    |   0.2890      0.7150
                         0.0260     0.2888    |   0.2980      0.7450
                         0.0300     0.3648    |   0.3060      0.7700
                         0.0650     0.4586    |   0.3150      0.8127
                         0.1100     0.5155    |   0.3320      0.9290
                         0.1680     0.5503    |   0.3390      0.9767
                         0.1930     0.5804    |   0.3520      1.0680
                         0.2000     0.6048    |   0.0000      0.0000

                                    AREA     QPEAK     TPEAK       R.V.
                                    (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0266)     16.510      4.443      1.33      74.88
   OUTFLOW: ID= 1 (  0263)     16.510      0.300      3.75      74.73

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.74
                  TIME SHIFT OF PEAK FLOW         (min)=145.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.7499

--------------------------------------------------------------------------------

-------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0206):     0.12   0.017     1.58    43.24
     + ID2= 2 (  0263):    16.51   0.300     3.75    74.73
       ================================================
       ID = 3 (  0261):    16.64   0.300     3.75    74.50

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
```



SCHAEFFERS
CONSULTING ENGINEERS

Post-development Visual OTTHYMO™ Schematic
6 Hour AES 2-100 Year

Job #: 2018-4841 | **Date: July 2020**

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================================================================================
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       V    V   I    SSSSS  U   U    A    L             (v 5.0.2025)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\b9051a5c-533b-459e-ac2f-3b896adea026\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\b9051a5c-533b-459e-ac2f-3b896adea026\s


DATE: 07/06/2020                          TIME: 04:30:38

USER:


COMMENTS: _____________________________________________________________


--------------------------------------------------------------------------------
----------------------------
  ***********************************************
  ** SIMULATION : 10 Year 6 Hour AES           **
  ***********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\06d1c7dc
| Ptotal= 55.69 mm |    Comments: 10 Year 6 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00   18.94 |  3.75    7.80 |  5.50    1.11
                0.50    1.11 |  2.25   18.94 |  4.00    4.46 |  5.75    1.11
                0.75    1.11 |  2.50   51.24 |  4.25    4.46 |  6.00    1.11
                1.00    1.11 |  2.75   51.24 |  4.50    2.23 |  6.25    1.11
                1.25    1.11 |  3.00   14.48 |  4.75    2.23 |
                1.50    6.68 |  3.25   14.48 |  5.00    1.11 |
                1.75    6.68 |  3.50    7.80 |  5.25    1.11 |

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    6.68 | 3.250   14.48 |  4.83    1.11
               0.167    0.00 | 1.750    6.68 | 3.333    7.80 |  4.92    1.11
               0.250    0.00 | 1.833   18.94 | 3.417    7.80 |  5.00    1.11
               0.333    1.11 | 1.917   18.94 | 3.500    7.80 |  5.08    1.11
               0.417    1.11 | 2.000   18.94 | 3.583    7.80 |  5.17    1.11
               0.500    1.11 | 2.083   18.94 | 3.667    7.80 |  5.25    1.11
               0.583    1.11 | 2.167   18.94 | 3.750    7.80 |  5.33    1.11
               0.667    1.11 | 2.250   18.94 | 3.833    4.46 |  5.42    1.11
               0.750    1.11 | 2.333   51.24 | 3.917    4.46 |  5.50    1.11
               0.833    1.11 | 2.417   51.24 | 4.000    4.46 |  5.58    1.11
               0.917    1.11 | 2.500   51.24 | 4.083    4.46 |  5.67    1.11
               1.000    1.11 | 2.583   51.24 | 4.167    4.46 |  5.75    1.11
               1.083    1.11 | 2.667   51.24 | 4.250    4.46 |  5.83    1.11
               1.167    1.11 | 2.750   51.24 | 4.333    2.23 |  5.92    1.11
               1.250    1.11 | 2.833   14.48 | 4.417    2.23 |  6.00    1.11
               1.333    6.68 | 2.917   14.48 | 4.500    2.23 |  6.08    1.11
               1.417    6.68 | 3.000   14.48 | 4.583    2.23 |  6.17    1.11
               1.500    6.68 | 3.083   14.48 | 4.667    2.23 |  6.25    1.11
               1.583    6.68 | 3.167   14.48 | 4.750    2.23 |

    Unit Hyd Qpeak  (cms)=   0.019

    PEAK FLOW       (cms)=   0.007 (i)
    TIME TO PEAK    (hrs)=   2.833
    RUNOFF VOLUME    (mm)=  24.114
    TOTAL RAINFALL   (mm)=  55.690
    RUNOFF COEFFICIENT   =   0.433

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\06d1c7dc
| Ptotal= 55.69 mm |    Comments: 10 Year 6 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00   18.94 |  3.75    7.80 |  5.50    1.11
                0.50    1.11 |  2.25   18.94 |  4.00    4.46 |  5.75    1.11
                0.75    1.11 |  2.50   51.24 |  4.25    4.46 |  6.00    1.11
                1.00    1.11 |  2.75   51.24 |  4.50    2.23 |  6.25    1.11
                1.25    1.11 |  3.00   14.48 |  4.75    2.23 |
                1.50    6.68 |  3.25   14.48 |  5.00    1.11 |
                1.75    6.68 |  3.50    7.80 |  5.25    1.11 |

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD (  0205)|   Area    (ha)=   1.12
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
```

```
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.11         0.01
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      86.60        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	6.68	3.250	14.48	4.83	1.11
0.167	0.00	1.750	6.68	3.333	7.80	4.92	1.11
0.250	0.00	1.833	18.94	3.417	7.80	5.00	1.11
0.333	1.11	1.917	18.94	3.500	7.80	5.08	1.11
0.417	1.11	2.000	18.94	3.583	7.80	5.17	1.11
0.500	1.11	2.083	18.94	3.667	7.80	5.25	1.11
0.583	1.11	2.167	18.94	3.750	7.80	5.33	1.11
0.667	1.11	2.250	18.94	3.833	4.46	5.42	1.11
0.750	1.11	2.333	51.24	3.917	4.46	5.50	1.11
0.833	1.11	2.417	51.24	4.000	4.46	5.58	1.11
0.917	1.11	2.500	51.24	4.083	4.46	5.67	1.11
1.000	1.11	2.583	51.24	4.167	4.46	5.75	1.11
1.083	1.11	2.667	51.24	4.250	4.46	5.83	1.11
1.167	1.11	2.750	51.24	4.333	2.23	5.92	1.11
1.250	1.11	2.833	14.48	4.417	2.23	6.00	1.11
1.333	6.68	2.917	14.48	4.500	2.23	6.08	1.11
1.417	6.68	3.000	14.48	4.583	2.23	6.17	1.11
1.500	6.68	3.083	14.48	4.667	2.23	6.25	1.11
1.583	6.68	3.167	14.48	4.750	2.23		

```
     Max.Eff.Inten.(mm/hr)=      51.24        29.66
               over (min)        5.00         5.00
     Storage Coeff.  (min)=      3.06 (ii)    4.53 (ii)
     Unit Hyd. Tpeak (min)=      5.00         5.00
     Unit Hyd. peak  (cms)=      0.27         0.23
                                                  *TOTALS*
     PEAK FLOW       (cms)=      0.16         0.00          0.159 (iii)
     TIME TO PEAK    (hrs)=      2.75         2.75           2.75
     RUNOFF VOLUME    (mm)=     54.69        24.14          54.38
     TOTAL RAINFALL   (mm)=     55.69        55.69          55.69
     RUNOFF COEFFICIENT   =      0.98         0.43           0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0256)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                        0.0000     0.0000   |   0.0470     0.0750

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0205)      1.125      0.159      2.75      54.38
   OUTFLOW: ID= 1 (  0256)      1.125      0.027      3.42      54.03

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 16.64
                    TIME SHIFT OF PEAK FLOW         (min)= 40.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0424

--------------------------------------------------------------------------------

--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\06d1c7dc
| Ptotal= 55.69 mm |    Comments: 10 Year 6 Hour AES (Bloor, TRCA)
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	18.94	3.75	7.80	5.50	1.11
0.50	1.11	2.25	18.94	4.00	4.46	5.75	1.11
0.75	1.11	2.50	51.24	4.25	4.46	6.00	1.11
1.00	1.11	2.75	51.24	4.50	2.23	6.25	1.11
1.25	1.11	3.00	14.48	4.75	2.23		
1.50	6.68	3.25	14.48	5.00	1.11		
1.75	6.68	3.50	7.80	5.25	1.11		

```
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD (  0203)|   Area    (ha)=   2.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.68         0.42
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     118.18        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	6.68	3.250	14.48	4.83	1.11
0.167	0.00	1.750	6.68	3.333	7.80	4.92	1.11
0.250	0.00	1.833	18.94	3.417	7.80	5.00	1.11
0.333	1.11	1.917	18.94	3.500	7.80	5.08	1.11
0.417	1.11	2.000	18.94	3.583	7.80	5.17	1.11
0.500	1.11	2.083	18.94	3.667	7.80	5.25	1.11
0.583	1.11	2.167	18.94	3.750	7.80	5.33	1.11
0.667	1.11	2.250	18.94	3.833	4.46	5.42	1.11
0.750	1.11	2.333	51.24	3.917	4.46	5.50	1.11
0.833	1.11	2.417	51.24	4.000	4.46	5.58	1.11
0.917	1.11	2.500	51.24	4.083	4.46	5.67	1.11
1.000	1.11	2.583	51.24	4.167	4.46	5.75	1.11
1.083	1.11	2.667	51.24	4.250	4.46	5.83	1.11
1.167	1.11	2.750	51.24	4.333	2.23	5.92	1.11
1.250	1.11	2.833	14.48	4.417	2.23	6.00	1.11
1.333	6.68	2.917	14.48	4.500	2.23	6.08	1.11
1.417	6.68	3.000	14.48	4.583	2.23	6.17	1.11
1.500	6.68	3.083	14.48	4.667	2.23	6.25	1.11
1.583	6.68	3.167	14.48	4.750	2.23		

```
     Max.Eff.Inten.(mm/hr)=      51.24        28.47
               over (min)         5.00        20.00
     Storage Coeff.  (min)=       3.69 (ii)   15.36 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.25         0.07
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.24         0.02          0.259 (iii)
     TIME TO PEAK    (hrs)=       2.75         2.92           2.75
     RUNOFF VOLUME    (mm)=      54.69        24.14          48.57
     TOTAL RAINFALL   (mm)=      55.69        55.69          55.69
     RUNOFF COEFFICIENT   =       0.98         0.43           0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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-------------------
| ADD HYD  (  0260)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0203):     2.10   0.259     2.75    48.57
     + ID2= 2 (  0256):     1.12   0.027     3.42    54.03
       ================================================
       ID = 3 (  0260):     3.22   0.282     2.75    50.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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-------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\06d1c7dc
| Ptotal= 55.69 mm |    Comments: 10 Year 6 Hour AES (Bloor, TRCA)
-------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00   18.94 |  3.75    7.80 |  5.50    1.11
                0.50    1.11 |  2.25   18.94 |  4.00    4.46 |  5.75    1.11
                0.75    1.11 |  2.50   51.24 |  4.25    4.46 |  6.00    1.11
                1.00    1.11 |  2.75   51.24 |  4.50    2.23 |  6.25    1.11
                1.25    1.11 |  3.00   14.48 |  4.75    2.23 |
                1.50    6.68 |  3.25   14.48 |  5.00    1.11 |
                1.75    6.68 |  3.50    7.80 |  5.25    1.11 |

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-------------------
| CALIB            |
| STANDHYD (  0204)|   Area    (ha)=   1.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
-------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.16         0.29
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      98.32        40.00
     Mannings n             =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                                  ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    6.68 | 3.250   14.48 |  4.83    1.11
               0.167    0.00 | 1.750    6.68 | 3.333    7.80 |  4.92    1.11
               0.250    0.00 | 1.833   18.94 | 3.417    7.80 |  5.00    1.11
               0.333    1.11 | 1.917   18.94 | 3.500    7.80 |  5.08    1.11
               0.417    1.11 | 2.000   18.94 | 3.583    7.80 |  5.17    1.11
               0.500    1.11 | 2.083   18.94 | 3.667    7.80 |  5.25    1.11
               0.583    1.11 | 2.167   18.94 | 3.750    7.80 |  5.33    1.11
               0.667    1.11 | 2.250   18.94 | 3.833    4.46 |  5.42    1.11
               0.750    1.11 | 2.333   51.24 | 3.917    4.46 |  5.50    1.11
               0.833    1.11 | 2.417   51.24 | 4.000    4.46 |  5.58    1.11
               0.917    1.11 | 2.500   51.24 | 4.083    4.46 |  5.67    1.11
               1.000    1.11 | 2.583   51.24 | 4.167    4.46 |  5.75    1.11
               1.083    1.11 | 2.667   51.24 | 4.250    4.46 |  5.83    1.11
               1.167    1.11 | 2.750   51.24 | 4.333    2.23 |  5.92    1.11
               1.250    1.11 | 2.833   14.48 | 4.417    2.23 |  6.00    1.11
               1.333    6.68 | 2.917   14.48 | 4.500    2.23 |  6.08    1.11
               1.417    6.68 | 3.000   14.48 | 4.583    2.23 |  6.17    1.11
               1.500    6.68 | 3.083   14.48 | 4.667    2.23 |  6.25    1.11
               1.583    6.68 | 3.167   14.48 | 4.750    2.23 |

     Max.Eff.Inten.(mm/hr)=      51.24        28.47
               over (min)         5.00        15.00
     Storage Coeff.  (min)=       3.30 (ii)   14.97 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.26         0.08
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.17         0.02          0.181 (iii)
     TIME TO PEAK    (hrs)=       2.75         2.83           2.75
     RUNOFF VOLUME    (mm)=      54.69        24.14          48.57
     TOTAL RAINFALL   (mm)=      55.69        55.69          55.69
     RUNOFF COEFFICIENT   =       0.98         0.43           0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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-------------------
| ADD HYD  (  0259)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0204):     1.45   0.181     2.75    48.57
     + ID2= 2 (  0260):     3.22   0.282     2.75    50.48
       ================================================
       ID = 3 (  0259):     4.67   0.463     2.75    49.89

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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```
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\06d1c7dc
| Ptotal= 55.69 mm |    Comments: 10 Year 6 Hour AES (Bloor, TRCA)
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	18.94	3.75	7.80	5.50	1.11
0.50	1.11	2.25	18.94	4.00	4.46	5.75	1.11
0.75	1.11	2.50	51.24	4.25	4.46	6.00	1.11
1.00	1.11	2.75	51.24	4.50	2.23	6.25	1.11
1.25	1.11	3.00	14.48	4.75	2.23		
1.50	6.68	3.25	14.48	5.00	1.11		
1.75	6.68	3.50	7.80	5.25	1.11		

```
--------------------
| CALIB            |
| STANDHYD (  0201)|   Area    (ha)=   5.27
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.22	0.05
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	187.44	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	6.68	3.250	14.48	4.83	1.11
0.167	0.00	1.750	6.68	3.333	7.80	4.92	1.11
0.250	0.00	1.833	18.94	3.417	7.80	5.00	1.11
0.333	1.11	1.917	18.94	3.500	7.80	5.08	1.11
0.417	1.11	2.000	18.94	3.583	7.80	5.17	1.11
0.500	1.11	2.083	18.94	3.667	7.80	5.25	1.11
0.583	1.11	2.167	18.94	3.750	7.80	5.33	1.11
0.667	1.11	2.250	18.94	3.833	4.46	5.42	1.11
0.750	1.11	2.333	51.24	3.917	4.46	5.50	1.11
0.833	1.11	2.417	51.24	4.000	4.46	5.58	1.11
0.917	1.11	2.500	51.24	4.083	4.46	5.67	1.11
1.000	1.11	2.583	51.24	4.167	4.46	5.75	1.11
1.083	1.11	2.667	51.24	4.250	4.46	5.83	1.11
1.167	1.11	2.750	51.24	4.333	2.23	5.92	1.11
1.250	1.11	2.833	14.48	4.417	2.23	6.00	1.11
1.333	6.68	2.917	14.48	4.500	2.23	6.08	1.11
1.417	6.68	3.000	14.48	4.583	2.23	6.17	1.11
1.500	6.68	3.083	14.48	4.667	2.23	6.25	1.11
1.583	6.68	3.167	14.48	4.750	2.23		

Max.Eff.Inten.(mm/hr)	=	51.24	29.66	
over (min)		5.00	10.00	
Storage Coeff. (min)	=	4.87 (ii)	6.33 (ii)	
Unit Hyd. Tpeak (min)	=	5.00	10.00	
Unit Hyd. peak (cms)	=	0.22	0.15	
				TOTALS
PEAK FLOW	(cms)=	0.74	0.00	0.746 (iii)
TIME TO PEAK	(hrs)=	2.75	2.75	2.75
RUNOFF VOLUME	(mm)=	54.69	24.14	54.38
TOTAL RAINFALL	(mm)=	55.69	55.69	55.69
RUNOFF COEFFICIENT	=	0.98	0.43	0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  0268)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |
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```

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.1959	0.1883
0.0980	0.0369	0.2939	0.4335

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)	5.270	0.746	2.75	54.38
OUTFLOW: ID= 1 (0268)	5.270	0.179	3.33	54.37

PEAK FLOW REDUCTION [Qout/Qin](%)= 24.05
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.1630

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--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\06d1c7dc
| Ptotal= 55.69 mm |    Comments: 10 Year 6 Hour AES (Bloor, TRCA)
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	18.94	3.75	7.80	5.50	1.11
0.50	1.11	2.25	18.94	4.00	4.46	5.75	1.11
0.75	1.11	2.50	51.24	4.25	4.46	6.00	1.11
1.00	1.11	2.75	51.24	4.50	2.23	6.25	1.11
1.25	1.11	3.00	14.48	4.75	2.23		
1.50	6.68	3.25	14.48	5.00	1.11		
1.75	6.68	3.50	7.80	5.25	1.11		

```
--------------------
| CALIB            |
| STANDHYD (  0202)|   Area    (ha)=   6.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.32	1.25
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	209.28	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	6.68	3.250	14.48	4.83	1.11
0.167	0.00	1.750	6.68	3.333	7.80	4.92	1.11
0.250	0.00	1.833	18.94	3.417	7.80	5.00	1.11
0.333	1.11	1.917	18.94	3.500	7.80	5.08	1.11
0.417	1.11	2.000	18.94	3.583	7.80	5.17	1.11
0.500	1.11	2.083	18.94	3.667	7.80	5.25	1.11
0.583	1.11	2.167	18.94	3.750	7.80	5.33	1.11
0.667	1.11	2.250	18.94	3.833	4.46	5.42	1.11
0.750	1.11	2.333	51.24	3.917	4.46	5.50	1.11
0.833	1.11	2.417	51.24	4.000	4.46	5.58	1.11
0.917	1.11	2.500	51.24	4.083	4.46	5.67	1.11
1.000	1.11	2.583	51.24	4.167	4.46	5.75	1.11
1.083	1.11	2.667	51.24	4.250	4.46	5.83	1.11
1.167	1.11	2.750	51.24	4.333	2.23	5.92	1.11
1.250	1.11	2.833	14.48	4.417	2.23	6.00	1.11
1.333	6.68	2.917	14.48	4.500	2.23	6.08	1.11
1.417	6.68	3.000	14.48	4.583	2.23	6.17	1.11
1.500	6.68	3.083	14.48	4.667	2.23	6.25	1.11
1.583	6.68	3.167	14.48	4.750	2.23		

			TOTALS
Max.Eff.Inten.(mm/hr)=	51.24	28.47	
over (min)	5.00	20.00	
Storage Coeff. (min)=	5.20 (ii)	16.86 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.21	0.06	
PEAK FLOW (cms)=	0.76	0.07	0.815 (iii)
TIME TO PEAK (hrs)=	2.75	2.92	2.75
RUNOFF VOLUME (mm)=	54.69	24.14	48.88
TOTAL RAINFALL (mm)=	55.69	55.69	55.69
RUNOFF COEFFICIENT =	0.98	0.43	0.88

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0262)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (0202):	6.57	0.815	2.75	48.88
	+ ID2= 2 (0268):	5.27	0.179	3.33	54.37
	ID = 3 (0262):	11.84	0.979	2.75	51.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0266)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (0259):	4.67	0.463	2.75	49.89
	+ ID2= 2 (0262):	11.84	0.979	2.75	51.32
	ID = 3 (0266):	16.51	1.442	2.75	50.92

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0263)	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
IN= 2---> OUT= 1				
DT= 5.0 min	0.0000	0.0000	0.2130	0.6563
	0.0190	0.1773	0.2520	0.6883
	0.0220	0.2128	0.2890	0.7150
	0.0260	0.2888	0.2980	0.7450
	0.0300	0.3648	0.3060	0.7700
	0.0650	0.4586	0.3150	0.8127
	0.1100	0.5155	0.3320	0.9290
	0.1680	0.5503	0.3390	0.9767
	0.1930	0.5804	0.3520	1.0680
	0.2000	0.6048	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0266)	16.510	1.442	2.75	50.92
OUTFLOW: ID= 1 (0263)	16.510	0.186	5.25	50.77

PEAK FLOW REDUCTION [Qout/Qin](%)= 12.88
TIME SHIFT OF PEAK FLOW (min)=150.00
MAXIMUM STORAGE USED (ha.m.)= 0.5718

ADD HYD (0261)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (0206):	0.12	0.007	2.83	24.11
	+ ID2= 2 (0263):	16.51	0.186	5.25	50.77
	ID = 3 (0261):	16.64	0.186	5.25	50.57

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
V    V   I    SSSSS  U   U    A    L              (v 5.0.2025)
V    V   I    SS     U   U   A A   L
 V  V    I     SS    U   U  AAAAA  L
 V  V    I      SS   U   U  A   A  L
  VV     I    SSSSS  UUUUU  A   A  LLLLL

 OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
O   O    T      T    H   H   Y Y   MM MM  O   O
O   O    T      T    H   H    Y    M   M  O   O
 OOO     T      T    H   H    Y    M   M   OOO
```


***** D E T A I L E D O U T P U T *****

```
  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\7071979d-c3ec-43b0-a4e0-89d3f7d945fe\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\7071979d-c3ec-43b0-a4e0-89d3f7d945fe\s


DATE: 07/06/2020                          TIME: 04:30:38

USER:


COMMENTS: _____________________________________________________________


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  ***********************************************
  ** SIMULATION : 100 Year 6 Hour AES           **
  ***********************************************


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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\c1e20d2d
| Ptotal= 80.31 mm |    Comments: 100 Year 6 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00   27.30 |  3.75   11.24 |  5.50    1.61
                0.50    1.61 |  2.25   27.30 |  4.00    6.42 |  5.75    1.61
                0.75    1.61 |  2.50   73.88 |  4.25    6.42 |  6.00    1.61
                1.00    1.61 |  2.75   73.88 |  4.50    3.21 |  6.25    1.61
                1.25    1.61 |  3.00   20.88 |  4.75    3.21 |
                1.50    9.64 |  3.25   20.88 |  5.00    1.61 |
                1.75    9.64 |  3.50   11.24 |  5.25    1.61 |

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--------------------
| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    9.64 | 3.250   20.88 |  4.83    1.61
               0.167    0.00 | 1.750    9.64 | 3.333   11.24 |  4.92    1.61
               0.250    0.00 | 1.833   27.30 | 3.417   11.24 |  5.00    1.61
               0.333    1.61 | 1.917   27.30 | 3.500   11.24 |  5.08    1.61
               0.417    1.61 | 2.000   27.30 | 3.583   11.24 |  5.17    1.61
               0.500    1.61 | 2.083   27.30 | 3.667   11.24 |  5.25    1.61
               0.583    1.61 | 2.167   27.30 | 3.750   11.24 |  5.33    1.61
               0.667    1.61 | 2.250   27.30 | 3.833    6.42 |  5.42    1.61
               0.750    1.61 | 2.333   73.88 | 3.917    6.42 |  5.50    1.61
               0.833    1.61 | 2.417   73.88 | 4.000    6.42 |  5.58    1.61
               0.917    1.61 | 2.500   73.88 | 4.083    6.42 |  5.67    1.61
               1.000    1.61 | 2.583   73.88 | 4.167    6.42 |  5.75    1.61
               1.083    1.61 | 2.667   73.88 | 4.250    6.42 |  5.83    1.61
               1.167    1.61 | 2.750   73.88 | 4.333    3.21 |  5.92    1.61
               1.250    1.61 | 2.833   20.88 | 4.417    3.21 |  6.00    1.61
               1.333    9.64 | 2.917   20.88 | 4.500    3.21 |  6.08    1.61
               1.417    9.64 | 3.000   20.88 | 4.583    3.21 |  6.17    1.61
               1.500    9.64 | 3.083   20.88 | 4.667    3.21 |  6.25    1.61
               1.583    9.64 | 3.167   20.88 | 4.750    3.21 |

    Unit Hyd Qpeak  (cms)=   0.019

    PEAK FLOW       (cms)=   0.013 (i)
    TIME TO PEAK    (hrs)=   2.833
    RUNOFF VOLUME    (mm)=  43.233
    TOTAL RAINFALL   (mm)=  80.310
    RUNOFF COEFFICIENT   =   0.538

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\c1e20d2d
| Ptotal= 80.31 mm |    Comments: 100 Year 6 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00   27.30 |  3.75   11.24 |  5.50    1.61
                0.50    1.61 |  2.25   27.30 |  4.00    6.42 |  5.75    1.61
                0.75    1.61 |  2.50   73.88 |  4.25    6.42 |  6.00    1.61
                1.00    1.61 |  2.75   73.88 |  4.50    3.21 |  6.25    1.61
                1.25    1.61 |  3.00   20.88 |  4.75    3.21 |
                1.50    9.64 |  3.25   20.88 |  5.00    1.61 |
                1.75    9.64 |  3.50   11.24 |  5.25    1.61 |

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--------------------
| CALIB            |
| STANDHYD (  0205)|   Area    (ha)=   1.12
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=          1.11          0.01
    Dep. Storage     (mm)=          1.00          5.00
    Average Slope     (%)=          1.00          2.00
    Length            (m)=         86.60         40.00
    Mannings n           =         0.013         0.250

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    9.64 | 3.250   20.88 |  4.83    1.61
               0.167    0.00 | 1.750    9.64 | 3.333   11.24 |  4.92    1.61
               0.250    0.00 | 1.833   27.30 | 3.417   11.24 |  5.00    1.61
               0.333    1.61 | 1.917   27.30 | 3.500   11.24 |  5.08    1.61
               0.417    1.61 | 2.000   27.30 | 3.583   11.24 |  5.17    1.61
               0.500    1.61 | 2.083   27.30 | 3.667   11.24 |  5.25    1.61
```

0.583	1.61	2.167	27.30	3.750	11.24	5.33	1.61
0.667	1.61	2.250	27.30	3.833	6.42	5.42	1.61
0.750	1.61	2.333	73.88	3.917	6.42	5.50	1.61
0.833	1.61	2.417	73.88	4.000	6.42	5.58	1.61
0.917	1.61	2.500	73.88	4.083	6.42	5.67	1.61
1.000	1.61	2.583	73.88	4.167	6.42	5.75	1.61
1.083	1.61	2.667	73.88	4.250	6.42	5.83	1.61
1.167	1.61	2.750	73.88	4.333	3.21	5.92	1.61
1.250	1.61	2.833	20.88	4.417	3.21	6.00	1.61
1.333	9.64	2.917	20.88	4.500	3.21	6.08	1.61
1.417	9.64	3.000	20.88	4.583	3.21	6.17	1.61
1.500	9.64	3.083	20.88	4.667	3.21	6.25	1.61
1.583	9.64	3.167	20.88	4.750	3.21		

				TOTALS
Max.Eff.Inten.(mm/hr)=		73.88	51.56	
over (min)		5.00	5.00	
Storage Coeff. (min)=		2.65 (ii)	3.91 (ii)	
Unit Hyd. Tpeak (min)=		5.00	5.00	
Unit Hyd. peak (cms)=		0.29	0.25	
PEAK FLOW	(cms)=	0.23	0.00	0.230 (iii)
TIME TO PEAK	(hrs)=	2.75	2.75	2.75
RUNOFF VOLUME	(mm)=	79.31	43.27	78.95
TOTAL RAINFALL	(mm)=	80.31	80.31	80.31
RUNOFF COEFFICIENT	=	0.99	0.54	0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0256)				
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0470	0.0750

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0205)	1.125	0.230	2.75	78.95
OUTFLOW: ID= 1 (0256)	1.125	0.039	3.33	78.60

PEAK FLOW REDUCTION [Qout/Qin](%)= 16.73
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.0615

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\532f9adf-2237-4159-99ad-dfda1740d167\c1e20d2d
Ptotal= 80.31 mm	Comments: 100 Year 6 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	27.30	3.75	11.24	5.50	1.61
0.50	1.61	2.25	27.30	4.00	6.42	5.75	1.61
0.75	1.61	2.50	73.88	4.25	6.42	6.00	1.61
1.00	1.61	2.75	73.88	4.50	3.21	6.25	1.61
1.25	1.61	3.00	20.88	4.75	3.21		
1.50	9.64	3.25	20.88	5.00	1.61		
1.75	9.64	3.50	11.24	5.25	1.61		

CALIB STANDHYD (0203) ID= 1 DT= 5.0 min	Area (ha)= 2.10 Total Imp(%)= 80.00 Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.68	0.42
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	118.18	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	9.64	3.250	20.88	4.83	1.61
0.167	0.00	1.750	9.64	3.333	11.24	4.92	1.61
0.250	0.00	1.833	27.30	3.417	11.24	5.00	1.61
0.333	1.61	1.917	27.30	3.500	11.24	5.08	1.61
0.417	1.61	2.000	27.30	3.583	11.24	5.17	1.61
0.500	1.61	2.083	27.30	3.667	11.24	5.25	1.61
0.583	1.61	2.167	27.30	3.750	11.24	5.33	1.61
0.667	1.61	2.250	27.30	3.833	6.42	5.42	1.61
0.750	1.61	2.333	73.88	3.917	6.42	5.50	1.61
0.833	1.61	2.417	73.88	4.000	6.42	5.58	1.61
0.917	1.61	2.500	73.88	4.083	6.42	5.67	1.61
1.000	1.61	2.583	73.88	4.167	6.42	5.75	1.61
1.083	1.61	2.667	73.88	4.250	6.42	5.83	1.61
1.167	1.61	2.750	73.88	4.333	3.21	5.92	1.61
1.250	1.61	2.833	20.88	4.417	3.21	6.00	1.61
1.333	9.64	2.917	20.88	4.500	3.21	6.08	1.61
1.417	9.64	3.000	20.88	4.583	3.21	6.17	1.61
1.500	9.64	3.083	20.88	4.667	3.21	6.25	1.61
1.583	9.64	3.167	20.88	4.750	3.21		

				TOTALS
Max.Eff.Inten.(mm/hr)=		73.88	51.56	
over (min)		5.00	10.00	
Storage Coeff. (min)=		3.19 (ii)	7.76 (ii)	
Unit Hyd. Tpeak (min)=		5.00	10.00	
Unit Hyd. peak (cms)=		0.27	0.13	
PEAK FLOW	(cms)=	0.34	0.05	0.398 (iii)
TIME TO PEAK	(hrs)=	2.75	2.75	2.75
RUNOFF VOLUME	(mm)=	79.31	43.27	72.10
TOTAL RAINFALL	(mm)=	80.31	80.31	80.31
RUNOFF COEFFICIENT	=	0.99	0.54	0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0260)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0203):     2.10   0.398     2.75    72.10
     + ID2= 2 (  0256):     1.12   0.039     3.33    78.60
       ================================================
       ID = 3 (  0260):     3.22   0.431     2.75    74.37

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\c1e20d2d
| Ptotal= 80.31 mm |    Comments: 100 Year 6 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00   27.30 |  3.75   11.24 |  5.50    1.61
                0.50    1.61 |  2.25   27.30 |  4.00    6.42 |  5.75    1.61
                0.75    1.61 |  2.50   73.88 |  4.25    6.42 |  6.00    1.61
                1.00    1.61 |  2.75   73.88 |  4.50    3.21 |  6.25    1.61
                1.25    1.61 |  3.00   20.88 |  4.75    3.21 |
                1.50    9.64 |  3.25   20.88 |  5.00    1.61 |
                1.75    9.64 |  3.50   11.24 |  5.25    1.61 |

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--------------------
| CALIB            |
| STANDHYD (  0204)|   Area    (ha)=   1.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.16         0.29
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      98.32        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    9.64 | 3.250   20.88 |  4.83    1.61
               0.167    0.00 | 1.750    9.64 | 3.333   11.24 |  4.92    1.61
               0.250    0.00 | 1.833   27.30 | 3.417   11.24 |  5.00    1.61
               0.333    1.61 | 1.917   27.30 | 3.500   11.24 |  5.08    1.61
               0.417    1.61 | 2.000   27.30 | 3.583   11.24 |  5.17    1.61
               0.500    1.61 | 2.083   27.30 | 3.667   11.24 |  5.25    1.61
               0.583    1.61 | 2.167   27.30 | 3.750   11.24 |  5.33    1.61
               0.667    1.61 | 2.250   27.30 | 3.833    6.42 |  5.42    1.61
               0.750    1.61 | 2.333   73.88 | 3.917    6.42 |  5.50    1.61
               0.833    1.61 | 2.417   73.88 | 4.000    6.42 |  5.58    1.61
               0.917    1.61 | 2.500   73.88 | 4.083    6.42 |  5.67    1.61
               1.000    1.61 | 2.583   73.88 | 4.167    6.42 |  5.75    1.61
               1.083    1.61 | 2.667   73.88 | 4.250    6.42 |  5.83    1.61
               1.167    1.61 | 2.750   73.88 | 4.333    3.21 |  5.92    1.61
               1.250    1.61 | 2.833   20.88 | 4.417    3.21 |  6.00    1.61
               1.333    9.64 | 2.917   20.88 | 4.500    3.21 |  6.08    1.61
               1.417    9.64 | 3.000   20.88 | 4.583    3.21 |  6.17    1.61
               1.500    9.64 | 3.083   20.88 | 4.667    3.21 |  6.25    1.61
               1.583    9.64 | 3.167   20.88 | 4.750    3.21 |

     Max.Eff.Inten.(mm/hr)=      73.88        51.56
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       2.85 (ii)    7.43 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.28         0.13
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.24         0.04          0.276 (iii)
     TIME TO PEAK    (hrs)=       2.75         2.75           2.75
     RUNOFF VOLUME    (mm)=      79.31        43.27          72.10
     TOTAL RAINFALL   (mm)=      80.31        80.31          80.31
     RUNOFF COEFFICIENT   =       0.99         0.54           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0259)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0204):     1.45   0.276     2.75    72.10
     + ID2= 2 (  0260):     3.22   0.431     2.75    74.37
       ================================================
       ID = 3 (  0259):     4.67   0.707     2.75    73.66

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\c1e20d2d
| Ptotal= 80.31 mm |    Comments: 100 Year 6 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00   27.30 |  3.75   11.24 |  5.50    1.61
                0.50    1.61 |  2.25   27.30 |  4.00    6.42 |  5.75    1.61
                0.75    1.61 |  2.50   73.88 |  4.25    6.42 |  6.00    1.61
                1.00    1.61 |  2.75   73.88 |  4.50    3.21 |  6.25    1.61
                1.25    1.61 |  3.00   20.88 |  4.75    3.21 |
                1.50    9.64 |  3.25   20.88 |  5.00    1.61 |
                1.75    9.64 |  3.50   11.24 |  5.25    1.61 |

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| CALIB            |
| STANDHYD (  0201)|   Area    (ha)=   5.27
```

|ID= 1 DT= 5.0 min | Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.22	0.05
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	187.44	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	9.64	3.250	20.88	4.83	1.61
0.167	0.00	1.750	9.64	3.333	11.24	4.92	1.61
0.250	0.00	1.833	27.30	3.417	11.24	5.00	1.61
0.333	1.61	1.917	27.30	3.500	11.24	5.08	1.61
0.417	1.61	2.000	27.30	3.583	11.24	5.17	1.61
0.500	1.61	2.083	27.30	3.667	11.24	5.25	1.61
0.583	1.61	2.167	27.30	3.750	11.24	5.33	1.61
0.667	1.61	2.250	27.30	3.833	6.42	5.42	1.61
0.750	1.61	2.333	73.88	3.917	6.42	5.50	1.61
0.833	1.61	2.417	73.88	4.000	6.42	5.58	1.61
0.917	1.61	2.500	73.88	4.083	6.42	5.67	1.61
1.000	1.61	2.583	73.88	4.167	6.42	5.75	1.61
1.083	1.61	2.667	73.88	4.250	6.42	5.83	1.61
1.167	1.61	2.750	73.88	4.333	3.21	5.92	1.61
1.250	1.61	2.833	20.88	4.417	3.21	6.00	1.61
1.333	9.64	2.917	20.88	4.500	3.21	6.08	1.61
1.417	9.64	3.000	20.88	4.583	3.21	6.17	1.61
1.500	9.64	3.083	20.88	4.667	3.21	6.25	1.61
1.583	9.64	3.167	20.88	4.750	3.21		

				TOTALS
Max.Eff.Inten.(mm/hr)=		73.88	51.56	
over (min)		5.00	10.00	
Storage Coeff. (min)=		4.20 (ii)	5.47 (ii)	
Unit Hyd. Tpeak (min)=		5.00	10.00	
Unit Hyd. peak (cms)=		0.24	0.16	
PEAK FLOW	(cms)=	1.07	0.01	1.077 (iii)
TIME TO PEAK	(hrs)=	2.75	2.75	2.75
RUNOFF VOLUME	(mm)=	79.31	43.27	78.95
TOTAL RAINFALL	(mm)=	80.31	80.31	80.31
RUNOFF COEFFICIENT	=	0.99	0.54	0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0268)| IN= 2---> OUT= 1	DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1959	0.1883
	0.0980	0.0369	0.2939	0.4335

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)	5.270	1.077	2.75	78.95
OUTFLOW: ID= 1 (0268)	5.270	0.221	3.33	78.93

PEAK FLOW REDUCTION [Qout/Qin](%)= 20.52
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.2515

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\532f9adf-2237-4159-99ad-dfda1740d167\c1e20d2d
Ptotal= 80.31 mm	Comments: 100 Year 6 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	27.30	3.75	11.24	5.50	1.61
0.50	1.61	2.25	27.30	4.00	6.42	5.75	1.61
0.75	1.61	2.50	73.88	4.25	6.42	6.00	1.61
1.00	1.61	2.75	73.88	4.50	3.21	6.25	1.61
1.25	1.61	3.00	20.88	4.75	3.21		
1.50	9.64	3.25	20.88	5.00	1.61		
1.75	9.64	3.50	11.24	5.25	1.61		

CALIB	STANDHYD (0202)	Area (ha)= 6.57
ID= 1 DT= 5.0 min	Total Imp(%)= 81.00	Dir. Conn.(%)= 81.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.32	1.25
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	209.28	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	9.64	3.250	20.88	4.83	1.61
0.167	0.00	1.750	9.64	3.333	11.24	4.92	1.61
0.250	0.00	1.833	27.30	3.417	11.24	5.00	1.61
0.333	1.61	1.917	27.30	3.500	11.24	5.08	1.61
0.417	1.61	2.000	27.30	3.583	11.24	5.17	1.61
0.500	1.61	2.083	27.30	3.667	11.24	5.25	1.61
0.583	1.61	2.167	27.30	3.750	11.24	5.33	1.61
0.667	1.61	2.250	27.30	3.833	6.42	5.42	1.61
0.750	1.61	2.333	73.88	3.917	6.42	5.50	1.61
0.833	1.61	2.417	73.88	4.000	6.42	5.58	1.61
0.917	1.61	2.500	73.88	4.083	6.42	5.67	1.61
1.000	1.61	2.583	73.88	4.167	6.42	5.75	1.61
1.083	1.61	2.667	73.88	4.250	6.42	5.83	1.61
1.167	1.61	2.750	73.88	4.333	3.21	5.92	1.61
1.250	1.61	2.833	20.88	4.417	3.21	6.00	1.61
1.333	9.64	2.917	20.88	4.500	3.21	6.08	1.61
1.417	9.64	3.000	20.88	4.583	3.21	6.17	1.61

```
               1.500    9.64 | 3.083   20.88 | 4.667    3.21 |  6.25    1.61
               1.583    9.64 | 3.167   20.88 | 4.750    3.21 |

     Max.Eff.Inten.(mm/hr)=      73.88        51.56
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       4.49 (ii)    8.95 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.23         0.12
                                                        *TOTALS*
     PEAK FLOW       (cms)=       1.09         0.16         1.249 (iii)
     TIME TO PEAK    (hrs)=       2.75         2.75          2.75
     RUNOFF VOLUME    (mm)=      79.31        43.27         72.46
     TOTAL RAINFALL   (mm)=      80.31        80.31         80.31
     RUNOFF COEFFICIENT   =       0.99         0.54          0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0262)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0202):     6.57   1.249     2.75    72.46
     + ID2= 2 (  0268):     5.27   0.221     3.33    78.93
       ================================================
       ID = 3 (  0262):    11.84   1.455     2.75    75.34

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (  0266)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0259):     4.67   0.707     2.75    73.66
     + ID2= 2 (  0262):    11.84   1.455     2.75    75.34
       ================================================
       ID = 3 (  0266):    16.51   2.162     2.75    74.87

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0263)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                        0.0000     0.0000    |   0.2130      0.6563
                        0.0190     0.1773    |   0.2520      0.6883
                        0.0220     0.2128    |   0.2890      0.7150
                        0.0260     0.2888    |   0.2980      0.7450
                        0.0300     0.3648    |   0.3060      0.7700
                        0.0650     0.4586    |   0.3150      0.8127
                        0.1100     0.5155    |   0.3320      0.9290
                        0.1680     0.5503    |   0.3390      0.9767
                        0.1930     0.5804    |   0.3520      1.0680
                        0.2000     0.6048    |   0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0266)     16.510     2.162      2.75      74.87
   OUTFLOW: ID= 1 (  0263)     16.510     0.299      4.83      74.72

                PEAK   FLOW   REDUCTION [Qout/Qin](%)= 13.85
                TIME SHIFT OF PEAK FLOW         (min)=125.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.7498

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--------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0206):     0.12   0.013     2.83    43.23
     + ID2= 2 (  0263):    16.51   0.299     4.83    74.72
       ================================================
       ID = 3 (  0261):    16.64   0.301     4.75    74.49

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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       V    V   I    SSSSS  U   U    A    L              (v 5.0.2025)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\f8929c83-f604-457f-a465-0b1ae2b7052b\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\f8929c83-f604-457f-a465-0b1ae2b7052b\s


DATE: 07/06/2020                          TIME: 04:30:38

USER:



COMMENTS: _____________________________________________________________


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  **********************************************
  ** SIMULATION : 2 Year 6 Hour AES            **
  **********************************************


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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\712b2231
| Ptotal= 36.00 mm |    Comments: 2 Year 6 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00   12.24 |  3.75    5.04 |  5.50    0.72
                0.50    0.72 |  2.25   12.24 |  4.00    2.88 |  5.75    0.72
                0.75    0.72 |  2.50   33.12 |  4.25    2.88 |  6.00    0.72
                1.00    0.72 |  2.75   33.12 |  4.50    1.44 |  6.25    0.72
                1.25    0.72 |  3.00    9.36 |  4.75    1.44 |
                1.50    4.32 |  3.25    9.36 |  5.00    0.72 |
                1.75    4.32 |  3.50    5.04 |  5.25    0.72 |

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--------------------
| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    4.32 | 3.250    9.36 |  4.83    0.72
               0.167    0.00 | 1.750    4.32 | 3.333    5.04 |  4.92    0.72
               0.250    0.00 | 1.833   12.24 | 3.417    5.04 |  5.00    0.72
               0.333    0.72 | 1.917   12.24 | 3.500    5.04 |  5.08    0.72
               0.417    0.72 | 2.000   12.24 | 3.583    5.04 |  5.17    0.72
               0.500    0.72 | 2.083   12.24 | 3.667    5.04 |  5.25    0.72
               0.583    0.72 | 2.167   12.24 | 3.750    5.04 |  5.33    0.72
               0.667    0.72 | 2.250   12.24 | 3.833    2.88 |  5.42    0.72
               0.750    0.72 | 2.333   33.12 | 3.917    2.88 |  5.50    0.72
               0.833    0.72 | 2.417   33.12 | 4.000    2.88 |  5.58    0.72
               0.917    0.72 | 2.500   33.12 | 4.083    2.88 |  5.67    0.72
               1.000    0.72 | 2.583   33.12 | 4.167    2.88 |  5.75    0.72
               1.083    0.72 | 2.667   33.12 | 4.250    2.88 |  5.83    0.72
               1.167    0.72 | 2.750   33.12 | 4.333    1.44 |  5.92    0.72
               1.250    0.72 | 2.833    9.36 | 4.417    1.44 |  6.00    0.72
               1.333    4.32 | 2.917    9.36 | 4.500    1.44 |  6.08    0.72
               1.417    4.32 | 3.000    9.36 | 4.583    1.44 |  6.17    0.72
               1.500    4.32 | 3.083    9.36 | 4.667    1.44 |  6.25    0.72
               1.583    4.32 | 3.167    9.36 | 4.750    1.44 |

    Unit Hyd Qpeak  (cms)=   0.019

    PEAK FLOW       (cms)=   0.003 (i)
    TIME TO PEAK    (hrs)=   2.833
    RUNOFF VOLUME    (mm)=  11.063
    TOTAL RAINFALL   (mm)=  36.000
    RUNOFF COEFFICIENT   =   0.307

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\712b2231
| Ptotal= 36.00 mm |    Comments: 2 Year 6 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00   12.24 |  3.75    5.04 |  5.50    0.72
                0.50    0.72 |  2.25   12.24 |  4.00    2.88 |  5.75    0.72
                0.75    0.72 |  2.50   33.12 |  4.25    2.88 |  6.00    0.72
                1.00    0.72 |  2.75   33.12 |  4.50    1.44 |  6.25    0.72
                1.25    0.72 |  3.00    9.36 |  4.75    1.44 |
                1.50    4.32 |  3.25    9.36 |  5.00    0.72 |
                1.75    4.32 |  3.50    5.04 |  5.25    0.72 |

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--------------------
| CALIB            |
| STANDHYD (  0205)|   Area    (ha)=   1.12
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------

                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.11         0.01
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      86.60        40.00
     Mannings n           =      0.013        0.250

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    4.32 | 3.250    9.36 |  4.83    0.72
               0.167    0.00 | 1.750    4.32 | 3.333    5.04 |  4.92    0.72
               0.250    0.00 | 1.833   12.24 | 3.417    5.04 |  5.00    0.72
               0.333    0.72 | 1.917   12.24 | 3.500    5.04 |  5.08    0.72
               0.417    0.72 | 2.000   12.24 | 3.583    5.04 |  5.17    0.72
               0.500    0.72 | 2.083   12.24 | 3.667    5.04 |  5.25    0.72
               0.583    0.72 | 2.167   12.24 | 3.750    5.04 |  5.33    0.72
               0.667    0.72 | 2.250   12.24 | 3.833    2.88 |  5.42    0.72
               0.750    0.72 | 2.333   33.12 | 3.917    2.88 |  5.50    0.72
               0.833    0.72 | 2.417   33.12 | 4.000    2.88 |  5.58    0.72
               0.917    0.72 | 2.500   33.12 | 4.083    2.88 |  5.67    0.72
               1.000    0.72 | 2.583   33.12 | 4.167    2.88 |  5.75    0.72
               1.083    0.72 | 2.667   33.12 | 4.250    2.88 |  5.83    0.72
               1.167    0.72 | 2.750   33.12 | 4.333    1.44 |  5.92    0.72
               1.250    0.72 | 2.833    9.36 | 4.417    1.44 |  6.00    0.72
               1.333    4.32 | 2.917    9.36 | 4.500    1.44 |  6.08    0.72
               1.417    4.32 | 3.000    9.36 | 4.583    1.44 |  6.17    0.72
               1.500    4.32 | 3.083    9.36 | 4.667    1.44 |  6.25    0.72
               1.583    4.32 | 3.167    9.36 | 4.750    1.44 |

    Max.Eff.Inten.(mm/hr)=      33.12        14.06
              over (min)        5.00        10.00
    Storage Coeff.  (min)=      3.65 (ii)    5.39 (ii)
    Unit Hyd. Tpeak (min)=      5.00        10.00
    Unit Hyd. peak  (cms)=      0.25         0.16
```

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                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.10         0.00          0.103 (iii)
     TIME TO PEAK    (hrs)=       2.75         2.75           2.75
     RUNOFF VOLUME    (mm)=      35.00        11.08          34.76
     TOTAL RAINFALL   (mm)=      36.00        36.00          36.00
     RUNOFF COEFFICIENT   =       0.97         0.31           0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  0256)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0470      0.0750

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0205)     1.125      0.103      2.75      34.76
   OUTFLOW: ID= 1 (  0256)     1.125      0.017      3.42      34.41

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 16.50
                  TIME SHIFT OF PEAK FLOW         (min)= 40.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0271

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--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\712b2231
| Ptotal= 36.00 mm |    Comments: 2 Year 6 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00   12.24 |  3.75    5.04 |  5.50    0.72
                0.50    0.72 |  2.25   12.24 |  4.00    2.88 |  5.75    0.72
                0.75    0.72 |  2.50   33.12 |  4.25    2.88 |  6.00    0.72
                1.00    0.72 |  2.75   33.12 |  4.50    1.44 |  6.25    0.72
                1.25    0.72 |  3.00    9.36 |  4.75    1.44 |
                1.50    4.32 |  3.25    9.36 |  5.00    0.72 |
                1.75    4.32 |  3.50    5.04 |  5.25    0.72 |

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--------------------
| CALIB            |
| STANDHYD (  0203)|   Area    (ha)=   2.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.68         0.42
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     118.18        40.00
     Mannings n           =      0.013        0.250
```

```
     NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    4.32 | 3.250    9.36 |  4.83    0.72
               0.167    0.00 | 1.750    4.32 | 3.333    5.04 |  4.92    0.72
               0.250    0.00 | 1.833   12.24 | 3.417    5.04 |  5.00    0.72
               0.333    0.72 | 1.917   12.24 | 3.500    5.04 |  5.08    0.72
               0.417    0.72 | 2.000   12.24 | 3.583    5.04 |  5.17    0.72
               0.500    0.72 | 2.083   12.24 | 3.667    5.04 |  5.25    0.72
               0.583    0.72 | 2.167   12.24 | 3.750    5.04 |  5.33    0.72
               0.667    0.72 | 2.250   12.24 | 3.833    2.88 |  5.42    0.72
               0.750    0.72 | 2.333   33.12 | 3.917    2.88 |  5.50    0.72
               0.833    0.72 | 2.417   33.12 | 4.000    2.88 |  5.58    0.72
               0.917    0.72 | 2.500   33.12 | 4.083    2.88 |  5.67    0.72
               1.000    0.72 | 2.583   33.12 | 4.167    2.88 |  5.75    0.72
               1.083    0.72 | 2.667   33.12 | 4.250    2.88 |  5.83    0.72
               1.167    0.72 | 2.750   33.12 | 4.333    1.44 |  5.92    0.72
               1.250    0.72 | 2.833    9.36 | 4.417    1.44 |  6.00    0.72
               1.333    4.32 | 2.917    9.36 | 4.500    1.44 |  6.08    0.72
               1.417    4.32 | 3.000    9.36 | 4.583    1.44 |  6.17    0.72
               1.500    4.32 | 3.083    9.36 | 4.667    1.44 |  6.25    0.72
               1.583    4.32 | 3.167    9.36 | 4.750    1.44 |

     Max.Eff.Inten.(mm/hr)=      33.12        12.45
               over (min)        5.00        25.00
     Storage Coeff.  (min)=      4.39 (ii)   20.63 (ii)
     Unit Hyd. Tpeak (min)=      5.00        25.00
     Unit Hyd. peak  (cms)=      0.23         0.05
                                                    *TOTALS*
     PEAK FLOW       (cms)=      0.15         0.01          0.161 (iii)
     TIME TO PEAK    (hrs)=      2.75         3.00           2.75
     RUNOFF VOLUME    (mm)=     35.00        11.08          30.21
     TOTAL RAINFALL   (mm)=     36.00        36.00          36.00
     RUNOFF COEFFICIENT   =      0.97         0.31           0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0260)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0203):     2.10    0.161     2.75    30.21
     + ID2= 2 (  0256):     1.12    0.017     3.42    34.41
       ================================================
       ID = 3 (  0260):     3.22    0.175     2.75    31.68

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
```

		532f9adf-2237-4159-99ad-dfda1740d167\712b2231
Ptotal= 36.00 mm	Comments: 2 Year 6 Hour AES (Bloor, TRCA)	

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	12.24	3.75	5.04	5.50	0.72
0.50	0.72	2.25	12.24	4.00	2.88	5.75	0.72
0.75	0.72	2.50	33.12	4.25	2.88	6.00	0.72
1.00	0.72	2.75	33.12	4.50	1.44	6.25	0.72
1.25	0.72	3.00	9.36	4.75	1.44		
1.50	4.32	3.25	9.36	5.00	0.72		
1.75	4.32	3.50	5.04	5.25	0.72		

CALIB	
STANDHYD (0204)	Area (ha)= 1.45
ID= 1 DT= 5.0 min	Total Imp(%)= 80.00 Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.16	0.29
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	98.32	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	4.32	3.250	9.36	4.83	0.72
0.167	0.00	1.750	4.32	3.333	5.04	4.92	0.72
0.250	0.00	1.833	12.24	3.417	5.04	5.00	0.72
0.333	0.72	1.917	12.24	3.500	5.04	5.08	0.72
0.417	0.72	2.000	12.24	3.583	5.04	5.17	0.72
0.500	0.72	2.083	12.24	3.667	5.04	5.25	0.72
0.583	0.72	2.167	12.24	3.750	5.04	5.33	0.72
0.667	0.72	2.250	12.24	3.833	2.88	5.42	0.72
0.750	0.72	2.333	33.12	3.917	2.88	5.50	0.72
0.833	0.72	2.417	33.12	4.000	2.88	5.58	0.72
0.917	0.72	2.500	33.12	4.083	2.88	5.67	0.72
1.000	0.72	2.583	33.12	4.167	2.88	5.75	0.72
1.083	0.72	2.667	33.12	4.250	2.88	5.83	0.72
1.167	0.72	2.750	33.12	4.333	1.44	5.92	0.72
1.250	0.72	2.833	9.36	4.417	1.44	6.00	0.72
1.333	4.32	2.917	9.36	4.500	1.44	6.08	0.72
1.417	4.32	3.000	9.36	4.583	1.44	6.17	0.72
1.500	4.32	3.083	9.36	4.667	1.44	6.25	0.72
1.583	4.32	3.167	9.36	4.750	1.44		

				TOTALS
Max.Eff.Inten.(mm/hr)=		33.12	12.45	
over (min)		5.00	25.00	
Storage Coeff. (min)=		3.93 (ii)	20.17 (ii)	
Unit Hyd. Tpeak (min)=		5.00	25.00	
Unit Hyd. peak (cms)=		0.24	0.05	
PEAK FLOW	(cms)=	0.11	0.01	0.111 (iii)
TIME TO PEAK	(hrs)=	2.75	3.00	2.75
RUNOFF VOLUME	(mm)=	35.00	11.08	30.21
TOTAL RAINFALL	(mm)=	36.00	36.00	36.00
RUNOFF COEFFICIENT	=	0.97	0.31	0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0259)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (0204):	1.45	0.111	2.75	30.21
	+ ID2= 2 (0260):	3.22	0.175	2.75	31.68
	ID = 3 (0259):	4.67	0.286	2.75	31.22

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\532f9adf-2237-4159-99ad-dfda1740d167\712b2231
Ptotal= 36.00 mm	Comments: 2 Year 6 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	12.24	3.75	5.04	5.50	0.72
0.50	0.72	2.25	12.24	4.00	2.88	5.75	0.72
0.75	0.72	2.50	33.12	4.25	2.88	6.00	0.72
1.00	0.72	2.75	33.12	4.50	1.44	6.25	0.72
1.25	0.72	3.00	9.36	4.75	1.44		
1.50	4.32	3.25	9.36	5.00	0.72		
1.75	4.32	3.50	5.04	5.25	0.72		

CALIB	
STANDHYD (0201)	Area (ha)= 5.27
ID= 1 DT= 5.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.22	0.05
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	187.44	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	4.32	3.250	9.36	4.83	0.72
0.167	0.00	1.750	4.32	3.333	5.04	4.92	0.72
0.250	0.00	1.833	12.24	3.417	5.04	5.00	0.72
0.333	0.72	1.917	12.24	3.500	5.04	5.08	0.72

0.417	0.72	2.000	12.24	3.583	5.04	5.17	0.72
0.500	0.72	2.083	12.24	3.667	5.04	5.25	0.72
0.583	0.72	2.167	12.24	3.750	5.04	5.33	0.72
0.667	0.72	2.250	12.24	3.833	2.88	5.42	0.72
0.750	0.72	2.333	33.12	3.917	2.88	5.50	0.72
0.833	0.72	2.417	33.12	4.000	2.88	5.58	0.72
0.917	0.72	2.500	33.12	4.083	2.88	5.67	0.72
1.000	0.72	2.583	33.12	4.167	2.88	5.75	0.72
1.083	0.72	2.667	33.12	4.250	2.88	5.83	0.72
1.167	0.72	2.750	33.12	4.333	1.44	5.92	0.72
1.250	0.72	2.833	9.36	4.417	1.44	6.00	0.72
1.333	4.32	2.917	9.36	4.500	1.44	6.08	0.72
1.417	4.32	3.000	9.36	4.583	1.44	6.17	0.72
1.500	4.32	3.083	9.36	4.667	1.44	6.25	0.72
1.583	4.32	3.167	9.36	4.750	1.44		

Max.Eff.Inten.(mm/hr)=	33.12	14.06	
over (min)	5.00	10.00	
Storage Coeff. (min)=	5.79 (ii)	7.54 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.20	0.13	
			TOTALS
PEAK FLOW (cms)=	0.48	0.00	0.480 (iii)
TIME TO PEAK (hrs)=	2.75	2.75	2.75
RUNOFF VOLUME (mm)=	35.00	11.08	34.76
TOTAL RAINFALL (mm)=	36.00	36.00	36.00
RUNOFF COEFFICIENT =	0.97	0.31	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0268)				
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1959	0.1883
	0.0980	0.0369	0.2939	0.4335

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)	5.270	0.480	2.75	34.76
OUTFLOW: ID= 1 (0268)	5.270	0.136	3.25	34.74

PEAK FLOW REDUCTION [Qout/Qin](%)= 28.38
TIME SHIFT OF PEAK FLOW (min)= 30.00
MAXIMUM STORAGE USED (ha.m.)= 0.0961

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\532f9adf-2237-4159-99ad-dfda1740d167\712b2231
Ptotal= 36.00 mm	Comments: 2 Year 6 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	12.24	3.75	5.04	5.50	0.72
0.50	0.72	2.25	12.24	4.00	2.88	5.75	0.72
0.75	0.72	2.50	33.12	4.25	2.88	6.00	0.72
1.00	0.72	2.75	33.12	4.50	1.44	6.25	0.72
1.25	0.72	3.00	9.36	4.75	1.44		
1.50	4.32	3.25	9.36	5.00	0.72		
1.75	4.32	3.50	5.04	5.25	0.72		

CALIB	
STANDHYD (0202)	Area (ha)= 6.57
ID= 1 DT= 5.0 min	Total Imp(%)= 81.00 Dir. Conn.(%)= 81.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.32	1.25
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	209.28	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	4.32	3.250	9.36	4.83	0.72
0.167	0.00	1.750	4.32	3.333	5.04	4.92	0.72
0.250	0.00	1.833	12.24	3.417	5.04	5.00	0.72
0.333	0.72	1.917	12.24	3.500	5.04	5.08	0.72
0.417	0.72	2.000	12.24	3.583	5.04	5.17	0.72
0.500	0.72	2.083	12.24	3.667	5.04	5.25	0.72
0.583	0.72	2.167	12.24	3.750	5.04	5.33	0.72
0.667	0.72	2.250	12.24	3.833	2.88	5.42	0.72
0.750	0.72	2.333	33.12	3.917	2.88	5.50	0.72
0.833	0.72	2.417	33.12	4.000	2.88	5.58	0.72
0.917	0.72	2.500	33.12	4.083	2.88	5.67	0.72
1.000	0.72	2.583	33.12	4.167	2.88	5.75	0.72
1.083	0.72	2.667	33.12	4.250	2.88	5.83	0.72
1.167	0.72	2.750	33.12	4.333	1.44	5.92	0.72
1.250	0.72	2.833	9.36	4.417	1.44	6.00	0.72
1.333	4.32	2.917	9.36	4.500	1.44	6.08	0.72
1.417	4.32	3.000	9.36	4.583	1.44	6.17	0.72
1.500	4.32	3.083	9.36	4.667	1.44	6.25	0.72
1.583	4.32	3.167	9.36	4.750	1.44		

Max.Eff.Inten.(mm/hr)=	33.12	12.45	
over (min)	5.00	25.00	
Storage Coeff. (min)=	6.19 (ii)	22.43 (ii)	
Unit Hyd. Tpeak (min)=	5.00	25.00	
Unit Hyd. peak (cms)=	0.19	0.05	
			TOTALS
PEAK FLOW (cms)=	0.49	0.03	0.506 (iii)
TIME TO PEAK (hrs)=	2.75	3.00	2.75
RUNOFF VOLUME (mm)=	35.00	11.08	30.45
TOTAL RAINFALL (mm)=	36.00	36.00	36.00
RUNOFF COEFFICIENT =	0.97	0.31	0.85

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

```
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-------------------------------------------------------------------------------

-------------------
| ADD HYD  (  0262)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0202):     6.57   0.506     2.75    30.45
     + ID2= 2 (  0268):     5.27   0.136     3.25    34.74
       ================================================
       ID = 3 (  0262):    11.84   0.634     2.75    32.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

-------------------------------------------------------------------------------

-------------------
| ADD HYD  (  0266)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0259):     4.67   0.286     2.75    31.22
     + ID2= 2 (  0262):    11.84   0.634     2.75    32.36
       ================================================
       ID = 3 (  0266):    16.51   0.920     2.75    32.04

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

-------------------------------------------------------------------------------
-------------------
| RESERVOIR(  0263)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.2130      0.6563
                         0.0190     0.1773   |   0.2520      0.6883
                         0.0220     0.2128   |   0.2890      0.7150
                         0.0260     0.2888   |   0.2980      0.7450
                         0.0300     0.3648   |   0.3060      0.7700
                         0.0650     0.4586   |   0.3150      0.8127
                         0.1100     0.5155   |   0.3320      0.9290
                         0.1680     0.5503   |   0.3390      0.9767
                         0.1930     0.5804   |   0.3520      1.0680
                         0.2000     0.6048   |   0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0266)     16.510      0.920      2.75      32.04
   OUTFLOW: ID= 1 (  0263)     16.510      0.058      6.42      31.90

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.27
                  TIME SHIFT OF PEAK FLOW         (min)=220.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.4389

-------------------------------------------------------------------------------

-------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0206):     0.12   0.003     2.83    11.06
     + ID2= 2 (  0263):    16.51   0.058     6.42    31.90
       ================================================
       ID = 3 (  0261):    16.64   0.058     6.42    31.74
```

```
     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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===============================================================================
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       V    V   I    SSSSS  U   U    A    L              (v 5.0.2025)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\cd00d386-05ec-42ad-8542-23415444c346\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\cd00d386-05ec-42ad-8542-23415444c346\s


DATE: 07/06/2020                          TIME: 04:30:38

USER:



COMMENTS: _____________________________________________________________


-------------------------------------------------------------------------------
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  **********************************************
  ** SIMULATION : 25 Year 6 Hour AES           **
  **********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\0ba2d124
| Ptotal= 65.59 mm |    Comments: 25 Year 6 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00   22.30 |  3.75    9.18 |  5.50    1.31
                0.50    1.31 |  2.25   22.30 |  4.00    5.25 |  5.75    1.31
                0.75    1.31 |  2.50   60.35 |  4.25    5.25 |  6.00    1.31
                1.00    1.31 |  2.75   60.35 |  4.50    2.62 |  6.25    1.31
                1.25    1.31 |  3.00   17.06 |  4.75    2.62 |
                1.50    7.87 |  3.25   17.06 |  5.00    1.31 |
                1.75    7.87 |  3.50    9.18 |  5.25    1.31 |
```

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--------------------
| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 1.667    7.87 | 3.250   17.06 |  4.83    1.31
   0.167    0.00 | 1.750    7.87 | 3.333    9.18 |  4.92    1.31
   0.250    0.00 | 1.833   22.30 | 3.417    9.18 |  5.00    1.31
   0.333    1.31 | 1.917   22.30 | 3.500    9.18 |  5.08    1.31
   0.417    1.31 | 2.000   22.30 | 3.583    9.18 |  5.17    1.31
   0.500    1.31 | 2.083   22.30 | 3.667    9.18 |  5.25    1.31
   0.583    1.31 | 2.167   22.30 | 3.750    9.18 |  5.33    1.31
   0.667    1.31 | 2.250   22.30 | 3.833    5.25 |  5.42    1.31
   0.750    1.31 | 2.333   60.35 | 3.917    5.25 |  5.50    1.31
   0.833    1.31 | 2.417   60.35 | 4.000    5.25 |  5.58    1.31
   0.917    1.31 | 2.500   60.35 | 4.083    5.25 |  5.67    1.31
   1.000    1.31 | 2.583   60.35 | 4.167    5.25 |  5.75    1.31
   1.083    1.31 | 2.667   60.35 | 4.250    5.25 |  5.83    1.31
   1.167    1.31 | 2.750   60.35 | 4.333    2.62 |  5.92    1.31
   1.250    1.31 | 2.833   17.06 | 4.417    2.62 |  6.00    1.31
   1.333    7.87 | 2.917   17.06 | 4.500    2.62 |  6.08    1.31
   1.417    7.87 | 3.000   17.06 | 4.583    2.62 |  6.17    1.31
   1.500    7.87 | 3.083   17.06 | 4.667    2.62 |  6.25    1.31
   1.583    7.87 | 3.167   17.06 | 4.750    2.62 |

     Unit Hyd Qpeak  (cms)=   0.019

     PEAK FLOW       (cms)=   0.010 (i)
     TIME TO PEAK    (hrs)=   2.833
     RUNOFF VOLUME    (mm)=  31.524
     TOTAL RAINFALL   (mm)=  65.590
     RUNOFF COEFFICIENT   =   0.481

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\0ba2d124
| Ptotal= 65.59 mm |    Comments: 25 Year 6 Hour AES (Bloor, TRCA)
--------------------
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.25     0.00 |  2.00   22.30 |  3.75    9.18 |  5.50    1.31
   0.50     1.31 |  2.25   22.30 |  4.00    5.25 |  5.75    1.31
   0.75     1.31 |  2.50   60.35 |  4.25    5.25 |  6.00    1.31
   1.00     1.31 |  2.75   60.35 |  4.50    2.62 |  6.25    1.31
   1.25     1.31 |  3.00   17.06 |  4.75    2.62 |
   1.50     7.87 |  3.25   17.06 |  5.00    1.31 |
   1.75     7.87 |  3.50    9.18 |  5.25    1.31 |

--------------------
| CALIB            |
| STANDHYD (  0205)|   Area    (ha)=   1.12
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.11         0.01
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      86.60        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
   0.083    0.00 | 1.667    7.87 | 3.250   17.06 |  4.83    1.31
   0.167    0.00 | 1.750    7.87 | 3.333    9.18 |  4.92    1.31
   0.250    0.00 | 1.833   22.30 | 3.417    9.18 |  5.00    1.31
   0.333    1.31 | 1.917   22.30 | 3.500    9.18 |  5.08    1.31
   0.417    1.31 | 2.000   22.30 | 3.583    9.18 |  5.17    1.31
   0.500    1.31 | 2.083   22.30 | 3.667    9.18 |  5.25    1.31
   0.583    1.31 | 2.167   22.30 | 3.750    9.18 |  5.33    1.31
   0.667    1.31 | 2.250   22.30 | 3.833    5.25 |  5.42    1.31
   0.750    1.31 | 2.333   60.35 | 3.917    5.25 |  5.50    1.31
   0.833    1.31 | 2.417   60.35 | 4.000    5.25 |  5.58    1.31
   0.917    1.31 | 2.500   60.35 | 4.083    5.25 |  5.67    1.31
   1.000    1.31 | 2.583   60.35 | 4.167    5.25 |  5.75    1.31
   1.083    1.31 | 2.667   60.35 | 4.250    5.25 |  5.83    1.31
   1.167    1.31 | 2.750   60.35 | 4.333    2.62 |  5.92    1.31
   1.250    1.31 | 2.833   17.06 | 4.417    2.62 |  6.00    1.31
   1.333    7.87 | 2.917   17.06 | 4.500    2.62 |  6.08    1.31
   1.417    7.87 | 3.000   17.06 | 4.583    2.62 |  6.17    1.31
   1.500    7.87 | 3.083   17.06 | 4.667    2.62 |  6.25    1.31
   1.583    7.87 | 3.167   17.06 | 4.750    2.62 |

     Max.Eff.Inten.(mm/hr)=      60.35        38.26
               over (min)        5.00         5.00
     Storage Coeff.  (min)=      2.87 (ii)    4.24 (ii)
     Unit Hyd. Tpeak (min)=      5.00         5.00
     Unit Hyd. peak  (cms)=      0.28         0.24
                                                      *TOTALS*
     PEAK FLOW       (cms)=      0.19         0.00       0.188 (iii)
     TIME TO PEAK    (hrs)=      2.75         2.75        2.75
     RUNOFF VOLUME    (mm)=     64.59        31.55       64.26
     TOTAL RAINFALL   (mm)=     65.59        65.59       65.59
     RUNOFF COEFFICIENT   =      0.98         0.48        0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------
| RESERVOIR(  0256)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
```

```
                        0.0000     0.0000   |   0.0470      0.0750

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0205)      1.125      0.188      2.75      64.26
   OUTFLOW: ID= 1 (  0256)      1.125      0.031      3.33      63.90

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 16.69
                  TIME SHIFT OF PEAK FLOW         (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0501

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\0ba2d124
| Ptotal= 65.59 mm |    Comments: 25 Year 6 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00   22.30 |  3.75    9.18 |  5.50    1.31
                0.50    1.31 |  2.25   22.30 |  4.00    5.25 |  5.75    1.31
                0.75    1.31 |  2.50   60.35 |  4.25    5.25 |  6.00    1.31
                1.00    1.31 |  2.75   60.35 |  4.50    2.62 |  6.25    1.31
                1.25    1.31 |  3.00   17.06 |  4.75    2.62 |
                1.50    7.87 |  3.25   17.06 |  5.00    1.31 |
                1.75    7.87 |  3.50    9.18 |  5.25    1.31 |

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--------------------
| CALIB            |
| STANDHYD (  0203)|   Area    (ha)=   2.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.68         0.42
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     118.18        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    7.87 | 3.250   17.06 |  4.83    1.31
               0.167    0.00 | 1.750    7.87 | 3.333    9.18 |  4.92    1.31
               0.250    0.00 | 1.833   22.30 | 3.417    9.18 |  5.00    1.31
               0.333    1.31 | 1.917   22.30 | 3.500    9.18 |  5.08    1.31
               0.417    1.31 | 2.000   22.30 | 3.583    9.18 |  5.17    1.31
               0.500    1.31 | 2.083   22.30 | 3.667    9.18 |  5.25    1.31
               0.583    1.31 | 2.167   22.30 | 3.750    9.18 |  5.33    1.31
               0.667    1.31 | 2.250   22.30 | 3.833    5.25 |  5.42    1.31
               0.750    1.31 | 2.333   60.35 | 3.917    5.25 |  5.50    1.31
               0.833    1.31 | 2.417   60.35 | 4.000    5.25 |  5.58    1.31
               0.917    1.31 | 2.500   60.35 | 4.083    5.25 |  5.67    1.31
               1.000    1.31 | 2.583   60.35 | 4.167    5.25 |  5.75    1.31
               1.083    1.31 | 2.667   60.35 | 4.250    5.25 |  5.83    1.31
               1.167    1.31 | 2.750   60.35 | 4.333    2.62 |  5.92    1.31
               1.250    1.31 | 2.833   17.06 | 4.417    2.62 |  6.00    1.31
               1.333    7.87 | 2.917   17.06 | 4.500    2.62 |  6.08    1.31
               1.417    7.87 | 3.000   17.06 | 4.583    2.62 |  6.17    1.31
               1.500    7.87 | 3.083   17.06 | 4.667    2.62 |  6.25    1.31
               1.583    7.87 | 3.167   17.06 | 4.750    2.62 |

     Max.Eff.Inten.(mm/hr)=      60.35        38.26
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       3.46 (ii)    8.42 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.26         0.12
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.28         0.04          0.320 (iii)
     TIME TO PEAK    (hrs)=       2.75         2.75           2.75
     RUNOFF VOLUME    (mm)=      64.59        31.55          57.98
     TOTAL RAINFALL   (mm)=      65.59        65.59          65.59
     RUNOFF COEFFICIENT   =       0.98         0.48           0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0260)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0203):     2.10   0.320     2.75    57.98
     + ID2= 2 (  0256):     1.12   0.031     3.33    63.90
       ================================================
       ID = 3 (  0260):     3.22   0.347     2.75    60.05

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\0ba2d124
| Ptotal= 65.59 mm |    Comments: 25 Year 6 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00   22.30 |  3.75    9.18 |  5.50    1.31
                0.50    1.31 |  2.25   22.30 |  4.00    5.25 |  5.75    1.31
                0.75    1.31 |  2.50   60.35 |  4.25    5.25 |  6.00    1.31
                1.00    1.31 |  2.75   60.35 |  4.50    2.62 |  6.25    1.31
                1.25    1.31 |  3.00   17.06 |  4.75    2.62 |
                1.50    7.87 |  3.25   17.06 |  5.00    1.31 |
                1.75    7.87 |  3.50    9.18 |  5.25    1.31 |

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--------------------
| CALIB            |
| STANDHYD (  0204)|   Area    (ha)=   1.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
```

Surface Area	(ha)=	1.16	0.29
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	98.32	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	7.87	3.250	17.06	4.83	1.31
0.167	0.00	1.750	7.87	3.333	9.18	4.92	1.31
0.250	0.00	1.833	22.30	3.417	9.18	5.00	1.31
0.333	1.31	1.917	22.30	3.500	9.18	5.08	1.31
0.417	1.31	2.000	22.30	3.583	9.18	5.17	1.31
0.500	1.31	2.083	22.30	3.667	9.18	5.25	1.31
0.583	1.31	2.167	22.30	3.750	9.18	5.33	1.31
0.667	1.31	2.250	22.30	3.833	5.25	5.42	1.31
0.750	1.31	2.333	60.35	3.917	5.25	5.50	1.31
0.833	1.31	2.417	60.35	4.000	5.25	5.58	1.31
0.917	1.31	2.500	60.35	4.083	5.25	5.67	1.31
1.000	1.31	2.583	60.35	4.167	5.25	5.75	1.31
1.083	1.31	2.667	60.35	4.250	5.25	5.83	1.31
1.167	1.31	2.750	60.35	4.333	2.62	5.92	1.31
1.250	1.31	2.833	17.06	4.417	2.62	6.00	1.31
1.333	7.87	2.917	17.06	4.500	2.62	6.08	1.31
1.417	7.87	3.000	17.06	4.583	2.62	6.17	1.31
1.500	7.87	3.083	17.06	4.667	2.62	6.25	1.31
1.583	7.87	3.167	17.06	4.750	2.62		

Max.Eff.Inten.(mm/hr)	=	60.35	38.26	
	over (min)	5.00	10.00	
Storage Coeff.	(min)=	3.09 (ii)	8.06 (ii)	
Unit Hyd. Tpeak	(min)=	5.00	10.00	
Unit Hyd. peak	(cms)=	0.27	0.13	
				TOTALS
PEAK FLOW	(cms)=	0.19	0.03	0.222 (iii)
TIME TO PEAK	(hrs)=	2.75	2.75	2.75
RUNOFF VOLUME	(mm)=	64.59	31.55	57.98
TOTAL RAINFALL	(mm)=	65.59	65.59	65.59
RUNOFF COEFFICIENT	=	0.98	0.48	0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0259)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0204):	1.45	0.222	2.75	57.98
+ ID2= 2 (0260):	3.22	0.347	2.75	60.05
ID = 3 (0259):	4.67	0.569	2.75	59.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM | Filename: C:\Users\mventresca\AppData\Local\Temp\532f9adf-2237-4159-99ad-dfda1740d167\0ba2d124
Ptotal= 65.59 mm | Comments: 25 Year 6 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	22.30	3.75	9.18	5.50	1.31
0.50	1.31	2.25	22.30	4.00	5.25	5.75	1.31
0.75	1.31	2.50	60.35	4.25	5.25	6.00	1.31
1.00	1.31	2.75	60.35	4.50	2.62	6.25	1.31
1.25	1.31	3.00	17.06	4.75	2.62		
1.50	7.87	3.25	17.06	5.00	1.31		
1.75	7.87	3.50	9.18	5.25	1.31		

CALIB
STANDHYD (0201) | Area (ha)= 5.27
ID= 1 DT= 5.0 min | Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.22	0.05
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	187.44	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	7.87	3.250	17.06	4.83	1.31
0.167	0.00	1.750	7.87	3.333	9.18	4.92	1.31
0.250	0.00	1.833	22.30	3.417	9.18	5.00	1.31
0.333	1.31	1.917	22.30	3.500	9.18	5.08	1.31
0.417	1.31	2.000	22.30	3.583	9.18	5.17	1.31
0.500	1.31	2.083	22.30	3.667	9.18	5.25	1.31
0.583	1.31	2.167	22.30	3.750	9.18	5.33	1.31
0.667	1.31	2.250	22.30	3.833	5.25	5.42	1.31
0.750	1.31	2.333	60.35	3.917	5.25	5.50	1.31
0.833	1.31	2.417	60.35	4.000	5.25	5.58	1.31
0.917	1.31	2.500	60.35	4.083	5.25	5.67	1.31
1.000	1.31	2.583	60.35	4.167	5.25	5.75	1.31
1.083	1.31	2.667	60.35	4.250	5.25	5.83	1.31
1.167	1.31	2.750	60.35	4.333	2.62	5.92	1.31
1.250	1.31	2.833	17.06	4.417	2.62	6.00	1.31
1.333	7.87	2.917	17.06	4.500	2.62	6.08	1.31
1.417	7.87	3.000	17.06	4.583	2.62	6.17	1.31
1.500	7.87	3.083	17.06	4.667	2.62	6.25	1.31
1.583	7.87	3.167	17.06	4.750	2.62		

Max.Eff.Inten.(mm/hr)	=	60.35	38.26
	over (min)	5.00	10.00
Storage Coeff.	(min)=	4.56 (ii)	5.93 (ii)
Unit Hyd. Tpeak	(min)=	5.00	10.00
Unit Hyd. peak	(cms)=	0.23	0.15

```
                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.87         0.01          0.879 (iii)
     TIME TO PEAK    (hrs)=       2.75         2.75           2.75
     RUNOFF VOLUME    (mm)=      64.59        31.55          64.26
     TOTAL RAINFALL   (mm)=      65.59        65.59          65.59
     RUNOFF COEFFICIENT   =       0.98         0.48           0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  0268)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.1959      0.1883
                         0.0980     0.0369   |   0.2939      0.4335

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0201)     5.270      0.879      2.75      64.26
   OUTFLOW: ID= 1 (  0268)     5.270      0.200      3.33      64.24

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 22.70
                  TIME SHIFT OF PEAK FLOW         (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.1976

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\0ba2d124
| Ptotal= 65.59 mm |    Comments: 25 Year 6 Hour AES (Bloor, TRCA)
--------------------
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.25    0.00 |  2.00   22.30 |  3.75    9.18 |  5.50    1.31
               0.50    1.31 |  2.25   22.30 |  4.00    5.25 |  5.75    1.31
               0.75    1.31 |  2.50   60.35 |  4.25    5.25 |  6.00    1.31
               1.00    1.31 |  2.75   60.35 |  4.50    2.62 |  6.25    1.31
               1.25    1.31 |  3.00   17.06 |  4.75    2.62 |
               1.50    7.87 |  3.25   17.06 |  5.00    1.31 |
               1.75    7.87 |  3.50    9.18 |  5.25    1.31 |

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD (  0202)|   Area    (ha)=   6.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.32         1.25
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     209.28        40.00
     Mannings n           =      0.013        0.250
```

```
     NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    7.87 | 3.250   17.06 |  4.83    1.31
               0.167    0.00 | 1.750    7.87 | 3.333    9.18 |  4.92    1.31
               0.250    0.00 | 1.833   22.30 | 3.417    9.18 |  5.00    1.31
               0.333    1.31 | 1.917   22.30 | 3.500    9.18 |  5.08    1.31
               0.417    1.31 | 2.000   22.30 | 3.583    9.18 |  5.17    1.31
               0.500    1.31 | 2.083   22.30 | 3.667    9.18 |  5.25    1.31
               0.583    1.31 | 2.167   22.30 | 3.750    9.18 |  5.33    1.31
               0.667    1.31 | 2.250   22.30 | 3.833    5.25 |  5.42    1.31
               0.750    1.31 | 2.333   60.35 | 3.917    5.25 |  5.50    1.31
               0.833    1.31 | 2.417   60.35 | 4.000    5.25 |  5.58    1.31
               0.917    1.31 | 2.500   60.35 | 4.083    5.25 |  5.67    1.31
               1.000    1.31 | 2.583   60.35 | 4.167    5.25 |  5.75    1.31
               1.083    1.31 | 2.667   60.35 | 4.250    5.25 |  5.83    1.31
               1.167    1.31 | 2.750   60.35 | 4.333    2.62 |  5.92    1.31
               1.250    1.31 | 2.833   17.06 | 4.417    2.62 |  6.00    1.31
               1.333    7.87 | 2.917   17.06 | 4.500    2.62 |  6.08    1.31
               1.417    7.87 | 3.000   17.06 | 4.583    2.62 |  6.17    1.31
               1.500    7.87 | 3.083   17.06 | 4.667    2.62 |  6.25    1.31
               1.583    7.87 | 3.167   17.06 | 4.750    2.62 |

     Max.Eff.Inten.(mm/hr)=      60.35        38.26
               over (min)        5.00        10.00
     Storage Coeff.  (min)=       4.87 (ii)    9.71 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.22         0.11
                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.89         0.11          1.004 (iii)
     TIME TO PEAK    (hrs)=       2.75         2.75           2.75
     RUNOFF VOLUME    (mm)=      64.59        31.55          58.31
     TOTAL RAINFALL   (mm)=      65.59        65.59          65.59
     RUNOFF COEFFICIENT   =       0.98         0.48           0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0262)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0202):     6.57   1.004     2.75    58.31
     + ID2= 2 (  0268):     5.27   0.200     3.33    64.24
       ================================================
       ID = 3 (  0262):    11.84   1.187     2.75    60.95

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0266)|
```

```
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0259):     4.67   0.569     2.75    59.41
     + ID2= 2 (  0262):    11.84   1.187     2.75    60.95
       ================================================
       ID = 3 (  0266):    16.51   1.756     2.75    60.51

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
-------------------
| RESERVOIR(  0263)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.2130      0.6563
                         0.0190     0.1773   |   0.2520      0.6883
                         0.0220     0.2128   |   0.2890      0.7150
                         0.0260     0.2888   |   0.2980      0.7450
                         0.0300     0.3648   |   0.3060      0.7700
                         0.0650     0.4586   |   0.3150      0.8127
                         0.1100     0.5155   |   0.3320      0.9290
                         0.1680     0.5503   |   0.3390      0.9767
                         0.1930     0.5804   |   0.3520      1.0680
                         0.2000     0.6048   |   0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0266)    16.510     1.756      2.75      60.51
   OUTFLOW: ID= 1 (  0263)    16.510     0.211      5.33      60.37

                 PEAK   FLOW   REDUCTION [Qout/Qin](%)= 12.02
                 TIME SHIFT OF PEAK FLOW         (min)=155.00
                 MAXIMUM  STORAGE   USED       (ha.m.)=  0.6485

--------------------------------------------------------------------------------

-------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0206):     0.12   0.010     2.83    31.52
     + ID2= 2 (  0263):    16.51   0.211     5.33    60.37
       ================================================
       ID = 3 (  0261):    16.64   0.211     5.17    60.15

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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================================================================================
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      V    V   I    SSSSS  U   U    A    L             (v 5.0.2025)
      V    V   I    SS     U   U   A A   L
       V  V    I     SS    U   U  AAAAA  L
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
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```



```
                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\69cdb30f-e921-4933-a0e8-629ee5e1929f\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\69cdb30f-e921-4933-a0e8-629ee5e1929f\s


DATE: 07/06/2020                          TIME: 04:30:38

USER:



COMMENTS: _____________________________________________________


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  ********************************************
  ** SIMULATION : 5 Year 6 Hour AES           **
  ********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\04fe6def
| Ptotal= 47.81 mm |    Comments: 5 Year 6 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00   16.25 |  3.75    6.69 |  5.50    0.96
                0.50    0.96 |  2.25   16.25 |  4.00    3.82 |  5.75    0.96
                0.75    0.96 |  2.50   43.98 |  4.25    3.82 |  6.00    0.96
                1.00    0.96 |  2.75   43.98 |  4.50    1.91 |  6.25    0.96
                1.25    0.96 |  3.00   12.43 |  4.75    1.91 |
                1.50    5.74 |  3.25   12.43 |  5.00    0.96 |
                1.75    5.74 |  3.50    6.69 |  5.25    0.96 |

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--------------------
| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    5.74 | 3.250   12.43 |  4.83    0.96
               0.167    0.00 | 1.750    5.74 | 3.333    6.69 |  4.92    0.96
               0.250    0.00 | 1.833   16.25 | 3.417    6.69 |  5.00    0.96
               0.333    0.96 | 1.917   16.25 | 3.500    6.69 |  5.08    0.96
               0.417    0.96 | 2.000   16.25 | 3.583    6.69 |  5.17    0.96
```

```
               0.500    0.96 | 2.083   16.25 | 3.667    6.69 |  5.25    0.96
               0.583    0.96 | 2.167   16.25 | 3.750    6.69 |  5.33    0.96
               0.667    0.96 | 2.250   16.25 | 3.833    3.82 |  5.42    0.96
               0.750    0.96 | 2.333   43.98 | 3.917    3.82 |  5.50    0.96
               0.833    0.96 | 2.417   43.98 | 4.000    3.82 |  5.58    0.96
               0.917    0.96 | 2.500   43.98 | 4.083    3.82 |  5.67    0.96
               1.000    0.96 | 2.583   43.98 | 4.167    3.82 |  5.75    0.96
               1.083    0.96 | 2.667   43.98 | 4.250    3.82 |  5.83    0.96
               1.167    0.96 | 2.750   43.98 | 4.333    1.91 |  5.92    0.96
               1.250    0.96 | 2.833   12.43 | 4.417    1.91 |  6.00    0.96
               1.333    5.74 | 2.917   12.43 | 4.500    1.91 |  6.08    0.96
               1.417    5.74 | 3.000   12.43 | 4.583    1.91 |  6.17    0.96
               1.500    5.74 | 3.083   12.43 | 4.667    1.91 |  6.25    0.96
               1.583    5.74 | 3.167   12.43 | 4.750    1.91 |

     Unit Hyd Qpeak  (cms)=   0.019

     PEAK FLOW       (cms)=   0.006 (i)
     TIME TO PEAK    (hrs)=   2.833
     RUNOFF VOLUME    (mm)=  18.574
     TOTAL RAINFALL   (mm)=  47.810
     RUNOFF COEFFICIENT   =   0.389

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\04fe6def
| Ptotal= 47.81 mm |    Comments: 5 Year 6 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00   16.25 |  3.75    6.69 |  5.50    0.96
                0.50    0.96 |  2.25   16.25 |  4.00    3.82 |  5.75    0.96
                0.75    0.96 |  2.50   43.98 |  4.25    3.82 |  6.00    0.96
                1.00    0.96 |  2.75   43.98 |  4.50    1.91 |  6.25    0.96
                1.25    0.96 |  3.00   12.43 |  4.75    1.91 |
                1.50    5.74 |  3.25   12.43 |  5.00    0.96 |
                1.75    5.74 |  3.50    6.69 |  5.25    0.96 |

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD (  0205)|   Area    (ha)=   1.12
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.11         0.01
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      86.60        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    5.74 | 3.250   12.43 |  4.83    0.96
               0.167    0.00 | 1.750    5.74 | 3.333    6.69 |  4.92    0.96
               0.250    0.00 | 1.833   16.25 | 3.417    6.69 |  5.00    0.96
               0.333    0.96 | 1.917   16.25 | 3.500    6.69 |  5.08    0.96
               0.417    0.96 | 2.000   16.25 | 3.583    6.69 |  5.17    0.96
               0.500    0.96 | 2.083   16.25 | 3.667    6.69 |  5.25    0.96
               0.583    0.96 | 2.167   16.25 | 3.750    6.69 |  5.33    0.96
               0.667    0.96 | 2.250   16.25 | 3.833    3.82 |  5.42    0.96
               0.750    0.96 | 2.333   43.98 | 3.917    3.82 |  5.50    0.96
               0.833    0.96 | 2.417   43.98 | 4.000    3.82 |  5.58    0.96
               0.917    0.96 | 2.500   43.98 | 4.083    3.82 |  5.67    0.96
               1.000    0.96 | 2.583   43.98 | 4.167    3.82 |  5.75    0.96
               1.083    0.96 | 2.667   43.98 | 4.250    3.82 |  5.83    0.96
               1.167    0.96 | 2.750   43.98 | 4.333    1.91 |  5.92    0.96
               1.250    0.96 | 2.833   12.43 | 4.417    1.91 |  6.00    0.96
               1.333    5.74 | 2.917   12.43 | 4.500    1.91 |  6.08    0.96
               1.417    5.74 | 3.000   12.43 | 4.583    1.91 |  6.17    0.96
               1.500    5.74 | 3.083   12.43 | 4.667    1.91 |  6.25    0.96
               1.583    5.74 | 3.167   12.43 | 4.750    1.91 |

     Max.Eff.Inten.(mm/hr)=      43.98        23.12
               over (min)        5.00         5.00
     Storage Coeff.  (min)=      3.25 (ii)    4.81 (ii)
     Unit Hyd. Tpeak (min)=      5.00         5.00
     Unit Hyd. peak  (cms)=      0.27         0.22
                                                        *TOTALS*
     PEAK FLOW       (cms)=      0.14         0.00          0.137 (iii)
     TIME TO PEAK    (hrs)=      2.75         2.75           2.75
     RUNOFF VOLUME    (mm)=     46.81        18.59          46.53
     TOTAL RAINFALL   (mm)=     47.81        47.81          47.81
     RUNOFF COEFFICIENT   =      0.98         0.39           0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0256)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0470     0.0750

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0205)      1.125     0.137      2.75      46.53
   OUTFLOW: ID= 1 (  0256)      1.125     0.023      3.42      46.17

                PEAK   FLOW   REDUCTION [Qout/Qin](%)= 16.60
                TIME SHIFT OF PEAK FLOW         (min)= 40.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.0363

--------------------------------------------------------------------------------

--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\04fe6def
| Ptotal= 47.81 mm |    Comments: 5 Year 6 Hour AES (Bloor, TRCA)
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	16.25	3.75	6.69	5.50	0.96
0.50	0.96	2.25	16.25	4.00	3.82	5.75	0.96
0.75	0.96	2.50	43.98	4.25	3.82	6.00	0.96
1.00	0.96	2.75	43.98	4.50	1.91	6.25	0.96
1.25	0.96	3.00	12.43	4.75	1.91		
1.50	5.74	3.25	12.43	5.00	0.96		
1.75	5.74	3.50	6.69	5.25	0.96		

```
--------------------
| CALIB            |
| STANDHYD (  0203)|   Area    (ha)=   2.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.68	0.42
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	118.18	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	5.74	3.250	12.43	4.83	0.96
0.167	0.00	1.750	5.74	3.333	6.69	4.92	0.96
0.250	0.00	1.833	16.25	3.417	6.69	5.00	0.96
0.333	0.96	1.917	16.25	3.500	6.69	5.08	0.96
0.417	0.96	2.000	16.25	3.583	6.69	5.17	0.96
0.500	0.96	2.083	16.25	3.667	6.69	5.25	0.96
0.583	0.96	2.167	16.25	3.750	6.69	5.33	0.96
0.667	0.96	2.250	16.25	3.833	3.82	5.42	0.96
0.750	0.96	2.333	43.98	3.917	3.82	5.50	0.96
0.833	0.96	2.417	43.98	4.000	3.82	5.58	0.96
0.917	0.96	2.500	43.98	4.083	3.82	5.67	0.96
1.000	0.96	2.583	43.98	4.167	3.82	5.75	0.96
1.083	0.96	2.667	43.98	4.250	3.82	5.83	0.96
1.167	0.96	2.750	43.98	4.333	1.91	5.92	0.96
1.250	0.96	2.833	12.43	4.417	1.91	6.00	0.96
1.333	5.74	2.917	12.43	4.500	1.91	6.08	0.96
1.417	5.74	3.000	12.43	4.583	1.91	6.17	0.96
1.500	5.74	3.083	12.43	4.667	1.91	6.25	0.96
1.583	5.74	3.167	12.43	4.750	1.91		

Max.Eff.Inten.(mm/hr)=		43.98	22.08	
over (min)		5.00	20.00	
Storage Coeff. (min)=		3.92 (ii)	16.84 (ii)	
Unit Hyd. Tpeak (min)=		5.00	20.00	
Unit Hyd. peak (cms)=		0.24	0.06	
				TOTALS
PEAK FLOW	(cms)=	0.20	0.02	0.220 (iii)
TIME TO PEAK	(hrs)=	2.75	2.92	2.75
RUNOFF VOLUME	(mm)=	46.81	18.59	41.16
TOTAL RAINFALL	(mm)=	47.81	47.81	47.81
RUNOFF COEFFICIENT	=	0.98	0.39	0.86

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
--------------------
| ADD HYD  (  0260)|
|   1 +  2 =  3    |
--------------------
```

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0203):	2.10	0.220	2.75	41.16
+ ID2= 2 (0256):	1.12	0.023	3.42	46.17
ID = 3 (0260):	3.22	0.239	2.75	42.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\04fe6def
| Ptotal= 47.81 mm |    Comments: 5 Year 6 Hour AES (Bloor, TRCA)
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	16.25	3.75	6.69	5.50	0.96
0.50	0.96	2.25	16.25	4.00	3.82	5.75	0.96
0.75	0.96	2.50	43.98	4.25	3.82	6.00	0.96
1.00	0.96	2.75	43.98	4.50	1.91	6.25	0.96
1.25	0.96	3.00	12.43	4.75	1.91		
1.50	5.74	3.25	12.43	5.00	0.96		
1.75	5.74	3.50	6.69	5.25	0.96		

```
--------------------
| CALIB            |
| STANDHYD (  0204)|   Area    (ha)=   1.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.16	0.29
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	98.32	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	5.74	3.250	12.43	4.83	0.96
0.167	0.00	1.750	5.74	3.333	6.69	4.92	0.96
0.250	0.00	1.833	16.25	3.417	6.69	5.00	0.96
0.333	0.96	1.917	16.25	3.500	6.69	5.08	0.96
0.417	0.96	2.000	16.25	3.583	6.69	5.17	0.96
0.500	0.96	2.083	16.25	3.667	6.69	5.25	0.96
0.583	0.96	2.167	16.25	3.750	6.69	5.33	0.96

0.667	0.96	2.250	16.25	3.833	3.82	5.42	0.96
0.750	0.96	2.333	43.98	3.917	3.82	5.50	0.96
0.833	0.96	2.417	43.98	4.000	3.82	5.58	0.96
0.917	0.96	2.500	43.98	4.083	3.82	5.67	0.96
1.000	0.96	2.583	43.98	4.167	3.82	5.75	0.96
1.083	0.96	2.667	43.98	4.250	3.82	5.83	0.96
1.167	0.96	2.750	43.98	4.333	1.91	5.92	0.96
1.250	0.96	2.833	12.43	4.417	1.91	6.00	0.96
1.333	5.74	2.917	12.43	4.500	1.91	6.08	0.96
1.417	5.74	3.000	12.43	4.583	1.91	6.17	0.96
1.500	5.74	3.083	12.43	4.667	1.91	6.25	0.96
1.583	5.74	3.167	12.43	4.750	1.91		

Max.Eff.Inten.(mm/hr)=	43.98	22.08	
over (min)	5.00	20.00	
Storage Coeff. (min)=	3.51 (ii)	16.43 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.26	0.06	
			TOTALS
PEAK FLOW (cms)=	0.14	0.01	0.152 (iii)
TIME TO PEAK (hrs)=	2.75	2.92	2.75
RUNOFF VOLUME (mm)=	46.81	18.59	41.16
TOTAL RAINFALL (mm)=	47.81	47.81	47.81
RUNOFF COEFFICIENT =	0.98	0.39	0.86

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0259)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0204):		1.45	0.152	2.75	41.16
+ ID2= 2 (0260):		3.22	0.239	2.75	42.91
ID = 3 (0259):		4.67	0.391	2.75	42.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM | Filename: C:\Users\mventresca\AppData\Local\Temp\532f9adf-2237-4159-99ad-dfda1740d167\04fe6def
Ptotal= 47.81 mm | Comments: 5 Year 6 Hour AES (Bloor, TRCA)

TIME (hrs)	RAIN (mm/hr)	TIME (hrs)	RAIN (mm/hr)	TIME (hrs)	RAIN (mm/hr)	TIME (hrs)	RAIN (mm/hr)
0.25	0.00	2.00	16.25	3.75	6.69	5.50	0.96
0.50	0.96	2.25	16.25	4.00	3.82	5.75	0.96
0.75	0.96	2.50	43.98	4.25	3.82	6.00	0.96
1.00	0.96	2.75	43.98	4.50	1.91	6.25	0.96
1.25	0.96	3.00	12.43	4.75	1.91		
1.50	5.74	3.25	12.43	5.00	0.96		
1.75	5.74	3.50	6.69	5.25	0.96		

CALIB | STANDHYD (0201) | ID= 1 DT= 5.0 min | Area (ha)= 5.27 Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.22	0.05
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	187.44	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME (hrs)	RAIN (mm/hr)	TIME (hrs)	RAIN (mm/hr)	TIME (hrs)	RAIN (mm/hr)	TIME (hrs)	RAIN (mm/hr)
0.083	0.00	1.667	5.74	3.250	12.43	4.83	0.96
0.167	0.00	1.750	5.74	3.333	6.69	4.92	0.96
0.250	0.00	1.833	16.25	3.417	6.69	5.00	0.96
0.333	0.96	1.917	16.25	3.500	6.69	5.08	0.96
0.417	0.96	2.000	16.25	3.583	6.69	5.17	0.96
0.500	0.96	2.083	16.25	3.667	6.69	5.25	0.96
0.583	0.96	2.167	16.25	3.750	6.69	5.33	0.96
0.667	0.96	2.250	16.25	3.833	3.82	5.42	0.96
0.750	0.96	2.333	43.98	3.917	3.82	5.50	0.96
0.833	0.96	2.417	43.98	4.000	3.82	5.58	0.96
0.917	0.96	2.500	43.98	4.083	3.82	5.67	0.96
1.000	0.96	2.583	43.98	4.167	3.82	5.75	0.96
1.083	0.96	2.667	43.98	4.250	3.82	5.83	0.96
1.167	0.96	2.750	43.98	4.333	1.91	5.92	0.96
1.250	0.96	2.833	12.43	4.417	1.91	6.00	0.96
1.333	5.74	2.917	12.43	4.500	1.91	6.08	0.96
1.417	5.74	3.000	12.43	4.583	1.91	6.17	0.96
1.500	5.74	3.083	12.43	4.667	1.91	6.25	0.96
1.583	5.74	3.167	12.43	4.750	1.91		

Max.Eff.Inten.(mm/hr)=	43.98	23.12	
over (min)	5.00	10.00	
Storage Coeff. (min)=	5.17 (ii)	6.73 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.21	0.14	
			TOTALS
PEAK FLOW (cms)=	0.64	0.00	0.639 (iii)
TIME TO PEAK (hrs)=	2.75	2.75	2.75
RUNOFF VOLUME (mm)=	46.81	18.59	46.53
TOTAL RAINFALL (mm)=	47.81	47.81	47.81
RUNOFF COEFFICIENT =	0.98	0.39	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0268) | IN= 2---> OUT= 1 | DT= 5.0 min | OUTFLOW STORAGE | OUTFLOW STORAGE

```
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1959      0.1883
                          0.0980     0.0369   |   0.2939      0.4335

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0201)      5.270      0.639      2.75      46.53
   OUTFLOW: ID= 1 (  0268)      5.270      0.162      3.25      46.51

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 25.32
                  TIME SHIFT OF PEAK FLOW         (min)= 30.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.1359

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--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\04fe6def
| Ptotal= 47.81 mm |    Comments: 5 Year 6 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00   16.25 |  3.75    6.69 |  5.50    0.96
                0.50    0.96 |  2.25   16.25 |  4.00    3.82 |  5.75    0.96
                0.75    0.96 |  2.50   43.98 |  4.25    3.82 |  6.00    0.96
                1.00    0.96 |  2.75   43.98 |  4.50    1.91 |  6.25    0.96
                1.25    0.96 |  3.00   12.43 |  4.75    1.91 |
                1.50    5.74 |  3.25   12.43 |  5.00    0.96 |
                1.75    5.74 |  3.50    6.69 |  5.25    0.96 |

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD (  0202)|   Area    (ha)=   6.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.32         1.25
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     209.28        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    5.74 | 3.250   12.43 |  4.83    0.96
               0.167    0.00 | 1.750    5.74 | 3.333    6.69 |  4.92    0.96
               0.250    0.00 | 1.833   16.25 | 3.417    6.69 |  5.00    0.96
               0.333    0.96 | 1.917   16.25 | 3.500    6.69 |  5.08    0.96
               0.417    0.96 | 2.000   16.25 | 3.583    6.69 |  5.17    0.96
               0.500    0.96 | 2.083   16.25 | 3.667    6.69 |  5.25    0.96
               0.583    0.96 | 2.167   16.25 | 3.750    6.69 |  5.33    0.96
               0.667    0.96 | 2.250   16.25 | 3.833    3.82 |  5.42    0.96
               0.750    0.96 | 2.333   43.98 | 3.917    3.82 |  5.50    0.96
               0.833    0.96 | 2.417   43.98 | 4.000    3.82 |  5.58    0.96
               0.917    0.96 | 2.500   43.98 | 4.083    3.82 |  5.67    0.96
               1.000    0.96 | 2.583   43.98 | 4.167    3.82 |  5.75    0.96
               1.083    0.96 | 2.667   43.98 | 4.250    3.82 |  5.83    0.96
               1.167    0.96 | 2.750   43.98 | 4.333    1.91 |  5.92    0.96
               1.250    0.96 | 2.833   12.43 | 4.417    1.91 |  6.00    0.96
               1.333    5.74 | 2.917   12.43 | 4.500    1.91 |  6.08    0.96
               1.417    5.74 | 3.000   12.43 | 4.583    1.91 |  6.17    0.96
               1.500    5.74 | 3.083   12.43 | 4.667    1.91 |  6.25    0.96
               1.583    5.74 | 3.167   12.43 | 4.750    1.91 |

     Max.Eff.Inten.(mm/hr)=      43.98        22.08
               over (min)         5.00        20.00
     Storage Coeff.  (min)=       5.53 (ii)   18.44 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.20         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.65         0.05          0.691 (iii)
     TIME TO PEAK    (hrs)=       2.75         2.92           2.75
     RUNOFF VOLUME    (mm)=      46.81        18.59          41.45
     TOTAL RAINFALL   (mm)=      47.81        47.81          47.81
     RUNOFF COEFFICIENT   =       0.98         0.39           0.87

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0262)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0202):     6.57   0.691     2.75    41.45
     + ID2= 2 (  0268):     5.27   0.162     3.25    46.51
       ================================================
       ID = 3 (  0262):    11.84   0.840     2.75    43.70

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0266)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0259):     4.67   0.391     2.75    42.37
     + ID2= 2 (  0262):    11.84   0.840     2.75    43.70
       ================================================
       ID = 3 (  0266):    16.51   1.231     2.75    43.32

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| RESERVOIR(  0263)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.2130      0.6563
                          0.0190     0.1773   |   0.2520      0.6883
                          0.0220     0.2128   |   0.2890      0.7150
                          0.0260     0.2888   |   0.2980      0.7450
                          0.0300     0.3648   |   0.3060      0.7700
                          0.0650     0.4586   |   0.3150      0.8127
```

```
                        0.1100     0.5155   |   0.3320      0.9290
                        0.1680     0.5503   |   0.3390      0.9767
                        0.1930     0.5804   |   0.3520      1.0680
                        0.2000     0.6048   |   0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0266)     16.510     1.231      2.75      43.32
   OUTFLOW: ID= 1 (  0263)     16.510     0.137      6.25      43.18

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 11.12
                  TIME SHIFT OF PEAK FLOW         (min)=210.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.5317

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0206):     0.12   0.006     2.83    18.57
     + ID2= 2 (  0263):    16.51   0.137     6.25    43.18
       ================================================
       ID = 3 (  0261):    16.64   0.137     6.25    43.00

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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================================================================================
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      V    V   I    SSSSS  U   U    A    L             (v 5.0.2025)
      V    V   I    SS     U   U   A A   L
       V  V    I     SS    U   U  AAAAA  L
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\d836b700-adbd-4282-bfe7-b79316ed9535\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\d836b700-adbd-4282-bfe7-b79316ed9535\s


DATE: 07/06/2020                          TIME: 04:30:38

USER:



COMMENTS: _____________________________________________________________
```

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--------------------------
  ***********************************************
  ** SIMULATION : 50 Year 6 Hour AES           **
  ***********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\d42f3a3a
| Ptotal= 73.00 mm |    Comments: 50 Year 6 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00   24.82 |  3.75   10.22 |  5.50    1.46
                0.50    1.46 |  2.25   24.82 |  4.00    5.84 |  5.75    1.46
                0.75    1.46 |  2.50   67.16 |  4.25    5.84 |  6.00    1.46
                1.00    1.46 |  2.75   67.16 |  4.50    2.92 |  6.25    1.46
                1.25    1.46 |  3.00   18.98 |  4.75    2.92 |
                1.50    8.76 |  3.25   18.98 |  5.00    1.46 |
                1.75    8.76 |  3.50   10.22 |  5.25    1.46 |

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--------------------
| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    8.76 | 3.250   18.98 |  4.83    1.46
               0.167    0.00 | 1.750    8.76 | 3.333   10.22 |  4.92    1.46
               0.250    0.00 | 1.833   24.82 | 3.417   10.22 |  5.00    1.46
               0.333    1.46 | 1.917   24.82 | 3.500   10.22 |  5.08    1.46
               0.417    1.46 | 2.000   24.82 | 3.583   10.22 |  5.17    1.46
               0.500    1.46 | 2.083   24.82 | 3.667   10.22 |  5.25    1.46
               0.583    1.46 | 2.167   24.82 | 3.750   10.22 |  5.33    1.46
               0.667    1.46 | 2.250   24.82 | 3.833    5.84 |  5.42    1.46
               0.750    1.46 | 2.333   67.16 | 3.917    5.84 |  5.50    1.46
               0.833    1.46 | 2.417   67.16 | 4.000    5.84 |  5.58    1.46
               0.917    1.46 | 2.500   67.16 | 4.083    5.84 |  5.67    1.46
               1.000    1.46 | 2.583   67.16 | 4.167    5.84 |  5.75    1.46
               1.083    1.46 | 2.667   67.16 | 4.250    5.84 |  5.83    1.46
               1.167    1.46 | 2.750   67.16 | 4.333    2.92 |  5.92    1.46
               1.250    1.46 | 2.833   18.98 | 4.417    2.92 |  6.00    1.46
               1.333    8.76 | 2.917   18.98 | 4.500    2.92 |  6.08    1.46
               1.417    8.76 | 3.000   18.98 | 4.583    2.92 |  6.17    1.46
               1.500    8.76 | 3.083   18.98 | 4.667    2.92 |  6.25    1.46
               1.583    8.76 | 3.167   18.98 | 4.750    2.92 |

    Unit Hyd Qpeak  (cms)=   0.019

    PEAK FLOW       (cms)=   0.012 (i)
    TIME TO PEAK    (hrs)=   2.833
    RUNOFF VOLUME    (mm)=  37.329
    TOTAL RAINFALL   (mm)=  73.000
```

```
     RUNOFF COEFFICIENT   =   0.511

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\d42f3a3a
| Ptotal= 73.00 mm |    Comments: 50 Year 6 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00   24.82 |  3.75   10.22 |  5.50    1.46
                0.50    1.46 |  2.25   24.82 |  4.00    5.84 |  5.75    1.46
                0.75    1.46 |  2.50   67.16 |  4.25    5.84 |  6.00    1.46
                1.00    1.46 |  2.75   67.16 |  4.50    2.92 |  6.25    1.46
                1.25    1.46 |  3.00   18.98 |  4.75    2.92 |
                1.50    8.76 |  3.25   18.98 |  5.00    1.46 |
                1.75    8.76 |  3.50   10.22 |  5.25    1.46 |

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--------------------
| CALIB            |
| STANDHYD (  0205)|   Area    (ha)=   1.12
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.11         0.01
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      86.60        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    8.76 | 3.250   18.98 |  4.83    1.46
               0.167    0.00 | 1.750    8.76 | 3.333   10.22 |  4.92    1.46
               0.250    0.00 | 1.833   24.82 | 3.417   10.22 |  5.00    1.46
               0.333    1.46 | 1.917   24.82 | 3.500   10.22 |  5.08    1.46
               0.417    1.46 | 2.000   24.82 | 3.583   10.22 |  5.17    1.46
               0.500    1.46 | 2.083   24.82 | 3.667   10.22 |  5.25    1.46
               0.583    1.46 | 2.167   24.82 | 3.750   10.22 |  5.33    1.46
               0.667    1.46 | 2.250   24.82 | 3.833    5.84 |  5.42    1.46
               0.750    1.46 | 2.333   67.16 | 3.917    5.84 |  5.50    1.46
               0.833    1.46 | 2.417   67.16 | 4.000    5.84 |  5.58    1.46
               0.917    1.46 | 2.500   67.16 | 4.083    5.84 |  5.67    1.46
               1.000    1.46 | 2.583   67.16 | 4.167    5.84 |  5.75    1.46
               1.083    1.46 | 2.667   67.16 | 4.250    5.84 |  5.83    1.46
               1.167    1.46 | 2.750   67.16 | 4.333    2.92 |  5.92    1.46
               1.250    1.46 | 2.833   18.98 | 4.417    2.92 |  6.00    1.46
               1.333    8.76 | 2.917   18.98 | 4.500    2.92 |  6.08    1.46
               1.417    8.76 | 3.000   18.98 | 4.583    2.92 |  6.17    1.46
               1.500    8.76 | 3.083   18.98 | 4.667    2.92 |  6.25    1.46
               1.583    8.76 | 3.167   18.98 | 4.750    2.92 |

     Max.Eff.Inten.(mm/hr)=      67.16        44.89
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       2.75 (ii)    4.06 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.28         0.24
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.21         0.00          0.209 (iii)
     TIME TO PEAK    (hrs)=       2.75         2.75           2.75
     RUNOFF VOLUME    (mm)=      72.00        37.36          71.65
     TOTAL RAINFALL   (mm)=      73.00        73.00          73.00
     RUNOFF COEFFICIENT   =       0.99         0.51           0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  0256)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0470     0.0750

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0205)      1.125     0.209      2.75      71.65
   OUTFLOW: ID= 1 (  0256)      1.125     0.035      3.33      71.30

                 PEAK   FLOW   REDUCTION [Qout/Qin](%)= 16.71
                 TIME SHIFT OF PEAK FLOW         (min)= 35.00
                 MAXIMUM  STORAGE   USED       (ha.m.)=  0.0558

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\d42f3a3a
| Ptotal= 73.00 mm |    Comments: 50 Year 6 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00   24.82 |  3.75   10.22 |  5.50    1.46
                0.50    1.46 |  2.25   24.82 |  4.00    5.84 |  5.75    1.46
                0.75    1.46 |  2.50   67.16 |  4.25    5.84 |  6.00    1.46
                1.00    1.46 |  2.75   67.16 |  4.50    2.92 |  6.25    1.46
                1.25    1.46 |  3.00   18.98 |  4.75    2.92 |
                1.50    8.76 |  3.25   18.98 |  5.00    1.46 |
                1.75    8.76 |  3.50   10.22 |  5.25    1.46 |

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--------------------
| CALIB            |
| STANDHYD (  0203)|   Area    (ha)=   2.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.68         0.42
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
```

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     Length            (m)=     118.18        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	8.76	3.250	18.98	4.83	1.46
0.167	0.00	1.750	8.76	3.333	10.22	4.92	1.46
0.250	0.00	1.833	24.82	3.417	10.22	5.00	1.46
0.333	1.46	1.917	24.82	3.500	10.22	5.08	1.46
0.417	1.46	2.000	24.82	3.583	10.22	5.17	1.46
0.500	1.46	2.083	24.82	3.667	10.22	5.25	1.46
0.583	1.46	2.167	24.82	3.750	10.22	5.33	1.46
0.667	1.46	2.250	24.82	3.833	5.84	5.42	1.46
0.750	1.46	2.333	67.16	3.917	5.84	5.50	1.46
0.833	1.46	2.417	67.16	4.000	5.84	5.58	1.46
0.917	1.46	2.500	67.16	4.083	5.84	5.67	1.46
1.000	1.46	2.583	67.16	4.167	5.84	5.75	1.46
1.083	1.46	2.667	67.16	4.250	5.84	5.83	1.46
1.167	1.46	2.750	67.16	4.333	2.92	5.92	1.46
1.250	1.46	2.833	18.98	4.417	2.92	6.00	1.46
1.333	8.76	2.917	18.98	4.500	2.92	6.08	1.46
1.417	8.76	3.000	18.98	4.583	2.92	6.17	1.46
1.500	8.76	3.083	18.98	4.667	2.92	6.25	1.46
1.583	8.76	3.167	18.98	4.750	2.92		

```
     Max.Eff.Inten.(mm/hr)=      67.16        44.89
               over (min)        5.00        10.00
     Storage Coeff.  (min)=      3.31 (ii)    8.06 (ii)
     Unit Hyd. Tpeak (min)=      5.00        10.00
     Unit Hyd. peak  (cms)=      0.26         0.13
                                                    *TOTALS*
     PEAK FLOW       (cms)=      0.31         0.05          0.359 (iii)
     TIME TO PEAK    (hrs)=      2.75         2.75           2.75
     RUNOFF VOLUME    (mm)=     72.00        37.36          65.07
     TOTAL RAINFALL   (mm)=     73.00        73.00          73.00
     RUNOFF COEFFICIENT   =      0.99         0.51           0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0260)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0203):     2.10   0.359     2.75    65.07
     + ID2= 2 (  0256):     1.12   0.035     3.33    71.30
       ================================================
       ID = 3 (  0260):     3.22   0.389     2.75    67.25

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\d42f3a3a
| Ptotal= 73.00 mm |    Comments: 50 Year 6 Hour AES (Bloor, TRCA)
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	24.82	3.75	10.22	5.50	1.46
0.50	1.46	2.25	24.82	4.00	5.84	5.75	1.46
0.75	1.46	2.50	67.16	4.25	5.84	6.00	1.46
1.00	1.46	2.75	67.16	4.50	2.92	6.25	1.46
1.25	1.46	3.00	18.98	4.75	2.92		
1.50	8.76	3.25	18.98	5.00	1.46		
1.75	8.76	3.50	10.22	5.25	1.46		

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--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD (  0204)|   Area    (ha)=   1.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.16         0.29
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      98.32        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	8.76	3.250	18.98	4.83	1.46
0.167	0.00	1.750	8.76	3.333	10.22	4.92	1.46
0.250	0.00	1.833	24.82	3.417	10.22	5.00	1.46
0.333	1.46	1.917	24.82	3.500	10.22	5.08	1.46
0.417	1.46	2.000	24.82	3.583	10.22	5.17	1.46
0.500	1.46	2.083	24.82	3.667	10.22	5.25	1.46
0.583	1.46	2.167	24.82	3.750	10.22	5.33	1.46
0.667	1.46	2.250	24.82	3.833	5.84	5.42	1.46
0.750	1.46	2.333	67.16	3.917	5.84	5.50	1.46
0.833	1.46	2.417	67.16	4.000	5.84	5.58	1.46
0.917	1.46	2.500	67.16	4.083	5.84	5.67	1.46
1.000	1.46	2.583	67.16	4.167	5.84	5.75	1.46
1.083	1.46	2.667	67.16	4.250	5.84	5.83	1.46
1.167	1.46	2.750	67.16	4.333	2.92	5.92	1.46
1.250	1.46	2.833	18.98	4.417	2.92	6.00	1.46
1.333	8.76	2.917	18.98	4.500	2.92	6.08	1.46
1.417	8.76	3.000	18.98	4.583	2.92	6.17	1.46
1.500	8.76	3.083	18.98	4.667	2.92	6.25	1.46
1.583	8.76	3.167	18.98	4.750	2.92		

```
     Max.Eff.Inten.(mm/hr)=      67.16        44.89
               over (min)        5.00        10.00
     Storage Coeff.  (min)=      2.97 (ii)    7.72 (ii)
     Unit Hyd. Tpeak (min)=      5.00        10.00
     Unit Hyd. peak  (cms)=      0.28         0.13
                                                    *TOTALS*
     PEAK FLOW       (cms)=      0.22         0.03          0.249 (iii)
     TIME TO PEAK    (hrs)=      2.75         2.75           2.75
```

```
     RUNOFF VOLUME    (mm)=      72.00        37.36          65.07
     TOTAL RAINFALL   (mm)=      73.00        73.00          73.00
     RUNOFF COEFFICIENT   =       0.99         0.51           0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0259)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0204):     1.45   0.249     2.75    65.07
     + ID2= 2 (  0260):     3.22   0.389     2.75    67.25
       ================================================
       ID = 3 (  0259):     4.67   0.638     2.75    66.57

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\d42f3a3a
| Ptotal= 73.00 mm |    Comments: 50 Year 6 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00   24.82 |  3.75   10.22 |  5.50    1.46
                0.50    1.46 |  2.25   24.82 |  4.00    5.84 |  5.75    1.46
                0.75    1.46 |  2.50   67.16 |  4.25    5.84 |  6.00    1.46
                1.00    1.46 |  2.75   67.16 |  4.50    2.92 |  6.25    1.46
                1.25    1.46 |  3.00   18.98 |  4.75    2.92 |
                1.50    8.76 |  3.25   18.98 |  5.00    1.46 |
                1.75    8.76 |  3.50   10.22 |  5.25    1.46 |

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--------------------
| CALIB            |
| STANDHYD (  0201)|   Area    (ha)=   5.27
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.22         0.05
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     187.44        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    8.76 | 3.250   18.98 |  4.83    1.46
               0.167    0.00 | 1.750    8.76 | 3.333   10.22 |  4.92    1.46
               0.250    0.00 | 1.833   24.82 | 3.417   10.22 |  5.00    1.46
               0.333    1.46 | 1.917   24.82 | 3.500   10.22 |  5.08    1.46
               0.417    1.46 | 2.000   24.82 | 3.583   10.22 |  5.17    1.46
               0.500    1.46 | 2.083   24.82 | 3.667   10.22 |  5.25    1.46
               0.583    1.46 | 2.167   24.82 | 3.750   10.22 |  5.33    1.46
               0.667    1.46 | 2.250   24.82 | 3.833    5.84 |  5.42    1.46
               0.750    1.46 | 2.333   67.16 | 3.917    5.84 |  5.50    1.46
               0.833    1.46 | 2.417   67.16 | 4.000    5.84 |  5.58    1.46
               0.917    1.46 | 2.500   67.16 | 4.083    5.84 |  5.67    1.46
               1.000    1.46 | 2.583   67.16 | 4.167    5.84 |  5.75    1.46
               1.083    1.46 | 2.667   67.16 | 4.250    5.84 |  5.83    1.46
               1.167    1.46 | 2.750   67.16 | 4.333    2.92 |  5.92    1.46
               1.250    1.46 | 2.833   18.98 | 4.417    2.92 |  6.00    1.46
               1.333    8.76 | 2.917   18.98 | 4.500    2.92 |  6.08    1.46
               1.417    8.76 | 3.000   18.98 | 4.583    2.92 |  6.17    1.46
               1.500    8.76 | 3.083   18.98 | 4.667    2.92 |  6.25    1.46
               1.583    8.76 | 3.167   18.98 | 4.750    2.92 |

     Max.Eff.Inten.(mm/hr)=      67.16        44.89
               over (min)        5.00        10.00
     Storage Coeff.  (min)=      4.37 (ii)    5.68 (ii)
     Unit Hyd. Tpeak (min)=      5.00        10.00
     Unit Hyd. peak  (cms)=      0.23         0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=      0.97         0.01          0.979 (iii)
     TIME TO PEAK    (hrs)=      2.75         2.75           2.75
     RUNOFF VOLUME    (mm)=     72.00        37.36          71.65
     TOTAL RAINFALL   (mm)=     73.00        73.00          73.00
     RUNOFF COEFFICIENT   =      0.99         0.51           0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0268)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |  0.1959      0.1883
                          0.0980     0.0369   |  0.2939      0.4335

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0201)      5.270     0.979      2.75      71.65
   OUTFLOW: ID= 1 (  0268)      5.270     0.210      3.33      71.64

                PEAK   FLOW   REDUCTION [Qout/Qin](%)= 21.48
                TIME SHIFT OF PEAK FLOW         (min)= 35.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.2245

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              532f9adf-2237-4159-99ad-dfda1740d167\d42f3a3a
| Ptotal= 73.00 mm |    Comments: 50 Year 6 Hour AES (Bloor, TRCA)
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	24.82	3.75	10.22	5.50	1.46
0.50	1.46	2.25	24.82	4.00	5.84	5.75	1.46
0.75	1.46	2.50	67.16	4.25	5.84	6.00	1.46
1.00	1.46	2.75	67.16	4.50	2.92	6.25	1.46
1.25	1.46	3.00	18.98	4.75	2.92		
1.50	8.76	3.25	18.98	5.00	1.46		
1.75	8.76	3.50	10.22	5.25	1.46		

CALIB / STANDHYD (0202) / ID= 1 DT= 5.0 min	Area (ha)= 6.57	Total Imp(%)= 81.00	Dir. Conn.(%)= 81.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.32	1.25
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	209.28	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	8.76	3.250	18.98	4.83	1.46
0.167	0.00	1.750	8.76	3.333	10.22	4.92	1.46
0.250	0.00	1.833	24.82	3.417	10.22	5.00	1.46
0.333	1.46	1.917	24.82	3.500	10.22	5.08	1.46
0.417	1.46	2.000	24.82	3.583	10.22	5.17	1.46
0.500	1.46	2.083	24.82	3.667	10.22	5.25	1.46
0.583	1.46	2.167	24.82	3.750	10.22	5.33	1.46
0.667	1.46	2.250	24.82	3.833	5.84	5.42	1.46
0.750	1.46	2.333	67.16	3.917	5.84	5.50	1.46
0.833	1.46	2.417	67.16	4.000	5.84	5.58	1.46
0.917	1.46	2.500	67.16	4.083	5.84	5.67	1.46
1.000	1.46	2.583	67.16	4.167	5.84	5.75	1.46
1.083	1.46	2.667	67.16	4.250	5.84	5.83	1.46
1.167	1.46	2.750	67.16	4.333	2.92	5.92	1.46
1.250	1.46	2.833	18.98	4.417	2.92	6.00	1.46
1.333	8.76	2.917	18.98	4.500	2.92	6.08	1.46
1.417	8.76	3.000	18.98	4.583	2.92	6.17	1.46
1.500	8.76	3.083	18.98	4.667	2.92	6.25	1.46
1.583	8.76	3.167	18.98	4.750	2.92		

				TOTALS
Max.Eff.Inten.(mm/hr)=	67.16	44.89		
over (min)	5.00	10.00		
Storage Coeff. (min)=	4.67 (ii)	9.30 (ii)		
Unit Hyd. Tpeak (min)=	5.00	10.00		
Unit Hyd. peak (cms)=	0.22	0.12		
PEAK FLOW (cms)=	0.99	0.14	1.127 (iii)	
TIME TO PEAK (hrs)=	2.75	2.75	2.75	
RUNOFF VOLUME (mm)=	72.00	37.36	65.42	
TOTAL RAINFALL (mm)=	73.00	73.00	73.00	
RUNOFF COEFFICIENT =	0.99	0.51	0.90	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0262) / 1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0202):	6.57	1.127	2.75	65.42
+ ID2= 2 (0268):	5.27	0.210	3.33	71.64
ID = 3 (0262):	11.84	1.324	2.75	68.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0266) / 1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0259):	4.67	0.638	2.75	66.57
+ ID2= 2 (0262):	11.84	1.324	2.75	68.19
ID = 3 (0266):	16.51	1.962	2.75	67.73

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0263) / IN= 2---> OUT= 1 / DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.2130	0.6563
	0.0190	0.1773	0.2520	0.6883
	0.0220	0.2128	0.2890	0.7150
	0.0260	0.2888	0.2980	0.7450
	0.0300	0.3648	0.3060	0.7700
	0.0650	0.4586	0.3150	0.8127
	0.1100	0.5155	0.3320	0.9290
	0.1680	0.5503	0.3390	0.9767
	0.1930	0.5804	0.3520	1.0680
	0.2000	0.6048	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0266)	16.510	1.962	2.75	67.73
OUTFLOW: ID= 1 (0263)	16.510	0.268	4.83	67.59

PEAK FLOW REDUCTION [Qout/Qin](%)= 13.68
TIME SHIFT OF PEAK FLOW (min)=125.00
MAXIMUM STORAGE USED (ha.m.)= 0.7002

ADD HYD (0261) / 1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.

```
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0206):     0.12   0.012     2.83    37.33
      + ID2= 2 (  0263):    16.51   0.268     4.83    67.59
        ==================================================
        ID = 3 (  0261):    16.64   0.269     4.83    67.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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 FINISH
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```

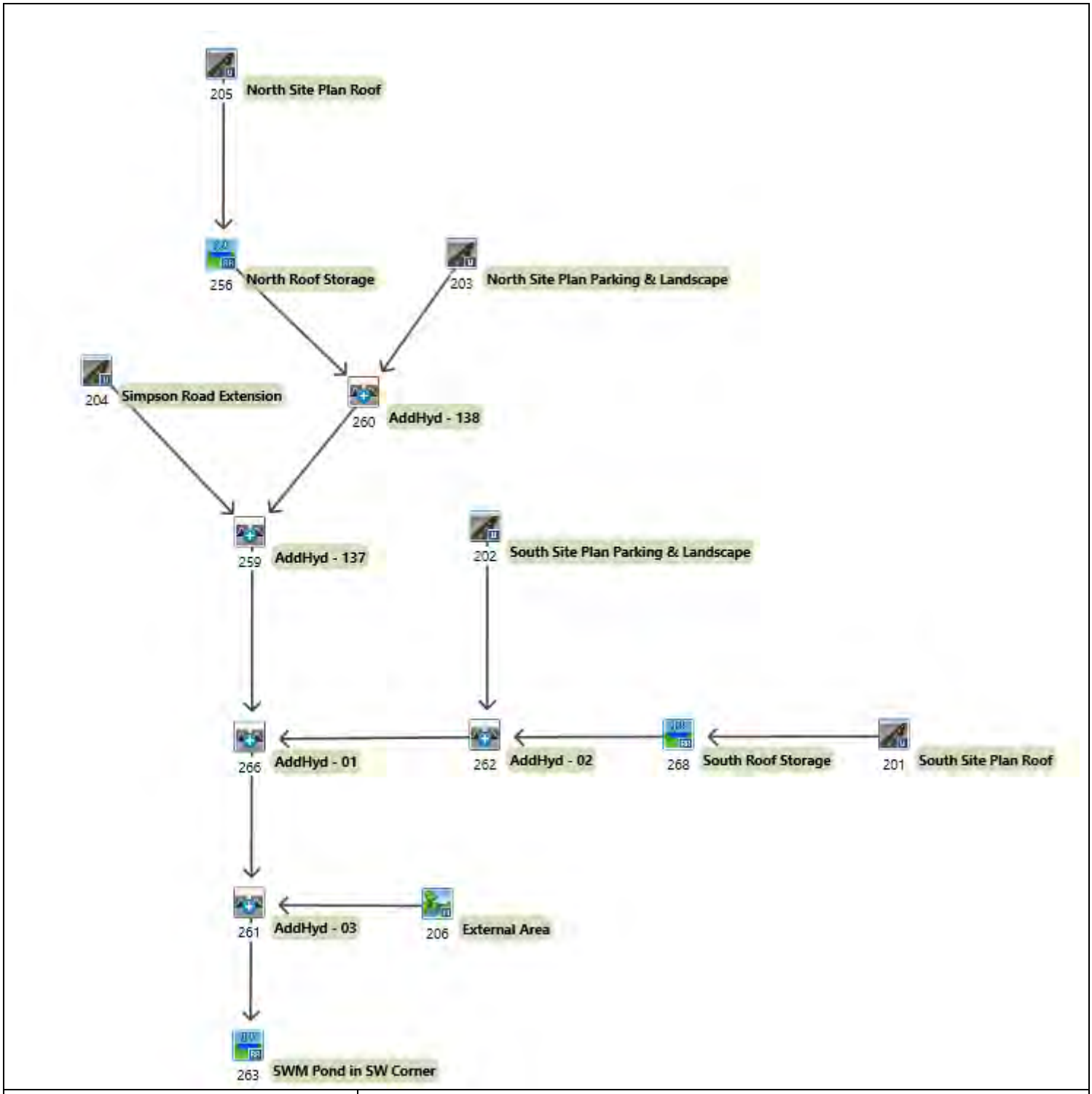

SCHAEFFERS
CONSULTING ENGINEERS

Post-development Visual OTTHYMO^{TM} Schematic
6 Hour SCS 2-100 Year

Job #: 2018-4841	**Date: July 2020**

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================================================================================
============================

       V    V   I    SSSSS  U   U    A    L             (v 5.0.2025)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\9b85d30d-2754-49f0-a525-410ef2229a9d\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\9b85d30d-2754-49f0-a525-410ef2229a9d\s


DATE: 07/06/2020                          TIME: 04:32:57

USER:


COMMENTS: _____________________________________________________________


--------------------------------------------------------------------------------
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  ***********************************************
  ** SIMULATION : 10 Year 6 Hour SCS           **
  ***********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\8c260ef9
| Ptotal= 61.75 mm |    Comments: 10yr 6hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00    6.18 |  3.75   13.59 |  5.50    2.47
                0.50    2.47 |  2.25    6.18 |  4.00    6.18 |  5.75    2.47
                0.75    2.47 |  2.50    7.41 |  4.25    6.18 |  6.00    2.47
                1.00    3.70 |  2.75    7.41 |  4.50    4.94 |  6.25    2.47
                1.25    3.70 |  3.00   37.05 |  4.75    4.94 |
                1.50    3.70 |  3.25   96.33 |  5.00    3.70 |
                1.75    3.70 |  3.50   13.59 |  5.25    3.70 |

--------------------------------------------------------------------------------


--------------------
| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    3.71 | 3.250   96.33 |  4.83    3.71
               0.167    0.00 | 1.750    3.71 | 3.333   13.59 |  4.92    3.71
               0.250    0.00 | 1.833    6.18 | 3.417   13.59 |  5.00    3.71
               0.333    2.47 | 1.917    6.18 | 3.500   13.59 |  5.08    3.71
               0.417    2.47 | 2.000    6.18 | 3.583   13.58 |  5.17    3.71
               0.500    2.47 | 2.083    6.18 | 3.667   13.59 |  5.25    3.71
               0.583    2.47 | 2.167    6.18 | 3.750   13.59 |  5.33    2.47
               0.667    2.47 | 2.250    6.18 | 3.833    6.18 |  5.42    2.47
               0.750    2.47 | 2.333    7.41 | 3.917    6.18 |  5.50    2.47
               0.833    3.70 | 2.417    7.41 | 4.000    6.18 |  5.58    2.47
               0.917    3.71 | 2.500    7.41 | 4.083    6.17 |  5.67    2.47
               1.000    3.71 | 2.583    7.41 | 4.167    6.18 |  5.75    2.47
               1.083    3.70 | 2.667    7.41 | 4.250    6.18 |  5.83    2.47
               1.167    3.71 | 2.750    7.41 | 4.333    4.94 |  5.92    2.47
               1.250    3.71 | 2.833   37.05 | 4.417    4.94 |  6.00    2.47
               1.333    3.71 | 2.917   37.05 | 4.500    4.94 |  6.08    2.47
               1.417    3.71 | 3.000   37.05 | 4.583    4.94 |  6.17    2.47
               1.500    3.71 | 3.083   96.33 | 4.667    4.94 |  6.25    2.47
               1.583    3.71 | 3.167   96.33 | 4.750    4.94 |

    Unit Hyd Qpeak  (cms)=   0.019

    PEAK FLOW       (cms)=   0.011 (i)
    TIME TO PEAK    (hrs)=   3.333
    RUNOFF VOLUME    (mm)=  28.598
    TOTAL RAINFALL   (mm)=  61.750
    RUNOFF COEFFICIENT   =   0.463

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\8c260ef9
| Ptotal= 61.75 mm |    Comments: 10yr 6hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00    6.18 |  3.75   13.59 |  5.50    2.47
                0.50    2.47 |  2.25    6.18 |  4.00    6.18 |  5.75    2.47
                0.75    2.47 |  2.50    7.41 |  4.25    6.18 |  6.00    2.47
                1.00    3.70 |  2.75    7.41 |  4.50    4.94 |  6.25    2.47
                1.25    3.70 |  3.00   37.05 |  4.75    4.94 |
                1.50    3.70 |  3.25   96.33 |  5.00    3.70 |
                1.75    3.70 |  3.50   13.59 |  5.25    3.70 |

--------------------------------------------------------------------------------


--------------------
| CALIB            |
| STANDHYD (  0205)|   Area    (ha)=   1.12
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
```

```
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.11         0.01
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      86.60        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	3.71	3.250	96.33	4.83	3.71
0.167	0.00	1.750	3.71	3.333	13.59	4.92	3.71
0.250	0.00	1.833	6.18	3.417	13.59	5.00	3.71
0.333	2.47	1.917	6.18	3.500	13.59	5.08	3.71
0.417	2.47	2.000	6.18	3.583	13.58	5.17	3.71
0.500	2.47	2.083	6.18	3.667	13.59	5.25	3.71
0.583	2.47	2.167	6.18	3.750	13.59	5.33	2.47
0.667	2.47	2.250	6.18	3.833	6.18	5.42	2.47
0.750	2.47	2.333	7.41	3.917	6.18	5.50	2.47
0.833	3.70	2.417	7.41	4.000	6.18	5.58	2.47
0.917	3.71	2.500	7.41	4.083	6.17	5.67	2.47
1.000	3.71	2.583	7.41	4.167	6.18	5.75	2.47
1.083	3.70	2.667	7.41	4.250	6.18	5.83	2.47
1.167	3.71	2.750	7.41	4.333	4.94	5.92	2.47
1.250	3.71	2.833	37.05	4.417	4.94	6.00	2.47
1.333	3.71	2.917	37.05	4.500	4.94	6.08	2.47
1.417	3.71	3.000	37.05	4.583	4.94	6.17	2.47
1.500	3.71	3.083	96.33	4.667	4.94	6.25	2.47
1.583	3.71	3.167	96.33	4.750	4.94		

```
     Max.Eff.Inten.(mm/hr)=      96.33        57.16
               over (min)        5.00         5.00
     Storage Coeff.  (min)=      2.38 (ii)    3.52 (ii)
     Unit Hyd. Tpeak (min)=      5.00         5.00
     Unit Hyd. peak  (cms)=      0.30         0.26
                                                    *TOTALS*
     PEAK FLOW       (cms)=      0.30         0.00      0.300 (iii)
     TIME TO PEAK    (hrs)=      3.25         3.25       3.25
     RUNOFF VOLUME    (mm)=     60.75        28.63      60.43
     TOTAL RAINFALL   (mm)=     61.75        61.75      61.75
     RUNOFF COEFFICIENT   =      0.98         0.46       0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0256)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                        0.0000     0.0000   |   0.0470     0.0750

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0205)      1.125      0.300      3.25      60.43
   OUTFLOW: ID= 1 (  0256)      1.125      0.029      3.83      60.08

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)=  9.81
                    TIME SHIFT OF PEAK FLOW         (min)= 35.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0470

--------------------------------------------------------------------------------

--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\8c260ef9
| Ptotal= 61.75 mm |    Comments: 10yr 6hr 15min SCS
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	6.18	3.75	13.59	5.50	2.47
0.50	2.47	2.25	6.18	4.00	6.18	5.75	2.47
0.75	2.47	2.50	7.41	4.25	6.18	6.00	2.47
1.00	3.70	2.75	7.41	4.50	4.94	6.25	2.47
1.25	3.70	3.00	37.05	4.75	4.94		
1.50	3.70	3.25	96.33	5.00	3.70		
1.75	3.70	3.50	13.59	5.25	3.70		

```
--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD (  0203)|   Area    (ha)=   2.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.68         0.42
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     118.18        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	3.71	3.250	96.33	4.83	3.71
0.167	0.00	1.750	3.71	3.333	13.59	4.92	3.71
0.250	0.00	1.833	6.18	3.417	13.59	5.00	3.71
0.333	2.47	1.917	6.18	3.500	13.59	5.08	3.71
0.417	2.47	2.000	6.18	3.583	13.58	5.17	3.71
0.500	2.47	2.083	6.18	3.667	13.59	5.25	3.71
0.583	2.47	2.167	6.18	3.750	13.59	5.33	2.47
0.667	2.47	2.250	6.18	3.833	6.18	5.42	2.47
0.750	2.47	2.333	7.41	3.917	6.18	5.50	2.47
0.833	3.70	2.417	7.41	4.000	6.18	5.58	2.47
0.917	3.71	2.500	7.41	4.083	6.17	5.67	2.47
1.000	3.71	2.583	7.41	4.167	6.18	5.75	2.47
1.083	3.70	2.667	7.41	4.250	6.18	5.83	2.47
1.167	3.71	2.750	7.41	4.333	4.94	5.92	2.47
1.250	3.71	2.833	37.05	4.417	4.94	6.00	2.47
1.333	3.71	2.917	37.05	4.500	4.94	6.08	2.47
1.417	3.71	3.000	37.05	4.583	4.94	6.17	2.47
1.500	3.71	3.083	96.33	4.667	4.94	6.25	2.47
1.583	3.71	3.167	96.33	4.750	4.94		

```
     Max.Eff.Inten.(mm/hr)=      96.33        57.16
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       2.87 (ii)    6.98 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.28         0.14
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.45         0.05         0.499 (iii)
     TIME TO PEAK    (hrs)=       3.25         3.25          3.25
     RUNOFF VOLUME    (mm)=      60.75        28.63         54.32
     TOTAL RAINFALL   (mm)=      61.75        61.75         61.75
     RUNOFF COEFFICIENT   =       0.98         0.46          0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0260)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0203):     2.10   0.499     3.25    54.32
     + ID2= 2 (  0256):     1.12   0.029     3.83    60.08
       ================================================
       ID = 3 (  0260):     3.22   0.524     3.25    56.33

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\8c260ef9
| Ptotal= 61.75 mm |    Comments: 10yr 6hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00    6.18 |  3.75   13.59 |  5.50    2.47
                0.50    2.47 |  2.25    6.18 |  4.00    6.18 |  5.75    2.47
                0.75    2.47 |  2.50    7.41 |  4.25    6.18 |  6.00    2.47
                1.00    3.70 |  2.75    7.41 |  4.50    4.94 |  6.25    2.47
                1.25    3.70 |  3.00   37.05 |  4.75    4.94 |
                1.50    3.70 |  3.25   96.33 |  5.00    3.70 |
                1.75    3.70 |  3.50   13.59 |  5.25    3.70 |

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD (  0204)|   Area    (ha)=   1.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.16         0.29
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      98.32        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                  ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    0.00 | 1.667    3.71 | 3.250   96.33 |  4.83    3.71
                0.167    0.00 | 1.750    3.71 | 3.333   13.59 |  4.92    3.71
                0.250    0.00 | 1.833    6.18 | 3.417   13.59 |  5.00    3.71
                0.333    2.47 | 1.917    6.18 | 3.500   13.59 |  5.08    3.71
                0.417    2.47 | 2.000    6.18 | 3.583   13.58 |  5.17    3.71
                0.500    2.47 | 2.083    6.18 | 3.667   13.59 |  5.25    3.71
                0.583    2.47 | 2.167    6.18 | 3.750   13.59 |  5.33    2.47
                0.667    2.47 | 2.250    6.18 | 3.833    6.18 |  5.42    2.47
                0.750    2.47 | 2.333    7.41 | 3.917    6.18 |  5.50    2.47
                0.833    3.70 | 2.417    7.41 | 4.000    6.18 |  5.58    2.47
                0.917    3.71 | 2.500    7.41 | 4.083    6.17 |  5.67    2.47
                1.000    3.71 | 2.583    7.41 | 4.167    6.18 |  5.75    2.47
                1.083    3.70 | 2.667    7.41 | 4.250    6.18 |  5.83    2.47
                1.167    3.71 | 2.750    7.41 | 4.333    4.94 |  5.92    2.47
                1.250    3.71 | 2.833   37.05 | 4.417    4.94 |  6.00    2.47
                1.333    3.71 | 2.917   37.05 | 4.500    4.94 |  6.08    2.47
                1.417    3.71 | 3.000   37.05 | 4.583    4.94 |  6.17    2.47
                1.500    3.71 | 3.083   96.33 | 4.667    4.94 |  6.25    2.47
                1.583    3.71 | 3.167   96.33 | 4.750    4.94 |

     Max.Eff.Inten.(mm/hr)=      96.33        57.16
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       2.57 (ii)    6.68 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.29         0.14
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.31         0.04         0.347 (iii)
     TIME TO PEAK    (hrs)=       3.25         3.25          3.25
     RUNOFF VOLUME    (mm)=      60.75        28.63         54.32
     TOTAL RAINFALL   (mm)=      61.75        61.75         61.75
     RUNOFF COEFFICIENT   =       0.98         0.46          0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0259)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0204):     1.45   0.347     3.25    54.32
     + ID2= 2 (  0260):     3.22   0.524     3.25    56.33
       ================================================
       ID = 3 (  0259):     4.67   0.871     3.25    55.71

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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```
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\8c260ef9
| Ptotal= 61.75 mm |    Comments: 10yr 6hr 15min SCS
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	6.18	3.75	13.59	5.50	2.47
0.50	2.47	2.25	6.18	4.00	6.18	5.75	2.47
0.75	2.47	2.50	7.41	4.25	6.18	6.00	2.47
1.00	3.70	2.75	7.41	4.50	4.94	6.25	2.47
1.25	3.70	3.00	37.05	4.75	4.94		
1.50	3.70	3.25	96.33	5.00	3.70		
1.75	3.70	3.50	13.59	5.25	3.70		

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--------------------
| CALIB            |
| STANDHYD (  0201)|   Area    (ha)=   5.27
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.22	0.05
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	187.44	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	3.71	3.250	96.33	4.83	3.71
0.167	0.00	1.750	3.71	3.333	13.59	4.92	3.71
0.250	0.00	1.833	6.18	3.417	13.59	5.00	3.71
0.333	2.47	1.917	6.18	3.500	13.59	5.08	3.71
0.417	2.47	2.000	6.18	3.583	13.58	5.17	3.71
0.500	2.47	2.083	6.18	3.667	13.59	5.25	3.71
0.583	2.47	2.167	6.18	3.750	13.59	5.33	2.47
0.667	2.47	2.250	6.18	3.833	6.18	5.42	2.47
0.750	2.47	2.333	7.41	3.917	6.18	5.50	2.47
0.833	3.70	2.417	7.41	4.000	6.18	5.58	2.47
0.917	3.71	2.500	7.41	4.083	6.17	5.67	2.47
1.000	3.71	2.583	7.41	4.167	6.18	5.75	2.47
1.083	3.70	2.667	7.41	4.250	6.18	5.83	2.47
1.167	3.71	2.750	7.41	4.333	4.94	5.92	2.47
1.250	3.71	2.833	37.05	4.417	4.94	6.00	2.47
1.333	3.71	2.917	37.05	4.500	4.94	6.08	2.47
1.417	3.71	3.000	37.05	4.583	4.94	6.17	2.47
1.500	3.71	3.083	96.33	4.667	4.94	6.25	2.47
1.583	3.71	3.167	96.33	4.750	4.94		

Max.Eff.Inten.(mm/hr)=		96.33	57.16	
over (min)		5.00	5.00	
Storage Coeff. (min)=		3.78 (ii)	4.92 (ii)	
Unit Hyd. Tpeak (min)=		5.00	5.00	
Unit Hyd. peak (cms)=		0.25	0.22	
				TOTALS
PEAK FLOW	(cms)=	1.38	0.01	1.388 (iii)
TIME TO PEAK	(hrs)=	3.25	3.25	3.25
RUNOFF VOLUME	(mm)=	60.75	28.63	60.43
TOTAL RAINFALL	(mm)=	61.75	61.75	61.75
RUNOFF COEFFICIENT	=	0.98	0.46	0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  0268)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |
--------------------
```

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.1959	0.1883
0.0980	0.0369	0.2939	0.4335

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)	5.270	1.388	3.25	60.43
OUTFLOW: ID= 1 (0268)	5.270	0.191	3.75	60.41

PEAK FLOW REDUCTION [Qout/Qin](%)= 13.77
TIME SHIFT OF PEAK FLOW (min)= 30.00
MAXIMUM STORAGE USED (ha.m.)= 0.1810

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--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\8c260ef9
| Ptotal= 61.75 mm |    Comments: 10yr 6hr 15min SCS
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	6.18	3.75	13.59	5.50	2.47
0.50	2.47	2.25	6.18	4.00	6.18	5.75	2.47
0.75	2.47	2.50	7.41	4.25	6.18	6.00	2.47
1.00	3.70	2.75	7.41	4.50	4.94	6.25	2.47
1.25	3.70	3.00	37.05	4.75	4.94		
1.50	3.70	3.25	96.33	5.00	3.70		
1.75	3.70	3.50	13.59	5.25	3.70		

```
--------------------
| CALIB            |
| STANDHYD (  0202)|   Area    (ha)=   6.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.32	1.25
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	209.28	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	3.71	3.250	96.33	4.83	3.71
0.167	0.00	1.750	3.71	3.333	13.59	4.92	3.71
0.250	0.00	1.833	6.18	3.417	13.59	5.00	3.71
0.333	2.47	1.917	6.18	3.500	13.59	5.08	3.71
0.417	2.47	2.000	6.18	3.583	13.58	5.17	3.71
0.500	2.47	2.083	6.18	3.667	13.59	5.25	3.71
0.583	2.47	2.167	6.18	3.750	13.59	5.33	2.47
0.667	2.47	2.250	6.18	3.833	6.18	5.42	2.47
0.750	2.47	2.333	7.41	3.917	6.18	5.50	2.47
0.833	3.70	2.417	7.41	4.000	6.18	5.58	2.47
0.917	3.71	2.500	7.41	4.083	6.17	5.67	2.47
1.000	3.71	2.583	7.41	4.167	6.18	5.75	2.47
1.083	3.70	2.667	7.41	4.250	6.18	5.83	2.47
1.167	3.71	2.750	7.41	4.333	4.94	5.92	2.47
1.250	3.71	2.833	37.05	4.417	4.94	6.00	2.47
1.333	3.71	2.917	37.05	4.500	4.94	6.08	2.47
1.417	3.71	3.000	37.05	4.583	4.94	6.17	2.47
1.500	3.71	3.083	96.33	4.667	4.94	6.25	2.47
1.583	3.71	3.167	96.33	4.750	4.94		

			TOTALS
Max.Eff.Inten.(mm/hr)=	96.33	57.16	
over (min)	5.00	10.00	
Storage Coeff. (min)=	4.04 (ii)	8.05 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.24	0.13	
PEAK FLOW (cms)=	1.40	0.15	1.551 (iii)
TIME TO PEAK (hrs)=	3.25	3.25	3.25
RUNOFF VOLUME (mm)=	60.75	28.63	54.65
TOTAL RAINFALL (mm)=	61.75	61.75	61.75
RUNOFF COEFFICIENT =	0.98	0.46	0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0262)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0202):		6.57	1.551	3.25	54.65
+ ID2= 2 (0268):		5.27	0.191	3.75	60.41
ID = 3 (0262):		11.84	1.721	3.25	57.21

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0266)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0259):		4.67	0.871	3.25	55.71
+ ID2= 2 (0262):		11.84	1.721	3.25	57.21
ID = 3 (0266):		16.51	2.592	3.25	56.79

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0263)				
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.2130	0.6563
	0.0190	0.1773	0.2520	0.6883
	0.0220	0.2128	0.2890	0.7150
	0.0260	0.2888	0.2980	0.7450
	0.0300	0.3648	0.3060	0.7700
	0.0650	0.4586	0.3150	0.8127
	0.1100	0.5155	0.3320	0.9290
	0.1680	0.5503	0.3390	0.9767
	0.1930	0.5804	0.3520	1.0680
	0.2000	0.6048	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0266)	16.510	2.592	3.25	56.79
OUTFLOW: ID= 1 (0263)	16.510	0.204	6.25	56.64

PEAK FLOW REDUCTION [Qout/Qin](%)= 7.86
TIME SHIFT OF PEAK FLOW (min)=180.00
MAXIMUM STORAGE USED (ha.m.)= 0.6198

ADD HYD (0261)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0206):		0.12	0.011	3.33	28.60
+ ID2= 2 (0263):		16.51	0.204	6.25	56.64
ID = 3 (0261):		16.64	0.204	6.25	56.43

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
V    V   I    SSSSS  U   U    A    L              (v 5.0.2025)
V    V   I    SS     U   U   A A   L
 V  V    I     SS    U   U  AAAAA  L
 V  V    I      SS   U   U  A   A  L
  VV     I    SSSSS  UUUUU  A   A  LLLLL

 OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
O   O    T      T    H   H   Y Y   MM MM  O   O
O   O    T      T    H   H    Y    M   M  O   O
 OOO     T      T    H   H    Y    M   M   OOO
```

Developed and Distributed by Civica Infrastructure

***** D E T A I L E D O U T P U T *****

```
  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\f78f660e-8d2f-4f33-a5c3-4a3d189c325c\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\f78f660e-8d2f-4f33-a5c3-4a3d189c325c\s

DATE: 07/06/2020                          TIME: 04:32:58

USER:


COMMENTS: _____________________________________________________________

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  **********************************************
  ** SIMULATION : 100 Year 6 Hour SCS          **
  **********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\92ca19b1
| Ptotal= 93.25 mm |    Comments: 100yr 6hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00    9.32 |  3.75   20.51 |  5.50    3.73
                0.50    3.73 |  2.25    9.32 |  4.00    9.32 |  5.75    3.73
                0.75    3.73 |  2.50   11.19 |  4.25    9.32 |  6.00    3.73
                1.00    5.59 |  2.75   11.19 |  4.50    7.46 |  6.25    3.73
                1.25    5.59 |  3.00   55.95 |  4.75    7.46 |
                1.50    5.59 |  3.25  145.47 |  5.00    5.59 |
                1.75    5.59 |  3.50   20.51 |  5.25    5.59 |

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--------------------
| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    5.59 | 3.250  145.47 |  4.83    5.60
               0.167    0.00 | 1.750    5.60 | 3.333   20.52 |  4.92    5.59
               0.250    0.00 | 1.833    9.32 | 3.417   20.51 |  5.00    5.59
               0.333    3.73 | 1.917    9.32 | 3.500   20.51 |  5.08    5.60
               0.417    3.73 | 2.000    9.33 | 3.583   20.51 |  5.17    5.59
               0.500    3.73 | 2.083    9.32 | 3.667   20.51 |  5.25    5.59
               0.583    3.73 | 2.167    9.32 | 3.750   20.51 |  5.33    3.73
               0.667    3.73 | 2.250    9.32 | 3.833    9.33 |  5.42    3.73
               0.750    3.73 | 2.333   11.19 | 3.917    9.32 |  5.50    3.73
               0.833    5.59 | 2.417   11.19 | 4.000    9.32 |  5.58    3.73
               0.917    5.59 | 2.500   11.19 | 4.083    9.32 |  5.67    3.73
               1.000    5.59 | 2.583   11.19 | 4.167    9.32 |  5.75    3.73
               1.083    5.59 | 2.667   11.19 | 4.250    9.32 |  5.83    3.73
               1.167    5.59 | 2.750   11.19 | 4.333    7.46 |  5.92    3.73
               1.250    5.59 | 2.833   55.95 | 4.417    7.46 |  6.00    3.73
               1.333    5.60 | 2.917   55.95 | 4.500    7.46 |  6.08    3.73
               1.417    5.59 | 3.000   55.95 | 4.583    7.46 |  6.17    3.73
               1.500    5.60 | 3.083  145.47 | 4.667    7.46 |  6.25    3.73
               1.583    5.59 | 3.167  145.47 | 4.750    7.46 |

     Unit Hyd Qpeak  (cms)=   0.019

     PEAK FLOW       (cms)=   0.021 (i)
     TIME TO PEAK    (hrs)=   3.333
     RUNOFF VOLUME    (mm)=  54.034
     TOTAL RAINFALL   (mm)=  93.250
     RUNOFF COEFFICIENT   =   0.579

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\92ca19b1
| Ptotal= 93.25 mm |    Comments: 100yr 6hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00    9.32 |  3.75   20.51 |  5.50    3.73
                0.50    3.73 |  2.25    9.32 |  4.00    9.32 |  5.75    3.73
                0.75    3.73 |  2.50   11.19 |  4.25    9.32 |  6.00    3.73
                1.00    5.59 |  2.75   11.19 |  4.50    7.46 |  6.25    3.73
                1.25    5.59 |  3.00   55.95 |  4.75    7.46 |
                1.50    5.59 |  3.25  145.47 |  5.00    5.59 |
                1.75    5.59 |  3.50   20.51 |  5.25    5.59 |

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--------------------
| CALIB            |
| STANDHYD (  0205)|   Area    (ha)=   1.12
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.11          0.01
     Dep. Storage     (mm)=       1.00          5.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      86.60         40.00
     Mannings n           =      0.013         0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    5.59 | 3.250  145.47 |  4.83    5.60
               0.167    0.00 | 1.750    5.60 | 3.333   20.52 |  4.92    5.59
               0.250    0.00 | 1.833    9.32 | 3.417   20.51 |  5.00    5.59
               0.333    3.73 | 1.917    9.32 | 3.500   20.51 |  5.08    5.60
               0.417    3.73 | 2.000    9.33 | 3.583   20.51 |  5.17    5.59
```

```
               0.500    3.73 | 2.083    9.32 | 3.667   20.51 |  5.25    5.59
               0.583    3.73 | 2.167    9.32 | 3.750   20.51 |  5.33    3.73
               0.667    3.73 | 2.250    9.32 | 3.833    9.33 |  5.42    3.73
               0.750    3.73 | 2.333   11.19 | 3.917    9.32 |  5.50    3.73
               0.833    5.59 | 2.417   11.19 | 4.000    9.32 |  5.58    3.73
               0.917    5.59 | 2.500   11.19 | 4.083    9.32 |  5.67    3.73
               1.000    5.59 | 2.583   11.19 | 4.167    9.32 |  5.75    3.73
               1.083    5.59 | 2.667   11.19 | 4.250    9.32 |  5.83    3.73
               1.167    5.59 | 2.750   11.19 | 4.333    7.46 |  5.92    3.73
               1.250    5.59 | 2.833   55.95 | 4.417    7.46 |  6.00    3.73
               1.333    5.60 | 2.917   55.95 | 4.500    7.46 |  6.08    3.73
               1.417    5.59 | 3.000   55.95 | 4.583    7.46 |  6.17    3.73
               1.500    5.60 | 3.083  145.47 | 4.667    7.46 |  6.25    3.73
               1.583    5.59 | 3.167  145.47 | 4.750    7.46 |

     Max.Eff.Inten.(mm/hr)=     145.47       105.23
               over (min)        5.00         5.00
     Storage Coeff.  (min)=      2.02 (ii)    2.98 (ii)
     Unit Hyd. Tpeak (min)=      5.00         5.00
     Unit Hyd. peak  (cms)=      0.31         0.28
                                                        *TOTALS*
     PEAK FLOW       (cms)=      0.45         0.00         0.453 (iii)
     TIME TO PEAK    (hrs)=      3.25         3.25          3.25
     RUNOFF VOLUME    (mm)=     92.25        54.08         91.87
     TOTAL RAINFALL   (mm)=     93.25        93.25         93.25
     RUNOFF COEFFICIENT   =      0.99         0.58          0.99

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  0256)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0470     0.0750

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0205)     1.125     0.453      3.25      91.87
   OUTFLOW: ID= 1 (  0256)     1.125     0.045      3.83      91.51

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  9.84
                  TIME SHIFT OF PEAK FLOW         (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0714

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--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\92ca19b1
| Ptotal= 93.25 mm |    Comments: 100yr 6hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00    9.32 |  3.75   20.51 |  5.50    3.73
                0.50    3.73 |  2.25    9.32 |  4.00    9.32 |  5.75    3.73
                0.75    3.73 |  2.50   11.19 |  4.25    9.32 |  6.00    3.73
                1.00    5.59 |  2.75   11.19 |  4.50    7.46 |  6.25    3.73
                1.25    5.59 |  3.00   55.95 |  4.75    7.46 |
                1.50    5.59 |  3.25  145.47 |  5.00    5.59 |
                1.75    5.59 |  3.50   20.51 |  5.25    5.59 |

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| CALIB            |
| STANDHYD (  0203)|   Area    (ha)=   2.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.68         0.42
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     118.18        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    0.00 | 1.667    5.59 | 3.250  145.47 |  4.83    5.60
                0.167    0.00 | 1.750    5.60 | 3.333   20.52 |  4.92    5.59
                0.250    0.00 | 1.833    9.32 | 3.417   20.51 |  5.00    5.59
                0.333    3.73 | 1.917    9.32 | 3.500   20.51 |  5.08    5.60
                0.417    3.73 | 2.000    9.33 | 3.583   20.51 |  5.17    5.59
                0.500    3.73 | 2.083    9.32 | 3.667   20.51 |  5.25    5.59
                0.583    3.73 | 2.167    9.32 | 3.750   20.51 |  5.33    3.73
                0.667    3.73 | 2.250    9.32 | 3.833    9.33 |  5.42    3.73
                0.750    3.73 | 2.333   11.19 | 3.917    9.32 |  5.50    3.73
                0.833    5.59 | 2.417   11.19 | 4.000    9.32 |  5.58    3.73
                0.917    5.59 | 2.500   11.19 | 4.083    9.32 |  5.67    3.73
                1.000    5.59 | 2.583   11.19 | 4.167    9.32 |  5.75    3.73
                1.083    5.59 | 2.667   11.19 | 4.250    9.32 |  5.83    3.73
                1.167    5.59 | 2.750   11.19 | 4.333    7.46 |  5.92    3.73
                1.250    5.59 | 2.833   55.95 | 4.417    7.46 |  6.00    3.73
                1.333    5.60 | 2.917   55.95 | 4.500    7.46 |  6.08    3.73
                1.417    5.59 | 3.000   55.95 | 4.583    7.46 |  6.17    3.73
                1.500    5.60 | 3.083  145.47 | 4.667    7.46 |  6.25    3.73
                1.583    5.59 | 3.167  145.47 | 4.750    7.46 |

     Max.Eff.Inten.(mm/hr)=     145.47       105.23
               over (min)        5.00        10.00
     Storage Coeff.  (min)=      2.43 (ii)    5.92 (ii)
     Unit Hyd. Tpeak (min)=      5.00        10.00
     Unit Hyd. peak  (cms)=      0.30         0.15
                                                        *TOTALS*
     PEAK FLOW       (cms)=      0.68         0.10         0.780 (iii)
     TIME TO PEAK    (hrs)=      3.25         3.25          3.25
     RUNOFF VOLUME    (mm)=     92.25        54.08         84.61
     TOTAL RAINFALL   (mm)=     93.25        93.25         93.25
     RUNOFF COEFFICIENT   =      0.99         0.58          0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
```

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0260)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (0203):	2.10	0.780	3.25	84.61
	+ ID2= 2 (0256):	1.12	0.045	3.83	91.51
	ID = 3 (0260):	3.22	0.818	3.25	87.02

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\50f23b5e-2bda-4888-8f6a-fa41043db911\92ca19b1
Ptotal= 93.25 mm	Comments: 100yr 6hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	9.32	3.75	20.51	5.50	3.73
0.50	3.73	2.25	9.32	4.00	9.32	5.75	3.73
0.75	3.73	2.50	11.19	4.25	9.32	6.00	3.73
1.00	5.59	2.75	11.19	4.50	7.46	6.25	3.73
1.25	5.59	3.00	55.95	4.75	7.46		
1.50	5.59	3.25	145.47	5.00	5.59		
1.75	5.59	3.50	20.51	5.25	5.59		

CALIB STANDHYD (0204)	Area (ha)= 1.45
ID= 1 DT= 5.0 min	Total Imp(%)= 80.00 Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.16	0.29
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	98.32	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	5.59	3.250	145.47	4.83	5.60
0.167	0.00	1.750	5.60	3.333	20.52	4.92	5.59
0.250	0.00	1.833	9.32	3.417	20.51	5.00	5.59
0.333	3.73	1.917	9.32	3.500	20.51	5.08	5.60
0.417	3.73	2.000	9.33	3.583	20.51	5.17	5.59
0.500	3.73	2.083	9.32	3.667	20.51	5.25	5.59
0.583	3.73	2.167	9.32	3.750	20.51	5.33	3.73
0.667	3.73	2.250	9.32	3.833	9.33	5.42	3.73
0.750	3.73	2.333	11.19	3.917	9.32	5.50	3.73
0.833	5.59	2.417	11.19	4.000	9.32	5.58	3.73
0.917	5.59	2.500	11.19	4.083	9.32	5.67	3.73
1.000	5.59	2.583	11.19	4.167	9.32	5.75	3.73
1.083	5.59	2.667	11.19	4.250	9.32	5.83	3.73
1.167	5.59	2.750	11.19	4.333	7.46	5.92	3.73
1.250	5.59	2.833	55.95	4.417	7.46	6.00	3.73
1.333	5.60	2.917	55.95	4.500	7.46	6.08	3.73
1.417	5.59	3.000	55.95	4.583	7.46	6.17	3.73
1.500	5.60	3.083	145.47	4.667	7.46	6.25	3.73
1.583	5.59	3.167	145.47	4.750	7.46		

				TOTALS
Max.Eff.Inten.(mm/hr)=		145.47	105.23	
over (min)		5.00	10.00	
Storage Coeff. (min)=		2.18 (ii)	5.67 (ii)	
Unit Hyd. Tpeak (min)=		5.00	10.00	
Unit Hyd. peak (cms)=		0.31	0.15	
PEAK FLOW	(cms)=	0.47	0.07	0.541 (iii)
TIME TO PEAK	(hrs)=	3.25	3.25	3.25
RUNOFF VOLUME	(mm)=	92.25	54.08	84.61
TOTAL RAINFALL	(mm)=	93.25	93.25	93.25
RUNOFF COEFFICIENT	=	0.99	0.58	0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0259)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (0204):	1.45	0.541	3.25	84.61
	+ ID2= 2 (0260):	3.22	0.818	3.25	87.02
	ID = 3 (0259):	4.67	1.359	3.25	86.28

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\50f23b5e-2bda-4888-8f6a-fa41043db911\92ca19b1
Ptotal= 93.25 mm	Comments: 100yr 6hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	9.32	3.75	20.51	5.50	3.73
0.50	3.73	2.25	9.32	4.00	9.32	5.75	3.73
0.75	3.73	2.50	11.19	4.25	9.32	6.00	3.73
1.00	5.59	2.75	11.19	4.50	7.46	6.25	3.73
1.25	5.59	3.00	55.95	4.75	7.46		
1.50	5.59	3.25	145.47	5.00	5.59		
1.75	5.59	3.50	20.51	5.25	5.59		

CALIB

```
| STANDHYD (  0201)|   Area    (ha)=   5.27
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.22         0.05
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     187.44        40.00
     Mannings n             =     0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	5.59	3.250	145.47	4.83	5.60
0.167	0.00	1.750	5.60	3.333	20.52	4.92	5.59
0.250	0.00	1.833	9.32	3.417	20.51	5.00	5.59
0.333	3.73	1.917	9.32	3.500	20.51	5.08	5.60
0.417	3.73	2.000	9.33	3.583	20.51	5.17	5.59
0.500	3.73	2.083	9.32	3.667	20.51	5.25	5.59
0.583	3.73	2.167	9.32	3.750	20.51	5.33	3.73
0.667	3.73	2.250	9.32	3.833	9.33	5.42	3.73
0.750	3.73	2.333	11.19	3.917	9.32	5.50	3.73
0.833	5.59	2.417	11.19	4.000	9.32	5.58	3.73
0.917	5.59	2.500	11.19	4.083	9.32	5.67	3.73
1.000	5.59	2.583	11.19	4.167	9.32	5.75	3.73
1.083	5.59	2.667	11.19	4.250	9.32	5.83	3.73
1.167	5.59	2.750	11.19	4.333	7.46	5.92	3.73
1.250	5.59	2.833	55.95	4.417	7.46	6.00	3.73
1.333	5.60	2.917	55.95	4.500	7.46	6.08	3.73
1.417	5.59	3.000	55.95	4.583	7.46	6.17	3.73
1.500	5.60	3.083	145.47	4.667	7.46	6.25	3.73
1.583	5.59	3.167	145.47	4.750	7.46		

```
     Max.Eff.Inten.(mm/hr)=     145.47       105.23
               over (min)        5.00         5.00
     Storage Coeff.  (min)=      3.21 (ii)    4.17 (ii)
     Unit Hyd. Tpeak (min)=      5.00         5.00
     Unit Hyd. peak  (cms)=      0.27         0.24
                                                  *TOTALS*
     PEAK FLOW       (cms)=      2.10         0.02          2.111 (iii)
     TIME TO PEAK    (hrs)=      3.25         3.25           3.25
     RUNOFF VOLUME    (mm)=     92.25        54.08          91.87
     TOTAL RAINFALL   (mm)=     93.25        93.25          93.25
     RUNOFF COEFFICIENT   =      0.99         0.58           0.99

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0268)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.1959      0.1883
                         0.0980     0.0369   |   0.2939      0.4335

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0201)      5.270     2.111      3.25      91.87
   OUTFLOW: ID= 1 (  0268)      5.270     0.237      3.75      91.85

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 11.20
                  TIME SHIFT OF PEAK FLOW         (min)= 30.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.2908

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--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\92ca19b1
| Ptotal= 93.25 mm |    Comments: 100yr 6hr 15min SCS
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	9.32	3.75	20.51	5.50	3.73
0.50	3.73	2.25	9.32	4.00	9.32	5.75	3.73
0.75	3.73	2.50	11.19	4.25	9.32	6.00	3.73
1.00	5.59	2.75	11.19	4.50	7.46	6.25	3.73
1.25	5.59	3.00	55.95	4.75	7.46		
1.50	5.59	3.25	145.47	5.00	5.59		
1.75	5.59	3.50	20.51	5.25	5.59		

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| CALIB            |
| STANDHYD (  0202)|   Area    (ha)=   6.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.32         1.25
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     209.28        40.00
     Mannings n             =     0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	5.59	3.250	145.47	4.83	5.60
0.167	0.00	1.750	5.60	3.333	20.52	4.92	5.59
0.250	0.00	1.833	9.32	3.417	20.51	5.00	5.59
0.333	3.73	1.917	9.32	3.500	20.51	5.08	5.60
0.417	3.73	2.000	9.33	3.583	20.51	5.17	5.59
0.500	3.73	2.083	9.32	3.667	20.51	5.25	5.59
0.583	3.73	2.167	9.32	3.750	20.51	5.33	3.73
0.667	3.73	2.250	9.32	3.833	9.33	5.42	3.73
0.750	3.73	2.333	11.19	3.917	9.32	5.50	3.73
0.833	5.59	2.417	11.19	4.000	9.32	5.58	3.73
0.917	5.59	2.500	11.19	4.083	9.32	5.67	3.73
1.000	5.59	2.583	11.19	4.167	9.32	5.75	3.73
1.083	5.59	2.667	11.19	4.250	9.32	5.83	3.73
1.167	5.59	2.750	11.19	4.333	7.46	5.92	3.73
1.250	5.59	2.833	55.95	4.417	7.46	6.00	3.73
1.333	5.60	2.917	55.95	4.500	7.46	6.08	3.73

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              1.417    5.59 | 3.000   55.95 | 4.583    7.46 |  6.17    3.73
              1.500    5.60 | 3.083  145.47 | 4.667    7.46 |  6.25    3.73
              1.583    5.59 | 3.167  145.47 | 4.750    7.46 |

     Max.Eff.Inten.(mm/hr)=     145.47       105.23
               over (min)        5.00        10.00
     Storage Coeff.  (min)=       3.43 (ii)    6.83 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.26         0.14
                                                          *TOTALS*
     PEAK FLOW       (cms)=       2.13         0.30         2.432 (iii)
     TIME TO PEAK    (hrs)=       3.25         3.25          3.25
     RUNOFF VOLUME    (mm)=      92.25        54.08         85.00
     TOTAL RAINFALL   (mm)=      93.25        93.25         93.25
     RUNOFF COEFFICIENT   =       0.99         0.58          0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0262)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0202):     6.57   2.432     3.25    85.00
     + ID2= 2 (  0268):     5.27   0.237     3.75    91.85
       ================================================
       ID = 3 (  0262):    11.84   2.647     3.25    88.05

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0266)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0259):     4.67   1.359     3.25    86.28
     + ID2= 2 (  0262):    11.84   2.647     3.25    88.05
       ================================================
       ID = 3 (  0266):    16.51   4.006     3.25    87.55

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0263)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000    |   0.2130     0.6563
                         0.0190     0.1773    |   0.2520     0.6883
                         0.0220     0.2128    |   0.2890     0.7150
                         0.0260     0.2888    |   0.2980     0.7450
                         0.0300     0.3648    |   0.3060     0.7700
                         0.0650     0.4586    |   0.3150     0.8127
                         0.1100     0.5155    |   0.3320     0.9290
                         0.1680     0.5503    |   0.3390     0.9767
                         0.1930     0.5804    |   0.3520     1.0680
                         0.2000     0.6048    |   0.0000     0.0000

                                    AREA     QPEAK     TPEAK       R.V.
                                    (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0266)     16.510      4.006      3.25      87.55
   OUTFLOW: ID= 1 (  0263)     16.510      0.322      6.25      87.40

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  8.05
                  TIME SHIFT OF PEAK FLOW         (min)=180.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.8628

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0206):     0.12   0.021     3.33    54.03
     + ID2= 2 (  0263):    16.51   0.322     6.25    87.40
       ================================================
       ID = 3 (  0261):    16.64   0.323     6.25    87.15

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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 FINISH
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      V    V   I    SSSSS  U   U    A    L              (v 5.0.2025)
      V    V   I    SS     U   U   A A   L
       V  V    I     SS    U   U  AAAAA  L
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\86996c1e-990a-4c25-80c0-de7180243855\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\86996c1e-990a-4c25-80c0-de7180243855\s


DATE: 07/06/2020                          TIME: 04:32:57

USER:
```

COMMENTS: _____

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---------------------------
  ***********************************************
  ** SIMULATION : 2 Year 6 Hour SCS             **
  ***********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\4742e92a
| Ptotal= 36.33 mm |    Comments: 2yr 6hr 15min SCS
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	3.63	3.75	7.99	5.50	1.45
0.50	1.45	2.25	3.63	4.00	3.63	5.75	1.45
0.75	1.45	2.50	4.36	4.25	3.63	6.00	1.45
1.00	2.18	2.75	4.36	4.50	2.91	6.25	1.45
1.25	2.18	3.00	21.80	4.75	2.91		
1.50	2.18	3.25	56.67	5.00	2.18		
1.75	2.18	3.50	7.99	5.25	2.18		

```
---------------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	2.18	3.250	56.67	4.83	2.18
0.167	0.00	1.750	2.18	3.333	7.99	4.92	2.18
0.250	0.00	1.833	3.63	3.417	7.99	5.00	2.18
0.333	1.45	1.917	3.63	3.500	7.99	5.08	2.18
0.417	1.45	2.000	3.63	3.583	7.99	5.17	2.18
0.500	1.45	2.083	3.63	3.667	7.99	5.25	2.18
0.583	1.45	2.167	3.63	3.750	7.99	5.33	1.45
0.667	1.45	2.250	3.63	3.833	3.63	5.42	1.45
0.750	1.45	2.333	4.36	3.917	3.63	5.50	1.45
0.833	2.18	2.417	4.36	4.000	3.63	5.58	1.45
0.917	2.18	2.500	4.36	4.083	3.63	5.67	1.45
1.000	2.18	2.583	4.36	4.167	3.63	5.75	1.45
1.083	2.18	2.667	4.36	4.250	3.63	5.83	1.45
1.167	2.18	2.750	4.36	4.333	2.91	5.92	1.45
1.250	2.18	2.833	21.80	4.417	2.91	6.00	1.45
1.333	2.18	2.917	21.80	4.500	2.91	6.08	1.45
1.417	2.18	3.000	21.80	4.583	2.91	6.17	1.45
1.500	2.18	3.083	56.67	4.667	2.91	6.25	1.45
1.583	2.18	3.167	56.67	4.750	2.91		

```
    Unit Hyd Qpeak  (cms)=   0.019

    PEAK FLOW       (cms)=   0.004 (i)

    TIME TO PEAK    (hrs)=   3.417
    RUNOFF VOLUME    (mm)=  11.257
    TOTAL RAINFALL   (mm)=  36.330
    RUNOFF COEFFICIENT   =   0.310

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\4742e92a
| Ptotal= 36.33 mm |    Comments: 2yr 6hr 15min SCS
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	3.63	3.75	7.99	5.50	1.45
0.50	1.45	2.25	3.63	4.00	3.63	5.75	1.45
0.75	1.45	2.50	4.36	4.25	3.63	6.00	1.45
1.00	2.18	2.75	4.36	4.50	2.91	6.25	1.45
1.25	2.18	3.00	21.80	4.75	2.91		
1.50	2.18	3.25	56.67	5.00	2.18		
1.75	2.18	3.50	7.99	5.25	2.18		

```
---------------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0205)|   Area    (ha)=   1.12
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------

                           IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=       1.11         0.01
    Dep. Storage     (mm)=       1.00         5.00
    Average Slope     (%)=       1.00         2.00
    Length            (m)=      86.60        40.00
    Mannings n           =      0.013        0.250

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	2.18	3.250	56.67	4.83	2.18
0.167	0.00	1.750	2.18	3.333	7.99	4.92	2.18
0.250	0.00	1.833	3.63	3.417	7.99	5.00	2.18
0.333	1.45	1.917	3.63	3.500	7.99	5.08	2.18
0.417	1.45	2.000	3.63	3.583	7.99	5.17	2.18
0.500	1.45	2.083	3.63	3.667	7.99	5.25	2.18
0.583	1.45	2.167	3.63	3.750	7.99	5.33	1.45
0.667	1.45	2.250	3.63	3.833	3.63	5.42	1.45
0.750	1.45	2.333	4.36	3.917	3.63	5.50	1.45
0.833	2.18	2.417	4.36	4.000	3.63	5.58	1.45
0.917	2.18	2.500	4.36	4.083	3.63	5.67	1.45
1.000	2.18	2.583	4.36	4.167	3.63	5.75	1.45
1.083	2.18	2.667	4.36	4.250	3.63	5.83	1.45
1.167	2.18	2.750	4.36	4.333	2.91	5.92	1.45
1.250	2.18	2.833	21.80	4.417	2.91	6.00	1.45
1.333	2.18	2.917	21.80	4.500	2.91	6.08	1.45
1.417	2.18	3.000	21.80	4.583	2.91	6.17	1.45
1.500	2.18	3.083	56.67	4.667	2.91	6.25	1.45
1.583	2.18	3.167	56.67	4.750	2.91		

```
     Max.Eff.Inten.(mm/hr)=      56.67        23.06
               over (min)         5.00         5.00
     Storage Coeff.  (min)=       2.94 (ii)    4.35 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.28         0.23
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.17         0.00          0.175 (iii)
     TIME TO PEAK    (hrs)=       3.25         3.25           3.25
     RUNOFF VOLUME    (mm)=      35.33        11.27          35.09
     TOTAL RAINFALL   (mm)=      36.33        36.33          36.33
     RUNOFF COEFFICIENT   =       0.97         0.31           0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0256)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0470      0.0750

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0205)      1.125     0.175      3.25      35.09
   OUTFLOW: ID= 1 (  0256)      1.125     0.017      3.83      34.73

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  9.75
                  TIME SHIFT OF PEAK FLOW         (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0273

--------------------------------------------------------------------------------

--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\4742e92a
| Ptotal= 36.33 mm |    Comments: 2yr 6hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00    3.63 |  3.75    7.99 |  5.50    1.45
                0.50    1.45 |  2.25    3.63 |  4.00    3.63 |  5.75    1.45
                0.75    1.45 |  2.50    4.36 |  4.25    3.63 |  6.00    1.45
                1.00    2.18 |  2.75    4.36 |  4.50    2.91 |  6.25    1.45
                1.25    2.18 |  3.00   21.80 |  4.75    2.91 |
                1.50    2.18 |  3.25   56.67 |  5.00    2.18 |
                1.75    2.18 |  3.50    7.99 |  5.25    2.18 |

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD (  0203)|   Area    (ha)=   2.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.68         0.42
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     118.18        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    0.00 | 1.667    2.18 | 3.250   56.67 |  4.83    2.18
             0.167    0.00 | 1.750    2.18 | 3.333    7.99 |  4.92    2.18
             0.250    0.00 | 1.833    3.63 | 3.417    7.99 |  5.00    2.18
             0.333    1.45 | 1.917    3.63 | 3.500    7.99 |  5.08    2.18
             0.417    1.45 | 2.000    3.63 | 3.583    7.99 |  5.17    2.18
             0.500    1.45 | 2.083    3.63 | 3.667    7.99 |  5.25    2.18
             0.583    1.45 | 2.167    3.63 | 3.750    7.99 |  5.33    1.45
             0.667    1.45 | 2.250    3.63 | 3.833    3.63 |  5.42    1.45
             0.750    1.45 | 2.333    4.36 | 3.917    3.63 |  5.50    1.45
             0.833    2.18 | 2.417    4.36 | 4.000    3.63 |  5.58    1.45
             0.917    2.18 | 2.500    4.36 | 4.083    3.63 |  5.67    1.45
             1.000    2.18 | 2.583    4.36 | 4.167    3.63 |  5.75    1.45
             1.083    2.18 | 2.667    4.36 | 4.250    3.63 |  5.83    1.45
             1.167    2.18 | 2.750    4.36 | 4.333    2.91 |  5.92    1.45
             1.250    2.18 | 2.833   21.80 | 4.417    2.91 |  6.00    1.45
             1.333    2.18 | 2.917   21.80 | 4.500    2.91 |  6.08    1.45
             1.417    2.18 | 3.000   21.80 | 4.583    2.91 |  6.17    1.45
             1.500    2.18 | 3.083   56.67 | 4.667    2.91 |  6.25    1.45
             1.583    2.18 | 3.167   56.67 | 4.750    2.91 |

     Max.Eff.Inten.(mm/hr)=      56.67        20.55
               over (min)         5.00        20.00
     Storage Coeff.  (min)=       3.54 (ii)   16.84 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.26         0.06
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.26         0.01          0.269 (iii)
     TIME TO PEAK    (hrs)=       3.25         3.42           3.25
     RUNOFF VOLUME    (mm)=      35.33        11.27          30.51
     TOTAL RAINFALL   (mm)=      36.33        36.33          36.33
     RUNOFF COEFFICIENT   =       0.97         0.31           0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0260)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0203):     2.10   0.269     3.25    30.51
      + ID2= 2 (  0256):     1.12   0.017     3.83    34.73
        ==========================================================
        ID = 3 (  0260):     3.22   0.283     3.25    31.99

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\4742e92a
| Ptotal= 36.33 mm |    Comments: 2yr 6hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00    3.63 |  3.75    7.99 |  5.50    1.45
                0.50    1.45 |  2.25    3.63 |  4.00    3.63 |  5.75    1.45
                0.75    1.45 |  2.50    4.36 |  4.25    3.63 |  6.00    1.45
                1.00    2.18 |  2.75    4.36 |  4.50    2.91 |  6.25    1.45
                1.25    2.18 |  3.00   21.80 |  4.75    2.91 |
                1.50    2.18 |  3.25   56.67 |  5.00    2.18 |
                1.75    2.18 |  3.50    7.99 |  5.25    2.18 |

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| STANDHYD (  0204)|   Area    (ha)=   1.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.16         0.29
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      98.32        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    2.18 | 3.250   56.67 |  4.83    2.18
               0.167    0.00 | 1.750    2.18 | 3.333    7.99 |  4.92    2.18
               0.250    0.00 | 1.833    3.63 | 3.417    7.99 |  5.00    2.18
               0.333    1.45 | 1.917    3.63 | 3.500    7.99 |  5.08    2.18
               0.417    1.45 | 2.000    3.63 | 3.583    7.99 |  5.17    2.18
               0.500    1.45 | 2.083    3.63 | 3.667    7.99 |  5.25    2.18
               0.583    1.45 | 2.167    3.63 | 3.750    7.99 |  5.33    1.45
               0.667    1.45 | 2.250    3.63 | 3.833    3.63 |  5.42    1.45
               0.750    1.45 | 2.333    4.36 | 3.917    3.63 |  5.50    1.45
               0.833    2.18 | 2.417    4.36 | 4.000    3.63 |  5.58    1.45
               0.917    2.18 | 2.500    4.36 | 4.083    3.63 |  5.67    1.45
               1.000    2.18 | 2.583    4.36 | 4.167    3.63 |  5.75    1.45
               1.083    2.18 | 2.667    4.36 | 4.250    3.63 |  5.83    1.45
               1.167    2.18 | 2.750    4.36 | 4.333    2.91 |  5.92    1.45
               1.250    2.18 | 2.833   21.80 | 4.417    2.91 |  6.00    1.45
               1.333    2.18 | 2.917   21.80 | 4.500    2.91 |  6.08    1.45
               1.417    2.18 | 3.000   21.80 | 4.583    2.91 |  6.17    1.45
               1.500    2.18 | 3.083   56.67 | 4.667    2.91 |  6.25    1.45
               1.583    2.18 | 3.167   56.67 | 4.750    2.91 |

     Max.Eff.Inten.(mm/hr)=      56.67        20.55
               over (min)        5.00        20.00
     Storage Coeff.  (min)=      3.17 (ii)   16.46 (ii)
     Unit Hyd. Tpeak (min)=      5.00        20.00
     Unit Hyd. peak  (cms)=      0.27         0.06
                                                                      *TOTALS*
     PEAK FLOW       (cms)=      0.18         0.01          0.187 (iii)
     TIME TO PEAK    (hrs)=      3.25         3.42           3.25
     RUNOFF VOLUME    (mm)=     35.33        11.27          30.51
     TOTAL RAINFALL   (mm)=     36.33        36.33          36.33
     RUNOFF COEFFICIENT   =      0.97         0.31           0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0259)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0204):     1.45   0.187     3.25    30.51
     + ID2= 2 (  0260):     3.22   0.283     3.25    31.99
       ==========================================================
       ID = 3 (  0259):     4.67   0.471     3.25    31.53

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\4742e92a
| Ptotal= 36.33 mm |    Comments: 2yr 6hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00    3.63 |  3.75    7.99 |  5.50    1.45
                0.50    1.45 |  2.25    3.63 |  4.00    3.63 |  5.75    1.45
                0.75    1.45 |  2.50    4.36 |  4.25    3.63 |  6.00    1.45
                1.00    2.18 |  2.75    4.36 |  4.50    2.91 |  6.25    1.45
                1.25    2.18 |  3.00   21.80 |  4.75    2.91 |
                1.50    2.18 |  3.25   56.67 |  5.00    2.18 |
                1.75    2.18 |  3.50    7.99 |  5.25    2.18 |

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--------------------
| CALIB            |
| STANDHYD (  0201)|   Area    (ha)=   5.27
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.22         0.05
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     187.44        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	2.18	3.250	56.67	4.83	2.18
0.167	0.00	1.750	2.18	3.333	7.99	4.92	2.18
0.250	0.00	1.833	3.63	3.417	7.99	5.00	2.18
0.333	1.45	1.917	3.63	3.500	7.99	5.08	2.18
0.417	1.45	2.000	3.63	3.583	7.99	5.17	2.18
0.500	1.45	2.083	3.63	3.667	7.99	5.25	2.18
0.583	1.45	2.167	3.63	3.750	7.99	5.33	1.45
0.667	1.45	2.250	3.63	3.833	3.63	5.42	1.45
0.750	1.45	2.333	4.36	3.917	3.63	5.50	1.45
0.833	2.18	2.417	4.36	4.000	3.63	5.58	1.45
0.917	2.18	2.500	4.36	4.083	3.63	5.67	1.45
1.000	2.18	2.583	4.36	4.167	3.63	5.75	1.45
1.083	2.18	2.667	4.36	4.250	3.63	5.83	1.45
1.167	2.18	2.750	4.36	4.333	2.91	5.92	1.45
1.250	2.18	2.833	21.80	4.417	2.91	6.00	1.45
1.333	2.18	2.917	21.80	4.500	2.91	6.08	1.45
1.417	2.18	3.000	21.80	4.583	2.91	6.17	1.45
1.500	2.18	3.083	56.67	4.667	2.91	6.25	1.45
1.583	2.18	3.167	56.67	4.750	2.91		

			TOTALS
Max.Eff.Inten.(mm/hr)=	56.67	23.06	
over (min)	5.00	10.00	
Storage Coeff. (min)=	4.67 (ii)	6.08 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.22	0.15	
PEAK FLOW (cms)=	0.80	0.00	0.803 (iii)
TIME TO PEAK (hrs)=	3.25	3.25	3.25
RUNOFF VOLUME (mm)=	35.33	11.27	35.09
TOTAL RAINFALL (mm)=	36.33	36.33	36.33
RUNOFF COEFFICIENT =	0.97	0.31	0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0268)				
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1959	0.1883
	0.0980	0.0369	0.2939	0.4335

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)	5.270	0.803	3.25	35.09
OUTFLOW: ID= 1 (0268)	5.270	0.138	3.50	35.07

PEAK FLOW REDUCTION [Qout/Qin](%)= 17.22
TIME SHIFT OF PEAK FLOW (min)= 15.00
MAXIMUM STORAGE USED (ha.m.)= 0.0993

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\50f23b5e-2bda-4888-8f6a-fa41043db911\4742e92a
Ptotal= 36.33 mm	Comments: 2yr 6hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	3.63	3.75	7.99	5.50	1.45
0.50	1.45	2.25	3.63	4.00	3.63	5.75	1.45
0.75	1.45	2.50	4.36	4.25	3.63	6.00	1.45
1.00	2.18	2.75	4.36	4.50	2.91	6.25	1.45
1.25	2.18	3.00	21.80	4.75	2.91		
1.50	2.18	3.25	56.67	5.00	2.18		
1.75	2.18	3.50	7.99	5.25	2.18		

CALIB	
STANDHYD (0202)	Area (ha)= 6.57
ID= 1 DT= 5.0 min	Total Imp(%)= 81.00 Dir. Conn.(%)= 81.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.32	1.25
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	209.28	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	2.18	3.250	56.67	4.83	2.18
0.167	0.00	1.750	2.18	3.333	7.99	4.92	2.18
0.250	0.00	1.833	3.63	3.417	7.99	5.00	2.18
0.333	1.45	1.917	3.63	3.500	7.99	5.08	2.18
0.417	1.45	2.000	3.63	3.583	7.99	5.17	2.18
0.500	1.45	2.083	3.63	3.667	7.99	5.25	2.18
0.583	1.45	2.167	3.63	3.750	7.99	5.33	1.45
0.667	1.45	2.250	3.63	3.833	3.63	5.42	1.45
0.750	1.45	2.333	4.36	3.917	3.63	5.50	1.45
0.833	2.18	2.417	4.36	4.000	3.63	5.58	1.45
0.917	2.18	2.500	4.36	4.083	3.63	5.67	1.45
1.000	2.18	2.583	4.36	4.167	3.63	5.75	1.45
1.083	2.18	2.667	4.36	4.250	3.63	5.83	1.45
1.167	2.18	2.750	4.36	4.333	2.91	5.92	1.45
1.250	2.18	2.833	21.80	4.417	2.91	6.00	1.45
1.333	2.18	2.917	21.80	4.500	2.91	6.08	1.45
1.417	2.18	3.000	21.80	4.583	2.91	6.17	1.45
1.500	2.18	3.083	56.67	4.667	2.91	6.25	1.45
1.583	2.18	3.167	56.67	4.750	2.91		

			TOTALS
Max.Eff.Inten.(mm/hr)=	56.67	23.06	
over (min)	5.00	10.00	
Storage Coeff. (min)=	4.99 (ii)	9.95 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.21	0.11	
PEAK FLOW (cms)=	0.81	0.05	0.864 (iii)
TIME TO PEAK (hrs)=	3.25	3.33	3.25
RUNOFF VOLUME (mm)=	35.33	11.27	30.76
TOTAL RAINFALL (mm)=	36.33	36.33	36.33

```
     RUNOFF COEFFICIENT   =       0.97        0.31          0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0262)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0202):     6.57   0.864     3.25    30.76
     + ID2= 2 (  0268):     5.27   0.138     3.50    35.07
       ================================================
       ID = 3 (  0262):    11.84   0.990     3.25    32.68

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (  0266)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0259):     4.67   0.471     3.25    31.53
     + ID2= 2 (  0262):    11.84   0.990     3.25    32.68
       ================================================
       ID = 3 (  0266):    16.51   1.460     3.25    32.35

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0263)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.2130      0.6563
                         0.0190     0.1773   |   0.2520      0.6883
                         0.0220     0.2128   |   0.2890      0.7150
                         0.0260     0.2888   |   0.2980      0.7450
                         0.0300     0.3648   |   0.3060      0.7700
                         0.0650     0.4586   |   0.3150      0.8127
                         0.1100     0.5155   |   0.3320      0.9290
                         0.1680     0.5503   |   0.3390      0.9767
                         0.1930     0.5804   |   0.3520      1.0680
                         0.2000     0.6048   |   0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0266)    16.510      1.460      3.25      32.35
   OUTFLOW: ID= 1 (  0263)    16.510      0.059      6.75      32.21

                 PEAK   FLOW   REDUCTION [Qout/Qin](%)=  4.06
                 TIME SHIFT OF PEAK FLOW        (min)=210.00
                 MAXIMUM  STORAGE   USED       (ha.m.)=  0.4431

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--------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0206):     0.12   0.004     3.42    11.26
     + ID2= 2 (  0263):    16.51   0.059     6.75    32.21
       ================================================
       ID = 3 (  0261):    16.64   0.059     6.75    32.05

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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       V    V   I    SSSSS  U   U    A    L             (v 5.0.2025)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\14bb4f57-bb41-4b04-a5d0-141afe47c089\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\14bb4f57-bb41-4b04-a5d0-141afe47c089\s


DATE: 07/06/2020                          TIME: 04:32:58

USER:



COMMENTS: _____________________________________________________________


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  *******************************************
  ** SIMULATION : 25 Year 6 Hour SCS       **
  *******************************************


--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\e49ef9f8
| Ptotal= 74.94 mm |    Comments: 25yr 6hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
```

0.25	0.00	2.00	7.49	3.75	16.49	5.50	3.00
0.50	3.00	2.25	7.49	4.00	7.49	5.75	3.00
0.75	3.00	2.50	8.99	4.25	7.49	6.00	3.00
1.00	4.50	2.75	8.99	4.50	6.00	6.25	3.00
1.25	4.50	3.00	44.96	4.75	6.00		
1.50	4.50	3.25	116.91	5.00	4.50		
1.75	4.50	3.50	16.49	5.25	4.50		

CALIB			
NASHYD (0206)	Area (ha)=	0.12	Curve Number (CN)= 82.0
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.25	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	4.50	3.250	116.91	4.83	4.50
0.167	0.00	1.750	4.50	3.333	16.49	4.92	4.50
0.250	0.00	1.833	7.49	3.417	16.49	5.00	4.50
0.333	3.00	1.917	7.49	3.500	16.49	5.08	4.50
0.417	3.00	2.000	7.49	3.583	16.49	5.17	4.50
0.500	3.00	2.083	7.49	3.667	16.49	5.25	4.50
0.583	3.00	2.167	7.49	3.750	16.49	5.33	3.00
0.667	3.00	2.250	7.49	3.833	7.49	5.42	3.00
0.750	3.00	2.333	8.99	3.917	7.49	5.50	3.00
0.833	4.50	2.417	8.99	4.000	7.49	5.58	3.00
0.917	4.50	2.500	8.99	4.083	7.49	5.67	3.00
1.000	4.50	2.583	8.99	4.167	7.49	5.75	3.00
1.083	4.50	2.667	8.99	4.250	7.49	5.83	3.00
1.167	4.50	2.750	8.99	4.333	6.00	5.92	3.00
1.250	4.50	2.833	44.96	4.417	6.00	6.00	3.00
1.333	4.50	2.917	44.96	4.500	6.00	6.08	3.00
1.417	4.50	3.000	44.96	4.583	6.00	6.17	3.00
1.500	4.50	3.083	116.91	4.667	6.00	6.25	3.00
1.583	4.50	3.167	116.91	4.750	6.00		

Unit Hyd Qpeak (cms)= 0.019

PEAK FLOW (cms)= 0.015 (i)
TIME TO PEAK (hrs)= 3.333
RUNOFF VOLUME (mm)= 38.880
TOTAL RAINFALL (mm)= 74.940
RUNOFF COEFFICIENT = 0.519

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\50f23b5e-2bda-4888-8f6a-fa41043db911\e49ef9f8
Ptotal= 74.94 mm	Comments: 25yr 6hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	7.49	3.75	16.49	5.50	3.00
0.50	3.00	2.25	7.49	4.00	7.49	5.75	3.00
0.75	3.00	2.50	8.99	4.25	7.49	6.00	3.00
1.00	4.50	2.75	8.99	4.50	6.00	6.25	3.00
1.25	4.50	3.00	44.96	4.75	6.00		
1.50	4.50	3.25	116.91	5.00	4.50		
1.75	4.50	3.50	16.49	5.25	4.50		

CALIB			
STANDHYD (0205)	Area (ha)=	1.12	
ID= 1 DT= 5.0 min	Total Imp(%)=	99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.11	0.01
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	86.60	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	4.50	3.250	116.91	4.83	4.50
0.167	0.00	1.750	4.50	3.333	16.49	4.92	4.50
0.250	0.00	1.833	7.49	3.417	16.49	5.00	4.50
0.333	3.00	1.917	7.49	3.500	16.49	5.08	4.50
0.417	3.00	2.000	7.49	3.583	16.49	5.17	4.50
0.500	3.00	2.083	7.49	3.667	16.49	5.25	4.50
0.583	3.00	2.167	7.49	3.750	16.49	5.33	3.00
0.667	3.00	2.250	7.49	3.833	7.49	5.42	3.00
0.750	3.00	2.333	8.99	3.917	7.49	5.50	3.00
0.833	4.50	2.417	8.99	4.000	7.49	5.58	3.00
0.917	4.50	2.500	8.99	4.083	7.49	5.67	3.00
1.000	4.50	2.583	8.99	4.167	7.49	5.75	3.00
1.083	4.50	2.667	8.99	4.250	7.49	5.83	3.00
1.167	4.50	2.750	8.99	4.333	6.00	5.92	3.00
1.250	4.50	2.833	44.96	4.417	6.00	6.00	3.00
1.333	4.50	2.917	44.96	4.500	6.00	6.08	3.00
1.417	4.50	3.000	44.96	4.583	6.00	6.17	3.00
1.500	4.50	3.083	116.91	4.667	6.00	6.25	3.00
1.583	4.50	3.167	116.91	4.750	6.00		

Max.Eff.Inten.(mm/hr)=		116.91	76.83	
over (min)		5.00	5.00	
Storage Coeff. (min)=		2.20 (ii)	3.26 (ii)	
Unit Hyd. Tpeak (min)=		5.00	5.00	
Unit Hyd. peak (cms)=		0.30	0.27	
				TOTALS
PEAK FLOW	(cms)=	0.36	0.00	0.364 (iii)
TIME TO PEAK	(hrs)=	3.25	3.25	3.25
RUNOFF VOLUME	(mm)=	73.94	38.92	73.59
TOTAL RAINFALL	(mm)=	74.94	74.94	74.94
RUNOFF COEFFICIENT	=	0.99	0.52	0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

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     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0256)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0470      0.0750

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0205)     1.125      0.364      3.25      73.59
   OUTFLOW: ID= 1 (  0256)     1.125      0.036      3.83      73.23

                 PEAK   FLOW   REDUCTION [Qout/Qin](%)=  9.83
                 TIME SHIFT OF PEAK FLOW         (min)= 35.00
                 MAXIMUM  STORAGE   USED       (ha.m.)=  0.0572

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--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\e49ef9f8
| Ptotal= 74.94 mm |    Comments: 25yr 6hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00    7.49 |  3.75   16.49 |  5.50    3.00
                0.50    3.00 |  2.25    7.49 |  4.00    7.49 |  5.75    3.00
                0.75    3.00 |  2.50    8.99 |  4.25    7.49 |  6.00    3.00
                1.00    4.50 |  2.75    8.99 |  4.50    6.00 |  6.25    3.00
                1.25    4.50 |  3.00   44.96 |  4.75    6.00 |
                1.50    4.50 |  3.25  116.91 |  5.00    4.50 |
                1.75    4.50 |  3.50   16.49 |  5.25    4.50 |

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--------------------
| CALIB            |
| STANDHYD (  0203)|   Area    (ha)=   2.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.68         0.42
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     118.18        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    4.50 | 3.250  116.91 |  4.83    4.50
               0.167    0.00 | 1.750    4.50 | 3.333   16.49 |  4.92    4.50
               0.250    0.00 | 1.833    7.49 | 3.417   16.49 |  5.00    4.50
               0.333    3.00 | 1.917    7.49 | 3.500   16.49 |  5.08    4.50
               0.417    3.00 | 2.000    7.49 | 3.583   16.49 |  5.17    4.50
               0.500    3.00 | 2.083    7.49 | 3.667   16.49 |  5.25    4.50
               0.583    3.00 | 2.167    7.49 | 3.750   16.49 |  5.33    3.00
               0.667    3.00 | 2.250    7.49 | 3.833    7.49 |  5.42    3.00
               0.750    3.00 | 2.333    8.99 | 3.917    7.49 |  5.50    3.00
               0.833    4.50 | 2.417    8.99 | 4.000    7.49 |  5.58    3.00
               0.917    4.50 | 2.500    8.99 | 4.083    7.49 |  5.67    3.00
               1.000    4.50 | 2.583    8.99 | 4.167    7.49 |  5.75    3.00
               1.083    4.50 | 2.667    8.99 | 4.250    7.49 |  5.83    3.00
               1.167    4.50 | 2.750    8.99 | 4.333    6.00 |  5.92    3.00
               1.250    4.50 | 2.833   44.96 | 4.417    6.00 |  6.00    3.00
               1.333    4.50 | 2.917   44.96 | 4.500    6.00 |  6.08    3.00
               1.417    4.50 | 3.000   44.96 | 4.583    6.00 |  6.17    3.00
               1.500    4.50 | 3.083  116.91 | 4.667    6.00 |  6.25    3.00
               1.583    4.50 | 3.167  116.91 | 4.750    6.00 |

     Max.Eff.Inten.(mm/hr)=     116.91        76.83
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       2.65 (ii)    6.46 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.29         0.14
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.54         0.07          0.616 (iii)
     TIME TO PEAK    (hrs)=       3.25         3.25           3.25
     RUNOFF VOLUME    (mm)=      73.94        38.92          66.93
     TOTAL RAINFALL   (mm)=      74.94        74.94          74.94
     RUNOFF COEFFICIENT   =       0.99         0.52           0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0260)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0203):     2.10   0.616     3.25    66.93
      + ID2= 2 (  0256):     1.12   0.036     3.83    73.23
        ================================================
        ID = 3 (  0260):     3.22   0.646     3.25    69.13

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\e49ef9f8
| Ptotal= 74.94 mm |    Comments: 25yr 6hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00    7.49 |  3.75   16.49 |  5.50    3.00
                0.50    3.00 |  2.25    7.49 |  4.00    7.49 |  5.75    3.00
                0.75    3.00 |  2.50    8.99 |  4.25    7.49 |  6.00    3.00
                1.00    4.50 |  2.75    8.99 |  4.50    6.00 |  6.25    3.00
                1.25    4.50 |  3.00   44.96 |  4.75    6.00 |
                1.50    4.50 |  3.25  116.91 |  5.00    4.50 |
                1.75    4.50 |  3.50   16.49 |  5.25    4.50 |
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| CALIB            |
| STANDHYD (  0204)|   Area    (ha)=   1.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.16         0.29
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      98.32        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.667    4.50 | 3.250  116.91 |  4.83    4.50
              0.167    0.00 | 1.750    4.50 | 3.333   16.49 |  4.92    4.50
              0.250    0.00 | 1.833    7.49 | 3.417   16.49 |  5.00    4.50
              0.333    3.00 | 1.917    7.49 | 3.500   16.49 |  5.08    4.50
              0.417    3.00 | 2.000    7.49 | 3.583   16.49 |  5.17    4.50
              0.500    3.00 | 2.083    7.49 | 3.667   16.49 |  5.25    4.50
              0.583    3.00 | 2.167    7.49 | 3.750   16.49 |  5.33    3.00
              0.667    3.00 | 2.250    7.49 | 3.833    7.49 |  5.42    3.00
              0.750    3.00 | 2.333    8.99 | 3.917    7.49 |  5.50    3.00
              0.833    4.50 | 2.417    8.99 | 4.000    7.49 |  5.58    3.00
              0.917    4.50 | 2.500    8.99 | 4.083    7.49 |  5.67    3.00
              1.000    4.50 | 2.583    8.99 | 4.167    7.49 |  5.75    3.00
              1.083    4.50 | 2.667    8.99 | 4.250    7.49 |  5.83    3.00
              1.167    4.50 | 2.750    8.99 | 4.333    6.00 |  5.92    3.00
              1.250    4.50 | 2.833   44.96 | 4.417    6.00 |  6.00    3.00
              1.333    4.50 | 2.917   44.96 | 4.500    6.00 |  6.08    3.00
              1.417    4.50 | 3.000   44.96 | 4.583    6.00 |  6.17    3.00
              1.500    4.50 | 3.083  116.91 | 4.667    6.00 |  6.25    3.00
              1.583    4.50 | 3.167  116.91 | 4.750    6.00 |

     Max.Eff.Inten.(mm/hr)=     116.91        76.83
               over (min)        5.00        10.00
     Storage Coeff.  (min)=       2.38 (ii)    6.18 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.30         0.15
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.38         0.05          0.428 (iii)
     TIME TO PEAK    (hrs)=       3.25         3.25           3.25
     RUNOFF VOLUME    (mm)=      73.94        38.92          66.93
     TOTAL RAINFALL   (mm)=      74.94        74.94          74.94
     RUNOFF COEFFICIENT   =       0.99         0.52           0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0259)|
|   1 +  2 =  3    |        AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0204):     1.45   0.428     3.25    66.93
     + ID2= 2 (  0260):     3.22   0.646     3.25    69.13
       ================================================
       ID = 3 (  0259):     4.67   1.074     3.25    68.45

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\e49ef9f8
| Ptotal= 74.94 mm |    Comments: 25yr 6hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00    7.49 |  3.75   16.49 |  5.50    3.00
                0.50    3.00 |  2.25    7.49 |  4.00    7.49 |  5.75    3.00
                0.75    3.00 |  2.50    8.99 |  4.25    7.49 |  6.00    3.00
                1.00    4.50 |  2.75    8.99 |  4.50    6.00 |  6.25    3.00
                1.25    4.50 |  3.00   44.96 |  4.75    6.00 |
                1.50    4.50 |  3.25  116.91 |  5.00    4.50 |
                1.75    4.50 |  3.50   16.49 |  5.25    4.50 |

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--------------------
| CALIB            |
| STANDHYD (  0201)|   Area    (ha)=   5.27
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.22         0.05
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     187.44        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.667    4.50 | 3.250  116.91 |  4.83    4.50
              0.167    0.00 | 1.750    4.50 | 3.333   16.49 |  4.92    4.50
              0.250    0.00 | 1.833    7.49 | 3.417   16.49 |  5.00    4.50
              0.333    3.00 | 1.917    7.49 | 3.500   16.49 |  5.08    4.50
              0.417    3.00 | 2.000    7.49 | 3.583   16.49 |  5.17    4.50
              0.500    3.00 | 2.083    7.49 | 3.667   16.49 |  5.25    4.50
              0.583    3.00 | 2.167    7.49 | 3.750   16.49 |  5.33    3.00
              0.667    3.00 | 2.250    7.49 | 3.833    7.49 |  5.42    3.00
              0.750    3.00 | 2.333    8.99 | 3.917    7.49 |  5.50    3.00
              0.833    4.50 | 2.417    8.99 | 4.000    7.49 |  5.58    3.00
              0.917    4.50 | 2.500    8.99 | 4.083    7.49 |  5.67    3.00
              1.000    4.50 | 2.583    8.99 | 4.167    7.49 |  5.75    3.00
              1.083    4.50 | 2.667    8.99 | 4.250    7.49 |  5.83    3.00
              1.167    4.50 | 2.750    8.99 | 4.333    6.00 |  5.92    3.00
              1.250    4.50 | 2.833   44.96 | 4.417    6.00 |  6.00    3.00
              1.333    4.50 | 2.917   44.96 | 4.500    6.00 |  6.08    3.00
              1.417    4.50 | 3.000   44.96 | 4.583    6.00 |  6.17    3.00
```

```
              1.500    4.50 | 3.083  116.91 | 4.667    6.00 |  6.25    3.00
              1.583    4.50 | 3.167  116.91 | 4.750    6.00 |

     Max.Eff.Inten.(mm/hr)=     116.91        76.83
               over (min)        5.00         5.00
     Storage Coeff.  (min)=       3.50 (ii)    4.55 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.26         0.23
                                                        *TOTALS*
     PEAK FLOW       (cms)=       1.68         0.01         1.691 (iii)
     TIME TO PEAK    (hrs)=       3.25         3.25          3.25
     RUNOFF VOLUME    (mm)=      73.94        38.92         73.59
     TOTAL RAINFALL   (mm)=      74.94        74.94         74.94
     RUNOFF COEFFICIENT   =       0.99         0.52          0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  0268)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1959      0.1883
                          0.0980     0.0369   |   0.2939      0.4335

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0201)      5.270      1.691      3.25      73.59
   OUTFLOW: ID= 1 (  0268)      5.270      0.211      3.75      73.57

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 12.47
                  TIME SHIFT OF PEAK FLOW         (min)= 30.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.2263

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\e49ef9f8
| Ptotal= 74.94 mm |    Comments: 25yr 6hr 15min SCS
--------------------
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.25    0.00 |  2.00    7.49 |  3.75   16.49 |  5.50    3.00
               0.50    3.00 |  2.25    7.49 |  4.00    7.49 |  5.75    3.00
               0.75    3.00 |  2.50    8.99 |  4.25    7.49 |  6.00    3.00
               1.00    4.50 |  2.75    8.99 |  4.50    6.00 |  6.25    3.00
               1.25    4.50 |  3.00   44.96 |  4.75    6.00 |
               1.50    4.50 |  3.25  116.91 |  5.00    4.50 |
               1.75    4.50 |  3.50   16.49 |  5.25    4.50 |

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--------------------
| CALIB            |
| STANDHYD (  0202)|   Area    (ha)=   6.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                                   IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=           5.32          1.25
     Dep. Storage     (mm)=           1.00          5.00
     Average Slope     (%)=           1.00          2.00
     Length            (m)=         209.28         40.00
     Mannings n           =          0.013         0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    4.50 | 3.250  116.91 |  4.83    4.50
               0.167    0.00 | 1.750    4.50 | 3.333   16.49 |  4.92    4.50
               0.250    0.00 | 1.833    7.49 | 3.417   16.49 |  5.00    4.50
               0.333    3.00 | 1.917    7.49 | 3.500   16.49 |  5.08    4.50
               0.417    3.00 | 2.000    7.49 | 3.583   16.49 |  5.17    4.50
               0.500    3.00 | 2.083    7.49 | 3.667   16.49 |  5.25    4.50
               0.583    3.00 | 2.167    7.49 | 3.750   16.49 |  5.33    3.00
               0.667    3.00 | 2.250    7.49 | 3.833    7.49 |  5.42    3.00
               0.750    3.00 | 2.333    8.99 | 3.917    7.49 |  5.50    3.00
               0.833    4.50 | 2.417    8.99 | 4.000    7.49 |  5.58    3.00
               0.917    4.50 | 2.500    8.99 | 4.083    7.49 |  5.67    3.00
               1.000    4.50 | 2.583    8.99 | 4.167    7.49 |  5.75    3.00
               1.083    4.50 | 2.667    8.99 | 4.250    7.49 |  5.83    3.00
               1.167    4.50 | 2.750    8.99 | 4.333    6.00 |  5.92    3.00
               1.250    4.50 | 2.833   44.96 | 4.417    6.00 |  6.00    3.00
               1.333    4.50 | 2.917   44.96 | 4.500    6.00 |  6.08    3.00
               1.417    4.50 | 3.000   44.96 | 4.583    6.00 |  6.17    3.00
               1.500    4.50 | 3.083  116.91 | 4.667    6.00 |  6.25    3.00
               1.583    4.50 | 3.167  116.91 | 4.750    6.00 |

     Max.Eff.Inten.(mm/hr)=     116.91        76.83
               over (min)        5.00        10.00
     Storage Coeff.  (min)=       3.74 (ii)    7.45 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.25         0.13
                                                        *TOTALS*
     PEAK FLOW       (cms)=       1.71         0.21         1.917 (iii)
     TIME TO PEAK    (hrs)=       3.25         3.25          3.25
     RUNOFF VOLUME    (mm)=      73.94        38.92         67.28
     TOTAL RAINFALL   (mm)=      74.94        74.94         74.94
     RUNOFF COEFFICIENT   =       0.99         0.52          0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0262)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0202):     6.57   1.917     3.25    67.28
     + ID2= 2 (  0268):     5.27   0.211     3.75    73.57
       ==================================================
```

```
       ID = 3 (  0262):    11.84   2.111     3.25    70.08

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (  0266)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0259):     4.67   1.074     3.25    68.45
     + ID2= 2 (  0262):    11.84   2.111     3.25    70.08
       ================================================
       ID = 3 (  0266):    16.51   3.185     3.25    69.62

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0263)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                        0.0000     0.0000    |   0.2130      0.6563
                        0.0190     0.1773    |   0.2520      0.6883
                        0.0220     0.2128    |   0.2890      0.7150
                        0.0260     0.2888    |   0.2980      0.7450
                        0.0300     0.3648    |   0.3060      0.7700
                        0.0650     0.4586    |   0.3150      0.8127
                        0.1100     0.5155    |   0.3320      0.9290
                        0.1680     0.5503    |   0.3390      0.9767
                        0.1930     0.5804    |   0.3520      1.0680
                        0.2000     0.6048    |   0.0000      0.0000

                             AREA     QPEAK     TPEAK       R.V.
                             (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0266)     16.510      3.185      3.25      69.62
   OUTFLOW: ID= 1 (  0263)     16.510      0.283      5.67      69.48

                 PEAK   FLOW   REDUCTION [Qout/Qin](%)=  8.88
                 TIME SHIFT OF PEAK FLOW         (min)=145.00
                 MAXIMUM  STORAGE   USED       (ha.m.)=  0.7105

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0206):     0.12   0.015     3.33    38.88
     + ID2= 2 (  0263):    16.51   0.283     5.67    69.48
       ================================================
       ID = 3 (  0261):    16.64   0.284     5.58    69.25

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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================================================================================
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       V    V   I    SSSSS  U   U    A    L             (v 5.0.2025)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L

         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\bafdda8d-8980-40ee-9629-9105450e132a\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\bafdda8d-8980-40ee-9629-9105450e132a\s


DATE: 07/06/2020                           TIME: 04:32:57

USER:



COMMENTS: _____________________________________________________________

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  **********************************************
  ** SIMULATION : 5 Year 6 Hour SCS            **
  **********************************************


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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\f6b420c7
| Ptotal= 52.74 mm |    Comments: 5yr 6hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00    5.27 |  3.75   11.60 |  5.50    2.11
                0.50    2.11 |  2.25    5.27 |  4.00    5.27 |  5.75    2.11
                0.75    2.11 |  2.50    6.33 |  4.25    5.27 |  6.00    2.11
                1.00    3.16 |  2.75    6.33 |  4.50    4.22 |  6.25    2.11
                1.25    3.16 |  3.00   31.64 |  4.75    4.22 |
                1.50    3.16 |  3.25   82.27 |  5.00    3.16 |
                1.75    3.16 |  3.50   11.60 |  5.25    3.16 |

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--------------------
| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	3.16	3.250	82.27	4.83	3.16
0.167	0.00	1.750	3.16	3.333	11.60	4.92	3.16
0.250	0.00	1.833	5.27	3.417	11.60	5.00	3.16
0.333	2.11	1.917	5.27	3.500	11.60	5.08	3.16
0.417	2.11	2.000	5.27	3.583	11.60	5.17	3.16
0.500	2.11	2.083	5.27	3.667	11.60	5.25	3.16
0.583	2.11	2.167	5.27	3.750	11.60	5.33	2.11
0.667	2.11	2.250	5.27	3.833	5.27	5.42	2.11
0.750	2.11	2.333	6.33	3.917	5.27	5.50	2.11
0.833	3.16	2.417	6.33	4.000	5.27	5.58	2.11
0.917	3.16	2.500	6.33	4.083	5.27	5.67	2.11
1.000	3.16	2.583	6.33	4.167	5.27	5.75	2.11
1.083	3.16	2.667	6.33	4.250	5.27	5.83	2.11
1.167	3.16	2.750	6.33	4.333	4.22	5.92	2.11
1.250	3.16	2.833	31.64	4.417	4.22	6.00	2.11
1.333	3.16	2.917	31.64	4.500	4.22	6.08	2.11
1.417	3.16	3.000	31.64	4.583	4.22	6.17	2.11
1.500	3.16	3.083	82.27	4.667	4.22	6.25	2.11
1.583	3.16	3.167	82.27	4.750	4.22		

Unit Hyd Qpeak (cms)= 0.019

PEAK FLOW (cms)= 0.008 (i)
TIME TO PEAK (hrs)= 3.333
RUNOFF VOLUME (mm)= 21.998
TOTAL RAINFALL (mm)= 52.740
RUNOFF COEFFICIENT = 0.417

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\50f23b5e-2bda-4888-8f6a-fa41043db911\f6b420c7
Ptotal= 52.74 mm	Comments: 5yr 6hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	5.27	3.75	11.60	5.50	2.11
0.50	2.11	2.25	5.27	4.00	5.27	5.75	2.11
0.75	2.11	2.50	6.33	4.25	5.27	6.00	2.11
1.00	3.16	2.75	6.33	4.50	4.22	6.25	2.11
1.25	3.16	3.00	31.64	4.75	4.22		
1.50	3.16	3.25	82.27	5.00	3.16		
1.75	3.16	3.50	11.60	5.25	3.16		

CALIB STANDHYD (0205) ID= 1 DT= 5.0 min	Area (ha)= 1.12 Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.11	0.01
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	86.60	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	3.16	3.250	82.27	4.83	3.16
0.167	0.00	1.750	3.16	3.333	11.60	4.92	3.16
0.250	0.00	1.833	5.27	3.417	11.60	5.00	3.16
0.333	2.11	1.917	5.27	3.500	11.60	5.08	3.16
0.417	2.11	2.000	5.27	3.583	11.60	5.17	3.16
0.500	2.11	2.083	5.27	3.667	11.60	5.25	3.16
0.583	2.11	2.167	5.27	3.750	11.60	5.33	2.11
0.667	2.11	2.250	5.27	3.833	5.27	5.42	2.11
0.750	2.11	2.333	6.33	3.917	5.27	5.50	2.11
0.833	3.16	2.417	6.33	4.000	5.27	5.58	2.11
0.917	3.16	2.500	6.33	4.083	5.27	5.67	2.11
1.000	3.16	2.583	6.33	4.167	5.27	5.75	2.11
1.083	3.16	2.667	6.33	4.250	5.27	5.83	2.11
1.167	3.16	2.750	6.33	4.333	4.22	5.92	2.11
1.250	3.16	2.833	31.64	4.417	4.22	6.00	2.11
1.333	3.16	2.917	31.64	4.500	4.22	6.08	2.11
1.417	3.16	3.000	31.64	4.583	4.22	6.17	2.11
1.500	3.16	3.083	82.27	4.667	4.22	6.25	2.11
1.583	3.16	3.167	82.27	4.750	4.22		

				TOTALS
Max.Eff.Inten.(mm/hr)=	82.27	44.34		
over (min)	5.00	5.00		
Storage Coeff. (min)=	2.53 (ii)	3.75 (ii)		
Unit Hyd. Tpeak (min)=	5.00	5.00		
Unit Hyd. peak (cms)=	0.29	0.25		
PEAK FLOW (cms)=	0.25	0.00		0.256 (iii)
TIME TO PEAK (hrs)=	3.25	3.25		3.25
RUNOFF VOLUME (mm)=	51.74	22.02		51.44
TOTAL RAINFALL (mm)=	52.74	52.74		52.74
RUNOFF COEFFICIENT =	0.98	0.42		0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0256) IN= 2---> OUT= 1 DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0470	0.0750

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0205)		1.125	0.256	3.25	51.44
OUTFLOW: ID= 1 (0256)		1.125	0.025	3.83	51.09

PEAK FLOW REDUCTION [Qout/Qin](%)= 9.80
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.0400

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\f6b420c7
| Ptotal= 52.74 mm |    Comments: 5yr 6hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00    5.27 |  3.75   11.60 |  5.50    2.11
                0.50    2.11 |  2.25    5.27 |  4.00    5.27 |  5.75    2.11
                0.75    2.11 |  2.50    6.33 |  4.25    5.27 |  6.00    2.11
                1.00    3.16 |  2.75    6.33 |  4.50    4.22 |  6.25    2.11
                1.25    3.16 |  3.00   31.64 |  4.75    4.22 |
                1.50    3.16 |  3.25   82.27 |  5.00    3.16 |
                1.75    3.16 |  3.50   11.60 |  5.25    3.16 |

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--------------------
| CALIB            |
| STANDHYD (  0203)|   Area    (ha)=   2.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.68         0.42
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     118.18        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    3.16 | 3.250   82.27 |  4.83    3.16
               0.167    0.00 | 1.750    3.16 | 3.333   11.60 |  4.92    3.16
               0.250    0.00 | 1.833    5.27 | 3.417   11.60 |  5.00    3.16
               0.333    2.11 | 1.917    5.27 | 3.500   11.60 |  5.08    3.16
               0.417    2.11 | 2.000    5.27 | 3.583   11.60 |  5.17    3.16
               0.500    2.11 | 2.083    5.27 | 3.667   11.60 |  5.25    3.16
               0.583    2.11 | 2.167    5.27 | 3.750   11.60 |  5.33    2.11
               0.667    2.11 | 2.250    5.27 | 3.833    5.27 |  5.42    2.11
               0.750    2.11 | 2.333    6.33 | 3.917    5.27 |  5.50    2.11
               0.833    3.16 | 2.417    6.33 | 4.000    5.27 |  5.58    2.11
               0.917    3.16 | 2.500    6.33 | 4.083    5.27 |  5.67    2.11
               1.000    3.16 | 2.583    6.33 | 4.167    5.27 |  5.75    2.11
               1.083    3.16 | 2.667    6.33 | 4.250    5.27 |  5.83    2.11
               1.167    3.16 | 2.750    6.33 | 4.333    4.22 |  5.92    2.11
               1.250    3.16 | 2.833   31.64 | 4.417    4.22 |  6.00    2.11
               1.333    3.16 | 2.917   31.64 | 4.500    4.22 |  6.08    2.11
               1.417    3.16 | 3.000   31.64 | 4.583    4.22 |  6.17    2.11
               1.500    3.16 | 3.083   82.27 | 4.667    4.22 |  6.25    2.11
               1.583    3.16 | 3.167   82.27 | 4.750    4.22 |

     Max.Eff.Inten.(mm/hr)=      82.27        44.34
               over (min)        5.00        10.00
     Storage Coeff.  (min)=      3.05 (ii)    7.44 (ii)
     Unit Hyd. Tpeak (min)=      5.00        10.00
     Unit Hyd. peak  (cms)=      0.27         0.13
                                                        *TOTALS*
     PEAK FLOW       (cms)=      0.38         0.04          0.421 (iii)
     TIME TO PEAK    (hrs)=      3.25         3.25           3.25
     RUNOFF VOLUME    (mm)=     51.74        22.02          45.79
     TOTAL RAINFALL   (mm)=     52.74        52.74          52.74
     RUNOFF COEFFICIENT   =      0.98         0.42           0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0260)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0203):     2.10   0.421     3.25    45.79
     + ID2= 2 (  0256):     1.12   0.025     3.83    51.09
       ================================================
       ID = 3 (  0260):     3.22   0.442     3.25    47.64

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\f6b420c7
| Ptotal= 52.74 mm |    Comments: 5yr 6hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00    5.27 |  3.75   11.60 |  5.50    2.11
                0.50    2.11 |  2.25    5.27 |  4.00    5.27 |  5.75    2.11
                0.75    2.11 |  2.50    6.33 |  4.25    5.27 |  6.00    2.11
                1.00    3.16 |  2.75    6.33 |  4.50    4.22 |  6.25    2.11
                1.25    3.16 |  3.00   31.64 |  4.75    4.22 |
                1.50    3.16 |  3.25   82.27 |  5.00    3.16 |
                1.75    3.16 |  3.50   11.60 |  5.25    3.16 |

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--------------------
| CALIB            |
| STANDHYD (  0204)|   Area    (ha)=   1.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.16         0.29
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      98.32        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
```

hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.00	1.667	3.16	3.250	82.27	4.83	3.16
0.167	0.00	1.750	3.16	3.333	11.60	4.92	3.16
0.250	0.00	1.833	5.27	3.417	11.60	5.00	3.16
0.333	2.11	1.917	5.27	3.500	11.60	5.08	3.16
0.417	2.11	2.000	5.27	3.583	11.60	5.17	3.16
0.500	2.11	2.083	5.27	3.667	11.60	5.25	3.16
0.583	2.11	2.167	5.27	3.750	11.60	5.33	2.11
0.667	2.11	2.250	5.27	3.833	5.27	5.42	2.11
0.750	2.11	2.333	6.33	3.917	5.27	5.50	2.11
0.833	3.16	2.417	6.33	4.000	5.27	5.58	2.11
0.917	3.16	2.500	6.33	4.083	5.27	5.67	2.11
1.000	3.16	2.583	6.33	4.167	5.27	5.75	2.11
1.083	3.16	2.667	6.33	4.250	5.27	5.83	2.11
1.167	3.16	2.750	6.33	4.333	4.22	5.92	2.11
1.250	3.16	2.833	31.64	4.417	4.22	6.00	2.11
1.333	3.16	2.917	31.64	4.500	4.22	6.08	2.11
1.417	3.16	3.000	31.64	4.583	4.22	6.17	2.11
1.500	3.16	3.083	82.27	4.667	4.22	6.25	2.11
1.583	3.16	3.167	82.27	4.750	4.22		

Max.Eff.Inten.(mm/hr)=	82.27	44.34		
over (min)	5.00	10.00		
Storage Coeff. (min)=	2.73 (ii)	7.12 (ii)		
Unit Hyd. Tpeak (min)=	5.00	10.00		
Unit Hyd. peak (cms)=	0.29	0.14		
			TOTALS	
PEAK FLOW (cms)=	0.26	0.03	0.292 (iii)	
TIME TO PEAK (hrs)=	3.25	3.25	3.25	
RUNOFF VOLUME (mm)=	51.74	22.02	45.79	
TOTAL RAINFALL (mm)=	52.74	52.74	52.74	
RUNOFF COEFFICIENT =	0.98	0.42	0.87	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0259)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0204):		1.45	0.292	3.25	45.79
+ ID2= 2 (0260):		3.22	0.442	3.25	47.64
ID = 3 (0259):		4.67	0.734	3.25	47.07

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\50f23b5e-2bda-4888-8f6a-fa41043db911\f6b420c7
Ptotal= 52.74 mm	Comments: 5yr 6hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	5.27	3.75	11.60	5.50	2.11
0.50	2.11	2.25	5.27	4.00	5.27	5.75	2.11
0.75	2.11	2.50	6.33	4.25	5.27	6.00	2.11
1.00	3.16	2.75	6.33	4.50	4.22	6.25	2.11
1.25	3.16	3.00	31.64	4.75	4.22		
1.50	3.16	3.25	82.27	5.00	3.16		
1.75	3.16	3.50	11.60	5.25	3.16		

CALIB	
STANDHYD (0201)|	Area (ha)= 5.27
ID= 1 DT= 5.0 min |	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.22	0.05
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	187.44	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	3.16	3.250	82.27	4.83	3.16
0.167	0.00	1.750	3.16	3.333	11.60	4.92	3.16
0.250	0.00	1.833	5.27	3.417	11.60	5.00	3.16
0.333	2.11	1.917	5.27	3.500	11.60	5.08	3.16
0.417	2.11	2.000	5.27	3.583	11.60	5.17	3.16
0.500	2.11	2.083	5.27	3.667	11.60	5.25	3.16
0.583	2.11	2.167	5.27	3.750	11.60	5.33	2.11
0.667	2.11	2.250	5.27	3.833	5.27	5.42	2.11
0.750	2.11	2.333	6.33	3.917	5.27	5.50	2.11
0.833	3.16	2.417	6.33	4.000	5.27	5.58	2.11
0.917	3.16	2.500	6.33	4.083	5.27	5.67	2.11
1.000	3.16	2.583	6.33	4.167	5.27	5.75	2.11
1.083	3.16	2.667	6.33	4.250	5.27	5.83	2.11
1.167	3.16	2.750	6.33	4.333	4.22	5.92	2.11
1.250	3.16	2.833	31.64	4.417	4.22	6.00	2.11
1.333	3.16	2.917	31.64	4.500	4.22	6.08	2.11
1.417	3.16	3.000	31.64	4.583	4.22	6.17	2.11
1.500	3.16	3.083	82.27	4.667	4.22	6.25	2.11
1.583	3.16	3.167	82.27	4.750	4.22		

Max.Eff.Inten.(mm/hr)=	82.27	44.34		
over (min)	5.00	10.00		
Storage Coeff. (min)=	4.03 (ii)	5.24 (ii)		
Unit Hyd. Tpeak (min)=	5.00	10.00		
Unit Hyd. peak (cms)=	0.24	0.16		
			TOTALS	
PEAK FLOW (cms)=	1.17	0.01	1.180 (iii)	
TIME TO PEAK (hrs)=	3.25	3.25	3.25	
RUNOFF VOLUME (mm)=	51.74	22.02	51.44	
TOTAL RAINFALL (mm)=	52.74	52.74	52.74	
RUNOFF COEFFICIENT =	0.98	0.42	0.98	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)

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     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  0268)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.1959      0.1883
                         0.0980     0.0369   |   0.2939      0.4335

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0201)     5.270     1.180      3.25      51.44
   OUTFLOW: ID= 1 (  0268)     5.270     0.172      3.67      51.43

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 14.58
                  TIME SHIFT OF PEAK FLOW         (min)= 25.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.1513

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\f6b420c7
| Ptotal= 52.74 mm |    Comments: 5yr 6hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00    5.27 |  3.75   11.60 |  5.50    2.11
                0.50    2.11 |  2.25    5.27 |  4.00    5.27 |  5.75    2.11
                0.75    2.11 |  2.50    6.33 |  4.25    5.27 |  6.00    2.11
                1.00    3.16 |  2.75    6.33 |  4.50    4.22 |  6.25    2.11
                1.25    3.16 |  3.00   31.64 |  4.75    4.22 |
                1.50    3.16 |  3.25   82.27 |  5.00    3.16 |
                1.75    3.16 |  3.50   11.60 |  5.25    3.16 |

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--------------------
| CALIB            |
| STANDHYD (  0202)|   Area    (ha)=   6.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.32         1.25
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     209.28        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    3.16 | 3.250   82.27 |  4.83    3.16
               0.167    0.00 | 1.750    3.16 | 3.333   11.60 |  4.92    3.16
               0.250    0.00 | 1.833    5.27 | 3.417   11.60 |  5.00    3.16
               0.333    2.11 | 1.917    5.27 | 3.500   11.60 |  5.08    3.16
               0.417    2.11 | 2.000    5.27 | 3.583   11.60 |  5.17    3.16
               0.500    2.11 | 2.083    5.27 | 3.667   11.60 |  5.25    3.16
               0.583    2.11 | 2.167    5.27 | 3.750   11.60 |  5.33    2.11
               0.667    2.11 | 2.250    5.27 | 3.833    5.27 |  5.42    2.11
               0.750    2.11 | 2.333    6.33 | 3.917    5.27 |  5.50    2.11
               0.833    3.16 | 2.417    6.33 | 4.000    5.27 |  5.58    2.11
               0.917    3.16 | 2.500    6.33 | 4.083    5.27 |  5.67    2.11
               1.000    3.16 | 2.583    6.33 | 4.167    5.27 |  5.75    2.11
               1.083    3.16 | 2.667    6.33 | 4.250    5.27 |  5.83    2.11
               1.167    3.16 | 2.750    6.33 | 4.333    4.22 |  5.92    2.11
               1.250    3.16 | 2.833   31.64 | 4.417    4.22 |  6.00    2.11
               1.333    3.16 | 2.917   31.64 | 4.500    4.22 |  6.08    2.11
               1.417    3.16 | 3.000   31.64 | 4.583    4.22 |  6.17    2.11
               1.500    3.16 | 3.083   82.27 | 4.667    4.22 |  6.25    2.11
               1.583    3.16 | 3.167   82.27 | 4.750    4.22 |

     Max.Eff.Inten.(mm/hr)=      82.27        44.34
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       4.30 (ii)    8.57 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.23         0.12
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.19         0.11          1.304 (iii)
     TIME TO PEAK    (hrs)=       3.25         3.25           3.25
     RUNOFF VOLUME    (mm)=      51.74        22.02          46.09
     TOTAL RAINFALL   (mm)=      52.74        52.74          52.74
     RUNOFF COEFFICIENT   =       0.98         0.42           0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0262)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0202):     6.57   1.304     3.25    46.09
     + ID2= 2 (  0268):     5.27   0.172     3.67    51.43
       ==========================================================
       ID = 3 (  0262):    11.84   1.458     3.25    48.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (  0266)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0259):     4.67   0.734     3.25    47.07
     + ID2= 2 (  0262):    11.84   1.458     3.25    48.47
       ==========================================================
       ID = 3 (  0266):    16.51   2.192     3.25    48.07

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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RESERVOIR(0263)						
IN= 2---> OUT= 1						
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)		OUTFLOW (cms)	STORAGE (ha.m.)	
	0.0000	0.0000		0.2130	0.6563	
	0.0190	0.1773		0.2520	0.6883	
	0.0220	0.2128		0.2890	0.7150	
	0.0260	0.2888		0.2980	0.7450	
	0.0300	0.3648		0.3060	0.7700	
	0.0650	0.4586		0.3150	0.8127	
	0.1100	0.5155		0.3320	0.9290	
	0.1680	0.5503		0.3390	0.9767	
	0.1930	0.5804		0.3520	1.0680	
	0.2000	0.6048		0.0000	0.0000	

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0266)	16.510	2.192	3.25	48.07
OUTFLOW: ID= 1 (0263)	16.510	0.176	6.25	47.93

PEAK FLOW REDUCTION [Qout/Qin](%)= 8.01
TIME SHIFT OF PEAK FLOW (min)=180.00
MAXIMUM STORAGE USED (ha.m.)= 0.5598

ADD HYD (0261)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (0206):	0.12	0.008	3.33	22.00
	+ ID2= 2 (0263):	16.51	0.176	6.25	47.93
	ID = 3 (0261):	16.64	0.176	6.25	47.73

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
       V    V   I    SSSSS  U   U    A    L              (v 5.0.2025)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
```

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
Output filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-4bf8-aeac-18a29a864848\e2d4dd80-e614-4671-86a4-eb0c49addd38\s
Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-4bf8-aeac-18a29a864848\e2d4dd80-e614-4671-86a4-eb0c49addd38\s

DATE: 07/06/2020 TIME: 04:32:58

USER:

COMMENTS: _____

** SIMULATION : 50 Year 6 Hour SCS **

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\50f23b5e-2bda-4888-8f6a-fa41043db911\b0f030db
Ptotal= 83.66 mm	Comments: 50yr 6hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	2.00	8.37	3.75	18.41	5.50	3.35
0.50	3.35	2.25	8.37	4.00	8.37	5.75	3.35
0.75	3.35	2.50	10.04	4.25	8.37	6.00	3.35
1.00	5.02	2.75	10.04	4.50	6.69	6.25	3.35
1.25	5.02	3.00	50.20	4.75	6.69		
1.50	5.02	3.25	130.51	5.00	5.02		
1.75	5.02	3.50	18.41	5.25	5.02		

CALIB NASHYD (0206)|ID= 1 DT= 5.0 min	Area (ha)= 0.12	Curve Number (CN)= 82.0
	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.25	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	1.667	5.02	3.250	130.51	4.83	5.02
0.167	0.00	1.750	5.02	3.333	18.41	4.92	5.02
0.250	0.00	1.833	8.37	3.417	18.41	5.00	5.02
0.333	3.35	1.917	8.37	3.500	18.41	5.08	5.02
0.417	3.35	2.000	8.37	3.583	18.41	5.17	5.02
0.500	3.35	2.083	8.37	3.667	18.41	5.25	5.02
0.583	3.35	2.167	8.37	3.750	18.41	5.33	3.35
0.667	3.35	2.250	8.37	3.833	8.37	5.42	3.35
0.750	3.35	2.333	10.04	3.917	8.37	5.50	3.35
0.833	5.02	2.417	10.04	4.000	8.37	5.58	3.35
0.917	5.02	2.500	10.04	4.083	8.37	5.67	3.35
1.000	5.02	2.583	10.04	4.167	8.37	5.75	3.35
1.083	5.02	2.667	10.04	4.250	8.37	5.83	3.35
1.167	5.02	2.750	10.04	4.333	6.69	5.92	3.35
1.250	5.02	2.833	50.20	4.417	6.69	6.00	3.35
1.333	5.02	2.917	50.20	4.500	6.69	6.08	3.35

```
              1.417    5.02 | 3.000   50.20 | 4.583    6.69 |  6.17    3.35
              1.500    5.02 | 3.083  130.51 | 4.667    6.69 |  6.25    3.35
              1.583    5.02 | 3.167  130.51 | 4.750    6.69 |

     Unit Hyd Qpeak  (cms)=   0.019

     PEAK FLOW       (cms)=   0.017 (i)
     TIME TO PEAK    (hrs)=   3.333
     RUNOFF VOLUME    (mm)=  45.991
     TOTAL RAINFALL   (mm)=  83.660
     RUNOFF COEFFICIENT   =   0.550

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\b0f030db
| Ptotal= 83.66 mm |    Comments: 50yr 6hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00    8.37 |  3.75   18.41 |  5.50    3.35
                0.50    3.35 |  2.25    8.37 |  4.00    8.37 |  5.75    3.35
                0.75    3.35 |  2.50   10.04 |  4.25    8.37 |  6.00    3.35
                1.00    5.02 |  2.75   10.04 |  4.50    6.69 |  6.25    3.35
                1.25    5.02 |  3.00   50.20 |  4.75    6.69 |
                1.50    5.02 |  3.25  130.51 |  5.00    5.02 |
                1.75    5.02 |  3.50   18.41 |  5.25    5.02 |

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--------------------
| CALIB            |
| STANDHYD (  0205)|   Area    (ha)=   1.12
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.11         0.01
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      86.60        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    5.02 | 3.250  130.51 |  4.83    5.02
               0.167    0.00 | 1.750    5.02 | 3.333   18.41 |  4.92    5.02
               0.250    0.00 | 1.833    8.37 | 3.417   18.41 |  5.00    5.02
               0.333    3.35 | 1.917    8.37 | 3.500   18.41 |  5.08    5.02
               0.417    3.35 | 2.000    8.37 | 3.583   18.41 |  5.17    5.02
               0.500    3.35 | 2.083    8.37 | 3.667   18.41 |  5.25    5.02
               0.583    3.35 | 2.167    8.37 | 3.750   18.41 |  5.33    3.35
               0.667    3.35 | 2.250    8.37 | 3.833    8.37 |  5.42    3.35
               0.750    3.35 | 2.333   10.04 | 3.917    8.37 |  5.50    3.35
               0.833    5.02 | 2.417   10.04 | 4.000    8.37 |  5.58    3.35
               0.917    5.02 | 2.500   10.04 | 4.083    8.37 |  5.67    3.35
               1.000    5.02 | 2.583   10.04 | 4.167    8.37 |  5.75    3.35
               1.083    5.02 | 2.667   10.04 | 4.250    8.37 |  5.83    3.35
               1.167    5.02 | 2.750   10.04 | 4.333    6.69 |  5.92    3.35
               1.250    5.02 | 2.833   50.20 | 4.417    6.69 |  6.00    3.35
               1.333    5.02 | 2.917   50.20 | 4.500    6.69 |  6.08    3.35
               1.417    5.02 | 3.000   50.20 | 4.583    6.69 |  6.17    3.35
               1.500    5.02 | 3.083  130.51 | 4.667    6.69 |  6.25    3.35
               1.583    5.02 | 3.167  130.51 | 4.750    6.69 |

     Max.Eff.Inten.(mm/hr)=     130.51        90.23
               over (min)        5.00         5.00
     Storage Coeff.  (min)=      2.11 (ii)    3.12 (ii)
     Unit Hyd. Tpeak (min)=      5.00         5.00
     Unit Hyd. peak  (cms)=      0.31         0.27
                                                          *TOTALS*
     PEAK FLOW       (cms)=      0.40         0.00          0.406 (iii)
     TIME TO PEAK    (hrs)=      3.25         3.25           3.25
     RUNOFF VOLUME    (mm)=     82.66        46.03          82.29
     TOTAL RAINFALL   (mm)=     83.66        83.66          83.66
     RUNOFF COEFFICIENT   =      0.99         0.55           0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  0256)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0470     0.0750

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (  0205)      1.125     0.406      3.25      82.29
     OUTFLOW: ID= 1 (  0256)      1.125     0.040      3.83      81.94

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  9.83
                   TIME SHIFT OF PEAK FLOW         (min)= 35.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0639

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\b0f030db
| Ptotal= 83.66 mm |    Comments: 50yr 6hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00    8.37 |  3.75   18.41 |  5.50    3.35
                0.50    3.35 |  2.25    8.37 |  4.00    8.37 |  5.75    3.35
                0.75    3.35 |  2.50   10.04 |  4.25    8.37 |  6.00    3.35
                1.00    5.02 |  2.75   10.04 |  4.50    6.69 |  6.25    3.35
                1.25    5.02 |  3.00   50.20 |  4.75    6.69 |
                1.50    5.02 |  3.25  130.51 |  5.00    5.02 |
                1.75    5.02 |  3.50   18.41 |  5.25    5.02 |

--------------------------------------------------------------------------------
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--------------------
| CALIB            |
| STANDHYD (  0203)|   Area    (ha)=   2.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.68         0.42
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     118.18        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.667    5.02 | 3.250  130.51 |  4.83    5.02
              0.167    0.00 | 1.750    5.02 | 3.333   18.41 |  4.92    5.02
              0.250    0.00 | 1.833    8.37 | 3.417   18.41 |  5.00    5.02
              0.333    3.35 | 1.917    8.37 | 3.500   18.41 |  5.08    5.02
              0.417    3.35 | 2.000    8.37 | 3.583   18.41 |  5.17    5.02
              0.500    3.35 | 2.083    8.37 | 3.667   18.41 |  5.25    5.02
              0.583    3.35 | 2.167    8.37 | 3.750   18.41 |  5.33    3.35
              0.667    3.35 | 2.250    8.37 | 3.833    8.37 |  5.42    3.35
              0.750    3.35 | 2.333   10.04 | 3.917    8.37 |  5.50    3.35
              0.833    5.02 | 2.417   10.04 | 4.000    8.37 |  5.58    3.35
              0.917    5.02 | 2.500   10.04 | 4.083    8.37 |  5.67    3.35
              1.000    5.02 | 2.583   10.04 | 4.167    8.37 |  5.75    3.35
              1.083    5.02 | 2.667   10.04 | 4.250    8.37 |  5.83    3.35
              1.167    5.02 | 2.750   10.04 | 4.333    6.69 |  5.92    3.35
              1.250    5.02 | 2.833   50.20 | 4.417    6.69 |  6.00    3.35
              1.333    5.02 | 2.917   50.20 | 4.500    6.69 |  6.08    3.35
              1.417    5.02 | 3.000   50.20 | 4.583    6.69 |  6.17    3.35
              1.500    5.02 | 3.083  130.51 | 4.667    6.69 |  6.25    3.35
              1.583    5.02 | 3.167  130.51 | 4.750    6.69 |

     Max.Eff.Inten.(mm/hr)=     130.51        90.23
               over (min)        5.00        10.00
     Storage Coeff.  (min)=       2.54 (ii)    6.18 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.29         0.15
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.61         0.09         0.694 (iii)
     TIME TO PEAK    (hrs)=       3.25         3.25          3.25
     RUNOFF VOLUME    (mm)=      82.66        46.03         75.33
     TOTAL RAINFALL   (mm)=      83.66        83.66         83.66
     RUNOFF COEFFICIENT   =       0.99         0.55          0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0260)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0203):     2.10   0.694     3.25    75.33
      + ID2= 2 (  0256):     1.12   0.040     3.83    81.94
        ================================================
        ID = 3 (  0260):     3.22   0.728     3.25    77.64

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\b0f030db
| Ptotal= 83.66 mm |    Comments: 50yr 6hr 15min SCS
--------------------
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.25    0.00 |  2.00    8.37 |  3.75   18.41 |  5.50    3.35
               0.50    3.35 |  2.25    8.37 |  4.00    8.37 |  5.75    3.35
               0.75    3.35 |  2.50   10.04 |  4.25    8.37 |  6.00    3.35
               1.00    5.02 |  2.75   10.04 |  4.50    6.69 |  6.25    3.35
               1.25    5.02 |  3.00   50.20 |  4.75    6.69 |
               1.50    5.02 |  3.25  130.51 |  5.00    5.02 |
               1.75    5.02 |  3.50   18.41 |  5.25    5.02 |

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--------------------
| CALIB            |
| STANDHYD (  0204)|   Area    (ha)=   1.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.16         0.29
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      98.32        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.667    5.02 | 3.250  130.51 |  4.83    5.02
              0.167    0.00 | 1.750    5.02 | 3.333   18.41 |  4.92    5.02
              0.250    0.00 | 1.833    8.37 | 3.417   18.41 |  5.00    5.02
              0.333    3.35 | 1.917    8.37 | 3.500   18.41 |  5.08    5.02
              0.417    3.35 | 2.000    8.37 | 3.583   18.41 |  5.17    5.02
              0.500    3.35 | 2.083    8.37 | 3.667   18.41 |  5.25    5.02
              0.583    3.35 | 2.167    8.37 | 3.750   18.41 |  5.33    3.35
              0.667    3.35 | 2.250    8.37 | 3.833    8.37 |  5.42    3.35
              0.750    3.35 | 2.333   10.04 | 3.917    8.37 |  5.50    3.35
              0.833    5.02 | 2.417   10.04 | 4.000    8.37 |  5.58    3.35
              0.917    5.02 | 2.500   10.04 | 4.083    8.37 |  5.67    3.35
              1.000    5.02 | 2.583   10.04 | 4.167    8.37 |  5.75    3.35
              1.083    5.02 | 2.667   10.04 | 4.250    8.37 |  5.83    3.35
              1.167    5.02 | 2.750   10.04 | 4.333    6.69 |  5.92    3.35
              1.250    5.02 | 2.833   50.20 | 4.417    6.69 |  6.00    3.35
              1.333    5.02 | 2.917   50.20 | 4.500    6.69 |  6.08    3.35
              1.417    5.02 | 3.000   50.20 | 4.583    6.69 |  6.17    3.35
              1.500    5.02 | 3.083  130.51 | 4.667    6.69 |  6.25    3.35
```

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               1.583    5.02 | 3.167  130.51 | 4.750    6.69 |

     Max.Eff.Inten.(mm/hr)=     130.51        90.23
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       2.27 (ii)    5.92 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.30         0.15
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.42         0.06       0.482 (iii)
     TIME TO PEAK    (hrs)=       3.25         3.25        3.25
     RUNOFF VOLUME    (mm)=      82.66        46.03       75.33
     TOTAL RAINFALL   (mm)=      83.66        83.66       83.66
     RUNOFF COEFFICIENT   =       0.99         0.55        0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0259)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0204):     1.45   0.482     3.25    75.33
     + ID2= 2 (  0260):     3.22   0.728     3.25    77.64
       ================================================
       ID = 3 (  0259):     4.67   1.210     3.25    76.92

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\b0f030db
| Ptotal= 83.66 mm |    Comments: 50yr 6hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  2.00    8.37 |  3.75   18.41 |  5.50    3.35
                0.50    3.35 |  2.25    8.37 |  4.00    8.37 |  5.75    3.35
                0.75    3.35 |  2.50   10.04 |  4.25    8.37 |  6.00    3.35
                1.00    5.02 |  2.75   10.04 |  4.50    6.69 |  6.25    3.35
                1.25    5.02 |  3.00   50.20 |  4.75    6.69 |
                1.50    5.02 |  3.25  130.51 |  5.00    5.02 |
                1.75    5.02 |  3.50   18.41 |  5.25    5.02 |

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--------------------
| CALIB            |
| STANDHYD (  0201)|   Area    (ha)=   5.27
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.22         0.05
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     187.44        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 1.667    5.02 | 3.250  130.51 |  4.83    5.02
               0.167    0.00 | 1.750    5.02 | 3.333   18.41 |  4.92    5.02
               0.250    0.00 | 1.833    8.37 | 3.417   18.41 |  5.00    5.02
               0.333    3.35 | 1.917    8.37 | 3.500   18.41 |  5.08    5.02
               0.417    3.35 | 2.000    8.37 | 3.583   18.41 |  5.17    5.02
               0.500    3.35 | 2.083    8.37 | 3.667   18.41 |  5.25    5.02
               0.583    3.35 | 2.167    8.37 | 3.750   18.41 |  5.33    3.35
               0.667    3.35 | 2.250    8.37 | 3.833    8.37 |  5.42    3.35
               0.750    3.35 | 2.333   10.04 | 3.917    8.37 |  5.50    3.35
               0.833    5.02 | 2.417   10.04 | 4.000    8.37 |  5.58    3.35
               0.917    5.02 | 2.500   10.04 | 4.083    8.37 |  5.67    3.35
               1.000    5.02 | 2.583   10.04 | 4.167    8.37 |  5.75    3.35
               1.083    5.02 | 2.667   10.04 | 4.250    8.37 |  5.83    3.35
               1.167    5.02 | 2.750   10.04 | 4.333    6.69 |  5.92    3.35
               1.250    5.02 | 2.833   50.20 | 4.417    6.69 |  6.00    3.35
               1.333    5.02 | 2.917   50.20 | 4.500    6.69 |  6.08    3.35
               1.417    5.02 | 3.000   50.20 | 4.583    6.69 |  6.17    3.35
               1.500    5.02 | 3.083  130.51 | 4.667    6.69 |  6.25    3.35
               1.583    5.02 | 3.167  130.51 | 4.750    6.69 |

     Max.Eff.Inten.(mm/hr)=     130.51        90.23
               over (min)         5.00         5.00
     Storage Coeff.  (min)=       3.35 (ii)    4.36 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.26         0.23
                                                        *TOTALS*
     PEAK FLOW       (cms)=       1.88         0.01       1.891 (iii)
     TIME TO PEAK    (hrs)=       3.25         3.25        3.25
     RUNOFF VOLUME    (mm)=      82.66        46.03       82.29
     TOTAL RAINFALL   (mm)=      83.66        83.66       83.66
     RUNOFF COEFFICIENT   =       0.99         0.55        0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  0268)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.1959     0.1883
                         0.0980     0.0369   |   0.2939     0.4335

                                   AREA     QPEAK     TPEAK       R.V.
                                   (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0201)      5.270      1.891      3.25      82.29
   OUTFLOW: ID= 1 (  0268)      5.270      0.223      3.75      82.28

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 11.79
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                TIME SHIFT OF PEAK FLOW         (min)= 30.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.2568

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              50f23b5e-2bda-4888-8f6a-fa41043db911\b0f030db
| Ptotal= 83.66 mm |    Comments: 50yr 6hr 15min SCS
--------------------
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.25    0.00 |  2.00    8.37 |  3.75   18.41 |  5.50    3.35
               0.50    3.35 |  2.25    8.37 |  4.00    8.37 |  5.75    3.35
               0.75    3.35 |  2.50   10.04 |  4.25    8.37 |  6.00    3.35
               1.00    5.02 |  2.75   10.04 |  4.50    6.69 |  6.25    3.35
               1.25    5.02 |  3.00   50.20 |  4.75    6.69 |
               1.50    5.02 |  3.25  130.51 |  5.00    5.02 |
               1.75    5.02 |  3.50   18.41 |  5.25    5.02 |

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--------------------
| CALIB            |
| STANDHYD (  0202)|   Area    (ha)=   6.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.32         1.25
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     209.28        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    0.00 | 1.667    5.02 | 3.250  130.51 |  4.83    5.02
              0.167    0.00 | 1.750    5.02 | 3.333   18.41 |  4.92    5.02
              0.250    0.00 | 1.833    8.37 | 3.417   18.41 |  5.00    5.02
              0.333    3.35 | 1.917    8.37 | 3.500   18.41 |  5.08    5.02
              0.417    3.35 | 2.000    8.37 | 3.583   18.41 |  5.17    5.02
              0.500    3.35 | 2.083    8.37 | 3.667   18.41 |  5.25    5.02
              0.583    3.35 | 2.167    8.37 | 3.750   18.41 |  5.33    3.35
              0.667    3.35 | 2.250    8.37 | 3.833    8.37 |  5.42    3.35
              0.750    3.35 | 2.333   10.04 | 3.917    8.37 |  5.50    3.35
              0.833    5.02 | 2.417   10.04 | 4.000    8.37 |  5.58    3.35
              0.917    5.02 | 2.500   10.04 | 4.083    8.37 |  5.67    3.35
              1.000    5.02 | 2.583   10.04 | 4.167    8.37 |  5.75    3.35
              1.083    5.02 | 2.667   10.04 | 4.250    8.37 |  5.83    3.35
              1.167    5.02 | 2.750   10.04 | 4.333    6.69 |  5.92    3.35
              1.250    5.02 | 2.833   50.20 | 4.417    6.69 |  6.00    3.35
              1.333    5.02 | 2.917   50.20 | 4.500    6.69 |  6.08    3.35
              1.417    5.02 | 3.000   50.20 | 4.583    6.69 |  6.17    3.35
              1.500    5.02 | 3.083  130.51 | 4.667    6.69 |  6.25    3.35
              1.583    5.02 | 3.167  130.51 | 4.750    6.69 |

     Max.Eff.Inten.(mm/hr)=     130.51        90.23
               over (min)        5.00        10.00
     Storage Coeff.  (min)=      3.58 (ii)    7.13 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.26         0.14
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.91         0.25          2.162 (iii)
     TIME TO PEAK    (hrs)=       3.25         3.25           3.25
     RUNOFF VOLUME    (mm)=      82.66        46.03          75.70
     TOTAL RAINFALL   (mm)=      83.66        83.66          83.66
     RUNOFF COEFFICIENT   =       0.99         0.55           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0262)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0202):     6.57   2.162     3.25    75.70
     + ID2= 2 (  0268):     5.27   0.223     3.75    82.28
       ================================================
       ID = 3 (  0262):    11.84   2.366     3.25    78.63

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD  (  0266)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0259):     4.67   1.210     3.25    76.92
     + ID2= 2 (  0262):    11.84   2.366     3.25    78.63
       ================================================
       ID = 3 (  0266):    16.51   3.575     3.25    78.15

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| RESERVOIR(  0263)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.2130     0.6563
                          0.0190     0.1773   |   0.2520     0.6883
                          0.0220     0.2128   |   0.2890     0.7150
                          0.0260     0.2888   |   0.2980     0.7450
                          0.0300     0.3648   |   0.3060     0.7700
                          0.0650     0.4586   |   0.3150     0.8127
                          0.1100     0.5155   |   0.3320     0.9290
                          0.1680     0.5503   |   0.3390     0.9767
                          0.1930     0.5804   |   0.3520     1.0680
                          0.2000     0.6048   |   0.0000     0.0000

                                    AREA     QPEAK     TPEAK       R.V.
                                    (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0266)     16.510      3.575      3.25      78.15
   OUTFLOW: ID= 1 (  0263)     16.510      0.307      5.83      78.00
```

```
                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  8.58
                  TIME SHIFT OF PEAK FLOW         (min)=155.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.7739

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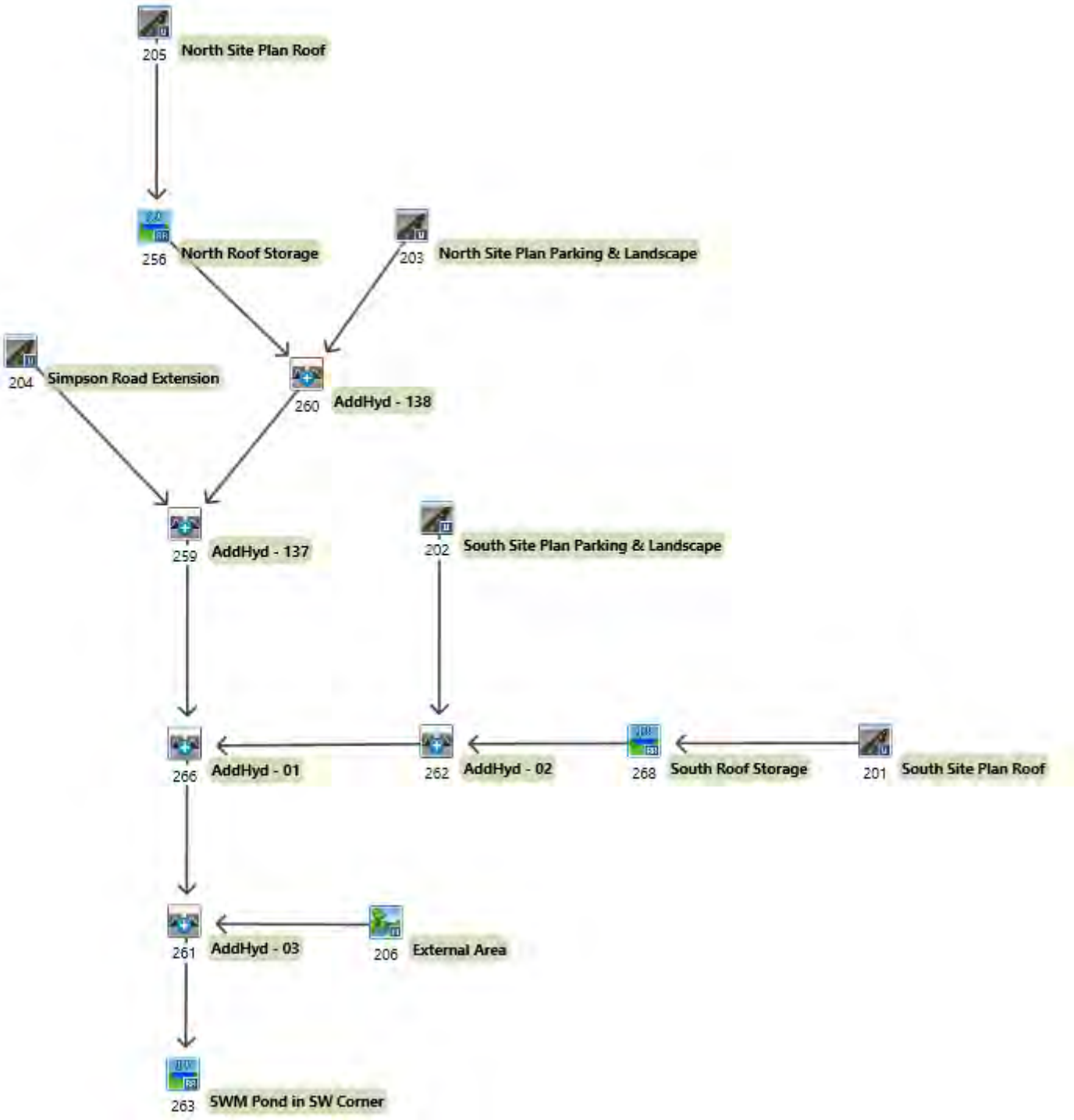
--------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0206):     0.12   0.017     3.33    45.99
     + ID2= 2 (  0263):    16.51   0.307     5.83    78.00
       ================================================
       ID = 3 (  0261):    16.64   0.308     5.50    77.76

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
```



SCHAEFFERS
CONSULTING ENGINEERS

Post-development Visual OTTHYMO™ Schematic
12 Hour AES 2-100 Year

Job #: 2018-4841	**Date: July 2020**

```
================================================================================
============================

       V    V   I    SSSSS  U   U    A    L             (v 5.0.2025)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\47c1cdd8-9c04-44a5-b689-6ea6b6860b77\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\47c1cdd8-9c04-44a5-b689-6ea6b6860b77\s


DATE: 07/06/2020                          TIME: 04:35:19

USER:



COMMENTS: _____________________________________________________________


--------------------------------------------------------------------------------
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  ***********************************************
  ** SIMULATION : 10 Year 12 Hour AES           **
  ***********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              fc9a518d-4e80-47e2-ab56-8ded57ffff68\f285344e
| Ptotal= 62.71 mm |    Comments: 10 Year 12 Hour AES (Bloor, TRCA)
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	10.66	6.75	4.39	10.00	0.63
0.50	0.63	3.75	10.66	7.00	4.39	10.25	0.63
0.75	0.63	4.00	10.66	7.25	4.39	10.50	0.63
1.00	0.63	4.25	10.66	7.50	2.51	10.75	0.63
1.25	0.63	4.50	28.84	7.75	2.51	11.00	0.63
1.50	0.63	4.75	28.84	8.00	2.51	11.25	0.63
1.75	0.63	5.00	28.84	8.25	2.51	11.50	0.63
2.00	0.63	5.25	28.84	8.50	1.25	11.75	0.63
2.25	0.63	5.50	8.15	8.75	1.25	12.00	0.63
2.50	3.76	5.75	8.15	9.00	1.25	12.25	0.63
2.75	3.76	6.00	8.15	9.25	1.25		
3.00	3.76	6.25	8.15	9.50	0.63		
3.25	3.76	6.50	4.39	9.75	0.63		

```
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--------------------
| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.76	6.250	8.15	9.33	0.63
0.167	0.00	3.250	3.76	6.333	4.39	9.42	0.63
0.250	0.00	3.333	10.66	6.417	4.39	9.50	0.63
0.333	0.63	3.417	10.66	6.500	4.39	9.58	0.63
0.417	0.63	3.500	10.66	6.583	4.39	9.67	0.63
0.500	0.63	3.583	10.66	6.667	4.39	9.75	0.63
0.583	0.63	3.667	10.66	6.750	4.39	9.83	0.63
0.667	0.63	3.750	10.66	6.833	4.39	9.92	0.63
0.750	0.63	3.833	10.66	6.917	4.39	10.00	0.63
0.833	0.63	3.917	10.66	7.000	4.39	10.08	0.63
0.917	0.63	4.000	10.66	7.083	4.39	10.17	0.63
1.000	0.63	4.083	10.66	7.167	4.39	10.25	0.63
1.083	0.63	4.167	10.66	7.250	4.39	10.33	0.63
1.167	0.63	4.250	10.66	7.333	2.51	10.42	0.63
1.250	0.63	4.333	28.84	7.417	2.51	10.50	0.63
1.333	0.63	4.417	28.84	7.500	2.51	10.58	0.63
1.417	0.63	4.500	28.84	7.583	2.51	10.67	0.63
1.500	0.63	4.583	28.84	7.667	2.51	10.75	0.63
1.583	0.63	4.667	28.84	7.750	2.51	10.83	0.63
1.667	0.63	4.750	28.84	7.833	2.51	10.92	0.63
1.750	0.63	4.833	28.84	7.917	2.51	11.00	0.63
1.833	0.63	4.917	28.84	8.000	2.51	11.08	0.63
1.917	0.63	5.000	28.84	8.083	2.51	11.17	0.63
2.000	0.63	5.083	28.84	8.167	2.51	11.25	0.63
2.083	0.63	5.167	28.84	8.250	2.51	11.33	0.63
2.167	0.63	5.250	28.84	8.333	1.25	11.42	0.63
2.250	0.63	5.333	8.15	8.417	1.25	11.50	0.63
2.333	3.76	5.417	8.15	8.500	1.25	11.58	0.63
2.417	3.76	5.500	8.15	8.583	1.25	11.67	0.63
2.500	3.76	5.583	8.15	8.667	1.25	11.75	0.63
2.583	3.76	5.667	8.15	8.750	1.25	11.83	0.63
2.667	3.76	5.750	8.15	8.833	1.25	11.92	0.63
2.750	3.76	5.833	8.15	8.917	1.25	12.00	0.63
2.833	3.76	5.917	8.15	9.000	1.25	12.08	0.63
2.917	3.76	6.000	8.15	9.083	1.25	12.17	0.63
3.000	3.76	6.083	8.15	9.167	1.25	12.25	0.63
3.083	3.76	6.167	8.15	9.250	1.25		

```
    Unit Hyd Qpeak  (cms)=   0.019

    PEAK FLOW       (cms)=   0.006 (i)
    TIME TO PEAK    (hrs)=   5.250
    RUNOFF VOLUME    (mm)=  29.323
    TOTAL RAINFALL   (mm)=  62.710
    RUNOFF COEFFICIENT   =   0.468

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\fc9a518d-4e80-47e2-ab56-8ded57ffff68\f285344e
Ptotal= 62.71 mm	Comments: 10 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	10.66	6.75	4.39	10.00	0.63
0.50	0.63	3.75	10.66	7.00	4.39	10.25	0.63
0.75	0.63	4.00	10.66	7.25	4.39	10.50	0.63
1.00	0.63	4.25	10.66	7.50	2.51	10.75	0.63
1.25	0.63	4.50	28.84	7.75	2.51	11.00	0.63
1.50	0.63	4.75	28.84	8.00	2.51	11.25	0.63
1.75	0.63	5.00	28.84	8.25	2.51	11.50	0.63
2.00	0.63	5.25	28.84	8.50	1.25	11.75	0.63
2.25	0.63	5.50	8.15	8.75	1.25	12.00	0.63
2.50	3.76	5.75	8.15	9.00	1.25	12.25	0.63
2.75	3.76	6.00	8.15	9.25	1.25		
3.00	3.76	6.25	8.15	9.50	0.63		
3.25	3.76	6.50	4.39	9.75	0.63		

CALIB STANDHYD (0205) ID= 1 DT= 5.0 min	Area (ha)= 1.12 Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.11	0.01
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	86.60	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.76	6.250	8.15	9.33	0.63
0.167	0.00	3.250	3.76	6.333	4.39	9.42	0.63
0.250	0.00	3.333	10.66	6.417	4.39	9.50	0.63
0.333	0.63	3.417	10.66	6.500	4.39	9.58	0.63
0.417	0.63	3.500	10.66	6.583	4.39	9.67	0.63
0.500	0.63	3.583	10.66	6.667	4.39	9.75	0.63
0.583	0.63	3.667	10.66	6.750	4.39	9.83	0.63
0.667	0.63	3.750	10.66	6.833	4.39	9.92	0.63
0.750	0.63	3.833	10.66	6.917	4.39	10.00	0.63
0.833	0.63	3.917	10.66	7.000	4.39	10.08	0.63
0.917	0.63	4.000	10.66	7.083	4.39	10.17	0.63
1.000	0.63	4.083	10.66	7.167	4.39	10.25	0.63
1.083	0.63	4.167	10.66	7.250	4.39	10.33	0.63
1.167	0.63	4.250	10.66	7.333	2.51	10.42	0.63
1.250	0.63	4.333	28.84	7.417	2.51	10.50	0.63
1.333	0.63	4.417	28.84	7.500	2.51	10.58	0.63
1.417	0.63	4.500	28.84	7.583	2.51	10.67	0.63
1.500	0.63	4.583	28.84	7.667	2.51	10.75	0.63
1.583	0.63	4.667	28.84	7.750	2.51	10.83	0.63
1.667	0.63	4.750	28.84	7.833	2.51	10.92	0.63
1.750	0.63	4.833	28.84	7.917	2.51	11.00	0.63
1.833	0.63	4.917	28.84	8.000	2.51	11.08	0.63
1.917	0.63	5.000	28.84	8.083	2.51	11.17	0.63
2.000	0.63	5.083	28.84	8.167	2.51	11.25	0.63
2.083	0.63	5.167	28.84	8.250	2.51	11.33	0.63
2.167	0.63	5.250	28.84	8.333	1.25	11.42	0.63
2.250	0.63	5.333	8.15	8.417	1.25	11.50	0.63
2.333	3.76	5.417	8.15	8.500	1.25	11.58	0.63
2.417	3.76	5.500	8.15	8.583	1.25	11.67	0.63
2.500	3.76	5.583	8.15	8.667	1.25	11.75	0.63
2.583	3.76	5.667	8.15	8.750	1.25	11.83	0.63
2.667	3.76	5.750	8.15	8.833	1.25	11.92	0.63
2.750	3.76	5.833	8.15	8.917	1.25	12.00	0.63
2.833	3.76	5.917	8.15	9.000	1.25	12.08	0.63
2.917	3.76	6.000	8.15	9.083	1.25	12.17	0.63
3.000	3.76	6.083	8.15	9.167	1.25	12.25	0.63
3.083	3.76	6.167	8.15	9.250	1.25		

			TOTALS
Max.Eff.Inten.(mm/hr)=	28.84	18.44	
over (min)	5.00	10.00	
Storage Coeff. (min)=	3.85 (ii)	5.70 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.25	0.15	
PEAK FLOW (cms)=	0.09	0.00	0.090 (iii)
TIME TO PEAK (hrs)=	5.17	5.25	5.25
RUNOFF VOLUME (mm)=	61.71	29.35	61.38
TOTAL RAINFALL (mm)=	62.71	62.71	62.71
RUNOFF COEFFICIENT =	0.98	0.47	0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0256) IN= 2---> OUT= 1 DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0470	0.0750

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0205)	1.125	0.090	5.25	61.38
OUTFLOW: ID= 1 (0256)	1.125	0.025	6.25	61.03

PEAK FLOW REDUCTION [Qout/Qin](%)= 27.95
TIME SHIFT OF PEAK FLOW (min)= 60.00
MAXIMUM STORAGE USED (ha.m.)= 0.0400

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\fc9a518d-4e80-47e2-ab56-8ded57ffff68\f285344e
Ptotal= 62.71 mm	Comments: 10 Year 12 Hour AES (Bloor, TRCA)

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN

hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	0.00	3.50	10.66	6.75	4.39	10.00	0.63
0.50	0.63	3.75	10.66	7.00	4.39	10.25	0.63
0.75	0.63	4.00	10.66	7.25	4.39	10.50	0.63
1.00	0.63	4.25	10.66	7.50	2.51	10.75	0.63
1.25	0.63	4.50	28.84	7.75	2.51	11.00	0.63
1.50	0.63	4.75	28.84	8.00	2.51	11.25	0.63
1.75	0.63	5.00	28.84	8.25	2.51	11.50	0.63
2.00	0.63	5.25	28.84	8.50	1.25	11.75	0.63
2.25	0.63	5.50	8.15	8.75	1.25	12.00	0.63
2.50	3.76	5.75	8.15	9.00	1.25	12.25	0.63
2.75	3.76	6.00	8.15	9.25	1.25		
3.00	3.76	6.25	8.15	9.50	0.63		
3.25	3.76	6.50	4.39	9.75	0.63		

```
--------------------
| CALIB            |
| STANDHYD (  0203)|   Area    (ha)=   2.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.68	0.42
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	118.18	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.76	6.250	8.15	9.33	0.63
0.167	0.00	3.250	3.76	6.333	4.39	9.42	0.63
0.250	0.00	3.333	10.66	6.417	4.39	9.50	0.63
0.333	0.63	3.417	10.66	6.500	4.39	9.58	0.63
0.417	0.63	3.500	10.66	6.583	4.39	9.67	0.63
0.500	0.63	3.583	10.66	6.667	4.39	9.75	0.63
0.583	0.63	3.667	10.66	6.750	4.39	9.83	0.63
0.667	0.63	3.750	10.66	6.833	4.39	9.92	0.63
0.750	0.63	3.833	10.66	6.917	4.39	10.00	0.63
0.833	0.63	3.917	10.66	7.000	4.39	10.08	0.63
0.917	0.63	4.000	10.66	7.083	4.39	10.17	0.63
1.000	0.63	4.083	10.66	7.167	4.39	10.25	0.63
1.083	0.63	4.167	10.66	7.250	4.39	10.33	0.63
1.167	0.63	4.250	10.66	7.333	2.51	10.42	0.63
1.250	0.63	4.333	28.84	7.417	2.51	10.50	0.63
1.333	0.63	4.417	28.84	7.500	2.51	10.58	0.63
1.417	0.63	4.500	28.84	7.583	2.51	10.67	0.63
1.500	0.63	4.583	28.84	7.667	2.51	10.75	0.63
1.583	0.63	4.667	28.84	7.750	2.51	10.83	0.63
1.667	0.63	4.750	28.84	7.833	2.51	10.92	0.63
1.750	0.63	4.833	28.84	7.917	2.51	11.00	0.63
1.833	0.63	4.917	28.84	8.000	2.51	11.08	0.63
1.917	0.63	5.000	28.84	8.083	2.51	11.17	0.63
2.000	0.63	5.083	28.84	8.167	2.51	11.25	0.63
2.083	0.63	5.167	28.84	8.250	2.51	11.33	0.63
2.167	0.63	5.250	28.84	8.333	1.25	11.42	0.63
2.250	0.63	5.333	8.15	8.417	1.25	11.50	0.63
2.333	3.76	5.417	8.15	8.500	1.25	11.58	0.63
2.417	3.76	5.500	8.15	8.583	1.25	11.67	0.63
2.500	3.76	5.583	8.15	8.667	1.25	11.75	0.63
2.583	3.76	5.667	8.15	8.750	1.25	11.83	0.63
2.667	3.76	5.750	8.15	8.833	1.25	11.92	0.63
2.750	3.76	5.833	8.15	8.917	1.25	12.00	0.63
2.833	3.76	5.917	8.15	9.000	1.25	12.08	0.63
2.917	3.76	6.000	8.15	9.083	1.25	12.17	0.63
3.000	3.76	6.083	8.15	9.167	1.25	12.25	0.63
3.083	3.76	6.167	8.15	9.250	1.25		

				TOTALS
Max.Eff.Inten.(mm/hr)=		28.84	18.15	
over (min)		5.00	20.00	
Storage Coeff. (min)=		4.64 (ii)	18.61 (ii)	
Unit Hyd. Tpeak (min)=		5.00	20.00	
Unit Hyd. peak (cms)=		0.22	0.06	
PEAK FLOW	(cms)=	0.13	0.02	0.152 (iii)
TIME TO PEAK	(hrs)=	5.25	5.33	5.25
RUNOFF VOLUME	(mm)=	61.71	29.35	55.23
TOTAL RAINFALL	(mm)=	62.71	62.71	62.71
RUNOFF COEFFICIENT	=	0.98	0.47	0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
--------------------
| ADD HYD  (  0260)|
|   1 +  2 =  3    |
--------------------
```

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0203):	2.10	0.152	5.25	55.23
+ ID2= 2 (0256):	1.12	0.025	6.25	61.03
ID = 3 (0260):	3.22	0.176	5.25	57.26

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              fc9a518d-4e80-47e2-ab56-8ded57ffff68\f285344e
| Ptotal= 62.71 mm |    Comments: 10 Year 12 Hour AES (Bloor, TRCA)
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	10.66	6.75	4.39	10.00	0.63
0.50	0.63	3.75	10.66	7.00	4.39	10.25	0.63
0.75	0.63	4.00	10.66	7.25	4.39	10.50	0.63
1.00	0.63	4.25	10.66	7.50	2.51	10.75	0.63
1.25	0.63	4.50	28.84	7.75	2.51	11.00	0.63
1.50	0.63	4.75	28.84	8.00	2.51	11.25	0.63
1.75	0.63	5.00	28.84	8.25	2.51	11.50	0.63
2.00	0.63	5.25	28.84	8.50	1.25	11.75	0.63
2.25	0.63	5.50	8.15	8.75	1.25	12.00	0.63
2.50	3.76	5.75	8.15	9.00	1.25	12.25	0.63
2.75	3.76	6.00	8.15	9.25	1.25		
3.00	3.76	6.25	8.15	9.50	0.63		

```
                3.25    3.76 |  6.50    4.39 |  9.75    0.63 |

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| CALIB            |
| STANDHYD (  0204)|   Area    (ha)=   1.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.16         0.29
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      98.32        40.00
     Mannings n           =      0.013        0.250

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    0.00 | 3.167    3.76 | 6.250    8.15 |  9.33    0.63
             0.167    0.00 | 3.250    3.76 | 6.333    4.39 |  9.42    0.63
             0.250    0.00 | 3.333   10.66 | 6.417    4.39 |  9.50    0.63
             0.333    0.63 | 3.417   10.66 | 6.500    4.39 |  9.58    0.63
             0.417    0.63 | 3.500   10.66 | 6.583    4.39 |  9.67    0.63
             0.500    0.63 | 3.583   10.66 | 6.667    4.39 |  9.75    0.63
             0.583    0.63 | 3.667   10.66 | 6.750    4.39 |  9.83    0.63
             0.667    0.63 | 3.750   10.66 | 6.833    4.39 |  9.92    0.63
             0.750    0.63 | 3.833   10.66 | 6.917    4.39 | 10.00    0.63
             0.833    0.63 | 3.917   10.66 | 7.000    4.39 | 10.08    0.63
             0.917    0.63 | 4.000   10.66 | 7.083    4.39 | 10.17    0.63
             1.000    0.63 | 4.083   10.66 | 7.167    4.39 | 10.25    0.63
             1.083    0.63 | 4.167   10.66 | 7.250    4.39 | 10.33    0.63
             1.167    0.63 | 4.250   10.66 | 7.333    2.51 | 10.42    0.63
             1.250    0.63 | 4.333   28.84 | 7.417    2.51 | 10.50    0.63
             1.333    0.63 | 4.417   28.84 | 7.500    2.51 | 10.58    0.63
             1.417    0.63 | 4.500   28.84 | 7.583    2.51 | 10.67    0.63
             1.500    0.63 | 4.583   28.84 | 7.667    2.51 | 10.75    0.63
             1.583    0.63 | 4.667   28.84 | 7.750    2.51 | 10.83    0.63
             1.667    0.63 | 4.750   28.84 | 7.833    2.51 | 10.92    0.63
             1.750    0.63 | 4.833   28.84 | 7.917    2.51 | 11.00    0.63
             1.833    0.63 | 4.917   28.84 | 8.000    2.51 | 11.08    0.63
             1.917    0.63 | 5.000   28.84 | 8.083    2.51 | 11.17    0.63
             2.000    0.63 | 5.083   28.84 | 8.167    2.51 | 11.25    0.63
             2.083    0.63 | 5.167   28.84 | 8.250    2.51 | 11.33    0.63
             2.167    0.63 | 5.250   28.84 | 8.333    1.25 | 11.42    0.63
             2.250    0.63 | 5.333    8.15 | 8.417    1.25 | 11.50    0.63
             2.333    3.76 | 5.417    8.15 | 8.500    1.25 | 11.58    0.63
             2.417    3.76 | 5.500    8.15 | 8.583    1.25 | 11.67    0.63
             2.500    3.76 | 5.583    8.15 | 8.667    1.25 | 11.75    0.63
             2.583    3.76 | 5.667    8.15 | 8.750    1.25 | 11.83    0.63
             2.667    3.76 | 5.750    8.15 | 8.833    1.25 | 11.92    0.63
             2.750    3.76 | 5.833    8.15 | 8.917    1.25 | 12.00    0.63
             2.833    3.76 | 5.917    8.15 | 9.000    1.25 | 12.08    0.63
             2.917    3.76 | 6.000    8.15 | 9.083    1.25 | 12.17    0.63
             3.000    3.76 | 6.083    8.15 | 9.167    1.25 | 12.25    0.63
             3.083    3.76 | 6.167    8.15 | 9.250    1.25 |

     Max.Eff.Inten.(mm/hr)=      28.84        18.15
               over (min)         5.00        20.00
     Storage Coeff.  (min)=       4.16 (ii)   18.12 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.24         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.09         0.01          0.105 (iii)
     TIME TO PEAK    (hrs)=       5.17         5.33           5.25
     RUNOFF VOLUME    (mm)=      61.71        29.35          55.23
     TOTAL RAINFALL   (mm)=      62.71        62.71          62.71
     RUNOFF COEFFICIENT   =       0.98         0.47           0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (  0259)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0204):     1.45   0.105     5.25    55.23
     + ID2= 2 (  0260):     3.22   0.176     5.25    57.26
       ================================================
       ID = 3 (  0259):     4.67   0.281     5.25    56.63

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              fc9a518d-4e80-47e2-ab56-8ded57ffff68\f285344e
| Ptotal= 62.71 mm |    Comments: 10 Year 12 Hour AES (Bloor, TRCA)
--------------------
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.25    0.00 |  3.50   10.66 |  6.75    4.39 | 10.00    0.63
             0.50    0.63 |  3.75   10.66 |  7.00    4.39 | 10.25    0.63
             0.75    0.63 |  4.00   10.66 |  7.25    4.39 | 10.50    0.63
             1.00    0.63 |  4.25   10.66 |  7.50    2.51 | 10.75    0.63
             1.25    0.63 |  4.50   28.84 |  7.75    2.51 | 11.00    0.63
             1.50    0.63 |  4.75   28.84 |  8.00    2.51 | 11.25    0.63
             1.75    0.63 |  5.00   28.84 |  8.25    2.51 | 11.50    0.63
             2.00    0.63 |  5.25   28.84 |  8.50    1.25 | 11.75    0.63
             2.25    0.63 |  5.50    8.15 |  8.75    1.25 | 12.00    0.63
             2.50    3.76 |  5.75    8.15 |  9.00    1.25 | 12.25    0.63
             2.75    3.76 |  6.00    8.15 |  9.25    1.25 |
             3.00    3.76 |  6.25    8.15 |  9.50    0.63 |
             3.25    3.76 |  6.50    4.39 |  9.75    0.63 |

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| CALIB            |
| STANDHYD (  0201)|   Area    (ha)=   5.27
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.22         0.05
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
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Length	(m)=	187.44	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.76	6.250	8.15	9.33	0.63
0.167	0.00	3.250	3.76	6.333	4.39	9.42	0.63
0.250	0.00	3.333	10.66	6.417	4.39	9.50	0.63
0.333	0.63	3.417	10.66	6.500	4.39	9.58	0.63
0.417	0.63	3.500	10.66	6.583	4.39	9.67	0.63
0.500	0.63	3.583	10.66	6.667	4.39	9.75	0.63
0.583	0.63	3.667	10.66	6.750	4.39	9.83	0.63
0.667	0.63	3.750	10.66	6.833	4.39	9.92	0.63
0.750	0.63	3.833	10.66	6.917	4.39	10.00	0.63
0.833	0.63	3.917	10.66	7.000	4.39	10.08	0.63
0.917	0.63	4.000	10.66	7.083	4.39	10.17	0.63
1.000	0.63	4.083	10.66	7.167	4.39	10.25	0.63
1.083	0.63	4.167	10.66	7.250	4.39	10.33	0.63
1.167	0.63	4.250	10.66	7.333	2.51	10.42	0.63
1.250	0.63	4.333	28.84	7.417	2.51	10.50	0.63
1.333	0.63	4.417	28.84	7.500	2.51	10.58	0.63
1.417	0.63	4.500	28.84	7.583	2.51	10.67	0.63
1.500	0.63	4.583	28.84	7.667	2.51	10.75	0.63
1.583	0.63	4.667	28.84	7.750	2.51	10.83	0.63
1.667	0.63	4.750	28.84	7.833	2.51	10.92	0.63
1.750	0.63	4.833	28.84	7.917	2.51	11.00	0.63
1.833	0.63	4.917	28.84	8.000	2.51	11.08	0.63
1.917	0.63	5.000	28.84	8.083	2.51	11.17	0.63
2.000	0.63	5.083	28.84	8.167	2.51	11.25	0.63
2.083	0.63	5.167	28.84	8.250	2.51	11.33	0.63
2.167	0.63	5.250	28.84	8.333	1.25	11.42	0.63
2.250	0.63	5.333	8.15	8.417	1.25	11.50	0.63
2.333	3.76	5.417	8.15	8.500	1.25	11.58	0.63
2.417	3.76	5.500	8.15	8.583	1.25	11.67	0.63
2.500	3.76	5.583	8.15	8.667	1.25	11.75	0.63
2.583	3.76	5.667	8.15	8.750	1.25	11.83	0.63
2.667	3.76	5.750	8.15	8.833	1.25	11.92	0.63
2.750	3.76	5.833	8.15	8.917	1.25	12.00	0.63
2.833	3.76	5.917	8.15	9.000	1.25	12.08	0.63
2.917	3.76	6.000	8.15	9.083	1.25	12.17	0.63
3.000	3.76	6.083	8.15	9.167	1.25	12.25	0.63
3.083	3.76	6.167	8.15	9.250	1.25		

Max.Eff.Inten.(mm/hr)=		28.84	18.44	
over (min)		5.00	10.00	
Storage Coeff. (min)=		6.12 (ii)	7.97 (ii)	
Unit Hyd. Tpeak (min)=		5.00	10.00	
Unit Hyd. peak (cms)=		0.19	0.13	
				TOTALS
PEAK FLOW	(cms)=	0.42	0.00	0.421 (iii)
TIME TO PEAK	(hrs)=	5.25	5.25	5.25
RUNOFF VOLUME	(mm)=	61.71	29.35	61.39
TOTAL RAINFALL	(mm)=	62.71	62.71	62.71
RUNOFF COEFFICIENT	=	0.98	0.47	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0268)	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
IN= 2---> OUT= 1	0.0000	0.0000	0.1959	0.1883
DT= 5.0 min	0.0980	0.0369	0.2939	0.4335

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)	5.270	0.421	5.25	61.39
OUTFLOW: ID= 1 (0268)	5.270	0.165	5.42	61.37

PEAK FLOW REDUCTION [Qout/Qin](%)= 39.22
TIME SHIFT OF PEAK FLOW (min)= 10.00
MAXIMUM STORAGE USED (ha.m.)= 0.1406

READ STORM | Filename: C:\Users\mventresca\AppData\Local\Temp\fc9a518d-4e80-47e2-ab56-8ded57ffff68\f285344e
Ptotal= 62.71 mm | Comments: 10 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	10.66	6.75	4.39	10.00	0.63
0.50	0.63	3.75	10.66	7.00	4.39	10.25	0.63
0.75	0.63	4.00	10.66	7.25	4.39	10.50	0.63
1.00	0.63	4.25	10.66	7.50	2.51	10.75	0.63
1.25	0.63	4.50	28.84	7.75	2.51	11.00	0.63
1.50	0.63	4.75	28.84	8.00	2.51	11.25	0.63
1.75	0.63	5.00	28.84	8.25	2.51	11.50	0.63
2.00	0.63	5.25	28.84	8.50	1.25	11.75	0.63
2.25	0.63	5.50	8.15	8.75	1.25	12.00	0.63
2.50	3.76	5.75	8.15	9.00	1.25	12.25	0.63
2.75	3.76	6.00	8.15	9.25	1.25		
3.00	3.76	6.25	8.15	9.50	0.63		
3.25	3.76	6.50	4.39	9.75	0.63		

CALIB | STANDHYD (0202) | Area (ha)= 6.57
ID= 1 DT= 5.0 min | Total Imp(%)= 81.00 Dir. Conn.(%)= 81.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.32	1.25
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	209.28	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr

0.083	0.00	3.167	3.76	6.250	8.15	9.33	0.63
0.167	0.00	3.250	3.76	6.333	4.39	9.42	0.63
0.250	0.00	3.333	10.66	6.417	4.39	9.50	0.63
0.333	0.63	3.417	10.66	6.500	4.39	9.58	0.63
0.417	0.63	3.500	10.66	6.583	4.39	9.67	0.63
0.500	0.63	3.583	10.66	6.667	4.39	9.75	0.63
0.583	0.63	3.667	10.66	6.750	4.39	9.83	0.63
0.667	0.63	3.750	10.66	6.833	4.39	9.92	0.63
0.750	0.63	3.833	10.66	6.917	4.39	10.00	0.63
0.833	0.63	3.917	10.66	7.000	4.39	10.08	0.63
0.917	0.63	4.000	10.66	7.083	4.39	10.17	0.63
1.000	0.63	4.083	10.66	7.167	4.39	10.25	0.63
1.083	0.63	4.167	10.66	7.250	4.39	10.33	0.63
1.167	0.63	4.250	10.66	7.333	2.51	10.42	0.63
1.250	0.63	4.333	28.84	7.417	2.51	10.50	0.63
1.333	0.63	4.417	28.84	7.500	2.51	10.58	0.63
1.417	0.63	4.500	28.84	7.583	2.51	10.67	0.63
1.500	0.63	4.583	28.84	7.667	2.51	10.75	0.63
1.583	0.63	4.667	28.84	7.750	2.51	10.83	0.63
1.667	0.63	4.750	28.84	7.833	2.51	10.92	0.63
1.750	0.63	4.833	28.84	7.917	2.51	11.00	0.63
1.833	0.63	4.917	28.84	8.000	2.51	11.08	0.63
1.917	0.63	5.000	28.84	8.083	2.51	11.17	0.63
2.000	0.63	5.083	28.84	8.167	2.51	11.25	0.63
2.083	0.63	5.167	28.84	8.250	2.51	11.33	0.63
2.167	0.63	5.250	28.84	8.333	1.25	11.42	0.63
2.250	0.63	5.333	8.15	8.417	1.25	11.50	0.63
2.333	3.76	5.417	8.15	8.500	1.25	11.58	0.63
2.417	3.76	5.500	8.15	8.583	1.25	11.67	0.63
2.500	3.76	5.583	8.15	8.667	1.25	11.75	0.63
2.583	3.76	5.667	8.15	8.750	1.25	11.83	0.63
2.667	3.76	5.750	8.15	8.833	1.25	11.92	0.63
2.750	3.76	5.833	8.15	8.917	1.25	12.00	0.63
2.833	3.76	5.917	8.15	9.000	1.25	12.08	0.63
2.917	3.76	6.000	8.15	9.083	1.25	12.17	0.63
3.000	3.76	6.083	8.15	9.167	1.25	12.25	0.63
3.083	3.76	6.167	8.15	9.250	1.25		

			TOTALS
Max.Eff.Inten.(mm/hr)=	28.84	18.15	
over (min)	5.00	25.00	
Storage Coeff. (min)=	6.54 (ii)	20.51 (ii)	
Unit Hyd. Tpeak (min)=	5.00	25.00	
Unit Hyd. peak (cms)=	0.18	0.05	
PEAK FLOW (cms)=	0.43	0.05	0.475 (iii)
TIME TO PEAK (hrs)=	5.25	5.33	5.25
RUNOFF VOLUME (mm)=	61.71	29.35	55.56
TOTAL RAINFALL (mm)=	62.71	62.71	62.71
RUNOFF COEFFICIENT =	0.98	0.47	0.89

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0262)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0202):	6.57	0.475	5.25	55.56
+ ID2= 2 (0268):	5.27	0.165	5.42	61.37
ID = 3 (0262):	11.84	0.636	5.25	58.15

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0266)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0259):	4.67	0.281	5.25	56.63
+ ID2= 2 (0262):	11.84	0.636	5.25	58.15
ID = 3 (0266):	16.51	0.916	5.25	57.72

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0263)
IN= 2---> OUT= 1
DT= 5.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.2130	0.6563
0.0190	0.1773	0.2520	0.6883
0.0220	0.2128	0.2890	0.7150
0.0260	0.2888	0.2980	0.7450
0.0300	0.3648	0.3060	0.7700
0.0650	0.4586	0.3150	0.8127
0.1100	0.5155	0.3320	0.9290
0.1680	0.5503	0.3390	0.9767
0.1930	0.5804	0.3520	1.0680
0.2000	0.6048	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0266)	16.510	0.916	5.25	57.72
OUTFLOW: ID= 1 (0263)	16.510	0.200	8.25	57.57

PEAK FLOW REDUCTION [Qout/Qin](%)= 21.85
TIME SHIFT OF PEAK FLOW (min)=180.00
MAXIMUM STORAGE USED (ha.m.)= 0.6056

ADD HYD (0261)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0206):	0.12	0.006	5.25	29.32
+ ID2= 2 (0263):	16.51	0.200	8.25	57.57
ID = 3 (0261):	16.64	0.201	8.25	57.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSSS U U A L (v 5.0.2025)
V V I SS U U A A L

```
       V  V    I     SS    U   U  AAAAA  L
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
```


***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
Output filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-4bf8-aeac-18a29a864848\8a2b4d64-ec88-448e-b40e-f567ac5f7182\s
Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-4bf8-aeac-18a29a864848\8a2b4d64-ec88-448e-b40e-f567ac5f7182\s

DATE: 07/06/2020 TIME: 04:35:20

USER:

COMMENTS: _____

** SIMULATION : 100 Year 12 Hour AES **

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\fc9a518d-4e80-47e2-ab56-8ded57ffff68\f0c69930
Ptotal= 88.54 mm	Comments: 100 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	15.05	6.75	6.20	10.00	0.89
0.50	0.89	3.75	15.05	7.00	6.20	10.25	0.89
0.75	0.89	4.00	15.05	7.25	6.20	10.50	0.89
1.00	0.89	4.25	15.05	7.50	3.54	10.75	0.89
1.25	0.89	4.50	40.71	7.75	3.54	11.00	0.89
1.50	0.89	4.75	40.71	8.00	3.54	11.25	0.89
1.75	0.89	5.00	40.71	8.25	3.54	11.50	0.89
2.00	0.89	5.25	40.71	8.50	1.77	11.75	0.89
2.25	0.89	5.50	11.51	8.75	1.77	12.00	0.89
2.50	5.31	5.75	11.51	9.00	1.77	12.25	0.89
2.75	5.31	6.00	11.51	9.25	1.77		
3.00	5.31	6.25	11.51	9.50	0.89		
3.25	5.31	6.50	6.20	9.75	0.89		

CALIB	
NASHYD (0206)	Area (ha)= 0.12 Curve Number (CN)= 82.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.25

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	5.31	6.250	11.51	9.33	0.89
0.167	0.00	3.250	5.31	6.333	6.20	9.42	0.89
0.250	0.00	3.333	15.05	6.417	6.20	9.50	0.89
0.333	0.89	3.417	15.05	6.500	6.20	9.58	0.89
0.417	0.89	3.500	15.05	6.583	6.20	9.67	0.89
0.500	0.89	3.583	15.05	6.667	6.20	9.75	0.89
0.583	0.89	3.667	15.05	6.750	6.20	9.83	0.89
0.667	0.89	3.750	15.05	6.833	6.20	9.92	0.89
0.750	0.89	3.833	15.05	6.917	6.20	10.00	0.89
0.833	0.89	3.917	15.05	7.000	6.20	10.08	0.89
0.917	0.89	4.000	15.05	7.083	6.20	10.17	0.89
1.000	0.89	4.083	15.05	7.167	6.20	10.25	0.89
1.083	0.89	4.167	15.05	7.250	6.20	10.33	0.89
1.167	0.89	4.250	15.05	7.333	3.54	10.42	0.89
1.250	0.89	4.333	40.71	7.417	3.54	10.50	0.89
1.333	0.89	4.417	40.71	7.500	3.54	10.58	0.89
1.417	0.89	4.500	40.71	7.583	3.54	10.67	0.89
1.500	0.89	4.583	40.71	7.667	3.54	10.75	0.89
1.583	0.89	4.667	40.71	7.750	3.54	10.83	0.89
1.667	0.89	4.750	40.71	7.833	3.54	10.92	0.89
1.750	0.89	4.833	40.71	7.917	3.54	11.00	0.89
1.833	0.89	4.917	40.71	8.000	3.54	11.08	0.89
1.917	0.89	5.000	40.71	8.083	3.54	11.17	0.89
2.000	0.89	5.083	40.71	8.167	3.54	11.25	0.89
2.083	0.89	5.167	40.71	8.250	3.54	11.33	0.89
2.167	0.89	5.250	40.71	8.333	1.77	11.42	0.89
2.250	0.89	5.333	11.51	8.417	1.77	11.50	0.89
2.333	5.31	5.417	11.51	8.500	1.77	11.58	0.89
2.417	5.31	5.500	11.51	8.583	1.77	11.67	0.89
2.500	5.31	5.583	11.51	8.667	1.77	11.75	0.89
2.583	5.31	5.667	11.51	8.750	1.77	11.83	0.89
2.667	5.31	5.750	11.51	8.833	1.77	11.92	0.89
2.750	5.31	5.833	11.51	8.917	1.77	12.00	0.89
2.833	5.31	5.917	11.51	9.000	1.77	12.08	0.89
2.917	5.31	6.000	11.51	9.083	1.77	12.17	0.89
3.000	5.31	6.083	11.51	9.167	1.77	12.25	0.89
3.083	5.31	6.167	11.51	9.250	1.77		

Unit Hyd Qpeak (cms)= 0.019

PEAK FLOW (cms)= 0.010 (i)
TIME TO PEAK (hrs)= 5.250
RUNOFF VOLUME (mm)= 50.056
TOTAL RAINFALL (mm)= 88.540
RUNOFF COEFFICIENT = 0.565

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\

		fc9a518d-4e80-47e2-ab56-8ded57ffff68\f0c69930
Ptotal= 88.54 mm	Comments: 100 Year 12 Hour AES (Bloor, TRCA)	

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	15.05	6.75	6.20	10.00	0.89
0.50	0.89	3.75	15.05	7.00	6.20	10.25	0.89
0.75	0.89	4.00	15.05	7.25	6.20	10.50	0.89
1.00	0.89	4.25	15.05	7.50	3.54	10.75	0.89
1.25	0.89	4.50	40.71	7.75	3.54	11.00	0.89
1.50	0.89	4.75	40.71	8.00	3.54	11.25	0.89
1.75	0.89	5.00	40.71	8.25	3.54	11.50	0.89
2.00	0.89	5.25	40.71	8.50	1.77	11.75	0.89
2.25	0.89	5.50	11.51	8.75	1.77	12.00	0.89
2.50	5.31	5.75	11.51	9.00	1.77	12.25	0.89
2.75	5.31	6.00	11.51	9.25	1.77		
3.00	5.31	6.25	11.51	9.50	0.89		
3.25	5.31	6.50	6.20	9.75	0.89		

CALIB	
STANDHYD (0205)	Area (ha)= 1.12
ID= 1 DT= 5.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.11	0.01
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	86.60	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	5.31	6.250	11.51	9.33	0.89
0.167	0.00	3.250	5.31	6.333	6.20	9.42	0.89
0.250	0.00	3.333	15.05	6.417	6.20	9.50	0.89
0.333	0.89	3.417	15.05	6.500	6.20	9.58	0.89
0.417	0.89	3.500	15.05	6.583	6.20	9.67	0.89
0.500	0.89	3.583	15.05	6.667	6.20	9.75	0.89
0.583	0.89	3.667	15.05	6.750	6.20	9.83	0.89
0.667	0.89	3.750	15.05	6.833	6.20	9.92	0.89
0.750	0.89	3.833	15.05	6.917	6.20	10.00	0.89
0.833	0.89	3.917	15.05	7.000	6.20	10.08	0.89
0.917	0.89	4.000	15.05	7.083	6.20	10.17	0.89
1.000	0.89	4.083	15.05	7.167	6.20	10.25	0.89
1.083	0.89	4.167	15.05	7.250	6.20	10.33	0.89
1.167	0.89	4.250	15.05	7.333	3.54	10.42	0.89
1.250	0.89	4.333	40.71	7.417	3.54	10.50	0.89
1.333	0.89	4.417	40.71	7.500	3.54	10.58	0.89
1.417	0.89	4.500	40.71	7.583	3.54	10.67	0.89
1.500	0.89	4.583	40.71	7.667	3.54	10.75	0.89
1.583	0.89	4.667	40.71	7.750	3.54	10.83	0.89
1.667	0.89	4.750	40.71	7.833	3.54	10.92	0.89
1.750	0.89	4.833	40.71	7.917	3.54	11.00	0.89
1.833	0.89	4.917	40.71	8.000	3.54	11.08	0.89
1.917	0.89	5.000	40.71	8.083	3.54	11.17	0.89
2.000	0.89	5.083	40.71	8.167	3.54	11.25	0.89
2.083	0.89	5.167	40.71	8.250	3.54	11.33	0.89
2.167	0.89	5.250	40.71	8.333	1.77	11.42	0.89
2.250	0.89	5.333	11.51	8.417	1.77	11.50	0.89
2.333	5.31	5.417	11.51	8.500	1.77	11.58	0.89
2.417	5.31	5.500	11.51	8.583	1.77	11.67	0.89
2.500	5.31	5.583	11.51	8.667	1.77	11.75	0.89
2.583	5.31	5.667	11.51	8.750	1.77	11.83	0.89
2.667	5.31	5.750	11.51	8.833	1.77	11.92	0.89
2.750	5.31	5.833	11.51	8.917	1.77	12.00	0.89
2.833	5.31	5.917	11.51	9.000	1.77	12.08	0.89
2.917	5.31	6.000	11.51	9.083	1.77	12.17	0.89
3.000	5.31	6.083	11.51	9.167	1.77	12.25	0.89
3.083	5.31	6.167	11.51	9.250	1.77		

			TOTALS
Max.Eff.Inten.(mm/hr)=	40.71	30.28	
over (min)	5.00	5.00	
Storage Coeff. (min)=	3.36 (ii)	4.97 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.26	0.22	
PEAK FLOW (cms)=	0.13	0.00	0.127 (iii)
TIME TO PEAK (hrs)=	5.08	5.25	5.25
RUNOFF VOLUME (mm)=	87.54	50.10	87.16
TOTAL RAINFALL (mm)=	88.54	88.54	88.54
RUNOFF COEFFICIENT =	0.99	0.57	0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0256)				
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0470	0.0750

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0205)	1.125	0.127	5.25	87.16
OUTFLOW: ID= 1 (0256)	1.125	0.036	6.25	86.81

PEAK FLOW REDUCTION [Qout/Qin](%)= 28.03
TIME SHIFT OF PEAK FLOW (min)= 60.00
MAXIMUM STORAGE USED (ha.m.)= 0.0568

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\fc9a518d-4e80-47e2-ab56-8ded57ffff68\f0c69930
Ptotal= 88.54 mm	Comments: 100 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	15.05	6.75	6.20	10.00	0.89
0.50	0.89	3.75	15.05	7.00	6.20	10.25	0.89
0.75	0.89	4.00	15.05	7.25	6.20	10.50	0.89
1.00	0.89	4.25	15.05	7.50	3.54	10.75	0.89

1.25	0.89	4.50	40.71	7.75	3.54	11.00	0.89
1.50	0.89	4.75	40.71	8.00	3.54	11.25	0.89
1.75	0.89	5.00	40.71	8.25	3.54	11.50	0.89
2.00	0.89	5.25	40.71	8.50	1.77	11.75	0.89
2.25	0.89	5.50	11.51	8.75	1.77	12.00	0.89
2.50	5.31	5.75	11.51	9.00	1.77	12.25	0.89
2.75	5.31	6.00	11.51	9.25	1.77		
3.00	5.31	6.25	11.51	9.50	0.89		
3.25	5.31	6.50	6.20	9.75	0.89		

CALIB		
STANDHYD (0203)	Area (ha)=	2.10
ID= 1 DT= 5.0 min	Total Imp(%)=	80.00 Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.68	0.42
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	118.18	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	5.31	6.250	11.51	9.33	0.89
0.167	0.00	3.250	5.31	6.333	6.20	9.42	0.89
0.250	0.00	3.333	15.05	6.417	6.20	9.50	0.89
0.333	0.89	3.417	15.05	6.500	6.20	9.58	0.89
0.417	0.89	3.500	15.05	6.583	6.20	9.67	0.89
0.500	0.89	3.583	15.05	6.667	6.20	9.75	0.89
0.583	0.89	3.667	15.05	6.750	6.20	9.83	0.89
0.667	0.89	3.750	15.05	6.833	6.20	9.92	0.89
0.750	0.89	3.833	15.05	6.917	6.20	10.00	0.89
0.833	0.89	3.917	15.05	7.000	6.20	10.08	0.89
0.917	0.89	4.000	15.05	7.083	6.20	10.17	0.89
1.000	0.89	4.083	15.05	7.167	6.20	10.25	0.89
1.083	0.89	4.167	15.05	7.250	6.20	10.33	0.89
1.167	0.89	4.250	15.05	7.333	3.54	10.42	0.89
1.250	0.89	4.333	40.71	7.417	3.54	10.50	0.89
1.333	0.89	4.417	40.71	7.500	3.54	10.58	0.89
1.417	0.89	4.500	40.71	7.583	3.54	10.67	0.89
1.500	0.89	4.583	40.71	7.667	3.54	10.75	0.89
1.583	0.89	4.667	40.71	7.750	3.54	10.83	0.89
1.667	0.89	4.750	40.71	7.833	3.54	10.92	0.89
1.750	0.89	4.833	40.71	7.917	3.54	11.00	0.89
1.833	0.89	4.917	40.71	8.000	3.54	11.08	0.89
1.917	0.89	5.000	40.71	8.083	3.54	11.17	0.89
2.000	0.89	5.083	40.71	8.167	3.54	11.25	0.89
2.083	0.89	5.167	40.71	8.250	3.54	11.33	0.89
2.167	0.89	5.250	40.71	8.333	1.77	11.42	0.89
2.250	0.89	5.333	11.51	8.417	1.77	11.50	0.89
2.333	5.31	5.417	11.51	8.500	1.77	11.58	0.89
2.417	5.31	5.500	11.51	8.583	1.77	11.67	0.89
2.500	5.31	5.583	11.51	8.667	1.77	11.75	0.89
2.583	5.31	5.667	11.51	8.750	1.77	11.83	0.89
2.667	5.31	5.750	11.51	8.833	1.77	11.92	0.89
2.750	5.31	5.833	11.51	8.917	1.77	12.00	0.89
2.833	5.31	5.917	11.51	9.000	1.77	12.08	0.89
2.917	5.31	6.000	11.51	9.083	1.77	12.17	0.89
3.000	5.31	6.083	11.51	9.167	1.77	12.25	0.89
3.083	5.31	6.167	11.51	9.250	1.77		

			TOTALS
Max.Eff.Inten.(mm/hr)=	40.71	29.94	
over (min)	5.00	20.00	
Storage Coeff. (min)=	4.05 (ii)	15.48 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.24	0.07	
PEAK FLOW (cms)=	0.19	0.03	0.220 (iii)
TIME TO PEAK (hrs)=	5.17	5.25	5.25
RUNOFF VOLUME (mm)=	87.54	50.10	80.05
TOTAL RAINFALL (mm)=	88.54	88.54	88.54
RUNOFF COEFFICIENT =	0.99	0.57	0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0260)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
	ID1= 1 (0203):	2.10	0.220	5.25	80.05
1 + 2 = 3	+ ID2= 2 (0256):	1.12	0.036	6.25	86.81
	ID = 3 (0260):	3.22	0.254	5.25	82.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\fc9a518d-4e80-47e2-ab56-8ded57ffff68\f0c69930
Ptotal= 88.54 mm	Comments: 100 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	15.05	6.75	6.20	10.00	0.89
0.50	0.89	3.75	15.05	7.00	6.20	10.25	0.89
0.75	0.89	4.00	15.05	7.25	6.20	10.50	0.89
1.00	0.89	4.25	15.05	7.50	3.54	10.75	0.89
1.25	0.89	4.50	40.71	7.75	3.54	11.00	0.89
1.50	0.89	4.75	40.71	8.00	3.54	11.25	0.89
1.75	0.89	5.00	40.71	8.25	3.54	11.50	0.89
2.00	0.89	5.25	40.71	8.50	1.77	11.75	0.89
2.25	0.89	5.50	11.51	8.75	1.77	12.00	0.89
2.50	5.31	5.75	11.51	9.00	1.77	12.25	0.89
2.75	5.31	6.00	11.51	9.25	1.77		
3.00	5.31	6.25	11.51	9.50	0.89		
3.25	5.31	6.50	6.20	9.75	0.89		

```
| CALIB            |
| STANDHYD (  0204)|   Area    (ha)=   1.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      1.16         0.29
     Dep. Storage     (mm)=      1.00         5.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     98.32        40.00
     Mannings n           =     0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	5.31	6.250	11.51	9.33	0.89
0.167	0.00	3.250	5.31	6.333	6.20	9.42	0.89
0.250	0.00	3.333	15.05	6.417	6.20	9.50	0.89
0.333	0.89	3.417	15.05	6.500	6.20	9.58	0.89
0.417	0.89	3.500	15.05	6.583	6.20	9.67	0.89
0.500	0.89	3.583	15.05	6.667	6.20	9.75	0.89
0.583	0.89	3.667	15.05	6.750	6.20	9.83	0.89
0.667	0.89	3.750	15.05	6.833	6.20	9.92	0.89
0.750	0.89	3.833	15.05	6.917	6.20	10.00	0.89
0.833	0.89	3.917	15.05	7.000	6.20	10.08	0.89
0.917	0.89	4.000	15.05	7.083	6.20	10.17	0.89
1.000	0.89	4.083	15.05	7.167	6.20	10.25	0.89
1.083	0.89	4.167	15.05	7.250	6.20	10.33	0.89
1.167	0.89	4.250	15.05	7.333	3.54	10.42	0.89
1.250	0.89	4.333	40.71	7.417	3.54	10.50	0.89
1.333	0.89	4.417	40.71	7.500	3.54	10.58	0.89
1.417	0.89	4.500	40.71	7.583	3.54	10.67	0.89
1.500	0.89	4.583	40.71	7.667	3.54	10.75	0.89
1.583	0.89	4.667	40.71	7.750	3.54	10.83	0.89
1.667	0.89	4.750	40.71	7.833	3.54	10.92	0.89
1.750	0.89	4.833	40.71	7.917	3.54	11.00	0.89
1.833	0.89	4.917	40.71	8.000	3.54	11.08	0.89
1.917	0.89	5.000	40.71	8.083	3.54	11.17	0.89
2.000	0.89	5.083	40.71	8.167	3.54	11.25	0.89
2.083	0.89	5.167	40.71	8.250	3.54	11.33	0.89
2.167	0.89	5.250	40.71	8.333	1.77	11.42	0.89
2.250	0.89	5.333	11.51	8.417	1.77	11.50	0.89
2.333	5.31	5.417	11.51	8.500	1.77	11.58	0.89
2.417	5.31	5.500	11.51	8.583	1.77	11.67	0.89
2.500	5.31	5.583	11.51	8.667	1.77	11.75	0.89
2.583	5.31	5.667	11.51	8.750	1.77	11.83	0.89
2.667	5.31	5.750	11.51	8.833	1.77	11.92	0.89
2.750	5.31	5.833	11.51	8.917	1.77	12.00	0.89
2.833	5.31	5.917	11.51	9.000	1.77	12.08	0.89
2.917	5.31	6.000	11.51	9.083	1.77	12.17	0.89
3.000	5.31	6.083	11.51	9.167	1.77	12.25	0.89
3.083	5.31	6.167	11.51	9.250	1.77		

```
     Max.Eff.Inten.(mm/hr)=      40.71        29.94
               over (min)        5.00        20.00
     Storage Coeff.  (min)=     3.62 (ii)   15.06 (ii)
     Unit Hyd. Tpeak (min)=      5.00        20.00
     Unit Hyd. peak  (cms)=      0.25         0.07
                                                    *TOTALS*
     PEAK FLOW       (cms)=      0.13         0.02      0.153 (iii)
     TIME TO PEAK    (hrs)=      5.08         5.25       5.25
     RUNOFF VOLUME    (mm)=     87.54        50.10      80.05
     TOTAL RAINFALL   (mm)=     88.54        88.54      88.54
     RUNOFF COEFFICIENT   =      0.99         0.57       0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0259)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0204):     1.45   0.153     5.25    80.05
      + ID2= 2 (  0260):     3.22   0.254     5.25    82.41
        ==========================================================
        ID = 3 (  0259):     4.67   0.407     5.25    81.68

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              fc9a518d-4e80-47e2-ab56-8ded57ffff68\f0c69930
| Ptotal= 88.54 mm |    Comments: 100 Year 12 Hour AES (Bloor, TRCA)
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	15.05	6.75	6.20	10.00	0.89
0.50	0.89	3.75	15.05	7.00	6.20	10.25	0.89
0.75	0.89	4.00	15.05	7.25	6.20	10.50	0.89
1.00	0.89	4.25	15.05	7.50	3.54	10.75	0.89
1.25	0.89	4.50	40.71	7.75	3.54	11.00	0.89
1.50	0.89	4.75	40.71	8.00	3.54	11.25	0.89
1.75	0.89	5.00	40.71	8.25	3.54	11.50	0.89
2.00	0.89	5.25	40.71	8.50	1.77	11.75	0.89
2.25	0.89	5.50	11.51	8.75	1.77	12.00	0.89
2.50	5.31	5.75	11.51	9.00	1.77	12.25	0.89
2.75	5.31	6.00	11.51	9.25	1.77		
3.00	5.31	6.25	11.51	9.50	0.89		
3.25	5.31	6.50	6.20	9.75	0.89		

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--------------------
| CALIB            |
| STANDHYD (  0201)|   Area    (ha)=   5.27
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      5.22         0.05
     Dep. Storage     (mm)=      1.00         5.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=    187.44        40.00
     Mannings n           =     0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	5.31	6.250	11.51	9.33	0.89
0.167	0.00	3.250	5.31	6.333	6.20	9.42	0.89
0.250	0.00	3.333	15.05	6.417	6.20	9.50	0.89
0.333	0.89	3.417	15.05	6.500	6.20	9.58	0.89
0.417	0.89	3.500	15.05	6.583	6.20	9.67	0.89
0.500	0.89	3.583	15.05	6.667	6.20	9.75	0.89
0.583	0.89	3.667	15.05	6.750	6.20	9.83	0.89
0.667	0.89	3.750	15.05	6.833	6.20	9.92	0.89
0.750	0.89	3.833	15.05	6.917	6.20	10.00	0.89
0.833	0.89	3.917	15.05	7.000	6.20	10.08	0.89
0.917	0.89	4.000	15.05	7.083	6.20	10.17	0.89
1.000	0.89	4.083	15.05	7.167	6.20	10.25	0.89
1.083	0.89	4.167	15.05	7.250	6.20	10.33	0.89
1.167	0.89	4.250	15.05	7.333	3.54	10.42	0.89
1.250	0.89	4.333	40.71	7.417	3.54	10.50	0.89
1.333	0.89	4.417	40.71	7.500	3.54	10.58	0.89
1.417	0.89	4.500	40.71	7.583	3.54	10.67	0.89
1.500	0.89	4.583	40.71	7.667	3.54	10.75	0.89
1.583	0.89	4.667	40.71	7.750	3.54	10.83	0.89
1.667	0.89	4.750	40.71	7.833	3.54	10.92	0.89
1.750	0.89	4.833	40.71	7.917	3.54	11.00	0.89
1.833	0.89	4.917	40.71	8.000	3.54	11.08	0.89
1.917	0.89	5.000	40.71	8.083	3.54	11.17	0.89
2.000	0.89	5.083	40.71	8.167	3.54	11.25	0.89
2.083	0.89	5.167	40.71	8.250	3.54	11.33	0.89
2.167	0.89	5.250	40.71	8.333	1.77	11.42	0.89
2.250	0.89	5.333	11.51	8.417	1.77	11.50	0.89
2.333	5.31	5.417	11.51	8.500	1.77	11.58	0.89
2.417	5.31	5.500	11.51	8.583	1.77	11.67	0.89
2.500	5.31	5.583	11.51	8.667	1.77	11.75	0.89
2.583	5.31	5.667	11.51	8.750	1.77	11.83	0.89
2.667	5.31	5.750	11.51	8.833	1.77	11.92	0.89
2.750	5.31	5.833	11.51	8.917	1.77	12.00	0.89
2.833	5.31	5.917	11.51	9.000	1.77	12.08	0.89
2.917	5.31	6.000	11.51	9.083	1.77	12.17	0.89
3.000	5.31	6.083	11.51	9.167	1.77	12.25	0.89
3.083	5.31	6.167	11.51	9.250	1.77		

			TOTALS
Max.Eff.Inten.(mm/hr)=	40.71	30.28	
over (min)	5.00	10.00	
Storage Coeff. (min)=	5.34 (ii)	6.94 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.21	0.14	
PEAK FLOW (cms)=	0.59	0.00	0.594 (iii)
TIME TO PEAK (hrs)=	5.25	5.25	5.25
RUNOFF VOLUME (mm)=	87.54	50.10	87.17
TOTAL RAINFALL (mm)=	88.54	88.54	88.54
RUNOFF COEFFICIENT =	0.99	0.57	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0268)		IN= 2---> OUT= 1
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000
	0.0980	0.0369

OUTFLOW (cms)	STORAGE (ha.m.)
0.1959	0.1883
0.2939	0.4335

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)	5.270	0.594	5.25	87.17
OUTFLOW: ID= 1 (0268)	5.270	0.206	5.50	87.15

PEAK FLOW REDUCTION [Qout/Qin](%)= 34.70
TIME SHIFT OF PEAK FLOW (min)= 15.00
MAXIMUM STORAGE USED (ha.m.)= 0.2142

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\fc9a518d-4e80-47e2-ab56-8ded57ffff68\f0c69930
Ptotal= 88.54 mm	Comments: 100 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	15.05	6.75	6.20	10.00	0.89
0.50	0.89	3.75	15.05	7.00	6.20	10.25	0.89
0.75	0.89	4.00	15.05	7.25	6.20	10.50	0.89
1.00	0.89	4.25	15.05	7.50	3.54	10.75	0.89
1.25	0.89	4.50	40.71	7.75	3.54	11.00	0.89
1.50	0.89	4.75	40.71	8.00	3.54	11.25	0.89
1.75	0.89	5.00	40.71	8.25	3.54	11.50	0.89
2.00	0.89	5.25	40.71	8.50	1.77	11.75	0.89
2.25	0.89	5.50	11.51	8.75	1.77	12.00	0.89
2.50	5.31	5.75	11.51	9.00	1.77	12.25	0.89
2.75	5.31	6.00	11.51	9.25	1.77		
3.00	5.31	6.25	11.51	9.50	0.89		
3.25	5.31	6.50	6.20	9.75	0.89		

CALIB	
STANDHYD (0202)	Area (ha)= 6.57
ID= 1 DT= 5.0 min	Total Imp(%)= 81.00 Dir. Conn.(%)= 81.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.32	1.25
Dep. Storage (mm)=	1.00	5.00
Average Slope (%)=	1.00	2.00
Length (m)=	209.28	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	5.31	6.250	11.51	9.33	0.89
0.167	0.00	3.250	5.31	6.333	6.20	9.42	0.89
0.250	0.00	3.333	15.05	6.417	6.20	9.50	0.89
0.333	0.89	3.417	15.05	6.500	6.20	9.58	0.89
0.417	0.89	3.500	15.05	6.583	6.20	9.67	0.89

```
                0.500    0.89 | 3.583   15.05 | 6.667    6.20 |  9.75    0.89
                0.583    0.89 | 3.667   15.05 | 6.750    6.20 |  9.83    0.89
                0.667    0.89 | 3.750   15.05 | 6.833    6.20 |  9.92    0.89
                0.750    0.89 | 3.833   15.05 | 6.917    6.20 | 10.00    0.89
                0.833    0.89 | 3.917   15.05 | 7.000    6.20 | 10.08    0.89
                0.917    0.89 | 4.000   15.05 | 7.083    6.20 | 10.17    0.89
                1.000    0.89 | 4.083   15.05 | 7.167    6.20 | 10.25    0.89
                1.083    0.89 | 4.167   15.05 | 7.250    6.20 | 10.33    0.89
                1.167    0.89 | 4.250   15.05 | 7.333    3.54 | 10.42    0.89
                1.250    0.89 | 4.333   40.71 | 7.417    3.54 | 10.50    0.89
                1.333    0.89 | 4.417   40.71 | 7.500    3.54 | 10.58    0.89
                1.417    0.89 | 4.500   40.71 | 7.583    3.54 | 10.67    0.89
                1.500    0.89 | 4.583   40.71 | 7.667    3.54 | 10.75    0.89
                1.583    0.89 | 4.667   40.71 | 7.750    3.54 | 10.83    0.89
                1.667    0.89 | 4.750   40.71 | 7.833    3.54 | 10.92    0.89
                1.750    0.89 | 4.833   40.71 | 7.917    3.54 | 11.00    0.89
                1.833    0.89 | 4.917   40.71 | 8.000    3.54 | 11.08    0.89
                1.917    0.89 | 5.000   40.71 | 8.083    3.54 | 11.17    0.89
                2.000    0.89 | 5.083   40.71 | 8.167    3.54 | 11.25    0.89
                2.083    0.89 | 5.167   40.71 | 8.250    3.54 | 11.33    0.89
                2.167    0.89 | 5.250   40.71 | 8.333    1.77 | 11.42    0.89
                2.250    0.89 | 5.333   11.51 | 8.417    1.77 | 11.50    0.89
                2.333    5.31 | 5.417   11.51 | 8.500    1.77 | 11.58    0.89
                2.417    5.31 | 5.500   11.51 | 8.583    1.77 | 11.67    0.89
                2.500    5.31 | 5.583   11.51 | 8.667    1.77 | 11.75    0.89
                2.583    5.31 | 5.667   11.51 | 8.750    1.77 | 11.83    0.89
                2.667    5.31 | 5.750   11.51 | 8.833    1.77 | 11.92    0.89
                2.750    5.31 | 5.833   11.51 | 8.917    1.77 | 12.00    0.89
                2.833    5.31 | 5.917   11.51 | 9.000    1.77 | 12.08    0.89
                2.917    5.31 | 6.000   11.51 | 9.083    1.77 | 12.17    0.89
                3.000    5.31 | 6.083   11.51 | 9.167    1.77 | 12.25    0.89
                3.083    5.31 | 6.167   11.51 | 9.250    1.77 |

     Max.Eff.Inten.(mm/hr)=      40.71        29.94
               over (min)         5.00        20.00
     Storage Coeff.  (min)=       5.70 (ii)   17.13 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.20         0.06
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.60         0.09         0.692 (iii)
     TIME TO PEAK    (hrs)=       5.25         5.33          5.25
     RUNOFF VOLUME    (mm)=      87.54        50.10         80.43
     TOTAL RAINFALL   (mm)=      88.54        88.54         88.54
     RUNOFF COEFFICIENT   =       0.99         0.57          0.91

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0262)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0202):     6.57   0.692     5.25    80.43
     + ID2= 2 (  0268):     5.27   0.206     5.50    87.15
       ====================================================
       ID = 3 (  0262):    11.84   0.894     5.25    83.42

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0266)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0259):     4.67   0.407     5.25    81.68
     + ID2= 2 (  0262):    11.84   0.894     5.25    83.42
       ====================================================
       ID = 3 (  0266):    16.51   1.301     5.25    82.93

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| RESERVOIR(  0263)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.2130     0.6563
                          0.0190     0.1773   |   0.2520     0.6883
                          0.0220     0.2128   |   0.2890     0.7150
                          0.0260     0.2888   |   0.2980     0.7450
                          0.0300     0.3648   |   0.3060     0.7700
                          0.0650     0.4586   |   0.3150     0.8127
                          0.1100     0.5155   |   0.3320     0.9290
                          0.1680     0.5503   |   0.3390     0.9767
                          0.1930     0.5804   |   0.3520     1.0680
                          0.2000     0.6048   |   0.0000     0.0000

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (  0266)     16.510     1.301      5.25      82.93
     OUTFLOW: ID= 1 (  0263)     16.510     0.308      7.58      82.78

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 23.70
                   TIME SHIFT OF PEAK FLOW         (min)=140.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.7812

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0206):     0.12   0.010     5.25    50.06
     + ID2= 2 (  0263):    16.51   0.308     7.58    82.78
       ====================================================
       ID = 3 (  0261):    16.64   0.310     7.42    82.54

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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 FINISH
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      V    V   I    SSSSS  U   U    A    L              (v 5.0.2025)
      V    V   I    SS     U   U   A A   L
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```
       V  V    I     SS    U   U  AAAAA  L
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
Output filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-4bf8-aeac-18a29a864848\aebde6ec-2b9b-4a5c-b60c-f7f2472b05a5\s
Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-4bf8-aeac-18a29a864848\aebde6ec-2b9b-4a5c-b60c-f7f2472b05a5\s

DATE: 07/06/2020 TIME: 04:35:19

USER:

COMMENTS: _____

** SIMULATION : 2 Year 12 Hour AES **

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\fc9a518d-4e80-47e2-ab56-8ded57ffff68\21ac65b6
Ptotal= 42.00 mm	Comments: 2 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	7.14	6.75	2.94	10.00	0.42
0.50	0.42	3.75	7.14	7.00	2.94	10.25	0.42
0.75	0.42	4.00	7.14	7.25	2.94	10.50	0.42
1.00	0.42	4.25	7.14	7.50	1.68	10.75	0.42
1.25	0.42	4.50	19.32	7.75	1.68	11.00	0.42
1.50	0.42	4.75	19.32	8.00	1.68	11.25	0.42
1.75	0.42	5.00	19.32	8.25	1.68	11.50	0.42
2.00	0.42	5.25	19.32	8.50	0.84	11.75	0.42
2.25	0.42	5.50	5.46	8.75	0.84	12.00	0.42
2.50	2.52	5.75	5.46	9.00	0.84	12.25	0.42
2.75	2.52	6.00	5.46	9.25	0.84		
3.00	2.52	6.25	5.46	9.50	0.42		
3.25	2.52	6.50	2.94	9.75	0.42		

CALIB	
NASHYD (0206)	Area (ha)= 0.12 Curve Number (CN)= 82.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.25

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.52	6.250	5.46	9.33	0.42
0.167	0.00	3.250	2.52	6.333	2.94	9.42	0.42
0.250	0.00	3.333	7.14	6.417	2.94	9.50	0.42
0.333	0.42	3.417	7.14	6.500	2.94	9.58	0.42
0.417	0.42	3.500	7.14	6.583	2.94	9.67	0.42
0.500	0.42	3.583	7.14	6.667	2.94	9.75	0.42
0.583	0.42	3.667	7.14	6.750	2.94	9.83	0.42
0.667	0.42	3.750	7.14	6.833	2.94	9.92	0.42
0.750	0.42	3.833	7.14	6.917	2.94	10.00	0.42
0.833	0.42	3.917	7.14	7.000	2.94	10.08	0.42
0.917	0.42	4.000	7.14	7.083	2.94	10.17	0.42
1.000	0.42	4.083	7.14	7.167	2.94	10.25	0.42
1.083	0.42	4.167	7.14	7.250	2.94	10.33	0.42
1.167	0.42	4.250	7.14	7.333	1.68	10.42	0.42
1.250	0.42	4.333	19.32	7.417	1.68	10.50	0.42
1.333	0.42	4.417	19.32	7.500	1.68	10.58	0.42
1.417	0.42	4.500	19.32	7.583	1.68	10.67	0.42
1.500	0.42	4.583	19.32	7.667	1.68	10.75	0.42
1.583	0.42	4.667	19.32	7.750	1.68	10.83	0.42
1.667	0.42	4.750	19.32	7.833	1.68	10.92	0.42
1.750	0.42	4.833	19.32	7.917	1.68	11.00	0.42
1.833	0.42	4.917	19.32	8.000	1.68	11.08	0.42
1.917	0.42	5.000	19.32	8.083	1.68	11.17	0.42
2.000	0.42	5.083	19.32	8.167	1.68	11.25	0.42
2.083	0.42	5.167	19.32	8.250	1.68	11.33	0.42
2.167	0.42	5.250	19.32	8.333	0.84	11.42	0.42
2.250	0.42	5.333	5.46	8.417	0.84	11.50	0.42
2.333	2.52	5.417	5.46	8.500	0.84	11.58	0.42
2.417	2.52	5.500	5.46	8.583	0.84	11.67	0.42
2.500	2.52	5.583	5.46	8.667	0.84	11.75	0.42
2.583	2.52	5.667	5.46	8.750	0.84	11.83	0.42
2.667	2.52	5.750	5.46	8.833	0.84	11.92	0.42
2.750	2.52	5.833	5.46	8.917	0.84	12.00	0.42
2.833	2.52	5.917	5.46	9.000	0.84	12.08	0.42
2.917	2.52	6.000	5.46	9.083	0.84	12.17	0.42
3.000	2.52	6.083	5.46	9.167	0.84	12.25	0.42
3.083	2.52	6.167	5.46	9.250	0.84		

Unit Hyd Qpeak (cms)= 0.019

PEAK FLOW (cms)= 0.003 (i)
TIME TO PEAK (hrs)= 5.250
RUNOFF VOLUME (mm)= 14.742
TOTAL RAINFALL (mm)= 42.000
RUNOFF COEFFICIENT = 0.351

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\

		fc9a518d-4e80-47e2-ab56-8ded57ffff68\21ac65b6
Ptotal= 42.00 mm	Comments: 2 Year 12 Hour AES (Bloor, TRCA)	

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	7.14	6.75	2.94	10.00	0.42
0.50	0.42	3.75	7.14	7.00	2.94	10.25	0.42
0.75	0.42	4.00	7.14	7.25	2.94	10.50	0.42
1.00	0.42	4.25	7.14	7.50	1.68	10.75	0.42
1.25	0.42	4.50	19.32	7.75	1.68	11.00	0.42
1.50	0.42	4.75	19.32	8.00	1.68	11.25	0.42
1.75	0.42	5.00	19.32	8.25	1.68	11.50	0.42
2.00	0.42	5.25	19.32	8.50	0.84	11.75	0.42
2.25	0.42	5.50	5.46	8.75	0.84	12.00	0.42
2.50	2.52	5.75	5.46	9.00	0.84	12.25	0.42
2.75	2.52	6.00	5.46	9.25	0.84		
3.00	2.52	6.25	5.46	9.50	0.42		
3.25	2.52	6.50	2.94	9.75	0.42		

CALIB	
STANDHYD (0205)	Area (ha)= 1.12
ID= 1 DT= 5.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.11	0.01
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	86.60	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.52	6.250	5.46	9.33	0.42
0.167	0.00	3.250	2.52	6.333	2.94	9.42	0.42
0.250	0.00	3.333	7.14	6.417	2.94	9.50	0.42
0.333	0.42	3.417	7.14	6.500	2.94	9.58	0.42
0.417	0.42	3.500	7.14	6.583	2.94	9.67	0.42
0.500	0.42	3.583	7.14	6.667	2.94	9.75	0.42
0.583	0.42	3.667	7.14	6.750	2.94	9.83	0.42
0.667	0.42	3.750	7.14	6.833	2.94	9.92	0.42
0.750	0.42	3.833	7.14	6.917	2.94	10.00	0.42
0.833	0.42	3.917	7.14	7.000	2.94	10.08	0.42
0.917	0.42	4.000	7.14	7.083	2.94	10.17	0.42
1.000	0.42	4.083	7.14	7.167	2.94	10.25	0.42
1.083	0.42	4.167	7.14	7.250	2.94	10.33	0.42
1.167	0.42	4.250	7.14	7.333	1.68	10.42	0.42
1.250	0.42	4.333	19.32	7.417	1.68	10.50	0.42
1.333	0.42	4.417	19.32	7.500	1.68	10.58	0.42
1.417	0.42	4.500	19.32	7.583	1.68	10.67	0.42
1.500	0.42	4.583	19.32	7.667	1.68	10.75	0.42
1.583	0.42	4.667	19.32	7.750	1.68	10.83	0.42
1.667	0.42	4.750	19.32	7.833	1.68	10.92	0.42
1.750	0.42	4.833	19.32	7.917	1.68	11.00	0.42
1.833	0.42	4.917	19.32	8.000	1.68	11.08	0.42
1.917	0.42	5.000	19.32	8.083	1.68	11.17	0.42
2.000	0.42	5.083	19.32	8.167	1.68	11.25	0.42
2.083	0.42	5.167	19.32	8.250	1.68	11.33	0.42
2.167	0.42	5.250	19.32	8.333	0.84	11.42	0.42
2.250	0.42	5.333	5.46	8.417	0.84	11.50	0.42
2.333	2.52	5.417	5.46	8.500	0.84	11.58	0.42
2.417	2.52	5.500	5.46	8.583	0.84	11.67	0.42
2.500	2.52	5.583	5.46	8.667	0.84	11.75	0.42
2.583	2.52	5.667	5.46	8.750	0.84	11.83	0.42
2.667	2.52	5.750	5.46	8.833	0.84	11.92	0.42
2.750	2.52	5.833	5.46	8.917	0.84	12.00	0.42
2.833	2.52	5.917	5.46	9.000	0.84	12.08	0.42
2.917	2.52	6.000	5.46	9.083	0.84	12.17	0.42
3.000	2.52	6.083	5.46	9.167	0.84	12.25	0.42
3.083	2.52	6.167	5.46	9.250	0.84		

			TOTALS
Max.Eff.Inten.(mm/hr)=	19.32	9.68	
over (min)	5.00	10.00	
Storage Coeff. (min)=	4.52 (ii)	6.69 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.23	0.14	
PEAK FLOW (cms)=	0.06	0.00	0.060 (iii)
TIME TO PEAK (hrs)=	5.25	5.25	5.25
RUNOFF VOLUME (mm)=	41.00	14.76	40.74
TOTAL RAINFALL (mm)=	42.00	42.00	42.00
RUNOFF COEFFICIENT =	0.98	0.35	0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0256)				
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0470	0.0750

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0205)	1.125	0.060	5.25	40.74
OUTFLOW: ID= 1 (0256)	1.125	0.017	6.25	40.38

PEAK FLOW REDUCTION [Qout/Qin](%)= 27.79
TIME SHIFT OF PEAK FLOW (min)= 60.00
MAXIMUM STORAGE USED (ha.m.)= 0.0266

READ STORM	Filename: C:\Users\mventresca\AppD ata\Local\Temp\ fc9a518d-4e80-47e2-ab56-8ded57ffff68\21ac65b6
Ptotal= 42.00 mm	Comments: 2 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	7.14	6.75	2.94	10.00	0.42
0.50	0.42	3.75	7.14	7.00	2.94	10.25	0.42
0.75	0.42	4.00	7.14	7.25	2.94	10.50	0.42
1.00	0.42	4.25	7.14	7.50	1.68	10.75	0.42

1.25	0.42	4.50	19.32	7.75	1.68	11.00	0.42
1.50	0.42	4.75	19.32	8.00	1.68	11.25	0.42
1.75	0.42	5.00	19.32	8.25	1.68	11.50	0.42
2.00	0.42	5.25	19.32	8.50	0.84	11.75	0.42
2.25	0.42	5.50	5.46	8.75	0.84	12.00	0.42
2.50	2.52	5.75	5.46	9.00	0.84	12.25	0.42
2.75	2.52	6.00	5.46	9.25	0.84		
3.00	2.52	6.25	5.46	9.50	0.42		
3.25	2.52	6.50	2.94	9.75	0.42		

CALIB		
STANDHYD (0203)	Area (ha)=	2.10
ID= 1 DT= 5.0 min	Total Imp(%)=	80.00 Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.68	0.42
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	118.18	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.52	6.250	5.46	9.33	0.42
0.167	0.00	3.250	2.52	6.333	2.94	9.42	0.42
0.250	0.00	3.333	7.14	6.417	2.94	9.50	0.42
0.333	0.42	3.417	7.14	6.500	2.94	9.58	0.42
0.417	0.42	3.500	7.14	6.583	2.94	9.67	0.42
0.500	0.42	3.583	7.14	6.667	2.94	9.75	0.42
0.583	0.42	3.667	7.14	6.750	2.94	9.83	0.42
0.667	0.42	3.750	7.14	6.833	2.94	9.92	0.42
0.750	0.42	3.833	7.14	6.917	2.94	10.00	0.42
0.833	0.42	3.917	7.14	7.000	2.94	10.08	0.42
0.917	0.42	4.000	7.14	7.083	2.94	10.17	0.42
1.000	0.42	4.083	7.14	7.167	2.94	10.25	0.42
1.083	0.42	4.167	7.14	7.250	2.94	10.33	0.42
1.167	0.42	4.250	7.14	7.333	1.68	10.42	0.42
1.250	0.42	4.333	19.32	7.417	1.68	10.50	0.42
1.333	0.42	4.417	19.32	7.500	1.68	10.58	0.42
1.417	0.42	4.500	19.32	7.583	1.68	10.67	0.42
1.500	0.42	4.583	19.32	7.667	1.68	10.75	0.42
1.583	0.42	4.667	19.32	7.750	1.68	10.83	0.42
1.667	0.42	4.750	19.32	7.833	1.68	10.92	0.42
1.750	0.42	4.833	19.32	7.917	1.68	11.00	0.42
1.833	0.42	4.917	19.32	8.000	1.68	11.08	0.42
1.917	0.42	5.000	19.32	8.083	1.68	11.17	0.42
2.000	0.42	5.083	19.32	8.167	1.68	11.25	0.42
2.083	0.42	5.167	19.32	8.250	1.68	11.33	0.42
2.167	0.42	5.250	19.32	8.333	0.84	11.42	0.42
2.250	0.42	5.333	5.46	8.417	0.84	11.50	0.42
2.333	2.52	5.417	5.46	8.500	0.84	11.58	0.42
2.417	2.52	5.500	5.46	8.583	0.84	11.67	0.42
2.500	2.52	5.583	5.46	8.667	0.84	11.75	0.42
2.583	2.52	5.667	5.46	8.750	0.84	11.83	0.42
2.667	2.52	5.750	5.46	8.833	0.84	11.92	0.42
2.750	2.52	5.833	5.46	8.917	0.84	12.00	0.42
2.833	2.52	5.917	5.46	9.000	0.84	12.08	0.42
2.917	2.52	6.000	5.46	9.083	0.84	12.17	0.42
3.000	2.52	6.083	5.46	9.167	0.84	12.25	0.42
3.083	2.52	6.167	5.46	9.250	0.84		

			TOTALS
Max.Eff.Inten.(mm/hr)=	19.32	9.27	
over (min)	5.00	25.00	
Storage Coeff. (min)=	5.45 (ii)	23.73 (ii)	
Unit Hyd. Tpeak (min)=	5.00	25.00	
Unit Hyd. peak (cms)=	0.20	0.05	
PEAK FLOW (cms)=	0.09	0.01	0.098 (iii)
TIME TO PEAK (hrs)=	5.25	5.42	5.25
RUNOFF VOLUME (mm)=	41.00	14.76	35.74
TOTAL RAINFALL (mm)=	42.00	42.00	42.00
RUNOFF COEFFICIENT =	0.98	0.35	0.85

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0260)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (0203):	2.10	0.098	5.25	35.74
	+ ID2= 2 (0256):	1.12	0.017	6.25	40.38
	ID = 3 (0260):	3.22	0.113	5.25	37.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\fc9a518d-4e80-47e2-ab56-8ded57ffff68\21ac65b6
Ptotal= 42.00 mm	Comments: 2 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	7.14	6.75	2.94	10.00	0.42
0.50	0.42	3.75	7.14	7.00	2.94	10.25	0.42
0.75	0.42	4.00	7.14	7.25	2.94	10.50	0.42
1.00	0.42	4.25	7.14	7.50	1.68	10.75	0.42
1.25	0.42	4.50	19.32	7.75	1.68	11.00	0.42
1.50	0.42	4.75	19.32	8.00	1.68	11.25	0.42
1.75	0.42	5.00	19.32	8.25	1.68	11.50	0.42
2.00	0.42	5.25	19.32	8.50	0.84	11.75	0.42
2.25	0.42	5.50	5.46	8.75	0.84	12.00	0.42
2.50	2.52	5.75	5.46	9.00	0.84	12.25	0.42
2.75	2.52	6.00	5.46	9.25	0.84		
3.00	2.52	6.25	5.46	9.50	0.42		
3.25	2.52	6.50	2.94	9.75	0.42		

CALIB

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| STANDHYD (  0204)|   Area    (ha)=   1.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.16         0.29
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      98.32        40.00
     Mannings n             =     0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
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---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.52	6.250	5.46	9.33	0.42
0.167	0.00	3.250	2.52	6.333	2.94	9.42	0.42
0.250	0.00	3.333	7.14	6.417	2.94	9.50	0.42
0.333	0.42	3.417	7.14	6.500	2.94	9.58	0.42
0.417	0.42	3.500	7.14	6.583	2.94	9.67	0.42
0.500	0.42	3.583	7.14	6.667	2.94	9.75	0.42
0.583	0.42	3.667	7.14	6.750	2.94	9.83	0.42
0.667	0.42	3.750	7.14	6.833	2.94	9.92	0.42
0.750	0.42	3.833	7.14	6.917	2.94	10.00	0.42
0.833	0.42	3.917	7.14	7.000	2.94	10.08	0.42
0.917	0.42	4.000	7.14	7.083	2.94	10.17	0.42
1.000	0.42	4.083	7.14	7.167	2.94	10.25	0.42
1.083	0.42	4.167	7.14	7.250	2.94	10.33	0.42
1.167	0.42	4.250	7.14	7.333	1.68	10.42	0.42
1.250	0.42	4.333	19.32	7.417	1.68	10.50	0.42
1.333	0.42	4.417	19.32	7.500	1.68	10.58	0.42
1.417	0.42	4.500	19.32	7.583	1.68	10.67	0.42
1.500	0.42	4.583	19.32	7.667	1.68	10.75	0.42
1.583	0.42	4.667	19.32	7.750	1.68	10.83	0.42
1.667	0.42	4.750	19.32	7.833	1.68	10.92	0.42
1.750	0.42	4.833	19.32	7.917	1.68	11.00	0.42
1.833	0.42	4.917	19.32	8.000	1.68	11.08	0.42
1.917	0.42	5.000	19.32	8.083	1.68	11.17	0.42
2.000	0.42	5.083	19.32	8.167	1.68	11.25	0.42
2.083	0.42	5.167	19.32	8.250	1.68	11.33	0.42
2.167	0.42	5.250	19.32	8.333	0.84	11.42	0.42
2.250	0.42	5.333	5.46	8.417	0.84	11.50	0.42
2.333	2.52	5.417	5.46	8.500	0.84	11.58	0.42
2.417	2.52	5.500	5.46	8.583	0.84	11.67	0.42
2.500	2.52	5.583	5.46	8.667	0.84	11.75	0.42
2.583	2.52	5.667	5.46	8.750	0.84	11.83	0.42
2.667	2.52	5.750	5.46	8.833	0.84	11.92	0.42
2.750	2.52	5.833	5.46	8.917	0.84	12.00	0.42
2.833	2.52	5.917	5.46	9.000	0.84	12.08	0.42
2.917	2.52	6.000	5.46	9.083	0.84	12.17	0.42
3.000	2.52	6.083	5.46	9.167	0.84	12.25	0.42
3.083	2.52	6.167	5.46	9.250	0.84		

```
     Max.Eff.Inten.(mm/hr)=      19.32         9.27
               over (min)        5.00        25.00
     Storage Coeff.  (min)=       4.88 (ii)   23.16 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.22         0.05
                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.06         0.01          0.068 (iii)
     TIME TO PEAK    (hrs)=       5.25         5.42           5.25
     RUNOFF VOLUME    (mm)=      41.00        14.76          35.74
     TOTAL RAINFALL   (mm)=      42.00        42.00          42.00

          RUNOFF COEFFICIENT   =       0.98         0.35          0.85

     ***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

           (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
                CN*  =  82.0    Ia = Dep. Storage  (Above)
          (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
               THAN THE STORAGE COEFFICIENT.
         (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

     ------------------------------------------------------------------------------

     --------------------
     | ADD HYD  (  0259)|
     |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
     -------------------          (ha)    (cms)    (hrs)     (mm)
            ID1= 1 (  0204):      1.45   0.068     5.25    35.74
          + ID2= 2 (  0260):      3.22   0.113     5.25    37.36
            ================================================
            ID = 3 (  0259):      4.67   0.181     5.25    36.86

         NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

     ------------------------------------------------------------------------------

     --------------------
     |    READ STORM    |    Filename: C:\Users\mventresca\AppD
     |                  |              ata\Local\Temp\
     |                  |              fc9a518d-4e80-47e2-ab56-8ded57ffff68\21ac65b6
     | Ptotal= 42.00 mm |    Comments: 2 Year 12 Hour AES (Bloor, TRCA)
     --------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	7.14	6.75	2.94	10.00	0.42
0.50	0.42	3.75	7.14	7.00	2.94	10.25	0.42
0.75	0.42	4.00	7.14	7.25	2.94	10.50	0.42
1.00	0.42	4.25	7.14	7.50	1.68	10.75	0.42
1.25	0.42	4.50	19.32	7.75	1.68	11.00	0.42
1.50	0.42	4.75	19.32	8.00	1.68	11.25	0.42
1.75	0.42	5.00	19.32	8.25	1.68	11.50	0.42
2.00	0.42	5.25	19.32	8.50	0.84	11.75	0.42
2.25	0.42	5.50	5.46	8.75	0.84	12.00	0.42
2.50	2.52	5.75	5.46	9.00	0.84	12.25	0.42
2.75	2.52	6.00	5.46	9.25	0.84		
3.00	2.52	6.25	5.46	9.50	0.42		
3.25	2.52	6.50	2.94	9.75	0.42		

```
     ------------------------------------------------------------------------------

     --------------------
     | CALIB            |
     | STANDHYD (  0201)|   Area    (ha)=   5.27
     |ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
     --------------------
                               IMPERVIOUS    PERVIOUS (i)
          Surface Area     (ha)=       5.22         0.05
          Dep. Storage     (mm)=       1.00         5.00
          Average Slope     (%)=       1.00         2.00
          Length            (m)=     187.44        40.00
          Mannings n             =     0.013        0.250

              NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.52	6.250	5.46	9.33	0.42
0.167	0.00	3.250	2.52	6.333	2.94	9.42	0.42
0.250	0.00	3.333	7.14	6.417	2.94	9.50	0.42
0.333	0.42	3.417	7.14	6.500	2.94	9.58	0.42
0.417	0.42	3.500	7.14	6.583	2.94	9.67	0.42
0.500	0.42	3.583	7.14	6.667	2.94	9.75	0.42
0.583	0.42	3.667	7.14	6.750	2.94	9.83	0.42
0.667	0.42	3.750	7.14	6.833	2.94	9.92	0.42
0.750	0.42	3.833	7.14	6.917	2.94	10.00	0.42
0.833	0.42	3.917	7.14	7.000	2.94	10.08	0.42
0.917	0.42	4.000	7.14	7.083	2.94	10.17	0.42
1.000	0.42	4.083	7.14	7.167	2.94	10.25	0.42
1.083	0.42	4.167	7.14	7.250	2.94	10.33	0.42
1.167	0.42	4.250	7.14	7.333	1.68	10.42	0.42
1.250	0.42	4.333	19.32	7.417	1.68	10.50	0.42
1.333	0.42	4.417	19.32	7.500	1.68	10.58	0.42
1.417	0.42	4.500	19.32	7.583	1.68	10.67	0.42
1.500	0.42	4.583	19.32	7.667	1.68	10.75	0.42
1.583	0.42	4.667	19.32	7.750	1.68	10.83	0.42
1.667	0.42	4.750	19.32	7.833	1.68	10.92	0.42
1.750	0.42	4.833	19.32	7.917	1.68	11.00	0.42
1.833	0.42	4.917	19.32	8.000	1.68	11.08	0.42
1.917	0.42	5.000	19.32	8.083	1.68	11.17	0.42
2.000	0.42	5.083	19.32	8.167	1.68	11.25	0.42
2.083	0.42	5.167	19.32	8.250	1.68	11.33	0.42
2.167	0.42	5.250	19.32	8.333	0.84	11.42	0.42
2.250	0.42	5.333	5.46	8.417	0.84	11.50	0.42
2.333	2.52	5.417	5.46	8.500	0.84	11.58	0.42
2.417	2.52	5.500	5.46	8.583	0.84	11.67	0.42
2.500	2.52	5.583	5.46	8.667	0.84	11.75	0.42
2.583	2.52	5.667	5.46	8.750	0.84	11.83	0.42
2.667	2.52	5.750	5.46	8.833	0.84	11.92	0.42
2.750	2.52	5.833	5.46	8.917	0.84	12.00	0.42
2.833	2.52	5.917	5.46	9.000	0.84	12.08	0.42
2.917	2.52	6.000	5.46	9.083	0.84	12.17	0.42
3.000	2.52	6.083	5.46	9.167	0.84	12.25	0.42
3.083	2.52	6.167	5.46	9.250	0.84		

Max.Eff.Inten.(mm/hr)=	19.32	9.68	
over (min)	5.00	10.00	
Storage Coeff. (min)=	7.19 (ii)	9.36 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.17	0.12	
			TOTALS
PEAK FLOW (cms)=	0.28	0.00	0.281 (iii)
TIME TO PEAK (hrs)=	5.25	5.25	5.25
RUNOFF VOLUME (mm)=	41.00	14.76	40.74
TOTAL RAINFALL (mm)=	42.00	42.00	42.00
RUNOFF COEFFICIENT =	0.98	0.35	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| RESERVOIR(0268)|
| IN= 2---> OUT= 1 |

DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1959	0.1883
	0.0980	0.0369	0.2939	0.4335

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)	5.270	0.281	5.25	40.74
OUTFLOW: ID= 1 (0268)	5.270	0.129	5.42	40.72

PEAK FLOW REDUCTION [Qout/Qin](%)= 45.90
TIME SHIFT OF PEAK FLOW (min)= 10.00
MAXIMUM STORAGE USED (ha.m.)= 0.0850

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\fc9a518d-4e80-47e2-ab56-8ded57ffff68\21ac65b6
Ptotal= 42.00 mm	Comments: 2 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	7.14	6.75	2.94	10.00	0.42
0.50	0.42	3.75	7.14	7.00	2.94	10.25	0.42
0.75	0.42	4.00	7.14	7.25	2.94	10.50	0.42
1.00	0.42	4.25	7.14	7.50	1.68	10.75	0.42
1.25	0.42	4.50	19.32	7.75	1.68	11.00	0.42
1.50	0.42	4.75	19.32	8.00	1.68	11.25	0.42
1.75	0.42	5.00	19.32	8.25	1.68	11.50	0.42
2.00	0.42	5.25	19.32	8.50	0.84	11.75	0.42
2.25	0.42	5.50	5.46	8.75	0.84	12.00	0.42
2.50	2.52	5.75	5.46	9.00	0.84	12.25	0.42
2.75	2.52	6.00	5.46	9.25	0.84		
3.00	2.52	6.25	5.46	9.50	0.42		
3.25	2.52	6.50	2.94	9.75	0.42		

CALIB
STANDHYD (0202)
ID= 1 DT= 5.0 min

Area (ha)= 6.57
Total Imp(%)= 81.00 Dir. Conn.(%)= 81.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.32	1.25
Dep. Storage (mm)=	1.00	5.00
Average Slope (%)=	1.00	2.00
Length (m)=	209.28	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.52	6.250	5.46	9.33	0.42
0.167	0.00	3.250	2.52	6.333	2.94	9.42	0.42
0.250	0.00	3.333	7.14	6.417	2.94	9.50	0.42
0.333	0.42	3.417	7.14	6.500	2.94	9.58	0.42
0.417	0.42	3.500	7.14	6.583	2.94	9.67	0.42
0.500	0.42	3.583	7.14	6.667	2.94	9.75	0.42

```
              0.583    0.42 | 3.667    7.14 | 6.750    2.94 |  9.83    0.42
              0.667    0.42 | 3.750    7.14 | 6.833    2.94 |  9.92    0.42
              0.750    0.42 | 3.833    7.14 | 6.917    2.94 | 10.00    0.42
              0.833    0.42 | 3.917    7.14 | 7.000    2.94 | 10.08    0.42
              0.917    0.42 | 4.000    7.14 | 7.083    2.94 | 10.17    0.42
              1.000    0.42 | 4.083    7.14 | 7.167    2.94 | 10.25    0.42
              1.083    0.42 | 4.167    7.14 | 7.250    2.94 | 10.33    0.42
              1.167    0.42 | 4.250    7.14 | 7.333    1.68 | 10.42    0.42
              1.250    0.42 | 4.333   19.32 | 7.417    1.68 | 10.50    0.42
              1.333    0.42 | 4.417   19.32 | 7.500    1.68 | 10.58    0.42
              1.417    0.42 | 4.500   19.32 | 7.583    1.68 | 10.67    0.42
              1.500    0.42 | 4.583   19.32 | 7.667    1.68 | 10.75    0.42
              1.583    0.42 | 4.667   19.32 | 7.750    1.68 | 10.83    0.42
              1.667    0.42 | 4.750   19.32 | 7.833    1.68 | 10.92    0.42
              1.750    0.42 | 4.833   19.32 | 7.917    1.68 | 11.00    0.42
              1.833    0.42 | 4.917   19.32 | 8.000    1.68 | 11.08    0.42
              1.917    0.42 | 5.000   19.32 | 8.083    1.68 | 11.17    0.42
              2.000    0.42 | 5.083   19.32 | 8.167    1.68 | 11.25    0.42
              2.083    0.42 | 5.167   19.32 | 8.250    1.68 | 11.33    0.42
              2.167    0.42 | 5.250   19.32 | 8.333    0.84 | 11.42    0.42
              2.250    0.42 | 5.333    5.46 | 8.417    0.84 | 11.50    0.42
              2.333    2.52 | 5.417    5.46 | 8.500    0.84 | 11.58    0.42
              2.417    2.52 | 5.500    5.46 | 8.583    0.84 | 11.67    0.42
              2.500    2.52 | 5.583    5.46 | 8.667    0.84 | 11.75    0.42
              2.583    2.52 | 5.667    5.46 | 8.750    0.84 | 11.83    0.42
              2.667    2.52 | 5.750    5.46 | 8.833    0.84 | 11.92    0.42
              2.750    2.52 | 5.833    5.46 | 8.917    0.84 | 12.00    0.42
              2.833    2.52 | 5.917    5.46 | 9.000    0.84 | 12.08    0.42
              2.917    2.52 | 6.000    5.46 | 9.083    0.84 | 12.17    0.42
              3.000    2.52 | 6.083    5.46 | 9.167    0.84 | 12.25    0.42
              3.083    2.52 | 6.167    5.46 | 9.250    0.84 |

     Max.Eff.Inten.(mm/hr)=      19.32         9.27
               over (min)        10.00        30.00
     Storage Coeff.  (min)=       7.68 (ii)   25.96 (ii)
     Unit Hyd. Tpeak (min)=      10.00        30.00
     Unit Hyd. peak  (cms)=       0.13         0.04
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.29         0.02          0.306 (iii)
     TIME TO PEAK    (hrs)=       5.25         5.50           5.25
     RUNOFF VOLUME    (mm)=      41.00        14.76          36.01
     TOTAL RAINFALL   (mm)=      42.00        42.00          42.00
     RUNOFF COEFFICIENT   =       0.98         0.35           0.86

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
        (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
       (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0262)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0202):     6.57   0.306     5.25    36.01
     + ID2= 2 (  0268):     5.27   0.129     5.42    40.72
       ================================================
       ID = 3 (  0262):    11.84   0.433     5.25    38.11

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0266)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0259):     4.67   0.181     5.25    36.86
     + ID2= 2 (  0262):    11.84   0.433     5.25    38.11
       ================================================
       ID = 3 (  0266):    16.51   0.614     5.25    37.75

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| RESERVOIR(  0263)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000    |   0.2130      0.6563
                         0.0190     0.1773    |   0.2520      0.6883
                         0.0220     0.2128    |   0.2890      0.7150
                         0.0260     0.2888    |   0.2980      0.7450
                         0.0300     0.3648    |   0.3060      0.7700
                         0.0650     0.4586    |   0.3150      0.8127
                         0.1100     0.5155    |   0.3320      0.9290
                         0.1680     0.5503    |   0.3390      0.9767
                         0.1930     0.5804    |   0.3520      1.0680
                         0.2000     0.6048    |   0.0000      0.0000

                                    AREA     QPEAK     TPEAK       R.V.
                                    (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (  0266)     16.510      0.614      5.25      37.75
     OUTFLOW: ID= 1 (  0263)     16.510      0.082      8.83      37.61

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 13.39
                   TIME SHIFT OF PEAK FLOW         (min)=215.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.4804

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0206):     0.12   0.003     5.25    14.74
     + ID2= 2 (  0263):    16.51   0.082     8.83    37.61
       ================================================
       ID = 3 (  0261):    16.64   0.082     8.83    37.44

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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================================================================================
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       V    V   I    SSSSS  U   U    A    L              (v 5.0.2025)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
```

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       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\23e1e48a-3d74-4ac3-9aa3-794302a65b1a\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\23e1e48a-3d74-4ac3-9aa3-794302a65b1a\s


DATE: 07/06/2020                          TIME: 04:35:19

USER:



COMMENTS: _____________________________________________________________

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  ***********************************************
  ** SIMULATION : 25 Year 12 Hour AES           **
  ***********************************************


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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              fc9a518d-4e80-47e2-ab56-8ded57ffff68\553ce99a
| Ptotal= 73.10 mm |    Comments: 25 Year 12 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  3.50   12.43 |  6.75    5.12 | 10.00    0.73
                0.50    0.73 |  3.75   12.43 |  7.00    5.12 | 10.25    0.73
                0.75    0.73 |  4.00   12.43 |  7.25    5.12 | 10.50    0.73
                1.00    0.73 |  4.25   12.43 |  7.50    2.92 | 10.75    0.73
                1.25    0.73 |  4.50   33.63 |  7.75    2.92 | 11.00    0.73
                1.50    0.73 |  4.75   33.63 |  8.00    2.92 | 11.25    0.73
                1.75    0.73 |  5.00   33.63 |  8.25    2.92 | 11.50    0.73
                2.00    0.73 |  5.25   33.63 |  8.50    1.46 | 11.75    0.73
                2.25    0.73 |  5.50    9.50 |  8.75    1.46 | 12.00    0.73
                2.50    4.39 |  5.75    9.50 |  9.00    1.46 | 12.25    0.73
                2.75    4.39 |  6.00    9.50 |  9.25    1.46 |
                3.00    4.39 |  6.25    9.50 |  9.50    0.73 |
                3.25    4.39 |  6.50    5.12 |  9.75    0.73 |

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| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                    ---- TRANSFORMED HYETOGRAPH ----
 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN |  TIME    RAIN
  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr |   hrs   mm/hr
0.083    0.00 | 3.167    4.39 | 6.250    9.50 |  9.33    0.73
0.167    0.00 | 3.250    4.39 | 6.333    5.12 |  9.42    0.73
0.250    0.00 | 3.333   12.43 | 6.417    5.12 |  9.50    0.73
0.333    0.73 | 3.417   12.43 | 6.500    5.12 |  9.58    0.73
0.417    0.73 | 3.500   12.43 | 6.583    5.12 |  9.67    0.73
0.500    0.73 | 3.583   12.43 | 6.667    5.12 |  9.75    0.73
0.583    0.73 | 3.667   12.43 | 6.750    5.12 |  9.83    0.73
0.667    0.73 | 3.750   12.43 | 6.833    5.12 |  9.92    0.73
0.750    0.73 | 3.833   12.43 | 6.917    5.12 | 10.00    0.73
0.833    0.73 | 3.917   12.43 | 7.000    5.12 | 10.08    0.73
0.917    0.73 | 4.000   12.43 | 7.083    5.12 | 10.17    0.73
1.000    0.73 | 4.083   12.43 | 7.167    5.12 | 10.25    0.73
1.083    0.73 | 4.167   12.43 | 7.250    5.12 | 10.33    0.73
1.167    0.73 | 4.250   12.43 | 7.333    2.92 | 10.42    0.73
1.250    0.73 | 4.333   33.63 | 7.417    2.92 | 10.50    0.73
1.333    0.73 | 4.417   33.63 | 7.500    2.92 | 10.58    0.73
1.417    0.73 | 4.500   33.63 | 7.583    2.92 | 10.67    0.73
1.500    0.73 | 4.583   33.63 | 7.667    2.92 | 10.75    0.73
1.583    0.73 | 4.667   33.63 | 7.750    2.92 | 10.83    0.73
1.667    0.73 | 4.750   33.63 | 7.833    2.92 | 10.92    0.73
1.750    0.73 | 4.833   33.63 | 7.917    2.92 | 11.00    0.73
1.833    0.73 | 4.917   33.63 | 8.000    2.92 | 11.08    0.73
1.917    0.73 | 5.000   33.63 | 8.083    2.92 | 11.17    0.73
2.000    0.73 | 5.083   33.63 | 8.167    2.92 | 11.25    0.73
2.083    0.73 | 5.167   33.63 | 8.250    2.92 | 11.33    0.73
2.167    0.73 | 5.250   33.63 | 8.333    1.46 | 11.42    0.73
2.250    0.73 | 5.333    9.50 | 8.417    1.46 | 11.50    0.73
2.333    4.39 | 5.417    9.50 | 8.500    1.46 | 11.58    0.73
2.417    4.39 | 5.500    9.50 | 8.583    1.46 | 11.67    0.73
2.500    4.39 | 5.583    9.50 | 8.667    1.46 | 11.75    0.73
2.583    4.39 | 5.667    9.50 | 8.750    1.46 | 11.83    0.73
2.667    4.39 | 5.750    9.50 | 8.833    1.46 | 11.92    0.73
2.750    4.39 | 5.833    9.50 | 8.917    1.46 | 12.00    0.73
2.833    4.39 | 5.917    9.50 | 9.000    1.46 | 12.08    0.73
2.917    4.39 | 6.000    9.50 | 9.083    1.46 | 12.17    0.73
3.000    4.39 | 6.083    9.50 | 9.167    1.46 | 12.25    0.73
3.083    4.39 | 6.167    9.50 | 9.250    1.46 |

    Unit Hyd Qpeak  (cms)=   0.019

    PEAK FLOW       (cms)=   0.007 (i)
    TIME TO PEAK    (hrs)=   5.250
    RUNOFF VOLUME    (mm)=  37.407
    TOTAL RAINFALL   (mm)=  73.100
    RUNOFF COEFFICIENT   =   0.512

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              fc9a518d-4e80-47e2-ab56-8ded57ffff68\553ce99a
| Ptotal= 73.10 mm |    Comments: 25 Year 12 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  3.50   12.43 |  6.75    5.12 | 10.00    0.73
```

0.50	0.73	3.75	12.43	7.00	5.12	10.25	0.73
0.75	0.73	4.00	12.43	7.25	5.12	10.50	0.73
1.00	0.73	4.25	12.43	7.50	2.92	10.75	0.73
1.25	0.73	4.50	33.63	7.75	2.92	11.00	0.73
1.50	0.73	4.75	33.63	8.00	2.92	11.25	0.73
1.75	0.73	5.00	33.63	8.25	2.92	11.50	0.73
2.00	0.73	5.25	33.63	8.50	1.46	11.75	0.73
2.25	0.73	5.50	9.50	8.75	1.46	12.00	0.73
2.50	4.39	5.75	9.50	9.00	1.46	12.25	0.73
2.75	4.39	6.00	9.50	9.25	1.46		
3.00	4.39	6.25	9.50	9.50	0.73		
3.25	4.39	6.50	5.12	9.75	0.73		

CALIB	
STANDHYD (0205)	Area (ha)= 1.12
ID= 1 DT= 5.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.11	0.01
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	86.60	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	4.39	6.250	9.50	9.33	0.73
0.167	0.00	3.250	4.39	6.333	5.12	9.42	0.73
0.250	0.00	3.333	12.43	6.417	5.12	9.50	0.73
0.333	0.73	3.417	12.43	6.500	5.12	9.58	0.73
0.417	0.73	3.500	12.43	6.583	5.12	9.67	0.73
0.500	0.73	3.583	12.43	6.667	5.12	9.75	0.73
0.583	0.73	3.667	12.43	6.750	5.12	9.83	0.73
0.667	0.73	3.750	12.43	6.833	5.12	9.92	0.73
0.750	0.73	3.833	12.43	6.917	5.12	10.00	0.73
0.833	0.73	3.917	12.43	7.000	5.12	10.08	0.73
0.917	0.73	4.000	12.43	7.083	5.12	10.17	0.73
1.000	0.73	4.083	12.43	7.167	5.12	10.25	0.73
1.083	0.73	4.167	12.43	7.250	5.12	10.33	0.73
1.167	0.73	4.250	12.43	7.333	2.92	10.42	0.73
1.250	0.73	4.333	33.63	7.417	2.92	10.50	0.73
1.333	0.73	4.417	33.63	7.500	2.92	10.58	0.73
1.417	0.73	4.500	33.63	7.583	2.92	10.67	0.73
1.500	0.73	4.583	33.63	7.667	2.92	10.75	0.73
1.583	0.73	4.667	33.63	7.750	2.92	10.83	0.73
1.667	0.73	4.750	33.63	7.833	2.92	10.92	0.73
1.750	0.73	4.833	33.63	7.917	2.92	11.00	0.73
1.833	0.73	4.917	33.63	8.000	2.92	11.08	0.73
1.917	0.73	5.000	33.63	8.083	2.92	11.17	0.73
2.000	0.73	5.083	33.63	8.167	2.92	11.25	0.73
2.083	0.73	5.167	33.63	8.250	2.92	11.33	0.73
2.167	0.73	5.250	33.63	8.333	1.46	11.42	0.73
2.250	0.73	5.333	9.50	8.417	1.46	11.50	0.73
2.333	4.39	5.417	9.50	8.500	1.46	11.58	0.73
2.417	4.39	5.500	9.50	8.583	1.46	11.67	0.73
2.500	4.39	5.583	9.50	8.667	1.46	11.75	0.73
2.583	4.39	5.667	9.50	8.750	1.46	11.83	0.73
2.667	4.39	5.750	9.50	8.833	1.46	11.92	0.73
2.750	4.39	5.833	9.50	8.917	1.46	12.00	0.73
2.833	4.39	5.917	9.50	9.000	1.46	12.08	0.73
2.917	4.39	6.000	9.50	9.083	1.46	12.17	0.73
3.000	4.39	6.083	9.50	9.167	1.46	12.25	0.73
3.083	4.39	6.167	9.50	9.250	1.46		

			TOTALS
Max.Eff.Inten.(mm/hr)=	33.63	23.14	
over (min)	5.00	10.00	
Storage Coeff. (min)=	3.62 (ii)	5.36 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.25	0.16	
PEAK FLOW (cms)=	0.10	0.00	0.105 (iii)
TIME TO PEAK (hrs)=	5.08	5.25	5.25
RUNOFF VOLUME (mm)=	72.10	37.44	71.75
TOTAL RAINFALL (mm)=	73.10	73.10	73.10
RUNOFF COEFFICIENT =	0.99	0.51	0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0256)				
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0470	0.0750

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0205)	1.125	0.105	5.25	71.75
OUTFLOW: ID= 1 (0256)	1.125	0.029	6.25	71.39

PEAK FLOW REDUCTION [Qout/Qin](%)= 27.98
TIME SHIFT OF PEAK FLOW (min)= 60.00
MAXIMUM STORAGE USED (ha.m.)= 0.0468

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\fc9a518d-4e80-47e2-ab56-8ded57ffff68\553ce99a
Ptotal= 73.10 mm	Comments: 25 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	12.43	6.75	5.12	10.00	0.73
0.50	0.73	3.75	12.43	7.00	5.12	10.25	0.73
0.75	0.73	4.00	12.43	7.25	5.12	10.50	0.73
1.00	0.73	4.25	12.43	7.50	2.92	10.75	0.73
1.25	0.73	4.50	33.63	7.75	2.92	11.00	0.73
1.50	0.73	4.75	33.63	8.00	2.92	11.25	0.73
1.75	0.73	5.00	33.63	8.25	2.92	11.50	0.73
2.00	0.73	5.25	33.63	8.50	1.46	11.75	0.73
2.25	0.73	5.50	9.50	8.75	1.46	12.00	0.73
2.50	4.39	5.75	9.50	9.00	1.46	12.25	0.73

2.75	4.39	6.00	9.50	9.25	1.46
3.00	4.39	6.25	9.50	9.50	0.73
3.25	4.39	6.50	5.12	9.75	0.73

CALIB			
STANDHYD (0203)	Area (ha)=	2.10	
ID= 1 DT= 5.0 min	Total Imp(%)=	80.00	Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.68	0.42
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	118.18	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	4.39	6.250	9.50	9.33	0.73
0.167	0.00	3.250	4.39	6.333	5.12	9.42	0.73
0.250	0.00	3.333	12.43	6.417	5.12	9.50	0.73
0.333	0.73	3.417	12.43	6.500	5.12	9.58	0.73
0.417	0.73	3.500	12.43	6.583	5.12	9.67	0.73
0.500	0.73	3.583	12.43	6.667	5.12	9.75	0.73
0.583	0.73	3.667	12.43	6.750	5.12	9.83	0.73
0.667	0.73	3.750	12.43	6.833	5.12	9.92	0.73
0.750	0.73	3.833	12.43	6.917	5.12	10.00	0.73
0.833	0.73	3.917	12.43	7.000	5.12	10.08	0.73
0.917	0.73	4.000	12.43	7.083	5.12	10.17	0.73
1.000	0.73	4.083	12.43	7.167	5.12	10.25	0.73
1.083	0.73	4.167	12.43	7.250	5.12	10.33	0.73
1.167	0.73	4.250	12.43	7.333	2.92	10.42	0.73
1.250	0.73	4.333	33.63	7.417	2.92	10.50	0.73
1.333	0.73	4.417	33.63	7.500	2.92	10.58	0.73
1.417	0.73	4.500	33.63	7.583	2.92	10.67	0.73
1.500	0.73	4.583	33.63	7.667	2.92	10.75	0.73
1.583	0.73	4.667	33.63	7.750	2.92	10.83	0.73
1.667	0.73	4.750	33.63	7.833	2.92	10.92	0.73
1.750	0.73	4.833	33.63	7.917	2.92	11.00	0.73
1.833	0.73	4.917	33.63	8.000	2.92	11.08	0.73
1.917	0.73	5.000	33.63	8.083	2.92	11.17	0.73
2.000	0.73	5.083	33.63	8.167	2.92	11.25	0.73
2.083	0.73	5.167	33.63	8.250	2.92	11.33	0.73
2.167	0.73	5.250	33.63	8.333	1.46	11.42	0.73
2.250	0.73	5.333	9.50	8.417	1.46	11.50	0.73
2.333	4.39	5.417	9.50	8.500	1.46	11.58	0.73
2.417	4.39	5.500	9.50	8.583	1.46	11.67	0.73
2.500	4.39	5.583	9.50	8.667	1.46	11.75	0.73
2.583	4.39	5.667	9.50	8.750	1.46	11.83	0.73
2.667	4.39	5.750	9.50	8.833	1.46	11.92	0.73
2.750	4.39	5.833	9.50	8.917	1.46	12.00	0.73
2.833	4.39	5.917	9.50	9.000	1.46	12.08	0.73
2.917	4.39	6.000	9.50	9.083	1.46	12.17	0.73
3.000	4.39	6.083	9.50	9.167	1.46	12.25	0.73
3.083	4.39	6.167	9.50	9.250	1.46		

Max.Eff.Inten.(mm/hr)=	33.63	22.83	
over (min)	5.00	20.00	
Storage Coeff. (min)=	4.37 (ii)	17.11 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.23	0.06	
			TOTALS
PEAK FLOW (cms)=	0.16	0.02	0.179 (iii)
TIME TO PEAK (hrs)=	5.17	5.33	5.25
RUNOFF VOLUME (mm)=	72.10	37.44	65.16
TOTAL RAINFALL (mm)=	73.10	73.10	73.10
RUNOFF COEFFICIENT =	0.99	0.51	0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0260)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (0203):	2.10	0.179	5.25	65.16
	+ ID2= 2 (0256):	1.12	0.029	6.25	71.39
	ID = 3 (0260):	3.22	0.207	5.25	67.34

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\fc9a518d-4e80-47e2-ab56-8ded57ffff68\553ce99a
Ptotal= 73.10 mm	Comments: 25 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	12.43	6.75	5.12	10.00	0.73
0.50	0.73	3.75	12.43	7.00	5.12	10.25	0.73
0.75	0.73	4.00	12.43	7.25	5.12	10.50	0.73
1.00	0.73	4.25	12.43	7.50	2.92	10.75	0.73
1.25	0.73	4.50	33.63	7.75	2.92	11.00	0.73
1.50	0.73	4.75	33.63	8.00	2.92	11.25	0.73
1.75	0.73	5.00	33.63	8.25	2.92	11.50	0.73
2.00	0.73	5.25	33.63	8.50	1.46	11.75	0.73
2.25	0.73	5.50	9.50	8.75	1.46	12.00	0.73
2.50	4.39	5.75	9.50	9.00	1.46	12.25	0.73
2.75	4.39	6.00	9.50	9.25	1.46		
3.00	4.39	6.25	9.50	9.50	0.73		
3.25	4.39	6.50	5.12	9.75	0.73		

CALIB			
STANDHYD (0204)	Area (ha)=	1.45	
ID= 1 DT= 5.0 min	Total Imp(%)=	80.00	Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.16	0.29

Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	98.32	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	4.39	6.250	9.50	9.33	0.73
0.167	0.00	3.250	4.39	6.333	5.12	9.42	0.73
0.250	0.00	3.333	12.43	6.417	5.12	9.50	0.73
0.333	0.73	3.417	12.43	6.500	5.12	9.58	0.73
0.417	0.73	3.500	12.43	6.583	5.12	9.67	0.73
0.500	0.73	3.583	12.43	6.667	5.12	9.75	0.73
0.583	0.73	3.667	12.43	6.750	5.12	9.83	0.73
0.667	0.73	3.750	12.43	6.833	5.12	9.92	0.73
0.750	0.73	3.833	12.43	6.917	5.12	10.00	0.73
0.833	0.73	3.917	12.43	7.000	5.12	10.08	0.73
0.917	0.73	4.000	12.43	7.083	5.12	10.17	0.73
1.000	0.73	4.083	12.43	7.167	5.12	10.25	0.73
1.083	0.73	4.167	12.43	7.250	5.12	10.33	0.73
1.167	0.73	4.250	12.43	7.333	2.92	10.42	0.73
1.250	0.73	4.333	33.63	7.417	2.92	10.50	0.73
1.333	0.73	4.417	33.63	7.500	2.92	10.58	0.73
1.417	0.73	4.500	33.63	7.583	2.92	10.67	0.73
1.500	0.73	4.583	33.63	7.667	2.92	10.75	0.73
1.583	0.73	4.667	33.63	7.750	2.92	10.83	0.73
1.667	0.73	4.750	33.63	7.833	2.92	10.92	0.73
1.750	0.73	4.833	33.63	7.917	2.92	11.00	0.73
1.833	0.73	4.917	33.63	8.000	2.92	11.08	0.73
1.917	0.73	5.000	33.63	8.083	2.92	11.17	0.73
2.000	0.73	5.083	33.63	8.167	2.92	11.25	0.73
2.083	0.73	5.167	33.63	8.250	2.92	11.33	0.73
2.167	0.73	5.250	33.63	8.333	1.46	11.42	0.73
2.250	0.73	5.333	9.50	8.417	1.46	11.50	0.73
2.333	4.39	5.417	9.50	8.500	1.46	11.58	0.73
2.417	4.39	5.500	9.50	8.583	1.46	11.67	0.73
2.500	4.39	5.583	9.50	8.667	1.46	11.75	0.73
2.583	4.39	5.667	9.50	8.750	1.46	11.83	0.73
2.667	4.39	5.750	9.50	8.833	1.46	11.92	0.73
2.750	4.39	5.833	9.50	8.917	1.46	12.00	0.73
2.833	4.39	5.917	9.50	9.000	1.46	12.08	0.73
2.917	4.39	6.000	9.50	9.083	1.46	12.17	0.73
3.000	4.39	6.083	9.50	9.167	1.46	12.25	0.73
3.083	4.39	6.167	9.50	9.250	1.46		

Max.Eff.Inten.(mm/hr)=		33.63	22.83	
over (min)		5.00	20.00	
Storage Coeff. (min)=		3.91 (ii)	16.65 (ii)	
Unit Hyd. Tpeak (min)=		5.00	20.00	
Unit Hyd. peak (cms)=		0.25	0.06	
				TOTALS
PEAK FLOW	(cms)=	0.11	0.02	0.124 (iii)
TIME TO PEAK	(hrs)=	5.17	5.33	5.25
RUNOFF VOLUME	(mm)=	72.10	37.44	65.16
TOTAL RAINFALL	(mm)=	73.10	73.10	73.10
RUNOFF COEFFICIENT	=	0.99	0.51	0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0259)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (0204):	1.45	0.124	5.25	65.16
	+ ID2= 2 (0260):	3.22	0.207	5.25	67.34
	ID = 3 (0259):	4.67	0.331	5.25	66.66

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\fc9a518d-4e80-47e2-ab56-8ded57ffff68\553ce99a
Ptotal= 73.10 mm	Comments: 25 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	12.43	6.75	5.12	10.00	0.73
0.50	0.73	3.75	12.43	7.00	5.12	10.25	0.73
0.75	0.73	4.00	12.43	7.25	5.12	10.50	0.73
1.00	0.73	4.25	12.43	7.50	2.92	10.75	0.73
1.25	0.73	4.50	33.63	7.75	2.92	11.00	0.73
1.50	0.73	4.75	33.63	8.00	2.92	11.25	0.73
1.75	0.73	5.00	33.63	8.25	2.92	11.50	0.73
2.00	0.73	5.25	33.63	8.50	1.46	11.75	0.73
2.25	0.73	5.50	9.50	8.75	1.46	12.00	0.73
2.50	4.39	5.75	9.50	9.00	1.46	12.25	0.73
2.75	4.39	6.00	9.50	9.25	1.46		
3.00	4.39	6.25	9.50	9.50	0.73		
3.25	4.39	6.50	5.12	9.75	0.73		

CALIB			
STANDHYD (0201)	Area (ha)=	5.27	
ID= 1 DT= 5.0 min	Total Imp(%)=	99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.22	0.05
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	187.44	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	4.39	6.250	9.50	9.33	0.73
0.167	0.00	3.250	4.39	6.333	5.12	9.42	0.73

0.250	0.00	3.333	12.43	6.417	5.12	9.50	0.73
0.333	0.73	3.417	12.43	6.500	5.12	9.58	0.73
0.417	0.73	3.500	12.43	6.583	5.12	9.67	0.73
0.500	0.73	3.583	12.43	6.667	5.12	9.75	0.73
0.583	0.73	3.667	12.43	6.750	5.12	9.83	0.73
0.667	0.73	3.750	12.43	6.833	5.12	9.92	0.73
0.750	0.73	3.833	12.43	6.917	5.12	10.00	0.73
0.833	0.73	3.917	12.43	7.000	5.12	10.08	0.73
0.917	0.73	4.000	12.43	7.083	5.12	10.17	0.73
1.000	0.73	4.083	12.43	7.167	5.12	10.25	0.73
1.083	0.73	4.167	12.43	7.250	5.12	10.33	0.73
1.167	0.73	4.250	12.43	7.333	2.92	10.42	0.73
1.250	0.73	4.333	33.63	7.417	2.92	10.50	0.73
1.333	0.73	4.417	33.63	7.500	2.92	10.58	0.73
1.417	0.73	4.500	33.63	7.583	2.92	10.67	0.73
1.500	0.73	4.583	33.63	7.667	2.92	10.75	0.73
1.583	0.73	4.667	33.63	7.750	2.92	10.83	0.73
1.667	0.73	4.750	33.63	7.833	2.92	10.92	0.73
1.750	0.73	4.833	33.63	7.917	2.92	11.00	0.73
1.833	0.73	4.917	33.63	8.000	2.92	11.08	0.73
1.917	0.73	5.000	33.63	8.083	2.92	11.17	0.73
2.000	0.73	5.083	33.63	8.167	2.92	11.25	0.73
2.083	0.73	5.167	33.63	8.250	2.92	11.33	0.73
2.167	0.73	5.250	33.63	8.333	1.46	11.42	0.73
2.250	0.73	5.333	9.50	8.417	1.46	11.50	0.73
2.333	4.39	5.417	9.50	8.500	1.46	11.58	0.73
2.417	4.39	5.500	9.50	8.583	1.46	11.67	0.73
2.500	4.39	5.583	9.50	8.667	1.46	11.75	0.73
2.583	4.39	5.667	9.50	8.750	1.46	11.83	0.73
2.667	4.39	5.750	9.50	8.833	1.46	11.92	0.73
2.750	4.39	5.833	9.50	8.917	1.46	12.00	0.73
2.833	4.39	5.917	9.50	9.000	1.46	12.08	0.73
2.917	4.39	6.000	9.50	9.083	1.46	12.17	0.73
3.000	4.39	6.083	9.50	9.167	1.46	12.25	0.73
3.083	4.39	6.167	9.50	9.250	1.46		

Max.Eff.Inten.(mm/hr)=	33.63	23.14	
over (min)	5.00	10.00	
Storage Coeff. (min)=	5.76 (ii)	7.50 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.20	0.13	
			TOTALS
PEAK FLOW (cms)=	0.49	0.00	0.491 (iii)
TIME TO PEAK (hrs)=	5.25	5.25	5.25
RUNOFF VOLUME (mm)=	72.10	37.44	71.75
TOTAL RAINFALL (mm)=	73.10	73.10	73.10
RUNOFF COEFFICIENT =	0.99	0.51	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0268) IN= 2---> OUT= 1 DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1959	0.1883
	0.0980	0.0369	0.2939	0.4335

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)	5.270	0.491	5.25	71.75
OUTFLOW: ID= 1 (0268)	5.270	0.184	5.42	71.74

PEAK FLOW REDUCTION [Qout/Qin](%)= 37.45
TIME SHIFT OF PEAK FLOW (min)= 10.00
MAXIMUM STORAGE USED (ha.m.)= 0.1697

READ STORM Ptotal= 73.10 mm	Filename: C:\Users\mventresca\AppData\Local\Temp\fc9a518d-4e80-47e2-ab56-8ded57ffff68\553ce99a Comments: 25 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	12.43	6.75	5.12	10.00	0.73
0.50	0.73	3.75	12.43	7.00	5.12	10.25	0.73
0.75	0.73	4.00	12.43	7.25	5.12	10.50	0.73
1.00	0.73	4.25	12.43	7.50	2.92	10.75	0.73
1.25	0.73	4.50	33.63	7.75	2.92	11.00	0.73
1.50	0.73	4.75	33.63	8.00	2.92	11.25	0.73
1.75	0.73	5.00	33.63	8.25	2.92	11.50	0.73
2.00	0.73	5.25	33.63	8.50	1.46	11.75	0.73
2.25	0.73	5.50	9.50	8.75	1.46	12.00	0.73
2.50	4.39	5.75	9.50	9.00	1.46	12.25	0.73
2.75	4.39	6.00	9.50	9.25	1.46		
3.00	4.39	6.25	9.50	9.50	0.73		
3.25	4.39	6.50	5.12	9.75	0.73		

CALIB STANDHYD (0202) ID= 1 DT= 5.0 min	Area (ha)= 6.57 Total Imp(%)= 81.00 Dir. Conn.(%)= 81.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.32	1.25
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	209.28	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	4.39	6.250	9.50	9.33	0.73
0.167	0.00	3.250	4.39	6.333	5.12	9.42	0.73
0.250	0.00	3.333	12.43	6.417	5.12	9.50	0.73
0.333	0.73	3.417	12.43	6.500	5.12	9.58	0.73
0.417	0.73	3.500	12.43	6.583	5.12	9.67	0.73
0.500	0.73	3.583	12.43	6.667	5.12	9.75	0.73
0.583	0.73	3.667	12.43	6.750	5.12	9.83	0.73
0.667	0.73	3.750	12.43	6.833	5.12	9.92	0.73
0.750	0.73	3.833	12.43	6.917	5.12	10.00	0.73
0.833	0.73	3.917	12.43	7.000	5.12	10.08	0.73
0.917	0.73	4.000	12.43	7.083	5.12	10.17	0.73

```
                1.000    0.73 | 4.083   12.43 | 7.167    5.12 | 10.25    0.73
                1.083    0.73 | 4.167   12.43 | 7.250    5.12 | 10.33    0.73
                1.167    0.73 | 4.250   12.43 | 7.333    2.92 | 10.42    0.73
                1.250    0.73 | 4.333   33.63 | 7.417    2.92 | 10.50    0.73
                1.333    0.73 | 4.417   33.63 | 7.500    2.92 | 10.58    0.73
                1.417    0.73 | 4.500   33.63 | 7.583    2.92 | 10.67    0.73
                1.500    0.73 | 4.583   33.63 | 7.667    2.92 | 10.75    0.73
                1.583    0.73 | 4.667   33.63 | 7.750    2.92 | 10.83    0.73
                1.667    0.73 | 4.750   33.63 | 7.833    2.92 | 10.92    0.73
                1.750    0.73 | 4.833   33.63 | 7.917    2.92 | 11.00    0.73
                1.833    0.73 | 4.917   33.63 | 8.000    2.92 | 11.08    0.73
                1.917    0.73 | 5.000   33.63 | 8.083    2.92 | 11.17    0.73
                2.000    0.73 | 5.083   33.63 | 8.167    2.92 | 11.25    0.73
                2.083    0.73 | 5.167   33.63 | 8.250    2.92 | 11.33    0.73
                2.167    0.73 | 5.250   33.63 | 8.333    1.46 | 11.42    0.73
                2.250    0.73 | 5.333    9.50 | 8.417    1.46 | 11.50    0.73
                2.333    4.39 | 5.417    9.50 | 8.500    1.46 | 11.58    0.73
                2.417    4.39 | 5.500    9.50 | 8.583    1.46 | 11.67    0.73
                2.500    4.39 | 5.583    9.50 | 8.667    1.46 | 11.75    0.73
                2.583    4.39 | 5.667    9.50 | 8.750    1.46 | 11.83    0.73
                2.667    4.39 | 5.750    9.50 | 8.833    1.46 | 11.92    0.73
                2.750    4.39 | 5.833    9.50 | 8.917    1.46 | 12.00    0.73
                2.833    4.39 | 5.917    9.50 | 9.000    1.46 | 12.08    0.73
                2.917    4.39 | 6.000    9.50 | 9.083    1.46 | 12.17    0.73
                3.000    4.39 | 6.083    9.50 | 9.167    1.46 | 12.25    0.73
                3.083    4.39 | 6.167    9.50 | 9.250    1.46 |

     Max.Eff.Inten.(mm/hr)=      33.63        22.83
               over (min)        5.00        20.00
     Storage Coeff.  (min)=      6.15 (ii)   18.90 (ii)
     Unit Hyd. Tpeak (min)=      5.00        20.00
     Unit Hyd. peak  (cms)=      0.19         0.06
                                                        *TOTALS*
     PEAK FLOW       (cms)=      0.50         0.07         0.563 (iii)
     TIME TO PEAK    (hrs)=      5.25         5.33         5.25
     RUNOFF VOLUME    (mm)=     72.10        37.44        65.51
     TOTAL RAINFALL   (mm)=     73.10        73.10        73.10
     RUNOFF COEFFICIENT   =      0.99         0.51         0.90


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0262)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0202):     6.57   0.563     5.25    65.51
     + ID2= 2 (  0268):     5.27   0.184     5.42    71.74
       ================================================
       ID = 3 (  0262):    11.84   0.742     5.25    68.28

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0266)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0259):     4.67   0.331     5.25    66.66
     + ID2= 2 (  0262):    11.84   0.742     5.25    68.28
       ================================================
       ID = 3 (  0266):    16.51   1.073     5.25    67.83

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| RESERVOIR(  0263)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.2130      0.6563
                          0.0190     0.1773   |   0.2520      0.6883
                          0.0220     0.2128   |   0.2890      0.7150
                          0.0260     0.2888   |   0.2980      0.7450
                          0.0300     0.3648   |   0.3060      0.7700
                          0.0650     0.4586   |   0.3150      0.8127
                          0.1100     0.5155   |   0.3320      0.9290
                          0.1680     0.5503   |   0.3390      0.9767
                          0.1930     0.5804   |   0.3520      1.0680
                          0.2000     0.6048   |   0.0000      0.0000

                                    AREA     QPEAK     TPEAK       R.V.
                                    (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (  0266)     16.510      1.073      5.25      67.83
     OUTFLOW: ID= 1 (  0263)     16.510      0.243      8.00      67.68

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 22.61
                    TIME SHIFT OF PEAK FLOW         (min)=165.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.6807

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0206):     0.12   0.007     5.25    37.41
     + ID2= 2 (  0263):    16.51   0.243     8.00    67.68
       ================================================
       ID = 3 (  0261):    16.64   0.243     8.00    67.45

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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      V    V   I    SSSSS  U   U    A    L              (v 5.0.2025)
      V    V   I    SS     U   U   A A   L
       V  V    I     SS    U   U  AAAAA  L
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
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***** D E T A I L E D O U T P U T *****

```
  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\208d1966-0d70-4edf-ac22-23cdaa7e0210\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\208d1966-0d70-4edf-ac22-23cdaa7e0210\s

DATE: 07/06/2020                          TIME: 04:35:19

USER:


COMMENTS: _____________________________________________________________

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  ***********************************************
  ** SIMULATION : 5 Year 12 Hour AES           **
  ***********************************************


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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              fc9a518d-4e80-47e2-ab56-8ded57ffff68\bee6f002
| Ptotal= 54.38 mm |    Comments: 5 Year 12 Hour AES (Bloor, TRCA)
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```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	9.25	6.75	3.81	10.00	0.54
0.50	0.54	3.75	9.25	7.00	3.81	10.25	0.54
0.75	0.54	4.00	9.25	7.25	3.81	10.50	0.54
1.00	0.54	4.25	9.25	7.50	2.18	10.75	0.54
1.25	0.54	4.50	25.02	7.75	2.18	11.00	0.54
1.50	0.54	4.75	25.02	8.00	2.18	11.25	0.54
1.75	0.54	5.00	25.02	8.25	2.18	11.50	0.54
2.00	0.54	5.25	25.02	8.50	1.09	11.75	0.54
2.25	0.54	5.50	7.07	8.75	1.09	12.00	0.54
2.50	3.26	5.75	7.07	9.00	1.09	12.25	0.54
2.75	3.26	6.00	7.07	9.25	1.09		
3.00	3.26	6.25	7.07	9.50	0.54		
3.25	3.26	6.50	3.81	9.75	0.54		

```
--------------------
| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.26	6.250	7.07	9.33	0.54
0.167	0.00	3.250	3.26	6.333	3.81	9.42	0.54
0.250	0.00	3.333	9.25	6.417	3.81	9.50	0.54
0.333	0.54	3.417	9.25	6.500	3.81	9.58	0.54
0.417	0.54	3.500	9.25	6.583	3.81	9.67	0.54
0.500	0.54	3.583	9.25	6.667	3.81	9.75	0.54
0.583	0.54	3.667	9.25	6.750	3.81	9.83	0.54
0.667	0.54	3.750	9.25	6.833	3.81	9.92	0.54
0.750	0.54	3.833	9.25	6.917	3.81	10.00	0.54
0.833	0.54	3.917	9.25	7.000	3.81	10.08	0.54
0.917	0.54	4.000	9.25	7.083	3.81	10.17	0.54
1.000	0.54	4.083	9.25	7.167	3.81	10.25	0.54
1.083	0.54	4.167	9.25	7.250	3.81	10.33	0.54
1.167	0.54	4.250	9.25	7.333	2.18	10.42	0.54
1.250	0.54	4.333	25.02	7.417	2.18	10.50	0.54
1.333	0.54	4.417	25.02	7.500	2.18	10.58	0.54
1.417	0.54	4.500	25.02	7.583	2.18	10.67	0.54
1.500	0.54	4.583	25.02	7.667	2.18	10.75	0.54
1.583	0.54	4.667	25.02	7.750	2.18	10.83	0.54
1.667	0.54	4.750	25.02	7.833	2.18	10.92	0.54
1.750	0.54	4.833	25.02	7.917	2.18	11.00	0.54
1.833	0.54	4.917	25.02	8.000	2.18	11.08	0.54
1.917	0.54	5.000	25.02	8.083	2.18	11.17	0.54
2.000	0.54	5.083	25.02	8.167	2.18	11.25	0.54
2.083	0.54	5.167	25.02	8.250	2.18	11.33	0.54
2.167	0.54	5.250	25.02	8.333	1.09	11.42	0.54
2.250	0.54	5.333	7.07	8.417	1.09	11.50	0.54
2.333	3.26	5.417	7.07	8.500	1.09	11.58	0.54
2.417	3.26	5.500	7.07	8.583	1.09	11.67	0.54
2.500	3.26	5.583	7.07	8.667	1.09	11.75	0.54
2.583	3.26	5.667	7.07	8.750	1.09	11.83	0.54
2.667	3.26	5.750	7.07	8.833	1.09	11.92	0.54
2.750	3.26	5.833	7.07	8.917	1.09	12.00	0.54
2.833	3.26	5.917	7.07	9.000	1.09	12.08	0.54
2.917	3.26	6.000	7.07	9.083	1.09	12.17	0.54
3.000	3.26	6.083	7.07	9.167	1.09	12.25	0.54
3.083	3.26	6.167	7.07	9.250	1.09		

```
    Unit Hyd Qpeak  (cms)=   0.019

    PEAK FLOW       (cms)=   0.004 (i)
    TIME TO PEAK    (hrs)=   5.250
    RUNOFF VOLUME    (mm)=  23.169
    TOTAL RAINFALL   (mm)=  54.380
    RUNOFF COEFFICIENT   =   0.426

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              fc9a518d-4e80-47e2-ab56-8ded57ffff68\bee6f002
| Ptotal= 54.38 mm |    Comments: 5 Year 12 Hour AES (Bloor, TRCA)
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```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	9.25	6.75	3.81	10.00	0.54
0.50	0.54	3.75	9.25	7.00	3.81	10.25	0.54
0.75	0.54	4.00	9.25	7.25	3.81	10.50	0.54
1.00	0.54	4.25	9.25	7.50	2.18	10.75	0.54
1.25	0.54	4.50	25.02	7.75	2.18	11.00	0.54
1.50	0.54	4.75	25.02	8.00	2.18	11.25	0.54

1.75	0.54	5.00	25.02	8.25	2.18	11.50	0.54
2.00	0.54	5.25	25.02	8.50	1.09	11.75	0.54
2.25	0.54	5.50	7.07	8.75	1.09	12.00	0.54
2.50	3.26	5.75	7.07	9.00	1.09	12.25	0.54
2.75	3.26	6.00	7.07	9.25	1.09		
3.00	3.26	6.25	7.07	9.50	0.54		
3.25	3.26	6.50	3.81	9.75	0.54		

CALIB	
STANDHYD (0205)	Area (ha)= 1.12
ID= 1 DT= 5.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.11	0.01
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	86.60	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.26	6.250	7.07	9.33	0.54
0.167	0.00	3.250	3.26	6.333	3.81	9.42	0.54
0.250	0.00	3.333	9.25	6.417	3.81	9.50	0.54
0.333	0.54	3.417	9.25	6.500	3.81	9.58	0.54
0.417	0.54	3.500	9.25	6.583	3.81	9.67	0.54
0.500	0.54	3.583	9.25	6.667	3.81	9.75	0.54
0.583	0.54	3.667	9.25	6.750	3.81	9.83	0.54
0.667	0.54	3.750	9.25	6.833	3.81	9.92	0.54
0.750	0.54	3.833	9.25	6.917	3.81	10.00	0.54
0.833	0.54	3.917	9.25	7.000	3.81	10.08	0.54
0.917	0.54	4.000	9.25	7.083	3.81	10.17	0.54
1.000	0.54	4.083	9.25	7.167	3.81	10.25	0.54
1.083	0.54	4.167	9.25	7.250	3.81	10.33	0.54
1.167	0.54	4.250	9.25	7.333	2.18	10.42	0.54
1.250	0.54	4.333	25.02	7.417	2.18	10.50	0.54
1.333	0.54	4.417	25.02	7.500	2.18	10.58	0.54
1.417	0.54	4.500	25.02	7.583	2.18	10.67	0.54
1.500	0.54	4.583	25.02	7.667	2.18	10.75	0.54
1.583	0.54	4.667	25.02	7.750	2.18	10.83	0.54
1.667	0.54	4.750	25.02	7.833	2.18	10.92	0.54
1.750	0.54	4.833	25.02	7.917	2.18	11.00	0.54
1.833	0.54	4.917	25.02	8.000	2.18	11.08	0.54
1.917	0.54	5.000	25.02	8.083	2.18	11.17	0.54
2.000	0.54	5.083	25.02	8.167	2.18	11.25	0.54
2.083	0.54	5.167	25.02	8.250	2.18	11.33	0.54
2.167	0.54	5.250	25.02	8.333	1.09	11.42	0.54
2.250	0.54	5.333	7.07	8.417	1.09	11.50	0.54
2.333	3.26	5.417	7.07	8.500	1.09	11.58	0.54
2.417	3.26	5.500	7.07	8.583	1.09	11.67	0.54
2.500	3.26	5.583	7.07	8.667	1.09	11.75	0.54
2.583	3.26	5.667	7.07	8.750	1.09	11.83	0.54
2.667	3.26	5.750	7.07	8.833	1.09	11.92	0.54
2.750	3.26	5.833	7.07	8.917	1.09	12.00	0.54
2.833	3.26	5.917	7.07	9.000	1.09	12.08	0.54
2.917	3.26	6.000	7.07	9.083	1.09	12.17	0.54
3.000	3.26	6.083	7.07	9.167	1.09	12.25	0.54
3.083	3.26	6.167	7.07	9.250	1.09		

			TOTALS
Max.Eff.Inten.(mm/hr)=	25.02	14.80	
over (min)	5.00	10.00	
Storage Coeff. (min)=	4.08 (ii)	6.03 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.24	0.15	
PEAK FLOW (cms)=	0.08	0.00	0.078 (iii)
TIME TO PEAK (hrs)=	5.17	5.25	5.25
RUNOFF VOLUME (mm)=	53.38	23.19	53.08
TOTAL RAINFALL (mm)=	54.38	54.38	54.38
RUNOFF COEFFICIENT =	0.98	0.43	0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0256)						
IN= 2---> OUT= 1						
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)		OUTFLOW (cms)	STORAGE (ha.m.)	
	0.0000	0.0000		0.0470	0.0750	

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0205)	1.125	0.078	5.25	53.08
OUTFLOW: ID= 1 (0256)	1.125	0.022	6.25	52.72

PEAK FLOW REDUCTION [Qout/Qin](%)= 27.90
TIME SHIFT OF PEAK FLOW (min)= 60.00
MAXIMUM STORAGE USED (ha.m.)= 0.0347

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\fc9a518d-4e80-47e2-ab56-8ded57ffff68\bee6f002
Ptotal= 54.38 mm	Comments: 5 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	9.25	6.75	3.81	10.00	0.54
0.50	0.54	3.75	9.25	7.00	3.81	10.25	0.54
0.75	0.54	4.00	9.25	7.25	3.81	10.50	0.54
1.00	0.54	4.25	9.25	7.50	2.18	10.75	0.54
1.25	0.54	4.50	25.02	7.75	2.18	11.00	0.54
1.50	0.54	4.75	25.02	8.00	2.18	11.25	0.54
1.75	0.54	5.00	25.02	8.25	2.18	11.50	0.54
2.00	0.54	5.25	25.02	8.50	1.09	11.75	0.54
2.25	0.54	5.50	7.07	8.75	1.09	12.00	0.54
2.50	3.26	5.75	7.07	9.00	1.09	12.25	0.54
2.75	3.26	6.00	7.07	9.25	1.09		
3.00	3.26	6.25	7.07	9.50	0.54		
3.25	3.26	6.50	3.81	9.75	0.54		

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| CALIB            |
| STANDHYD (  0203)|   Area    (ha)=   2.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      1.68         0.42
     Dep. Storage     (mm)=      1.00         5.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=    118.18        40.00
     Mannings n           =     0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.26	6.250	7.07	9.33	0.54
0.167	0.00	3.250	3.26	6.333	3.81	9.42	0.54
0.250	0.00	3.333	9.25	6.417	3.81	9.50	0.54
0.333	0.54	3.417	9.25	6.500	3.81	9.58	0.54
0.417	0.54	3.500	9.25	6.583	3.81	9.67	0.54
0.500	0.54	3.583	9.25	6.667	3.81	9.75	0.54
0.583	0.54	3.667	9.25	6.750	3.81	9.83	0.54
0.667	0.54	3.750	9.25	6.833	3.81	9.92	0.54
0.750	0.54	3.833	9.25	6.917	3.81	10.00	0.54
0.833	0.54	3.917	9.25	7.000	3.81	10.08	0.54
0.917	0.54	4.000	9.25	7.083	3.81	10.17	0.54
1.000	0.54	4.083	9.25	7.167	3.81	10.25	0.54
1.083	0.54	4.167	9.25	7.250	3.81	10.33	0.54
1.167	0.54	4.250	9.25	7.333	2.18	10.42	0.54
1.250	0.54	4.333	25.02	7.417	2.18	10.50	0.54
1.333	0.54	4.417	25.02	7.500	2.18	10.58	0.54
1.417	0.54	4.500	25.02	7.583	2.18	10.67	0.54
1.500	0.54	4.583	25.02	7.667	2.18	10.75	0.54
1.583	0.54	4.667	25.02	7.750	2.18	10.83	0.54
1.667	0.54	4.750	25.02	7.833	2.18	10.92	0.54
1.750	0.54	4.833	25.02	7.917	2.18	11.00	0.54
1.833	0.54	4.917	25.02	8.000	2.18	11.08	0.54
1.917	0.54	5.000	25.02	8.083	2.18	11.17	0.54
2.000	0.54	5.083	25.02	8.167	2.18	11.25	0.54
2.083	0.54	5.167	25.02	8.250	2.18	11.33	0.54
2.167	0.54	5.250	25.02	8.333	1.09	11.42	0.54
2.250	0.54	5.333	7.07	8.417	1.09	11.50	0.54
2.333	3.26	5.417	7.07	8.500	1.09	11.58	0.54
2.417	3.26	5.500	7.07	8.583	1.09	11.67	0.54
2.500	3.26	5.583	7.07	8.667	1.09	11.75	0.54
2.583	3.26	5.667	7.07	8.750	1.09	11.83	0.54
2.667	3.26	5.750	7.07	8.833	1.09	11.92	0.54
2.750	3.26	5.833	7.07	8.917	1.09	12.00	0.54
2.833	3.26	5.917	7.07	9.000	1.09	12.08	0.54
2.917	3.26	6.000	7.07	9.083	1.09	12.17	0.54
3.000	3.26	6.083	7.07	9.167	1.09	12.25	0.54
3.083	3.26	6.167	7.07	9.250	1.09		

```
     Max.Eff.Inten.(mm/hr)=      25.02        14.28
               over (min)        5.00        25.00
     Storage Coeff.  (min)=      4.92 (ii)   20.29 (ii)
     Unit Hyd. Tpeak (min)=      5.00        25.00
     Unit Hyd. peak  (cms)=      0.22         0.05
                                                    *TOTALS*
     PEAK FLOW       (cms)=      0.12         0.01         0.129 (iii)
     TIME TO PEAK    (hrs)=      5.25         5.33          5.25
     RUNOFF VOLUME    (mm)=     53.38        23.19         47.34
     TOTAL RAINFALL   (mm)=     54.38        54.38         54.38
     RUNOFF COEFFICIENT   =      0.98         0.43          0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0260)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0203):     2.10   0.129     5.25    47.34
     + ID2= 2 (  0256):     1.12   0.022     6.25    52.72
       ================================================
       ID = 3 (  0260):     3.22   0.150     5.25    49.22

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              fc9a518d-4e80-47e2-ab56-8ded57ffff68\bee6f002
| Ptotal= 54.38 mm |    Comments: 5 Year 12 Hour AES (Bloor, TRCA)
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	9.25	6.75	3.81	10.00	0.54
0.50	0.54	3.75	9.25	7.00	3.81	10.25	0.54
0.75	0.54	4.00	9.25	7.25	3.81	10.50	0.54
1.00	0.54	4.25	9.25	7.50	2.18	10.75	0.54
1.25	0.54	4.50	25.02	7.75	2.18	11.00	0.54
1.50	0.54	4.75	25.02	8.00	2.18	11.25	0.54
1.75	0.54	5.00	25.02	8.25	2.18	11.50	0.54
2.00	0.54	5.25	25.02	8.50	1.09	11.75	0.54
2.25	0.54	5.50	7.07	8.75	1.09	12.00	0.54
2.50	3.26	5.75	7.07	9.00	1.09	12.25	0.54
2.75	3.26	6.00	7.07	9.25	1.09		
3.00	3.26	6.25	7.07	9.50	0.54		
3.25	3.26	6.50	3.81	9.75	0.54		

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| CALIB            |
| STANDHYD (  0204)|   Area    (ha)=   1.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      1.16         0.29
     Dep. Storage     (mm)=      1.00         5.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     98.32        40.00
     Mannings n           =     0.013        0.250
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.26	6.250	7.07	9.33	0.54
0.167	0.00	3.250	3.26	6.333	3.81	9.42	0.54
0.250	0.00	3.333	9.25	6.417	3.81	9.50	0.54
0.333	0.54	3.417	9.25	6.500	3.81	9.58	0.54
0.417	0.54	3.500	9.25	6.583	3.81	9.67	0.54
0.500	0.54	3.583	9.25	6.667	3.81	9.75	0.54
0.583	0.54	3.667	9.25	6.750	3.81	9.83	0.54
0.667	0.54	3.750	9.25	6.833	3.81	9.92	0.54
0.750	0.54	3.833	9.25	6.917	3.81	10.00	0.54
0.833	0.54	3.917	9.25	7.000	3.81	10.08	0.54
0.917	0.54	4.000	9.25	7.083	3.81	10.17	0.54
1.000	0.54	4.083	9.25	7.167	3.81	10.25	0.54
1.083	0.54	4.167	9.25	7.250	3.81	10.33	0.54
1.167	0.54	4.250	9.25	7.333	2.18	10.42	0.54
1.250	0.54	4.333	25.02	7.417	2.18	10.50	0.54
1.333	0.54	4.417	25.02	7.500	2.18	10.58	0.54
1.417	0.54	4.500	25.02	7.583	2.18	10.67	0.54
1.500	0.54	4.583	25.02	7.667	2.18	10.75	0.54
1.583	0.54	4.667	25.02	7.750	2.18	10.83	0.54
1.667	0.54	4.750	25.02	7.833	2.18	10.92	0.54
1.750	0.54	4.833	25.02	7.917	2.18	11.00	0.54
1.833	0.54	4.917	25.02	8.000	2.18	11.08	0.54
1.917	0.54	5.000	25.02	8.083	2.18	11.17	0.54
2.000	0.54	5.083	25.02	8.167	2.18	11.25	0.54
2.083	0.54	5.167	25.02	8.250	2.18	11.33	0.54
2.167	0.54	5.250	25.02	8.333	1.09	11.42	0.54
2.250	0.54	5.333	7.07	8.417	1.09	11.50	0.54
2.333	3.26	5.417	7.07	8.500	1.09	11.58	0.54
2.417	3.26	5.500	7.07	8.583	1.09	11.67	0.54
2.500	3.26	5.583	7.07	8.667	1.09	11.75	0.54
2.583	3.26	5.667	7.07	8.750	1.09	11.83	0.54
2.667	3.26	5.750	7.07	8.833	1.09	11.92	0.54
2.750	3.26	5.833	7.07	8.917	1.09	12.00	0.54
2.833	3.26	5.917	7.07	9.000	1.09	12.08	0.54
2.917	3.26	6.000	7.07	9.083	1.09	12.17	0.54
3.000	3.26	6.083	7.07	9.167	1.09	12.25	0.54
3.083	3.26	6.167	7.07	9.250	1.09		

Max.Eff.Inten.(mm/hr)=	25.02	14.28		
over (min)	5.00	20.00		
Storage Coeff. (min)=	4.40 (ii)	19.78 (ii)		
Unit Hyd. Tpeak (min)=	5.00	20.00		
Unit Hyd. peak (cms)=	0.23	0.06		
			TOTALS	
PEAK FLOW (cms)=	0.08	0.01	0.090 (iii)	
TIME TO PEAK (hrs)=	5.17	5.33	5.25	
RUNOFF VOLUME (mm)=	53.38	23.19	47.33	
TOTAL RAINFALL (mm)=	54.38	54.38	54.38	
RUNOFF COEFFICIENT =	0.98	0.43	0.87	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0259)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (0204):	1.45	0.090	5.25	47.33
	+ ID2= 2 (0260):	3.22	0.150	5.25	49.22
	ID = 3 (0259):	4.67	0.240	5.25	48.63

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\fc9a518d-4e80-47e2-ab56-8ded57ffff68\bee6f002
Ptotal= 54.38 mm	Comments: 5 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	9.25	6.75	3.81	10.00	0.54
0.50	0.54	3.75	9.25	7.00	3.81	10.25	0.54
0.75	0.54	4.00	9.25	7.25	3.81	10.50	0.54
1.00	0.54	4.25	9.25	7.50	2.18	10.75	0.54
1.25	0.54	4.50	25.02	7.75	2.18	11.00	0.54
1.50	0.54	4.75	25.02	8.00	2.18	11.25	0.54
1.75	0.54	5.00	25.02	8.25	2.18	11.50	0.54
2.00	0.54	5.25	25.02	8.50	1.09	11.75	0.54
2.25	0.54	5.50	7.07	8.75	1.09	12.00	0.54
2.50	3.26	5.75	7.07	9.00	1.09	12.25	0.54
2.75	3.26	6.00	7.07	9.25	1.09		
3.00	3.26	6.25	7.07	9.50	0.54		
3.25	3.26	6.50	3.81	9.75	0.54		

CALIB		
STANDHYD (0201)	Area (ha)=	5.27
ID= 1 DT= 5.0 min	Total Imp(%)=	99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.22	0.05
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	187.44	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.26	6.250	7.07	9.33	0.54
0.167	0.00	3.250	3.26	6.333	3.81	9.42	0.54
0.250	0.00	3.333	9.25	6.417	3.81	9.50	0.54
0.333	0.54	3.417	9.25	6.500	3.81	9.58	0.54
0.417	0.54	3.500	9.25	6.583	3.81	9.67	0.54
0.500	0.54	3.583	9.25	6.667	3.81	9.75	0.54
0.583	0.54	3.667	9.25	6.750	3.81	9.83	0.54

0.667	0.54	3.750	9.25	6.833	3.81	9.92	0.54
0.750	0.54	3.833	9.25	6.917	3.81	10.00	0.54
0.833	0.54	3.917	9.25	7.000	3.81	10.08	0.54
0.917	0.54	4.000	9.25	7.083	3.81	10.17	0.54
1.000	0.54	4.083	9.25	7.167	3.81	10.25	0.54
1.083	0.54	4.167	9.25	7.250	3.81	10.33	0.54
1.167	0.54	4.250	9.25	7.333	2.18	10.42	0.54
1.250	0.54	4.333	25.02	7.417	2.18	10.50	0.54
1.333	0.54	4.417	25.02	7.500	2.18	10.58	0.54
1.417	0.54	4.500	25.02	7.583	2.18	10.67	0.54
1.500	0.54	4.583	25.02	7.667	2.18	10.75	0.54
1.583	0.54	4.667	25.02	7.750	2.18	10.83	0.54
1.667	0.54	4.750	25.02	7.833	2.18	10.92	0.54
1.750	0.54	4.833	25.02	7.917	2.18	11.00	0.54
1.833	0.54	4.917	25.02	8.000	2.18	11.08	0.54
1.917	0.54	5.000	25.02	8.083	2.18	11.17	0.54
2.000	0.54	5.083	25.02	8.167	2.18	11.25	0.54
2.083	0.54	5.167	25.02	8.250	2.18	11.33	0.54
2.167	0.54	5.250	25.02	8.333	1.09	11.42	0.54
2.250	0.54	5.333	7.07	8.417	1.09	11.50	0.54
2.333	3.26	5.417	7.07	8.500	1.09	11.58	0.54
2.417	3.26	5.500	7.07	8.583	1.09	11.67	0.54
2.500	3.26	5.583	7.07	8.667	1.09	11.75	0.54
2.583	3.26	5.667	7.07	8.750	1.09	11.83	0.54
2.667	3.26	5.750	7.07	8.833	1.09	11.92	0.54
2.750	3.26	5.833	7.07	8.917	1.09	12.00	0.54
2.833	3.26	5.917	7.07	9.000	1.09	12.08	0.54
2.917	3.26	6.000	7.07	9.083	1.09	12.17	0.54
3.000	3.26	6.083	7.07	9.167	1.09	12.25	0.54
3.083	3.26	6.167	7.07	9.250	1.09		

Max.Eff.Inten.(mm/hr)=	25.02	14.80	
over (min)	5.00	10.00	
Storage Coeff. (min)=	6.48 (ii)	8.44 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.18	0.12	
			TOTALS
PEAK FLOW (cms)=	0.36	0.00	0.365 (iii)
TIME TO PEAK (hrs)=	5.25	5.25	5.25
RUNOFF VOLUME (mm)=	53.38	23.19	53.08
TOTAL RAINFALL (mm)=	54.38	54.38	54.38
RUNOFF COEFFICIENT =	0.98	0.43	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0268)				
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1959	0.1883
	0.0980	0.0369	0.2939	0.4335

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)	5.270	0.365	5.25	53.08
OUTFLOW: ID= 1 (0268)	5.270	0.150	5.42	53.06

PEAK FLOW REDUCTION [Qout/Qin](%)= 41.23
TIME SHIFT OF PEAK FLOW (min)= 10.00
MAXIMUM STORAGE USED (ha.m.)= 0.1180

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\fc9a518d-4e80-47e2-ab56-8ded57ffff68\bee6f002
Ptotal= 54.38 mm	Comments: 5 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	9.25	6.75	3.81	10.00	0.54
0.50	0.54	3.75	9.25	7.00	3.81	10.25	0.54
0.75	0.54	4.00	9.25	7.25	3.81	10.50	0.54
1.00	0.54	4.25	9.25	7.50	2.18	10.75	0.54
1.25	0.54	4.50	25.02	7.75	2.18	11.00	0.54
1.50	0.54	4.75	25.02	8.00	2.18	11.25	0.54
1.75	0.54	5.00	25.02	8.25	2.18	11.50	0.54
2.00	0.54	5.25	25.02	8.50	1.09	11.75	0.54
2.25	0.54	5.50	7.07	8.75	1.09	12.00	0.54
2.50	3.26	5.75	7.07	9.00	1.09	12.25	0.54
2.75	3.26	6.00	7.07	9.25	1.09		
3.00	3.26	6.25	7.07	9.50	0.54		
3.25	3.26	6.50	3.81	9.75	0.54		

CALIB		
STANDHYD (0202)	Area (ha)=	6.57
ID= 1 DT= 5.0 min	Total Imp(%)=	81.00 Dir. Conn.(%)= 81.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.32	1.25
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	209.28	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	3.26	6.250	7.07	9.33	0.54
0.167	0.00	3.250	3.26	6.333	3.81	9.42	0.54
0.250	0.00	3.333	9.25	6.417	3.81	9.50	0.54
0.333	0.54	3.417	9.25	6.500	3.81	9.58	0.54
0.417	0.54	3.500	9.25	6.583	3.81	9.67	0.54
0.500	0.54	3.583	9.25	6.667	3.81	9.75	0.54
0.583	0.54	3.667	9.25	6.750	3.81	9.83	0.54
0.667	0.54	3.750	9.25	6.833	3.81	9.92	0.54
0.750	0.54	3.833	9.25	6.917	3.81	10.00	0.54
0.833	0.54	3.917	9.25	7.000	3.81	10.08	0.54
0.917	0.54	4.000	9.25	7.083	3.81	10.17	0.54
1.000	0.54	4.083	9.25	7.167	3.81	10.25	0.54
1.083	0.54	4.167	9.25	7.250	3.81	10.33	0.54
1.167	0.54	4.250	9.25	7.333	2.18	10.42	0.54
1.250	0.54	4.333	25.02	7.417	2.18	10.50	0.54
1.333	0.54	4.417	25.02	7.500	2.18	10.58	0.54

```
               1.417    0.54 | 4.500   25.02 | 7.583    2.18 | 10.67    0.54
               1.500    0.54 | 4.583   25.02 | 7.667    2.18 | 10.75    0.54
               1.583    0.54 | 4.667   25.02 | 7.750    2.18 | 10.83    0.54
               1.667    0.54 | 4.750   25.02 | 7.833    2.18 | 10.92    0.54
               1.750    0.54 | 4.833   25.02 | 7.917    2.18 | 11.00    0.54
               1.833    0.54 | 4.917   25.02 | 8.000    2.18 | 11.08    0.54
               1.917    0.54 | 5.000   25.02 | 8.083    2.18 | 11.17    0.54
               2.000    0.54 | 5.083   25.02 | 8.167    2.18 | 11.25    0.54
               2.083    0.54 | 5.167   25.02 | 8.250    2.18 | 11.33    0.54
               2.167    0.54 | 5.250   25.02 | 8.333    1.09 | 11.42    0.54
               2.250    0.54 | 5.333    7.07 | 8.417    1.09 | 11.50    0.54
               2.333    3.26 | 5.417    7.07 | 8.500    1.09 | 11.58    0.54
               2.417    3.26 | 5.500    7.07 | 8.583    1.09 | 11.67    0.54
               2.500    3.26 | 5.583    7.07 | 8.667    1.09 | 11.75    0.54
               2.583    3.26 | 5.667    7.07 | 8.750    1.09 | 11.83    0.54
               2.667    3.26 | 5.750    7.07 | 8.833    1.09 | 11.92    0.54
               2.750    3.26 | 5.833    7.07 | 8.917    1.09 | 12.00    0.54
               2.833    3.26 | 5.917    7.07 | 9.000    1.09 | 12.08    0.54
               2.917    3.26 | 6.000    7.07 | 9.083    1.09 | 12.17    0.54
               3.000    3.26 | 6.083    7.07 | 9.167    1.09 | 12.25    0.54
               3.083    3.26 | 6.167    7.07 | 9.250    1.09 |

     Max.Eff.Inten.(mm/hr)=      25.02        14.28
               over (min)         5.00        25.00
     Storage Coeff.  (min)=       6.93 (ii)   22.30 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.17         0.05
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.37         0.04        0.407 (iii)
     TIME TO PEAK    (hrs)=       5.25         5.42         5.25
     RUNOFF VOLUME    (mm)=      53.38        23.19        47.64
     TOTAL RAINFALL   (mm)=      54.38        54.38        54.38
     RUNOFF COEFFICIENT   =       0.98         0.43         0.88


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0262)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0202):     6.57   0.407     5.25    47.64
     + ID2= 2 (  0268):     5.27   0.150     5.42    53.06
       ================================================
       ID = 3 (  0262):    11.84   0.554     5.25    50.05

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0266)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0259):     4.67   0.240     5.25    48.63
     + ID2= 2 (  0262):    11.84   0.554     5.25    50.05
       ================================================
       ID = 3 (  0266):    16.51   0.794     5.25    49.65

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| RESERVOIR(  0263)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.2130      0.6563
                          0.0190     0.1773   |   0.2520      0.6883
                          0.0220     0.2128   |   0.2890      0.7150
                          0.0260     0.2888   |   0.2980      0.7450
                          0.0300     0.3648   |   0.3060      0.7700
                          0.0650     0.4586   |   0.3150      0.8127
                          0.1100     0.5155   |   0.3320      0.9290
                          0.1680     0.5503   |   0.3390      0.9767
                          0.1930     0.5804   |   0.3520      1.0680
                          0.2000     0.6048   |   0.0000      0.0000

                                    AREA     QPEAK     TPEAK       R.V.
                                    (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (  0266)     16.510      0.794      5.25      49.65
     OUTFLOW: ID= 1 (  0263)     16.510      0.173      8.33      49.51

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 21.73
                    TIME SHIFT OF PEAK FLOW         (min)=185.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.5558

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0206):     0.12   0.004     5.25    23.17
     + ID2= 2 (  0263):    16.51   0.173     8.33    49.51
       ================================================
       ID = 3 (  0261):    16.64   0.173     8.33    49.31

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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================================================================================
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       V    V   I    SSSSS  U   U    A    L              (v 5.0.2025)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****
```

```
  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\0a31cd5a-f140-4f20-b904-fa734fce65d0\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\0a31cd5a-f140-4f20-b904-fa734fce65d0\s


DATE: 07/06/2020                          TIME: 04:35:19

USER:



COMMENTS: _____________________________________________________________


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  ********************************************
  ** SIMULATION : 50 Year 12 Hour AES           **
  ********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              fc9a518d-4e80-47e2-ab56-8ded57ffff68\5897a01a
| Ptotal= 80.82 mm |    Comments: 50 Year 12 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.25    0.00 |  3.50   13.74 |  6.75    5.66 | 10.00    0.81
               0.50    0.81 |  3.75   13.74 |  7.00    5.66 | 10.25    0.81
               0.75    0.81 |  4.00   13.74 |  7.25    5.66 | 10.50    0.81
               1.00    0.81 |  4.25   13.74 |  7.50    3.23 | 10.75    0.81
               1.25    0.81 |  4.50   37.17 |  7.75    3.23 | 11.00    0.81
               1.50    0.81 |  4.75   37.17 |  8.00    3.23 | 11.25    0.81
               1.75    0.81 |  5.00   37.17 |  8.25    3.23 | 11.50    0.81
               2.00    0.81 |  5.25   37.17 |  8.50    1.62 | 11.75    0.81
               2.25    0.81 |  5.50   10.50 |  8.75    1.62 | 12.00    0.81
               2.50    4.85 |  5.75   10.50 |  9.00    1.62 | 12.25    0.81
               2.75    4.85 |  6.00   10.50 |  9.25    1.62 |
               3.00    4.85 |  6.25   10.50 |  9.50    0.81 |
               3.25    4.85 |  6.50    5.66 |  9.75    0.81 |

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| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    4.85 | 6.250   10.50 |  9.33    0.81
               0.167    0.00 | 3.250    4.85 | 6.333    5.66 |  9.42    0.81
               0.250    0.00 | 3.333   13.74 | 6.417    5.66 |  9.50    0.81
               0.333    0.81 | 3.417   13.74 | 6.500    5.66 |  9.58    0.81
               0.417    0.81 | 3.500   13.74 | 6.583    5.66 |  9.67    0.81
               0.500    0.81 | 3.583   13.74 | 6.667    5.66 |  9.75    0.81
               0.583    0.81 | 3.667   13.74 | 6.750    5.66 |  9.83    0.81
               0.667    0.81 | 3.750   13.74 | 6.833    5.66 |  9.92    0.81
               0.750    0.81 | 3.833   13.74 | 6.917    5.66 | 10.00    0.81
               0.833    0.81 | 3.917   13.74 | 7.000    5.66 | 10.08    0.81
               0.917    0.81 | 4.000   13.74 | 7.083    5.66 | 10.17    0.81
               1.000    0.81 | 4.083   13.74 | 7.167    5.66 | 10.25    0.81
               1.083    0.81 | 4.167   13.74 | 7.250    5.66 | 10.33    0.81
               1.167    0.81 | 4.250   13.74 | 7.333    3.23 | 10.42    0.81
               1.250    0.81 | 4.333   37.17 | 7.417    3.23 | 10.50    0.81
               1.333    0.81 | 4.417   37.17 | 7.500    3.23 | 10.58    0.81
               1.417    0.81 | 4.500   37.17 | 7.583    3.23 | 10.67    0.81
               1.500    0.81 | 4.583   37.17 | 7.667    3.23 | 10.75    0.81
               1.583    0.81 | 4.667   37.17 | 7.750    3.23 | 10.83    0.81
               1.667    0.81 | 4.750   37.17 | 7.833    3.23 | 10.92    0.81
               1.750    0.81 | 4.833   37.17 | 7.917    3.23 | 11.00    0.81
               1.833    0.81 | 4.917   37.17 | 8.000    3.23 | 11.08    0.81
               1.917    0.81 | 5.000   37.17 | 8.083    3.23 | 11.17    0.81
               2.000    0.81 | 5.083   37.17 | 8.167    3.23 | 11.25    0.81
               2.083    0.81 | 5.167   37.17 | 8.250    3.23 | 11.33    0.81
               2.167    0.81 | 5.250   37.17 | 8.333    1.62 | 11.42    0.81
               2.250    0.81 | 5.333   10.50 | 8.417    1.62 | 11.50    0.81
               2.333    4.85 | 5.417   10.50 | 8.500    1.62 | 11.58    0.81
               2.417    4.85 | 5.500   10.50 | 8.583    1.62 | 11.67    0.81
               2.500    4.85 | 5.583   10.50 | 8.667    1.62 | 11.75    0.81
               2.583    4.85 | 5.667   10.50 | 8.750    1.62 | 11.83    0.81
               2.667    4.85 | 5.750   10.50 | 8.833    1.62 | 11.92    0.81
               2.750    4.85 | 5.833   10.50 | 8.917    1.62 | 12.00    0.81
               2.833    4.85 | 5.917   10.50 | 9.000    1.62 | 12.08    0.81
               2.917    4.85 | 6.000   10.50 | 9.083    1.62 | 12.17    0.81
               3.000    4.85 | 6.083   10.50 | 9.167    1.62 | 12.25    0.81
               3.083    4.85 | 6.167   10.50 | 9.250    1.62 |

    Unit Hyd Qpeak  (cms)=   0.019

    PEAK FLOW       (cms)=   0.008 (i)
    TIME TO PEAK    (hrs)=   5.250
    RUNOFF VOLUME    (mm)=  43.651
    TOTAL RAINFALL   (mm)=  80.820
    RUNOFF COEFFICIENT   =   0.540

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              fc9a518d-4e80-47e2-ab56-8ded57ffff68\5897a01a
| Ptotal= 80.82 mm |    Comments: 50 Year 12 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.25    0.00 |  3.50   13.74 |  6.75    5.66 | 10.00    0.81
               0.50    0.81 |  3.75   13.74 |  7.00    5.66 | 10.25    0.81
               0.75    0.81 |  4.00   13.74 |  7.25    5.66 | 10.50    0.81
               1.00    0.81 |  4.25   13.74 |  7.50    3.23 | 10.75    0.81
               1.25    0.81 |  4.50   37.17 |  7.75    3.23 | 11.00    0.81
               1.50    0.81 |  4.75   37.17 |  8.00    3.23 | 11.25    0.81
               1.75    0.81 |  5.00   37.17 |  8.25    3.23 | 11.50    0.81
               2.00    0.81 |  5.25   37.17 |  8.50    1.62 | 11.75    0.81
               2.25    0.81 |  5.50   10.50 |  8.75    1.62 | 12.00    0.81
               2.50    4.85 |  5.75   10.50 |  9.00    1.62 | 12.25    0.81
               2.75    4.85 |  6.00   10.50 |  9.25    1.62 |
```

3.00	4.85	6.25	10.50	9.50	0.81		
3.25	4.85	6.50	5.66	9.75	0.81		

CALIB	
STANDHYD (0205)	Area (ha)= 1.12
ID= 1 DT= 5.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.11	0.01
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	86.60	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	4.85	6.250	10.50	9.33	0.81
0.167	0.00	3.250	4.85	6.333	5.66	9.42	0.81
0.250	0.00	3.333	13.74	6.417	5.66	9.50	0.81
0.333	0.81	3.417	13.74	6.500	5.66	9.58	0.81
0.417	0.81	3.500	13.74	6.583	5.66	9.67	0.81
0.500	0.81	3.583	13.74	6.667	5.66	9.75	0.81
0.583	0.81	3.667	13.74	6.750	5.66	9.83	0.81
0.667	0.81	3.750	13.74	6.833	5.66	9.92	0.81
0.750	0.81	3.833	13.74	6.917	5.66	10.00	0.81
0.833	0.81	3.917	13.74	7.000	5.66	10.08	0.81
0.917	0.81	4.000	13.74	7.083	5.66	10.17	0.81
1.000	0.81	4.083	13.74	7.167	5.66	10.25	0.81
1.083	0.81	4.167	13.74	7.250	5.66	10.33	0.81
1.167	0.81	4.250	13.74	7.333	3.23	10.42	0.81
1.250	0.81	4.333	37.17	7.417	3.23	10.50	0.81
1.333	0.81	4.417	37.17	7.500	3.23	10.58	0.81
1.417	0.81	4.500	37.17	7.583	3.23	10.67	0.81
1.500	0.81	4.583	37.17	7.667	3.23	10.75	0.81
1.583	0.81	4.667	37.17	7.750	3.23	10.83	0.81
1.667	0.81	4.750	37.17	7.833	3.23	10.92	0.81
1.750	0.81	4.833	37.17	7.917	3.23	11.00	0.81
1.833	0.81	4.917	37.17	8.000	3.23	11.08	0.81
1.917	0.81	5.000	37.17	8.083	3.23	11.17	0.81
2.000	0.81	5.083	37.17	8.167	3.23	11.25	0.81
2.083	0.81	5.167	37.17	8.250	3.23	11.33	0.81
2.167	0.81	5.250	37.17	8.333	1.62	11.42	0.81
2.250	0.81	5.333	10.50	8.417	1.62	11.50	0.81
2.333	4.85	5.417	10.50	8.500	1.62	11.58	0.81
2.417	4.85	5.500	10.50	8.583	1.62	11.67	0.81
2.500	4.85	5.583	10.50	8.667	1.62	11.75	0.81
2.583	4.85	5.667	10.50	8.750	1.62	11.83	0.81
2.667	4.85	5.750	10.50	8.833	1.62	11.92	0.81
2.750	4.85	5.833	10.50	8.917	1.62	12.00	0.81
2.833	4.85	5.917	10.50	9.000	1.62	12.08	0.81
2.917	4.85	6.000	10.50	9.083	1.62	12.17	0.81
3.000	4.85	6.083	10.50	9.167	1.62	12.25	0.81
3.083	4.85	6.167	10.50	9.250	1.62		

				TOTALS
Max.Eff.Inten.(mm/hr)=		37.17	26.69	
	over (min)	5.00	10.00	
Storage Coeff. (min)=		3.48 (ii)	5.15 (ii)	
Unit Hyd. Tpeak (min)=		5.00	10.00	
Unit Hyd. peak (cms)=		0.26	0.16	
PEAK FLOW	(cms)=	0.11	0.00	0.116 (iii)
TIME TO PEAK	(hrs)=	5.08	5.25	5.25
RUNOFF VOLUME	(mm)=	79.82	43.69	79.46
TOTAL RAINFALL	(mm)=	80.82	80.82	80.82
RUNOFF COEFFICIENT	=	0.99	0.54	0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0256)					
IN= 2---> OUT= 1					
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)	
	0.0000	0.0000	0.0470	0.0750	

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0205)	1.125	0.116	5.25	79.46
OUTFLOW: ID= 1 (0256)	1.125	0.032	6.25	79.10

PEAK FLOW REDUCTION [Qout/Qin](%)= 28.01
TIME SHIFT OF PEAK FLOW (min)= 60.00
MAXIMUM STORAGE USED (ha.m.)= 0.0518

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\fc9a518d-4e80-47e2-ab56-8ded57ffff68\5897a01a
Ptotal= 80.82 mm	Comments: 50 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	13.74	6.75	5.66	10.00	0.81
0.50	0.81	3.75	13.74	7.00	5.66	10.25	0.81
0.75	0.81	4.00	13.74	7.25	5.66	10.50	0.81
1.00	0.81	4.25	13.74	7.50	3.23	10.75	0.81
1.25	0.81	4.50	37.17	7.75	3.23	11.00	0.81
1.50	0.81	4.75	37.17	8.00	3.23	11.25	0.81
1.75	0.81	5.00	37.17	8.25	3.23	11.50	0.81
2.00	0.81	5.25	37.17	8.50	1.62	11.75	0.81
2.25	0.81	5.50	10.50	8.75	1.62	12.00	0.81
2.50	4.85	5.75	10.50	9.00	1.62	12.25	0.81
2.75	4.85	6.00	10.50	9.25	1.62		
3.00	4.85	6.25	10.50	9.50	0.81		
3.25	4.85	6.50	5.66	9.75	0.81		

CALIB	
STANDHYD (0203)	Area (ha)= 2.10
ID= 1 DT= 5.0 min	Total Imp(%)= 80.00 Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.68	0.42
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	118.18	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	4.85	6.250	10.50	9.33	0.81
0.167	0.00	3.250	4.85	6.333	5.66	9.42	0.81
0.250	0.00	3.333	13.74	6.417	5.66	9.50	0.81
0.333	0.81	3.417	13.74	6.500	5.66	9.58	0.81
0.417	0.81	3.500	13.74	6.583	5.66	9.67	0.81
0.500	0.81	3.583	13.74	6.667	5.66	9.75	0.81
0.583	0.81	3.667	13.74	6.750	5.66	9.83	0.81
0.667	0.81	3.750	13.74	6.833	5.66	9.92	0.81
0.750	0.81	3.833	13.74	6.917	5.66	10.00	0.81
0.833	0.81	3.917	13.74	7.000	5.66	10.08	0.81
0.917	0.81	4.000	13.74	7.083	5.66	10.17	0.81
1.000	0.81	4.083	13.74	7.167	5.66	10.25	0.81
1.083	0.81	4.167	13.74	7.250	5.66	10.33	0.81
1.167	0.81	4.250	13.74	7.333	3.23	10.42	0.81
1.250	0.81	4.333	37.17	7.417	3.23	10.50	0.81
1.333	0.81	4.417	37.17	7.500	3.23	10.58	0.81
1.417	0.81	4.500	37.17	7.583	3.23	10.67	0.81
1.500	0.81	4.583	37.17	7.667	3.23	10.75	0.81
1.583	0.81	4.667	37.17	7.750	3.23	10.83	0.81
1.667	0.81	4.750	37.17	7.833	3.23	10.92	0.81
1.750	0.81	4.833	37.17	7.917	3.23	11.00	0.81
1.833	0.81	4.917	37.17	8.000	3.23	11.08	0.81
1.917	0.81	5.000	37.17	8.083	3.23	11.17	0.81
2.000	0.81	5.083	37.17	8.167	3.23	11.25	0.81
2.083	0.81	5.167	37.17	8.250	3.23	11.33	0.81
2.167	0.81	5.250	37.17	8.333	1.62	11.42	0.81
2.250	0.81	5.333	10.50	8.417	1.62	11.50	0.81
2.333	4.85	5.417	10.50	8.500	1.62	11.58	0.81
2.417	4.85	5.500	10.50	8.583	1.62	11.67	0.81
2.500	4.85	5.583	10.50	8.667	1.62	11.75	0.81
2.583	4.85	5.667	10.50	8.750	1.62	11.83	0.81
2.667	4.85	5.750	10.50	8.833	1.62	11.92	0.81
2.750	4.85	5.833	10.50	8.917	1.62	12.00	0.81
2.833	4.85	5.917	10.50	9.000	1.62	12.08	0.81
2.917	4.85	6.000	10.50	9.083	1.62	12.17	0.81
3.000	4.85	6.083	10.50	9.167	1.62	12.25	0.81
3.083	4.85	6.167	10.50	9.250	1.62		

				TOTALS
Max.Eff.Inten.(mm/hr)=		37.17	26.36	
over (min)		5.00	20.00	
Storage Coeff. (min)=		4.20 (ii)	16.23 (ii)	
Unit Hyd. Tpeak (min)=		5.00	20.00	
Unit Hyd. peak (cms)=		0.24	0.06	
PEAK FLOW	(cms)=	0.17	0.03	0.200 (iii)
TIME TO PEAK	(hrs)=	5.17	5.33	5.25
RUNOFF VOLUME	(mm)=	79.82	43.69	72.59
TOTAL RAINFALL	(mm)=	80.82	80.82	80.82
RUNOFF COEFFICIENT	=	0.99	0.54	0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0260)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (0203):	2.10	0.200	5.25	72.59
	+ ID2= 2 (0256):	1.12	0.032	6.25	79.10
	ID = 3 (0260):	3.22	0.231	5.25	74.87

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\fc9a518d-4e80-47e2-ab56-8ded57ffff68\5897a01a
Ptotal= 80.82 mm	Comments: 50 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	13.74	6.75	5.66	10.00	0.81
0.50	0.81	3.75	13.74	7.00	5.66	10.25	0.81
0.75	0.81	4.00	13.74	7.25	5.66	10.50	0.81
1.00	0.81	4.25	13.74	7.50	3.23	10.75	0.81
1.25	0.81	4.50	37.17	7.75	3.23	11.00	0.81
1.50	0.81	4.75	37.17	8.00	3.23	11.25	0.81
1.75	0.81	5.00	37.17	8.25	3.23	11.50	0.81
2.00	0.81	5.25	37.17	8.50	1.62	11.75	0.81
2.25	0.81	5.50	10.50	8.75	1.62	12.00	0.81
2.50	4.85	5.75	10.50	9.00	1.62	12.25	0.81
2.75	4.85	6.00	10.50	9.25	1.62		
3.00	4.85	6.25	10.50	9.50	0.81		
3.25	4.85	6.50	5.66	9.75	0.81		

CALIB	
STANDHYD (0204)	Area (ha)= 1.45
ID= 1 DT= 5.0 min	Total Imp(%)= 80.00 Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.16	0.29
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	98.32	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN

hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.00	3.167	4.85	6.250	10.50	9.33	0.81
0.167	0.00	3.250	4.85	6.333	5.66	9.42	0.81
0.250	0.00	3.333	13.74	6.417	5.66	9.50	0.81
0.333	0.81	3.417	13.74	6.500	5.66	9.58	0.81
0.417	0.81	3.500	13.74	6.583	5.66	9.67	0.81
0.500	0.81	3.583	13.74	6.667	5.66	9.75	0.81
0.583	0.81	3.667	13.74	6.750	5.66	9.83	0.81
0.667	0.81	3.750	13.74	6.833	5.66	9.92	0.81
0.750	0.81	3.833	13.74	6.917	5.66	10.00	0.81
0.833	0.81	3.917	13.74	7.000	5.66	10.08	0.81
0.917	0.81	4.000	13.74	7.083	5.66	10.17	0.81
1.000	0.81	4.083	13.74	7.167	5.66	10.25	0.81
1.083	0.81	4.167	13.74	7.250	5.66	10.33	0.81
1.167	0.81	4.250	13.74	7.333	3.23	10.42	0.81
1.250	0.81	4.333	37.17	7.417	3.23	10.50	0.81
1.333	0.81	4.417	37.17	7.500	3.23	10.58	0.81
1.417	0.81	4.500	37.17	7.583	3.23	10.67	0.81
1.500	0.81	4.583	37.17	7.667	3.23	10.75	0.81
1.583	0.81	4.667	37.17	7.750	3.23	10.83	0.81
1.667	0.81	4.750	37.17	7.833	3.23	10.92	0.81
1.750	0.81	4.833	37.17	7.917	3.23	11.00	0.81
1.833	0.81	4.917	37.17	8.000	3.23	11.08	0.81
1.917	0.81	5.000	37.17	8.083	3.23	11.17	0.81
2.000	0.81	5.083	37.17	8.167	3.23	11.25	0.81
2.083	0.81	5.167	37.17	8.250	3.23	11.33	0.81
2.167	0.81	5.250	37.17	8.333	1.62	11.42	0.81
2.250	0.81	5.333	10.50	8.417	1.62	11.50	0.81
2.333	4.85	5.417	10.50	8.500	1.62	11.58	0.81
2.417	4.85	5.500	10.50	8.583	1.62	11.67	0.81
2.500	4.85	5.583	10.50	8.667	1.62	11.75	0.81
2.583	4.85	5.667	10.50	8.750	1.62	11.83	0.81
2.667	4.85	5.750	10.50	8.833	1.62	11.92	0.81
2.750	4.85	5.833	10.50	8.917	1.62	12.00	0.81
2.833	4.85	5.917	10.50	9.000	1.62	12.08	0.81
2.917	4.85	6.000	10.50	9.083	1.62	12.17	0.81
3.000	4.85	6.083	10.50	9.167	1.62	12.25	0.81
3.083	4.85	6.167	10.50	9.250	1.62		

Max.Eff.Inten.(mm/hr)=	37.17	26.36	
over (min)	5.00	20.00	
Storage Coeff. (min)=	3.76 (ii)	15.79 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.25	0.07	
			TOTALS
PEAK FLOW (cms)=	0.12	0.02	0.138 (iii)
TIME TO PEAK (hrs)=	5.08	5.25	5.25
RUNOFF VOLUME (mm)=	79.82	43.69	72.59
TOTAL RAINFALL (mm)=	80.82	80.82	80.82
RUNOFF COEFFICIENT =	0.99	0.54	0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0259)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	ID1= 1 (0204):	1.45	0.138	5.25	72.59
	+ ID2= 2 (0260):	3.22	0.231	5.25	74.87
	ID = 3 (0259):	4.67	0.369	5.25	74.16

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\fc9a518d-4e80-47e2-ab56-8ded57ffff68\5897a01a
Ptotal= 80.82 mm	Comments: 50 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	13.74	6.75	5.66	10.00	0.81
0.50	0.81	3.75	13.74	7.00	5.66	10.25	0.81
0.75	0.81	4.00	13.74	7.25	5.66	10.50	0.81
1.00	0.81	4.25	13.74	7.50	3.23	10.75	0.81
1.25	0.81	4.50	37.17	7.75	3.23	11.00	0.81
1.50	0.81	4.75	37.17	8.00	3.23	11.25	0.81
1.75	0.81	5.00	37.17	8.25	3.23	11.50	0.81
2.00	0.81	5.25	37.17	8.50	1.62	11.75	0.81
2.25	0.81	5.50	10.50	8.75	1.62	12.00	0.81
2.50	4.85	5.75	10.50	9.00	1.62	12.25	0.81
2.75	4.85	6.00	10.50	9.25	1.62		
3.00	4.85	6.25	10.50	9.50	0.81		
3.25	4.85	6.50	5.66	9.75	0.81		

CALIB	Area (ha)= 5.27
STANDHYD (0201)	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00
ID= 1 DT= 5.0 min	

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.22	0.05
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	187.44	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	4.85	6.250	10.50	9.33	0.81
0.167	0.00	3.250	4.85	6.333	5.66	9.42	0.81
0.250	0.00	3.333	13.74	6.417	5.66	9.50	0.81
0.333	0.81	3.417	13.74	6.500	5.66	9.58	0.81
0.417	0.81	3.500	13.74	6.583	5.66	9.67	0.81
0.500	0.81	3.583	13.74	6.667	5.66	9.75	0.81
0.583	0.81	3.667	13.74	6.750	5.66	9.83	0.81
0.667	0.81	3.750	13.74	6.833	5.66	9.92	0.81
0.750	0.81	3.833	13.74	6.917	5.66	10.00	0.81
0.833	0.81	3.917	13.74	7.000	5.66	10.08	0.81
0.917	0.81	4.000	13.74	7.083	5.66	10.17	0.81
1.000	0.81	4.083	13.74	7.167	5.66	10.25	0.81

1.083	0.81	4.167	13.74	7.250	5.66	10.33	0.81
1.167	0.81	4.250	13.74	7.333	3.23	10.42	0.81
1.250	0.81	4.333	37.17	7.417	3.23	10.50	0.81
1.333	0.81	4.417	37.17	7.500	3.23	10.58	0.81
1.417	0.81	4.500	37.17	7.583	3.23	10.67	0.81
1.500	0.81	4.583	37.17	7.667	3.23	10.75	0.81
1.583	0.81	4.667	37.17	7.750	3.23	10.83	0.81
1.667	0.81	4.750	37.17	7.833	3.23	10.92	0.81
1.750	0.81	4.833	37.17	7.917	3.23	11.00	0.81
1.833	0.81	4.917	37.17	8.000	3.23	11.08	0.81
1.917	0.81	5.000	37.17	8.083	3.23	11.17	0.81
2.000	0.81	5.083	37.17	8.167	3.23	11.25	0.81
2.083	0.81	5.167	37.17	8.250	3.23	11.33	0.81
2.167	0.81	5.250	37.17	8.333	1.62	11.42	0.81
2.250	0.81	5.333	10.50	8.417	1.62	11.50	0.81
2.333	4.85	5.417	10.50	8.500	1.62	11.58	0.81
2.417	4.85	5.500	10.50	8.583	1.62	11.67	0.81
2.500	4.85	5.583	10.50	8.667	1.62	11.75	0.81
2.583	4.85	5.667	10.50	8.750	1.62	11.83	0.81
2.667	4.85	5.750	10.50	8.833	1.62	11.92	0.81
2.750	4.85	5.833	10.50	8.917	1.62	12.00	0.81
2.833	4.85	5.917	10.50	9.000	1.62	12.08	0.81
2.917	4.85	6.000	10.50	9.083	1.62	12.17	0.81
3.000	4.85	6.083	10.50	9.167	1.62	12.25	0.81
3.083	4.85	6.167	10.50	9.250	1.62		

			TOTALS
Max.Eff.Inten.(mm/hr)=	37.17	26.69	
over (min)	5.00	10.00	
Storage Coeff. (min)=	5.53 (ii)	7.20 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.20	0.14	
PEAK FLOW (cms)=	0.54	0.00	0.542 (iii)
TIME TO PEAK (hrs)=	5.25	5.25	5.25
RUNOFF VOLUME (mm)=	79.82	43.69	79.46
TOTAL RAINFALL (mm)=	80.82	80.82	80.82
RUNOFF COEFFICIENT =	0.99	0.54	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0268)| IN= 2---> OUT= 1 | DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1959	0.1883
	0.0980	0.0369	0.2939	0.4335

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)	5.270	0.542	5.25	79.46
OUTFLOW: ID= 1 (0268)	5.270	0.197	5.50	79.44

PEAK FLOW REDUCTION [Qout/Qin](%)= 36.34
TIME SHIFT OF PEAK FLOW (min)= 15.00
MAXIMUM STORAGE USED (ha.m.)= 0.1916

READ STORM | Ptotal= 80.82 mm |	Filename: C:\Users\mventresca\AppData\Local\Temp\fc9a518d-4e80-47e2-ab56-8ded57ffff68\5897a01a
	Comments: 50 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	13.74	6.75	5.66	10.00	0.81
0.50	0.81	3.75	13.74	7.00	5.66	10.25	0.81
0.75	0.81	4.00	13.74	7.25	5.66	10.50	0.81
1.00	0.81	4.25	13.74	7.50	3.23	10.75	0.81
1.25	0.81	4.50	37.17	7.75	3.23	11.00	0.81
1.50	0.81	4.75	37.17	8.00	3.23	11.25	0.81
1.75	0.81	5.00	37.17	8.25	3.23	11.50	0.81
2.00	0.81	5.25	37.17	8.50	1.62	11.75	0.81
2.25	0.81	5.50	10.50	8.75	1.62	12.00	0.81
2.50	4.85	5.75	10.50	9.00	1.62	12.25	0.81
2.75	4.85	6.00	10.50	9.25	1.62		
3.00	4.85	6.25	10.50	9.50	0.81		
3.25	4.85	6.50	5.66	9.75	0.81		

CALIB | STANDHYD (0202)| ID= 1 DT= 5.0 min |	Area (ha)= 6.57	Total Imp(%)= 81.00	Dir. Conn.(%)= 81.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.32	1.25
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	209.28	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	4.85	6.250	10.50	9.33	0.81
0.167	0.00	3.250	4.85	6.333	5.66	9.42	0.81
0.250	0.00	3.333	13.74	6.417	5.66	9.50	0.81
0.333	0.81	3.417	13.74	6.500	5.66	9.58	0.81
0.417	0.81	3.500	13.74	6.583	5.66	9.67	0.81
0.500	0.81	3.583	13.74	6.667	5.66	9.75	0.81
0.583	0.81	3.667	13.74	6.750	5.66	9.83	0.81
0.667	0.81	3.750	13.74	6.833	5.66	9.92	0.81
0.750	0.81	3.833	13.74	6.917	5.66	10.00	0.81
0.833	0.81	3.917	13.74	7.000	5.66	10.08	0.81
0.917	0.81	4.000	13.74	7.083	5.66	10.17	0.81
1.000	0.81	4.083	13.74	7.167	5.66	10.25	0.81
1.083	0.81	4.167	13.74	7.250	5.66	10.33	0.81
1.167	0.81	4.250	13.74	7.333	3.23	10.42	0.81
1.250	0.81	4.333	37.17	7.417	3.23	10.50	0.81
1.333	0.81	4.417	37.17	7.500	3.23	10.58	0.81
1.417	0.81	4.500	37.17	7.583	3.23	10.67	0.81
1.500	0.81	4.583	37.17	7.667	3.23	10.75	0.81
1.583	0.81	4.667	37.17	7.750	3.23	10.83	0.81
1.667	0.81	4.750	37.17	7.833	3.23	10.92	0.81
1.750	0.81	4.833	37.17	7.917	3.23	11.00	0.81

```
               1.833    0.81 | 4.917   37.17 | 8.000    3.23 | 11.08    0.81
               1.917    0.81 | 5.000   37.17 | 8.083    3.23 | 11.17    0.81
               2.000    0.81 | 5.083   37.17 | 8.167    3.23 | 11.25    0.81
               2.083    0.81 | 5.167   37.17 | 8.250    3.23 | 11.33    0.81
               2.167    0.81 | 5.250   37.17 | 8.333    1.62 | 11.42    0.81
               2.250    0.81 | 5.333   10.50 | 8.417    1.62 | 11.50    0.81
               2.333    4.85 | 5.417   10.50 | 8.500    1.62 | 11.58    0.81
               2.417    4.85 | 5.500   10.50 | 8.583    1.62 | 11.67    0.81
               2.500    4.85 | 5.583   10.50 | 8.667    1.62 | 11.75    0.81
               2.583    4.85 | 5.667   10.50 | 8.750    1.62 | 11.83    0.81
               2.667    4.85 | 5.750   10.50 | 8.833    1.62 | 11.92    0.81
               2.750    4.85 | 5.833   10.50 | 8.917    1.62 | 12.00    0.81
               2.833    4.85 | 5.917   10.50 | 9.000    1.62 | 12.08    0.81
               2.917    4.85 | 6.000   10.50 | 9.083    1.62 | 12.17    0.81
               3.000    4.85 | 6.083   10.50 | 9.167    1.62 | 12.25    0.81
               3.083    4.85 | 6.167   10.50 | 9.250    1.62 |

     Max.Eff.Inten.(mm/hr)=      37.17        26.36
               over (min)        5.00        20.00
     Storage Coeff.  (min)=      5.91 (ii)   17.94 (ii)
     Unit Hyd. Tpeak (min)=      5.00        20.00
     Unit Hyd. peak  (cms)=      0.19         0.06
                                                        *TOTALS*
     PEAK FLOW       (cms)=      0.55         0.08          0.627 (iii)
     TIME TO PEAK    (hrs)=      5.25         5.33           5.25
     RUNOFF VOLUME    (mm)=     79.82        43.69          72.95
     TOTAL RAINFALL   (mm)=     80.82        80.82          80.82
     RUNOFF COEFFICIENT   =      0.99         0.54           0.90


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0262)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0202):     6.57   0.627     5.25    72.95
     + ID2= 2 (  0268):     5.27   0.197     5.50    79.44
       ================================================
       ID = 3 (  0262):    11.84   0.819     5.25    75.84

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0266)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0259):     4.67   0.369     5.25    74.16
     + ID2= 2 (  0262):    11.84   0.819     5.25    75.84
       ================================================
       ID = 3 (  0266):    16.51   1.189     5.25    75.37

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| RESERVOIR(  0263)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.2130     0.6563
                         0.0190     0.1773   |   0.2520     0.6883
                         0.0220     0.2128   |   0.2890     0.7150
                         0.0260     0.2888   |   0.2980     0.7450
                         0.0300     0.3648   |   0.3060     0.7700
                         0.0650     0.4586   |   0.3150     0.8127
                         0.1100     0.5155   |   0.3320     0.9290
                         0.1680     0.5503   |   0.3390     0.9767
                         0.1930     0.5804   |   0.3520     1.0680
                         0.2000     0.6048   |   0.0000     0.0000

                                    AREA     QPEAK     TPEAK       R.V.
                                    (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0266)     16.510      1.189      5.25      75.37
   OUTFLOW: ID= 1 (  0263)     16.510      0.292      7.50      75.22

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 24.56
                  TIME SHIFT OF PEAK FLOW         (min)=135.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.7248

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0206):     0.12   0.008     5.25    43.65
     + ID2= 2 (  0263):    16.51   0.292     7.50    75.22
       ================================================
       ID = 3 (  0261):    16.64   0.293     7.42    74.98

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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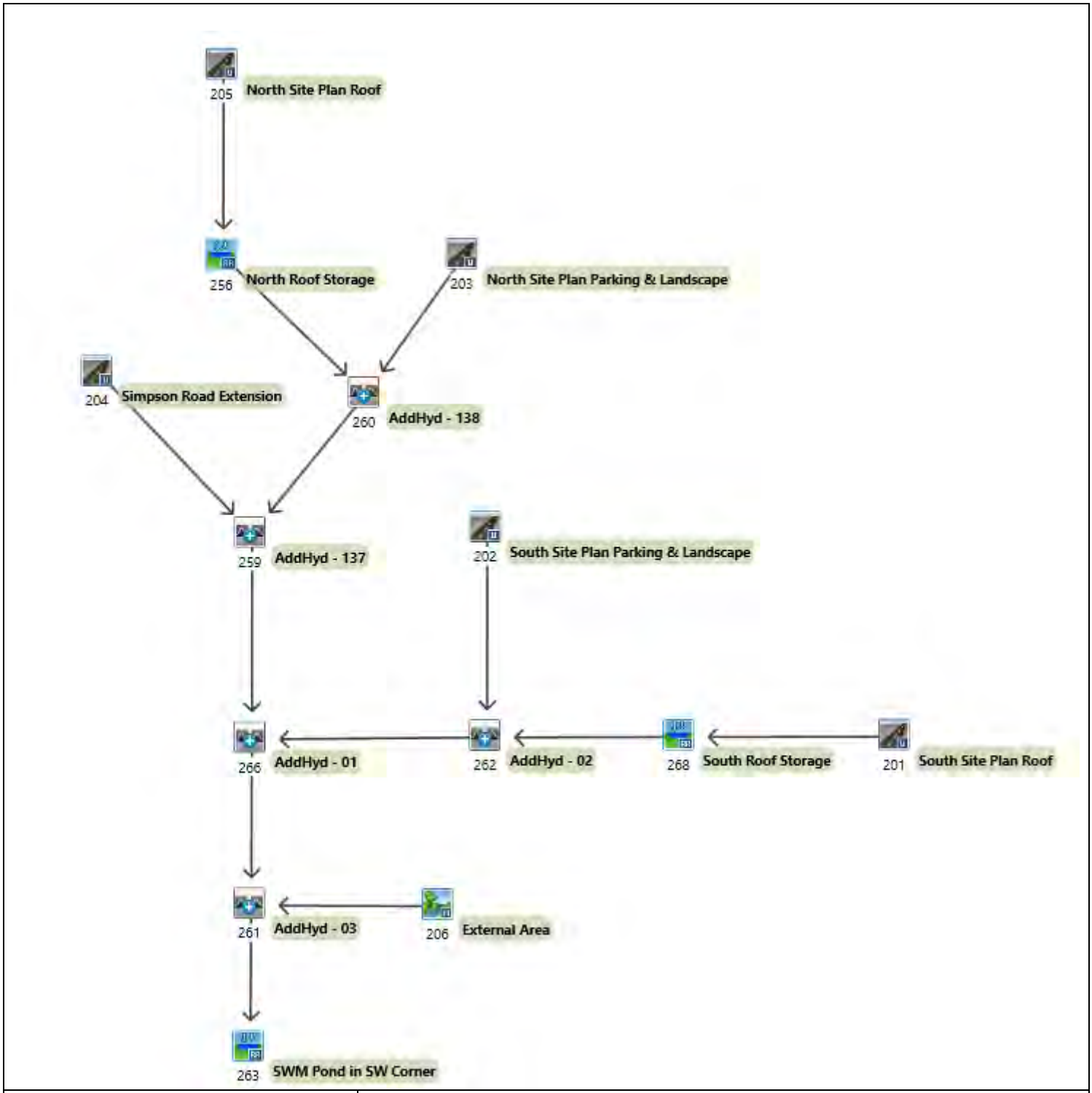
```



SCHAEFFERS
CONSULTING ENGINEERS

Post-development Visual OTTHYMO^{TM} Schematic
12 Hour SCS 2-100 Year

Job #: 2018-4841	**Date: July 2020**

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       V    V   I    SSSSS  U   U    A    L             (v 5.0.2025)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\15d8f3be-1022-40cf-9470-2dc809347b64\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\15d8f3be-1022-40cf-9470-2dc809347b64\s


DATE: 07/06/2020                          TIME: 04:36:54

USER:



COMMENTS: _____________________________________________________________


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  ***********************************************
  ** SIMULATION : 10 Year 12 Hour SCS           **
  ***********************************************


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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\596d80c2
| Ptotal= 66.80 mm |    Comments: 10yr 12hr 15min SCS
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	2.67	6.75	12.02	10.00	2.34
0.50	1.67	3.75	2.67	7.00	5.34	10.25	2.34
0.75	1.67	4.00	2.67	7.25	5.34	10.50	1.34
1.00	1.67	4.25	2.67	7.50	4.01	10.75	1.34
1.25	1.67	4.50	4.01	7.75	4.01	11.00	1.34
1.50	1.67	4.75	4.01	8.00	4.01	11.25	1.34
1.75	1.67	5.00	5.34	8.25	4.01	11.50	1.34
2.00	1.67	5.25	5.34	8.50	2.34	11.75	1.34
2.25	1.67	5.50	8.02	8.75	2.34	12.00	1.34
2.50	2.00	5.75	8.02	9.00	2.34	12.25	1.34
2.75	2.00	6.00	32.06	9.25	2.34		
3.00	2.00	6.25	88.18	9.50	2.34		
3.25	2.00	6.50	12.02	9.75	2.34		

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--------------------
| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.00	6.250	88.17	9.33	2.34
0.167	0.00	3.250	2.00	6.333	12.02	9.42	2.34
0.250	0.00	3.333	2.67	6.417	12.02	9.50	2.34
0.333	1.67	3.417	2.67	6.500	12.02	9.58	2.34
0.417	1.67	3.500	2.67	6.583	12.02	9.67	2.34
0.500	1.67	3.583	2.67	6.667	12.02	9.75	2.34
0.583	1.67	3.667	2.67	6.750	12.02	9.83	2.34
0.667	1.67	3.750	2.67	6.833	5.34	9.92	2.34
0.750	1.67	3.833	2.67	6.917	5.34	10.00	2.34
0.833	1.67	3.917	2.67	7.000	5.34	10.08	2.34
0.917	1.67	4.000	2.67	7.083	5.34	10.17	2.34
1.000	1.67	4.083	2.67	7.167	5.34	10.25	2.34
1.083	1.67	4.167	2.67	7.250	5.34	10.33	1.34
1.167	1.67	4.250	2.67	7.333	4.01	10.42	1.34
1.250	1.67	4.333	4.01	7.417	4.01	10.50	1.34
1.333	1.67	4.417	4.01	7.500	4.01	10.58	1.34
1.417	1.67	4.500	4.01	7.583	4.01	10.67	1.34
1.500	1.67	4.583	4.01	7.667	4.01	10.75	1.34
1.583	1.67	4.667	4.01	7.750	4.01	10.83	1.34
1.667	1.67	4.750	4.01	7.833	4.01	10.92	1.34
1.750	1.67	4.833	5.34	7.917	4.01	11.00	1.34
1.833	1.67	4.917	5.34	8.000	4.01	11.08	1.34
1.917	1.67	5.000	5.34	8.083	4.01	11.17	1.34
2.000	1.67	5.083	5.34	8.167	4.01	11.25	1.34
2.083	1.67	5.167	5.34	8.250	4.01	11.33	1.34
2.167	1.67	5.250	5.34	8.333	2.34	11.42	1.34
2.250	1.67	5.333	8.02	8.417	2.34	11.50	1.34
2.333	2.00	5.417	8.02	8.500	2.34	11.58	1.34
2.417	2.00	5.500	8.02	8.583	2.34	11.67	1.34
2.500	2.00	5.583	8.02	8.667	2.34	11.75	1.34
2.583	2.00	5.667	8.02	8.750	2.34	11.83	1.34
2.667	2.00	5.750	8.02	8.833	2.34	11.92	1.34
2.750	2.00	5.833	32.06	8.917	2.34	12.00	1.34
2.833	2.00	5.917	32.06	9.000	2.34	12.08	1.34
2.917	2.00	6.000	32.07	9.083	2.34	12.17	1.34
3.000	2.00	6.083	88.18	9.167	2.34	12.25	1.34
3.083	2.00	6.167	88.18	9.250	2.34		

```
    Unit Hyd Qpeak  (cms)=   0.019

    PEAK FLOW       (cms)=   0.010 (i)
    TIME TO PEAK    (hrs)=   6.333
    RUNOFF VOLUME    (mm)=  32.459
    TOTAL RAINFALL   (mm)=  66.800
    RUNOFF COEFFICIENT   =   0.486

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\596d80c2
| Ptotal= 66.80 mm |    Comments: 10yr 12hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  3.50    2.67 |  6.75   12.02 | 10.00    2.34
                0.50    1.67 |  3.75    2.67 |  7.00    5.34 | 10.25    2.34
                0.75    1.67 |  4.00    2.67 |  7.25    5.34 | 10.50    1.34
                1.00    1.67 |  4.25    2.67 |  7.50    4.01 | 10.75    1.34
                1.25    1.67 |  4.50    4.01 |  7.75    4.01 | 11.00    1.34
                1.50    1.67 |  4.75    4.01 |  8.00    4.01 | 11.25    1.34
                1.75    1.67 |  5.00    5.34 |  8.25    4.01 | 11.50    1.34
                2.00    1.67 |  5.25    5.34 |  8.50    2.34 | 11.75    1.34
                2.25    1.67 |  5.50    8.02 |  8.75    2.34 | 12.00    1.34
                2.50    2.00 |  5.75    8.02 |  9.00    2.34 | 12.25    1.34
                2.75    2.00 |  6.00   32.06 |  9.25    2.34 |
                3.00    2.00 |  6.25   88.18 |  9.50    2.34 |
                3.25    2.00 |  6.50   12.02 |  9.75    2.34 |

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--------------------
| CALIB            |
| STANDHYD (  0205)|   Area    (ha)=   1.12
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.11         0.01
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      86.60        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 3.167    2.00 | 6.250   88.17 |  9.33    2.34
               0.167    0.00 | 3.250    2.00 | 6.333   12.02 |  9.42    2.34
               0.250    0.00 | 3.333    2.67 | 6.417   12.02 |  9.50    2.34
               0.333    1.67 | 3.417    2.67 | 6.500   12.02 |  9.58    2.34
               0.417    1.67 | 3.500    2.67 | 6.583   12.02 |  9.67    2.34
               0.500    1.67 | 3.583    2.67 | 6.667   12.02 |  9.75    2.34
               0.583    1.67 | 3.667    2.67 | 6.750   12.02 |  9.83    2.34
               0.667    1.67 | 3.750    2.67 | 6.833    5.34 |  9.92    2.34
               0.750    1.67 | 3.833    2.67 | 6.917    5.34 | 10.00    2.34
               0.833    1.67 | 3.917    2.67 | 7.000    5.34 | 10.08    2.34
               0.917    1.67 | 4.000    2.67 | 7.083    5.34 | 10.17    2.34
               1.000    1.67 | 4.083    2.67 | 7.167    5.34 | 10.25    2.34
               1.083    1.67 | 4.167    2.67 | 7.250    5.34 | 10.33    1.34
               1.167    1.67 | 4.250    2.67 | 7.333    4.01 | 10.42    1.34
               1.250    1.67 | 4.333    4.01 | 7.417    4.01 | 10.50    1.34
               1.333    1.67 | 4.417    4.01 | 7.500    4.01 | 10.58    1.34
               1.417    1.67 | 4.500    4.01 | 7.583    4.01 | 10.67    1.34
               1.500    1.67 | 4.583    4.01 | 7.667    4.01 | 10.75    1.34
               1.583    1.67 | 4.667    4.01 | 7.750    4.01 | 10.83    1.34
               1.667    1.67 | 4.750    4.01 | 7.833    4.01 | 10.92    1.34
               1.750    1.67 | 4.833    5.34 | 7.917    4.01 | 11.00    1.34
               1.833    1.67 | 4.917    5.34 | 8.000    4.01 | 11.08    1.34
               1.917    1.67 | 5.000    5.34 | 8.083    4.01 | 11.17    1.34
               2.000    1.67 | 5.083    5.34 | 8.167    4.01 | 11.25    1.34
               2.083    1.67 | 5.167    5.34 | 8.250    4.01 | 11.33    1.34
               2.167    1.67 | 5.250    5.34 | 8.333    2.34 | 11.42    1.34
               2.250    1.67 | 5.333    8.02 | 8.417    2.34 | 11.50    1.34
               2.333    2.00 | 5.417    8.02 | 8.500    2.34 | 11.58    1.34
               2.417    2.00 | 5.500    8.02 | 8.583    2.34 | 11.67    1.34
               2.500    2.00 | 5.583    8.02 | 8.667    2.34 | 11.75    1.34
               2.583    2.00 | 5.667    8.02 | 8.750    2.34 | 11.83    1.34
               2.667    2.00 | 5.750    8.02 | 8.833    2.34 | 11.92    1.34
               2.750    2.00 | 5.833   32.06 | 8.917    2.34 | 12.00    1.34
               2.833    2.00 | 5.917   32.06 | 9.000    2.34 | 12.08    1.34
               2.917    2.00 | 6.000   32.07 | 9.083    2.34 | 12.17    1.34
               3.000    2.00 | 6.083   88.18 | 9.167    2.34 | 12.25    1.34
               3.083    2.00 | 6.167   88.18 | 9.250    2.34 |

     Max.Eff.Inten.(mm/hr)=      88.18        54.23
               over (min)         5.00         5.00
     Storage Coeff.  (min)=       2.46 (ii)    3.65 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.30         0.25
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.27         0.00          0.274 (iii)
     TIME TO PEAK    (hrs)=       6.25         6.25           6.25
     RUNOFF VOLUME    (mm)=      65.80        32.49          65.46
     TOTAL RAINFALL   (mm)=      66.80        66.80          66.80
     RUNOFF COEFFICIENT   =       0.99         0.49           0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN*  =  82.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  0256)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0470     0.0750

                                    AREA     QPEAK     TPEAK       R.V.
                                    (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0205)      1.125      0.274      6.25      65.46
   OUTFLOW: ID= 1 (  0256)      1.125      0.028      6.83      65.11

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 10.28
                  TIME SHIFT OF PEAK FLOW         (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0451

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\596d80c2
| Ptotal= 66.80 mm |    Comments: 10yr 12hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
```

hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.25	0.00	3.50	2.67	6.75	12.02	10.00	2.34
0.50	1.67	3.75	2.67	7.00	5.34	10.25	2.34
0.75	1.67	4.00	2.67	7.25	5.34	10.50	1.34
1.00	1.67	4.25	2.67	7.50	4.01	10.75	1.34
1.25	1.67	4.50	4.01	7.75	4.01	11.00	1.34
1.50	1.67	4.75	4.01	8.00	4.01	11.25	1.34
1.75	1.67	5.00	5.34	8.25	4.01	11.50	1.34
2.00	1.67	5.25	5.34	8.50	2.34	11.75	1.34
2.25	1.67	5.50	8.02	8.75	2.34	12.00	1.34
2.50	2.00	5.75	8.02	9.00	2.34	12.25	1.34
2.75	2.00	6.00	32.06	9.25	2.34		
3.00	2.00	6.25	88.18	9.50	2.34		
3.25	2.00	6.50	12.02	9.75	2.34		

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--------------------
| CALIB            |
| STANDHYD (  0203)|   Area    (ha)=   2.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.68	0.42
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	118.18	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.00	6.250	88.17	9.33	2.34
0.167	0.00	3.250	2.00	6.333	12.02	9.42	2.34
0.250	0.00	3.333	2.67	6.417	12.02	9.50	2.34
0.333	1.67	3.417	2.67	6.500	12.02	9.58	2.34
0.417	1.67	3.500	2.67	6.583	12.02	9.67	2.34
0.500	1.67	3.583	2.67	6.667	12.02	9.75	2.34
0.583	1.67	3.667	2.67	6.750	12.02	9.83	2.34
0.667	1.67	3.750	2.67	6.833	5.34	9.92	2.34
0.750	1.67	3.833	2.67	6.917	5.34	10.00	2.34
0.833	1.67	3.917	2.67	7.000	5.34	10.08	2.34
0.917	1.67	4.000	2.67	7.083	5.34	10.17	2.34
1.000	1.67	4.083	2.67	7.167	5.34	10.25	2.34
1.083	1.67	4.167	2.67	7.250	5.34	10.33	1.34
1.167	1.67	4.250	2.67	7.333	4.01	10.42	1.34
1.250	1.67	4.333	4.01	7.417	4.01	10.50	1.34
1.333	1.67	4.417	4.01	7.500	4.01	10.58	1.34
1.417	1.67	4.500	4.01	7.583	4.01	10.67	1.34
1.500	1.67	4.583	4.01	7.667	4.01	10.75	1.34
1.583	1.67	4.667	4.01	7.750	4.01	10.83	1.34
1.667	1.67	4.750	4.01	7.833	4.01	10.92	1.34
1.750	1.67	4.833	5.34	7.917	4.01	11.00	1.34
1.833	1.67	4.917	5.34	8.000	4.01	11.08	1.34
1.917	1.67	5.000	5.34	8.083	4.01	11.17	1.34
2.000	1.67	5.083	5.34	8.167	4.01	11.25	1.34
2.083	1.67	5.167	5.34	8.250	4.01	11.33	1.34
2.167	1.67	5.250	5.34	8.333	2.34	11.42	1.34
2.250	1.67	5.333	8.02	8.417	2.34	11.50	1.34
2.333	2.00	5.417	8.02	8.500	2.34	11.58	1.34
2.417	2.00	5.500	8.02	8.583	2.34	11.67	1.34
2.500	2.00	5.583	8.02	8.667	2.34	11.75	1.34
2.583	2.00	5.667	8.02	8.750	2.34	11.83	1.34
2.667	2.00	5.750	8.02	8.833	2.34	11.92	1.34
2.750	2.00	5.833	32.06	8.917	2.34	12.00	1.34
2.833	2.00	5.917	32.06	9.000	2.34	12.08	1.34
2.917	2.00	6.000	32.07	9.083	2.34	12.17	1.34
3.000	2.00	6.083	88.18	9.167	2.34	12.25	1.34
3.083	2.00	6.167	88.18	9.250	2.34		

Max.Eff.Inten.(mm/hr)=	88.18	54.23	
over (min)	5.00	10.00	
Storage Coeff. (min)=	2.97 (ii)	7.23 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.28	0.14	
			TOTALS
PEAK FLOW (cms)=	0.41	0.05	0.459 (iii)
TIME TO PEAK (hrs)=	6.25	6.25	6.25
RUNOFF VOLUME (mm)=	65.80	32.49	59.14
TOTAL RAINFALL (mm)=	66.80	66.80	66.80
RUNOFF COEFFICIENT =	0.99	0.49	0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
--------------------
| ADD HYD  (  0260)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0203):     2.10   0.459     6.25    59.14
     + ID2= 2 (  0256):     1.12   0.028     6.83    65.11
       ================================================
       ID = 3 (  0260):     3.22   0.483     6.25    61.22
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\596d80c2
| Ptotal= 66.80 mm |    Comments: 10yr 12hr 15min SCS
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	2.67	6.75	12.02	10.00	2.34
0.50	1.67	3.75	2.67	7.00	5.34	10.25	2.34
0.75	1.67	4.00	2.67	7.25	5.34	10.50	1.34
1.00	1.67	4.25	2.67	7.50	4.01	10.75	1.34
1.25	1.67	4.50	4.01	7.75	4.01	11.00	1.34
1.50	1.67	4.75	4.01	8.00	4.01	11.25	1.34
1.75	1.67	5.00	5.34	8.25	4.01	11.50	1.34
2.00	1.67	5.25	5.34	8.50	2.34	11.75	1.34
2.25	1.67	5.50	8.02	8.75	2.34	12.00	1.34
2.50	2.00	5.75	8.02	9.00	2.34	12.25	1.34
2.75	2.00	6.00	32.06	9.25	2.34		
3.00	2.00	6.25	88.18	9.50	2.34		

```
                3.25    2.00 |  6.50   12.02 |  9.75    2.34 |

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--------------------
| CALIB            |
| STANDHYD (  0204)|   Area    (ha)=   1.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.16         0.29
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      98.32        40.00
     Mannings n           =      0.013        0.250

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    0.00 | 3.167    2.00 | 6.250   88.17 |  9.33    2.34
             0.167    0.00 | 3.250    2.00 | 6.333   12.02 |  9.42    2.34
             0.250    0.00 | 3.333    2.67 | 6.417   12.02 |  9.50    2.34
             0.333    1.67 | 3.417    2.67 | 6.500   12.02 |  9.58    2.34
             0.417    1.67 | 3.500    2.67 | 6.583   12.02 |  9.67    2.34
             0.500    1.67 | 3.583    2.67 | 6.667   12.02 |  9.75    2.34
             0.583    1.67 | 3.667    2.67 | 6.750   12.02 |  9.83    2.34
             0.667    1.67 | 3.750    2.67 | 6.833    5.34 |  9.92    2.34
             0.750    1.67 | 3.833    2.67 | 6.917    5.34 | 10.00    2.34
             0.833    1.67 | 3.917    2.67 | 7.000    5.34 | 10.08    2.34
             0.917    1.67 | 4.000    2.67 | 7.083    5.34 | 10.17    2.34
             1.000    1.67 | 4.083    2.67 | 7.167    5.34 | 10.25    2.34
             1.083    1.67 | 4.167    2.67 | 7.250    5.34 | 10.33    1.34
             1.167    1.67 | 4.250    2.67 | 7.333    4.01 | 10.42    1.34
             1.250    1.67 | 4.333    4.01 | 7.417    4.01 | 10.50    1.34
             1.333    1.67 | 4.417    4.01 | 7.500    4.01 | 10.58    1.34
             1.417    1.67 | 4.500    4.01 | 7.583    4.01 | 10.67    1.34
             1.500    1.67 | 4.583    4.01 | 7.667    4.01 | 10.75    1.34
             1.583    1.67 | 4.667    4.01 | 7.750    4.01 | 10.83    1.34
             1.667    1.67 | 4.750    4.01 | 7.833    4.01 | 10.92    1.34
             1.750    1.67 | 4.833    5.34 | 7.917    4.01 | 11.00    1.34
             1.833    1.67 | 4.917    5.34 | 8.000    4.01 | 11.08    1.34
             1.917    1.67 | 5.000    5.34 | 8.083    4.01 | 11.17    1.34
             2.000    1.67 | 5.083    5.34 | 8.167    4.01 | 11.25    1.34
             2.083    1.67 | 5.167    5.34 | 8.250    4.01 | 11.33    1.34
             2.167    1.67 | 5.250    5.34 | 8.333    2.34 | 11.42    1.34
             2.250    1.67 | 5.333    8.02 | 8.417    2.34 | 11.50    1.34
             2.333    2.00 | 5.417    8.02 | 8.500    2.34 | 11.58    1.34
             2.417    2.00 | 5.500    8.02 | 8.583    2.34 | 11.67    1.34
             2.500    2.00 | 5.583    8.02 | 8.667    2.34 | 11.75    1.34
             2.583    2.00 | 5.667    8.02 | 8.750    2.34 | 11.83    1.34
             2.667    2.00 | 5.750    8.02 | 8.833    2.34 | 11.92    1.34
             2.750    2.00 | 5.833   32.06 | 8.917    2.34 | 12.00    1.34
             2.833    2.00 | 5.917   32.06 | 9.000    2.34 | 12.08    1.34
             2.917    2.00 | 6.000   32.07 | 9.083    2.34 | 12.17    1.34
             3.000    2.00 | 6.083   88.18 | 9.167    2.34 | 12.25    1.34
             3.083    2.00 | 6.167   88.18 | 9.250    2.34 |

     Max.Eff.Inten.(mm/hr)=      88.18        54.23
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       2.66 (ii)    6.92 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.29         0.14
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.28         0.04          0.319 (iii)
     TIME TO PEAK    (hrs)=       6.25         6.25           6.25
     RUNOFF VOLUME    (mm)=      65.80        32.49          59.13
     TOTAL RAINFALL   (mm)=      66.80        66.80          66.80
     RUNOFF COEFFICIENT   =       0.99         0.49           0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0259)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0204):     1.45   0.319     6.25    59.13
     + ID2= 2 (  0260):     3.22   0.483     6.25    61.22
       ================================================
       ID = 3 (  0259):     4.67   0.802     6.25    60.57

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\596d80c2
| Ptotal= 66.80 mm |    Comments: 10yr 12hr 15min SCS
--------------------
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.25    0.00 |  3.50    2.67 |  6.75   12.02 | 10.00    2.34
              0.50    1.67 |  3.75    2.67 |  7.00    5.34 | 10.25    2.34
              0.75    1.67 |  4.00    2.67 |  7.25    5.34 | 10.50    1.34
              1.00    1.67 |  4.25    2.67 |  7.50    4.01 | 10.75    1.34
              1.25    1.67 |  4.50    4.01 |  7.75    4.01 | 11.00    1.34
              1.50    1.67 |  4.75    4.01 |  8.00    4.01 | 11.25    1.34
              1.75    1.67 |  5.00    5.34 |  8.25    4.01 | 11.50    1.34
              2.00    1.67 |  5.25    5.34 |  8.50    2.34 | 11.75    1.34
              2.25    1.67 |  5.50    8.02 |  8.75    2.34 | 12.00    1.34
              2.50    2.00 |  5.75    8.02 |  9.00    2.34 | 12.25    1.34
              2.75    2.00 |  6.00   32.06 |  9.25    2.34 |
              3.00    2.00 |  6.25   88.18 |  9.50    2.34 |
              3.25    2.00 |  6.50   12.02 |  9.75    2.34 |

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| CALIB            |
| STANDHYD (  0201)|   Area    (ha)=   5.27
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.22         0.05
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
```

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     Length            (m)=     187.44        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
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---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.00	6.250	88.17	9.33	2.34
0.167	0.00	3.250	2.00	6.333	12.02	9.42	2.34
0.250	0.00	3.333	2.67	6.417	12.02	9.50	2.34
0.333	1.67	3.417	2.67	6.500	12.02	9.58	2.34
0.417	1.67	3.500	2.67	6.583	12.02	9.67	2.34
0.500	1.67	3.583	2.67	6.667	12.02	9.75	2.34
0.583	1.67	3.667	2.67	6.750	12.02	9.83	2.34
0.667	1.67	3.750	2.67	6.833	5.34	9.92	2.34
0.750	1.67	3.833	2.67	6.917	5.34	10.00	2.34
0.833	1.67	3.917	2.67	7.000	5.34	10.08	2.34
0.917	1.67	4.000	2.67	7.083	5.34	10.17	2.34
1.000	1.67	4.083	2.67	7.167	5.34	10.25	2.34
1.083	1.67	4.167	2.67	7.250	5.34	10.33	1.34
1.167	1.67	4.250	2.67	7.333	4.01	10.42	1.34
1.250	1.67	4.333	4.01	7.417	4.01	10.50	1.34
1.333	1.67	4.417	4.01	7.500	4.01	10.58	1.34
1.417	1.67	4.500	4.01	7.583	4.01	10.67	1.34
1.500	1.67	4.583	4.01	7.667	4.01	10.75	1.34
1.583	1.67	4.667	4.01	7.750	4.01	10.83	1.34
1.667	1.67	4.750	4.01	7.833	4.01	10.92	1.34
1.750	1.67	4.833	5.34	7.917	4.01	11.00	1.34
1.833	1.67	4.917	5.34	8.000	4.01	11.08	1.34
1.917	1.67	5.000	5.34	8.083	4.01	11.17	1.34
2.000	1.67	5.083	5.34	8.167	4.01	11.25	1.34
2.083	1.67	5.167	5.34	8.250	4.01	11.33	1.34
2.167	1.67	5.250	5.34	8.333	2.34	11.42	1.34
2.250	1.67	5.333	8.02	8.417	2.34	11.50	1.34
2.333	2.00	5.417	8.02	8.500	2.34	11.58	1.34
2.417	2.00	5.500	8.02	8.583	2.34	11.67	1.34
2.500	2.00	5.583	8.02	8.667	2.34	11.75	1.34
2.583	2.00	5.667	8.02	8.750	2.34	11.83	1.34
2.667	2.00	5.750	8.02	8.833	2.34	11.92	1.34
2.750	2.00	5.833	32.06	8.917	2.34	12.00	1.34
2.833	2.00	5.917	32.06	9.000	2.34	12.08	1.34
2.917	2.00	6.000	32.07	9.083	2.34	12.17	1.34
3.000	2.00	6.083	88.18	9.167	2.34	12.25	1.34
3.083	2.00	6.167	88.18	9.250	2.34		

```
     Max.Eff.Inten.(mm/hr)=      88.18        54.23
               over (min)        5.00        10.00
     Storage Coeff.  (min)=      3.92 (ii)    5.10 (ii)
     Unit Hyd. Tpeak (min)=      5.00        10.00
     Unit Hyd. peak  (cms)=      0.25         0.16
                                                    *TOTALS*
     PEAK FLOW       (cms)=      1.26         0.01     1.267 (iii)
     TIME TO PEAK    (hrs)=      6.25         6.25      6.25
     RUNOFF VOLUME    (mm)=     65.80        32.49     65.47
     TOTAL RAINFALL   (mm)=     66.80        66.80     66.80
     RUNOFF COEFFICIENT   =      0.99         0.49      0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  0268)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1959      0.1883
                          0.0980     0.0369   |   0.2939      0.4335

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (  0201)      5.270     1.267      6.25      65.47
     OUTFLOW: ID= 1 (  0268)      5.270     0.180      6.58      65.45

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 14.23
                    TIME SHIFT OF PEAK FLOW         (min)= 20.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.1641

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\596d80c2
| Ptotal= 66.80 mm |    Comments: 10yr 12hr 15min SCS
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	2.67	6.75	12.02	10.00	2.34
0.50	1.67	3.75	2.67	7.00	5.34	10.25	2.34
0.75	1.67	4.00	2.67	7.25	5.34	10.50	1.34
1.00	1.67	4.25	2.67	7.50	4.01	10.75	1.34
1.25	1.67	4.50	4.01	7.75	4.01	11.00	1.34
1.50	1.67	4.75	4.01	8.00	4.01	11.25	1.34
1.75	1.67	5.00	5.34	8.25	4.01	11.50	1.34
2.00	1.67	5.25	5.34	8.50	2.34	11.75	1.34
2.25	1.67	5.50	8.02	8.75	2.34	12.00	1.34
2.50	2.00	5.75	8.02	9.00	2.34	12.25	1.34
2.75	2.00	6.00	32.06	9.25	2.34		
3.00	2.00	6.25	88.18	9.50	2.34		
3.25	2.00	6.50	12.02	9.75	2.34		

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| CALIB            |
| STANDHYD (  0202)|   Area    (ha)=   6.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.32         1.25
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     209.28        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN

hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.00	3.167	2.00	6.250	88.17	9.33	2.34
0.167	0.00	3.250	2.00	6.333	12.02	9.42	2.34
0.250	0.00	3.333	2.67	6.417	12.02	9.50	2.34
0.333	1.67	3.417	2.67	6.500	12.02	9.58	2.34
0.417	1.67	3.500	2.67	6.583	12.02	9.67	2.34
0.500	1.67	3.583	2.67	6.667	12.02	9.75	2.34
0.583	1.67	3.667	2.67	6.750	12.02	9.83	2.34
0.667	1.67	3.750	2.67	6.833	5.34	9.92	2.34
0.750	1.67	3.833	2.67	6.917	5.34	10.00	2.34
0.833	1.67	3.917	2.67	7.000	5.34	10.08	2.34
0.917	1.67	4.000	2.67	7.083	5.34	10.17	2.34
1.000	1.67	4.083	2.67	7.167	5.34	10.25	2.34
1.083	1.67	4.167	2.67	7.250	5.34	10.33	1.34
1.167	1.67	4.250	2.67	7.333	4.01	10.42	1.34
1.250	1.67	4.333	4.01	7.417	4.01	10.50	1.34
1.333	1.67	4.417	4.01	7.500	4.01	10.58	1.34
1.417	1.67	4.500	4.01	7.583	4.01	10.67	1.34
1.500	1.67	4.583	4.01	7.667	4.01	10.75	1.34
1.583	1.67	4.667	4.01	7.750	4.01	10.83	1.34
1.667	1.67	4.750	4.01	7.833	4.01	10.92	1.34
1.750	1.67	4.833	5.34	7.917	4.01	11.00	1.34
1.833	1.67	4.917	5.34	8.000	4.01	11.08	1.34
1.917	1.67	5.000	5.34	8.083	4.01	11.17	1.34
2.000	1.67	5.083	5.34	8.167	4.01	11.25	1.34
2.083	1.67	5.167	5.34	8.250	4.01	11.33	1.34
2.167	1.67	5.250	5.34	8.333	2.34	11.42	1.34
2.250	1.67	5.333	8.02	8.417	2.34	11.50	1.34
2.333	2.00	5.417	8.02	8.500	2.34	11.58	1.34
2.417	2.00	5.500	8.02	8.583	2.34	11.67	1.34
2.500	2.00	5.583	8.02	8.667	2.34	11.75	1.34
2.583	2.00	5.667	8.02	8.750	2.34	11.83	1.34
2.667	2.00	5.750	8.02	8.833	2.34	11.92	1.34
2.750	2.00	5.833	32.06	8.917	2.34	12.00	1.34
2.833	2.00	5.917	32.06	9.000	2.34	12.08	1.34
2.917	2.00	6.000	32.07	9.083	2.34	12.17	1.34
3.000	2.00	6.083	88.18	9.167	2.34	12.25	1.34
3.083	2.00	6.167	88.18	9.250	2.34		

Max.Eff.Inten.(mm/hr)=	88.18	54.23	
over (min)	5.00	10.00	
Storage Coeff. (min)=	4.18 (ii)	8.34 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.24	0.13	
			TOTALS
PEAK FLOW (cms)=	1.28	0.14	1.423 (iii)
TIME TO PEAK (hrs)=	6.25	6.25	6.25
RUNOFF VOLUME (mm)=	65.80	32.49	59.47
TOTAL RAINFALL (mm)=	66.80	66.80	66.80
RUNOFF COEFFICIENT =	0.99	0.49	0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0262) |				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0202):	6.57	1.423	6.25	59.47
+ ID2= 2 (0268):	5.27	0.180	6.58	65.45
ID = 3 (0262):	11.84	1.584	6.25	62.13

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0266) |				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0259):	4.67	0.802	6.25	60.57
+ ID2= 2 (0262):	11.84	1.584	6.25	62.13
ID = 3 (0266):	16.51	2.386	6.25	61.69

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0263) | IN= 2---> OUT= 1 | DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.2130	0.6563
	0.0190	0.1773	0.2520	0.6883
	0.0220	0.2128	0.2890	0.7150
	0.0260	0.2888	0.2980	0.7450
	0.0300	0.3648	0.3060	0.7700
	0.0650	0.4586	0.3150	0.8127
	0.1100	0.5155	0.3320	0.9290
	0.1680	0.5503	0.3390	0.9767
	0.1930	0.5804	0.3520	1.0680
	0.2000	0.6048	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0266)	16.510	2.386	6.25	61.69
OUTFLOW: ID= 1 (0263)	16.510	0.203	9.42	61.55

PEAK FLOW REDUCTION [Qout/Qin](%)= 8.52
TIME SHIFT OF PEAK FLOW (min)=190.00
MAXIMUM STORAGE USED (ha.m.)= 0.6175

ADD HYD (0261) |				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0206):	0.12	0.010	6.33	32.46
+ ID2= 2 (0263):	16.51	0.203	9.42	61.55
ID = 3 (0261):	16.64	0.204	9.42	61.33

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
       V    V   I    SSSSS  U   U    A    L             (v 5.0.2025)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
```


***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
Output filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-4bf8-aeac-18a29a864848\1cc89fab-9bd0-4235-ba94-d830ceaba698\s
Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-4bf8-aeac-18a29a864848\1cc89fab-9bd0-4235-ba94-d830ceaba698\s

DATE: 07/06/2020 TIME: 04:36:54

USER:

COMMENTS: _____

** SIMULATION : 100 Year 12 Hour SCS **

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\1562c14f
Ptotal= 97.84 mm	Comments: 100yr 12hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	3.91	6.75	17.61	10.00	3.42
0.50	2.45	3.75	3.91	7.00	7.83	10.25	3.42
0.75	2.45	4.00	3.91	7.25	7.83	10.50	1.96
1.00	2.45	4.25	3.91	7.50	5.87	10.75	1.96
1.25	2.45	4.50	5.87	7.75	5.87	11.00	1.96
1.50	2.45	4.75	5.87	8.00	5.87	11.25	1.96
1.75	2.45	5.00	7.83	8.25	5.87	11.50	1.96
2.00	2.45	5.25	7.83	8.50	3.42	11.75	1.96
2.25	2.45	5.50	11.74	8.75	3.42	12.00	1.96
2.50	2.94	5.75	11.74	9.00	3.42	12.25	1.96
2.75	2.94	6.00	46.96	9.25	3.42		
3.00	2.94	6.25	129.15	9.50	3.42		
3.25	2.94	6.50	17.61	9.75	3.42		

CALIB					
NASHYD (0206)	Area (ha)=	0.12	Curve Number (CN)=	82.0	
ID= 1 DT= 5.0 min	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.25			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.94	6.250	129.15	9.33	3.42
0.167	0.00	3.250	2.94	6.333	17.61	9.42	3.42
0.250	0.00	3.333	3.91	6.417	17.61	9.50	3.42
0.333	2.45	3.417	3.91	6.500	17.61	9.58	3.42
0.417	2.45	3.500	3.91	6.583	17.61	9.67	3.42
0.500	2.45	3.583	3.91	6.667	17.61	9.75	3.42
0.583	2.45	3.667	3.91	6.750	17.61	9.83	3.42
0.667	2.45	3.750	3.91	6.833	7.83	9.92	3.42
0.750	2.45	3.833	3.91	6.917	7.83	10.00	3.42
0.833	2.45	3.917	3.91	7.000	7.83	10.08	3.42
0.917	2.45	4.000	3.91	7.083	7.83	10.17	3.42
1.000	2.45	4.083	3.91	7.167	7.83	10.25	3.42
1.083	2.45	4.167	3.91	7.250	7.83	10.33	1.96
1.167	2.45	4.250	3.91	7.333	5.87	10.42	1.96
1.250	2.45	4.333	5.87	7.417	5.87	10.50	1.96
1.333	2.45	4.417	5.87	7.500	5.87	10.58	1.96
1.417	2.45	4.500	5.87	7.583	5.87	10.67	1.96
1.500	2.45	4.583	5.87	7.667	5.87	10.75	1.96
1.583	2.45	4.667	5.87	7.750	5.87	10.83	1.96
1.667	2.45	4.750	5.87	7.833	5.87	10.92	1.96
1.750	2.45	4.833	7.83	7.917	5.87	11.00	1.96
1.833	2.45	4.917	7.83	8.000	5.87	11.08	1.96
1.917	2.45	5.000	7.83	8.083	5.87	11.17	1.96
2.000	2.45	5.083	7.83	8.167	5.87	11.25	1.96
2.083	2.45	5.167	7.83	8.250	5.87	11.33	1.96
2.167	2.45	5.250	7.83	8.333	3.42	11.42	1.96
2.250	2.45	5.333	11.74	8.417	3.42	11.50	1.96
2.333	2.94	5.417	11.74	8.500	3.42	11.58	1.96
2.417	2.94	5.500	11.74	8.583	3.42	11.67	1.96
2.500	2.94	5.583	11.74	8.667	3.42	11.75	1.96
2.583	2.94	5.667	11.74	8.750	3.42	11.83	1.96
2.667	2.94	5.750	11.74	8.833	3.42	11.92	1.96
2.750	2.94	5.833	46.96	8.917	3.42	12.00	1.96
2.833	2.94	5.917	46.96	9.000	3.42	12.08	1.96
2.917	2.94	6.000	46.97	9.083	3.42	12.17	1.96
3.000	2.94	6.083	129.15	9.167	3.42	12.25	1.96
3.083	2.94	6.167	129.15	9.250	3.42		

Unit Hyd Qpeak (cms)= 0.019

PEAK FLOW (cms)= 0.019 (i)
TIME TO PEAK (hrs)= 6.333
RUNOFF VOLUME (mm)= 57.955
TOTAL RAINFALL (mm)= 97.840
RUNOFF COEFFICIENT = 0.592

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\1562c14f
| Ptotal= 97.84 mm |    Comments: 100yr 12hr 15min SCS
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```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	3.91	6.75	17.61	10.00	3.42
0.50	2.45	3.75	3.91	7.00	7.83	10.25	3.42
0.75	2.45	4.00	3.91	7.25	7.83	10.50	1.96
1.00	2.45	4.25	3.91	7.50	5.87	10.75	1.96
1.25	2.45	4.50	5.87	7.75	5.87	11.00	1.96
1.50	2.45	4.75	5.87	8.00	5.87	11.25	1.96
1.75	2.45	5.00	7.83	8.25	5.87	11.50	1.96
2.00	2.45	5.25	7.83	8.50	3.42	11.75	1.96
2.25	2.45	5.50	11.74	8.75	3.42	12.00	1.96
2.50	2.94	5.75	11.74	9.00	3.42	12.25	1.96
2.75	2.94	6.00	46.96	9.25	3.42		
3.00	2.94	6.25	129.15	9.50	3.42		
3.25	2.94	6.50	17.61	9.75	3.42		

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| CALIB            |
| STANDHYD (  0205)|   Area    (ha)=   1.12
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
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```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.11	0.01
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	86.60	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.94	6.250	129.15	9.33	3.42
0.167	0.00	3.250	2.94	6.333	17.61	9.42	3.42
0.250	0.00	3.333	3.91	6.417	17.61	9.50	3.42
0.333	2.45	3.417	3.91	6.500	17.61	9.58	3.42
0.417	2.45	3.500	3.91	6.583	17.61	9.67	3.42
0.500	2.45	3.583	3.91	6.667	17.61	9.75	3.42
0.583	2.45	3.667	3.91	6.750	17.61	9.83	3.42
0.667	2.45	3.750	3.91	6.833	7.83	9.92	3.42
0.750	2.45	3.833	3.91	6.917	7.83	10.00	3.42
0.833	2.45	3.917	3.91	7.000	7.83	10.08	3.42
0.917	2.45	4.000	3.91	7.083	7.83	10.17	3.42
1.000	2.45	4.083	3.91	7.167	7.83	10.25	3.42
1.083	2.45	4.167	3.91	7.250	7.83	10.33	1.96
1.167	2.45	4.250	3.91	7.333	5.87	10.42	1.96
1.250	2.45	4.333	5.87	7.417	5.87	10.50	1.96
1.333	2.45	4.417	5.87	7.500	5.87	10.58	1.96
1.417	2.45	4.500	5.87	7.583	5.87	10.67	1.96
1.500	2.45	4.583	5.87	7.667	5.87	10.75	1.96
1.583	2.45	4.667	5.87	7.750	5.87	10.83	1.96
1.667	2.45	4.750	5.87	7.833	5.87	10.92	1.96
1.750	2.45	4.833	7.83	7.917	5.87	11.00	1.96
1.833	2.45	4.917	7.83	8.000	5.87	11.08	1.96
1.917	2.45	5.000	7.83	8.083	5.87	11.17	1.96
2.000	2.45	5.083	7.83	8.167	5.87	11.25	1.96
2.083	2.45	5.167	7.83	8.250	5.87	11.33	1.96
2.167	2.45	5.250	7.83	8.333	3.42	11.42	1.96
2.250	2.45	5.333	11.74	8.417	3.42	11.50	1.96
2.333	2.94	5.417	11.74	8.500	3.42	11.58	1.96
2.417	2.94	5.500	11.74	8.583	3.42	11.67	1.96
2.500	2.94	5.583	11.74	8.667	3.42	11.75	1.96
2.583	2.94	5.667	11.74	8.750	3.42	11.83	1.96
2.667	2.94	5.750	11.74	8.833	3.42	11.92	1.96
2.750	2.94	5.833	46.96	8.917	3.42	12.00	1.96
2.833	2.94	5.917	46.96	9.000	3.42	12.08	1.96
2.917	2.94	6.000	46.97	9.083	3.42	12.17	1.96
3.000	2.94	6.083	129.15	9.167	3.42	12.25	1.96
3.083	2.94	6.167	129.15	9.250	3.42		

				TOTALS
Max.Eff.Inten.(mm/hr)=		129.15	94.69	
over (min)		5.00	5.00	
Storage Coeff. (min)=		2.12 (ii)	3.13 (ii)	
Unit Hyd. Tpeak (min)=		5.00	5.00	
Unit Hyd. peak (cms)=		0.31	0.27	
PEAK FLOW	(cms)=	0.40	0.00	0.402 (iii)
TIME TO PEAK	(hrs)=	6.25	6.25	6.25
RUNOFF VOLUME	(mm)=	96.84	58.00	96.45
TOTAL RAINFALL	(mm)=	97.84	97.84	97.84
RUNOFF COEFFICIENT	=	0.99	0.59	0.99

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  0256)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0470     0.0750
```

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0205)	1.125	0.402	6.25	96.45
OUTFLOW: ID= 1 (0256)	1.125	0.041	6.75	96.10

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.30
TIME SHIFT OF PEAK FLOW (min)= 30.00
MAXIMUM STORAGE USED (ha.m.)= 0.0663

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\1562c14f
| Ptotal= 97.84 mm |    Comments: 100yr 12hr 15min SCS
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	3.91	6.75	17.61	10.00	3.42
0.50	2.45	3.75	3.91	7.00	7.83	10.25	3.42

0.75	2.45	4.00	3.91	7.25	7.83	10.50	1.96
1.00	2.45	4.25	3.91	7.50	5.87	10.75	1.96
1.25	2.45	4.50	5.87	7.75	5.87	11.00	1.96
1.50	2.45	4.75	5.87	8.00	5.87	11.25	1.96
1.75	2.45	5.00	7.83	8.25	5.87	11.50	1.96
2.00	2.45	5.25	7.83	8.50	3.42	11.75	1.96
2.25	2.45	5.50	11.74	8.75	3.42	12.00	1.96
2.50	2.94	5.75	11.74	9.00	3.42	12.25	1.96
2.75	2.94	6.00	46.96	9.25	3.42		
3.00	2.94	6.25	129.15	9.50	3.42		
3.25	2.94	6.50	17.61	9.75	3.42		

CALIB			
STANDHYD (0203)	Area (ha)=	2.10	
ID= 1 DT= 5.0 min	Total Imp(%)=	80.00	Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.68	0.42
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	118.18	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.94	6.250	129.15	9.33	3.42
0.167	0.00	3.250	2.94	6.333	17.61	9.42	3.42
0.250	0.00	3.333	3.91	6.417	17.61	9.50	3.42
0.333	2.45	3.417	3.91	6.500	17.61	9.58	3.42
0.417	2.45	3.500	3.91	6.583	17.61	9.67	3.42
0.500	2.45	3.583	3.91	6.667	17.61	9.75	3.42
0.583	2.45	3.667	3.91	6.750	17.61	9.83	3.42
0.667	2.45	3.750	3.91	6.833	7.83	9.92	3.42
0.750	2.45	3.833	3.91	6.917	7.83	10.00	3.42
0.833	2.45	3.917	3.91	7.000	7.83	10.08	3.42
0.917	2.45	4.000	3.91	7.083	7.83	10.17	3.42
1.000	2.45	4.083	3.91	7.167	7.83	10.25	3.42
1.083	2.45	4.167	3.91	7.250	7.83	10.33	1.96
1.167	2.45	4.250	3.91	7.333	5.87	10.42	1.96
1.250	2.45	4.333	5.87	7.417	5.87	10.50	1.96
1.333	2.45	4.417	5.87	7.500	5.87	10.58	1.96
1.417	2.45	4.500	5.87	7.583	5.87	10.67	1.96
1.500	2.45	4.583	5.87	7.667	5.87	10.75	1.96
1.583	2.45	4.667	5.87	7.750	5.87	10.83	1.96
1.667	2.45	4.750	5.87	7.833	5.87	10.92	1.96
1.750	2.45	4.833	7.83	7.917	5.87	11.00	1.96
1.833	2.45	4.917	7.83	8.000	5.87	11.08	1.96
1.917	2.45	5.000	7.83	8.083	5.87	11.17	1.96
2.000	2.45	5.083	7.83	8.167	5.87	11.25	1.96
2.083	2.45	5.167	7.83	8.250	5.87	11.33	1.96
2.167	2.45	5.250	7.83	8.333	3.42	11.42	1.96
2.250	2.45	5.333	11.74	8.417	3.42	11.50	1.96
2.333	2.94	5.417	11.74	8.500	3.42	11.58	1.96
2.417	2.94	5.500	11.74	8.583	3.42	11.67	1.96
2.500	2.94	5.583	11.74	8.667	3.42	11.75	1.96
2.583	2.94	5.667	11.74	8.750	3.42	11.83	1.96
2.667	2.94	5.750	11.74	8.833	3.42	11.92	1.96
2.750	2.94	5.833	46.96	8.917	3.42	12.00	1.96
2.833	2.94	5.917	46.96	9.000	3.42	12.08	1.96
2.917	2.94	6.000	46.97	9.083	3.42	12.17	1.96
3.000	2.94	6.083	129.15	9.167	3.42	12.25	1.96
3.083	2.94	6.167	129.15	9.250	3.42		

Max.Eff.Inten.(mm/hr)=	129.15	94.69		
over (min)	5.00	10.00		
Storage Coeff. (min)=	2.55 (ii)	6.21 (ii)		
Unit Hyd. Tpeak (min)=	5.00	10.00		
Unit Hyd. peak (cms)=	0.29	0.15		
			TOTALS	
PEAK FLOW (cms)=	0.60	0.09	0.694 (iii)	
TIME TO PEAK (hrs)=	6.25	6.25	6.25	
RUNOFF VOLUME (mm)=	96.84	58.00	89.07	
TOTAL RAINFALL (mm)=	97.84	97.84	97.84	
RUNOFF COEFFICIENT =	0.99	0.59	0.91	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0260)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (0203):	2.10	0.694	6.25	89.07
	+ ID2= 2 (0256):	1.12	0.041	6.75	96.10
	ID = 3 (0260):	3.22	0.730	6.25	91.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\1562c14f
Ptotal= 97.84 mm	Comments: 100yr 12hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	3.91	6.75	17.61	10.00	3.42
0.50	2.45	3.75	3.91	7.00	7.83	10.25	3.42
0.75	2.45	4.00	3.91	7.25	7.83	10.50	1.96
1.00	2.45	4.25	3.91	7.50	5.87	10.75	1.96
1.25	2.45	4.50	5.87	7.75	5.87	11.00	1.96
1.50	2.45	4.75	5.87	8.00	5.87	11.25	1.96
1.75	2.45	5.00	7.83	8.25	5.87	11.50	1.96
2.00	2.45	5.25	7.83	8.50	3.42	11.75	1.96
2.25	2.45	5.50	11.74	8.75	3.42	12.00	1.96
2.50	2.94	5.75	11.74	9.00	3.42	12.25	1.96
2.75	2.94	6.00	46.96	9.25	3.42		
3.00	2.94	6.25	129.15	9.50	3.42		
3.25	2.94	6.50	17.61	9.75	3.42		

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--------------------
| CALIB            |
| STANDHYD (  0204)|   Area    (ha)=   1.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      1.16         0.29
     Dep. Storage     (mm)=      1.00         5.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     98.32        40.00
     Mannings n           =     0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.94	6.250	129.15	9.33	3.42
0.167	0.00	3.250	2.94	6.333	17.61	9.42	3.42
0.250	0.00	3.333	3.91	6.417	17.61	9.50	3.42
0.333	2.45	3.417	3.91	6.500	17.61	9.58	3.42
0.417	2.45	3.500	3.91	6.583	17.61	9.67	3.42
0.500	2.45	3.583	3.91	6.667	17.61	9.75	3.42
0.583	2.45	3.667	3.91	6.750	17.61	9.83	3.42
0.667	2.45	3.750	3.91	6.833	7.83	9.92	3.42
0.750	2.45	3.833	3.91	6.917	7.83	10.00	3.42
0.833	2.45	3.917	3.91	7.000	7.83	10.08	3.42
0.917	2.45	4.000	3.91	7.083	7.83	10.17	3.42
1.000	2.45	4.083	3.91	7.167	7.83	10.25	3.42
1.083	2.45	4.167	3.91	7.250	7.83	10.33	1.96
1.167	2.45	4.250	3.91	7.333	5.87	10.42	1.96
1.250	2.45	4.333	5.87	7.417	5.87	10.50	1.96
1.333	2.45	4.417	5.87	7.500	5.87	10.58	1.96
1.417	2.45	4.500	5.87	7.583	5.87	10.67	1.96
1.500	2.45	4.583	5.87	7.667	5.87	10.75	1.96
1.583	2.45	4.667	5.87	7.750	5.87	10.83	1.96
1.667	2.45	4.750	5.87	7.833	5.87	10.92	1.96
1.750	2.45	4.833	7.83	7.917	5.87	11.00	1.96
1.833	2.45	4.917	7.83	8.000	5.87	11.08	1.96
1.917	2.45	5.000	7.83	8.083	5.87	11.17	1.96
2.000	2.45	5.083	7.83	8.167	5.87	11.25	1.96
2.083	2.45	5.167	7.83	8.250	5.87	11.33	1.96
2.167	2.45	5.250	7.83	8.333	3.42	11.42	1.96
2.250	2.45	5.333	11.74	8.417	3.42	11.50	1.96
2.333	2.94	5.417	11.74	8.500	3.42	11.58	1.96
2.417	2.94	5.500	11.74	8.583	3.42	11.67	1.96
2.500	2.94	5.583	11.74	8.667	3.42	11.75	1.96
2.583	2.94	5.667	11.74	8.750	3.42	11.83	1.96
2.667	2.94	5.750	11.74	8.833	3.42	11.92	1.96
2.750	2.94	5.833	46.96	8.917	3.42	12.00	1.96
2.833	2.94	5.917	46.96	9.000	3.42	12.08	1.96
2.917	2.94	6.000	46.97	9.083	3.42	12.17	1.96
3.000	2.94	6.083	129.15	9.167	3.42	12.25	1.96
3.083	2.94	6.167	129.15	9.250	3.42		

```
     Max.Eff.Inten.(mm/hr)=     129.15        94.69
               over (min)        5.00        10.00
     Storage Coeff.  (min)=       2.28 (ii)    5.94 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.30         0.15
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.42         0.07         0.481 (iii)
     TIME TO PEAK    (hrs)=       6.25         6.25          6.25
     RUNOFF VOLUME    (mm)=      96.84        58.00         89.07
     TOTAL RAINFALL   (mm)=      97.84        97.84         97.84
     RUNOFF COEFFICIENT   =       0.99         0.59          0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
--------------------
| ADD HYD  (  0259)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0204):      1.45   0.481     6.25    89.07
     + ID2= 2 (  0260):      3.22   0.730     6.25    91.53
       ================================================
       ID = 3 (  0259):      4.67   1.211     6.25    90.76

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\1562c14f
| Ptotal= 97.84 mm |    Comments: 100yr 12hr 15min SCS
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	3.91	6.75	17.61	10.00	3.42
0.50	2.45	3.75	3.91	7.00	7.83	10.25	3.42
0.75	2.45	4.00	3.91	7.25	7.83	10.50	1.96
1.00	2.45	4.25	3.91	7.50	5.87	10.75	1.96
1.25	2.45	4.50	5.87	7.75	5.87	11.00	1.96
1.50	2.45	4.75	5.87	8.00	5.87	11.25	1.96
1.75	2.45	5.00	7.83	8.25	5.87	11.50	1.96
2.00	2.45	5.25	7.83	8.50	3.42	11.75	1.96
2.25	2.45	5.50	11.74	8.75	3.42	12.00	1.96
2.50	2.94	5.75	11.74	9.00	3.42	12.25	1.96
2.75	2.94	6.00	46.96	9.25	3.42		
3.00	2.94	6.25	129.15	9.50	3.42		
3.25	2.94	6.50	17.61	9.75	3.42		

```
--------------------
| CALIB            |
| STANDHYD (  0201)|   Area    (ha)=   5.27
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      5.22         0.05
     Dep. Storage     (mm)=      1.00         5.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=    187.44        40.00
     Mannings n           =     0.013        0.250
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.94	6.250	129.15	9.33	3.42
0.167	0.00	3.250	2.94	6.333	17.61	9.42	3.42
0.250	0.00	3.333	3.91	6.417	17.61	9.50	3.42
0.333	2.45	3.417	3.91	6.500	17.61	9.58	3.42
0.417	2.45	3.500	3.91	6.583	17.61	9.67	3.42
0.500	2.45	3.583	3.91	6.667	17.61	9.75	3.42
0.583	2.45	3.667	3.91	6.750	17.61	9.83	3.42
0.667	2.45	3.750	3.91	6.833	7.83	9.92	3.42
0.750	2.45	3.833	3.91	6.917	7.83	10.00	3.42
0.833	2.45	3.917	3.91	7.000	7.83	10.08	3.42
0.917	2.45	4.000	3.91	7.083	7.83	10.17	3.42
1.000	2.45	4.083	3.91	7.167	7.83	10.25	3.42
1.083	2.45	4.167	3.91	7.250	7.83	10.33	1.96
1.167	2.45	4.250	3.91	7.333	5.87	10.42	1.96
1.250	2.45	4.333	5.87	7.417	5.87	10.50	1.96
1.333	2.45	4.417	5.87	7.500	5.87	10.58	1.96
1.417	2.45	4.500	5.87	7.583	5.87	10.67	1.96
1.500	2.45	4.583	5.87	7.667	5.87	10.75	1.96
1.583	2.45	4.667	5.87	7.750	5.87	10.83	1.96
1.667	2.45	4.750	5.87	7.833	5.87	10.92	1.96
1.750	2.45	4.833	7.83	7.917	5.87	11.00	1.96
1.833	2.45	4.917	7.83	8.000	5.87	11.08	1.96
1.917	2.45	5.000	7.83	8.083	5.87	11.17	1.96
2.000	2.45	5.083	7.83	8.167	5.87	11.25	1.96
2.083	2.45	5.167	7.83	8.250	5.87	11.33	1.96
2.167	2.45	5.250	7.83	8.333	3.42	11.42	1.96
2.250	2.45	5.333	11.74	8.417	3.42	11.50	1.96
2.333	2.94	5.417	11.74	8.500	3.42	11.58	1.96
2.417	2.94	5.500	11.74	8.583	3.42	11.67	1.96
2.500	2.94	5.583	11.74	8.667	3.42	11.75	1.96
2.583	2.94	5.667	11.74	8.750	3.42	11.83	1.96
2.667	2.94	5.750	11.74	8.833	3.42	11.92	1.96
2.750	2.94	5.833	46.96	8.917	3.42	12.00	1.96
2.833	2.94	5.917	46.96	9.000	3.42	12.08	1.96
2.917	2.94	6.000	46.97	9.083	3.42	12.17	1.96
3.000	2.94	6.083	129.15	9.167	3.42	12.25	1.96
3.083	2.94	6.167	129.15	9.250	3.42		

			TOTALS
Max.Eff.Inten.(mm/hr)=	129.15	94.69	
over (min)	5.00	5.00	
Storage Coeff. (min)=	3.36 (ii)	4.38 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.26	0.23	
PEAK FLOW (cms)=	1.86	0.01	1.871 (iii)
TIME TO PEAK (hrs)=	6.25	6.25	6.25
RUNOFF VOLUME (mm)=	96.84	58.00	96.45
TOTAL RAINFALL (mm)=	97.84	97.84	97.84
RUNOFF COEFFICIENT =	0.99	0.59	0.99

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0268)	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
IN= 2---> OUT= 1	0.0000	0.0000	0.1959	0.1883
DT= 5.0 min	0.0980	0.0369	0.2939	0.4335

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)	5.270	1.871	6.25	96.45
OUTFLOW: ID= 1 (0268)	5.270	0.222	6.75	96.43

PEAK FLOW REDUCTION [Qout/Qin](%)= 11.87
TIME SHIFT OF PEAK FLOW (min)= 30.00
MAXIMUM STORAGE USED (ha.m.)= 0.2545

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\1562c14f
Ptotal= 97.84 mm	Comments: 100yr 12hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	3.91	6.75	17.61	10.00	3.42
0.50	2.45	3.75	3.91	7.00	7.83	10.25	3.42
0.75	2.45	4.00	3.91	7.25	7.83	10.50	1.96
1.00	2.45	4.25	3.91	7.50	5.87	10.75	1.96
1.25	2.45	4.50	5.87	7.75	5.87	11.00	1.96
1.50	2.45	4.75	5.87	8.00	5.87	11.25	1.96
1.75	2.45	5.00	7.83	8.25	5.87	11.50	1.96
2.00	2.45	5.25	7.83	8.50	3.42	11.75	1.96
2.25	2.45	5.50	11.74	8.75	3.42	12.00	1.96
2.50	2.94	5.75	11.74	9.00	3.42	12.25	1.96
2.75	2.94	6.00	46.96	9.25	3.42		
3.00	2.94	6.25	129.15	9.50	3.42		
3.25	2.94	6.50	17.61	9.75	3.42		

CALIB			
STANDHYD (0202)	Area (ha)= 6.57		
ID= 1 DT= 5.0 min	Total Imp(%)= 81.00	Dir. Conn.(%)= 81.00	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.32	1.25
Dep. Storage (mm)=	1.00	5.00
Average Slope (%)=	1.00	2.00
Length (m)=	209.28	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.94	6.250	129.15	9.33	3.42
0.167	0.00	3.250	2.94	6.333	17.61	9.42	3.42

```
              0.250    0.00 | 3.333    3.91 | 6.417   17.61 |  9.50    3.42
              0.333    2.45 | 3.417    3.91 | 6.500   17.61 |  9.58    3.42
              0.417    2.45 | 3.500    3.91 | 6.583   17.61 |  9.67    3.42
              0.500    2.45 | 3.583    3.91 | 6.667   17.61 |  9.75    3.42
              0.583    2.45 | 3.667    3.91 | 6.750   17.61 |  9.83    3.42
              0.667    2.45 | 3.750    3.91 | 6.833    7.83 |  9.92    3.42
              0.750    2.45 | 3.833    3.91 | 6.917    7.83 | 10.00    3.42
              0.833    2.45 | 3.917    3.91 | 7.000    7.83 | 10.08    3.42
              0.917    2.45 | 4.000    3.91 | 7.083    7.83 | 10.17    3.42
              1.000    2.45 | 4.083    3.91 | 7.167    7.83 | 10.25    3.42
              1.083    2.45 | 4.167    3.91 | 7.250    7.83 | 10.33    1.96
              1.167    2.45 | 4.250    3.91 | 7.333    5.87 | 10.42    1.96
              1.250    2.45 | 4.333    5.87 | 7.417    5.87 | 10.50    1.96
              1.333    2.45 | 4.417    5.87 | 7.500    5.87 | 10.58    1.96
              1.417    2.45 | 4.500    5.87 | 7.583    5.87 | 10.67    1.96
              1.500    2.45 | 4.583    5.87 | 7.667    5.87 | 10.75    1.96
              1.583    2.45 | 4.667    5.87 | 7.750    5.87 | 10.83    1.96
              1.667    2.45 | 4.750    5.87 | 7.833    5.87 | 10.92    1.96
              1.750    2.45 | 4.833    7.83 | 7.917    5.87 | 11.00    1.96
              1.833    2.45 | 4.917    7.83 | 8.000    5.87 | 11.08    1.96
              1.917    2.45 | 5.000    7.83 | 8.083    5.87 | 11.17    1.96
              2.000    2.45 | 5.083    7.83 | 8.167    5.87 | 11.25    1.96
              2.083    2.45 | 5.167    7.83 | 8.250    5.87 | 11.33    1.96
              2.167    2.45 | 5.250    7.83 | 8.333    3.42 | 11.42    1.96
              2.250    2.45 | 5.333   11.74 | 8.417    3.42 | 11.50    1.96
              2.333    2.94 | 5.417   11.74 | 8.500    3.42 | 11.58    1.96
              2.417    2.94 | 5.500   11.74 | 8.583    3.42 | 11.67    1.96
              2.500    2.94 | 5.583   11.74 | 8.667    3.42 | 11.75    1.96
              2.583    2.94 | 5.667   11.74 | 8.750    3.42 | 11.83    1.96
              2.667    2.94 | 5.750   11.74 | 8.833    3.42 | 11.92    1.96
              2.750    2.94 | 5.833   46.96 | 8.917    3.42 | 12.00    1.96
              2.833    2.94 | 5.917   46.96 | 9.000    3.42 | 12.08    1.96
              2.917    2.94 | 6.000   46.97 | 9.083    3.42 | 12.17    1.96
              3.000    2.94 | 6.083  129.15 | 9.167    3.42 | 12.25    1.96
              3.083    2.94 | 6.167  129.15 | 9.250    3.42 |

     Max.Eff.Inten.(mm/hr)=     129.15        94.69
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       3.59 (ii)    7.16 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.26         0.14
                                                        *TOTALS*
     PEAK FLOW       (cms)=       1.89         0.27        2.158 (iii)
     TIME TO PEAK    (hrs)=       6.25         6.25         6.25
     RUNOFF VOLUME    (mm)=      96.84        58.00        89.46
     TOTAL RAINFALL   (mm)=      97.84        97.84        97.84
     RUNOFF COEFFICIENT   =       0.99         0.59         0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0262)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0202):     6.57   2.158     6.25    89.46
      + ID2= 2 (  0268):     5.27   0.222     6.75    96.43
        ================================================
        ID = 3 (  0262):    11.84   2.362     6.25    92.56

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0266)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0259):     4.67   1.211     6.25    90.76
      + ID2= 2 (  0262):    11.84   2.362     6.25    92.56
        ================================================
        ID = 3 (  0266):    16.51   3.573     6.25    92.05

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| RESERVOIR(  0263)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.2130     0.6563
                          0.0190     0.1773   |   0.2520     0.6883
                          0.0220     0.2128   |   0.2890     0.7150
                          0.0260     0.2888   |   0.2980     0.7450
                          0.0300     0.3648   |   0.3060     0.7700
                          0.0650     0.4586   |   0.3150     0.8127
                          0.1100     0.5155   |   0.3320     0.9290
                          0.1680     0.5503   |   0.3390     0.9767
                          0.1930     0.5804   |   0.3520     1.0680
                          0.2000     0.6048   |   0.0000     0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0266)     16.510     3.573      6.25      92.05
   OUTFLOW: ID= 1 (  0263)     16.510     0.319      8.58      91.91

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  8.94
                  TIME SHIFT OF PEAK FLOW         (min)=140.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.8420

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0206):     0.12   0.019     6.33    57.95
      + ID2= 2 (  0263):    16.51   0.319     8.58    91.91
        ================================================
        ID = 3 (  0261):    16.64   0.321     8.33    91.66

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
================================================================================
============================

       V    V   I    SSSSS  U   U    A    L              (v 5.0.2025)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
```

```
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
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***** D E T A I L E D O U T P U T *****

```
  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\af190106-1645-402c-8cb0-49b261e9ae79\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\af190106-1645-402c-8cb0-49b261e9ae79\s

DATE: 07/06/2020                          TIME: 04:36:53

USER:



COMMENTS: _____________________________________________________________

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  **********************************************
  ** SIMULATION : 2 Year 12 Hour SCS           **
  **********************************************


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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\aea093e4
| Ptotal= 39.97 mm |    Comments: 2yr 12hr 15min SCS
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TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	1.60	6.75	7.19	10.00	1.40
0.50	1.00	3.75	1.60	7.00	3.20	10.25	1.40
0.75	1.00	4.00	1.60	7.25	3.20	10.50	0.80
1.00	1.00	4.25	1.60	7.50	2.40	10.75	0.80
1.25	1.00	4.50	2.40	7.75	2.40	11.00	0.80
1.50	1.00	4.75	2.40	8.00	2.40	11.25	0.80
1.75	1.00	5.00	3.20	8.25	2.40	11.50	0.80
2.00	1.00	5.25	3.20	8.50	1.40	11.75	0.80
2.25	1.00	5.50	4.80	8.75	1.40	12.00	0.80
2.50	1.20	5.75	4.80	9.00	1.40	12.25	0.80
2.75	1.20	6.00	19.19	9.25	1.40		
3.00	1.20	6.25	52.76	9.50	1.40		
3.25	1.20	6.50	7.19	9.75	1.40		

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| CALIB            |
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| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
-------------------   U.H. Tp(hrs)=   0.25

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	1.20	6.250	52.76	9.33	1.40
0.167	0.00	3.250	1.20	6.333	7.19	9.42	1.40
0.250	0.00	3.333	1.60	6.417	7.19	9.50	1.40
0.333	1.00	3.417	1.60	6.500	7.19	9.58	1.40
0.417	1.00	3.500	1.60	6.583	7.19	9.67	1.40
0.500	1.00	3.583	1.60	6.667	7.19	9.75	1.40
0.583	1.00	3.667	1.60	6.750	7.19	9.83	1.40
0.667	1.00	3.750	1.60	6.833	3.20	9.92	1.40
0.750	1.00	3.833	1.60	6.917	3.20	10.00	1.40
0.833	1.00	3.917	1.60	7.000	3.20	10.08	1.40
0.917	1.00	4.000	1.60	7.083	3.20	10.17	1.40
1.000	1.00	4.083	1.60	7.167	3.20	10.25	1.40
1.083	1.00	4.167	1.60	7.250	3.20	10.33	0.80
1.167	1.00	4.250	1.60	7.333	2.40	10.42	0.80
1.250	1.00	4.333	2.40	7.417	2.40	10.50	0.80
1.333	1.00	4.417	2.40	7.500	2.40	10.58	0.80
1.417	1.00	4.500	2.40	7.583	2.40	10.67	0.80
1.500	1.00	4.583	2.40	7.667	2.40	10.75	0.80
1.583	1.00	4.667	2.40	7.750	2.40	10.83	0.80
1.667	1.00	4.750	2.40	7.833	2.40	10.92	0.80
1.750	1.00	4.833	3.20	7.917	2.40	11.00	0.80
1.833	1.00	4.917	3.20	8.000	2.40	11.08	0.80
1.917	1.00	5.000	3.20	8.083	2.40	11.17	0.80
2.000	1.00	5.083	3.20	8.167	2.40	11.25	0.80
2.083	1.00	5.167	3.20	8.250	2.40	11.33	0.80
2.167	1.00	5.250	3.20	8.333	1.40	11.42	0.80
2.250	1.00	5.333	4.80	8.417	1.40	11.50	0.80
2.333	1.20	5.417	4.80	8.500	1.40	11.58	0.80
2.417	1.20	5.500	4.80	8.583	1.40	11.67	0.80
2.500	1.20	5.583	4.80	8.667	1.40	11.75	0.80
2.583	1.20	5.667	4.80	8.750	1.40	11.83	0.80
2.667	1.20	5.750	4.80	8.833	1.40	11.92	0.80
2.750	1.20	5.833	19.19	8.917	1.40	12.00	0.80
2.833	1.20	5.917	19.19	9.000	1.40	12.08	0.80
2.917	1.20	6.000	19.19	9.083	1.40	12.17	0.80
3.000	1.20	6.083	52.76	9.167	1.40	12.25	0.80
3.083	1.20	6.167	52.76	9.250	1.40		

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    Unit Hyd Qpeak  (cms)=   0.019

    PEAK FLOW       (cms)=   0.004 (i)
    TIME TO PEAK    (hrs)=   6.333
    RUNOFF VOLUME    (mm)=  13.463
    TOTAL RAINFALL   (mm)=  39.970
    RUNOFF COEFFICIENT   =   0.337

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\aea093e4
```

| Ptotal= 39.97 mm | Comments: 2yr 12hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	1.60	6.75	7.19	10.00	1.40
0.50	1.00	3.75	1.60	7.00	3.20	10.25	1.40
0.75	1.00	4.00	1.60	7.25	3.20	10.50	0.80
1.00	1.00	4.25	1.60	7.50	2.40	10.75	0.80
1.25	1.00	4.50	2.40	7.75	2.40	11.00	0.80
1.50	1.00	4.75	2.40	8.00	2.40	11.25	0.80
1.75	1.00	5.00	3.20	8.25	2.40	11.50	0.80
2.00	1.00	5.25	3.20	8.50	1.40	11.75	0.80
2.25	1.00	5.50	4.80	8.75	1.40	12.00	0.80
2.50	1.20	5.75	4.80	9.00	1.40	12.25	0.80
2.75	1.20	6.00	19.19	9.25	1.40		
3.00	1.20	6.25	52.76	9.50	1.40		
3.25	1.20	6.50	7.19	9.75	1.40		

| CALIB
| STANDHYD (0205)|
|ID= 1 DT= 5.0 min |

Area (ha)= 1.12
Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.11	0.01
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	86.60	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	1.20	6.250	52.76	9.33	1.40
0.167	0.00	3.250	1.20	6.333	7.19	9.42	1.40
0.250	0.00	3.333	1.60	6.417	7.19	9.50	1.40
0.333	1.00	3.417	1.60	6.500	7.19	9.58	1.40
0.417	1.00	3.500	1.60	6.583	7.19	9.67	1.40
0.500	1.00	3.583	1.60	6.667	7.19	9.75	1.40
0.583	1.00	3.667	1.60	6.750	7.19	9.83	1.40
0.667	1.00	3.750	1.60	6.833	3.20	9.92	1.40
0.750	1.00	3.833	1.60	6.917	3.20	10.00	1.40
0.833	1.00	3.917	1.60	7.000	3.20	10.08	1.40
0.917	1.00	4.000	1.60	7.083	3.20	10.17	1.40
1.000	1.00	4.083	1.60	7.167	3.20	10.25	1.40
1.083	1.00	4.167	1.60	7.250	3.20	10.33	0.80
1.167	1.00	4.250	1.60	7.333	2.40	10.42	0.80
1.250	1.00	4.333	2.40	7.417	2.40	10.50	0.80
1.333	1.00	4.417	2.40	7.500	2.40	10.58	0.80
1.417	1.00	4.500	2.40	7.583	2.40	10.67	0.80
1.500	1.00	4.583	2.40	7.667	2.40	10.75	0.80
1.583	1.00	4.667	2.40	7.750	2.40	10.83	0.80
1.667	1.00	4.750	2.40	7.833	2.40	10.92	0.80
1.750	1.00	4.833	3.20	7.917	2.40	11.00	0.80
1.833	1.00	4.917	3.20	8.000	2.40	11.08	0.80
1.917	1.00	5.000	3.20	8.083	2.40	11.17	0.80
2.000	1.00	5.083	3.20	8.167	2.40	11.25	0.80
2.083	1.00	5.167	3.20	8.250	2.40	11.33	0.80
2.167	1.00	5.250	3.20	8.333	1.40	11.42	0.80
2.250	1.00	5.333	4.80	8.417	1.40	11.50	0.80
2.333	1.20	5.417	4.80	8.500	1.40	11.58	0.80
2.417	1.20	5.500	4.80	8.583	1.40	11.67	0.80
2.500	1.20	5.583	4.80	8.667	1.40	11.75	0.80
2.583	1.20	5.667	4.80	8.750	1.40	11.83	0.80
2.667	1.20	5.750	4.80	8.833	1.40	11.92	0.80
2.750	1.20	5.833	19.19	8.917	1.40	12.00	0.80
2.833	1.20	5.917	19.19	9.000	1.40	12.08	0.80
2.917	1.20	6.000	19.19	9.083	1.40	12.17	0.80
3.000	1.20	6.083	52.76	9.167	1.40	12.25	0.80
3.083	1.20	6.167	52.76	9.250	1.40		

			TOTALS
Max.Eff.Inten.(mm/hr)=	52.76	22.98	
over (min)	5.00	5.00	
Storage Coeff. (min)=	3.03 (ii)	4.48 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.27	0.23	
PEAK FLOW (cms)=	0.16	0.00	0.163 (iii)
TIME TO PEAK (hrs)=	6.25	6.25	6.25
RUNOFF VOLUME (mm)=	38.97	13.48	38.71
TOTAL RAINFALL (mm)=	39.97	39.97	39.97
RUNOFF COEFFICIENT =	0.97	0.34	0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| RESERVOIR(0256)|
| IN= 2---> OUT= 1 |
| DT= 5.0 min |

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0470	0.0750

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0205)	1.125	0.163	6.25	38.71
OUTFLOW: ID= 1 (0256)	1.125	0.017	6.83	38.36

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.27
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.0268

| READ STORM | Filename: C:\Users\mventresca\AppData\Local\Temp\c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\aea093e4

| Ptotal= 39.97 mm | Comments: 2yr 12hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	1.60	6.75	7.19	10.00	1.40
0.50	1.00	3.75	1.60	7.00	3.20	10.25	1.40
0.75	1.00	4.00	1.60	7.25	3.20	10.50	0.80
1.00	1.00	4.25	1.60	7.50	2.40	10.75	0.80
1.25	1.00	4.50	2.40	7.75	2.40	11.00	0.80

1.50	1.00	4.75	2.40	8.00	2.40	11.25	0.80
1.75	1.00	5.00	3.20	8.25	2.40	11.50	0.80
2.00	1.00	5.25	3.20	8.50	1.40	11.75	0.80
2.25	1.00	5.50	4.80	8.75	1.40	12.00	0.80
2.50	1.20	5.75	4.80	9.00	1.40	12.25	0.80
2.75	1.20	6.00	19.19	9.25	1.40		
3.00	1.20	6.25	52.76	9.50	1.40		
3.25	1.20	6.50	7.19	9.75	1.40		

CALIB
STANDHYD (0203)
ID= 1 DT= 5.0 min

Area (ha)= 2.10
Total Imp(%)= 80.00 Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.68	0.42
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	118.18	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	1.20	6.250	52.76	9.33	1.40
0.167	0.00	3.250	1.20	6.333	7.19	9.42	1.40
0.250	0.00	3.333	1.60	6.417	7.19	9.50	1.40
0.333	1.00	3.417	1.60	6.500	7.19	9.58	1.40
0.417	1.00	3.500	1.60	6.583	7.19	9.67	1.40
0.500	1.00	3.583	1.60	6.667	7.19	9.75	1.40
0.583	1.00	3.667	1.60	6.750	7.19	9.83	1.40
0.667	1.00	3.750	1.60	6.833	3.20	9.92	1.40
0.750	1.00	3.833	1.60	6.917	3.20	10.00	1.40
0.833	1.00	3.917	1.60	7.000	3.20	10.08	1.40
0.917	1.00	4.000	1.60	7.083	3.20	10.17	1.40
1.000	1.00	4.083	1.60	7.167	3.20	10.25	1.40
1.083	1.00	4.167	1.60	7.250	3.20	10.33	0.80
1.167	1.00	4.250	1.60	7.333	2.40	10.42	0.80
1.250	1.00	4.333	2.40	7.417	2.40	10.50	0.80
1.333	1.00	4.417	2.40	7.500	2.40	10.58	0.80
1.417	1.00	4.500	2.40	7.583	2.40	10.67	0.80
1.500	1.00	4.583	2.40	7.667	2.40	10.75	0.80
1.583	1.00	4.667	2.40	7.750	2.40	10.83	0.80
1.667	1.00	4.750	2.40	7.833	2.40	10.92	0.80
1.750	1.00	4.833	3.20	7.917	2.40	11.00	0.80
1.833	1.00	4.917	3.20	8.000	2.40	11.08	0.80
1.917	1.00	5.000	3.20	8.083	2.40	11.17	0.80
2.000	1.00	5.083	3.20	8.167	2.40	11.25	0.80
2.083	1.00	5.167	3.20	8.250	2.40	11.33	0.80
2.167	1.00	5.250	3.20	8.333	1.40	11.42	0.80
2.250	1.00	5.333	4.80	8.417	1.40	11.50	0.80
2.333	1.20	5.417	4.80	8.500	1.40	11.58	0.80
2.417	1.20	5.500	4.80	8.583	1.40	11.67	0.80
2.500	1.20	5.583	4.80	8.667	1.40	11.75	0.80
2.583	1.20	5.667	4.80	8.750	1.40	11.83	0.80
2.667	1.20	5.750	4.80	8.833	1.40	11.92	0.80
2.750	1.20	5.833	19.19	8.917	1.40	12.00	0.80
2.833	1.20	5.917	19.19	9.000	1.40	12.08	0.80
2.917	1.20	6.000	19.19	9.083	1.40	12.17	0.80
3.000	1.20	6.083	52.76	9.167	1.40	12.25	0.80
3.083	1.20	6.167	52.76	9.250	1.40		

			TOTALS
Max.Eff.Inten.(mm/hr)=	52.76	20.98	
over (min)	5.00	20.00	
Storage Coeff. (min)=	3.65 (ii)	16.83 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.25	0.06	
PEAK FLOW (cms)=	0.24	0.01	0.252 (iii)
TIME TO PEAK (hrs)=	6.25	6.42	6.25
RUNOFF VOLUME (mm)=	38.97	13.48	33.87
TOTAL RAINFALL (mm)=	39.97	39.97	39.97
RUNOFF COEFFICIENT =	0.97	0.34	0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0260)
1 + 2 = 3

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0203):		2.10	0.252	6.25	33.87
+ ID2= 2 (0256):		1.12	0.017	6.83	38.36
ID = 3 (0260):		3.22	0.266	6.25	35.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\aea093e4
Ptotal= 39.97 mm	Comments: 2yr 12hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	1.60	6.75	7.19	10.00	1.40
0.50	1.00	3.75	1.60	7.00	3.20	10.25	1.40
0.75	1.00	4.00	1.60	7.25	3.20	10.50	0.80
1.00	1.00	4.25	1.60	7.50	2.40	10.75	0.80
1.25	1.00	4.50	2.40	7.75	2.40	11.00	0.80
1.50	1.00	4.75	2.40	8.00	2.40	11.25	0.80
1.75	1.00	5.00	3.20	8.25	2.40	11.50	0.80
2.00	1.00	5.25	3.20	8.50	1.40	11.75	0.80
2.25	1.00	5.50	4.80	8.75	1.40	12.00	0.80
2.50	1.20	5.75	4.80	9.00	1.40	12.25	0.80
2.75	1.20	6.00	19.19	9.25	1.40		
3.00	1.20	6.25	52.76	9.50	1.40		
3.25	1.20	6.50	7.19	9.75	1.40		

CALIB

| STANDHYD (0204)| Area (ha)= 1.45
|ID= 1 DT= 5.0 min | Total Imp(%)= 80.00 Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.16	0.29
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	98.32	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	1.20	6.250	52.76	9.33	1.40
0.167	0.00	3.250	1.20	6.333	7.19	9.42	1.40
0.250	0.00	3.333	1.60	6.417	7.19	9.50	1.40
0.333	1.00	3.417	1.60	6.500	7.19	9.58	1.40
0.417	1.00	3.500	1.60	6.583	7.19	9.67	1.40
0.500	1.00	3.583	1.60	6.667	7.19	9.75	1.40
0.583	1.00	3.667	1.60	6.750	7.19	9.83	1.40
0.667	1.00	3.750	1.60	6.833	3.20	9.92	1.40
0.750	1.00	3.833	1.60	6.917	3.20	10.00	1.40
0.833	1.00	3.917	1.60	7.000	3.20	10.08	1.40
0.917	1.00	4.000	1.60	7.083	3.20	10.17	1.40
1.000	1.00	4.083	1.60	7.167	3.20	10.25	1.40
1.083	1.00	4.167	1.60	7.250	3.20	10.33	0.80
1.167	1.00	4.250	1.60	7.333	2.40	10.42	0.80
1.250	1.00	4.333	2.40	7.417	2.40	10.50	0.80
1.333	1.00	4.417	2.40	7.500	2.40	10.58	0.80
1.417	1.00	4.500	2.40	7.583	2.40	10.67	0.80
1.500	1.00	4.583	2.40	7.667	2.40	10.75	0.80
1.583	1.00	4.667	2.40	7.750	2.40	10.83	0.80
1.667	1.00	4.750	2.40	7.833	2.40	10.92	0.80
1.750	1.00	4.833	3.20	7.917	2.40	11.00	0.80
1.833	1.00	4.917	3.20	8.000	2.40	11.08	0.80
1.917	1.00	5.000	3.20	8.083	2.40	11.17	0.80
2.000	1.00	5.083	3.20	8.167	2.40	11.25	0.80
2.083	1.00	5.167	3.20	8.250	2.40	11.33	0.80
2.167	1.00	5.250	3.20	8.333	1.40	11.42	0.80
2.250	1.00	5.333	4.80	8.417	1.40	11.50	0.80
2.333	1.20	5.417	4.80	8.500	1.40	11.58	0.80
2.417	1.20	5.500	4.80	8.583	1.40	11.67	0.80
2.500	1.20	5.583	4.80	8.667	1.40	11.75	0.80
2.583	1.20	5.667	4.80	8.750	1.40	11.83	0.80
2.667	1.20	5.750	4.80	8.833	1.40	11.92	0.80
2.750	1.20	5.833	19.19	8.917	1.40	12.00	0.80
2.833	1.20	5.917	19.19	9.000	1.40	12.08	0.80
2.917	1.20	6.000	19.19	9.083	1.40	12.17	0.80
3.000	1.20	6.083	52.76	9.167	1.40	12.25	0.80
3.083	1.20	6.167	52.76	9.250	1.40		

Max.Eff.Inten.(mm/hr)=		52.76	20.98	
over (min)		5.00	20.00	
Storage Coeff. (min)=		3.27 (ii)	16.45 (ii)	
Unit Hyd. Tpeak (min)=		5.00	20.00	
Unit Hyd. peak (cms)=		0.27	0.06	
				TOTALS
PEAK FLOW	(cms)=	0.17	0.01	0.175 (iii)
TIME TO PEAK	(hrs)=	6.25	6.42	6.25
RUNOFF VOLUME	(mm)=	38.97	13.48	33.87
TOTAL RAINFALL	(mm)=	39.97	39.97	39.97

RUNOFF COEFFICIENT = 0.97 0.34 0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0259)
1 + 2 = 3

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0204):		1.45	0.175	6.25	33.87
+ ID2= 2 (0260):		3.22	0.266	6.25	35.44
ID = 3 (0259):		4.67	0.441	6.25	34.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\aea093e4
Ptotal= 39.97 mm	Comments: 2yr 12hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	1.60	6.75	7.19	10.00	1.40
0.50	1.00	3.75	1.60	7.00	3.20	10.25	1.40
0.75	1.00	4.00	1.60	7.25	3.20	10.50	0.80
1.00	1.00	4.25	1.60	7.50	2.40	10.75	0.80
1.25	1.00	4.50	2.40	7.75	2.40	11.00	0.80
1.50	1.00	4.75	2.40	8.00	2.40	11.25	0.80
1.75	1.00	5.00	3.20	8.25	2.40	11.50	0.80
2.00	1.00	5.25	3.20	8.50	1.40	11.75	0.80
2.25	1.00	5.50	4.80	8.75	1.40	12.00	0.80
2.50	1.20	5.75	4.80	9.00	1.40	12.25	0.80
2.75	1.20	6.00	19.19	9.25	1.40		
3.00	1.20	6.25	52.76	9.50	1.40		
3.25	1.20	6.50	7.19	9.75	1.40		

CALIB
STANDHYD (0201)| Area (ha)= 5.27
ID= 1 DT= 5.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.22	0.05
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	187.44	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	1.20	6.250	52.76	9.33	1.40
0.167	0.00	3.250	1.20	6.333	7.19	9.42	1.40
0.250	0.00	3.333	1.60	6.417	7.19	9.50	1.40
0.333	1.00	3.417	1.60	6.500	7.19	9.58	1.40
0.417	1.00	3.500	1.60	6.583	7.19	9.67	1.40
0.500	1.00	3.583	1.60	6.667	7.19	9.75	1.40
0.583	1.00	3.667	1.60	6.750	7.19	9.83	1.40
0.667	1.00	3.750	1.60	6.833	3.20	9.92	1.40
0.750	1.00	3.833	1.60	6.917	3.20	10.00	1.40
0.833	1.00	3.917	1.60	7.000	3.20	10.08	1.40
0.917	1.00	4.000	1.60	7.083	3.20	10.17	1.40
1.000	1.00	4.083	1.60	7.167	3.20	10.25	1.40
1.083	1.00	4.167	1.60	7.250	3.20	10.33	0.80
1.167	1.00	4.250	1.60	7.333	2.40	10.42	0.80
1.250	1.00	4.333	2.40	7.417	2.40	10.50	0.80
1.333	1.00	4.417	2.40	7.500	2.40	10.58	0.80
1.417	1.00	4.500	2.40	7.583	2.40	10.67	0.80
1.500	1.00	4.583	2.40	7.667	2.40	10.75	0.80
1.583	1.00	4.667	2.40	7.750	2.40	10.83	0.80
1.667	1.00	4.750	2.40	7.833	2.40	10.92	0.80
1.750	1.00	4.833	3.20	7.917	2.40	11.00	0.80
1.833	1.00	4.917	3.20	8.000	2.40	11.08	0.80
1.917	1.00	5.000	3.20	8.083	2.40	11.17	0.80
2.000	1.00	5.083	3.20	8.167	2.40	11.25	0.80
2.083	1.00	5.167	3.20	8.250	2.40	11.33	0.80
2.167	1.00	5.250	3.20	8.333	1.40	11.42	0.80
2.250	1.00	5.333	4.80	8.417	1.40	11.50	0.80
2.333	1.20	5.417	4.80	8.500	1.40	11.58	0.80
2.417	1.20	5.500	4.80	8.583	1.40	11.67	0.80
2.500	1.20	5.583	4.80	8.667	1.40	11.75	0.80
2.583	1.20	5.667	4.80	8.750	1.40	11.83	0.80
2.667	1.20	5.750	4.80	8.833	1.40	11.92	0.80
2.750	1.20	5.833	19.19	8.917	1.40	12.00	0.80
2.833	1.20	5.917	19.19	9.000	1.40	12.08	0.80
2.917	1.20	6.000	19.19	9.083	1.40	12.17	0.80
3.000	1.20	6.083	52.76	9.167	1.40	12.25	0.80
3.083	1.20	6.167	52.76	9.250	1.40		

Max.Eff.Inten.(mm/hr)=	52.76	22.98	
over (min)	5.00	10.00	
Storage Coeff. (min)=	4.81 (ii)	6.26 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.22	0.15	
			TOTALS
PEAK FLOW (cms)=	0.74	0.00	0.745 (iii)
TIME TO PEAK (hrs)=	6.25	6.25	6.25
RUNOFF VOLUME (mm)=	38.97	13.48	38.71
TOTAL RAINFALL (mm)=	39.97	39.97	39.97
RUNOFF COEFFICIENT =	0.97	0.34	0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0268)		IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)		
	0.0000	0.0000	0.1959	0.1883		
	0.0980	0.0369	0.2939	0.4335		

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)	5.270	0.745	6.25	38.71
OUTFLOW: ID= 1 (0268)	5.270	0.134	6.50	38.70

PEAK FLOW REDUCTION [Qout/Qin](%)= 17.93
TIME SHIFT OF PEAK FLOW (min)= 15.00
MAXIMUM STORAGE USED (ha.m.)= 0.0920

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\aea093e4
Ptotal= 39.97 mm	Comments: 2yr 12hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	1.60	6.75	7.19	10.00	1.40
0.50	1.00	3.75	1.60	7.00	3.20	10.25	1.40
0.75	1.00	4.00	1.60	7.25	3.20	10.50	0.80
1.00	1.00	4.25	1.60	7.50	2.40	10.75	0.80
1.25	1.00	4.50	2.40	7.75	2.40	11.00	0.80
1.50	1.00	4.75	2.40	8.00	2.40	11.25	0.80
1.75	1.00	5.00	3.20	8.25	2.40	11.50	0.80
2.00	1.00	5.25	3.20	8.50	1.40	11.75	0.80
2.25	1.00	5.50	4.80	8.75	1.40	12.00	0.80
2.50	1.20	5.75	4.80	9.00	1.40	12.25	0.80
2.75	1.20	6.00	19.19	9.25	1.40		
3.00	1.20	6.25	52.76	9.50	1.40		
3.25	1.20	6.50	7.19	9.75	1.40		

CALIB			
STANDHYD (0202)	Area (ha)= 6.57		
ID= 1 DT= 5.0 min	Total Imp(%)= 81.00	Dir. Conn.(%)= 81.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	5.32	1.25	
Dep. Storage (mm)=	1.00	5.00	
Average Slope (%)=	1.00	2.00	
Length (m)=	209.28	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	1.20	6.250	52.76	9.33	1.40
0.167	0.00	3.250	1.20	6.333	7.19	9.42	1.40
0.250	0.00	3.333	1.60	6.417	7.19	9.50	1.40
0.333	1.00	3.417	1.60	6.500	7.19	9.58	1.40
0.417	1.00	3.500	1.60	6.583	7.19	9.67	1.40

```
              0.500    1.00 | 3.583    1.60 | 6.667    7.19 |  9.75    1.40
              0.583    1.00 | 3.667    1.60 | 6.750    7.19 |  9.83    1.40
              0.667    1.00 | 3.750    1.60 | 6.833    3.20 |  9.92    1.40
              0.750    1.00 | 3.833    1.60 | 6.917    3.20 | 10.00    1.40
              0.833    1.00 | 3.917    1.60 | 7.000    3.20 | 10.08    1.40
              0.917    1.00 | 4.000    1.60 | 7.083    3.20 | 10.17    1.40
              1.000    1.00 | 4.083    1.60 | 7.167    3.20 | 10.25    1.40
              1.083    1.00 | 4.167    1.60 | 7.250    3.20 | 10.33    0.80
              1.167    1.00 | 4.250    1.60 | 7.333    2.40 | 10.42    0.80
              1.250    1.00 | 4.333    2.40 | 7.417    2.40 | 10.50    0.80
              1.333    1.00 | 4.417    2.40 | 7.500    2.40 | 10.58    0.80
              1.417    1.00 | 4.500    2.40 | 7.583    2.40 | 10.67    0.80
              1.500    1.00 | 4.583    2.40 | 7.667    2.40 | 10.75    0.80
              1.583    1.00 | 4.667    2.40 | 7.750    2.40 | 10.83    0.80
              1.667    1.00 | 4.750    2.40 | 7.833    2.40 | 10.92    0.80
              1.750    1.00 | 4.833    3.20 | 7.917    2.40 | 11.00    0.80
              1.833    1.00 | 4.917    3.20 | 8.000    2.40 | 11.08    0.80
              1.917    1.00 | 5.000    3.20 | 8.083    2.40 | 11.17    0.80
              2.000    1.00 | 5.083    3.20 | 8.167    2.40 | 11.25    0.80
              2.083    1.00 | 5.167    3.20 | 8.250    2.40 | 11.33    0.80
              2.167    1.00 | 5.250    3.20 | 8.333    1.40 | 11.42    0.80
              2.250    1.00 | 5.333    4.80 | 8.417    1.40 | 11.50    0.80
              2.333    1.20 | 5.417    4.80 | 8.500    1.40 | 11.58    0.80
              2.417    1.20 | 5.500    4.80 | 8.583    1.40 | 11.67    0.80
              2.500    1.20 | 5.583    4.80 | 8.667    1.40 | 11.75    0.80
              2.583    1.20 | 5.667    4.80 | 8.750    1.40 | 11.83    0.80
              2.667    1.20 | 5.750    4.80 | 8.833    1.40 | 11.92    0.80
              2.750    1.20 | 5.833   19.19 | 8.917    1.40 | 12.00    0.80
              2.833    1.20 | 5.917   19.19 | 9.000    1.40 | 12.08    0.80
              2.917    1.20 | 6.000   19.19 | 9.083    1.40 | 12.17    0.80
              3.000    1.20 | 6.083   52.76 | 9.167    1.40 | 12.25    0.80
              3.083    1.20 | 6.167   52.76 | 9.250    1.40 |

    Max.Eff.Inten.(mm/hr)=      52.76        20.98
              over (min)        5.00        20.00
    Storage Coeff.  (min)=      5.14 (ii)   18.32 (ii)
    Unit Hyd. Tpeak (min)=      5.00        20.00
    Unit Hyd. peak  (cms)=      0.21         0.06
                                                      *TOTALS*
    PEAK FLOW       (cms)=      0.75         0.04          0.777 (iii)
    TIME TO PEAK    (hrs)=      6.25         6.42           6.25
    RUNOFF VOLUME    (mm)=     38.97        13.48          34.13
    TOTAL RAINFALL   (mm)=     39.97        39.97          39.97
    RUNOFF COEFFICIENT   =      0.97         0.34           0.85

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  82.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
-------------------
| ADD HYD  (  0262)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0202):     6.57   0.777     6.25    34.13
     + ID2= 2 (  0268):     5.27   0.134     6.50    38.70
       ================================================
       ID = 3 (  0262):    11.84   0.900     6.25    36.16

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
-------------------
| ADD HYD  (  0266)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0259):     4.67   0.441     6.25    34.95
     + ID2= 2 (  0262):    11.84   0.900     6.25    36.16
       ================================================
       ID = 3 (  0266):    16.51   1.341     6.25    35.82

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
-------------------
| RESERVOIR(  0263)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.2130     0.6563
                         0.0190     0.1773   |   0.2520     0.6883
                         0.0220     0.2128   |   0.2890     0.7150
                         0.0260     0.2888   |   0.2980     0.7450
                         0.0300     0.3648   |   0.3060     0.7700
                         0.0650     0.4586   |   0.3150     0.8127
                         0.1100     0.5155   |   0.3320     0.9290
                         0.1680     0.5503   |   0.3390     0.9767
                         0.1930     0.5804   |   0.3520     1.0680
                         0.2000     0.6048   |   0.0000     0.0000

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0266)     16.510      1.341      6.25      35.82
   OUTFLOW: ID= 1 (  0263)     16.510      0.065     10.50      35.67

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  4.87
                TIME SHIFT OF PEAK FLOW         (min)=255.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.4590
```

```
-------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0206):     0.12   0.004     6.33    13.46
     + ID2= 2 (  0263):    16.51   0.065    10.50    35.67
       ================================================
       ID = 3 (  0261):    16.64   0.066    10.50    35.51

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
================================================================================
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      V    V   I    SSSSS  U   U    A    L              (v 5.0.2025)
      V    V   I    SS     U   U   A A   L
       V  V    I     SS    U   U  AAAAA  L
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
```

```
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\5f59d96d-7096-46e3-b930-2e76d203d112\s
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4bf8-aeac-18a29a864848\5f59d96d-7096-46e3-b930-2e76d203d112\s


DATE: 07/06/2020                          TIME: 04:36:54

USER:



COMMENTS: _____________________________________________________________


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  ***********************************************
  ** SIMULATION : 25 Year 12 Hour SCS           **
  ***********************************************


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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\e3311969
| Ptotal= 79.97 mm |    Comments: 25yr 12hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  3.50    3.20 |  6.75   14.39 | 10.00    2.80
                0.50    2.00 |  3.75    3.20 |  7.00    6.40 | 10.25    2.80
                0.75    2.00 |  4.00    3.20 |  7.25    6.40 | 10.50    1.60
                1.00    2.00 |  4.25    3.20 |  7.50    4.80 | 10.75    1.60
                1.25    2.00 |  4.50    4.80 |  7.75    4.80 | 11.00    1.60
                1.50    2.00 |  4.75    4.80 |  8.00    4.80 | 11.25    1.60
                1.75    2.00 |  5.00    6.40 |  8.25    4.80 | 11.50    1.60
                2.00    2.00 |  5.25    6.40 |  8.50    2.80 | 11.75    1.60
                2.25    2.00 |  5.50    9.60 |  8.75    2.80 | 12.00    1.60
                2.50    2.40 |  5.75    9.60 |  9.00    2.80 | 12.25    1.60
                2.75    2.40 |  6.00   38.39 |  9.25    2.80 |
                3.00    2.40 |  6.25  105.56 |  9.50    2.80 |
                3.25    2.40 |  6.50   14.39 |  9.75    2.80 |

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| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN |  TIME    RAIN
  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr |   hrs   mm/hr
0.083    0.00 | 3.167    2.40 | 6.250  105.56 |  9.33    2.80 |
0.167    0.00 | 3.250    2.40 | 6.333   14.39 |  9.42    2.80 |
0.250    0.00 | 3.333    3.20 | 6.417   14.39 |  9.50    2.80 |
0.333    2.00 | 3.417    3.20 | 6.500   14.39 |  9.58    2.80 |
0.417    2.00 | 3.500    3.20 | 6.583   14.39 |  9.67    2.80 |
0.500    2.00 | 3.583    3.20 | 6.667   14.39 |  9.75    2.80 |
0.583    2.00 | 3.667    3.20 | 6.750   14.39 |  9.83    2.80 |
0.667    2.00 | 3.750    3.20 | 6.833    6.40 |  9.92    2.80 |
0.750    2.00 | 3.833    3.20 | 6.917    6.40 | 10.00    2.80 |
0.833    2.00 | 3.917    3.20 | 7.000    6.40 | 10.08    2.80 |
0.917    2.00 | 4.000    3.20 | 7.083    6.40 | 10.17    2.80 |
1.000    2.00 | 4.083    3.20 | 7.167    6.40 | 10.25    2.80 |
1.083    2.00 | 4.167    3.20 | 7.250    6.40 | 10.33    1.60 |
1.167    2.00 | 4.250    3.20 | 7.333    4.80 | 10.42    1.60 |
1.250    2.00 | 4.333    4.80 | 7.417    4.80 | 10.50    1.60 |
1.333    2.00 | 4.417    4.80 | 7.500    4.80 | 10.58    1.60 |
1.417    2.00 | 4.500    4.80 | 7.583    4.80 | 10.67    1.60 |
1.500    2.00 | 4.583    4.80 | 7.667    4.80 | 10.75    1.60 |
1.583    2.00 | 4.667    4.80 | 7.750    4.80 | 10.83    1.60 |
1.667    2.00 | 4.750    4.80 | 7.833    4.80 | 10.92    1.60 |
1.750    2.00 | 4.833    6.40 | 7.917    4.80 | 11.00    1.60 |
1.833    2.00 | 4.917    6.40 | 8.000    4.80 | 11.08    1.60 |
1.917    2.00 | 5.000    6.40 | 8.083    4.80 | 11.17    1.60 |
2.000    2.00 | 5.083    6.40 | 8.167    4.80 | 11.25    1.60 |
2.083    2.00 | 5.167    6.40 | 8.250    4.80 | 11.33    1.60 |
2.167    2.00 | 5.250    6.40 | 8.333    2.80 | 11.42    1.60 |
2.250    2.00 | 5.333    9.60 | 8.417    2.80 | 11.50    1.60 |
2.333    2.40 | 5.417    9.60 | 8.500    2.80 | 11.58    1.60 |
2.417    2.40 | 5.500    9.60 | 8.583    2.80 | 11.67    1.60 |
2.500    2.40 | 5.583    9.60 | 8.667    2.80 | 11.75    1.60 |
2.583    2.40 | 5.667    9.60 | 8.750    2.80 | 11.83    1.60 |
2.667    2.40 | 5.750    9.60 | 8.833    2.80 | 11.92    1.60 |
2.750    2.40 | 5.833   38.39 | 8.917    2.80 | 12.00    1.60 |
2.833    2.40 | 5.917   38.39 | 9.000    2.80 | 12.08    1.60 |
2.917    2.40 | 6.000   38.39 | 9.083    2.80 | 12.17    1.60 |
3.000    2.40 | 6.083  105.56 | 9.167    2.80 | 12.25    1.60 |
3.083    2.40 | 6.167  105.56 | 9.250    2.80 |

    Unit Hyd Qpeak  (cms)=   0.019

    PEAK FLOW       (cms)=   0.014 (i)
    TIME TO PEAK    (hrs)=   6.333
    RUNOFF VOLUME    (mm)=  42.955
    TOTAL RAINFALL   (mm)=  79.970
    RUNOFF COEFFICIENT   =   0.537

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\e3311969
| Ptotal= 79.97 mm |    Comments: 25yr 12hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
```

0.25	0.00	3.50	3.20	6.75	14.39	10.00	2.80
0.50	2.00	3.75	3.20	7.00	6.40	10.25	2.80
0.75	2.00	4.00	3.20	7.25	6.40	10.50	1.60
1.00	2.00	4.25	3.20	7.50	4.80	10.75	1.60
1.25	2.00	4.50	4.80	7.75	4.80	11.00	1.60
1.50	2.00	4.75	4.80	8.00	4.80	11.25	1.60
1.75	2.00	5.00	6.40	8.25	4.80	11.50	1.60
2.00	2.00	5.25	6.40	8.50	2.80	11.75	1.60
2.25	2.00	5.50	9.60	8.75	2.80	12.00	1.60
2.50	2.40	5.75	9.60	9.00	2.80	12.25	1.60
2.75	2.40	6.00	38.39	9.25	2.80		
3.00	2.40	6.25	105.56	9.50	2.80		
3.25	2.40	6.50	14.39	9.75	2.80		

CALIB	
STANDHYD (0205)	Area (ha)= 1.12
ID= 1 DT= 5.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.11	0.01
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	86.60	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.40	6.250	105.56	9.33	2.80
0.167	0.00	3.250	2.40	6.333	14.39	9.42	2.80
0.250	0.00	3.333	3.20	6.417	14.39	9.50	2.80
0.333	2.00	3.417	3.20	6.500	14.39	9.58	2.80
0.417	2.00	3.500	3.20	6.583	14.39	9.67	2.80
0.500	2.00	3.583	3.20	6.667	14.39	9.75	2.80
0.583	2.00	3.667	3.20	6.750	14.39	9.83	2.80
0.667	2.00	3.750	3.20	6.833	6.40	9.92	2.80
0.750	2.00	3.833	3.20	6.917	6.40	10.00	2.80
0.833	2.00	3.917	3.20	7.000	6.40	10.08	2.80
0.917	2.00	4.000	3.20	7.083	6.40	10.17	2.80
1.000	2.00	4.083	3.20	7.167	6.40	10.25	2.80
1.083	2.00	4.167	3.20	7.250	6.40	10.33	1.60
1.167	2.00	4.250	3.20	7.333	4.80	10.42	1.60
1.250	2.00	4.333	4.80	7.417	4.80	10.50	1.60
1.333	2.00	4.417	4.80	7.500	4.80	10.58	1.60
1.417	2.00	4.500	4.80	7.583	4.80	10.67	1.60
1.500	2.00	4.583	4.80	7.667	4.80	10.75	1.60
1.583	2.00	4.667	4.80	7.750	4.80	10.83	1.60
1.667	2.00	4.750	4.80	7.833	4.80	10.92	1.60
1.750	2.00	4.833	6.40	7.917	4.80	11.00	1.60
1.833	2.00	4.917	6.40	8.000	4.80	11.08	1.60
1.917	2.00	5.000	6.40	8.083	4.80	11.17	1.60
2.000	2.00	5.083	6.40	8.167	4.80	11.25	1.60
2.083	2.00	5.167	6.40	8.250	4.80	11.33	1.60
2.167	2.00	5.250	6.40	8.333	2.80	11.42	1.60
2.250	2.00	5.333	9.60	8.417	2.80	11.50	1.60
2.333	2.40	5.417	9.60	8.500	2.80	11.58	1.60
2.417	2.40	5.500	9.60	8.583	2.80	11.67	1.60
2.500	2.40	5.583	9.60	8.667	2.80	11.75	1.60
2.583	2.40	5.667	9.60	8.750	2.80	11.83	1.60
2.667	2.40	5.750	9.60	8.833	2.80	11.92	1.60
2.750	2.40	5.833	38.39	8.917	2.80	12.00	1.60
2.833	2.40	5.917	38.39	9.000	2.80	12.08	1.60
2.917	2.40	6.000	38.39	9.083	2.80	12.17	1.60
3.000	2.40	6.083	105.56	9.167	2.80	12.25	1.60
3.083	2.40	6.167	105.56	9.250	2.80		

			TOTALS
Max.Eff.Inten.(mm/hr)=	105.56	71.07	
over (min)	5.00	5.00	
Storage Coeff. (min)=	2.29 (ii)	3.39 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.30	0.26	
PEAK FLOW (cms)=	0.33	0.00	0.329 (iii)
TIME TO PEAK (hrs)=	6.25	6.25	6.25
RUNOFF VOLUME (mm)=	78.97	42.99	78.61
TOTAL RAINFALL (mm)=	79.97	79.97	79.97
RUNOFF COEFFICIENT =	0.99	0.54	0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0256)					
IN= 2---> OUT= 1					
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)		OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000		0.0470	0.0750

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0205)	1.125	0.329	6.25	78.61
OUTFLOW: ID= 1 (0256)	1.125	0.034	6.83	78.25

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.29
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.0541

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\e3311969
Ptotal= 79.97 mm	Comments: 25yr 12hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	3.20	6.75	14.39	10.00	2.80
0.50	2.00	3.75	3.20	7.00	6.40	10.25	2.80
0.75	2.00	4.00	3.20	7.25	6.40	10.50	1.60
1.00	2.00	4.25	3.20	7.50	4.80	10.75	1.60
1.25	2.00	4.50	4.80	7.75	4.80	11.00	1.60
1.50	2.00	4.75	4.80	8.00	4.80	11.25	1.60
1.75	2.00	5.00	6.40	8.25	4.80	11.50	1.60
2.00	2.00	5.25	6.40	8.50	2.80	11.75	1.60
2.25	2.00	5.50	9.60	8.75	2.80	12.00	1.60

2.50	2.40	5.75	9.60	9.00	2.80	12.25	1.60
2.75	2.40	6.00	38.39	9.25	2.80		
3.00	2.40	6.25	105.56	9.50	2.80		
3.25	2.40	6.50	14.39	9.75	2.80		

CALIB	
STANDHYD (0203)	Area (ha)= 2.10
ID= 1 DT= 5.0 min	Total Imp(%)= 80.00 Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.68	0.42
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	118.18	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.40	6.250	105.56	9.33	2.80
0.167	0.00	3.250	2.40	6.333	14.39	9.42	2.80
0.250	0.00	3.333	3.20	6.417	14.39	9.50	2.80
0.333	2.00	3.417	3.20	6.500	14.39	9.58	2.80
0.417	2.00	3.500	3.20	6.583	14.39	9.67	2.80
0.500	2.00	3.583	3.20	6.667	14.39	9.75	2.80
0.583	2.00	3.667	3.20	6.750	14.39	9.83	2.80
0.667	2.00	3.750	3.20	6.833	6.40	9.92	2.80
0.750	2.00	3.833	3.20	6.917	6.40	10.00	2.80
0.833	2.00	3.917	3.20	7.000	6.40	10.08	2.80
0.917	2.00	4.000	3.20	7.083	6.40	10.17	2.80
1.000	2.00	4.083	3.20	7.167	6.40	10.25	2.80
1.083	2.00	4.167	3.20	7.250	6.40	10.33	1.60
1.167	2.00	4.250	3.20	7.333	4.80	10.42	1.60
1.250	2.00	4.333	4.80	7.417	4.80	10.50	1.60
1.333	2.00	4.417	4.80	7.500	4.80	10.58	1.60
1.417	2.00	4.500	4.80	7.583	4.80	10.67	1.60
1.500	2.00	4.583	4.80	7.667	4.80	10.75	1.60
1.583	2.00	4.667	4.80	7.750	4.80	10.83	1.60
1.667	2.00	4.750	4.80	7.833	4.80	10.92	1.60
1.750	2.00	4.833	6.40	7.917	4.80	11.00	1.60
1.833	2.00	4.917	6.40	8.000	4.80	11.08	1.60
1.917	2.00	5.000	6.40	8.083	4.80	11.17	1.60
2.000	2.00	5.083	6.40	8.167	4.80	11.25	1.60
2.083	2.00	5.167	6.40	8.250	4.80	11.33	1.60
2.167	2.00	5.250	6.40	8.333	2.80	11.42	1.60
2.250	2.00	5.333	9.60	8.417	2.80	11.50	1.60
2.333	2.40	5.417	9.60	8.500	2.80	11.58	1.60
2.417	2.40	5.500	9.60	8.583	2.80	11.67	1.60
2.500	2.40	5.583	9.60	8.667	2.80	11.75	1.60
2.583	2.40	5.667	9.60	8.750	2.80	11.83	1.60
2.667	2.40	5.750	9.60	8.833	2.80	11.92	1.60
2.750	2.40	5.833	38.39	8.917	2.80	12.00	1.60
2.833	2.40	5.917	38.39	9.000	2.80	12.08	1.60
2.917	2.40	6.000	38.39	9.083	2.80	12.17	1.60
3.000	2.40	6.083	105.56	9.167	2.80	12.25	1.60
3.083	2.40	6.167	105.56	9.250	2.80		

Max.Eff.Inten.(mm/hr)=		105.56	71.07
over (min)		5.00	10.00
Storage Coeff. (min)=		2.76 (ii)	6.73 (ii)
Unit Hyd. Tpeak (min)=		5.00	10.00
Unit Hyd. peak (cms)=		0.28	0.14

				TOTALS
PEAK FLOW	(cms)=	0.49	0.07	0.558 (iii)
TIME TO PEAK	(hrs)=	6.25	6.25	6.25
RUNOFF VOLUME	(mm)=	78.97	42.99	71.77
TOTAL RAINFALL	(mm)=	79.97	79.97	79.97
RUNOFF COEFFICIENT	=	0.99	0.54	0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0260)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0203):	2.10	0.558	6.25	71.77
+ ID2= 2 (0256):	1.12	0.034	6.83	78.25
ID = 3 (0260):	3.22	0.587	6.25	74.04

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\e3311969
Ptotal= 79.97 mm	Comments: 25yr 12hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	3.20	6.75	14.39	10.00	2.80
0.50	2.00	3.75	3.20	7.00	6.40	10.25	2.80
0.75	2.00	4.00	3.20	7.25	6.40	10.50	1.60
1.00	2.00	4.25	3.20	7.50	4.80	10.75	1.60
1.25	2.00	4.50	4.80	7.75	4.80	11.00	1.60
1.50	2.00	4.75	4.80	8.00	4.80	11.25	1.60
1.75	2.00	5.00	6.40	8.25	4.80	11.50	1.60
2.00	2.00	5.25	6.40	8.50	2.80	11.75	1.60
2.25	2.00	5.50	9.60	8.75	2.80	12.00	1.60
2.50	2.40	5.75	9.60	9.00	2.80	12.25	1.60
2.75	2.40	6.00	38.39	9.25	2.80		
3.00	2.40	6.25	105.56	9.50	2.80		
3.25	2.40	6.50	14.39	9.75	2.80		

CALIB	
STANDHYD (0204)	Area (ha)= 1.45
ID= 1 DT= 5.0 min	Total Imp(%)= 80.00 Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)

Surface Area	(ha)=	1.16	0.29
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	98.32	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.40	6.250	105.56	9.33	2.80
0.167	0.00	3.250	2.40	6.333	14.39	9.42	2.80
0.250	0.00	3.333	3.20	6.417	14.39	9.50	2.80
0.333	2.00	3.417	3.20	6.500	14.39	9.58	2.80
0.417	2.00	3.500	3.20	6.583	14.39	9.67	2.80
0.500	2.00	3.583	3.20	6.667	14.39	9.75	2.80
0.583	2.00	3.667	3.20	6.750	14.39	9.83	2.80
0.667	2.00	3.750	3.20	6.833	6.40	9.92	2.80
0.750	2.00	3.833	3.20	6.917	6.40	10.00	2.80
0.833	2.00	3.917	3.20	7.000	6.40	10.08	2.80
0.917	2.00	4.000	3.20	7.083	6.40	10.17	2.80
1.000	2.00	4.083	3.20	7.167	6.40	10.25	2.80
1.083	2.00	4.167	3.20	7.250	6.40	10.33	1.60
1.167	2.00	4.250	3.20	7.333	4.80	10.42	1.60
1.250	2.00	4.333	4.80	7.417	4.80	10.50	1.60
1.333	2.00	4.417	4.80	7.500	4.80	10.58	1.60
1.417	2.00	4.500	4.80	7.583	4.80	10.67	1.60
1.500	2.00	4.583	4.80	7.667	4.80	10.75	1.60
1.583	2.00	4.667	4.80	7.750	4.80	10.83	1.60
1.667	2.00	4.750	4.80	7.833	4.80	10.92	1.60
1.750	2.00	4.833	6.40	7.917	4.80	11.00	1.60
1.833	2.00	4.917	6.40	8.000	4.80	11.08	1.60
1.917	2.00	5.000	6.40	8.083	4.80	11.17	1.60
2.000	2.00	5.083	6.40	8.167	4.80	11.25	1.60
2.083	2.00	5.167	6.40	8.250	4.80	11.33	1.60
2.167	2.00	5.250	6.40	8.333	2.80	11.42	1.60
2.250	2.00	5.333	9.60	8.417	2.80	11.50	1.60
2.333	2.40	5.417	9.60	8.500	2.80	11.58	1.60
2.417	2.40	5.500	9.60	8.583	2.80	11.67	1.60
2.500	2.40	5.583	9.60	8.667	2.80	11.75	1.60
2.583	2.40	5.667	9.60	8.750	2.80	11.83	1.60
2.667	2.40	5.750	9.60	8.833	2.80	11.92	1.60
2.750	2.40	5.833	38.39	8.917	2.80	12.00	1.60
2.833	2.40	5.917	38.39	9.000	2.80	12.08	1.60
2.917	2.40	6.000	38.39	9.083	2.80	12.17	1.60
3.000	2.40	6.083	105.56	9.167	2.80	12.25	1.60
3.083	2.40	6.167	105.56	9.250	2.80		

Max.Eff.Inten.(mm/hr)=		105.56	71.07	
over (min)		5.00	10.00	
Storage Coeff. (min)=		2.47 (ii)	6.44 (ii)	
Unit Hyd. Tpeak (min)=		5.00	10.00	
Unit Hyd. peak (cms)=		0.29	0.14	
				TOTALS
PEAK FLOW	(cms)=	0.34	0.05	0.387 (iii)
TIME TO PEAK	(hrs)=	6.25	6.25	6.25
RUNOFF VOLUME	(mm)=	78.97	42.99	71.77
TOTAL RAINFALL	(mm)=	79.97	79.97	79.97
RUNOFF COEFFICIENT	=	0.99	0.54	0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0259)					
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0204):	1.45	0.387	6.25	71.77
+ ID2= 2 (0260):	3.22	0.587	6.25	74.04
ID = 3 (0259):	4.67	0.974	6.25	73.33

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\e3311969
Ptotal= 79.97 mm	Comments: 25yr 12hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	3.20	6.75	14.39	10.00	2.80
0.50	2.00	3.75	3.20	7.00	6.40	10.25	2.80
0.75	2.00	4.00	3.20	7.25	6.40	10.50	1.60
1.00	2.00	4.25	3.20	7.50	4.80	10.75	1.60
1.25	2.00	4.50	4.80	7.75	4.80	11.00	1.60
1.50	2.00	4.75	4.80	8.00	4.80	11.25	1.60
1.75	2.00	5.00	6.40	8.25	4.80	11.50	1.60
2.00	2.00	5.25	6.40	8.50	2.80	11.75	1.60
2.25	2.00	5.50	9.60	8.75	2.80	12.00	1.60
2.50	2.40	5.75	9.60	9.00	2.80	12.25	1.60
2.75	2.40	6.00	38.39	9.25	2.80		
3.00	2.40	6.25	105.56	9.50	2.80		
3.25	2.40	6.50	14.39	9.75	2.80		

CALIB		
STANDHYD (0201)	Area (ha)=	5.27
ID= 1 DT= 5.0 min	Total Imp(%)=	99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.22	0.05
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	187.44	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.40	6.250	105.56	9.33	2.80

0.167	0.00	3.250	2.40	6.333	14.39	9.42	2.80
0.250	0.00	3.333	3.20	6.417	14.39	9.50	2.80
0.333	2.00	3.417	3.20	6.500	14.39	9.58	2.80
0.417	2.00	3.500	3.20	6.583	14.39	9.67	2.80
0.500	2.00	3.583	3.20	6.667	14.39	9.75	2.80
0.583	2.00	3.667	3.20	6.750	14.39	9.83	2.80
0.667	2.00	3.750	3.20	6.833	6.40	9.92	2.80
0.750	2.00	3.833	3.20	6.917	6.40	10.00	2.80
0.833	2.00	3.917	3.20	7.000	6.40	10.08	2.80
0.917	2.00	4.000	3.20	7.083	6.40	10.17	2.80
1.000	2.00	4.083	3.20	7.167	6.40	10.25	2.80
1.083	2.00	4.167	3.20	7.250	6.40	10.33	1.60
1.167	2.00	4.250	3.20	7.333	4.80	10.42	1.60
1.250	2.00	4.333	4.80	7.417	4.80	10.50	1.60
1.333	2.00	4.417	4.80	7.500	4.80	10.58	1.60
1.417	2.00	4.500	4.80	7.583	4.80	10.67	1.60
1.500	2.00	4.583	4.80	7.667	4.80	10.75	1.60
1.583	2.00	4.667	4.80	7.750	4.80	10.83	1.60
1.667	2.00	4.750	4.80	7.833	4.80	10.92	1.60
1.750	2.00	4.833	6.40	7.917	4.80	11.00	1.60
1.833	2.00	4.917	6.40	8.000	4.80	11.08	1.60
1.917	2.00	5.000	6.40	8.083	4.80	11.17	1.60
2.000	2.00	5.083	6.40	8.167	4.80	11.25	1.60
2.083	2.00	5.167	6.40	8.250	4.80	11.33	1.60
2.167	2.00	5.250	6.40	8.333	2.80	11.42	1.60
2.250	2.00	5.333	9.60	8.417	2.80	11.50	1.60
2.333	2.40	5.417	9.60	8.500	2.80	11.58	1.60
2.417	2.40	5.500	9.60	8.583	2.80	11.67	1.60
2.500	2.40	5.583	9.60	8.667	2.80	11.75	1.60
2.583	2.40	5.667	9.60	8.750	2.80	11.83	1.60
2.667	2.40	5.750	9.60	8.833	2.80	11.92	1.60
2.750	2.40	5.833	38.39	8.917	2.80	12.00	1.60
2.833	2.40	5.917	38.39	9.000	2.80	12.08	1.60
2.917	2.40	6.000	38.39	9.083	2.80	12.17	1.60
3.000	2.40	6.083	105.56	9.167	2.80	12.25	1.60
3.083	2.40	6.167	105.56	9.250	2.80		

Max.Eff.Inten.(mm/hr)=	105.56	71.07	
over (min)	5.00	5.00	
Storage Coeff. (min)=	3.64 (ii)	4.74 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.25	0.22	
			TOTALS
PEAK FLOW (cms)=	1.51	0.01	1.524 (iii)
TIME TO PEAK (hrs)=	6.25	6.25	6.25
RUNOFF VOLUME (mm)=	78.97	42.99	78.61
TOTAL RAINFALL (mm)=	79.97	79.97	79.97
RUNOFF COEFFICIENT =	0.99	0.54	0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0268)				
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1959	0.1883
	0.0980	0.0369	0.2939	0.4335

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)	5.270	1.524	6.25	78.61
OUTFLOW: ID= 1 (0268)	5.270	0.201	6.75	78.59

PEAK FLOW REDUCTION [Qout/Qin](%)= 13.20
TIME SHIFT OF PEAK FLOW (min)= 30.00
MAXIMUM STORAGE USED (ha.m.)= 0.2013

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\e3311969
Ptotal= 79.97 mm	Comments: 25yr 12hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	3.20	6.75	14.39	10.00	2.80
0.50	2.00	3.75	3.20	7.00	6.40	10.25	2.80
0.75	2.00	4.00	3.20	7.25	6.40	10.50	1.60
1.00	2.00	4.25	3.20	7.50	4.80	10.75	1.60
1.25	2.00	4.50	4.80	7.75	4.80	11.00	1.60
1.50	2.00	4.75	4.80	8.00	4.80	11.25	1.60
1.75	2.00	5.00	6.40	8.25	4.80	11.50	1.60
2.00	2.00	5.25	6.40	8.50	2.80	11.75	1.60
2.25	2.00	5.50	9.60	8.75	2.80	12.00	1.60
2.50	2.40	5.75	9.60	9.00	2.80	12.25	1.60
2.75	2.40	6.00	38.39	9.25	2.80		
3.00	2.40	6.25	105.56	9.50	2.80		
3.25	2.40	6.50	14.39	9.75	2.80		

CALIB			
STANDHYD (0202)	Area (ha)= 6.57		
ID= 1 DT= 5.0 min	Total Imp(%)= 81.00	Dir. Conn.(%)= 81.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	5.32	1.25	
Dep. Storage (mm)=	1.00	5.00	
Average Slope (%)=	1.00	2.00	
Length (m)=	209.28	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.40	6.250	105.56	9.33	2.80
0.167	0.00	3.250	2.40	6.333	14.39	9.42	2.80
0.250	0.00	3.333	3.20	6.417	14.39	9.50	2.80
0.333	2.00	3.417	3.20	6.500	14.39	9.58	2.80
0.417	2.00	3.500	3.20	6.583	14.39	9.67	2.80
0.500	2.00	3.583	3.20	6.667	14.39	9.75	2.80
0.583	2.00	3.667	3.20	6.750	14.39	9.83	2.80
0.667	2.00	3.750	3.20	6.833	6.40	9.92	2.80
0.750	2.00	3.833	3.20	6.917	6.40	10.00	2.80

0.833	2.00	3.917	3.20	7.000	6.40	10.08	2.80
0.917	2.00	4.000	3.20	7.083	6.40	10.17	2.80
1.000	2.00	4.083	3.20	7.167	6.40	10.25	2.80
1.083	2.00	4.167	3.20	7.250	6.40	10.33	1.60
1.167	2.00	4.250	3.20	7.333	4.80	10.42	1.60
1.250	2.00	4.333	4.80	7.417	4.80	10.50	1.60
1.333	2.00	4.417	4.80	7.500	4.80	10.58	1.60
1.417	2.00	4.500	4.80	7.583	4.80	10.67	1.60
1.500	2.00	4.583	4.80	7.667	4.80	10.75	1.60
1.583	2.00	4.667	4.80	7.750	4.80	10.83	1.60
1.667	2.00	4.750	4.80	7.833	4.80	10.92	1.60
1.750	2.00	4.833	6.40	7.917	4.80	11.00	1.60
1.833	2.00	4.917	6.40	8.000	4.80	11.08	1.60
1.917	2.00	5.000	6.40	8.083	4.80	11.17	1.60
2.000	2.00	5.083	6.40	8.167	4.80	11.25	1.60
2.083	2.00	5.167	6.40	8.250	4.80	11.33	1.60
2.167	2.00	5.250	6.40	8.333	2.80	11.42	1.60
2.250	2.00	5.333	9.60	8.417	2.80	11.50	1.60
2.333	2.40	5.417	9.60	8.500	2.80	11.58	1.60
2.417	2.40	5.500	9.60	8.583	2.80	11.67	1.60
2.500	2.40	5.583	9.60	8.667	2.80	11.75	1.60
2.583	2.40	5.667	9.60	8.750	2.80	11.83	1.60
2.667	2.40	5.750	9.60	8.833	2.80	11.92	1.60
2.750	2.40	5.833	38.39	8.917	2.80	12.00	1.60
2.833	2.40	5.917	38.39	9.000	2.80	12.08	1.60
2.917	2.40	6.000	38.39	9.083	2.80	12.17	1.60
3.000	2.40	6.083	105.56	9.167	2.80	12.25	1.60
3.083	2.40	6.167	105.56	9.250	2.80		

Max.Eff.Inten.(mm/hr)=	105.56	71.07	
over (min)	5.00	10.00	
Storage Coeff. (min)=	3.89 (ii)	7.76 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.25	0.13	
			TOTALS
PEAK FLOW (cms)=	1.54	0.19	1.733 (iii)
TIME TO PEAK (hrs)=	6.25	6.25	6.25
RUNOFF VOLUME (mm)=	78.97	42.99	72.13
TOTAL RAINFALL (mm)=	79.97	79.97	79.97
RUNOFF COEFFICIENT =	0.99	0.54	0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0262)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0202):	6.57	1.733	6.25	72.13
+ ID2= 2 (0268):	5.27	0.201	6.75	78.59
ID = 3 (0262):	11.84	1.915	6.25	75.01

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0266)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0259):	4.67	0.974	6.25	73.33
+ ID2= 2 (0262):	11.84	1.915	6.25	75.01
ID = 3 (0266):	16.51	2.889	6.25	74.54

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0263)
IN= 2---> OUT= 1
DT= 5.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.2130	0.6563
0.0190	0.1773	0.2520	0.6883
0.0220	0.2128	0.2890	0.7150
0.0260	0.2888	0.2980	0.7450
0.0300	0.3648	0.3060	0.7700
0.0650	0.4586	0.3150	0.8127
0.1100	0.5155	0.3320	0.9290
0.1680	0.5503	0.3390	0.9767
0.1930	0.5804	0.3520	1.0680
0.2000	0.6048	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0266)	16.510	2.889	6.25	74.54
OUTFLOW: ID= 1 (0263)	16.510	0.277	8.42	74.39

PEAK FLOW REDUCTION [Qout/Qin](%)= 9.61
TIME SHIFT OF PEAK FLOW (min)=130.00
MAXIMUM STORAGE USED (ha.m.)= 0.7068

ADD HYD (0261)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0206):	0.12	0.014	6.33	42.96
+ ID2= 2 (0263):	16.51	0.277	8.42	74.39
ID = 3 (0261):	16.64	0.279	8.42	74.16

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

V V I SSSSS U U A L (v 5.0.2025)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
VV I SSSSS UUUUU A A LLLLL

OOO TTTTT TTTTT H H Y Y M M OOO TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
OOO T T H H Y M M OOO

***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
Output filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-4bf8-aeac-18a29a864848\976746f5-6ba2-4a30-9a66-f640c55a370b\s
Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-4bf8-aeac-18a29a864848\976746f5-6ba2-4a30-9a66-f640c55a370b\s

DATE: 07/06/2020 TIME: 04:36:53

USER:

COMMENTS: _____

** SIMULATION : 5 Year 12 Hour SCS **

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\af98f35e
Ptotal= 58.12 mm	Comments: 5yr 12hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	2.32	6.75	10.46	10.00	2.03
0.50	1.45	3.75	2.32	7.00	4.65	10.25	2.03
0.75	1.45	4.00	2.32	7.25	4.65	10.50	1.16
1.00	1.45	4.25	2.32	7.50	3.49	10.75	1.16
1.25	1.45	4.50	3.49	7.75	3.49	11.00	1.16
1.50	1.45	4.75	3.49	8.00	3.49	11.25	1.16
1.75	1.45	5.00	4.65	8.25	3.49	11.50	1.16
2.00	1.45	5.25	4.65	8.50	2.03	11.75	1.16
2.25	1.45	5.50	6.97	8.75	2.03	12.00	1.16
2.50	1.74	5.75	6.97	9.00	2.03	12.25	1.16
2.75	1.74	6.00	27.90	9.25	2.03		
3.00	1.74	6.25	76.72	9.50	2.03		
3.25	1.74	6.50	10.46	9.75	2.03		

CALIB	
NASHYD (0206)	Area (ha)= 0.12 Curve Number (CN)= 82.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.25

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	1.74	6.250	76.72	9.33	2.03
0.167	0.00	3.250	1.74	6.333	10.46	9.42	2.03
0.250	0.00	3.333	2.32	6.417	10.46	9.50	2.03
0.333	1.45	3.417	2.32	6.500	10.46	9.58	2.03
0.417	1.45	3.500	2.32	6.583	10.46	9.67	2.03
0.500	1.45	3.583	2.32	6.667	10.46	9.75	2.03
0.583	1.45	3.667	2.32	6.750	10.46	9.83	2.03
0.667	1.45	3.750	2.32	6.833	4.65	9.92	2.03
0.750	1.45	3.833	2.32	6.917	4.65	10.00	2.03
0.833	1.45	3.917	2.32	7.000	4.65	10.08	2.03
0.917	1.45	4.000	2.32	7.083	4.65	10.17	2.03
1.000	1.45	4.083	2.32	7.167	4.65	10.25	2.03
1.083	1.45	4.167	2.32	7.250	4.65	10.33	1.16
1.167	1.45	4.250	2.32	7.333	3.49	10.42	1.16
1.250	1.45	4.333	3.49	7.417	3.49	10.50	1.16
1.333	1.45	4.417	3.49	7.500	3.49	10.58	1.16
1.417	1.45	4.500	3.49	7.583	3.49	10.67	1.16
1.500	1.45	4.583	3.49	7.667	3.49	10.75	1.16
1.583	1.45	4.667	3.49	7.750	3.49	10.83	1.16
1.667	1.45	4.750	3.49	7.833	3.49	10.92	1.16
1.750	1.45	4.833	4.65	7.917	3.49	11.00	1.16
1.833	1.45	4.917	4.65	8.000	3.49	11.08	1.16
1.917	1.45	5.000	4.65	8.083	3.49	11.17	1.16
2.000	1.45	5.083	4.65	8.167	3.49	11.25	1.16
2.083	1.45	5.167	4.65	8.250	3.49	11.33	1.16
2.167	1.45	5.250	4.65	8.333	2.03	11.42	1.16
2.250	1.45	5.333	6.97	8.417	2.03	11.50	1.16
2.333	1.74	5.417	6.97	8.500	2.03	11.58	1.16
2.417	1.74	5.500	6.97	8.583	2.03	11.67	1.16
2.500	1.74	5.583	6.97	8.667	2.03	11.75	1.16
2.583	1.74	5.667	6.97	8.750	2.03	11.83	1.16
2.667	1.74	5.750	6.97	8.833	2.03	11.92	1.16
2.750	1.74	5.833	27.90	8.917	2.03	12.00	1.16
2.833	1.74	5.917	27.90	9.000	2.03	12.08	1.16
2.917	1.74	6.000	27.90	9.083	2.03	12.17	1.16
3.000	1.74	6.083	76.72	9.167	2.03	12.25	1.16
3.083	1.74	6.167	76.72	9.250	2.03		

Unit Hyd Qpeak (cms)= 0.019

PEAK FLOW (cms)= 0.008 (i)
TIME TO PEAK (hrs)= 6.333
RUNOFF VOLUME (mm)= 25.891
TOTAL RAINFALL (mm)= 58.120
RUNOFF COEFFICIENT = 0.445

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\af98f35e
Ptotal= 58.12 mm	Comments: 5yr 12hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	2.32	6.75	10.46	10.00	2.03
0.50	1.45	3.75	2.32	7.00	4.65	10.25	2.03
0.75	1.45	4.00	2.32	7.25	4.65	10.50	1.16

1.00	1.45	4.25	2.32	7.50	3.49	10.75	1.16
1.25	1.45	4.50	3.49	7.75	3.49	11.00	1.16
1.50	1.45	4.75	3.49	8.00	3.49	11.25	1.16
1.75	1.45	5.00	4.65	8.25	3.49	11.50	1.16
2.00	1.45	5.25	4.65	8.50	2.03	11.75	1.16
2.25	1.45	5.50	6.97	8.75	2.03	12.00	1.16
2.50	1.74	5.75	6.97	9.00	2.03	12.25	1.16
2.75	1.74	6.00	27.90	9.25	2.03		
3.00	1.74	6.25	76.72	9.50	2.03		
3.25	1.74	6.50	10.46	9.75	2.03		

CALIB	
STANDHYD (0205)	Area (ha)= 1.12
ID= 1 DT= 5.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.11	0.01
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	86.60	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	1.74	6.250	76.72	9.33	2.03
0.167	0.00	3.250	1.74	6.333	10.46	9.42	2.03
0.250	0.00	3.333	2.32	6.417	10.46	9.50	2.03
0.333	1.45	3.417	2.32	6.500	10.46	9.58	2.03
0.417	1.45	3.500	2.32	6.583	10.46	9.67	2.03
0.500	1.45	3.583	2.32	6.667	10.46	9.75	2.03
0.583	1.45	3.667	2.32	6.750	10.46	9.83	2.03
0.667	1.45	3.750	2.32	6.833	4.65	9.92	2.03
0.750	1.45	3.833	2.32	6.917	4.65	10.00	2.03
0.833	1.45	3.917	2.32	7.000	4.65	10.08	2.03
0.917	1.45	4.000	2.32	7.083	4.65	10.17	2.03
1.000	1.45	4.083	2.32	7.167	4.65	10.25	2.03
1.083	1.45	4.167	2.32	7.250	4.65	10.33	1.16
1.167	1.45	4.250	2.32	7.333	3.49	10.42	1.16
1.250	1.45	4.333	3.49	7.417	3.49	10.50	1.16
1.333	1.45	4.417	3.49	7.500	3.49	10.58	1.16
1.417	1.45	4.500	3.49	7.583	3.49	10.67	1.16
1.500	1.45	4.583	3.49	7.667	3.49	10.75	1.16
1.583	1.45	4.667	3.49	7.750	3.49	10.83	1.16
1.667	1.45	4.750	3.49	7.833	3.49	10.92	1.16
1.750	1.45	4.833	4.65	7.917	3.49	11.00	1.16
1.833	1.45	4.917	4.65	8.000	3.49	11.08	1.16
1.917	1.45	5.000	4.65	8.083	3.49	11.17	1.16
2.000	1.45	5.083	4.65	8.167	3.49	11.25	1.16
2.083	1.45	5.167	4.65	8.250	3.49	11.33	1.16
2.167	1.45	5.250	4.65	8.333	2.03	11.42	1.16
2.250	1.45	5.333	6.97	8.417	2.03	11.50	1.16
2.333	1.74	5.417	6.97	8.500	2.03	11.58	1.16
2.417	1.74	5.500	6.97	8.583	2.03	11.67	1.16
2.500	1.74	5.583	6.97	8.667	2.03	11.75	1.16
2.583	1.74	5.667	6.97	8.750	2.03	11.83	1.16
2.667	1.74	5.750	6.97	8.833	2.03	11.92	1.16
2.750	1.74	5.833	27.90	8.917	2.03	12.00	1.16
2.833	1.74	5.917	27.90	9.000	2.03	12.08	1.16
2.917	1.74	6.000	27.90	9.083	2.03	12.17	1.16
3.000	1.74	6.083	76.72	9.167	2.03	12.25	1.16
3.083	1.74	6.167	76.72	9.250	2.03		

			TOTALS
Max.Eff.Inten.(mm/hr)=	76.72	43.56	
over (min)	5.00	5.00	
Storage Coeff. (min)=	2.61 (ii)	3.85 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.29	0.25	
PEAK FLOW (cms)=	0.24	0.00	0.238 (iii)
TIME TO PEAK (hrs)=	6.25	6.25	6.25
RUNOFF VOLUME (mm)=	57.12	25.92	56.81
TOTAL RAINFALL (mm)=	58.12	58.12	58.12
RUNOFF COEFFICIENT =	0.98	0.45	0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0256)				
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0470	0.0750

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0205)	1.125	0.238	6.25	56.81
OUTFLOW: ID= 1 (0256)	1.125	0.024	6.83	56.45

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.28
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.0392

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\af98f35e
Ptotal= 58.12 mm	Comments: 5yr 12hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	2.32	6.75	10.46	10.00	2.03
0.50	1.45	3.75	2.32	7.00	4.65	10.25	2.03
0.75	1.45	4.00	2.32	7.25	4.65	10.50	1.16
1.00	1.45	4.25	2.32	7.50	3.49	10.75	1.16
1.25	1.45	4.50	3.49	7.75	3.49	11.00	1.16
1.50	1.45	4.75	3.49	8.00	3.49	11.25	1.16
1.75	1.45	5.00	4.65	8.25	3.49	11.50	1.16
2.00	1.45	5.25	4.65	8.50	2.03	11.75	1.16
2.25	1.45	5.50	6.97	8.75	2.03	12.00	1.16
2.50	1.74	5.75	6.97	9.00	2.03	12.25	1.16
2.75	1.74	6.00	27.90	9.25	2.03		
3.00	1.74	6.25	76.72	9.50	2.03		

```
                3.25    1.74 |  6.50   10.46 |  9.75    2.03 |

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| CALIB            |
| STANDHYD (  0203)|   Area    (ha)=   2.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.68         0.42
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     118.18        40.00
     Mannings n           =      0.013        0.250

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    0.00 | 3.167    1.74 | 6.250   76.72 |  9.33    2.03
             0.167    0.00 | 3.250    1.74 | 6.333   10.46 |  9.42    2.03
             0.250    0.00 | 3.333    2.32 | 6.417   10.46 |  9.50    2.03
             0.333    1.45 | 3.417    2.32 | 6.500   10.46 |  9.58    2.03
             0.417    1.45 | 3.500    2.32 | 6.583   10.46 |  9.67    2.03
             0.500    1.45 | 3.583    2.32 | 6.667   10.46 |  9.75    2.03
             0.583    1.45 | 3.667    2.32 | 6.750   10.46 |  9.83    2.03
             0.667    1.45 | 3.750    2.32 | 6.833    4.65 |  9.92    2.03
             0.750    1.45 | 3.833    2.32 | 6.917    4.65 | 10.00    2.03
             0.833    1.45 | 3.917    2.32 | 7.000    4.65 | 10.08    2.03
             0.917    1.45 | 4.000    2.32 | 7.083    4.65 | 10.17    2.03
             1.000    1.45 | 4.083    2.32 | 7.167    4.65 | 10.25    2.03
             1.083    1.45 | 4.167    2.32 | 7.250    4.65 | 10.33    1.16
             1.167    1.45 | 4.250    2.32 | 7.333    3.49 | 10.42    1.16
             1.250    1.45 | 4.333    3.49 | 7.417    3.49 | 10.50    1.16
             1.333    1.45 | 4.417    3.49 | 7.500    3.49 | 10.58    1.16
             1.417    1.45 | 4.500    3.49 | 7.583    3.49 | 10.67    1.16
             1.500    1.45 | 4.583    3.49 | 7.667    3.49 | 10.75    1.16
             1.583    1.45 | 4.667    3.49 | 7.750    3.49 | 10.83    1.16
             1.667    1.45 | 4.750    3.49 | 7.833    3.49 | 10.92    1.16
             1.750    1.45 | 4.833    4.65 | 7.917    3.49 | 11.00    1.16
             1.833    1.45 | 4.917    4.65 | 8.000    3.49 | 11.08    1.16
             1.917    1.45 | 5.000    4.65 | 8.083    3.49 | 11.17    1.16
             2.000    1.45 | 5.083    4.65 | 8.167    3.49 | 11.25    1.16
             2.083    1.45 | 5.167    4.65 | 8.250    3.49 | 11.33    1.16
             2.167    1.45 | 5.250    4.65 | 8.333    2.03 | 11.42    1.16
             2.250    1.45 | 5.333    6.97 | 8.417    2.03 | 11.50    1.16
             2.333    1.74 | 5.417    6.97 | 8.500    2.03 | 11.58    1.16
             2.417    1.74 | 5.500    6.97 | 8.583    2.03 | 11.67    1.16
             2.500    1.74 | 5.583    6.97 | 8.667    2.03 | 11.75    1.16
             2.583    1.74 | 5.667    6.97 | 8.750    2.03 | 11.83    1.16
             2.667    1.74 | 5.750    6.97 | 8.833    2.03 | 11.92    1.16
             2.750    1.74 | 5.833   27.90 | 8.917    2.03 | 12.00    1.16
             2.833    1.74 | 5.917   27.90 | 9.000    2.03 | 12.08    1.16
             2.917    1.74 | 6.000   27.90 | 9.083    2.03 | 12.17    1.16
             3.000    1.74 | 6.083   76.72 | 9.167    2.03 | 12.25    1.16
             3.083    1.74 | 6.167   76.72 | 9.250    2.03 |

     Max.Eff.Inten.(mm/hr)=      76.72        43.56
               over (min)        5.00        10.00
     Storage Coeff.  (min)=      3.14 (ii)    7.65 (ii)
     Unit Hyd. Tpeak (min)=      5.00        10.00
     Unit Hyd. peak  (cms)=      0.27         0.13
                                                          *TOTALS*
     PEAK FLOW       (cms)=      0.36         0.04          0.395 (iii)
     TIME TO PEAK    (hrs)=      6.25         6.25           6.25
     RUNOFF VOLUME    (mm)=     57.12        25.92          50.88
     TOTAL RAINFALL   (mm)=     58.12        58.12          58.12
     RUNOFF COEFFICIENT   =      0.98         0.45           0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0260)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0203):     2.10   0.395     6.25    50.88
     + ID2= 2 (  0256):     1.12   0.024     6.83    56.45
       ================================================
       ID = 3 (  0260):     3.22   0.415     6.25    52.83

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\af98f35e
| Ptotal= 58.12 mm |    Comments: 5yr 12hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.25    0.00 |  3.50    2.32 |  6.75   10.46 | 10.00    2.03
               0.50    1.45 |  3.75    2.32 |  7.00    4.65 | 10.25    2.03
               0.75    1.45 |  4.00    2.32 |  7.25    4.65 | 10.50    1.16
               1.00    1.45 |  4.25    2.32 |  7.50    3.49 | 10.75    1.16
               1.25    1.45 |  4.50    3.49 |  7.75    3.49 | 11.00    1.16
               1.50    1.45 |  4.75    3.49 |  8.00    3.49 | 11.25    1.16
               1.75    1.45 |  5.00    4.65 |  8.25    3.49 | 11.50    1.16
               2.00    1.45 |  5.25    4.65 |  8.50    2.03 | 11.75    1.16
               2.25    1.45 |  5.50    6.97 |  8.75    2.03 | 12.00    1.16
               2.50    1.74 |  5.75    6.97 |  9.00    2.03 | 12.25    1.16
               2.75    1.74 |  6.00   27.90 |  9.25    2.03 |
               3.00    1.74 |  6.25   76.72 |  9.50    2.03 |
               3.25    1.74 |  6.50   10.46 |  9.75    2.03 |

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| CALIB            |
| STANDHYD (  0204)|   Area    (ha)=   1.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.16         0.29
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
```

Length	(m)=	98.32	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	1.74	6.250	76.72	9.33	2.03
0.167	0.00	3.250	1.74	6.333	10.46	9.42	2.03
0.250	0.00	3.333	2.32	6.417	10.46	9.50	2.03
0.333	1.45	3.417	2.32	6.500	10.46	9.58	2.03
0.417	1.45	3.500	2.32	6.583	10.46	9.67	2.03
0.500	1.45	3.583	2.32	6.667	10.46	9.75	2.03
0.583	1.45	3.667	2.32	6.750	10.46	9.83	2.03
0.667	1.45	3.750	2.32	6.833	4.65	9.92	2.03
0.750	1.45	3.833	2.32	6.917	4.65	10.00	2.03
0.833	1.45	3.917	2.32	7.000	4.65	10.08	2.03
0.917	1.45	4.000	2.32	7.083	4.65	10.17	2.03
1.000	1.45	4.083	2.32	7.167	4.65	10.25	2.03
1.083	1.45	4.167	2.32	7.250	4.65	10.33	1.16
1.167	1.45	4.250	2.32	7.333	3.49	10.42	1.16
1.250	1.45	4.333	3.49	7.417	3.49	10.50	1.16
1.333	1.45	4.417	3.49	7.500	3.49	10.58	1.16
1.417	1.45	4.500	3.49	7.583	3.49	10.67	1.16
1.500	1.45	4.583	3.49	7.667	3.49	10.75	1.16
1.583	1.45	4.667	3.49	7.750	3.49	10.83	1.16
1.667	1.45	4.750	3.49	7.833	3.49	10.92	1.16
1.750	1.45	4.833	4.65	7.917	3.49	11.00	1.16
1.833	1.45	4.917	4.65	8.000	3.49	11.08	1.16
1.917	1.45	5.000	4.65	8.083	3.49	11.17	1.16
2.000	1.45	5.083	4.65	8.167	3.49	11.25	1.16
2.083	1.45	5.167	4.65	8.250	3.49	11.33	1.16
2.167	1.45	5.250	4.65	8.333	2.03	11.42	1.16
2.250	1.45	5.333	6.97	8.417	2.03	11.50	1.16
2.333	1.74	5.417	6.97	8.500	2.03	11.58	1.16
2.417	1.74	5.500	6.97	8.583	2.03	11.67	1.16
2.500	1.74	5.583	6.97	8.667	2.03	11.75	1.16
2.583	1.74	5.667	6.97	8.750	2.03	11.83	1.16
2.667	1.74	5.750	6.97	8.833	2.03	11.92	1.16
2.750	1.74	5.833	27.90	8.917	2.03	12.00	1.16
2.833	1.74	5.917	27.90	9.000	2.03	12.08	1.16
2.917	1.74	6.000	27.90	9.083	2.03	12.17	1.16
3.000	1.74	6.083	76.72	9.167	2.03	12.25	1.16
3.083	1.74	6.167	76.72	9.250	2.03		

Max.Eff.Inten.(mm/hr)=		76.72	43.56	
over (min)		5.00	10.00	
Storage Coeff. (min)=		2.81 (ii)	7.32 (ii)	
Unit Hyd. Tpeak (min)=		5.00	10.00	
Unit Hyd. peak (cms)=		0.28	0.13	
				TOTALS
PEAK FLOW	(cms)=	0.25	0.03	0.274 (iii)
TIME TO PEAK	(hrs)=	6.25	6.25	6.25
RUNOFF VOLUME	(mm)=	57.12	25.92	50.88
TOTAL RAINFALL	(mm)=	58.12	58.12	58.12
RUNOFF COEFFICIENT	=	0.98	0.45	0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0259)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (0204):	1.45	0.274	6.25	50.88
	+ ID2= 2 (0260):	3.22	0.415	6.25	52.83
	ID = 3 (0259):	4.67	0.689	6.25	52.22

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM | Filename: C:\Users\mventresca\AppData\Local\Temp\c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\af98f35e
Ptotal= 58.12 mm | Comments: 5yr 12hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	2.32	6.75	10.46	10.00	2.03
0.50	1.45	3.75	2.32	7.00	4.65	10.25	2.03
0.75	1.45	4.00	2.32	7.25	4.65	10.50	1.16
1.00	1.45	4.25	2.32	7.50	3.49	10.75	1.16
1.25	1.45	4.50	3.49	7.75	3.49	11.00	1.16
1.50	1.45	4.75	3.49	8.00	3.49	11.25	1.16
1.75	1.45	5.00	4.65	8.25	3.49	11.50	1.16
2.00	1.45	5.25	4.65	8.50	2.03	11.75	1.16
2.25	1.45	5.50	6.97	8.75	2.03	12.00	1.16
2.50	1.74	5.75	6.97	9.00	2.03	12.25	1.16
2.75	1.74	6.00	27.90	9.25	2.03		
3.00	1.74	6.25	76.72	9.50	2.03		
3.25	1.74	6.50	10.46	9.75	2.03		

CALIB | STANDHYD (0201) | ID= 1 DT= 5.0 min | Area (ha)= 5.27 | Total Imp(%)= 99.00 | Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.22	0.05
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	187.44	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	1.74	6.250	76.72	9.33	2.03
0.167	0.00	3.250	1.74	6.333	10.46	9.42	2.03
0.250	0.00	3.333	2.32	6.417	10.46	9.50	2.03
0.333	1.45	3.417	2.32	6.500	10.46	9.58	2.03

0.417	1.45	3.500	2.32	6.583	10.46	9.67	2.03
0.500	1.45	3.583	2.32	6.667	10.46	9.75	2.03
0.583	1.45	3.667	2.32	6.750	10.46	9.83	2.03
0.667	1.45	3.750	2.32	6.833	4.65	9.92	2.03
0.750	1.45	3.833	2.32	6.917	4.65	10.00	2.03
0.833	1.45	3.917	2.32	7.000	4.65	10.08	2.03
0.917	1.45	4.000	2.32	7.083	4.65	10.17	2.03
1.000	1.45	4.083	2.32	7.167	4.65	10.25	2.03
1.083	1.45	4.167	2.32	7.250	4.65	10.33	1.16
1.167	1.45	4.250	2.32	7.333	3.49	10.42	1.16
1.250	1.45	4.333	3.49	7.417	3.49	10.50	1.16
1.333	1.45	4.417	3.49	7.500	3.49	10.58	1.16
1.417	1.45	4.500	3.49	7.583	3.49	10.67	1.16
1.500	1.45	4.583	3.49	7.667	3.49	10.75	1.16
1.583	1.45	4.667	3.49	7.750	3.49	10.83	1.16
1.667	1.45	4.750	3.49	7.833	3.49	10.92	1.16
1.750	1.45	4.833	4.65	7.917	3.49	11.00	1.16
1.833	1.45	4.917	4.65	8.000	3.49	11.08	1.16
1.917	1.45	5.000	4.65	8.083	3.49	11.17	1.16
2.000	1.45	5.083	4.65	8.167	3.49	11.25	1.16
2.083	1.45	5.167	4.65	8.250	3.49	11.33	1.16
2.167	1.45	5.250	4.65	8.333	2.03	11.42	1.16
2.250	1.45	5.333	6.97	8.417	2.03	11.50	1.16
2.333	1.74	5.417	6.97	8.500	2.03	11.58	1.16
2.417	1.74	5.500	6.97	8.583	2.03	11.67	1.16
2.500	1.74	5.583	6.97	8.667	2.03	11.75	1.16
2.583	1.74	5.667	6.97	8.750	2.03	11.83	1.16
2.667	1.74	5.750	6.97	8.833	2.03	11.92	1.16
2.750	1.74	5.833	27.90	8.917	2.03	12.00	1.16
2.833	1.74	5.917	27.90	9.000	2.03	12.08	1.16
2.917	1.74	6.000	27.90	9.083	2.03	12.17	1.16
3.000	1.74	6.083	76.72	9.167	2.03	12.25	1.16
3.083	1.74	6.167	76.72	9.250	2.03		

			TOTALS
Max.Eff.Inten.(mm/hr)=	76.72	43.56	
over (min)	5.00	10.00	
Storage Coeff. (min)=	4.14 (ii)	5.39 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.24	0.16	
PEAK FLOW (cms)=	1.09	0.01	1.098 (iii)
TIME TO PEAK (hrs)=	6.25	6.25	6.25
RUNOFF VOLUME (mm)=	57.12	25.92	56.81
TOTAL RAINFALL (mm)=	58.12	58.12	58.12
RUNOFF COEFFICIENT =	0.98	0.45	0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0268) IN= 2---> OUT= 1 DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1959	0.1883
	0.0980	0.0369	0.2939	0.4335

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0201)	5.270	1.098	6.25	56.81
OUTFLOW: ID= 1 (0268)	5.270	0.165	6.58	56.79

PEAK FLOW REDUCTION [Qout/Qin](%)= 15.02
TIME SHIFT OF PEAK FLOW (min)= 20.00
MAXIMUM STORAGE USED (ha.m.)= 0.1404

READ STORM Ptotal= 58.12 mm	Filename: C:\Users\mventresca\AppData\Local\Temp\c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\af98f35e Comments: 5yr 12hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	2.32	6.75	10.46	10.00	2.03
0.50	1.45	3.75	2.32	7.00	4.65	10.25	2.03
0.75	1.45	4.00	2.32	7.25	4.65	10.50	1.16
1.00	1.45	4.25	2.32	7.50	3.49	10.75	1.16
1.25	1.45	4.50	3.49	7.75	3.49	11.00	1.16
1.50	1.45	4.75	3.49	8.00	3.49	11.25	1.16
1.75	1.45	5.00	4.65	8.25	3.49	11.50	1.16
2.00	1.45	5.25	4.65	8.50	2.03	11.75	1.16
2.25	1.45	5.50	6.97	8.75	2.03	12.00	1.16
2.50	1.74	5.75	6.97	9.00	2.03	12.25	1.16
2.75	1.74	6.00	27.90	9.25	2.03		
3.00	1.74	6.25	76.72	9.50	2.03		
3.25	1.74	6.50	10.46	9.75	2.03		

CALIB STANDHYD (0202) ID= 1 DT= 5.0 min	Area (ha)= 6.57 Total Imp(%)= 81.00 Dir. Conn.(%)= 81.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.32	1.25
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	209.28	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	1.74	6.250	76.72	9.33	2.03
0.167	0.00	3.250	1.74	6.333	10.46	9.42	2.03
0.250	0.00	3.333	2.32	6.417	10.46	9.50	2.03
0.333	1.45	3.417	2.32	6.500	10.46	9.58	2.03
0.417	1.45	3.500	2.32	6.583	10.46	9.67	2.03
0.500	1.45	3.583	2.32	6.667	10.46	9.75	2.03
0.583	1.45	3.667	2.32	6.750	10.46	9.83	2.03
0.667	1.45	3.750	2.32	6.833	4.65	9.92	2.03
0.750	1.45	3.833	2.32	6.917	4.65	10.00	2.03
0.833	1.45	3.917	2.32	7.000	4.65	10.08	2.03
0.917	1.45	4.000	2.32	7.083	4.65	10.17	2.03
1.000	1.45	4.083	2.32	7.167	4.65	10.25	2.03

```
               1.083    1.45 | 4.167    2.32 | 7.250    4.65 | 10.33    1.16
               1.167    1.45 | 4.250    2.32 | 7.333    3.49 | 10.42    1.16
               1.250    1.45 | 4.333    3.49 | 7.417    3.49 | 10.50    1.16
               1.333    1.45 | 4.417    3.49 | 7.500    3.49 | 10.58    1.16
               1.417    1.45 | 4.500    3.49 | 7.583    3.49 | 10.67    1.16
               1.500    1.45 | 4.583    3.49 | 7.667    3.49 | 10.75    1.16
               1.583    1.45 | 4.667    3.49 | 7.750    3.49 | 10.83    1.16
               1.667    1.45 | 4.750    3.49 | 7.833    3.49 | 10.92    1.16
               1.750    1.45 | 4.833    4.65 | 7.917    3.49 | 11.00    1.16
               1.833    1.45 | 4.917    4.65 | 8.000    3.49 | 11.08    1.16
               1.917    1.45 | 5.000    4.65 | 8.083    3.49 | 11.17    1.16
               2.000    1.45 | 5.083    4.65 | 8.167    3.49 | 11.25    1.16
               2.083    1.45 | 5.167    4.65 | 8.250    3.49 | 11.33    1.16
               2.167    1.45 | 5.250    4.65 | 8.333    2.03 | 11.42    1.16
               2.250    1.45 | 5.333    6.97 | 8.417    2.03 | 11.50    1.16
               2.333    1.74 | 5.417    6.97 | 8.500    2.03 | 11.58    1.16
               2.417    1.74 | 5.500    6.97 | 8.583    2.03 | 11.67    1.16
               2.500    1.74 | 5.583    6.97 | 8.667    2.03 | 11.75    1.16
               2.583    1.74 | 5.667    6.97 | 8.750    2.03 | 11.83    1.16
               2.667    1.74 | 5.750    6.97 | 8.833    2.03 | 11.92    1.16
               2.750    1.74 | 5.833   27.90 | 8.917    2.03 | 12.00    1.16
               2.833    1.74 | 5.917   27.90 | 9.000    2.03 | 12.08    1.16
               2.917    1.74 | 6.000   27.90 | 9.083    2.03 | 12.17    1.16
               3.000    1.74 | 6.083   76.72 | 9.167    2.03 | 12.25    1.16
               3.083    1.74 | 6.167   76.72 | 9.250    2.03 |

     Max.Eff.Inten.(mm/hr)=      76.72        43.56
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       4.42 (ii)    8.82 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.23         0.12
                                                        *TOTALS*
     PEAK FLOW       (cms)=       1.11         0.11        1.221 (iii)
     TIME TO PEAK    (hrs)=       6.25         6.25         6.25
     RUNOFF VOLUME    (mm)=      57.12        25.92        51.19
     TOTAL RAINFALL   (mm)=      58.12        58.12        58.12
     RUNOFF COEFFICIENT   =       0.98         0.45         0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0262)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0202):     6.57   1.221     6.25    51.19
     + ID2= 2 (  0268):     5.27   0.165     6.58    56.79
       ================================================
       ID = 3 (  0262):    11.84   1.369     6.25    53.68

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0266)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0259):     4.67   0.689     6.25    52.22
     + ID2= 2 (  0262):    11.84   1.369     6.25    53.68
       ================================================
       ID = 3 (  0266):    16.51   2.059     6.25    53.27

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| RESERVOIR(  0263)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.2130      0.6563
                          0.0190     0.1773   |   0.2520      0.6883
                          0.0220     0.2128   |   0.2890      0.7150
                          0.0260     0.2888   |   0.2980      0.7450
                          0.0300     0.3648   |   0.3060      0.7700
                          0.0650     0.4586   |   0.3150      0.8127
                          0.1100     0.5155   |   0.3320      0.9290
                          0.1680     0.5503   |   0.3390      0.9767
                          0.1930     0.5804   |   0.3520      1.0680
                          0.2000     0.6048   |   0.0000      0.0000

                                    AREA     QPEAK     TPEAK       R.V.
                                    (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0266)     16.510      2.059      6.25      53.27
   OUTFLOW: ID= 1 (  0263)     16.510      0.179      9.50      53.13

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  8.71
                  TIME SHIFT OF PEAK FLOW         (min)=195.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.5638

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0206):     0.12   0.008     6.33    25.89
     + ID2= 2 (  0263):    16.51   0.179     9.50    53.13
       ================================================
       ID = 3 (  0261):    16.64   0.180     9.50    52.92

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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================================================================================
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      V    V   I    SSSSS  U   U    A    L              (v 5.0.2025)
      V    V   I    SS     U   U   A A   L
       V  V    I     SS    U   U  AAAAA  L
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
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***** D E T A I L E D O U T P U T *****

```
  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\baa7ab68-465a-4a1d-a51c-be366902230d\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\baa7ab68-465a-4a1d-a51c-be366902230d\s

DATE: 07/06/2020                          TIME: 04:36:54

USER:


COMMENTS: _____________________________________________________________
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  ********************************************
  ** SIMULATION : 50 Year 12 Hour SCS          **
  ********************************************
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READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\23d36382
Ptotal= 88.43 mm	Comments: 50yr 12hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	3.54	6.75	15.92	10.00	3.10
0.50	2.21	3.75	3.54	7.00	7.07	10.25	3.10
0.75	2.21	4.00	3.54	7.25	7.07	10.50	1.77
1.00	2.21	4.25	3.54	7.50	5.31	10.75	1.77
1.25	2.21	4.50	5.31	7.75	5.31	11.00	1.77
1.50	2.21	4.75	5.31	8.00	5.31	11.25	1.77
1.75	2.21	5.00	7.07	8.25	5.31	11.50	1.77
2.00	2.21	5.25	7.07	8.50	3.10	11.75	1.77
2.25	2.21	5.50	10.61	8.75	3.10	12.00	1.77
2.50	2.65	5.75	10.61	9.00	3.10	12.25	1.77
2.75	2.65	6.00	42.45	9.25	3.10		
3.00	2.65	6.25	116.73	9.50	3.10		
3.25	2.65	6.50	15.92	9.75	3.10		

CALIB					
NASHYD (0206)	Area (ha)= 0.12	Curve Number (CN)= 82.0			
ID= 1 DT= 5.0 min	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00			
	U.H. Tp(hrs)= 0.25				

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.65	6.250	116.72	9.33	3.10
0.167	0.00	3.250	2.65	6.333	15.92	9.42	3.10
0.250	0.00	3.333	3.54	6.417	15.92	9.50	3.10
0.333	2.21	3.417	3.54	6.500	15.92	9.58	3.10
0.417	2.21	3.500	3.54	6.583	15.92	9.67	3.10
0.500	2.21	3.583	3.54	6.667	15.92	9.75	3.10
0.583	2.21	3.667	3.54	6.750	15.92	9.83	3.10
0.667	2.21	3.750	3.54	6.833	7.07	9.92	3.10
0.750	2.21	3.833	3.54	6.917	7.07	10.00	3.10
0.833	2.21	3.917	3.54	7.000	7.07	10.08	3.10
0.917	2.21	4.000	3.54	7.083	7.07	10.17	3.10
1.000	2.21	4.083	3.54	7.167	7.07	10.25	3.10
1.083	2.21	4.167	3.54	7.250	7.07	10.33	1.77
1.167	2.21	4.250	3.54	7.333	5.31	10.42	1.77
1.250	2.21	4.333	5.31	7.417	5.31	10.50	1.77
1.333	2.21	4.417	5.31	7.500	5.31	10.58	1.77
1.417	2.21	4.500	5.31	7.583	5.31	10.67	1.77
1.500	2.21	4.583	5.31	7.667	5.31	10.75	1.77
1.583	2.21	4.667	5.31	7.750	5.31	10.83	1.77
1.667	2.21	4.750	5.31	7.833	5.31	10.92	1.77
1.750	2.21	4.833	7.07	7.917	5.31	11.00	1.77
1.833	2.21	4.917	7.07	8.000	5.31	11.08	1.77
1.917	2.21	5.000	7.07	8.083	5.31	11.17	1.77
2.000	2.21	5.083	7.07	8.167	5.31	11.25	1.77
2.083	2.21	5.167	7.07	8.250	5.31	11.33	1.77
2.167	2.21	5.250	7.07	8.333	3.10	11.42	1.77
2.250	2.21	5.333	10.61	8.417	3.10	11.50	1.77
2.333	2.65	5.417	10.61	8.500	3.10	11.58	1.77
2.417	2.65	5.500	10.61	8.583	3.10	11.67	1.77
2.500	2.65	5.583	10.61	8.667	3.10	11.75	1.77
2.583	2.65	5.667	10.61	8.750	3.10	11.83	1.77
2.667	2.65	5.750	10.61	8.833	3.10	11.92	1.77
2.750	2.65	5.833	42.45	8.917	3.10	12.00	1.77
2.833	2.65	5.917	42.45	9.000	3.10	12.08	1.77
2.917	2.65	6.000	42.45	9.083	3.10	12.17	1.77
3.000	2.65	6.083	116.73	9.167	3.10	12.25	1.77
3.083	2.65	6.167	116.73	9.250	3.10		

```
    Unit Hyd Qpeak  (cms)=   0.019

    PEAK FLOW       (cms)=   0.016 (i)
    TIME TO PEAK    (hrs)=   6.333
    RUNOFF VOLUME    (mm)=  49.964
    TOTAL RAINFALL   (mm)=  88.430
    RUNOFF COEFFICIENT   =   0.565

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\23d36382
Ptotal= 88.43 mm	Comments: 50yr 12hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	3.54	6.75	15.92	10.00	3.10
0.50	2.21	3.75	3.54	7.00	7.07	10.25	3.10
0.75	2.21	4.00	3.54	7.25	7.07	10.50	1.77
1.00	2.21	4.25	3.54	7.50	5.31	10.75	1.77
1.25	2.21	4.50	5.31	7.75	5.31	11.00	1.77
1.50	2.21	4.75	5.31	8.00	5.31	11.25	1.77

1.75	2.21	5.00	7.07	8.25	5.31	11.50	1.77
2.00	2.21	5.25	7.07	8.50	3.10	11.75	1.77
2.25	2.21	5.50	10.61	8.75	3.10	12.00	1.77
2.50	2.65	5.75	10.61	9.00	3.10	12.25	1.77
2.75	2.65	6.00	42.45	9.25	3.10		
3.00	2.65	6.25	116.73	9.50	3.10		
3.25	2.65	6.50	15.92	9.75	3.10		

CALIB	
STANDHYD (0205)	Area (ha)= 1.12
ID= 1 DT= 5.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.11	0.01
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	86.60	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.65	6.250	116.72	9.33	3.10
0.167	0.00	3.250	2.65	6.333	15.92	9.42	3.10
0.250	0.00	3.333	3.54	6.417	15.92	9.50	3.10
0.333	2.21	3.417	3.54	6.500	15.92	9.58	3.10
0.417	2.21	3.500	3.54	6.583	15.92	9.67	3.10
0.500	2.21	3.583	3.54	6.667	15.92	9.75	3.10
0.583	2.21	3.667	3.54	6.750	15.92	9.83	3.10
0.667	2.21	3.750	3.54	6.833	7.07	9.92	3.10
0.750	2.21	3.833	3.54	6.917	7.07	10.00	3.10
0.833	2.21	3.917	3.54	7.000	7.07	10.08	3.10
0.917	2.21	4.000	3.54	7.083	7.07	10.17	3.10
1.000	2.21	4.083	3.54	7.167	7.07	10.25	3.10
1.083	2.21	4.167	3.54	7.250	7.07	10.33	1.77
1.167	2.21	4.250	3.54	7.333	5.31	10.42	1.77
1.250	2.21	4.333	5.31	7.417	5.31	10.50	1.77
1.333	2.21	4.417	5.31	7.500	5.31	10.58	1.77
1.417	2.21	4.500	5.31	7.583	5.31	10.67	1.77
1.500	2.21	4.583	5.31	7.667	5.31	10.75	1.77
1.583	2.21	4.667	5.31	7.750	5.31	10.83	1.77
1.667	2.21	4.750	5.31	7.833	5.31	10.92	1.77
1.750	2.21	4.833	7.07	7.917	5.31	11.00	1.77
1.833	2.21	4.917	7.07	8.000	5.31	11.08	1.77
1.917	2.21	5.000	7.07	8.083	5.31	11.17	1.77
2.000	2.21	5.083	7.07	8.167	5.31	11.25	1.77
2.083	2.21	5.167	7.07	8.250	5.31	11.33	1.77
2.167	2.21	5.250	7.07	8.333	3.10	11.42	1.77
2.250	2.21	5.333	10.61	8.417	3.10	11.50	1.77
2.333	2.65	5.417	10.61	8.500	3.10	11.58	1.77
2.417	2.65	5.500	10.61	8.583	3.10	11.67	1.77
2.500	2.65	5.583	10.61	8.667	3.10	11.75	1.77
2.583	2.65	5.667	10.61	8.750	3.10	11.83	1.77
2.667	2.65	5.750	10.61	8.833	3.10	11.92	1.77
2.750	2.65	5.833	42.45	8.917	3.10	12.00	1.77
2.833	2.65	5.917	42.45	9.000	3.10	12.08	1.77
2.917	2.65	6.000	42.45	9.083	3.10	12.17	1.77
3.000	2.65	6.083	116.73	9.167	3.10	12.25	1.77
3.083	2.65	6.167	116.73	9.250	3.10		

			TOTALS
Max.Eff.Inten.(mm/hr)=	116.73	82.17	
over (min)	5.00	5.00	
Storage Coeff. (min)=	2.20 (ii)	3.26 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.30	0.27	
PEAK FLOW (cms)=	0.36	0.00	0.363 (iii)
TIME TO PEAK (hrs)=	6.25	6.25	6.25
RUNOFF VOLUME (mm)=	87.43	50.01	87.05
TOTAL RAINFALL (mm)=	88.43	88.43	88.43
RUNOFF COEFFICIENT =	0.99	0.57	0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0256)				
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0470	0.0750

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0205)	1.125	0.363	6.25	87.05
OUTFLOW: ID= 1 (0256)	1.125	0.037	6.75	86.70

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.29
TIME SHIFT OF PEAK FLOW (min)= 30.00
MAXIMUM STORAGE USED (ha.m.)= 0.0599

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\23d36382
Ptotal= 88.43 mm	Comments: 50yr 12hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	3.54	6.75	15.92	10.00	3.10
0.50	2.21	3.75	3.54	7.00	7.07	10.25	3.10
0.75	2.21	4.00	3.54	7.25	7.07	10.50	1.77
1.00	2.21	4.25	3.54	7.50	5.31	10.75	1.77
1.25	2.21	4.50	5.31	7.75	5.31	11.00	1.77
1.50	2.21	4.75	5.31	8.00	5.31	11.25	1.77
1.75	2.21	5.00	7.07	8.25	5.31	11.50	1.77
2.00	2.21	5.25	7.07	8.50	3.10	11.75	1.77
2.25	2.21	5.50	10.61	8.75	3.10	12.00	1.77
2.50	2.65	5.75	10.61	9.00	3.10	12.25	1.77
2.75	2.65	6.00	42.45	9.25	3.10		
3.00	2.65	6.25	116.73	9.50	3.10		
3.25	2.65	6.50	15.92	9.75	3.10		

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--------------------
| CALIB            |
| STANDHYD (  0203)|   Area    (ha)=   2.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      1.68         0.42
     Dep. Storage     (mm)=      1.00         5.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=    118.18        40.00
     Mannings n           =     0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.65	6.250	116.72	9.33	3.10
0.167	0.00	3.250	2.65	6.333	15.92	9.42	3.10
0.250	0.00	3.333	3.54	6.417	15.92	9.50	3.10
0.333	2.21	3.417	3.54	6.500	15.92	9.58	3.10
0.417	2.21	3.500	3.54	6.583	15.92	9.67	3.10
0.500	2.21	3.583	3.54	6.667	15.92	9.75	3.10
0.583	2.21	3.667	3.54	6.750	15.92	9.83	3.10
0.667	2.21	3.750	3.54	6.833	7.07	9.92	3.10
0.750	2.21	3.833	3.54	6.917	7.07	10.00	3.10
0.833	2.21	3.917	3.54	7.000	7.07	10.08	3.10
0.917	2.21	4.000	3.54	7.083	7.07	10.17	3.10
1.000	2.21	4.083	3.54	7.167	7.07	10.25	3.10
1.083	2.21	4.167	3.54	7.250	7.07	10.33	1.77
1.167	2.21	4.250	3.54	7.333	5.31	10.42	1.77
1.250	2.21	4.333	5.31	7.417	5.31	10.50	1.77
1.333	2.21	4.417	5.31	7.500	5.31	10.58	1.77
1.417	2.21	4.500	5.31	7.583	5.31	10.67	1.77
1.500	2.21	4.583	5.31	7.667	5.31	10.75	1.77
1.583	2.21	4.667	5.31	7.750	5.31	10.83	1.77
1.667	2.21	4.750	5.31	7.833	5.31	10.92	1.77
1.750	2.21	4.833	7.07	7.917	5.31	11.00	1.77
1.833	2.21	4.917	7.07	8.000	5.31	11.08	1.77
1.917	2.21	5.000	7.07	8.083	5.31	11.17	1.77
2.000	2.21	5.083	7.07	8.167	5.31	11.25	1.77
2.083	2.21	5.167	7.07	8.250	5.31	11.33	1.77
2.167	2.21	5.250	7.07	8.333	3.10	11.42	1.77
2.250	2.21	5.333	10.61	8.417	3.10	11.50	1.77
2.333	2.65	5.417	10.61	8.500	3.10	11.58	1.77
2.417	2.65	5.500	10.61	8.583	3.10	11.67	1.77
2.500	2.65	5.583	10.61	8.667	3.10	11.75	1.77
2.583	2.65	5.667	10.61	8.750	3.10	11.83	1.77
2.667	2.65	5.750	10.61	8.833	3.10	11.92	1.77
2.750	2.65	5.833	42.45	8.917	3.10	12.00	1.77
2.833	2.65	5.917	42.45	9.000	3.10	12.08	1.77
2.917	2.65	6.000	42.45	9.083	3.10	12.17	1.77
3.000	2.65	6.083	116.73	9.167	3.10	12.25	1.77
3.083	2.65	6.167	116.73	9.250	3.10		

```
     Max.Eff.Inten.(mm/hr)=     116.73        82.17
               over (min)        5.00        10.00
     Storage Coeff.  (min)=       2.65 (ii)    6.47 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.29         0.14
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.54         0.08         0.622 (iii)
     TIME TO PEAK    (hrs)=       6.25         6.25          6.25
     RUNOFF VOLUME    (mm)=      87.43        50.01         79.94
     TOTAL RAINFALL   (mm)=      88.43        88.43         88.43
     RUNOFF COEFFICIENT   =       0.99         0.57          0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
--------------------
| ADD HYD  (  0260)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0203):     2.10   0.622     6.25    79.94
     + ID2= 2 (  0256):     1.12   0.037     6.75    86.70
       ================================================
       ID = 3 (  0260):     3.22   0.654     6.25    82.30

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

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--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\23d36382
| Ptotal= 88.43 mm |    Comments: 50yr 12hr 15min SCS
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	3.54	6.75	15.92	10.00	3.10
0.50	2.21	3.75	3.54	7.00	7.07	10.25	3.10
0.75	2.21	4.00	3.54	7.25	7.07	10.50	1.77
1.00	2.21	4.25	3.54	7.50	5.31	10.75	1.77
1.25	2.21	4.50	5.31	7.75	5.31	11.00	1.77
1.50	2.21	4.75	5.31	8.00	5.31	11.25	1.77
1.75	2.21	5.00	7.07	8.25	5.31	11.50	1.77
2.00	2.21	5.25	7.07	8.50	3.10	11.75	1.77
2.25	2.21	5.50	10.61	8.75	3.10	12.00	1.77
2.50	2.65	5.75	10.61	9.00	3.10	12.25	1.77
2.75	2.65	6.00	42.45	9.25	3.10		
3.00	2.65	6.25	116.73	9.50	3.10		
3.25	2.65	6.50	15.92	9.75	3.10		

```
--------------------
| CALIB            |
| STANDHYD (  0204)|   Area    (ha)=   1.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      1.16         0.29
     Dep. Storage     (mm)=      1.00         5.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     98.32        40.00
     Mannings n           =     0.013        0.250
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.65	6.250	116.72	9.33	3.10
0.167	0.00	3.250	2.65	6.333	15.92	9.42	3.10
0.250	0.00	3.333	3.54	6.417	15.92	9.50	3.10
0.333	2.21	3.417	3.54	6.500	15.92	9.58	3.10
0.417	2.21	3.500	3.54	6.583	15.92	9.67	3.10
0.500	2.21	3.583	3.54	6.667	15.92	9.75	3.10
0.583	2.21	3.667	3.54	6.750	15.92	9.83	3.10
0.667	2.21	3.750	3.54	6.833	7.07	9.92	3.10
0.750	2.21	3.833	3.54	6.917	7.07	10.00	3.10
0.833	2.21	3.917	3.54	7.000	7.07	10.08	3.10
0.917	2.21	4.000	3.54	7.083	7.07	10.17	3.10
1.000	2.21	4.083	3.54	7.167	7.07	10.25	3.10
1.083	2.21	4.167	3.54	7.250	7.07	10.33	1.77
1.167	2.21	4.250	3.54	7.333	5.31	10.42	1.77
1.250	2.21	4.333	5.31	7.417	5.31	10.50	1.77
1.333	2.21	4.417	5.31	7.500	5.31	10.58	1.77
1.417	2.21	4.500	5.31	7.583	5.31	10.67	1.77
1.500	2.21	4.583	5.31	7.667	5.31	10.75	1.77
1.583	2.21	4.667	5.31	7.750	5.31	10.83	1.77
1.667	2.21	4.750	5.31	7.833	5.31	10.92	1.77
1.750	2.21	4.833	7.07	7.917	5.31	11.00	1.77
1.833	2.21	4.917	7.07	8.000	5.31	11.08	1.77
1.917	2.21	5.000	7.07	8.083	5.31	11.17	1.77
2.000	2.21	5.083	7.07	8.167	5.31	11.25	1.77
2.083	2.21	5.167	7.07	8.250	5.31	11.33	1.77
2.167	2.21	5.250	7.07	8.333	3.10	11.42	1.77
2.250	2.21	5.333	10.61	8.417	3.10	11.50	1.77
2.333	2.65	5.417	10.61	8.500	3.10	11.58	1.77
2.417	2.65	5.500	10.61	8.583	3.10	11.67	1.77
2.500	2.65	5.583	10.61	8.667	3.10	11.75	1.77
2.583	2.65	5.667	10.61	8.750	3.10	11.83	1.77
2.667	2.65	5.750	10.61	8.833	3.10	11.92	1.77
2.750	2.65	5.833	42.45	8.917	3.10	12.00	1.77
2.833	2.65	5.917	42.45	9.000	3.10	12.08	1.77
2.917	2.65	6.000	42.45	9.083	3.10	12.17	1.77
3.000	2.65	6.083	116.73	9.167	3.10	12.25	1.77
3.083	2.65	6.167	116.73	9.250	3.10		

Max.Eff.Inten.(mm/hr)=	116.73	82.17		
over (min)	5.00	10.00		
Storage Coeff. (min)=	2.38 (ii)	6.19 (ii)		
Unit Hyd. Tpeak (min)=	5.00	10.00		
Unit Hyd. peak (cms)=	0.30	0.15		
			TOTALS	
PEAK FLOW (cms)=	0.38	0.06	0.432 (iii)	
TIME TO PEAK (hrs)=	6.25	6.25	6.25	
RUNOFF VOLUME (mm)=	87.43	50.01	79.94	
TOTAL RAINFALL (mm)=	88.43	88.43	88.43	
RUNOFF COEFFICIENT =	0.99	0.57	0.90	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0259)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (0204):	1.45	0.432	6.25	79.94
	+ ID2= 2 (0260):	3.22	0.654	6.25	82.30
	ID = 3 (0259):	4.67	1.086	6.25	81.57

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM | Filename: C:\Users\mventresca\AppData\Local\Temp\c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\23d36382
Ptotal= 88.43 mm | Comments: 50yr 12hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	3.54	6.75	15.92	10.00	3.10
0.50	2.21	3.75	3.54	7.00	7.07	10.25	3.10
0.75	2.21	4.00	3.54	7.25	7.07	10.50	1.77
1.00	2.21	4.25	3.54	7.50	5.31	10.75	1.77
1.25	2.21	4.50	5.31	7.75	5.31	11.00	1.77
1.50	2.21	4.75	5.31	8.00	5.31	11.25	1.77
1.75	2.21	5.00	7.07	8.25	5.31	11.50	1.77
2.00	2.21	5.25	7.07	8.50	3.10	11.75	1.77
2.25	2.21	5.50	10.61	8.75	3.10	12.00	1.77
2.50	2.65	5.75	10.61	9.00	3.10	12.25	1.77
2.75	2.65	6.00	42.45	9.25	3.10		
3.00	2.65	6.25	116.73	9.50	3.10		
3.25	2.65	6.50	15.92	9.75	3.10		

CALIB | STANDHYD (0201) | ID= 1 DT= 5.0 min | Area (ha)= 5.27 | Total Imp(%)= 99.00 | Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.22	0.05
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	187.44	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.65	6.250	116.72	9.33	3.10
0.167	0.00	3.250	2.65	6.333	15.92	9.42	3.10
0.250	0.00	3.333	3.54	6.417	15.92	9.50	3.10
0.333	2.21	3.417	3.54	6.500	15.92	9.58	3.10
0.417	2.21	3.500	3.54	6.583	15.92	9.67	3.10
0.500	2.21	3.583	3.54	6.667	15.92	9.75	3.10
0.583	2.21	3.667	3.54	6.750	15.92	9.83	3.10

0.667	2.21	3.750	3.54	6.833	7.07	9.92	3.10
0.750	2.21	3.833	3.54	6.917	7.07	10.00	3.10
0.833	2.21	3.917	3.54	7.000	7.07	10.08	3.10
0.917	2.21	4.000	3.54	7.083	7.07	10.17	3.10
1.000	2.21	4.083	3.54	7.167	7.07	10.25	3.10
1.083	2.21	4.167	3.54	7.250	7.07	10.33	1.77
1.167	2.21	4.250	3.54	7.333	5.31	10.42	1.77
1.250	2.21	4.333	5.31	7.417	5.31	10.50	1.77
1.333	2.21	4.417	5.31	7.500	5.31	10.58	1.77
1.417	2.21	4.500	5.31	7.583	5.31	10.67	1.77
1.500	2.21	4.583	5.31	7.667	5.31	10.75	1.77
1.583	2.21	4.667	5.31	7.750	5.31	10.83	1.77
1.667	2.21	4.750	5.31	7.833	5.31	10.92	1.77
1.750	2.21	4.833	7.07	7.917	5.31	11.00	1.77
1.833	2.21	4.917	7.07	8.000	5.31	11.08	1.77
1.917	2.21	5.000	7.07	8.083	5.31	11.17	1.77
2.000	2.21	5.083	7.07	8.167	5.31	11.25	1.77
2.083	2.21	5.167	7.07	8.250	5.31	11.33	1.77
2.167	2.21	5.250	7.07	8.333	3.10	11.42	1.77
2.250	2.21	5.333	10.61	8.417	3.10	11.50	1.77
2.333	2.65	5.417	10.61	8.500	3.10	11.58	1.77
2.417	2.65	5.500	10.61	8.583	3.10	11.67	1.77
2.500	2.65	5.583	10.61	8.667	3.10	11.75	1.77
2.583	2.65	5.667	10.61	8.750	3.10	11.83	1.77
2.667	2.65	5.750	10.61	8.833	3.10	11.92	1.77
2.750	2.65	5.833	42.45	8.917	3.10	12.00	1.77
2.833	2.65	5.917	42.45	9.000	3.10	12.08	1.77
2.917	2.65	6.000	42.45	9.083	3.10	12.17	1.77
3.000	2.65	6.083	116.73	9.167	3.10	12.25	1.77
3.083	2.65	6.167	116.73	9.250	3.10		

Max.Eff.Inten.(mm/hr)=	116.73	82.17	
over (min)	5.00	5.00	
Storage Coeff. (min)=	3.50 (ii)	4.56 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.26	0.23	
			TOTALS
PEAK FLOW (cms)=	1.68	0.01	1.689 (iii)
TIME TO PEAK (hrs)=	6.25	6.25	6.25
RUNOFF VOLUME (mm)=	87.43	50.01	87.06
TOTAL RAINFALL (mm)=	88.43	88.43	88.43
RUNOFF COEFFICIENT =	0.99	0.57	0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0268)				
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1959	0.1883
	0.0980	0.0369	0.2939	0.4335

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)	5.270	1.689	6.25	87.06
OUTFLOW: ID= 1 (0268)	5.270	0.211	6.75	87.04

PEAK FLOW REDUCTION [Qout/Qin](%)= 12.49
TIME SHIFT OF PEAK FLOW (min)= 30.00
MAXIMUM STORAGE USED (ha.m.)= 0.2263

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\c8e2d12c-d60f-4bf5-a077-0320d6a0fe67\23d36382
Ptotal= 88.43 mm	Comments: 50yr 12hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	3.50	3.54	6.75	15.92	10.00	3.10
0.50	2.21	3.75	3.54	7.00	7.07	10.25	3.10
0.75	2.21	4.00	3.54	7.25	7.07	10.50	1.77
1.00	2.21	4.25	3.54	7.50	5.31	10.75	1.77
1.25	2.21	4.50	5.31	7.75	5.31	11.00	1.77
1.50	2.21	4.75	5.31	8.00	5.31	11.25	1.77
1.75	2.21	5.00	7.07	8.25	5.31	11.50	1.77
2.00	2.21	5.25	7.07	8.50	3.10	11.75	1.77
2.25	2.21	5.50	10.61	8.75	3.10	12.00	1.77
2.50	2.65	5.75	10.61	9.00	3.10	12.25	1.77
2.75	2.65	6.00	42.45	9.25	3.10		
3.00	2.65	6.25	116.73	9.50	3.10		
3.25	2.65	6.50	15.92	9.75	3.10		

CALIB			
STANDHYD (0202)	Area (ha)= 6.57		
ID= 1 DT= 5.0 min	Total Imp(%)= 81.00	Dir. Conn.(%)= 81.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	5.32	1.25	
Dep. Storage (mm)=	1.00	5.00	
Average Slope (%)=	1.00	2.00	
Length (m)=	209.28	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	3.167	2.65	6.250	116.72	9.33	3.10
0.167	0.00	3.250	2.65	6.333	15.92	9.42	3.10
0.250	0.00	3.333	3.54	6.417	15.92	9.50	3.10
0.333	2.21	3.417	3.54	6.500	15.92	9.58	3.10
0.417	2.21	3.500	3.54	6.583	15.92	9.67	3.10
0.500	2.21	3.583	3.54	6.667	15.92	9.75	3.10
0.583	2.21	3.667	3.54	6.750	15.92	9.83	3.10
0.667	2.21	3.750	3.54	6.833	7.07	9.92	3.10
0.750	2.21	3.833	3.54	6.917	7.07	10.00	3.10
0.833	2.21	3.917	3.54	7.000	7.07	10.08	3.10
0.917	2.21	4.000	3.54	7.083	7.07	10.17	3.10
1.000	2.21	4.083	3.54	7.167	7.07	10.25	3.10
1.083	2.21	4.167	3.54	7.250	7.07	10.33	1.77
1.167	2.21	4.250	3.54	7.333	5.31	10.42	1.77
1.250	2.21	4.333	5.31	7.417	5.31	10.50	1.77

```
               1.333    2.21 | 4.417    5.31 | 7.500    5.31 | 10.58    1.77
               1.417    2.21 | 4.500    5.31 | 7.583    5.31 | 10.67    1.77
               1.500    2.21 | 4.583    5.31 | 7.667    5.31 | 10.75    1.77
               1.583    2.21 | 4.667    5.31 | 7.750    5.31 | 10.83    1.77
               1.667    2.21 | 4.750    5.31 | 7.833    5.31 | 10.92    1.77
               1.750    2.21 | 4.833    7.07 | 7.917    5.31 | 11.00    1.77
               1.833    2.21 | 4.917    7.07 | 8.000    5.31 | 11.08    1.77
               1.917    2.21 | 5.000    7.07 | 8.083    5.31 | 11.17    1.77
               2.000    2.21 | 5.083    7.07 | 8.167    5.31 | 11.25    1.77
               2.083    2.21 | 5.167    7.07 | 8.250    5.31 | 11.33    1.77
               2.167    2.21 | 5.250    7.07 | 8.333    3.10 | 11.42    1.77
               2.250    2.21 | 5.333   10.61 | 8.417    3.10 | 11.50    1.77
               2.333    2.65 | 5.417   10.61 | 8.500    3.10 | 11.58    1.77
               2.417    2.65 | 5.500   10.61 | 8.583    3.10 | 11.67    1.77
               2.500    2.65 | 5.583   10.61 | 8.667    3.10 | 11.75    1.77
               2.583    2.65 | 5.667   10.61 | 8.750    3.10 | 11.83    1.77
               2.667    2.65 | 5.750   10.61 | 8.833    3.10 | 11.92    1.77
               2.750    2.65 | 5.833   42.45 | 8.917    3.10 | 12.00    1.77
               2.833    2.65 | 5.917   42.45 | 9.000    3.10 | 12.08    1.77
               2.917    2.65 | 6.000   42.45 | 9.083    3.10 | 12.17    1.77
               3.000    2.65 | 6.083  116.73 | 9.167    3.10 | 12.25    1.77
               3.083    2.65 | 6.167  116.73 | 9.250    3.10 |

     Max.Eff.Inten.(mm/hr)=     116.73        82.17
               over (min)        5.00        10.00
     Storage Coeff.  (min)=      3.74 (ii)    7.45 (ii)
     Unit Hyd. Tpeak (min)=      5.00        10.00
     Unit Hyd. peak  (cms)=      0.25         0.13
                                                        *TOTALS*
     PEAK FLOW       (cms)=      1.71         0.23         1.934 (iii)
     TIME TO PEAK    (hrs)=      6.25         6.25          6.25
     RUNOFF VOLUME    (mm)=     87.43        50.01         80.32
     TOTAL RAINFALL   (mm)=     88.43        88.43         88.43
     RUNOFF COEFFICIENT   =      0.99         0.57          0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0262)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0202):     6.57   1.934     6.25    80.32
      + ID2= 2 (  0268):     5.27   0.211     6.75    87.04
        ================================================
        ID = 3 (  0262):    11.84   2.128     6.25    83.31

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0266)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0259):     4.67   1.086     6.25    81.57
      + ID2= 2 (  0262):    11.84   2.128     6.25    83.31
        ================================================
        ID = 3 (  0266):    16.51   3.214     6.25    82.82

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| RESERVOIR(  0263)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.2130      0.6563
                          0.0190     0.1773   |   0.2520      0.6883
                          0.0220     0.2128   |   0.2890      0.7150
                          0.0260     0.2888   |   0.2980      0.7450
                          0.0300     0.3648   |   0.3060      0.7700
                          0.0650     0.4586   |   0.3150      0.8127
                          0.1100     0.5155   |   0.3320      0.9290
                          0.1680     0.5503   |   0.3390      0.9767
                          0.1930     0.5804   |   0.3520      1.0680
                          0.2000     0.6048   |   0.0000      0.0000

                                    AREA     QPEAK     TPEAK       R.V.
                                    (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0266)     16.510      3.214      6.25      82.82
   OUTFLOW: ID= 1 (  0263)     16.510      0.304      8.42      82.67

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  9.45
                  TIME SHIFT OF PEAK FLOW         (min)=130.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.7629

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0206):     0.12   0.016     6.33    49.96
      + ID2= 2 (  0263):    16.51   0.304     8.42    82.67
        ================================================
        ID = 3 (  0261):    16.64   0.305     8.33    82.43

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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 FINISH
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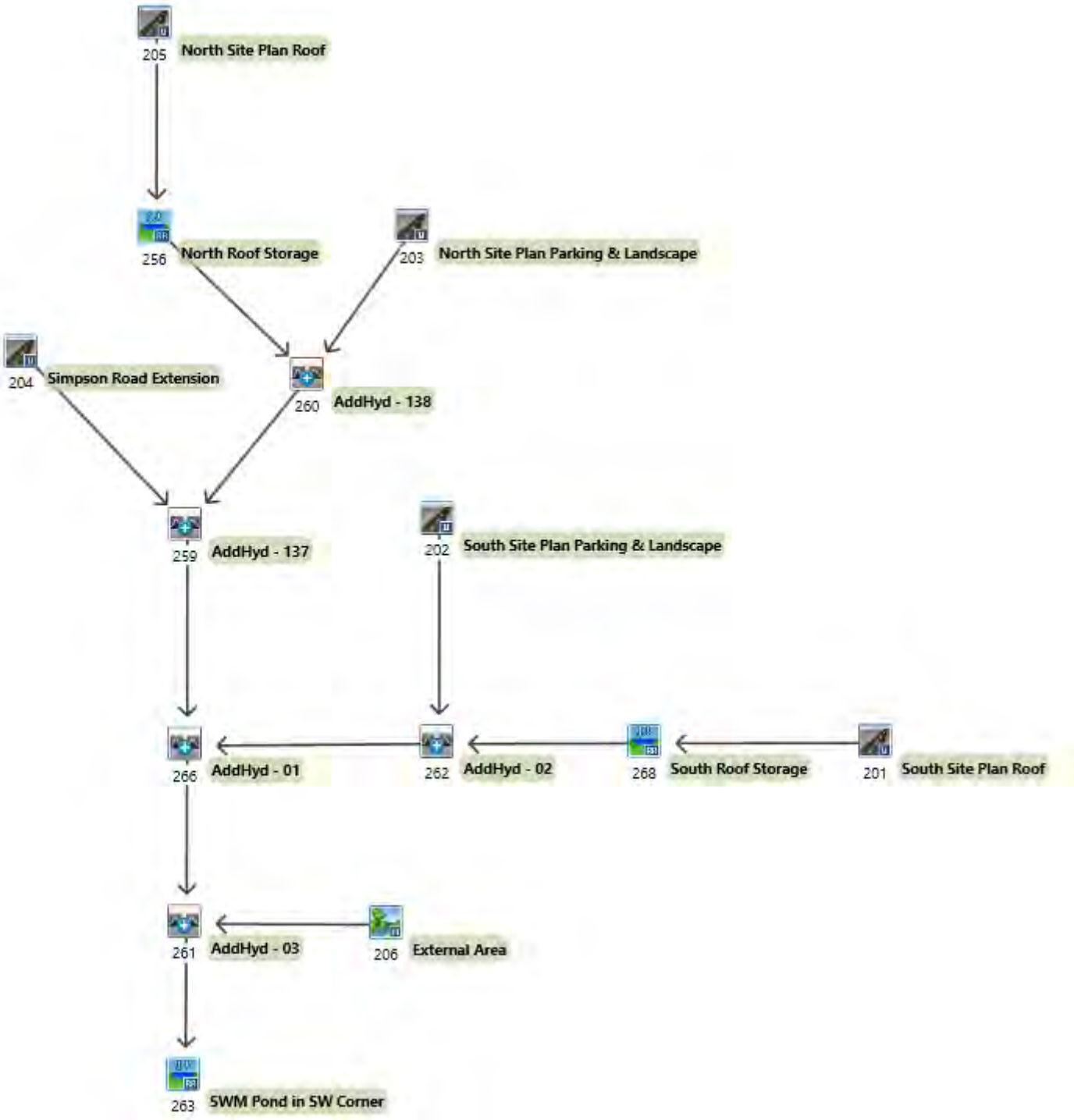

SCHAEFFERS
CONSULTING ENGINEERS

Post-development Visual OTTHYMO™ Schematic
24 Hour AES 2-100 Year

Job #: 2018-4841 | **Date: July 2020**

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       V    V   I    SSSSS  U   U    A    L             (v 5.0.2025)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
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  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\1313ac71-b4c2-4367-bb2f-37e062c096dc\s


DATE: 07/06/2020                          TIME: 04:38:41

USER:



COMMENTS: _____________________________________________________________


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  ***********************************************
  ** SIMULATION : 10 Year 24 Hour AES           **
  ***********************************************


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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              cdb8232d-79e6-461f-abf3-b53ae11525c8\9b653463
| Ptotal= 68.76 mm |    Comments:
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	5.85	12.75	2.41	19.00	0.34
0.50	0.34	6.75	5.85	13.00	2.41	19.25	0.34
0.75	0.34	7.00	5.85	13.25	2.41	19.50	0.34
1.00	0.34	7.25	5.85	13.50	2.41	19.75	0.34
1.25	0.34	7.50	5.85	13.75	2.41	20.00	0.34
1.50	0.34	7.75	5.85	14.00	2.41	20.25	0.34
1.75	0.34	8.00	5.85	14.25	2.41	20.50	0.34
2.00	0.34	8.25	5.85	14.50	1.38	20.75	0.34
2.25	0.34	8.50	15.82	14.75	1.38	21.00	0.34
2.50	0.34	8.75	15.82	15.00	1.38	21.25	0.34
2.75	0.34	9.00	15.82	15.25	1.38	21.50	0.34
3.00	0.34	9.25	15.82	15.50	1.38	21.75	0.34
3.25	0.34	9.50	15.82	15.75	1.38	22.00	0.34
3.50	0.34	9.75	15.82	16.00	1.38	22.25	0.34
3.75	0.34	10.00	15.82	16.25	1.38	22.50	0.34
4.00	0.34	10.25	15.82	16.50	0.69	22.75	0.34
4.25	0.34	10.50	4.47	16.75	0.69	23.00	0.34
4.50	2.06	10.75	4.47	17.00	0.69	23.25	0.34
4.75	2.06	11.00	4.47	17.25	0.69	23.50	0.34
5.00	2.06	11.25	4.47	17.50	0.69	23.75	0.34
5.25	2.06	11.50	4.47	17.75	0.69	24.00	0.34
5.50	2.06	11.75	4.47	18.00	0.69	24.25	0.34
5.75	2.06	12.00	4.47	18.25	0.69		
6.00	2.06	12.25	4.47	18.50	0.34		
6.25	2.06	12.50	2.41	18.75	0.34		

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| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
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---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	2.06	12.250	4.47	18.33	0.34
0.167	0.00	6.250	2.06	12.333	2.41	18.42	0.34
0.250	0.00	6.333	5.85	12.417	2.41	18.50	0.34
0.333	0.34	6.417	5.85	12.500	2.41	18.58	0.34
0.417	0.34	6.500	5.85	12.583	2.41	18.67	0.34
0.500	0.34	6.583	5.85	12.667	2.41	18.75	0.34
0.583	0.34	6.667	5.85	12.750	2.41	18.83	0.34
0.667	0.34	6.750	5.85	12.833	2.41	18.92	0.34
0.750	0.34	6.833	5.85	12.917	2.41	19.00	0.34
0.833	0.34	6.917	5.85	13.000	2.41	19.08	0.34
0.917	0.34	7.000	5.85	13.083	2.41	19.17	0.34
1.000	0.34	7.083	5.85	13.167	2.41	19.25	0.34
1.083	0.34	7.167	5.85	13.250	2.41	19.33	0.34
1.167	0.34	7.250	5.85	13.333	2.41	19.42	0.34
1.250	0.34	7.333	5.85	13.417	2.41	19.50	0.34
1.333	0.34	7.417	5.85	13.500	2.41	19.58	0.34
1.417	0.34	7.500	5.85	13.583	2.41	19.67	0.34
1.500	0.34	7.583	5.85	13.667	2.41	19.75	0.34
1.583	0.34	7.667	5.85	13.750	2.41	19.83	0.34
1.667	0.34	7.750	5.85	13.833	2.41	19.92	0.34
1.750	0.34	7.833	5.85	13.917	2.41	20.00	0.34
1.833	0.34	7.917	5.85	14.000	2.41	20.08	0.34
1.917	0.34	8.000	5.85	14.083	2.41	20.17	0.34
2.000	0.34	8.083	5.85	14.167	2.41	20.25	0.34
2.083	0.34	8.167	5.85	14.250	2.41	20.33	0.34
2.167	0.34	8.250	5.85	14.333	1.38	20.42	0.34
2.250	0.34	8.333	15.82	14.417	1.38	20.50	0.34
2.333	0.34	8.417	15.82	14.500	1.38	20.58	0.34
2.417	0.34	8.500	15.82	14.583	1.38	20.67	0.34
2.500	0.34	8.583	15.82	14.667	1.38	20.75	0.34
2.583	0.34	8.667	15.82	14.750	1.38	20.83	0.34
2.667	0.34	8.750	15.82	14.833	1.38	20.92	0.34
2.750	0.34	8.833	15.82	14.917	1.38	21.00	0.34
2.833	0.34	8.917	15.82	15.000	1.38	21.08	0.34
2.917	0.34	9.000	15.82	15.083	1.38	21.17	0.34
3.000	0.34	9.083	15.82	15.167	1.38	21.25	0.34

3.083	0.34	9.167	15.82	15.250	1.38	21.33	0.34
3.167	0.34	9.250	15.82	15.333	1.38	21.42	0.34
3.250	0.34	9.333	15.82	15.417	1.38	21.50	0.34
3.333	0.34	9.417	15.82	15.500	1.38	21.58	0.34
3.417	0.34	9.500	15.82	15.583	1.38	21.67	0.34
3.500	0.34	9.583	15.82	15.667	1.38	21.75	0.34
3.583	0.34	9.667	15.82	15.750	1.38	21.83	0.34
3.667	0.34	9.750	15.82	15.833	1.38	21.92	0.34
3.750	0.34	9.833	15.82	15.917	1.38	22.00	0.34
3.833	0.34	9.917	15.82	16.000	1.38	22.08	0.34
3.917	0.34	10.000	15.82	16.083	1.38	22.17	0.34
4.000	0.34	10.083	15.82	16.167	1.38	22.25	0.34
4.083	0.34	10.167	15.82	16.250	1.38	22.33	0.34
4.167	0.34	10.250	15.82	16.333	0.69	22.42	0.34
4.250	0.34	10.333	4.47	16.417	0.69	22.50	0.34
4.333	2.06	10.417	4.47	16.500	0.69	22.58	0.34
4.417	2.06	10.500	4.47	16.583	0.69	22.67	0.34
4.500	2.06	10.583	4.47	16.667	0.69	22.75	0.34
4.583	2.06	10.667	4.47	16.750	0.69	22.83	0.34
4.667	2.06	10.750	4.47	16.833	0.69	22.92	0.34
4.750	2.06	10.833	4.47	16.917	0.69	23.00	0.34
4.833	2.06	10.917	4.47	17.000	0.69	23.08	0.34
4.917	2.06	11.000	4.47	17.083	0.69	23.17	0.34
5.000	2.06	11.083	4.47	17.167	0.69	23.25	0.34
5.083	2.06	11.167	4.47	17.250	0.69	23.33	0.34
5.167	2.06	11.250	4.47	17.333	0.69	23.42	0.34
5.250	2.06	11.333	4.47	17.417	0.69	23.50	0.34
5.333	2.06	11.417	4.47	17.500	0.69	23.58	0.34
5.417	2.06	11.500	4.47	17.583	0.69	23.67	0.34
5.500	2.06	11.583	4.47	17.667	0.69	23.75	0.34
5.583	2.06	11.667	4.47	17.750	0.69	23.83	0.34
5.667	2.06	11.750	4.47	17.833	0.69	23.92	0.34
5.750	2.06	11.833	4.47	17.917	0.69	24.00	0.34
5.833	2.06	11.917	4.47	18.000	0.69	24.08	0.34
5.917	2.06	12.000	4.47	18.083	0.69	24.17	0.34
6.000	2.06	12.083	4.47	18.167	0.69	24.25	0.34
6.083	2.06	12.167	4.47	18.250	0.69		

Unit Hyd Qpeak (cms)= 0.019

PEAK FLOW (cms)= 0.004 (i)
TIME TO PEAK (hrs)= 10.250
RUNOFF VOLUME (mm)= 33.983
TOTAL RAINFALL (mm)= 68.760
RUNOFF COEFFICIENT = 0.494

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\cdb8232d-79e6-461f-abf3-b53ae11525c8\9b653463
Ptotal= 68.76 mm	Comments:

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	5.85	12.75	2.41	19.00	0.34
0.50	0.34	6.75	5.85	13.00	2.41	19.25	0.34
0.75	0.34	7.00	5.85	13.25	2.41	19.50	0.34
1.00	0.34	7.25	5.85	13.50	2.41	19.75	0.34
1.25	0.34	7.50	5.85	13.75	2.41	20.00	0.34
1.50	0.34	7.75	5.85	14.00	2.41	20.25	0.34
1.75	0.34	8.00	5.85	14.25	2.41	20.50	0.34
2.00	0.34	8.25	5.85	14.50	1.38	20.75	0.34
2.25	0.34	8.50	15.82	14.75	1.38	21.00	0.34
2.50	0.34	8.75	15.82	15.00	1.38	21.25	0.34
2.75	0.34	9.00	15.82	15.25	1.38	21.50	0.34
3.00	0.34	9.25	15.82	15.50	1.38	21.75	0.34
3.25	0.34	9.50	15.82	15.75	1.38	22.00	0.34
3.50	0.34	9.75	15.82	16.00	1.38	22.25	0.34
3.75	0.34	10.00	15.82	16.25	1.38	22.50	0.34
4.00	0.34	10.25	15.82	16.50	0.69	22.75	0.34
4.25	0.34	10.50	4.47	16.75	0.69	23.00	0.34
4.50	2.06	10.75	4.47	17.00	0.69	23.25	0.34
4.75	2.06	11.00	4.47	17.25	0.69	23.50	0.34
5.00	2.06	11.25	4.47	17.50	0.69	23.75	0.34
5.25	2.06	11.50	4.47	17.75	0.69	24.00	0.34
5.50	2.06	11.75	4.47	18.00	0.69	24.25	0.34
5.75	2.06	12.00	4.47	18.25	0.69		
6.00	2.06	12.25	4.47	18.50	0.34		
6.25	2.06	12.50	2.41	18.75	0.34		

CALIB	
STANDHYD (0205)	Area (ha)= 1.12
ID= 1 DT= 5.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.11	0.01
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	86.60	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	2.06	12.250	4.47	18.33	0.34
0.167	0.00	6.250	2.06	12.333	2.41	18.42	0.34
0.250	0.00	6.333	5.85	12.417	2.41	18.50	0.34
0.333	0.34	6.417	5.85	12.500	2.41	18.58	0.34
0.417	0.34	6.500	5.85	12.583	2.41	18.67	0.34
0.500	0.34	6.583	5.85	12.667	2.41	18.75	0.34
0.583	0.34	6.667	5.85	12.750	2.41	18.83	0.34
0.667	0.34	6.750	5.85	12.833	2.41	18.92	0.34
0.750	0.34	6.833	5.85	12.917	2.41	19.00	0.34
0.833	0.34	6.917	5.85	13.000	2.41	19.08	0.34
0.917	0.34	7.000	5.85	13.083	2.41	19.17	0.34
1.000	0.34	7.083	5.85	13.167	2.41	19.25	0.34
1.083	0.34	7.167	5.85	13.250	2.41	19.33	0.34
1.167	0.34	7.250	5.85	13.333	2.41	19.42	0.34
1.250	0.34	7.333	5.85	13.417	2.41	19.50	0.34
1.333	0.34	7.417	5.85	13.500	2.41	19.58	0.34
1.417	0.34	7.500	5.85	13.583	2.41	19.67	0.34
1.500	0.34	7.583	5.85	13.667	2.41	19.75	0.34
1.583	0.34	7.667	5.85	13.750	2.41	19.83	0.34
1.667	0.34	7.750	5.85	13.833	2.41	19.92	0.34
1.750	0.34	7.833	5.85	13.917	2.41	20.00	0.34
1.833	0.34	7.917	5.85	14.000	2.41	20.08	0.34
1.917	0.34	8.000	5.85	14.083	2.41	20.17	0.34
2.000	0.34	8.083	5.85	14.167	2.41	20.25	0.34

2.083	0.34	8.167	5.85	14.250	2.41	20.33	0.34
2.167	0.34	8.250	5.85	14.333	1.38	20.42	0.34
2.250	0.34	8.333	15.82	14.417	1.38	20.50	0.34
2.333	0.34	8.417	15.82	14.500	1.38	20.58	0.34
2.417	0.34	8.500	15.82	14.583	1.38	20.67	0.34
2.500	0.34	8.583	15.82	14.667	1.38	20.75	0.34
2.583	0.34	8.667	15.82	14.750	1.38	20.83	0.34
2.667	0.34	8.750	15.82	14.833	1.38	20.92	0.34
2.750	0.34	8.833	15.82	14.917	1.38	21.00	0.34
2.833	0.34	8.917	15.82	15.000	1.38	21.08	0.34
2.917	0.34	9.000	15.82	15.083	1.38	21.17	0.34
3.000	0.34	9.083	15.82	15.167	1.38	21.25	0.34
3.083	0.34	9.167	15.82	15.250	1.38	21.33	0.34
3.167	0.34	9.250	15.82	15.333	1.38	21.42	0.34
3.250	0.34	9.333	15.82	15.417	1.38	21.50	0.34
3.333	0.34	9.417	15.82	15.500	1.38	21.58	0.34
3.417	0.34	9.500	15.82	15.583	1.38	21.67	0.34
3.500	0.34	9.583	15.82	15.667	1.38	21.75	0.34
3.583	0.34	9.667	15.82	15.750	1.38	21.83	0.34
3.667	0.34	9.750	15.82	15.833	1.38	21.92	0.34
3.750	0.34	9.833	15.82	15.917	1.38	22.00	0.34
3.833	0.34	9.917	15.82	16.000	1.38	22.08	0.34
3.917	0.34	10.000	15.82	16.083	1.38	22.17	0.34
4.000	0.34	10.083	15.82	16.167	1.38	22.25	0.34
4.083	0.34	10.167	15.82	16.250	1.38	22.33	0.34
4.167	0.34	10.250	15.82	16.333	0.69	22.42	0.34
4.250	0.34	10.333	4.47	16.417	0.69	22.50	0.34
4.333	2.06	10.417	4.47	16.500	0.69	22.58	0.34
4.417	2.06	10.500	4.47	16.583	0.69	22.67	0.34
4.500	2.06	10.583	4.47	16.667	0.69	22.75	0.34
4.583	2.06	10.667	4.47	16.750	0.69	22.83	0.34
4.667	2.06	10.750	4.47	16.833	0.69	22.92	0.34
4.750	2.06	10.833	4.47	16.917	0.69	23.00	0.34
4.833	2.06	10.917	4.47	17.000	0.69	23.08	0.34
4.917	2.06	11.000	4.47	17.083	0.69	23.17	0.34
5.000	2.06	11.083	4.47	17.167	0.69	23.25	0.34
5.083	2.06	11.167	4.47	17.250	0.69	23.33	0.34
5.167	2.06	11.250	4.47	17.333	0.69	23.42	0.34
5.250	2.06	11.333	4.47	17.417	0.69	23.50	0.34
5.333	2.06	11.417	4.47	17.500	0.69	23.58	0.34
5.417	2.06	11.500	4.47	17.583	0.69	23.67	0.34
5.500	2.06	11.583	4.47	17.667	0.69	23.75	0.34
5.583	2.06	11.667	4.47	17.750	0.69	23.83	0.34
5.667	2.06	11.750	4.47	17.833	0.69	23.92	0.34
5.750	2.06	11.833	4.47	17.917	0.69	24.00	0.34
5.833	2.06	11.917	4.47	18.000	0.69	24.08	0.34
5.917	2.06	12.000	4.47	18.083	0.69	24.17	0.34
6.000	2.06	12.083	4.47	18.167	0.69	24.25	0.34
6.083	2.06	12.167	4.47	18.250	0.69		

Max.Eff.Inten.(mm/hr)=	15.82	10.73	
over (min)	5.00	10.00	
Storage Coeff. (min)=	4.90 (ii)	7.25 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.22	0.14	
			TOTALS
PEAK FLOW (cms)=	0.05	0.00	0.049 (iii)
TIME TO PEAK (hrs)=	9.50	10.25	10.25
RUNOFF VOLUME (mm)=	67.76	34.02	67.42
TOTAL RAINFALL (mm)=	68.76	68.76	68.76
RUNOFF COEFFICIENT =	0.99	0.49	0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0256) IN= 2---> OUT= 1 DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0470	0.0750

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0205)	1.125	0.049	10.25	67.42
OUTFLOW: ID= 1 (0256)	1.125	0.023	10.33	67.07

PEAK FLOW REDUCTION [Qout/Qin](%)= 46.30
TIME SHIFT OF PEAK FLOW (min)= 5.00
MAXIMUM STORAGE USED (ha.m.)= 0.0365

READ STORM Ptotal= 68.76 mm	Filename: C:\Users\mventresca\AppData\Local\Temp\cdb8232d-79e6-461f-abf3-b53ae11525c8\9b653463 Comments:

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	5.85	12.75	2.41	19.00	0.34
0.50	0.34	6.75	5.85	13.00	2.41	19.25	0.34
0.75	0.34	7.00	5.85	13.25	2.41	19.50	0.34
1.00	0.34	7.25	5.85	13.50	2.41	19.75	0.34
1.25	0.34	7.50	5.85	13.75	2.41	20.00	0.34
1.50	0.34	7.75	5.85	14.00	2.41	20.25	0.34
1.75	0.34	8.00	5.85	14.25	2.41	20.50	0.34
2.00	0.34	8.25	5.85	14.50	1.38	20.75	0.34
2.25	0.34	8.50	15.82	14.75	1.38	21.00	0.34
2.50	0.34	8.75	15.82	15.00	1.38	21.25	0.34
2.75	0.34	9.00	15.82	15.25	1.38	21.50	0.34
3.00	0.34	9.25	15.82	15.50	1.38	21.75	0.34
3.25	0.34	9.50	15.82	15.75	1.38	22.00	0.34
3.50	0.34	9.75	15.82	16.00	1.38	22.25	0.34
3.75	0.34	10.00	15.82	16.25	1.38	22.50	0.34
4.00	0.34	10.25	15.82	16.50	0.69	22.75	0.34
4.25	0.34	10.50	4.47	16.75	0.69	23.00	0.34
4.50	2.06	10.75	4.47	17.00	0.69	23.25	0.34
4.75	2.06	11.00	4.47	17.25	0.69	23.50	0.34
5.00	2.06	11.25	4.47	17.50	0.69	23.75	0.34
5.25	2.06	11.50	4.47	17.75	0.69	24.00	0.34
5.50	2.06	11.75	4.47	18.00	0.69	24.25	0.34
5.75	2.06	12.00	4.47	18.25	0.69		
6.00	2.06	12.25	4.47	18.50	0.34		
6.25	2.06	12.50	2.41	18.75	0.34		

CALIB STANDHYD (0203)	Area (ha)= 2.10

|ID= 1 DT= 5.0 min | Total Imp(%)= 80.00 Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.68	0.42
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	118.18	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	2.06	12.250	4.47	18.33	0.34
0.167	0.00	6.250	2.06	12.333	2.41	18.42	0.34
0.250	0.00	6.333	5.85	12.417	2.41	18.50	0.34
0.333	0.34	6.417	5.85	12.500	2.41	18.58	0.34
0.417	0.34	6.500	5.85	12.583	2.41	18.67	0.34
0.500	0.34	6.583	5.85	12.667	2.41	18.75	0.34
0.583	0.34	6.667	5.85	12.750	2.41	18.83	0.34
0.667	0.34	6.750	5.85	12.833	2.41	18.92	0.34
0.750	0.34	6.833	5.85	12.917	2.41	19.00	0.34
0.833	0.34	6.917	5.85	13.000	2.41	19.08	0.34
0.917	0.34	7.000	5.85	13.083	2.41	19.17	0.34
1.000	0.34	7.083	5.85	13.167	2.41	19.25	0.34
1.083	0.34	7.167	5.85	13.250	2.41	19.33	0.34
1.167	0.34	7.250	5.85	13.333	2.41	19.42	0.34
1.250	0.34	7.333	5.85	13.417	2.41	19.50	0.34
1.333	0.34	7.417	5.85	13.500	2.41	19.58	0.34
1.417	0.34	7.500	5.85	13.583	2.41	19.67	0.34
1.500	0.34	7.583	5.85	13.667	2.41	19.75	0.34
1.583	0.34	7.667	5.85	13.750	2.41	19.83	0.34
1.667	0.34	7.750	5.85	13.833	2.41	19.92	0.34
1.750	0.34	7.833	5.85	13.917	2.41	20.00	0.34
1.833	0.34	7.917	5.85	14.000	2.41	20.08	0.34
1.917	0.34	8.000	5.85	14.083	2.41	20.17	0.34
2.000	0.34	8.083	5.85	14.167	2.41	20.25	0.34
2.083	0.34	8.167	5.85	14.250	2.41	20.33	0.34
2.167	0.34	8.250	5.85	14.333	1.38	20.42	0.34
2.250	0.34	8.333	15.82	14.417	1.38	20.50	0.34
2.333	0.34	8.417	15.82	14.500	1.38	20.58	0.34
2.417	0.34	8.500	15.82	14.583	1.38	20.67	0.34
2.500	0.34	8.583	15.82	14.667	1.38	20.75	0.34
2.583	0.34	8.667	15.82	14.750	1.38	20.83	0.34
2.667	0.34	8.750	15.82	14.833	1.38	20.92	0.34
2.750	0.34	8.833	15.82	14.917	1.38	21.00	0.34
2.833	0.34	8.917	15.82	15.000	1.38	21.08	0.34
2.917	0.34	9.000	15.82	15.083	1.38	21.17	0.34
3.000	0.34	9.083	15.82	15.167	1.38	21.25	0.34
3.083	0.34	9.167	15.82	15.250	1.38	21.33	0.34
3.167	0.34	9.250	15.82	15.333	1.38	21.42	0.34
3.250	0.34	9.333	15.82	15.417	1.38	21.50	0.34
3.333	0.34	9.417	15.82	15.500	1.38	21.58	0.34
3.417	0.34	9.500	15.82	15.583	1.38	21.67	0.34
3.500	0.34	9.583	15.82	15.667	1.38	21.75	0.34
3.583	0.34	9.667	15.82	15.750	1.38	21.83	0.34
3.667	0.34	9.750	15.82	15.833	1.38	21.92	0.34
3.750	0.34	9.833	15.82	15.917	1.38	22.00	0.34
3.833	0.34	9.917	15.82	16.000	1.38	22.08	0.34
3.917	0.34	10.000	15.82	16.083	1.38	22.17	0.34
4.000	0.34	10.083	15.82	16.167	1.38	22.25	0.34
4.083	0.34	10.167	15.82	16.250	1.38	22.33	0.34
4.167	0.34	10.250	15.82	16.333	0.69	22.42	0.34
4.250	0.34	10.333	4.47	16.417	0.69	22.50	0.34
4.333	2.06	10.417	4.47	16.500	0.69	22.58	0.34
4.417	2.06	10.500	4.47	16.583	0.69	22.67	0.34
4.500	2.06	10.583	4.47	16.667	0.69	22.75	0.34
4.583	2.06	10.667	4.47	16.750	0.69	22.83	0.34
4.667	2.06	10.750	4.47	16.833	0.69	22.92	0.34
4.750	2.06	10.833	4.47	16.917	0.69	23.00	0.34
4.833	2.06	10.917	4.47	17.000	0.69	23.08	0.34
4.917	2.06	11.000	4.47	17.083	0.69	23.17	0.34
5.000	2.06	11.083	4.47	17.167	0.69	23.25	0.34
5.083	2.06	11.167	4.47	17.250	0.69	23.33	0.34
5.167	2.06	11.250	4.47	17.333	0.69	23.42	0.34
5.250	2.06	11.333	4.47	17.417	0.69	23.50	0.34
5.333	2.06	11.417	4.47	17.500	0.69	23.58	0.34
5.417	2.06	11.500	4.47	17.583	0.69	23.67	0.34
5.500	2.06	11.583	4.47	17.667	0.69	23.75	0.34
5.583	2.06	11.667	4.47	17.750	0.69	23.83	0.34
5.667	2.06	11.750	4.47	17.833	0.69	23.92	0.34
5.750	2.06	11.833	4.47	17.917	0.69	24.00	0.34
5.833	2.06	11.917	4.47	18.000	0.69	24.08	0.34
5.917	2.06	12.000	4.47	18.083	0.69	24.17	0.34
6.000	2.06	12.083	4.47	18.167	0.69	24.25	0.34
6.083	2.06	12.167	4.47	18.250	0.69		

Max.Eff.Inten.(mm/hr)=	15.82	10.58	
over (min)	5.00	25.00	
Storage Coeff. (min)=	5.90 (ii)	23.24 (ii)	
Unit Hyd. Tpeak (min)=	5.00	25.00	
Unit Hyd. peak (cms)=	0.19	0.05	
			TOTALS
PEAK FLOW (cms)=	0.07	0.01	0.085 (iii)
TIME TO PEAK (hrs)=	9.75	10.25	10.25
RUNOFF VOLUME (mm)=	67.76	34.02	61.00
TOTAL RAINFALL (mm)=	68.76	68.76	68.76
RUNOFF COEFFICIENT =	0.99	0.49	0.89

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0260)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
	ID1= 1 (0203):	2.10	0.085	10.25	61.00
	+ ID2= 2 (0256):	1.12	0.023	10.33	67.07
	ID = 3 (0260):	3.22	0.107	10.25	63.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\cdb8232d-79e6-461f-abf3-b53ae11525c8\9b653463
Ptotal= 68.76 mm	Comments:

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	5.85	12.75	2.41	19.00	0.34
0.50	0.34	6.75	5.85	13.00	2.41	19.25	0.34
0.75	0.34	7.00	5.85	13.25	2.41	19.50	0.34
1.00	0.34	7.25	5.85	13.50	2.41	19.75	0.34
1.25	0.34	7.50	5.85	13.75	2.41	20.00	0.34
1.50	0.34	7.75	5.85	14.00	2.41	20.25	0.34
1.75	0.34	8.00	5.85	14.25	2.41	20.50	0.34
2.00	0.34	8.25	5.85	14.50	1.38	20.75	0.34
2.25	0.34	8.50	15.82	14.75	1.38	21.00	0.34
2.50	0.34	8.75	15.82	15.00	1.38	21.25	0.34
2.75	0.34	9.00	15.82	15.25	1.38	21.50	0.34
3.00	0.34	9.25	15.82	15.50	1.38	21.75	0.34
3.25	0.34	9.50	15.82	15.75	1.38	22.00	0.34
3.50	0.34	9.75	15.82	16.00	1.38	22.25	0.34
3.75	0.34	10.00	15.82	16.25	1.38	22.50	0.34
4.00	0.34	10.25	15.82	16.50	0.69	22.75	0.34
4.25	0.34	10.50	4.47	16.75	0.69	23.00	0.34
4.50	2.06	10.75	4.47	17.00	0.69	23.25	0.34
4.75	2.06	11.00	4.47	17.25	0.69	23.50	0.34
5.00	2.06	11.25	4.47	17.50	0.69	23.75	0.34
5.25	2.06	11.50	4.47	17.75	0.69	24.00	0.34
5.50	2.06	11.75	4.47	18.00	0.69	24.25	0.34
5.75	2.06	12.00	4.47	18.25	0.69		
6.00	2.06	12.25	4.47	18.50	0.34		
6.25	2.06	12.50	2.41	18.75	0.34		

CALIB	
STANDHYD (0204)	Area (ha)= 1.45
ID= 1 DT= 5.0 min	Total Imp(%)= 80.00 Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.16	0.29
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	98.32	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	2.06	12.250	4.47	18.33	0.34
0.167	0.00	6.250	2.06	12.333	2.41	18.42	0.34
0.250	0.00	6.333	5.85	12.417	2.41	18.50	0.34
0.333	0.34	6.417	5.85	12.500	2.41	18.58	0.34
0.417	0.34	6.500	5.85	12.583	2.41	18.67	0.34
0.500	0.34	6.583	5.85	12.667	2.41	18.75	0.34
0.583	0.34	6.667	5.85	12.750	2.41	18.83	0.34
0.667	0.34	6.750	5.85	12.833	2.41	18.92	0.34
0.750	0.34	6.833	5.85	12.917	2.41	19.00	0.34
0.833	0.34	6.917	5.85	13.000	2.41	19.08	0.34
0.917	0.34	7.000	5.85	13.083	2.41	19.17	0.34
1.000	0.34	7.083	5.85	13.167	2.41	19.25	0.34
1.083	0.34	7.167	5.85	13.250	2.41	19.33	0.34
1.167	0.34	7.250	5.85	13.333	2.41	19.42	0.34
1.250	0.34	7.333	5.85	13.417	2.41	19.50	0.34
1.333	0.34	7.417	5.85	13.500	2.41	19.58	0.34
1.417	0.34	7.500	5.85	13.583	2.41	19.67	0.34
1.500	0.34	7.583	5.85	13.667	2.41	19.75	0.34
1.583	0.34	7.667	5.85	13.750	2.41	19.83	0.34
1.667	0.34	7.750	5.85	13.833	2.41	19.92	0.34
1.750	0.34	7.833	5.85	13.917	2.41	20.00	0.34
1.833	0.34	7.917	5.85	14.000	2.41	20.08	0.34
1.917	0.34	8.000	5.85	14.083	2.41	20.17	0.34
2.000	0.34	8.083	5.85	14.167	2.41	20.25	0.34
2.083	0.34	8.167	5.85	14.250	2.41	20.33	0.34
2.167	0.34	8.250	5.85	14.333	1.38	20.42	0.34
2.250	0.34	8.333	15.82	14.417	1.38	20.50	0.34
2.333	0.34	8.417	15.82	14.500	1.38	20.58	0.34
2.417	0.34	8.500	15.82	14.583	1.38	20.67	0.34
2.500	0.34	8.583	15.82	14.667	1.38	20.75	0.34
2.583	0.34	8.667	15.82	14.750	1.38	20.83	0.34
2.667	0.34	8.750	15.82	14.833	1.38	20.92	0.34
2.750	0.34	8.833	15.82	14.917	1.38	21.00	0.34
2.833	0.34	8.917	15.82	15.000	1.38	21.08	0.34
2.917	0.34	9.000	15.82	15.083	1.38	21.17	0.34
3.000	0.34	9.083	15.82	15.167	1.38	21.25	0.34
3.083	0.34	9.167	15.82	15.250	1.38	21.33	0.34
3.167	0.34	9.250	15.82	15.333	1.38	21.42	0.34
3.250	0.34	9.333	15.82	15.417	1.38	21.50	0.34
3.333	0.34	9.417	15.82	15.500	1.38	21.58	0.34
3.417	0.34	9.500	15.82	15.583	1.38	21.67	0.34
3.500	0.34	9.583	15.82	15.667	1.38	21.75	0.34
3.583	0.34	9.667	15.82	15.750	1.38	21.83	0.34
3.667	0.34	9.750	15.82	15.833	1.38	21.92	0.34
3.750	0.34	9.833	15.82	15.917	1.38	22.00	0.34
3.833	0.34	9.917	15.82	16.000	1.38	22.08	0.34
3.917	0.34	10.000	15.82	16.083	1.38	22.17	0.34
4.000	0.34	10.083	15.82	16.167	1.38	22.25	0.34
4.083	0.34	10.167	15.82	16.250	1.38	22.33	0.34
4.167	0.34	10.250	15.82	16.333	0.69	22.42	0.34
4.250	0.34	10.333	4.47	16.417	0.69	22.50	0.34
4.333	2.06	10.417	4.47	16.500	0.69	22.58	0.34
4.417	2.06	10.500	4.47	16.583	0.69	22.67	0.34
4.500	2.06	10.583	4.47	16.667	0.69	22.75	0.34
4.583	2.06	10.667	4.47	16.750	0.69	22.83	0.34
4.667	2.06	10.750	4.47	16.833	0.69	22.92	0.34
4.750	2.06	10.833	4.47	16.917	0.69	23.00	0.34
4.833	2.06	10.917	4.47	17.000	0.69	23.08	0.34
4.917	2.06	11.000	4.47	17.083	0.69	23.17	0.34
5.000	2.06	11.083	4.47	17.167	0.69	23.25	0.34
5.083	2.06	11.167	4.47	17.250	0.69	23.33	0.34
5.167	2.06	11.250	4.47	17.333	0.69	23.42	0.34
5.250	2.06	11.333	4.47	17.417	0.69	23.50	0.34
5.333	2.06	11.417	4.47	17.500	0.69	23.58	0.34
5.417	2.06	11.500	4.47	17.583	0.69	23.67	0.34
5.500	2.06	11.583	4.47	17.667	0.69	23.75	0.34
5.583	2.06	11.667	4.47	17.750	0.69	23.83	0.34
5.667	2.06	11.750	4.47	17.833	0.69	23.92	0.34
5.750	2.06	11.833	4.47	17.917	0.69	24.00	0.34
5.833	2.06	11.917	4.47	18.000	0.69	24.08	0.34
5.917	2.06	12.000	4.47	18.083	0.69	24.17	0.34
6.000	2.06	12.083	4.47	18.167	0.69	24.25	0.34
6.083	2.06	12.167	4.47	18.250	0.69		

Max.Eff.Inten.(mm/hr)=		15.82	10.58
	over (min)	5.00	25.00
Storage Coeff. (min)=		5.29 (ii)	22.62 (ii)
Unit Hyd. Tpeak (min)=		5.00	25.00
Unit Hyd. peak (cms)=		0.21	0.05

			TOTALS
PEAK FLOW (cms)=	0.05	0.01	0.059 (iii)
TIME TO PEAK (hrs)=	9.50	10.25	10.25
RUNOFF VOLUME (mm)=	67.76	34.02	61.00
TOTAL RAINFALL (mm)=	68.76	68.76	68.76
RUNOFF COEFFICIENT =	0.99	0.49	0.89

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0259)		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0204):		1.45	0.059	10.25	61.00
+ ID2= 2 (0260):		3.22	0.107	10.25	63.12
ID = 3 (0259):		4.67	0.166	10.25	62.46

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\cdb8232d-79e6-461f-abf3-b53ae11525c8\9b653463
Ptotal= 68.76 mm	Comments:

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	5.85	12.75	2.41	19.00	0.34
0.50	0.34	6.75	5.85	13.00	2.41	19.25	0.34
0.75	0.34	7.00	5.85	13.25	2.41	19.50	0.34
1.00	0.34	7.25	5.85	13.50	2.41	19.75	0.34
1.25	0.34	7.50	5.85	13.75	2.41	20.00	0.34
1.50	0.34	7.75	5.85	14.00	2.41	20.25	0.34
1.75	0.34	8.00	5.85	14.25	2.41	20.50	0.34
2.00	0.34	8.25	5.85	14.50	1.38	20.75	0.34
2.25	0.34	8.50	15.82	14.75	1.38	21.00	0.34
2.50	0.34	8.75	15.82	15.00	1.38	21.25	0.34
2.75	0.34	9.00	15.82	15.25	1.38	21.50	0.34
3.00	0.34	9.25	15.82	15.50	1.38	21.75	0.34
3.25	0.34	9.50	15.82	15.75	1.38	22.00	0.34
3.50	0.34	9.75	15.82	16.00	1.38	22.25	0.34
3.75	0.34	10.00	15.82	16.25	1.38	22.50	0.34
4.00	0.34	10.25	15.82	16.50	0.69	22.75	0.34
4.25	0.34	10.50	4.47	16.75	0.69	23.00	0.34
4.50	2.06	10.75	4.47	17.00	0.69	23.25	0.34
4.75	2.06	11.00	4.47	17.25	0.69	23.50	0.34
5.00	2.06	11.25	4.47	17.50	0.69	23.75	0.34
5.25	2.06	11.50	4.47	17.75	0.69	24.00	0.34
5.50	2.06	11.75	4.47	18.00	0.69	24.25	0.34
5.75	2.06	12.00	4.47	18.25	0.69		
6.00	2.06	12.25	4.47	18.50	0.34		
6.25	2.06	12.50	2.41	18.75	0.34		

CALIB					
STANDHYD (0201)	Area (ha)= 5.27				
ID= 1 DT= 5.0 min	Total Imp(%)= 99.00		Dir. Conn.(%)= 99.00		

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.22	0.05
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	187.44	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	2.06	12.250	4.47	18.33	0.34
0.167	0.00	6.250	2.06	12.333	2.41	18.42	0.34
0.250	0.00	6.333	5.85	12.417	2.41	18.50	0.34
0.333	0.34	6.417	5.85	12.500	2.41	18.58	0.34
0.417	0.34	6.500	5.85	12.583	2.41	18.67	0.34
0.500	0.34	6.583	5.85	12.667	2.41	18.75	0.34
0.583	0.34	6.667	5.85	12.750	2.41	18.83	0.34
0.667	0.34	6.750	5.85	12.833	2.41	18.92	0.34
0.750	0.34	6.833	5.85	12.917	2.41	19.00	0.34
0.833	0.34	6.917	5.85	13.000	2.41	19.08	0.34
0.917	0.34	7.000	5.85	13.083	2.41	19.17	0.34
1.000	0.34	7.083	5.85	13.167	2.41	19.25	0.34
1.083	0.34	7.167	5.85	13.250	2.41	19.33	0.34
1.167	0.34	7.250	5.85	13.333	2.41	19.42	0.34
1.250	0.34	7.333	5.85	13.417	2.41	19.50	0.34
1.333	0.34	7.417	5.85	13.500	2.41	19.58	0.34
1.417	0.34	7.500	5.85	13.583	2.41	19.67	0.34
1.500	0.34	7.583	5.85	13.667	2.41	19.75	0.34
1.583	0.34	7.667	5.85	13.750	2.41	19.83	0.34
1.667	0.34	7.750	5.85	13.833	2.41	19.92	0.34
1.750	0.34	7.833	5.85	13.917	2.41	20.00	0.34
1.833	0.34	7.917	5.85	14.000	2.41	20.08	0.34
1.917	0.34	8.000	5.85	14.083	2.41	20.17	0.34
2.000	0.34	8.083	5.85	14.167	2.41	20.25	0.34
2.083	0.34	8.167	5.85	14.250	2.41	20.33	0.34
2.167	0.34	8.250	5.85	14.333	1.38	20.42	0.34
2.250	0.34	8.333	15.82	14.417	1.38	20.50	0.34
2.333	0.34	8.417	15.82	14.500	1.38	20.58	0.34
2.417	0.34	8.500	15.82	14.583	1.38	20.67	0.34
2.500	0.34	8.583	15.82	14.667	1.38	20.75	0.34
2.583	0.34	8.667	15.82	14.750	1.38	20.83	0.34
2.667	0.34	8.750	15.82	14.833	1.38	20.92	0.34
2.750	0.34	8.833	15.82	14.917	1.38	21.00	0.34
2.833	0.34	8.917	15.82	15.000	1.38	21.08	0.34
2.917	0.34	9.000	15.82	15.083	1.38	21.17	0.34
3.000	0.34	9.083	15.82	15.167	1.38	21.25	0.34
3.083	0.34	9.167	15.82	15.250	1.38	21.33	0.34
3.167	0.34	9.250	15.82	15.333	1.38	21.42	0.34
3.250	0.34	9.333	15.82	15.417	1.38	21.50	0.34
3.333	0.34	9.417	15.82	15.500	1.38	21.58	0.34
3.417	0.34	9.500	15.82	15.583	1.38	21.67	0.34
3.500	0.34	9.583	15.82	15.667	1.38	21.75	0.34
3.583	0.34	9.667	15.82	15.750	1.38	21.83	0.34
3.667	0.34	9.750	15.82	15.833	1.38	21.92	0.34
3.750	0.34	9.833	15.82	15.917	1.38	22.00	0.34

3.833	0.34	9.917	15.82	16.000	1.38	22.08	0.34
3.917	0.34	10.000	15.82	16.083	1.38	22.17	0.34
4.000	0.34	10.083	15.82	16.167	1.38	22.25	0.34
4.083	0.34	10.167	15.82	16.250	1.38	22.33	0.34
4.167	0.34	10.250	15.82	16.333	0.69	22.42	0.34
4.250	0.34	10.333	4.47	16.417	0.69	22.50	0.34
4.333	2.06	10.417	4.47	16.500	0.69	22.58	0.34
4.417	2.06	10.500	4.47	16.583	0.69	22.67	0.34
4.500	2.06	10.583	4.47	16.667	0.69	22.75	0.34
4.583	2.06	10.667	4.47	16.750	0.69	22.83	0.34
4.667	2.06	10.750	4.47	16.833	0.69	22.92	0.34
4.750	2.06	10.833	4.47	16.917	0.69	23.00	0.34
4.833	2.06	10.917	4.47	17.000	0.69	23.08	0.34
4.917	2.06	11.000	4.47	17.083	0.69	23.17	0.34
5.000	2.06	11.083	4.47	17.167	0.69	23.25	0.34
5.083	2.06	11.167	4.47	17.250	0.69	23.33	0.34
5.167	2.06	11.250	4.47	17.333	0.69	23.42	0.34
5.250	2.06	11.333	4.47	17.417	0.69	23.50	0.34
5.333	2.06	11.417	4.47	17.500	0.69	23.58	0.34
5.417	2.06	11.500	4.47	17.583	0.69	23.67	0.34
5.500	2.06	11.583	4.47	17.667	0.69	23.75	0.34
5.583	2.06	11.667	4.47	17.750	0.69	23.83	0.34
5.667	2.06	11.750	4.47	17.833	0.69	23.92	0.34
5.750	2.06	11.833	4.47	17.917	0.69	24.00	0.34
5.833	2.06	11.917	4.47	18.000	0.69	24.08	0.34
5.917	2.06	12.000	4.47	18.083	0.69	24.17	0.34
6.000	2.06	12.083	4.47	18.167	0.69	24.25	0.34
6.083	2.06	12.167	4.47	18.250	0.69		

Max.Eff.Inten.(mm/hr)=	15.82	10.73	
over (min)	10.00	15.00	
Storage Coeff. (min)=	7.79 (ii)	10.14 (ii)	
Unit Hyd. Tpeak (min)=	10.00	15.00	
Unit Hyd. peak (cms)=	0.13	0.10	
			TOTALS
PEAK FLOW (cms)=	0.23	0.00	0.231 (iii)
TIME TO PEAK (hrs)=	10.25	10.25	10.25
RUNOFF VOLUME (mm)=	67.76	34.02	67.42
TOTAL RAINFALL (mm)=	68.76	68.76	68.76
RUNOFF COEFFICIENT =	0.99	0.49	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0268)				
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1959	0.1883
	0.0980	0.0369	0.2939	0.4335

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)	5.270	0.231	10.25	67.42
OUTFLOW: ID= 1 (0268)	5.270	0.142	10.42	67.40

PEAK FLOW REDUCTION [Qout/Qin](%)= 61.60
TIME SHIFT OF PEAK FLOW (min)= 10.00

MAXIMUM STORAGE USED (ha.m.)= 0.1053

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\cdb8232d-79e6-461f-abf3-b53ae11525c8\9b653463
Ptotal= 68.76 mm	Comments:

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	5.85	12.75	2.41	19.00	0.34
0.50	0.34	6.75	5.85	13.00	2.41	19.25	0.34
0.75	0.34	7.00	5.85	13.25	2.41	19.50	0.34
1.00	0.34	7.25	5.85	13.50	2.41	19.75	0.34
1.25	0.34	7.50	5.85	13.75	2.41	20.00	0.34
1.50	0.34	7.75	5.85	14.00	2.41	20.25	0.34
1.75	0.34	8.00	5.85	14.25	2.41	20.50	0.34
2.00	0.34	8.25	5.85	14.50	1.38	20.75	0.34
2.25	0.34	8.50	15.82	14.75	1.38	21.00	0.34
2.50	0.34	8.75	15.82	15.00	1.38	21.25	0.34
2.75	0.34	9.00	15.82	15.25	1.38	21.50	0.34
3.00	0.34	9.25	15.82	15.50	1.38	21.75	0.34
3.25	0.34	9.50	15.82	15.75	1.38	22.00	0.34
3.50	0.34	9.75	15.82	16.00	1.38	22.25	0.34
3.75	0.34	10.00	15.82	16.25	1.38	22.50	0.34
4.00	0.34	10.25	15.82	16.50	0.69	22.75	0.34
4.25	0.34	10.50	4.47	16.75	0.69	23.00	0.34
4.50	2.06	10.75	4.47	17.00	0.69	23.25	0.34
4.75	2.06	11.00	4.47	17.25	0.69	23.50	0.34
5.00	2.06	11.25	4.47	17.50	0.69	23.75	0.34
5.25	2.06	11.50	4.47	17.75	0.69	24.00	0.34
5.50	2.06	11.75	4.47	18.00	0.69	24.25	0.34
5.75	2.06	12.00	4.47	18.25	0.69		
6.00	2.06	12.25	4.47	18.50	0.34		
6.25	2.06	12.50	2.41	18.75	0.34		

CALIB	
STANDHYD (0202)	Area (ha)= 6.57
ID= 1 DT= 5.0 min	Total Imp(%)= 81.00 Dir. Conn.(%)= 81.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.32	1.25
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	209.28	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	2.06	12.250	4.47	18.33	0.34
0.167	0.00	6.250	2.06	12.333	2.41	18.42	0.34
0.250	0.00	6.333	5.85	12.417	2.41	18.50	0.34
0.333	0.34	6.417	5.85	12.500	2.41	18.58	0.34
0.417	0.34	6.500	5.85	12.583	2.41	18.67	0.34
0.500	0.34	6.583	5.85	12.667	2.41	18.75	0.34

0.583	0.34	6.667	5.85	12.750	2.41	18.83	0.34
0.667	0.34	6.750	5.85	12.833	2.41	18.92	0.34
0.750	0.34	6.833	5.85	12.917	2.41	19.00	0.34
0.833	0.34	6.917	5.85	13.000	2.41	19.08	0.34
0.917	0.34	7.000	5.85	13.083	2.41	19.17	0.34
1.000	0.34	7.083	5.85	13.167	2.41	19.25	0.34
1.083	0.34	7.167	5.85	13.250	2.41	19.33	0.34
1.167	0.34	7.250	5.85	13.333	2.41	19.42	0.34
1.250	0.34	7.333	5.85	13.417	2.41	19.50	0.34
1.333	0.34	7.417	5.85	13.500	2.41	19.58	0.34
1.417	0.34	7.500	5.85	13.583	2.41	19.67	0.34
1.500	0.34	7.583	5.85	13.667	2.41	19.75	0.34
1.583	0.34	7.667	5.85	13.750	2.41	19.83	0.34
1.667	0.34	7.750	5.85	13.833	2.41	19.92	0.34
1.750	0.34	7.833	5.85	13.917	2.41	20.00	0.34
1.833	0.34	7.917	5.85	14.000	2.41	20.08	0.34
1.917	0.34	8.000	5.85	14.083	2.41	20.17	0.34
2.000	0.34	8.083	5.85	14.167	2.41	20.25	0.34
2.083	0.34	8.167	5.85	14.250	2.41	20.33	0.34
2.167	0.34	8.250	5.85	14.333	1.38	20.42	0.34
2.250	0.34	8.333	15.82	14.417	1.38	20.50	0.34
2.333	0.34	8.417	15.82	14.500	1.38	20.58	0.34
2.417	0.34	8.500	15.82	14.583	1.38	20.67	0.34
2.500	0.34	8.583	15.82	14.667	1.38	20.75	0.34
2.583	0.34	8.667	15.82	14.750	1.38	20.83	0.34
2.667	0.34	8.750	15.82	14.833	1.38	20.92	0.34
2.750	0.34	8.833	15.82	14.917	1.38	21.00	0.34
2.833	0.34	8.917	15.82	15.000	1.38	21.08	0.34
2.917	0.34	9.000	15.82	15.083	1.38	21.17	0.34
3.000	0.34	9.083	15.82	15.167	1.38	21.25	0.34
3.083	0.34	9.167	15.82	15.250	1.38	21.33	0.34
3.167	0.34	9.250	15.82	15.333	1.38	21.42	0.34
3.250	0.34	9.333	15.82	15.417	1.38	21.50	0.34
3.333	0.34	9.417	15.82	15.500	1.38	21.58	0.34
3.417	0.34	9.500	15.82	15.583	1.38	21.67	0.34
3.500	0.34	9.583	15.82	15.667	1.38	21.75	0.34
3.583	0.34	9.667	15.82	15.750	1.38	21.83	0.34
3.667	0.34	9.750	15.82	15.833	1.38	21.92	0.34
3.750	0.34	9.833	15.82	15.917	1.38	22.00	0.34
3.833	0.34	9.917	15.82	16.000	1.38	22.08	0.34
3.917	0.34	10.000	15.82	16.083	1.38	22.17	0.34
4.000	0.34	10.083	15.82	16.167	1.38	22.25	0.34
4.083	0.34	10.167	15.82	16.250	1.38	22.33	0.34
4.167	0.34	10.250	15.82	16.333	0.69	22.42	0.34
4.250	0.34	10.333	4.47	16.417	0.69	22.50	0.34
4.333	2.06	10.417	4.47	16.500	0.69	22.58	0.34
4.417	2.06	10.500	4.47	16.583	0.69	22.67	0.34
4.500	2.06	10.583	4.47	16.667	0.69	22.75	0.34
4.583	2.06	10.667	4.47	16.750	0.69	22.83	0.34
4.667	2.06	10.750	4.47	16.833	0.69	22.92	0.34
4.750	2.06	10.833	4.47	16.917	0.69	23.00	0.34
4.833	2.06	10.917	4.47	17.000	0.69	23.08	0.34
4.917	2.06	11.000	4.47	17.083	0.69	23.17	0.34
5.000	2.06	11.083	4.47	17.167	0.69	23.25	0.34
5.083	2.06	11.167	4.47	17.250	0.69	23.33	0.34
5.167	2.06	11.250	4.47	17.333	0.69	23.42	0.34
5.250	2.06	11.333	4.47	17.417	0.69	23.50	0.34
5.333	2.06	11.417	4.47	17.500	0.69	23.58	0.34
5.417	2.06	11.500	4.47	17.583	0.69	23.67	0.34
5.500	2.06	11.583	4.47	17.667	0.69	23.75	0.34
5.583	2.06	11.667	4.47	17.750	0.69	23.83	0.34
5.667	2.06	11.750	4.47	17.833	0.69	23.92	0.34
5.750	2.06	11.833	4.47	17.917	0.69	24.00	0.34
5.833	2.06	11.917	4.47	18.000	0.69	24.08	0.34
5.917	2.06	12.000	4.47	18.083	0.69	24.17	0.34
6.000	2.06	12.083	4.47	18.167	0.69	24.25	0.34
6.083	2.06	12.167	4.47	18.250	0.69		

Max.Eff.Inten.(mm/hr)=	15.82	10.58	
over (min)	10.00	30.00	
Storage Coeff. (min)=	8.32 (ii)	25.65 (ii)	
Unit Hyd. Tpeak (min)=	10.00	30.00	
Unit Hyd. peak (cms)=	0.13	0.04	
			TOTALS
PEAK FLOW (cms)=	0.23	0.03	0.267 (iii)
TIME TO PEAK (hrs)=	10.25	10.33	10.25
RUNOFF VOLUME (mm)=	67.76	34.01	61.35
TOTAL RAINFALL (mm)=	68.76	68.76	68.76
RUNOFF COEFFICIENT =	0.99	0.49	0.89

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0262)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0202):	6.57	0.267	10.25	61.35
+ ID2= 2 (0268):	5.27	0.142	10.42	67.40
ID = 3 (0262):	11.84	0.407	10.25	64.04

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0266)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0259):	4.67	0.166	10.25	62.46
+ ID2= 2 (0262):	11.84	0.407	10.25	64.04
ID = 3 (0266):	16.51	0.573	10.25	63.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0263)
IN= 2---> OUT= 1
DT= 5.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.2130	0.6563
0.0190	0.1773	0.2520	0.6883
0.0220	0.2128	0.2890	0.7150
0.0260	0.2888	0.2980	0.7450
0.0300	0.3648	0.3060	0.7700
0.0650	0.4586	0.3150	0.8127
0.1100	0.5155	0.3320	0.9290
0.1680	0.5503	0.3390	0.9767
0.1930	0.5804	0.3520	1.0680

```
                        0.2000     0.6048   |   0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0266)     16.510      0.573     10.25      63.60
   OUTFLOW: ID= 1 (  0263)     16.510      0.199     12.75      63.45

                 PEAK   FLOW   REDUCTION [Qout/Qin](%)= 34.69
                 TIME SHIFT OF PEAK FLOW         (min)=150.00
                 MAXIMUM  STORAGE   USED       (ha.m.)=  0.6006

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--------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0206):     0.12   0.004    10.25    33.98
     + ID2= 2 (  0263):    16.51   0.199    12.75    63.45
       ================================================
       ID = 3 (  0261):    16.64   0.200    12.58    63.23

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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      V    V   I    SSSSS  U   U    A    L              (v 5.0.2025)
      V    V   I    SS     U   U   A A   L
       V  V    I     SS    U   U  AAAAA  L
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\cae6da14-d8a1-452b-8bcb-1bd55b199fae\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\cae6da14-d8a1-452b-8bcb-1bd55b199fae\s


DATE: 07/06/2020                          TIME: 04:38:42

USER:



COMMENTS: _____________________________________________________________


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  ********************************************
  ** SIMULATION : 100 Year 24 Hour AES       **
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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              cdb8232d-79e6-461f-abf3-b53ae11525c8\9c617c21
| Ptotal= 95.92 mm |    Comments:
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```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	8.15	12.75	3.36	19.00	0.48
0.50	0.48	6.75	8.15	13.00	3.36	19.25	0.48
0.75	0.48	7.00	8.15	13.25	3.36	19.50	0.48
1.00	0.48	7.25	8.15	13.50	3.36	19.75	0.48
1.25	0.48	7.50	8.15	13.75	3.36	20.00	0.48
1.50	0.48	7.75	8.15	14.00	3.36	20.25	0.48
1.75	0.48	8.00	8.15	14.25	3.36	20.50	0.48
2.00	0.48	8.25	8.15	14.50	1.92	20.75	0.48
2.25	0.48	8.50	22.06	14.75	1.92	21.00	0.48
2.50	0.48	8.75	22.06	15.00	1.92	21.25	0.48
2.75	0.48	9.00	22.06	15.25	1.92	21.50	0.48
3.00	0.48	9.25	22.06	15.50	1.92	21.75	0.48
3.25	0.48	9.50	22.06	15.75	1.92	22.00	0.48
3.50	0.48	9.75	22.06	16.00	1.92	22.25	0.48
3.75	0.48	10.00	22.06	16.25	1.92	22.50	0.48
4.00	0.48	10.25	22.06	16.50	0.96	22.75	0.48
4.25	0.48	10.50	6.23	16.75	0.96	23.00	0.48
4.50	2.88	10.75	6.23	17.00	0.96	23.25	0.48
4.75	2.88	11.00	6.23	17.25	0.96	23.50	0.48
5.00	2.88	11.25	6.23	17.50	0.96	23.75	0.48
5.25	2.88	11.50	6.23	17.75	0.96	24.00	0.48
5.50	2.88	11.75	6.23	18.00	0.96	24.25	0.48
5.75	2.88	12.00	6.23	18.25	0.96		
6.00	2.88	12.25	6.23	18.50	0.48		
6.25	2.88	12.50	3.36	18.75	0.48		

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| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
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---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	2.88	12.250	6.23	18.33	0.48
0.167	0.00	6.250	2.88	12.333	3.36	18.42	0.48
0.250	0.00	6.333	8.15	12.417	3.36	18.50	0.48
0.333	0.48	6.417	8.15	12.500	3.36	18.58	0.48
0.417	0.48	6.500	8.15	12.583	3.36	18.67	0.48
0.500	0.48	6.583	8.15	12.667	3.36	18.75	0.48
0.583	0.48	6.667	8.15	12.750	3.36	18.83	0.48
0.667	0.48	6.750	8.15	12.833	3.36	18.92	0.48
0.750	0.48	6.833	8.15	12.917	3.36	19.00	0.48
0.833	0.48	6.917	8.15	13.000	3.36	19.08	0.48
0.917	0.48	7.000	8.15	13.083	3.36	19.17	0.48

1.000	0.48	7.083	8.15	13.167	3.36	19.25	0.48
1.083	0.48	7.167	8.15	13.250	3.36	19.33	0.48
1.167	0.48	7.250	8.15	13.333	3.36	19.42	0.48
1.250	0.48	7.333	8.15	13.417	3.36	19.50	0.48
1.333	0.48	7.417	8.15	13.500	3.36	19.58	0.48
1.417	0.48	7.500	8.15	13.583	3.36	19.67	0.48
1.500	0.48	7.583	8.15	13.667	3.36	19.75	0.48
1.583	0.48	7.667	8.15	13.750	3.36	19.83	0.48
1.667	0.48	7.750	8.15	13.833	3.36	19.92	0.48
1.750	0.48	7.833	8.15	13.917	3.36	20.00	0.48
1.833	0.48	7.917	8.15	14.000	3.36	20.08	0.48
1.917	0.48	8.000	8.15	14.083	3.36	20.17	0.48
2.000	0.48	8.083	8.15	14.167	3.36	20.25	0.48
2.083	0.48	8.167	8.15	14.250	3.36	20.33	0.48
2.167	0.48	8.250	8.15	14.333	1.92	20.42	0.48
2.250	0.48	8.333	22.06	14.417	1.92	20.50	0.48
2.333	0.48	8.417	22.06	14.500	1.92	20.58	0.48
2.417	0.48	8.500	22.06	14.583	1.92	20.67	0.48
2.500	0.48	8.583	22.06	14.667	1.92	20.75	0.48
2.583	0.48	8.667	22.06	14.750	1.92	20.83	0.48
2.667	0.48	8.750	22.06	14.833	1.92	20.92	0.48
2.750	0.48	8.833	22.06	14.917	1.92	21.00	0.48
2.833	0.48	8.917	22.06	15.000	1.92	21.08	0.48
2.917	0.48	9.000	22.06	15.083	1.92	21.17	0.48
3.000	0.48	9.083	22.06	15.167	1.92	21.25	0.48
3.083	0.48	9.167	22.06	15.250	1.92	21.33	0.48
3.167	0.48	9.250	22.06	15.333	1.92	21.42	0.48
3.250	0.48	9.333	22.06	15.417	1.92	21.50	0.48
3.333	0.48	9.417	22.06	15.500	1.92	21.58	0.48
3.417	0.48	9.500	22.06	15.583	1.92	21.67	0.48
3.500	0.48	9.583	22.06	15.667	1.92	21.75	0.48
3.583	0.48	9.667	22.06	15.750	1.92	21.83	0.48
3.667	0.48	9.750	22.06	15.833	1.92	21.92	0.48
3.750	0.48	9.833	22.06	15.917	1.92	22.00	0.48
3.833	0.48	9.917	22.06	16.000	1.92	22.08	0.48
3.917	0.48	10.000	22.06	16.083	1.92	22.17	0.48
4.000	0.48	10.083	22.06	16.167	1.92	22.25	0.48
4.083	0.48	10.167	22.06	16.250	1.92	22.33	0.48
4.167	0.48	10.250	22.06	16.333	0.96	22.42	0.48
4.250	0.48	10.333	6.23	16.417	0.96	22.50	0.48
4.333	2.88	10.417	6.23	16.500	0.96	22.58	0.48
4.417	2.88	10.500	6.23	16.583	0.96	22.67	0.48
4.500	2.88	10.583	6.23	16.667	0.96	22.75	0.48
4.583	2.88	10.667	6.23	16.750	0.96	22.83	0.48
4.667	2.88	10.750	6.23	16.833	0.96	22.92	0.48
4.750	2.88	10.833	6.23	16.917	0.96	23.00	0.48
4.833	2.88	10.917	6.23	17.000	0.96	23.08	0.48
4.917	2.88	11.000	6.23	17.083	0.96	23.17	0.48
5.000	2.88	11.083	6.23	17.167	0.96	23.25	0.48
5.083	2.88	11.167	6.23	17.250	0.96	23.33	0.48
5.167	2.88	11.250	6.23	17.333	0.96	23.42	0.48
5.250	2.88	11.333	6.23	17.417	0.96	23.50	0.48
5.333	2.88	11.417	6.23	17.500	0.96	23.58	0.48
5.417	2.88	11.500	6.23	17.583	0.96	23.67	0.48
5.500	2.88	11.583	6.23	17.667	0.96	23.75	0.48
5.583	2.88	11.667	6.23	17.750	0.96	23.83	0.48
5.667	2.88	11.750	6.23	17.833	0.96	23.92	0.48
5.750	2.88	11.833	6.23	17.917	0.96	24.00	0.48
5.833	2.88	11.917	6.23	18.000	0.96	24.08	0.48
5.917	2.88	12.000	6.23	18.083	0.96	24.17	0.48
6.000	2.88	12.083	6.23	18.167	0.96	24.25	0.48
6.083	2.88	12.167	6.23	18.250	0.96		

Unit Hyd Qpeak (cms)= 0.019

PEAK FLOW (cms)= 0.006 (i)
TIME TO PEAK (hrs)= 10.250
RUNOFF VOLUME (mm)= 56.308
TOTAL RAINFALL (mm)= 95.920
RUNOFF COEFFICIENT = 0.587

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

READ STORM | Filename: C:\Users\mventresca\AppData\Local\Temp\cdb8232d-79e6-461f-abf3-b53ae11525c8\9c617c21
Ptotal= 95.92 mm | Comments:

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	8.15	12.75	3.36	19.00	0.48
0.50	0.48	6.75	8.15	13.00	3.36	19.25	0.48
0.75	0.48	7.00	8.15	13.25	3.36	19.50	0.48
1.00	0.48	7.25	8.15	13.50	3.36	19.75	0.48
1.25	0.48	7.50	8.15	13.75	3.36	20.00	0.48
1.50	0.48	7.75	8.15	14.00	3.36	20.25	0.48
1.75	0.48	8.00	8.15	14.25	3.36	20.50	0.48
2.00	0.48	8.25	8.15	14.50	1.92	20.75	0.48
2.25	0.48	8.50	22.06	14.75	1.92	21.00	0.48
2.50	0.48	8.75	22.06	15.00	1.92	21.25	0.48
2.75	0.48	9.00	22.06	15.25	1.92	21.50	0.48
3.00	0.48	9.25	22.06	15.50	1.92	21.75	0.48
3.25	0.48	9.50	22.06	15.75	1.92	22.00	0.48
3.50	0.48	9.75	22.06	16.00	1.92	22.25	0.48
3.75	0.48	10.00	22.06	16.25	1.92	22.50	0.48
4.00	0.48	10.25	22.06	16.50	0.96	22.75	0.48
4.25	0.48	10.50	6.23	16.75	0.96	23.00	0.48
4.50	2.88	10.75	6.23	17.00	0.96	23.25	0.48
4.75	2.88	11.00	6.23	17.25	0.96	23.50	0.48
5.00	2.88	11.25	6.23	17.50	0.96	23.75	0.48
5.25	2.88	11.50	6.23	17.75	0.96	24.00	0.48
5.50	2.88	11.75	6.23	18.00	0.96	24.25	0.48
5.75	2.88	12.00	6.23	18.25	0.96		
6.00	2.88	12.25	6.23	18.50	0.48		
6.25	2.88	12.50	3.36	18.75	0.48		

CALIB | STANDHYD (0205) | ID= 1 DT= 5.0 min | Area (ha)= 1.12 | Total Imp(%)= 99.00 | Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.11	0.01
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	86.60	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN

hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.00	6.167	2.88	12.250	6.23	18.33	0.48
0.167	0.00	6.250	2.88	12.333	3.36	18.42	0.48
0.250	0.00	6.333	8.15	12.417	3.36	18.50	0.48
0.333	0.48	6.417	8.15	12.500	3.36	18.58	0.48
0.417	0.48	6.500	8.15	12.583	3.36	18.67	0.48
0.500	0.48	6.583	8.15	12.667	3.36	18.75	0.48
0.583	0.48	6.667	8.15	12.750	3.36	18.83	0.48
0.667	0.48	6.750	8.15	12.833	3.36	18.92	0.48
0.750	0.48	6.833	8.15	12.917	3.36	19.00	0.48
0.833	0.48	6.917	8.15	13.000	3.36	19.08	0.48
0.917	0.48	7.000	8.15	13.083	3.36	19.17	0.48
1.000	0.48	7.083	8.15	13.167	3.36	19.25	0.48
1.083	0.48	7.167	8.15	13.250	3.36	19.33	0.48
1.167	0.48	7.250	8.15	13.333	3.36	19.42	0.48
1.250	0.48	7.333	8.15	13.417	3.36	19.50	0.48
1.333	0.48	7.417	8.15	13.500	3.36	19.58	0.48
1.417	0.48	7.500	8.15	13.583	3.36	19.67	0.48
1.500	0.48	7.583	8.15	13.667	3.36	19.75	0.48
1.583	0.48	7.667	8.15	13.750	3.36	19.83	0.48
1.667	0.48	7.750	8.15	13.833	3.36	19.92	0.48
1.750	0.48	7.833	8.15	13.917	3.36	20.00	0.48
1.833	0.48	7.917	8.15	14.000	3.36	20.08	0.48
1.917	0.48	8.000	8.15	14.083	3.36	20.17	0.48
2.000	0.48	8.083	8.15	14.167	3.36	20.25	0.48
2.083	0.48	8.167	8.15	14.250	3.36	20.33	0.48
2.167	0.48	8.250	8.15	14.333	1.92	20.42	0.48
2.250	0.48	8.333	22.06	14.417	1.92	20.50	0.48
2.333	0.48	8.417	22.06	14.500	1.92	20.58	0.48
2.417	0.48	8.500	22.06	14.583	1.92	20.67	0.48
2.500	0.48	8.583	22.06	14.667	1.92	20.75	0.48
2.583	0.48	8.667	22.06	14.750	1.92	20.83	0.48
2.667	0.48	8.750	22.06	14.833	1.92	20.92	0.48
2.750	0.48	8.833	22.06	14.917	1.92	21.00	0.48
2.833	0.48	8.917	22.06	15.000	1.92	21.08	0.48
2.917	0.48	9.000	22.06	15.083	1.92	21.17	0.48
3.000	0.48	9.083	22.06	15.167	1.92	21.25	0.48
3.083	0.48	9.167	22.06	15.250	1.92	21.33	0.48
3.167	0.48	9.250	22.06	15.333	1.92	21.42	0.48
3.250	0.48	9.333	22.06	15.417	1.92	21.50	0.48
3.333	0.48	9.417	22.06	15.500	1.92	21.58	0.48
3.417	0.48	9.500	22.06	15.583	1.92	21.67	0.48
3.500	0.48	9.583	22.06	15.667	1.92	21.75	0.48
3.583	0.48	9.667	22.06	15.750	1.92	21.83	0.48
3.667	0.48	9.750	22.06	15.833	1.92	21.92	0.48
3.750	0.48	9.833	22.06	15.917	1.92	22.00	0.48
3.833	0.48	9.917	22.06	16.000	1.92	22.08	0.48
3.917	0.48	10.000	22.06	16.083	1.92	22.17	0.48
4.000	0.48	10.083	22.06	16.167	1.92	22.25	0.48
4.083	0.48	10.167	22.06	16.250	1.92	22.33	0.48
4.167	0.48	10.250	22.06	16.333	0.96	22.42	0.48
4.250	0.48	10.333	6.23	16.417	0.96	22.50	0.48
4.333	2.88	10.417	6.23	16.500	0.96	22.58	0.48
4.417	2.88	10.500	6.23	16.583	0.96	22.67	0.48
4.500	2.88	10.583	6.23	16.667	0.96	22.75	0.48
4.583	2.88	10.667	6.23	16.750	0.96	22.83	0.48
4.667	2.88	10.750	6.23	16.833	0.96	22.92	0.48
4.750	2.88	10.833	6.23	16.917	0.96	23.00	0.48
4.833	2.88	10.917	6.23	17.000	0.96	23.08	0.48
4.917	2.88	11.000	6.23	17.083	0.96	23.17	0.48
5.000	2.88	11.083	6.23	17.167	0.96	23.25	0.48
5.083	2.88	11.167	6.23	17.250	0.96	23.33	0.48
5.167	2.88	11.250	6.23	17.333	0.96	23.42	0.48
5.250	2.88	11.333	6.23	17.417	0.96	23.50	0.48
5.333	2.88	11.417	6.23	17.500	0.96	23.58	0.48
5.417	2.88	11.500	6.23	17.583	0.96	23.67	0.48
5.500	2.88	11.583	6.23	17.667	0.96	23.75	0.48
5.583	2.88	11.667	6.23	17.750	0.96	23.83	0.48
5.667	2.88	11.750	6.23	17.833	0.96	23.92	0.48
5.750	2.88	11.833	6.23	17.917	0.96	24.00	0.48
5.833	2.88	11.917	6.23	18.000	0.96	24.08	0.48
5.917	2.88	12.000	6.23	18.083	0.96	24.17	0.48
6.000	2.88	12.083	6.23	18.167	0.96	24.25	0.48
6.083	2.88	12.167	6.23	18.250	0.96		

			TOTALS
Max.Eff.Inten.(mm/hr)=	22.06	17.05	
over (min)	5.00	10.00	
Storage Coeff. (min)=	4.29 (ii)	6.35 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.23	0.15	
PEAK FLOW (cms)=	0.07	0.00	0.069 (iii)
TIME TO PEAK (hrs)=	9.50	10.25	10.25
RUNOFF VOLUME (mm)=	94.92	56.36	94.53
TOTAL RAINFALL (mm)=	95.92	95.92	95.92
RUNOFF COEFFICIENT =	0.99	0.59	0.99

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0256)				
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0470	0.0750

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0205)	1.125	0.069	10.25	94.53
OUTFLOW: ID= 1 (0256)	1.125	0.032	10.33	94.18

PEAK FLOW REDUCTION [Qout/Qin](%)= 46.46
TIME SHIFT OF PEAK FLOW (min)= 5.00
MAXIMUM STORAGE USED (ha.m.)= 0.0510

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\cdb8232d-79e6-461f-abf3-b53ae11525c8\9c617c21
Ptotal= 95.92 mm	Comments:

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	8.15	12.75	3.36	19.00	0.48
0.50	0.48	6.75	8.15	13.00	3.36	19.25	0.48
0.75	0.48	7.00	8.15	13.25	3.36	19.50	0.48
1.00	0.48	7.25	8.15	13.50	3.36	19.75	0.48
1.25	0.48	7.50	8.15	13.75	3.36	20.00	0.48
1.50	0.48	7.75	8.15	14.00	3.36	20.25	0.48

1.75	0.48	8.00	8.15	14.25	3.36	20.50	0.48
2.00	0.48	8.25	8.15	14.50	1.92	20.75	0.48
2.25	0.48	8.50	22.06	14.75	1.92	21.00	0.48
2.50	0.48	8.75	22.06	15.00	1.92	21.25	0.48
2.75	0.48	9.00	22.06	15.25	1.92	21.50	0.48
3.00	0.48	9.25	22.06	15.50	1.92	21.75	0.48
3.25	0.48	9.50	22.06	15.75	1.92	22.00	0.48
3.50	0.48	9.75	22.06	16.00	1.92	22.25	0.48
3.75	0.48	10.00	22.06	16.25	1.92	22.50	0.48
4.00	0.48	10.25	22.06	16.50	0.96	22.75	0.48
4.25	0.48	10.50	6.23	16.75	0.96	23.00	0.48
4.50	2.88	10.75	6.23	17.00	0.96	23.25	0.48
4.75	2.88	11.00	6.23	17.25	0.96	23.50	0.48
5.00	2.88	11.25	6.23	17.50	0.96	23.75	0.48
5.25	2.88	11.50	6.23	17.75	0.96	24.00	0.48
5.50	2.88	11.75	6.23	18.00	0.96	24.25	0.48
5.75	2.88	12.00	6.23	18.25	0.96		
6.00	2.88	12.25	6.23	18.50	0.48		
6.25	2.88	12.50	3.36	18.75	0.48		

CALIB		
STANDHYD (0203)	Area (ha)=	2.10
ID= 1 DT= 5.0 min	Total Imp(%)=	80.00 Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.68	0.42
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	118.18	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	2.88	12.250	6.23	18.33	0.48
0.167	0.00	6.250	2.88	12.333	3.36	18.42	0.48
0.250	0.00	6.333	8.15	12.417	3.36	18.50	0.48
0.333	0.48	6.417	8.15	12.500	3.36	18.58	0.48
0.417	0.48	6.500	8.15	12.583	3.36	18.67	0.48
0.500	0.48	6.583	8.15	12.667	3.36	18.75	0.48
0.583	0.48	6.667	8.15	12.750	3.36	18.83	0.48
0.667	0.48	6.750	8.15	12.833	3.36	18.92	0.48
0.750	0.48	6.833	8.15	12.917	3.36	19.00	0.48
0.833	0.48	6.917	8.15	13.000	3.36	19.08	0.48
0.917	0.48	7.000	8.15	13.083	3.36	19.17	0.48
1.000	0.48	7.083	8.15	13.167	3.36	19.25	0.48
1.083	0.48	7.167	8.15	13.250	3.36	19.33	0.48
1.167	0.48	7.250	8.15	13.333	3.36	19.42	0.48
1.250	0.48	7.333	8.15	13.417	3.36	19.50	0.48
1.333	0.48	7.417	8.15	13.500	3.36	19.58	0.48
1.417	0.48	7.500	8.15	13.583	3.36	19.67	0.48
1.500	0.48	7.583	8.15	13.667	3.36	19.75	0.48
1.583	0.48	7.667	8.15	13.750	3.36	19.83	0.48
1.667	0.48	7.750	8.15	13.833	3.36	19.92	0.48
1.750	0.48	7.833	8.15	13.917	3.36	20.00	0.48
1.833	0.48	7.917	8.15	14.000	3.36	20.08	0.48
1.917	0.48	8.000	8.15	14.083	3.36	20.17	0.48
2.000	0.48	8.083	8.15	14.167	3.36	20.25	0.48
2.083	0.48	8.167	8.15	14.250	3.36	20.33	0.48
2.167	0.48	8.250	8.15	14.333	1.92	20.42	0.48
2.250	0.48	8.333	22.06	14.417	1.92	20.50	0.48
2.333	0.48	8.417	22.06	14.500	1.92	20.58	0.48
2.417	0.48	8.500	22.06	14.583	1.92	20.67	0.48
2.500	0.48	8.583	22.06	14.667	1.92	20.75	0.48
2.583	0.48	8.667	22.06	14.750	1.92	20.83	0.48
2.667	0.48	8.750	22.06	14.833	1.92	20.92	0.48
2.750	0.48	8.833	22.06	14.917	1.92	21.00	0.48
2.833	0.48	8.917	22.06	15.000	1.92	21.08	0.48
2.917	0.48	9.000	22.06	15.083	1.92	21.17	0.48
3.000	0.48	9.083	22.06	15.167	1.92	21.25	0.48
3.083	0.48	9.167	22.06	15.250	1.92	21.33	0.48
3.167	0.48	9.250	22.06	15.333	1.92	21.42	0.48
3.250	0.48	9.333	22.06	15.417	1.92	21.50	0.48
3.333	0.48	9.417	22.06	15.500	1.92	21.58	0.48
3.417	0.48	9.500	22.06	15.583	1.92	21.67	0.48
3.500	0.48	9.583	22.06	15.667	1.92	21.75	0.48
3.583	0.48	9.667	22.06	15.750	1.92	21.83	0.48
3.667	0.48	9.750	22.06	15.833	1.92	21.92	0.48
3.750	0.48	9.833	22.06	15.917	1.92	22.00	0.48
3.833	0.48	9.917	22.06	16.000	1.92	22.08	0.48
3.917	0.48	10.000	22.06	16.083	1.92	22.17	0.48
4.000	0.48	10.083	22.06	16.167	1.92	22.25	0.48
4.083	0.48	10.167	22.06	16.250	1.92	22.33	0.48
4.167	0.48	10.250	22.06	16.333	0.96	22.42	0.48
4.250	0.48	10.333	6.23	16.417	0.96	22.50	0.48
4.333	2.88	10.417	6.23	16.500	0.96	22.58	0.48
4.417	2.88	10.500	6.23	16.583	0.96	22.67	0.48
4.500	2.88	10.583	6.23	16.667	0.96	22.75	0.48
4.583	2.88	10.667	6.23	16.750	0.96	22.83	0.48
4.667	2.88	10.750	6.23	16.833	0.96	22.92	0.48
4.750	2.88	10.833	6.23	16.917	0.96	23.00	0.48
4.833	2.88	10.917	6.23	17.000	0.96	23.08	0.48
4.917	2.88	11.000	6.23	17.083	0.96	23.17	0.48
5.000	2.88	11.083	6.23	17.167	0.96	23.25	0.48
5.083	2.88	11.167	6.23	17.250	0.96	23.33	0.48
5.167	2.88	11.250	6.23	17.333	0.96	23.42	0.48
5.250	2.88	11.333	6.23	17.417	0.96	23.50	0.48
5.333	2.88	11.417	6.23	17.500	0.96	23.58	0.48
5.417	2.88	11.500	6.23	17.583	0.96	23.67	0.48
5.500	2.88	11.583	6.23	17.667	0.96	23.75	0.48
5.583	2.88	11.667	6.23	17.750	0.96	23.83	0.48
5.667	2.88	11.750	6.23	17.833	0.96	23.92	0.48
5.750	2.88	11.833	6.23	17.917	0.96	24.00	0.48
5.833	2.88	11.917	6.23	18.000	0.96	24.08	0.48
5.917	2.88	12.000	6.23	18.083	0.96	24.17	0.48
6.000	2.88	12.083	6.23	18.167	0.96	24.25	0.48
6.083	2.88	12.167	6.23	18.250	0.96		

Max.Eff.Inten.(mm/hr)=		22.06	16.97	
over (min)		5.00	20.00	
Storage Coeff. (min)=		5.17 (ii)	19.52 (ii)	
Unit Hyd. Tpeak (min)=		5.00	20.00	
Unit Hyd. peak (cms)=		0.21	0.06	
				TOTALS
PEAK FLOW	(cms)=	0.10	0.02	0.121 (iii)
TIME TO PEAK	(hrs)=	9.50	10.25	10.25
RUNOFF VOLUME	(mm)=	94.92	56.36	87.20
TOTAL RAINFALL	(mm)=	95.92	95.92	95.92
RUNOFF COEFFICIENT	=	0.99	0.59	0.91

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

```
           CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| ADD HYD  (  0260)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
-------------------           (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0203):     2.10   0.121    10.25    87.20
     + ID2= 2 (  0256):     1.12   0.032    10.33    94.18
       ================================================
       ID = 3 (  0260):     3.22   0.153    10.25    89.64

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              cdb8232d-79e6-461f-abf3-b53ae11525c8\9c617c21
| Ptotal= 95.92 mm |    Comments:
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	8.15	12.75	3.36	19.00	0.48
0.50	0.48	6.75	8.15	13.00	3.36	19.25	0.48
0.75	0.48	7.00	8.15	13.25	3.36	19.50	0.48
1.00	0.48	7.25	8.15	13.50	3.36	19.75	0.48
1.25	0.48	7.50	8.15	13.75	3.36	20.00	0.48
1.50	0.48	7.75	8.15	14.00	3.36	20.25	0.48
1.75	0.48	8.00	8.15	14.25	3.36	20.50	0.48
2.00	0.48	8.25	8.15	14.50	1.92	20.75	0.48
2.25	0.48	8.50	22.06	14.75	1.92	21.00	0.48
2.50	0.48	8.75	22.06	15.00	1.92	21.25	0.48
2.75	0.48	9.00	22.06	15.25	1.92	21.50	0.48
3.00	0.48	9.25	22.06	15.50	1.92	21.75	0.48
3.25	0.48	9.50	22.06	15.75	1.92	22.00	0.48
3.50	0.48	9.75	22.06	16.00	1.92	22.25	0.48
3.75	0.48	10.00	22.06	16.25	1.92	22.50	0.48
4.00	0.48	10.25	22.06	16.50	0.96	22.75	0.48
4.25	0.48	10.50	6.23	16.75	0.96	23.00	0.48
4.50	2.88	10.75	6.23	17.00	0.96	23.25	0.48
4.75	2.88	11.00	6.23	17.25	0.96	23.50	0.48
5.00	2.88	11.25	6.23	17.50	0.96	23.75	0.48
5.25	2.88	11.50	6.23	17.75	0.96	24.00	0.48
5.50	2.88	11.75	6.23	18.00	0.96	24.25	0.48
5.75	2.88	12.00	6.23	18.25	0.96		
6.00	2.88	12.25	6.23	18.50	0.48		
6.25	2.88	12.50	3.36	18.75	0.48		

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| CALIB            |
| STANDHYD (  0204)|   Area    (ha)=   1.45
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.16         0.29
     Dep. Storage     (mm)=       1.00         5.00
Average Slope     (%)=       1.00         2.00
Length            (m)=      98.32        40.00
Mannings n           =      0.013        0.250

    NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	2.88	12.250	6.23	18.33	0.48
0.167	0.00	6.250	2.88	12.333	3.36	18.42	0.48
0.250	0.00	6.333	8.15	12.417	3.36	18.50	0.48
0.333	0.48	6.417	8.15	12.500	3.36	18.58	0.48
0.417	0.48	6.500	8.15	12.583	3.36	18.67	0.48
0.500	0.48	6.583	8.15	12.667	3.36	18.75	0.48
0.583	0.48	6.667	8.15	12.750	3.36	18.83	0.48
0.667	0.48	6.750	8.15	12.833	3.36	18.92	0.48
0.750	0.48	6.833	8.15	12.917	3.36	19.00	0.48
0.833	0.48	6.917	8.15	13.000	3.36	19.08	0.48
0.917	0.48	7.000	8.15	13.083	3.36	19.17	0.48
1.000	0.48	7.083	8.15	13.167	3.36	19.25	0.48
1.083	0.48	7.167	8.15	13.250	3.36	19.33	0.48
1.167	0.48	7.250	8.15	13.333	3.36	19.42	0.48
1.250	0.48	7.333	8.15	13.417	3.36	19.50	0.48
1.333	0.48	7.417	8.15	13.500	3.36	19.58	0.48
1.417	0.48	7.500	8.15	13.583	3.36	19.67	0.48
1.500	0.48	7.583	8.15	13.667	3.36	19.75	0.48
1.583	0.48	7.667	8.15	13.750	3.36	19.83	0.48
1.667	0.48	7.750	8.15	13.833	3.36	19.92	0.48
1.750	0.48	7.833	8.15	13.917	3.36	20.00	0.48
1.833	0.48	7.917	8.15	14.000	3.36	20.08	0.48
1.917	0.48	8.000	8.15	14.083	3.36	20.17	0.48
2.000	0.48	8.083	8.15	14.167	3.36	20.25	0.48
2.083	0.48	8.167	8.15	14.250	3.36	20.33	0.48
2.167	0.48	8.250	8.15	14.333	1.92	20.42	0.48
2.250	0.48	8.333	22.06	14.417	1.92	20.50	0.48
2.333	0.48	8.417	22.06	14.500	1.92	20.58	0.48
2.417	0.48	8.500	22.06	14.583	1.92	20.67	0.48
2.500	0.48	8.583	22.06	14.667	1.92	20.75	0.48
2.583	0.48	8.667	22.06	14.750	1.92	20.83	0.48
2.667	0.48	8.750	22.06	14.833	1.92	20.92	0.48
2.750	0.48	8.833	22.06	14.917	1.92	21.00	0.48
2.833	0.48	8.917	22.06	15.000	1.92	21.08	0.48
2.917	0.48	9.000	22.06	15.083	1.92	21.17	0.48
3.000	0.48	9.083	22.06	15.167	1.92	21.25	0.48
3.083	0.48	9.167	22.06	15.250	1.92	21.33	0.48
3.167	0.48	9.250	22.06	15.333	1.92	21.42	0.48
3.250	0.48	9.333	22.06	15.417	1.92	21.50	0.48
3.333	0.48	9.417	22.06	15.500	1.92	21.58	0.48
3.417	0.48	9.500	22.06	15.583	1.92	21.67	0.48
3.500	0.48	9.583	22.06	15.667	1.92	21.75	0.48
3.583	0.48	9.667	22.06	15.750	1.92	21.83	0.48
3.667	0.48	9.750	22.06	15.833	1.92	21.92	0.48
3.750	0.48	9.833	22.06	15.917	1.92	22.00	0.48
3.833	0.48	9.917	22.06	16.000	1.92	22.08	0.48
3.917	0.48	10.000	22.06	16.083	1.92	22.17	0.48
4.000	0.48	10.083	22.06	16.167	1.92	22.25	0.48
4.083	0.48	10.167	22.06	16.250	1.92	22.33	0.48
4.167	0.48	10.250	22.06	16.333	0.96	22.42	0.48
4.250	0.48	10.333	6.23	16.417	0.96	22.50	0.48
4.333	2.88	10.417	6.23	16.500	0.96	22.58	0.48
4.417	2.88	10.500	6.23	16.583	0.96	22.67	0.48
4.500	2.88	10.583	6.23	16.667	0.96	22.75	0.48

4.583	2.88	10.667	6.23	16.750	0.96	22.83	0.48
4.667	2.88	10.750	6.23	16.833	0.96	22.92	0.48
4.750	2.88	10.833	6.23	16.917	0.96	23.00	0.48
4.833	2.88	10.917	6.23	17.000	0.96	23.08	0.48
4.917	2.88	11.000	6.23	17.083	0.96	23.17	0.48
5.000	2.88	11.083	6.23	17.167	0.96	23.25	0.48
5.083	2.88	11.167	6.23	17.250	0.96	23.33	0.48
5.167	2.88	11.250	6.23	17.333	0.96	23.42	0.48
5.250	2.88	11.333	6.23	17.417	0.96	23.50	0.48
5.333	2.88	11.417	6.23	17.500	0.96	23.58	0.48
5.417	2.88	11.500	6.23	17.583	0.96	23.67	0.48
5.500	2.88	11.583	6.23	17.667	0.96	23.75	0.48
5.583	2.88	11.667	6.23	17.750	0.96	23.83	0.48
5.667	2.88	11.750	6.23	17.833	0.96	23.92	0.48
5.750	2.88	11.833	6.23	17.917	0.96	24.00	0.48
5.833	2.88	11.917	6.23	18.000	0.96	24.08	0.48
5.917	2.88	12.000	6.23	18.083	0.96	24.17	0.48
6.000	2.88	12.083	6.23	18.167	0.96	24.25	0.48
6.083	2.88	12.167	6.23	18.250	0.96		

				TOTALS
Max.Eff.Inten.(mm/hr)=	22.06	16.97		
over (min)	5.00	20.00		
Storage Coeff. (min)=	4.63 (ii)	18.98 (ii)		
Unit Hyd. Tpeak (min)=	5.00	20.00		
Unit Hyd. peak (cms)=	0.22	0.06		
PEAK FLOW (cms)=	0.07	0.01		0.084 (iii)
TIME TO PEAK (hrs)=	9.50	10.25		10.25
RUNOFF VOLUME (mm)=	94.92	56.36		87.20
TOTAL RAINFALL (mm)=	95.92	95.92		95.92
RUNOFF COEFFICIENT =	0.99	0.59		0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0259)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0204):		1.45	0.084	10.25	87.20
+ ID2= 2 (0260):		3.22	0.153	10.25	89.64
ID = 3 (0259):		4.67	0.237	10.25	88.88

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\cdb8232d-79e6-461f-abf3-b53ae11525c8\9c617c21
Ptotal= 95.92 mm	Comments:

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	8.15	12.75	3.36	19.00	0.48
0.50	0.48	6.75	8.15	13.00	3.36	19.25	0.48
0.75	0.48	7.00	8.15	13.25	3.36	19.50	0.48
1.00	0.48	7.25	8.15	13.50	3.36	19.75	0.48
1.25	0.48	7.50	8.15	13.75	3.36	20.00	0.48
1.50	0.48	7.75	8.15	14.00	3.36	20.25	0.48
1.75	0.48	8.00	8.15	14.25	3.36	20.50	0.48
2.00	0.48	8.25	8.15	14.50	1.92	20.75	0.48
2.25	0.48	8.50	22.06	14.75	1.92	21.00	0.48
2.50	0.48	8.75	22.06	15.00	1.92	21.25	0.48
2.75	0.48	9.00	22.06	15.25	1.92	21.50	0.48
3.00	0.48	9.25	22.06	15.50	1.92	21.75	0.48
3.25	0.48	9.50	22.06	15.75	1.92	22.00	0.48
3.50	0.48	9.75	22.06	16.00	1.92	22.25	0.48
3.75	0.48	10.00	22.06	16.25	1.92	22.50	0.48
4.00	0.48	10.25	22.06	16.50	0.96	22.75	0.48
4.25	0.48	10.50	6.23	16.75	0.96	23.00	0.48
4.50	2.88	10.75	6.23	17.00	0.96	23.25	0.48
4.75	2.88	11.00	6.23	17.25	0.96	23.50	0.48
5.00	2.88	11.25	6.23	17.50	0.96	23.75	0.48
5.25	2.88	11.50	6.23	17.75	0.96	24.00	0.48
5.50	2.88	11.75	6.23	18.00	0.96	24.25	0.48
5.75	2.88	12.00	6.23	18.25	0.96		
6.00	2.88	12.25	6.23	18.50	0.48		
6.25	2.88	12.50	3.36	18.75	0.48		

CALIB	STANDHYD (0201)	Area (ha)= 5.27
ID= 1 DT= 5.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.22	0.05
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	187.44	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	2.88	12.250	6.23	18.33	0.48
0.167	0.00	6.250	2.88	12.333	3.36	18.42	0.48
0.250	0.00	6.333	8.15	12.417	3.36	18.50	0.48
0.333	0.48	6.417	8.15	12.500	3.36	18.58	0.48
0.417	0.48	6.500	8.15	12.583	3.36	18.67	0.48
0.500	0.48	6.583	8.15	12.667	3.36	18.75	0.48
0.583	0.48	6.667	8.15	12.750	3.36	18.83	0.48
0.667	0.48	6.750	8.15	12.833	3.36	18.92	0.48
0.750	0.48	6.833	8.15	12.917	3.36	19.00	0.48
0.833	0.48	6.917	8.15	13.000	3.36	19.08	0.48
0.917	0.48	7.000	8.15	13.083	3.36	19.17	0.48
1.000	0.48	7.083	8.15	13.167	3.36	19.25	0.48
1.083	0.48	7.167	8.15	13.250	3.36	19.33	0.48
1.167	0.48	7.250	8.15	13.333	3.36	19.42	0.48
1.250	0.48	7.333	8.15	13.417	3.36	19.50	0.48
1.333	0.48	7.417	8.15	13.500	3.36	19.58	0.48
1.417	0.48	7.500	8.15	13.583	3.36	19.67	0.48
1.500	0.48	7.583	8.15	13.667	3.36	19.75	0.48
1.583	0.48	7.667	8.15	13.750	3.36	19.83	0.48

1.667	0.48	7.750	8.15	13.833	3.36	19.92	0.48
1.750	0.48	7.833	8.15	13.917	3.36	20.00	0.48
1.833	0.48	7.917	8.15	14.000	3.36	20.08	0.48
1.917	0.48	8.000	8.15	14.083	3.36	20.17	0.48
2.000	0.48	8.083	8.15	14.167	3.36	20.25	0.48
2.083	0.48	8.167	8.15	14.250	3.36	20.33	0.48
2.167	0.48	8.250	8.15	14.333	1.92	20.42	0.48
2.250	0.48	8.333	22.06	14.417	1.92	20.50	0.48
2.333	0.48	8.417	22.06	14.500	1.92	20.58	0.48
2.417	0.48	8.500	22.06	14.583	1.92	20.67	0.48
2.500	0.48	8.583	22.06	14.667	1.92	20.75	0.48
2.583	0.48	8.667	22.06	14.750	1.92	20.83	0.48
2.667	0.48	8.750	22.06	14.833	1.92	20.92	0.48
2.750	0.48	8.833	22.06	14.917	1.92	21.00	0.48
2.833	0.48	8.917	22.06	15.000	1.92	21.08	0.48
2.917	0.48	9.000	22.06	15.083	1.92	21.17	0.48
3.000	0.48	9.083	22.06	15.167	1.92	21.25	0.48
3.083	0.48	9.167	22.06	15.250	1.92	21.33	0.48
3.167	0.48	9.250	22.06	15.333	1.92	21.42	0.48
3.250	0.48	9.333	22.06	15.417	1.92	21.50	0.48
3.333	0.48	9.417	22.06	15.500	1.92	21.58	0.48
3.417	0.48	9.500	22.06	15.583	1.92	21.67	0.48
3.500	0.48	9.583	22.06	15.667	1.92	21.75	0.48
3.583	0.48	9.667	22.06	15.750	1.92	21.83	0.48
3.667	0.48	9.750	22.06	15.833	1.92	21.92	0.48
3.750	0.48	9.833	22.06	15.917	1.92	22.00	0.48
3.833	0.48	9.917	22.06	16.000	1.92	22.08	0.48
3.917	0.48	10.000	22.06	16.083	1.92	22.17	0.48
4.000	0.48	10.083	22.06	16.167	1.92	22.25	0.48
4.083	0.48	10.167	22.06	16.250	1.92	22.33	0.48
4.167	0.48	10.250	22.06	16.333	0.96	22.42	0.48
4.250	0.48	10.333	6.23	16.417	0.96	22.50	0.48
4.333	2.88	10.417	6.23	16.500	0.96	22.58	0.48
4.417	2.88	10.500	6.23	16.583	0.96	22.67	0.48
4.500	2.88	10.583	6.23	16.667	0.96	22.75	0.48
4.583	2.88	10.667	6.23	16.750	0.96	22.83	0.48
4.667	2.88	10.750	6.23	16.833	0.96	22.92	0.48
4.750	2.88	10.833	6.23	16.917	0.96	23.00	0.48
4.833	2.88	10.917	6.23	17.000	0.96	23.08	0.48
4.917	2.88	11.000	6.23	17.083	0.96	23.17	0.48
5.000	2.88	11.083	6.23	17.167	0.96	23.25	0.48
5.083	2.88	11.167	6.23	17.250	0.96	23.33	0.48
5.167	2.88	11.250	6.23	17.333	0.96	23.42	0.48
5.250	2.88	11.333	6.23	17.417	0.96	23.50	0.48
5.333	2.88	11.417	6.23	17.500	0.96	23.58	0.48
5.417	2.88	11.500	6.23	17.583	0.96	23.67	0.48
5.500	2.88	11.583	6.23	17.667	0.96	23.75	0.48
5.583	2.88	11.667	6.23	17.750	0.96	23.83	0.48
5.667	2.88	11.750	6.23	17.833	0.96	23.92	0.48
5.750	2.88	11.833	6.23	17.917	0.96	24.00	0.48
5.833	2.88	11.917	6.23	18.000	0.96	24.08	0.48
5.917	2.88	12.000	6.23	18.083	0.96	24.17	0.48
6.000	2.88	12.083	6.23	18.167	0.96	24.25	0.48
6.083	2.88	12.167	6.23	18.250	0.96		

Max.Eff.Inten.(mm/hr)=	22.06	17.05	
over (min)	5.00	10.00	
Storage Coeff. (min)=	6.82 (ii)	8.87 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.18	0.12	
			TOTALS
PEAK FLOW (cms)=	0.32	0.00	0.322 (iii)
TIME TO PEAK (hrs)=	10.00	10.25	10.25
RUNOFF VOLUME (mm)=	94.92	56.36	94.53
TOTAL RAINFALL (mm)=	95.92	95.92	95.92
RUNOFF COEFFICIENT =	0.99	0.59	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0268)				
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1959	0.1883
	0.0980	0.0369	0.2939	0.4335

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)	5.270	0.322	10.25	94.53
OUTFLOW: ID= 1 (0268)	5.270	0.181	10.33	94.52

PEAK FLOW REDUCTION [Qout/Qin](%)= 56.03
TIME SHIFT OF PEAK FLOW (min)= 5.00
MAXIMUM STORAGE USED (ha.m.)= 0.1648

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\cdb8232d-79e6-461f-abf3-b53ae11525c8\9c617c21
Ptotal= 95.92 mm	Comments:

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	8.15	12.75	3.36	19.00	0.48
0.50	0.48	6.75	8.15	13.00	3.36	19.25	0.48
0.75	0.48	7.00	8.15	13.25	3.36	19.50	0.48
1.00	0.48	7.25	8.15	13.50	3.36	19.75	0.48
1.25	0.48	7.50	8.15	13.75	3.36	20.00	0.48
1.50	0.48	7.75	8.15	14.00	3.36	20.25	0.48
1.75	0.48	8.00	8.15	14.25	3.36	20.50	0.48
2.00	0.48	8.25	8.15	14.50	1.92	20.75	0.48
2.25	0.48	8.50	22.06	14.75	1.92	21.00	0.48
2.50	0.48	8.75	22.06	15.00	1.92	21.25	0.48
2.75	0.48	9.00	22.06	15.25	1.92	21.50	0.48
3.00	0.48	9.25	22.06	15.50	1.92	21.75	0.48
3.25	0.48	9.50	22.06	15.75	1.92	22.00	0.48
3.50	0.48	9.75	22.06	16.00	1.92	22.25	0.48
3.75	0.48	10.00	22.06	16.25	1.92	22.50	0.48
4.00	0.48	10.25	22.06	16.50	0.96	22.75	0.48
4.25	0.48	10.50	6.23	16.75	0.96	23.00	0.48
4.50	2.88	10.75	6.23	17.00	0.96	23.25	0.48
4.75	2.88	11.00	6.23	17.25	0.96	23.50	0.48
5.00	2.88	11.25	6.23	17.50	0.96	23.75	0.48
5.25	2.88	11.50	6.23	17.75	0.96	24.00	0.48
5.50	2.88	11.75	6.23	18.00	0.96	24.25	0.48
5.75	2.88	12.00	6.23	18.25	0.96		
6.00	2.88	12.25	6.23	18.50	0.48		
6.25	2.88	12.50	3.36	18.75	0.48		

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| CALIB            |
| STANDHYD (  0202)|   Area    (ha)=   6.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
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                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.32         1.25
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     209.28        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
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---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	2.88	12.250	6.23	18.33	0.48
0.167	0.00	6.250	2.88	12.333	3.36	18.42	0.48
0.250	0.00	6.333	8.15	12.417	3.36	18.50	0.48
0.333	0.48	6.417	8.15	12.500	3.36	18.58	0.48
0.417	0.48	6.500	8.15	12.583	3.36	18.67	0.48
0.500	0.48	6.583	8.15	12.667	3.36	18.75	0.48
0.583	0.48	6.667	8.15	12.750	3.36	18.83	0.48
0.667	0.48	6.750	8.15	12.833	3.36	18.92	0.48
0.750	0.48	6.833	8.15	12.917	3.36	19.00	0.48
0.833	0.48	6.917	8.15	13.000	3.36	19.08	0.48
0.917	0.48	7.000	8.15	13.083	3.36	19.17	0.48
1.000	0.48	7.083	8.15	13.167	3.36	19.25	0.48
1.083	0.48	7.167	8.15	13.250	3.36	19.33	0.48
1.167	0.48	7.250	8.15	13.333	3.36	19.42	0.48
1.250	0.48	7.333	8.15	13.417	3.36	19.50	0.48
1.333	0.48	7.417	8.15	13.500	3.36	19.58	0.48
1.417	0.48	7.500	8.15	13.583	3.36	19.67	0.48
1.500	0.48	7.583	8.15	13.667	3.36	19.75	0.48
1.583	0.48	7.667	8.15	13.750	3.36	19.83	0.48
1.667	0.48	7.750	8.15	13.833	3.36	19.92	0.48
1.750	0.48	7.833	8.15	13.917	3.36	20.00	0.48
1.833	0.48	7.917	8.15	14.000	3.36	20.08	0.48
1.917	0.48	8.000	8.15	14.083	3.36	20.17	0.48
2.000	0.48	8.083	8.15	14.167	3.36	20.25	0.48
2.083	0.48	8.167	8.15	14.250	3.36	20.33	0.48
2.167	0.48	8.250	8.15	14.333	1.92	20.42	0.48
2.250	0.48	8.333	22.06	14.417	1.92	20.50	0.48
2.333	0.48	8.417	22.06	14.500	1.92	20.58	0.48
2.417	0.48	8.500	22.06	14.583	1.92	20.67	0.48
2.500	0.48	8.583	22.06	14.667	1.92	20.75	0.48
2.583	0.48	8.667	22.06	14.750	1.92	20.83	0.48
2.667	0.48	8.750	22.06	14.833	1.92	20.92	0.48
2.750	0.48	8.833	22.06	14.917	1.92	21.00	0.48
2.833	0.48	8.917	22.06	15.000	1.92	21.08	0.48
2.917	0.48	9.000	22.06	15.083	1.92	21.17	0.48
3.000	0.48	9.083	22.06	15.167	1.92	21.25	0.48
3.083	0.48	9.167	22.06	15.250	1.92	21.33	0.48
3.167	0.48	9.250	22.06	15.333	1.92	21.42	0.48
3.250	0.48	9.333	22.06	15.417	1.92	21.50	0.48
3.333	0.48	9.417	22.06	15.500	1.92	21.58	0.48
3.417	0.48	9.500	22.06	15.583	1.92	21.67	0.48
3.500	0.48	9.583	22.06	15.667	1.92	21.75	0.48
3.583	0.48	9.667	22.06	15.750	1.92	21.83	0.48
3.667	0.48	9.750	22.06	15.833	1.92	21.92	0.48
3.750	0.48	9.833	22.06	15.917	1.92	22.00	0.48
3.833	0.48	9.917	22.06	16.000	1.92	22.08	0.48
3.917	0.48	10.000	22.06	16.083	1.92	22.17	0.48
4.000	0.48	10.083	22.06	16.167	1.92	22.25	0.48
4.083	0.48	10.167	22.06	16.250	1.92	22.33	0.48
4.167	0.48	10.250	22.06	16.333	0.96	22.42	0.48
4.250	0.48	10.333	6.23	16.417	0.96	22.50	0.48
4.333	2.88	10.417	6.23	16.500	0.96	22.58	0.48
4.417	2.88	10.500	6.23	16.583	0.96	22.67	0.48
4.500	2.88	10.583	6.23	16.667	0.96	22.75	0.48
4.583	2.88	10.667	6.23	16.750	0.96	22.83	0.48
4.667	2.88	10.750	6.23	16.833	0.96	22.92	0.48
4.750	2.88	10.833	6.23	16.917	0.96	23.00	0.48
4.833	2.88	10.917	6.23	17.000	0.96	23.08	0.48
4.917	2.88	11.000	6.23	17.083	0.96	23.17	0.48
5.000	2.88	11.083	6.23	17.167	0.96	23.25	0.48
5.083	2.88	11.167	6.23	17.250	0.96	23.33	0.48
5.167	2.88	11.250	6.23	17.333	0.96	23.42	0.48
5.250	2.88	11.333	6.23	17.417	0.96	23.50	0.48
5.333	2.88	11.417	6.23	17.500	0.96	23.58	0.48
5.417	2.88	11.500	6.23	17.583	0.96	23.67	0.48
5.500	2.88	11.583	6.23	17.667	0.96	23.75	0.48
5.583	2.88	11.667	6.23	17.750	0.96	23.83	0.48
5.667	2.88	11.750	6.23	17.833	0.96	23.92	0.48
5.750	2.88	11.833	6.23	17.917	0.96	24.00	0.48
5.833	2.88	11.917	6.23	18.000	0.96	24.08	0.48
5.917	2.88	12.000	6.23	18.083	0.96	24.17	0.48
6.000	2.88	12.083	6.23	18.167	0.96	24.25	0.48
6.083	2.88	12.167	6.23	18.250	0.96		

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     Max.Eff.Inten.(mm/hr)=      22.06        16.97
               over (min)        5.00        25.00
     Storage Coeff.  (min)=     7.28 (ii)   21.63 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.17         0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.33         0.06          0.381 (iii)
     TIME TO PEAK    (hrs)=      10.00        10.25          10.25
     RUNOFF VOLUME    (mm)=      94.92        56.36          87.59
     TOTAL RAINFALL   (mm)=      95.92        95.92          95.92
     RUNOFF COEFFICIENT   =       0.99         0.59           0.91


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| ADD HYD  (  0262)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0202):      6.57   0.381    10.25    87.59
     + ID2= 2 (  0268):      5.27   0.181    10.33    94.52
       ================================================
       ID = 3 (  0262):     11.84   0.560    10.25    90.67

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
--------------------
| ADD HYD  (  0266)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0259):     4.67   0.237    10.25    88.88
     + ID2= 2 (  0262):    11.84   0.560    10.25    90.67
       ================================================
       ID = 3 (  0266):    16.51   0.797    10.25    90.17

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0263)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.2130      0.6563
                         0.0190     0.1773   |   0.2520      0.6883
                         0.0220     0.2128   |   0.2890      0.7150
                         0.0260     0.2888   |   0.2980      0.7450
                         0.0300     0.3648   |   0.3060      0.7700
                         0.0650     0.4586   |   0.3150      0.8127
                         0.1100     0.5155   |   0.3320      0.9290
                         0.1680     0.5503   |   0.3390      0.9767
                         0.1930     0.5804   |   0.3520      1.0680
                         0.2000     0.6048   |   0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0266)    16.510     0.797     10.25      90.17
   OUTFLOW: ID= 1 (  0263)    16.510     0.303     12.33      90.02

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 38.07
                  TIME SHIFT OF PEAK FLOW         (min)=125.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.7622

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0206):     0.12   0.006    10.25    56.31
     + ID2= 2 (  0263):    16.51   0.303    12.33    90.02
       ================================================
       ID = 3 (  0261):    16.64   0.305    12.33    89.77

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

 FINISH
================================================================================
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================================================================================
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       V    V   I    SSSSS  U   U    A    L             (v 5.0.2025)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL
```

```
        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\14017fa6-edfd-415a-a6ef-c707dd9bf4a6\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\14017fa6-edfd-415a-a6ef-c707dd9bf4a6\s


DATE: 07/06/2020                          TIME: 04:38:42

USER:



COMMENTS: _____________________________________________________

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  *******************************************
  ** SIMULATION : 2 Year 24 Hour AES       **
  *******************************************


--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              cdb8232d-79e6-461f-abf3-b53ae11525c8\c1d06699
| Ptotal= 47.08 mm |    Comments:
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  6.50    4.00 | 12.75    1.65 | 19.00    0.24
                0.50    0.24 |  6.75    4.00 | 13.00    1.65 | 19.25    0.24
                0.75    0.24 |  7.00    4.00 | 13.25    1.65 | 19.50    0.24
                1.00    0.24 |  7.25    4.00 | 13.50    1.65 | 19.75    0.24
                1.25    0.24 |  7.50    4.00 | 13.75    1.65 | 20.00    0.24
                1.50    0.24 |  7.75    4.00 | 14.00    1.65 | 20.25    0.24
                1.75    0.24 |  8.00    4.00 | 14.25    1.65 | 20.50    0.24
                2.00    0.24 |  8.25    4.00 | 14.50    0.94 | 20.75    0.24
                2.25    0.24 |  8.50   10.81 | 14.75    0.94 | 21.00    0.24
                2.50    0.24 |  8.75   10.81 | 15.00    0.94 | 21.25    0.24
                2.75    0.24 |  9.00   10.81 | 15.25    0.94 | 21.50    0.24
                3.00    0.24 |  9.25   10.81 | 15.50    0.94 | 21.75    0.24
                3.25    0.24 |  9.50   10.81 | 15.75    0.94 | 22.00    0.24
                3.50    0.24 |  9.75   10.81 | 16.00    0.94 | 22.25    0.24
                3.75    0.24 | 10.00   10.81 | 16.25    0.94 | 22.50    0.24
                4.00    0.24 | 10.25   10.81 | 16.50    0.47 | 22.75    0.24
                4.25    0.24 | 10.50    3.06 | 16.75    0.47 | 23.00    0.24
                4.50    1.41 | 10.75    3.06 | 17.00    0.47 | 23.25    0.24
                4.75    1.41 | 11.00    3.06 | 17.25    0.47 | 23.50    0.24
                5.00    1.41 | 11.25    3.06 | 17.50    0.47 | 23.75    0.24
```

5.25	1.41	11.50	3.06	17.75	0.47	24.00	0.24
5.50	1.41	11.75	3.06	18.00	0.47	24.25	0.24
5.75	1.41	12.00	3.06	18.25	0.47		
6.00	1.41	12.25	3.06	18.50	0.24		
6.25	1.41	12.50	1.65	18.75	0.24		

```
--------------------
| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	1.41	12.250	3.06	18.33	0.24
0.167	0.00	6.250	1.41	12.333	1.65	18.42	0.24
0.250	0.00	6.333	4.00	12.417	1.65	18.50	0.24
0.333	0.24	6.417	4.00	12.500	1.65	18.58	0.24
0.417	0.24	6.500	4.00	12.583	1.65	18.67	0.24
0.500	0.24	6.583	4.00	12.667	1.65	18.75	0.24
0.583	0.24	6.667	4.00	12.750	1.65	18.83	0.24
0.667	0.24	6.750	4.00	12.833	1.65	18.92	0.24
0.750	0.24	6.833	4.00	12.917	1.65	19.00	0.24
0.833	0.24	6.917	4.00	13.000	1.65	19.08	0.24
0.917	0.24	7.000	4.00	13.083	1.65	19.17	0.24
1.000	0.24	7.083	4.00	13.167	1.65	19.25	0.24
1.083	0.24	7.167	4.00	13.250	1.65	19.33	0.24
1.167	0.24	7.250	4.00	13.333	1.65	19.42	0.24
1.250	0.24	7.333	4.00	13.417	1.65	19.50	0.24
1.333	0.24	7.417	4.00	13.500	1.65	19.58	0.24
1.417	0.24	7.500	4.00	13.583	1.65	19.67	0.24
1.500	0.24	7.583	4.00	13.667	1.65	19.75	0.24
1.583	0.24	7.667	4.00	13.750	1.65	19.83	0.24
1.667	0.24	7.750	4.00	13.833	1.65	19.92	0.24
1.750	0.24	7.833	4.00	13.917	1.65	20.00	0.24
1.833	0.24	7.917	4.00	14.000	1.65	20.08	0.24
1.917	0.24	8.000	4.00	14.083	1.65	20.17	0.24
2.000	0.24	8.083	4.00	14.167	1.65	20.25	0.24
2.083	0.24	8.167	4.00	14.250	1.65	20.33	0.24
2.167	0.24	8.250	4.00	14.333	0.94	20.42	0.24
2.250	0.24	8.333	10.81	14.417	0.94	20.50	0.24
2.333	0.24	8.417	10.81	14.500	0.94	20.58	0.24
2.417	0.24	8.500	10.81	14.583	0.94	20.67	0.24
2.500	0.24	8.583	10.81	14.667	0.94	20.75	0.24
2.583	0.24	8.667	10.81	14.750	0.94	20.83	0.24
2.667	0.24	8.750	10.81	14.833	0.94	20.92	0.24
2.750	0.24	8.833	10.81	14.917	0.94	21.00	0.24
2.833	0.24	8.917	10.81	15.000	0.94	21.08	0.24
2.917	0.24	9.000	10.81	15.083	0.94	21.17	0.24
3.000	0.24	9.083	10.81	15.167	0.94	21.25	0.24
3.083	0.24	9.167	10.81	15.250	0.94	21.33	0.24
3.167	0.24	9.250	10.81	15.333	0.94	21.42	0.24
3.250	0.24	9.333	10.81	15.417	0.94	21.50	0.24
3.333	0.24	9.417	10.81	15.500	0.94	21.58	0.24
3.417	0.24	9.500	10.81	15.583	0.94	21.67	0.24
3.500	0.24	9.583	10.81	15.667	0.94	21.75	0.24
3.583	0.24	9.667	10.81	15.750	0.94	21.83	0.24
3.667	0.24	9.750	10.81	15.833	0.94	21.92	0.24
3.750	0.24	9.833	10.81	15.917	0.94	22.00	0.24
3.833	0.24	9.917	10.81	16.000	0.94	22.08	0.24
3.917	0.24	10.000	10.81	16.083	0.94	22.17	0.24
4.000	0.24	10.083	10.81	16.167	0.94	22.25	0.24
4.083	0.24	10.167	10.81	16.250	0.94	22.33	0.24
4.167	0.24	10.250	10.81	16.333	0.47	22.42	0.24
4.250	0.24	10.333	3.06	16.417	0.47	22.50	0.24
4.333	1.41	10.417	3.06	16.500	0.47	22.58	0.24
4.417	1.41	10.500	3.06	16.583	0.47	22.67	0.24
4.500	1.41	10.583	3.06	16.667	0.47	22.75	0.24
4.583	1.41	10.667	3.06	16.750	0.47	22.83	0.24
4.667	1.41	10.750	3.06	16.833	0.47	22.92	0.24
4.750	1.41	10.833	3.06	16.917	0.47	23.00	0.24
4.833	1.41	10.917	3.06	17.000	0.47	23.08	0.24
4.917	1.41	11.000	3.06	17.083	0.47	23.17	0.24
5.000	1.41	11.083	3.06	17.167	0.47	23.25	0.24
5.083	1.41	11.167	3.06	17.250	0.47	23.33	0.24
5.167	1.41	11.250	3.06	17.333	0.47	23.42	0.24
5.250	1.41	11.333	3.06	17.417	0.47	23.50	0.24
5.333	1.41	11.417	3.06	17.500	0.47	23.58	0.24
5.417	1.41	11.500	3.06	17.583	0.47	23.67	0.24
5.500	1.41	11.583	3.06	17.667	0.47	23.75	0.24
5.583	1.41	11.667	3.06	17.750	0.47	23.83	0.24
5.667	1.41	11.750	3.06	17.833	0.47	23.92	0.24
5.750	1.41	11.833	3.06	17.917	0.47	24.00	0.24
5.833	1.41	11.917	3.06	18.000	0.47	24.08	0.24
5.917	1.41	12.000	3.06	18.083	0.47	24.17	0.24
6.000	1.41	12.083	3.06	18.167	0.47	24.25	0.24
6.083	1.41	12.167	3.06	18.250	0.47		

Unit Hyd Qpeak (cms)= 0.019

PEAK FLOW (cms)= 0.002 (i)
TIME TO PEAK (hrs)= 10.250
RUNOFF VOLUME (mm)= 18.079
TOTAL RAINFALL (mm)= 47.080
RUNOFF COEFFICIENT = 0.384

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
--------------------
|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              cdb8232d-79e6-461f-abf3-b53ae11525c8\c1d06699
| Ptotal= 47.08 mm |    Comments:
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	4.00	12.75	1.65	19.00	0.24
0.50	0.24	6.75	4.00	13.00	1.65	19.25	0.24
0.75	0.24	7.00	4.00	13.25	1.65	19.50	0.24
1.00	0.24	7.25	4.00	13.50	1.65	19.75	0.24
1.25	0.24	7.50	4.00	13.75	1.65	20.00	0.24
1.50	0.24	7.75	4.00	14.00	1.65	20.25	0.24
1.75	0.24	8.00	4.00	14.25	1.65	20.50	0.24
2.00	0.24	8.25	4.00	14.50	0.94	20.75	0.24
2.25	0.24	8.50	10.81	14.75	0.94	21.00	0.24
2.50	0.24	8.75	10.81	15.00	0.94	21.25	0.24
2.75	0.24	9.00	10.81	15.25	0.94	21.50	0.24
3.00	0.24	9.25	10.81	15.50	0.94	21.75	0.24
3.25	0.24	9.50	10.81	15.75	0.94	22.00	0.24
3.50	0.24	9.75	10.81	16.00	0.94	22.25	0.24

3.75	0.24	10.00	10.81	16.25	0.94	22.50	0.24
4.00	0.24	10.25	10.81	16.50	0.47	22.75	0.24
4.25	0.24	10.50	3.06	16.75	0.47	23.00	0.24
4.50	1.41	10.75	3.06	17.00	0.47	23.25	0.24
4.75	1.41	11.00	3.06	17.25	0.47	23.50	0.24
5.00	1.41	11.25	3.06	17.50	0.47	23.75	0.24
5.25	1.41	11.50	3.06	17.75	0.47	24.00	0.24
5.50	1.41	11.75	3.06	18.00	0.47	24.25	0.24
5.75	1.41	12.00	3.06	18.25	0.47		
6.00	1.41	12.25	3.06	18.50	0.24		
6.25	1.41	12.50	1.65	18.75	0.24		

CALIB	
STANDHYD (0205)	Area (ha)= 1.12
ID= 1 DT= 5.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.11	0.01
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	86.60	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	1.41	12.250	3.06	18.33	0.24
0.167	0.00	6.250	1.41	12.333	1.65	18.42	0.24
0.250	0.00	6.333	4.00	12.417	1.65	18.50	0.24
0.333	0.24	6.417	4.00	12.500	1.65	18.58	0.24
0.417	0.24	6.500	4.00	12.583	1.65	18.67	0.24
0.500	0.24	6.583	4.00	12.667	1.65	18.75	0.24
0.583	0.24	6.667	4.00	12.750	1.65	18.83	0.24
0.667	0.24	6.750	4.00	12.833	1.65	18.92	0.24
0.750	0.24	6.833	4.00	12.917	1.65	19.00	0.24
0.833	0.24	6.917	4.00	13.000	1.65	19.08	0.24
0.917	0.24	7.000	4.00	13.083	1.65	19.17	0.24
1.000	0.24	7.083	4.00	13.167	1.65	19.25	0.24
1.083	0.24	7.167	4.00	13.250	1.65	19.33	0.24
1.167	0.24	7.250	4.00	13.333	1.65	19.42	0.24
1.250	0.24	7.333	4.00	13.417	1.65	19.50	0.24
1.333	0.24	7.417	4.00	13.500	1.65	19.58	0.24
1.417	0.24	7.500	4.00	13.583	1.65	19.67	0.24
1.500	0.24	7.583	4.00	13.667	1.65	19.75	0.24
1.583	0.24	7.667	4.00	13.750	1.65	19.83	0.24
1.667	0.24	7.750	4.00	13.833	1.65	19.92	0.24
1.750	0.24	7.833	4.00	13.917	1.65	20.00	0.24
1.833	0.24	7.917	4.00	14.000	1.65	20.08	0.24
1.917	0.24	8.000	4.00	14.083	1.65	20.17	0.24
2.000	0.24	8.083	4.00	14.167	1.65	20.25	0.24
2.083	0.24	8.167	4.00	14.250	1.65	20.33	0.24
2.167	0.24	8.250	4.00	14.333	0.94	20.42	0.24
2.250	0.24	8.333	10.81	14.417	0.94	20.50	0.24
2.333	0.24	8.417	10.81	14.500	0.94	20.58	0.24
2.417	0.24	8.500	10.81	14.583	0.94	20.67	0.24
2.500	0.24	8.583	10.81	14.667	0.94	20.75	0.24
2.583	0.24	8.667	10.81	14.750	0.94	20.83	0.24
2.667	0.24	8.750	10.81	14.833	0.94	20.92	0.24
2.750	0.24	8.833	10.81	14.917	0.94	21.00	0.24
2.833	0.24	8.917	10.81	15.000	0.94	21.08	0.24
2.917	0.24	9.000	10.81	15.083	0.94	21.17	0.24
3.000	0.24	9.083	10.81	15.167	0.94	21.25	0.24
3.083	0.24	9.167	10.81	15.250	0.94	21.33	0.24
3.167	0.24	9.250	10.81	15.333	0.94	21.42	0.24
3.250	0.24	9.333	10.81	15.417	0.94	21.50	0.24
3.333	0.24	9.417	10.81	15.500	0.94	21.58	0.24
3.417	0.24	9.500	10.81	15.583	0.94	21.67	0.24
3.500	0.24	9.583	10.81	15.667	0.94	21.75	0.24
3.583	0.24	9.667	10.81	15.750	0.94	21.83	0.24
3.667	0.24	9.750	10.81	15.833	0.94	21.92	0.24
3.750	0.24	9.833	10.81	15.917	0.94	22.00	0.24
3.833	0.24	9.917	10.81	16.000	0.94	22.08	0.24
3.917	0.24	10.000	10.81	16.083	0.94	22.17	0.24
4.000	0.24	10.083	10.81	16.167	0.94	22.25	0.24
4.083	0.24	10.167	10.81	16.250	0.94	22.33	0.24
4.167	0.24	10.250	10.81	16.333	0.47	22.42	0.24
4.250	0.24	10.333	3.06	16.417	0.47	22.50	0.24
4.333	1.41	10.417	3.06	16.500	0.47	22.58	0.24
4.417	1.41	10.500	3.06	16.583	0.47	22.67	0.24
4.500	1.41	10.583	3.06	16.667	0.47	22.75	0.24
4.583	1.41	10.667	3.06	16.750	0.47	22.83	0.24
4.667	1.41	10.750	3.06	16.833	0.47	22.92	0.24
4.750	1.41	10.833	3.06	16.917	0.47	23.00	0.24
4.833	1.41	10.917	3.06	17.000	0.47	23.08	0.24
4.917	1.41	11.000	3.06	17.083	0.47	23.17	0.24
5.000	1.41	11.083	3.06	17.167	0.47	23.25	0.24
5.083	1.41	11.167	3.06	17.250	0.47	23.33	0.24
5.167	1.41	11.250	3.06	17.333	0.47	23.42	0.24
5.250	1.41	11.333	3.06	17.417	0.47	23.50	0.24
5.333	1.41	11.417	3.06	17.500	0.47	23.58	0.24
5.417	1.41	11.500	3.06	17.583	0.47	23.67	0.24
5.500	1.41	11.583	3.06	17.667	0.47	23.75	0.24
5.583	1.41	11.667	3.06	17.750	0.47	23.83	0.24
5.667	1.41	11.750	3.06	17.833	0.47	23.92	0.24
5.750	1.41	11.833	3.06	17.917	0.47	24.00	0.24
5.833	1.41	11.917	3.06	18.000	0.47	24.08	0.24
5.917	1.41	12.000	3.06	18.083	0.47	24.17	0.24
6.000	1.41	12.083	3.06	18.167	0.47	24.25	0.24
6.083	1.41	12.167	3.06	18.250	0.47		

Max.Eff.Inten.(mm/hr)=	10.81	5.96		
over (min)	5.00	10.00		
Storage Coeff. (min)=	5.71 (ii)	8.44 (ii)		
Unit Hyd. Tpeak (min)=	5.00	10.00		
Unit Hyd. peak (cms)=	0.20	0.12		
				TOTALS
PEAK FLOW (cms)=	0.03	0.00		0.034 (iii)
TIME TO PEAK (hrs)=	9.50	10.25		10.25
RUNOFF VOLUME (mm)=	46.08	18.10		45.80
TOTAL RAINFALL (mm)=	47.08	47.08		47.08
RUNOFF COEFFICIENT =	0.98	0.38		0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0256)

```
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0470      0.0750

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0205)     1.125     0.034     10.25      45.80
   OUTFLOW: ID= 1 (  0256)     1.125     0.016     10.42      45.44

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 46.12
                  TIME SHIFT OF PEAK FLOW         (min)= 10.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0248
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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              cdb8232d-79e6-461f-abf3-b53ae11525c8\c1d06699
| Ptotal= 47.08 mm |    Comments:
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```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	4.00	12.75	1.65	19.00	0.24
0.50	0.24	6.75	4.00	13.00	1.65	19.25	0.24
0.75	0.24	7.00	4.00	13.25	1.65	19.50	0.24
1.00	0.24	7.25	4.00	13.50	1.65	19.75	0.24
1.25	0.24	7.50	4.00	13.75	1.65	20.00	0.24
1.50	0.24	7.75	4.00	14.00	1.65	20.25	0.24
1.75	0.24	8.00	4.00	14.25	1.65	20.50	0.24
2.00	0.24	8.25	4.00	14.50	0.94	20.75	0.24
2.25	0.24	8.50	10.81	14.75	0.94	21.00	0.24
2.50	0.24	8.75	10.81	15.00	0.94	21.25	0.24
2.75	0.24	9.00	10.81	15.25	0.94	21.50	0.24
3.00	0.24	9.25	10.81	15.50	0.94	21.75	0.24
3.25	0.24	9.50	10.81	15.75	0.94	22.00	0.24
3.50	0.24	9.75	10.81	16.00	0.94	22.25	0.24
3.75	0.24	10.00	10.81	16.25	0.94	22.50	0.24
4.00	0.24	10.25	10.81	16.50	0.47	22.75	0.24
4.25	0.24	10.50	3.06	16.75	0.47	23.00	0.24
4.50	1.41	10.75	3.06	17.00	0.47	23.25	0.24
4.75	1.41	11.00	3.06	17.25	0.47	23.50	0.24
5.00	1.41	11.25	3.06	17.50	0.47	23.75	0.24
5.25	1.41	11.50	3.06	17.75	0.47	24.00	0.24
5.50	1.41	11.75	3.06	18.00	0.47	24.25	0.24
5.75	1.41	12.00	3.06	18.25	0.47		
6.00	1.41	12.25	3.06	18.50	0.24		
6.25	1.41	12.50	1.65	18.75	0.24		

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| CALIB            |
| STANDHYD (  0203)|   Area    (ha)=   2.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.68         0.42
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     118.18        40.00
     Mannings n           =      0.013        0.250
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	1.41	12.250	3.06	18.33	0.24
0.167	0.00	6.250	1.41	12.333	1.65	18.42	0.24
0.250	0.00	6.333	4.00	12.417	1.65	18.50	0.24
0.333	0.24	6.417	4.00	12.500	1.65	18.58	0.24
0.417	0.24	6.500	4.00	12.583	1.65	18.67	0.24
0.500	0.24	6.583	4.00	12.667	1.65	18.75	0.24
0.583	0.24	6.667	4.00	12.750	1.65	18.83	0.24
0.667	0.24	6.750	4.00	12.833	1.65	18.92	0.24
0.750	0.24	6.833	4.00	12.917	1.65	19.00	0.24
0.833	0.24	6.917	4.00	13.000	1.65	19.08	0.24
0.917	0.24	7.000	4.00	13.083	1.65	19.17	0.24
1.000	0.24	7.083	4.00	13.167	1.65	19.25	0.24
1.083	0.24	7.167	4.00	13.250	1.65	19.33	0.24
1.167	0.24	7.250	4.00	13.333	1.65	19.42	0.24
1.250	0.24	7.333	4.00	13.417	1.65	19.50	0.24
1.333	0.24	7.417	4.00	13.500	1.65	19.58	0.24
1.417	0.24	7.500	4.00	13.583	1.65	19.67	0.24
1.500	0.24	7.583	4.00	13.667	1.65	19.75	0.24
1.583	0.24	7.667	4.00	13.750	1.65	19.83	0.24
1.667	0.24	7.750	4.00	13.833	1.65	19.92	0.24
1.750	0.24	7.833	4.00	13.917	1.65	20.00	0.24
1.833	0.24	7.917	4.00	14.000	1.65	20.08	0.24
1.917	0.24	8.000	4.00	14.083	1.65	20.17	0.24
2.000	0.24	8.083	4.00	14.167	1.65	20.25	0.24
2.083	0.24	8.167	4.00	14.250	1.65	20.33	0.24
2.167	0.24	8.250	4.00	14.333	0.94	20.42	0.24
2.250	0.24	8.333	10.81	14.417	0.94	20.50	0.24
2.333	0.24	8.417	10.81	14.500	0.94	20.58	0.24
2.417	0.24	8.500	10.81	14.583	0.94	20.67	0.24
2.500	0.24	8.583	10.81	14.667	0.94	20.75	0.24
2.583	0.24	8.667	10.81	14.750	0.94	20.83	0.24
2.667	0.24	8.750	10.81	14.833	0.94	20.92	0.24
2.750	0.24	8.833	10.81	14.917	0.94	21.00	0.24
2.833	0.24	8.917	10.81	15.000	0.94	21.08	0.24
2.917	0.24	9.000	10.81	15.083	0.94	21.17	0.24
3.000	0.24	9.083	10.81	15.167	0.94	21.25	0.24
3.083	0.24	9.167	10.81	15.250	0.94	21.33	0.24
3.167	0.24	9.250	10.81	15.333	0.94	21.42	0.24
3.250	0.24	9.333	10.81	15.417	0.94	21.50	0.24
3.333	0.24	9.417	10.81	15.500	0.94	21.58	0.24
3.417	0.24	9.500	10.81	15.583	0.94	21.67	0.24
3.500	0.24	9.583	10.81	15.667	0.94	21.75	0.24
3.583	0.24	9.667	10.81	15.750	0.94	21.83	0.24
3.667	0.24	9.750	10.81	15.833	0.94	21.92	0.24
3.750	0.24	9.833	10.81	15.917	0.94	22.00	0.24
3.833	0.24	9.917	10.81	16.000	0.94	22.08	0.24
3.917	0.24	10.000	10.81	16.083	0.94	22.17	0.24
4.000	0.24	10.083	10.81	16.167	0.94	22.25	0.24
4.083	0.24	10.167	10.81	16.250	0.94	22.33	0.24
4.167	0.24	10.250	10.81	16.333	0.47	22.42	0.24
4.250	0.24	10.333	3.06	16.417	0.47	22.50	0.24
4.333	1.41	10.417	3.06	16.500	0.47	22.58	0.24
4.417	1.41	10.500	3.06	16.583	0.47	22.67	0.24
4.500	1.41	10.583	3.06	16.667	0.47	22.75	0.24
4.583	1.41	10.667	3.06	16.750	0.47	22.83	0.24
4.667	1.41	10.750	3.06	16.833	0.47	22.92	0.24
4.750	1.41	10.833	3.06	16.917	0.47	23.00	0.24
4.833	1.41	10.917	3.06	17.000	0.47	23.08	0.24

4.917	1.41	11.000	3.06	17.083	0.47	23.17	0.24
5.000	1.41	11.083	3.06	17.167	0.47	23.25	0.24
5.083	1.41	11.167	3.06	17.250	0.47	23.33	0.24
5.167	1.41	11.250	3.06	17.333	0.47	23.42	0.24
5.250	1.41	11.333	3.06	17.417	0.47	23.50	0.24
5.333	1.41	11.417	3.06	17.500	0.47	23.58	0.24
5.417	1.41	11.500	3.06	17.583	0.47	23.67	0.24
5.500	1.41	11.583	3.06	17.667	0.47	23.75	0.24
5.583	1.41	11.667	3.06	17.750	0.47	23.83	0.24
5.667	1.41	11.750	3.06	17.833	0.47	23.92	0.24
5.750	1.41	11.833	3.06	17.917	0.47	24.00	0.24
5.833	1.41	11.917	3.06	18.000	0.47	24.08	0.24
5.917	1.41	12.000	3.06	18.083	0.47	24.17	0.24
6.000	1.41	12.083	3.06	18.167	0.47	24.25	0.24
6.083	1.41	12.167	3.06	18.250	0.47		

			TOTALS
Max.Eff.Inten.(mm/hr)=	10.81	5.80	
over (min)	5.00	30.00	
Storage Coeff. (min)=	6.88 (ii)	28.93 (ii)	
Unit Hyd. Tpeak (min)=	5.00	30.00	
Unit Hyd. peak (cms)=	0.18	0.04	
PEAK FLOW (cms)=	0.05	0.01	0.056 (iii)
TIME TO PEAK (hrs)=	9.75	10.33	10.25
RUNOFF VOLUME (mm)=	46.08	18.10	40.48
TOTAL RAINFALL (mm)=	47.08	47.08	47.08
RUNOFF COEFFICIENT =	0.98	0.38	0.86

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0260)		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0203):		2.10	0.056	10.25	40.48
+ ID2= 2 (0256):		1.12	0.016	10.42	45.44
ID = 3 (0260):		3.22	0.071	10.25	42.21

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM | Filename: C:\Users\mventresca\AppData\Local\Temp\cdb8232d-79e6-461f-abf3-b53ae11525c8\c1d06699
Ptotal= 47.08 mm | Comments:

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	4.00	12.75	1.65	19.00	0.24
0.50	0.24	6.75	4.00	13.00	1.65	19.25	0.24
0.75	0.24	7.00	4.00	13.25	1.65	19.50	0.24
1.00	0.24	7.25	4.00	13.50	1.65	19.75	0.24
1.25	0.24	7.50	4.00	13.75	1.65	20.00	0.24
1.50	0.24	7.75	4.00	14.00	1.65	20.25	0.24
1.75	0.24	8.00	4.00	14.25	1.65	20.50	0.24
2.00	0.24	8.25	4.00	14.50	0.94	20.75	0.24
2.25	0.24	8.50	10.81	14.75	0.94	21.00	0.24
2.50	0.24	8.75	10.81	15.00	0.94	21.25	0.24
2.75	0.24	9.00	10.81	15.25	0.94	21.50	0.24
3.00	0.24	9.25	10.81	15.50	0.94	21.75	0.24
3.25	0.24	9.50	10.81	15.75	0.94	22.00	0.24
3.50	0.24	9.75	10.81	16.00	0.94	22.25	0.24
3.75	0.24	10.00	10.81	16.25	0.94	22.50	0.24
4.00	0.24	10.25	10.81	16.50	0.47	22.75	0.24
4.25	0.24	10.50	3.06	16.75	0.47	23.00	0.24
4.50	1.41	10.75	3.06	17.00	0.47	23.25	0.24
4.75	1.41	11.00	3.06	17.25	0.47	23.50	0.24
5.00	1.41	11.25	3.06	17.50	0.47	23.75	0.24
5.25	1.41	11.50	3.06	17.75	0.47	24.00	0.24
5.50	1.41	11.75	3.06	18.00	0.47	24.25	0.24
5.75	1.41	12.00	3.06	18.25	0.47		
6.00	1.41	12.25	3.06	18.50	0.24		
6.25	1.41	12.50	1.65	18.75	0.24		

CALIB | STANDHYD (0204) | ID= 1 DT= 5.0 min
Area (ha)= 1.45
Total Imp(%)= 80.00 Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.16	0.29
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	98.32	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	1.41	12.250	3.06	18.33	0.24
0.167	0.00	6.250	1.41	12.333	1.65	18.42	0.24
0.250	0.00	6.333	4.00	12.417	1.65	18.50	0.24
0.333	0.24	6.417	4.00	12.500	1.65	18.58	0.24
0.417	0.24	6.500	4.00	12.583	1.65	18.67	0.24
0.500	0.24	6.583	4.00	12.667	1.65	18.75	0.24
0.583	0.24	6.667	4.00	12.750	1.65	18.83	0.24
0.667	0.24	6.750	4.00	12.833	1.65	18.92	0.24
0.750	0.24	6.833	4.00	12.917	1.65	19.00	0.24
0.833	0.24	6.917	4.00	13.000	1.65	19.08	0.24
0.917	0.24	7.000	4.00	13.083	1.65	19.17	0.24
1.000	0.24	7.083	4.00	13.167	1.65	19.25	0.24
1.083	0.24	7.167	4.00	13.250	1.65	19.33	0.24
1.167	0.24	7.250	4.00	13.333	1.65	19.42	0.24
1.250	0.24	7.333	4.00	13.417	1.65	19.50	0.24
1.333	0.24	7.417	4.00	13.500	1.65	19.58	0.24
1.417	0.24	7.500	4.00	13.583	1.65	19.67	0.24
1.500	0.24	7.583	4.00	13.667	1.65	19.75	0.24
1.583	0.24	7.667	4.00	13.750	1.65	19.83	0.24
1.667	0.24	7.750	4.00	13.833	1.65	19.92	0.24
1.750	0.24	7.833	4.00	13.917	1.65	20.00	0.24
1.833	0.24	7.917	4.00	14.000	1.65	20.08	0.24
1.917	0.24	8.000	4.00	14.083	1.65	20.17	0.24
2.000	0.24	8.083	4.00	14.167	1.65	20.25	0.24

2.083	0.24	8.167	4.00	14.250	1.65	20.33	0.24
2.167	0.24	8.250	4.00	14.333	0.94	20.42	0.24
2.250	0.24	8.333	10.81	14.417	0.94	20.50	0.24
2.333	0.24	8.417	10.81	14.500	0.94	20.58	0.24
2.417	0.24	8.500	10.81	14.583	0.94	20.67	0.24
2.500	0.24	8.583	10.81	14.667	0.94	20.75	0.24
2.583	0.24	8.667	10.81	14.750	0.94	20.83	0.24
2.667	0.24	8.750	10.81	14.833	0.94	20.92	0.24
2.750	0.24	8.833	10.81	14.917	0.94	21.00	0.24
2.833	0.24	8.917	10.81	15.000	0.94	21.08	0.24
2.917	0.24	9.000	10.81	15.083	0.94	21.17	0.24
3.000	0.24	9.083	10.81	15.167	0.94	21.25	0.24
3.083	0.24	9.167	10.81	15.250	0.94	21.33	0.24
3.167	0.24	9.250	10.81	15.333	0.94	21.42	0.24
3.250	0.24	9.333	10.81	15.417	0.94	21.50	0.24
3.333	0.24	9.417	10.81	15.500	0.94	21.58	0.24
3.417	0.24	9.500	10.81	15.583	0.94	21.67	0.24
3.500	0.24	9.583	10.81	15.667	0.94	21.75	0.24
3.583	0.24	9.667	10.81	15.750	0.94	21.83	0.24
3.667	0.24	9.750	10.81	15.833	0.94	21.92	0.24
3.750	0.24	9.833	10.81	15.917	0.94	22.00	0.24
3.833	0.24	9.917	10.81	16.000	0.94	22.08	0.24
3.917	0.24	10.000	10.81	16.083	0.94	22.17	0.24
4.000	0.24	10.083	10.81	16.167	0.94	22.25	0.24
4.083	0.24	10.167	10.81	16.250	0.94	22.33	0.24
4.167	0.24	10.250	10.81	16.333	0.47	22.42	0.24
4.250	0.24	10.333	3.06	16.417	0.47	22.50	0.24
4.333	1.41	10.417	3.06	16.500	0.47	22.58	0.24
4.417	1.41	10.500	3.06	16.583	0.47	22.67	0.24
4.500	1.41	10.583	3.06	16.667	0.47	22.75	0.24
4.583	1.41	10.667	3.06	16.750	0.47	22.83	0.24
4.667	1.41	10.750	3.06	16.833	0.47	22.92	0.24
4.750	1.41	10.833	3.06	16.917	0.47	23.00	0.24
4.833	1.41	10.917	3.06	17.000	0.47	23.08	0.24
4.917	1.41	11.000	3.06	17.083	0.47	23.17	0.24
5.000	1.41	11.083	3.06	17.167	0.47	23.25	0.24
5.083	1.41	11.167	3.06	17.250	0.47	23.33	0.24
5.167	1.41	11.250	3.06	17.333	0.47	23.42	0.24
5.250	1.41	11.333	3.06	17.417	0.47	23.50	0.24
5.333	1.41	11.417	3.06	17.500	0.47	23.58	0.24
5.417	1.41	11.500	3.06	17.583	0.47	23.67	0.24
5.500	1.41	11.583	3.06	17.667	0.47	23.75	0.24
5.583	1.41	11.667	3.06	17.750	0.47	23.83	0.24
5.667	1.41	11.750	3.06	17.833	0.47	23.92	0.24
5.750	1.41	11.833	3.06	17.917	0.47	24.00	0.24
5.833	1.41	11.917	3.06	18.000	0.47	24.08	0.24
5.917	1.41	12.000	3.06	18.083	0.47	24.17	0.24
6.000	1.41	12.083	3.06	18.167	0.47	24.25	0.24
6.083	1.41	12.167	3.06	18.250	0.47		

Max.Eff.Inten.(mm/hr)=	10.81	5.80	
over (min)	5.00	30.00	
Storage Coeff. (min)=	6.16 (ii)	28.21 (ii)	
Unit Hyd. Tpeak (min)=	5.00	30.00	
Unit Hyd. peak (cms)=	0.19	0.04	
			TOTALS
PEAK FLOW (cms)=	0.03	0.00	0.039 (iii)
TIME TO PEAK (hrs)=	9.75	10.33	10.25
RUNOFF VOLUME (mm)=	46.08	18.10	40.47
TOTAL RAINFALL (mm)=	47.08	47.08	47.08
RUNOFF COEFFICIENT =	0.98	0.38	0.86

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0259)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (0204):	1.45	0.039	10.25	40.47
	+ ID2= 2 (0260):	3.22	0.071	10.25	42.21
	ID = 3 (0259):	4.67	0.110	10.25	41.67

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\cdb8232d-79e6-461f-abf3-b53ae11525c8\c1d06699
Ptotal= 47.08 mm	Comments:

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	4.00	12.75	1.65	19.00	0.24
0.50	0.24	6.75	4.00	13.00	1.65	19.25	0.24
0.75	0.24	7.00	4.00	13.25	1.65	19.50	0.24
1.00	0.24	7.25	4.00	13.50	1.65	19.75	0.24
1.25	0.24	7.50	4.00	13.75	1.65	20.00	0.24
1.50	0.24	7.75	4.00	14.00	1.65	20.25	0.24
1.75	0.24	8.00	4.00	14.25	1.65	20.50	0.24
2.00	0.24	8.25	4.00	14.50	0.94	20.75	0.24
2.25	0.24	8.50	10.81	14.75	0.94	21.00	0.24
2.50	0.24	8.75	10.81	15.00	0.94	21.25	0.24
2.75	0.24	9.00	10.81	15.25	0.94	21.50	0.24
3.00	0.24	9.25	10.81	15.50	0.94	21.75	0.24
3.25	0.24	9.50	10.81	15.75	0.94	22.00	0.24
3.50	0.24	9.75	10.81	16.00	0.94	22.25	0.24
3.75	0.24	10.00	10.81	16.25	0.94	22.50	0.24
4.00	0.24	10.25	10.81	16.50	0.47	22.75	0.24
4.25	0.24	10.50	3.06	16.75	0.47	23.00	0.24
4.50	1.41	10.75	3.06	17.00	0.47	23.25	0.24
4.75	1.41	11.00	3.06	17.25	0.47	23.50	0.24
5.00	1.41	11.25	3.06	17.50	0.47	23.75	0.24
5.25	1.41	11.50	3.06	17.75	0.47	24.00	0.24
5.50	1.41	11.75	3.06	18.00	0.47	24.25	0.24
5.75	1.41	12.00	3.06	18.25	0.47		
6.00	1.41	12.25	3.06	18.50	0.24		
6.25	1.41	12.50	1.65	18.75	0.24		

CALIB / STANDHYD (0201) / ID= 1 DT= 5.0 min	Area (ha)= 5.27	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.22	0.05
Dep. Storage	(mm)=	1.00	5.00

Average Slope	(%)=	1.00	2.00
Length	(m)=	187.44	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	1.41	12.250	3.06	18.33	0.24
0.167	0.00	6.250	1.41	12.333	1.65	18.42	0.24
0.250	0.00	6.333	4.00	12.417	1.65	18.50	0.24
0.333	0.24	6.417	4.00	12.500	1.65	18.58	0.24
0.417	0.24	6.500	4.00	12.583	1.65	18.67	0.24
0.500	0.24	6.583	4.00	12.667	1.65	18.75	0.24
0.583	0.24	6.667	4.00	12.750	1.65	18.83	0.24
0.667	0.24	6.750	4.00	12.833	1.65	18.92	0.24
0.750	0.24	6.833	4.00	12.917	1.65	19.00	0.24
0.833	0.24	6.917	4.00	13.000	1.65	19.08	0.24
0.917	0.24	7.000	4.00	13.083	1.65	19.17	0.24
1.000	0.24	7.083	4.00	13.167	1.65	19.25	0.24
1.083	0.24	7.167	4.00	13.250	1.65	19.33	0.24
1.167	0.24	7.250	4.00	13.333	1.65	19.42	0.24
1.250	0.24	7.333	4.00	13.417	1.65	19.50	0.24
1.333	0.24	7.417	4.00	13.500	1.65	19.58	0.24
1.417	0.24	7.500	4.00	13.583	1.65	19.67	0.24
1.500	0.24	7.583	4.00	13.667	1.65	19.75	0.24
1.583	0.24	7.667	4.00	13.750	1.65	19.83	0.24
1.667	0.24	7.750	4.00	13.833	1.65	19.92	0.24
1.750	0.24	7.833	4.00	13.917	1.65	20.00	0.24
1.833	0.24	7.917	4.00	14.000	1.65	20.08	0.24
1.917	0.24	8.000	4.00	14.083	1.65	20.17	0.24
2.000	0.24	8.083	4.00	14.167	1.65	20.25	0.24
2.083	0.24	8.167	4.00	14.250	1.65	20.33	0.24
2.167	0.24	8.250	4.00	14.333	0.94	20.42	0.24
2.250	0.24	8.333	10.81	14.417	0.94	20.50	0.24
2.333	0.24	8.417	10.81	14.500	0.94	20.58	0.24
2.417	0.24	8.500	10.81	14.583	0.94	20.67	0.24
2.500	0.24	8.583	10.81	14.667	0.94	20.75	0.24
2.583	0.24	8.667	10.81	14.750	0.94	20.83	0.24
2.667	0.24	8.750	10.81	14.833	0.94	20.92	0.24
2.750	0.24	8.833	10.81	14.917	0.94	21.00	0.24
2.833	0.24	8.917	10.81	15.000	0.94	21.08	0.24
2.917	0.24	9.000	10.81	15.083	0.94	21.17	0.24
3.000	0.24	9.083	10.81	15.167	0.94	21.25	0.24
3.083	0.24	9.167	10.81	15.250	0.94	21.33	0.24
3.167	0.24	9.250	10.81	15.333	0.94	21.42	0.24
3.250	0.24	9.333	10.81	15.417	0.94	21.50	0.24
3.333	0.24	9.417	10.81	15.500	0.94	21.58	0.24
3.417	0.24	9.500	10.81	15.583	0.94	21.67	0.24
3.500	0.24	9.583	10.81	15.667	0.94	21.75	0.24
3.583	0.24	9.667	10.81	15.750	0.94	21.83	0.24
3.667	0.24	9.750	10.81	15.833	0.94	21.92	0.24
3.750	0.24	9.833	10.81	15.917	0.94	22.00	0.24
3.833	0.24	9.917	10.81	16.000	0.94	22.08	0.24
3.917	0.24	10.000	10.81	16.083	0.94	22.17	0.24
4.000	0.24	10.083	10.81	16.167	0.94	22.25	0.24
4.083	0.24	10.167	10.81	16.250	0.94	22.33	0.24
4.167	0.24	10.250	10.81	16.333	0.47	22.42	0.24
4.250	0.24	10.333	3.06	16.417	0.47	22.50	0.24
4.333	1.41	10.417	3.06	16.500	0.47	22.58	0.24
4.417	1.41	10.500	3.06	16.583	0.47	22.67	0.24
4.500	1.41	10.583	3.06	16.667	0.47	22.75	0.24
4.583	1.41	10.667	3.06	16.750	0.47	22.83	0.24
4.667	1.41	10.750	3.06	16.833	0.47	22.92	0.24
4.750	1.41	10.833	3.06	16.917	0.47	23.00	0.24
4.833	1.41	10.917	3.06	17.000	0.47	23.08	0.24
4.917	1.41	11.000	3.06	17.083	0.47	23.17	0.24
5.000	1.41	11.083	3.06	17.167	0.47	23.25	0.24
5.083	1.41	11.167	3.06	17.250	0.47	23.33	0.24
5.167	1.41	11.250	3.06	17.333	0.47	23.42	0.24
5.250	1.41	11.333	3.06	17.417	0.47	23.50	0.24
5.333	1.41	11.417	3.06	17.500	0.47	23.58	0.24
5.417	1.41	11.500	3.06	17.583	0.47	23.67	0.24
5.500	1.41	11.583	3.06	17.667	0.47	23.75	0.24
5.583	1.41	11.667	3.06	17.750	0.47	23.83	0.24
5.667	1.41	11.750	3.06	17.833	0.47	23.92	0.24
5.750	1.41	11.833	3.06	17.917	0.47	24.00	0.24
5.833	1.41	11.917	3.06	18.000	0.47	24.08	0.24
5.917	1.41	12.000	3.06	18.083	0.47	24.17	0.24
6.000	1.41	12.083	3.06	18.167	0.47	24.25	0.24
6.083	1.41	12.167	3.06	18.250	0.47		

Max.Eff.Inten.(mm/hr)=		10.81	5.96	
	over (min)	10.00	15.00	
Storage Coeff. (min)=		9.07 (ii)	11.80 (ii)	
Unit Hyd. Tpeak (min)=		10.00	15.00	
Unit Hyd. peak (cms)=		0.12	0.09	
				TOTALS
PEAK FLOW	(cms)=	0.16	0.00	0.157 (iii)
TIME TO PEAK	(hrs)=	10.25	10.25	10.25
RUNOFF VOLUME	(mm)=	46.08	18.10	45.80
TOTAL RAINFALL	(mm)=	47.08	47.08	47.08
RUNOFF COEFFICIENT	=	0.98	0.38	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0268)				
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1959	0.1883
	0.0980	0.0369	0.2939	0.4335

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)	5.270	0.157	10.25	45.80
OUTFLOW: ID= 1 (0268)	5.270	0.113	10.42	45.78

PEAK FLOW REDUCTION [Qout/Qin](%)= 71.78
TIME SHIFT OF PEAK FLOW (min)= 10.00
MAXIMUM STORAGE USED (ha.m.)= 0.0604

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\cdb8232d-79e6-461f-abf3-b53ae11525c8\c1d06699
Ptotal= 47.08 mm	Comments:

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	4.00	12.75	1.65	19.00	0.24
0.50	0.24	6.75	4.00	13.00	1.65	19.25	0.24
0.75	0.24	7.00	4.00	13.25	1.65	19.50	0.24
1.00	0.24	7.25	4.00	13.50	1.65	19.75	0.24
1.25	0.24	7.50	4.00	13.75	1.65	20.00	0.24
1.50	0.24	7.75	4.00	14.00	1.65	20.25	0.24
1.75	0.24	8.00	4.00	14.25	1.65	20.50	0.24
2.00	0.24	8.25	4.00	14.50	0.94	20.75	0.24
2.25	0.24	8.50	10.81	14.75	0.94	21.00	0.24
2.50	0.24	8.75	10.81	15.00	0.94	21.25	0.24
2.75	0.24	9.00	10.81	15.25	0.94	21.50	0.24
3.00	0.24	9.25	10.81	15.50	0.94	21.75	0.24
3.25	0.24	9.50	10.81	15.75	0.94	22.00	0.24
3.50	0.24	9.75	10.81	16.00	0.94	22.25	0.24
3.75	0.24	10.00	10.81	16.25	0.94	22.50	0.24
4.00	0.24	10.25	10.81	16.50	0.47	22.75	0.24
4.25	0.24	10.50	3.06	16.75	0.47	23.00	0.24
4.50	1.41	10.75	3.06	17.00	0.47	23.25	0.24
4.75	1.41	11.00	3.06	17.25	0.47	23.50	0.24
5.00	1.41	11.25	3.06	17.50	0.47	23.75	0.24
5.25	1.41	11.50	3.06	17.75	0.47	24.00	0.24
5.50	1.41	11.75	3.06	18.00	0.47	24.25	0.24
5.75	1.41	12.00	3.06	18.25	0.47		
6.00	1.41	12.25	3.06	18.50	0.24		
6.25	1.41	12.50	1.65	18.75	0.24		

CALIB	
STANDHYD (0202)	Area (ha)= 6.57
ID= 1 DT= 5.0 min	Total Imp(%)= 81.00 Dir. Conn.(%)= 81.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.32	1.25
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	209.28	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	1.41	12.250	3.06	18.33	0.24
0.167	0.00	6.250	1.41	12.333	1.65	18.42	0.24
0.250	0.00	6.333	4.00	12.417	1.65	18.50	0.24
0.333	0.24	6.417	4.00	12.500	1.65	18.58	0.24
0.417	0.24	6.500	4.00	12.583	1.65	18.67	0.24
0.500	0.24	6.583	4.00	12.667	1.65	18.75	0.24
0.583	0.24	6.667	4.00	12.750	1.65	18.83	0.24
0.667	0.24	6.750	4.00	12.833	1.65	18.92	0.24
0.750	0.24	6.833	4.00	12.917	1.65	19.00	0.24
0.833	0.24	6.917	4.00	13.000	1.65	19.08	0.24
0.917	0.24	7.000	4.00	13.083	1.65	19.17	0.24
1.000	0.24	7.083	4.00	13.167	1.65	19.25	0.24
1.083	0.24	7.167	4.00	13.250	1.65	19.33	0.24
1.167	0.24	7.250	4.00	13.333	1.65	19.42	0.24
1.250	0.24	7.333	4.00	13.417	1.65	19.50	0.24
1.333	0.24	7.417	4.00	13.500	1.65	19.58	0.24
1.417	0.24	7.500	4.00	13.583	1.65	19.67	0.24
1.500	0.24	7.583	4.00	13.667	1.65	19.75	0.24
1.583	0.24	7.667	4.00	13.750	1.65	19.83	0.24
1.667	0.24	7.750	4.00	13.833	1.65	19.92	0.24
1.750	0.24	7.833	4.00	13.917	1.65	20.00	0.24
1.833	0.24	7.917	4.00	14.000	1.65	20.08	0.24
1.917	0.24	8.000	4.00	14.083	1.65	20.17	0.24
2.000	0.24	8.083	4.00	14.167	1.65	20.25	0.24
2.083	0.24	8.167	4.00	14.250	1.65	20.33	0.24
2.167	0.24	8.250	4.00	14.333	0.94	20.42	0.24
2.250	0.24	8.333	10.81	14.417	0.94	20.50	0.24
2.333	0.24	8.417	10.81	14.500	0.94	20.58	0.24
2.417	0.24	8.500	10.81	14.583	0.94	20.67	0.24
2.500	0.24	8.583	10.81	14.667	0.94	20.75	0.24
2.583	0.24	8.667	10.81	14.750	0.94	20.83	0.24
2.667	0.24	8.750	10.81	14.833	0.94	20.92	0.24
2.750	0.24	8.833	10.81	14.917	0.94	21.00	0.24
2.833	0.24	8.917	10.81	15.000	0.94	21.08	0.24
2.917	0.24	9.000	10.81	15.083	0.94	21.17	0.24
3.000	0.24	9.083	10.81	15.167	0.94	21.25	0.24
3.083	0.24	9.167	10.81	15.250	0.94	21.33	0.24
3.167	0.24	9.250	10.81	15.333	0.94	21.42	0.24
3.250	0.24	9.333	10.81	15.417	0.94	21.50	0.24
3.333	0.24	9.417	10.81	15.500	0.94	21.58	0.24
3.417	0.24	9.500	10.81	15.583	0.94	21.67	0.24
3.500	0.24	9.583	10.81	15.667	0.94	21.75	0.24
3.583	0.24	9.667	10.81	15.750	0.94	21.83	0.24
3.667	0.24	9.750	10.81	15.833	0.94	21.92	0.24
3.750	0.24	9.833	10.81	15.917	0.94	22.00	0.24
3.833	0.24	9.917	10.81	16.000	0.94	22.08	0.24
3.917	0.24	10.000	10.81	16.083	0.94	22.17	0.24
4.000	0.24	10.083	10.81	16.167	0.94	22.25	0.24
4.083	0.24	10.167	10.81	16.250	0.94	22.33	0.24
4.167	0.24	10.250	10.81	16.333	0.47	22.42	0.24
4.250	0.24	10.333	3.06	16.417	0.47	22.50	0.24
4.333	1.41	10.417	3.06	16.500	0.47	22.58	0.24
4.417	1.41	10.500	3.06	16.583	0.47	22.67	0.24
4.500	1.41	10.583	3.06	16.667	0.47	22.75	0.24
4.583	1.41	10.667	3.06	16.750	0.47	22.83	0.24
4.667	1.41	10.750	3.06	16.833	0.47	22.92	0.24
4.750	1.41	10.833	3.06	16.917	0.47	23.00	0.24
4.833	1.41	10.917	3.06	17.000	0.47	23.08	0.24
4.917	1.41	11.000	3.06	17.083	0.47	23.17	0.24
5.000	1.41	11.083	3.06	17.167	0.47	23.25	0.24
5.083	1.41	11.167	3.06	17.250	0.47	23.33	0.24
5.167	1.41	11.250	3.06	17.333	0.47	23.42	0.24
5.250	1.41	11.333	3.06	17.417	0.47	23.50	0.24
5.333	1.41	11.417	3.06	17.500	0.47	23.58	0.24
5.417	1.41	11.500	3.06	17.583	0.47	23.67	0.24
5.500	1.41	11.583	3.06	17.667	0.47	23.75	0.24
5.583	1.41	11.667	3.06	17.750	0.47	23.83	0.24
5.667	1.41	11.750	3.06	17.833	0.47	23.92	0.24
5.750	1.41	11.833	3.06	17.917	0.47	24.00	0.24
5.833	1.41	11.917	3.06	18.000	0.47	24.08	0.24
5.917	1.41	12.000	3.06	18.083	0.47	24.17	0.24
6.000	1.41	12.083	3.06	18.167	0.47	24.25	0.24
6.083	1.41	12.167	3.06	18.250	0.47		

Max.Eff.Inten.(mm/hr)=		10.81	5.80
	over (min)	10.00	35.00
Storage Coeff. (min)=		9.69 (ii)	31.74 (ii)
Unit Hyd. Tpeak (min)=		10.00	35.00
Unit Hyd. peak (cms)=		0.11	0.03

```
                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.16         0.02          0.176 (iii)
     TIME TO PEAK    (hrs)=      10.25        10.42          10.25
     RUNOFF VOLUME    (mm)=      46.08        18.10          40.76
     TOTAL RAINFALL   (mm)=      47.08        47.08          47.08
     RUNOFF COEFFICIENT   =       0.98         0.38           0.87


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0262)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0202):     6.57   0.176    10.25    40.76
     + ID2= 2 (  0268):     5.27   0.113    10.42    45.78
       ================================================
       ID = 3 (  0262):    11.84   0.289    10.25    43.00

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0266)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0259):     4.67   0.110    10.25    41.67
     + ID2= 2 (  0262):    11.84   0.289    10.25    43.00
       ================================================
       ID = 3 (  0266):    16.51   0.399    10.25    42.62

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0263)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.2130      0.6563
                         0.0190     0.1773   |   0.2520      0.6883
                         0.0220     0.2128   |   0.2890      0.7150
                         0.0260     0.2888   |   0.2980      0.7450
                         0.0300     0.3648   |   0.3060      0.7700
                         0.0650     0.4586   |   0.3150      0.8127
                         0.1100     0.5155   |   0.3320      0.9290
                         0.1680     0.5503   |   0.3390      0.9767
                         0.1930     0.5804   |   0.3520      1.0680
                         0.2000     0.6048   |   0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0266)    16.510     0.399     10.25      42.62
   OUTFLOW: ID= 1 (  0263)    16.510     0.086     14.25      42.48

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 21.54
                  TIME SHIFT OF PEAK FLOW         (min)=240.00

                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.4850

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
-------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0206):     0.12   0.002    10.25    18.08
     + ID2= 2 (  0263):    16.51   0.086    14.25    42.48
       ================================================
       ID = 3 (  0261):    16.64   0.086    14.25    42.29

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
================================================================================
============================

       V    V   I    SSSSS  U   U    A    L              (v 5.0.2025)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\61e07864-22a5-4338-85cf-b82e1abf1f36\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\61e07864-22a5-4338-85cf-b82e1abf1f36\s


DATE: 07/06/2020                          TIME: 04:38:42

USER:



COMMENTS: _____________________________________________________________


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  ********************************************
  ** SIMULATION : 25 Year 24 Hour AES          **
  ********************************************


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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              cdb8232d-79e6-461f-abf3-b53ae11525c8\6ffa8b7e
```

Ptotal= 79.70 mm	Comments:

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	6.77	12.75	2.79	19.00	0.40
0.50	0.40	6.75	6.77	13.00	2.79	19.25	0.40
0.75	0.40	7.00	6.77	13.25	2.79	19.50	0.40
1.00	0.40	7.25	6.77	13.50	2.79	19.75	0.40
1.25	0.40	7.50	6.77	13.75	2.79	20.00	0.40
1.50	0.40	7.75	6.77	14.00	2.79	20.25	0.40
1.75	0.40	8.00	6.77	14.25	2.79	20.50	0.40
2.00	0.40	8.25	6.77	14.50	1.59	20.75	0.40
2.25	0.40	8.50	18.33	14.75	1.59	21.00	0.40
2.50	0.40	8.75	18.33	15.00	1.59	21.25	0.40
2.75	0.40	9.00	18.33	15.25	1.59	21.50	0.40
3.00	0.40	9.25	18.33	15.50	1.59	21.75	0.40
3.25	0.40	9.50	18.33	15.75	1.59	22.00	0.40
3.50	0.40	9.75	18.33	16.00	1.59	22.25	0.40
3.75	0.40	10.00	18.33	16.25	1.59	22.50	0.40
4.00	0.40	10.25	18.33	16.50	0.80	22.75	0.40
4.25	0.40	10.50	5.18	16.75	0.80	23.00	0.40
4.50	2.39	10.75	5.18	17.00	0.80	23.25	0.40
4.75	2.39	11.00	5.18	17.25	0.80	23.50	0.40
5.00	2.39	11.25	5.18	17.50	0.80	23.75	0.40
5.25	2.39	11.50	5.18	17.75	0.80	24.00	0.40
5.50	2.39	11.75	5.18	18.00	0.80	24.25	0.40
5.75	2.39	12.00	5.18	18.25	0.80		
6.00	2.39	12.25	5.18	18.50	0.40		
6.25	2.39	12.50	2.79	18.75	0.40		

CALIB	
NASHYD (0206)	Area (ha)= 0.12 Curve Number (CN)= 82.0
ID= 1 DT= 5.0 min	Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.25

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	2.39	12.250	5.18	18.33	0.40
0.167	0.00	6.250	2.39	12.333	2.79	18.42	0.40
0.250	0.00	6.333	6.77	12.417	2.79	18.50	0.40
0.333	0.40	6.417	6.77	12.500	2.79	18.58	0.40
0.417	0.40	6.500	6.77	12.583	2.79	18.67	0.40
0.500	0.40	6.583	6.77	12.667	2.79	18.75	0.40
0.583	0.40	6.667	6.77	12.750	2.79	18.83	0.40
0.667	0.40	6.750	6.77	12.833	2.79	18.92	0.40
0.750	0.40	6.833	6.77	12.917	2.79	19.00	0.40
0.833	0.40	6.917	6.77	13.000	2.79	19.08	0.40
0.917	0.40	7.000	6.77	13.083	2.79	19.17	0.40
1.000	0.40	7.083	6.77	13.167	2.79	19.25	0.40
1.083	0.40	7.167	6.77	13.250	2.79	19.33	0.40
1.167	0.40	7.250	6.77	13.333	2.79	19.42	0.40
1.250	0.40	7.333	6.77	13.417	2.79	19.50	0.40
1.333	0.40	7.417	6.77	13.500	2.79	19.58	0.40
1.417	0.40	7.500	6.77	13.583	2.79	19.67	0.40
1.500	0.40	7.583	6.77	13.667	2.79	19.75	0.40
1.583	0.40	7.667	6.77	13.750	2.79	19.83	0.40
1.667	0.40	7.750	6.77	13.833	2.79	19.92	0.40
1.750	0.40	7.833	6.77	13.917	2.79	20.00	0.40
1.833	0.40	7.917	6.77	14.000	2.79	20.08	0.40
1.917	0.40	8.000	6.77	14.083	2.79	20.17	0.40
2.000	0.40	8.083	6.77	14.167	2.79	20.25	0.40
2.083	0.40	8.167	6.77	14.250	2.79	20.33	0.40
2.167	0.40	8.250	6.77	14.333	1.59	20.42	0.40
2.250	0.40	8.333	18.33	14.417	1.59	20.50	0.40
2.333	0.40	8.417	18.33	14.500	1.59	20.58	0.40
2.417	0.40	8.500	18.33	14.583	1.59	20.67	0.40
2.500	0.40	8.583	18.33	14.667	1.59	20.75	0.40
2.583	0.40	8.667	18.33	14.750	1.59	20.83	0.40
2.667	0.40	8.750	18.33	14.833	1.59	20.92	0.40
2.750	0.40	8.833	18.33	14.917	1.59	21.00	0.40
2.833	0.40	8.917	18.33	15.000	1.59	21.08	0.40
2.917	0.40	9.000	18.33	15.083	1.59	21.17	0.40
3.000	0.40	9.083	18.33	15.167	1.59	21.25	0.40
3.083	0.40	9.167	18.33	15.250	1.59	21.33	0.40
3.167	0.40	9.250	18.33	15.333	1.59	21.42	0.40
3.250	0.40	9.333	18.33	15.417	1.59	21.50	0.40
3.333	0.40	9.417	18.33	15.500	1.59	21.58	0.40
3.417	0.40	9.500	18.33	15.583	1.59	21.67	0.40
3.500	0.40	9.583	18.33	15.667	1.59	21.75	0.40
3.583	0.40	9.667	18.33	15.750	1.59	21.83	0.40
3.667	0.40	9.750	18.33	15.833	1.59	21.92	0.40
3.750	0.40	9.833	18.33	15.917	1.59	22.00	0.40
3.833	0.40	9.917	18.33	16.000	1.59	22.08	0.40
3.917	0.40	10.000	18.33	16.083	1.59	22.17	0.40
4.000	0.40	10.083	18.33	16.167	1.59	22.25	0.40
4.083	0.40	10.167	18.33	16.250	1.59	22.33	0.40
4.167	0.40	10.250	18.33	16.333	0.80	22.42	0.40
4.250	0.40	10.333	5.18	16.417	0.80	22.50	0.40
4.333	2.39	10.417	5.18	16.500	0.80	22.58	0.40
4.417	2.39	10.500	5.18	16.583	0.80	22.67	0.40
4.500	2.39	10.583	5.18	16.667	0.80	22.75	0.40
4.583	2.39	10.667	5.18	16.750	0.80	22.83	0.40
4.667	2.39	10.750	5.18	16.833	0.80	22.92	0.40
4.750	2.39	10.833	5.18	16.917	0.80	23.00	0.40
4.833	2.39	10.917	5.18	17.000	0.80	23.08	0.40
4.917	2.39	11.000	5.18	17.083	0.80	23.17	0.40
5.000	2.39	11.083	5.18	17.167	0.80	23.25	0.40
5.083	2.39	11.167	5.18	17.250	0.80	23.33	0.40
5.167	2.39	11.250	5.18	17.333	0.80	23.42	0.40
5.250	2.39	11.333	5.18	17.417	0.80	23.50	0.40
5.333	2.39	11.417	5.18	17.500	0.80	23.58	0.40
5.417	2.39	11.500	5.18	17.583	0.80	23.67	0.40
5.500	2.39	11.583	5.18	17.667	0.80	23.75	0.40
5.583	2.39	11.667	5.18	17.750	0.80	23.83	0.40
5.667	2.39	11.750	5.18	17.833	0.80	23.92	0.40
5.750	2.39	11.833	5.18	17.917	0.80	24.00	0.40
5.833	2.39	11.917	5.18	18.000	0.80	24.08	0.40
5.917	2.39	12.000	5.18	18.083	0.80	24.17	0.40
6.000	2.39	12.083	5.18	18.167	0.80	24.25	0.40
6.083	2.39	12.167	5.18	18.250	0.80		

Unit Hyd Qpeak (cms)= 0.019

PEAK FLOW (cms)= 0.004 (i)
TIME TO PEAK (hrs)= 10.250
RUNOFF VOLUME (mm)= 42.733
TOTAL RAINFALL (mm)= 79.700
RUNOFF COEFFICIENT = 0.536

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              cdb8232d-79e6-461f-abf3-b53ae11525c8\6ffa8b7e
| Ptotal= 79.70 mm |    Comments:
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	6.77	12.75	2.79	19.00	0.40
0.50	0.40	6.75	6.77	13.00	2.79	19.25	0.40
0.75	0.40	7.00	6.77	13.25	2.79	19.50	0.40
1.00	0.40	7.25	6.77	13.50	2.79	19.75	0.40
1.25	0.40	7.50	6.77	13.75	2.79	20.00	0.40
1.50	0.40	7.75	6.77	14.00	2.79	20.25	0.40
1.75	0.40	8.00	6.77	14.25	2.79	20.50	0.40
2.00	0.40	8.25	6.77	14.50	1.59	20.75	0.40
2.25	0.40	8.50	18.33	14.75	1.59	21.00	0.40
2.50	0.40	8.75	18.33	15.00	1.59	21.25	0.40
2.75	0.40	9.00	18.33	15.25	1.59	21.50	0.40
3.00	0.40	9.25	18.33	15.50	1.59	21.75	0.40
3.25	0.40	9.50	18.33	15.75	1.59	22.00	0.40
3.50	0.40	9.75	18.33	16.00	1.59	22.25	0.40
3.75	0.40	10.00	18.33	16.25	1.59	22.50	0.40
4.00	0.40	10.25	18.33	16.50	0.80	22.75	0.40
4.25	0.40	10.50	5.18	16.75	0.80	23.00	0.40
4.50	2.39	10.75	5.18	17.00	0.80	23.25	0.40
4.75	2.39	11.00	5.18	17.25	0.80	23.50	0.40
5.00	2.39	11.25	5.18	17.50	0.80	23.75	0.40
5.25	2.39	11.50	5.18	17.75	0.80	24.00	0.40
5.50	2.39	11.75	5.18	18.00	0.80	24.25	0.40
5.75	2.39	12.00	5.18	18.25	0.80		
6.00	2.39	12.25	5.18	18.50	0.40		
6.25	2.39	12.50	2.79	18.75	0.40		

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--------------------
| CALIB            |
| STANDHYD (  0205)|   Area    (ha)=   1.12
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.11	0.01
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	86.60	40.00
Mannings n	=	0.013	0.250

```
        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	2.39	12.250	5.18	18.33	0.40
0.167	0.00	6.250	2.39	12.333	2.79	18.42	0.40
0.250	0.00	6.333	6.77	12.417	2.79	18.50	0.40
0.333	0.40	6.417	6.77	12.500	2.79	18.58	0.40
0.417	0.40	6.500	6.77	12.583	2.79	18.67	0.40
0.500	0.40	6.583	6.77	12.667	2.79	18.75	0.40
0.583	0.40	6.667	6.77	12.750	2.79	18.83	0.40
0.667	0.40	6.750	6.77	12.833	2.79	18.92	0.40
0.750	0.40	6.833	6.77	12.917	2.79	19.00	0.40
0.833	0.40	6.917	6.77	13.000	2.79	19.08	0.40
0.917	0.40	7.000	6.77	13.083	2.79	19.17	0.40
1.000	0.40	7.083	6.77	13.167	2.79	19.25	0.40
1.083	0.40	7.167	6.77	13.250	2.79	19.33	0.40
1.167	0.40	7.250	6.77	13.333	2.79	19.42	0.40
1.250	0.40	7.333	6.77	13.417	2.79	19.50	0.40
1.333	0.40	7.417	6.77	13.500	2.79	19.58	0.40
1.417	0.40	7.500	6.77	13.583	2.79	19.67	0.40
1.500	0.40	7.583	6.77	13.667	2.79	19.75	0.40
1.583	0.40	7.667	6.77	13.750	2.79	19.83	0.40
1.667	0.40	7.750	6.77	13.833	2.79	19.92	0.40
1.750	0.40	7.833	6.77	13.917	2.79	20.00	0.40
1.833	0.40	7.917	6.77	14.000	2.79	20.08	0.40
1.917	0.40	8.000	6.77	14.083	2.79	20.17	0.40
2.000	0.40	8.083	6.77	14.167	2.79	20.25	0.40
2.083	0.40	8.167	6.77	14.250	2.79	20.33	0.40
2.167	0.40	8.250	6.77	14.333	1.59	20.42	0.40
2.250	0.40	8.333	18.33	14.417	1.59	20.50	0.40
2.333	0.40	8.417	18.33	14.500	1.59	20.58	0.40
2.417	0.40	8.500	18.33	14.583	1.59	20.67	0.40
2.500	0.40	8.583	18.33	14.667	1.59	20.75	0.40
2.583	0.40	8.667	18.33	14.750	1.59	20.83	0.40
2.667	0.40	8.750	18.33	14.833	1.59	20.92	0.40
2.750	0.40	8.833	18.33	14.917	1.59	21.00	0.40
2.833	0.40	8.917	18.33	15.000	1.59	21.08	0.40
2.917	0.40	9.000	18.33	15.083	1.59	21.17	0.40
3.000	0.40	9.083	18.33	15.167	1.59	21.25	0.40
3.083	0.40	9.167	18.33	15.250	1.59	21.33	0.40
3.167	0.40	9.250	18.33	15.333	1.59	21.42	0.40
3.250	0.40	9.333	18.33	15.417	1.59	21.50	0.40
3.333	0.40	9.417	18.33	15.500	1.59	21.58	0.40
3.417	0.40	9.500	18.33	15.583	1.59	21.67	0.40
3.500	0.40	9.583	18.33	15.667	1.59	21.75	0.40
3.583	0.40	9.667	18.33	15.750	1.59	21.83	0.40
3.667	0.40	9.750	18.33	15.833	1.59	21.92	0.40
3.750	0.40	9.833	18.33	15.917	1.59	22.00	0.40
3.833	0.40	9.917	18.33	16.000	1.59	22.08	0.40
3.917	0.40	10.000	18.33	16.083	1.59	22.17	0.40
4.000	0.40	10.083	18.33	16.167	1.59	22.25	0.40
4.083	0.40	10.167	18.33	16.250	1.59	22.33	0.40
4.167	0.40	10.250	18.33	16.333	0.80	22.42	0.40
4.250	0.40	10.333	5.18	16.417	0.80	22.50	0.40
4.333	2.39	10.417	5.18	16.500	0.80	22.58	0.40
4.417	2.39	10.500	5.18	16.583	0.80	22.67	0.40
4.500	2.39	10.583	5.18	16.667	0.80	22.75	0.40
4.583	2.39	10.667	5.18	16.750	0.80	22.83	0.40
4.667	2.39	10.750	5.18	16.833	0.80	22.92	0.40
4.750	2.39	10.833	5.18	16.917	0.80	23.00	0.40
4.833	2.39	10.917	5.18	17.000	0.80	23.08	0.40
4.917	2.39	11.000	5.18	17.083	0.80	23.17	0.40
5.000	2.39	11.083	5.18	17.167	0.80	23.25	0.40
5.083	2.39	11.167	5.18	17.250	0.80	23.33	0.40
5.167	2.39	11.250	5.18	17.333	0.80	23.42	0.40
5.250	2.39	11.333	5.18	17.417	0.80	23.50	0.40
5.333	2.39	11.417	5.18	17.500	0.80	23.58	0.40
5.417	2.39	11.500	5.18	17.583	0.80	23.67	0.40
5.500	2.39	11.583	5.18	17.667	0.80	23.75	0.40
5.583	2.39	11.667	5.18	17.750	0.80	23.83	0.40
5.667	2.39	11.750	5.18	17.833	0.80	23.92	0.40
5.750	2.39	11.833	5.18	17.917	0.80	24.00	0.40
5.833	2.39	11.917	5.18	18.000	0.80	24.08	0.40
5.917	2.39	12.000	5.18	18.083	0.80	24.17	0.40
6.000	2.39	12.083	5.18	18.167	0.80	24.25	0.40

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               6.083    2.39 |12.167    5.18 |18.250    0.80 |

     Max.Eff.Inten.(mm/hr)=      18.33        13.24
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       4.62 (ii)    6.83 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.22         0.14
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.06         0.00          0.057 (iii)
     TIME TO PEAK    (hrs)=       9.50        10.25          10.25
     RUNOFF VOLUME    (mm)=      78.70        42.77          78.34
     TOTAL RAINFALL   (mm)=      79.70        79.70          79.70
     RUNOFF COEFFICIENT   =       0.99         0.54           0.98

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  0256)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0470      0.0750

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0205)     1.125      0.057     10.25      78.34
   OUTFLOW: ID= 1 (  0256)     1.125      0.026     10.33      77.98

                 PEAK   FLOW   REDUCTION [Qout/Qin](%)= 46.37
                 TIME SHIFT OF PEAK FLOW         (min)=  5.00
                 MAXIMUM  STORAGE   USED       (ha.m.)=  0.0423

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              cdb8232d-79e6-461f-abf3-b53ae11525c8\6ffa8b7e
| Ptotal= 79.70 mm |    Comments:
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  6.50    6.77 | 12.75    2.79 | 19.00    0.40
                0.50    0.40 |  6.75    6.77 | 13.00    2.79 | 19.25    0.40
                0.75    0.40 |  7.00    6.77 | 13.25    2.79 | 19.50    0.40
                1.00    0.40 |  7.25    6.77 | 13.50    2.79 | 19.75    0.40
                1.25    0.40 |  7.50    6.77 | 13.75    2.79 | 20.00    0.40
                1.50    0.40 |  7.75    6.77 | 14.00    2.79 | 20.25    0.40
                1.75    0.40 |  8.00    6.77 | 14.25    2.79 | 20.50    0.40
                2.00    0.40 |  8.25    6.77 | 14.50    1.59 | 20.75    0.40
                2.25    0.40 |  8.50   18.33 | 14.75    1.59 | 21.00    0.40
                2.50    0.40 |  8.75   18.33 | 15.00    1.59 | 21.25    0.40
                2.75    0.40 |  9.00   18.33 | 15.25    1.59 | 21.50    0.40
                3.00    0.40 |  9.25   18.33 | 15.50    1.59 | 21.75    0.40
                3.25    0.40 |  9.50   18.33 | 15.75    1.59 | 22.00    0.40
                3.50    0.40 |  9.75   18.33 | 16.00    1.59 | 22.25    0.40
                3.75    0.40 | 10.00   18.33 | 16.25    1.59 | 22.50    0.40
                4.00    0.40 | 10.25   18.33 | 16.50    0.80 | 22.75    0.40
                4.25    0.40 | 10.50    5.18 | 16.75    0.80 | 23.00    0.40
                4.50    2.39 | 10.75    5.18 | 17.00    0.80 | 23.25    0.40
                4.75    2.39 | 11.00    5.18 | 17.25    0.80 | 23.50    0.40
                5.00    2.39 | 11.25    5.18 | 17.50    0.80 | 23.75    0.40
                5.25    2.39 | 11.50    5.18 | 17.75    0.80 | 24.00    0.40
                5.50    2.39 | 11.75    5.18 | 18.00    0.80 | 24.25    0.40
                5.75    2.39 | 12.00    5.18 | 18.25    0.80 |
                6.00    2.39 | 12.25    5.18 | 18.50    0.40 |
                6.25    2.39 | 12.50    2.79 | 18.75    0.40 |

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| CALIB            |
| STANDHYD (  0203)|   Area    (ha)=   2.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
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                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.68          0.42
     Dep. Storage     (mm)=       1.00          5.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=     118.18         40.00
     Mannings n           =      0.013         0.250

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    0.00 | 6.167    2.39 |12.250    5.18 | 18.33    0.40
               0.167    0.00 | 6.250    2.39 |12.333    2.79 | 18.42    0.40
               0.250    0.00 | 6.333    6.77 |12.417    2.79 | 18.50    0.40
               0.333    0.40 | 6.417    6.77 |12.500    2.79 | 18.58    0.40
               0.417    0.40 | 6.500    6.77 |12.583    2.79 | 18.67    0.40
               0.500    0.40 | 6.583    6.77 |12.667    2.79 | 18.75    0.40
               0.583    0.40 | 6.667    6.77 |12.750    2.79 | 18.83    0.40
               0.667    0.40 | 6.750    6.77 |12.833    2.79 | 18.92    0.40
               0.750    0.40 | 6.833    6.77 |12.917    2.79 | 19.00    0.40
               0.833    0.40 | 6.917    6.77 |13.000    2.79 | 19.08    0.40
               0.917    0.40 | 7.000    6.77 |13.083    2.79 | 19.17    0.40
               1.000    0.40 | 7.083    6.77 |13.167    2.79 | 19.25    0.40
               1.083    0.40 | 7.167    6.77 |13.250    2.79 | 19.33    0.40
               1.167    0.40 | 7.250    6.77 |13.333    2.79 | 19.42    0.40
               1.250    0.40 | 7.333    6.77 |13.417    2.79 | 19.50    0.40
               1.333    0.40 | 7.417    6.77 |13.500    2.79 | 19.58    0.40
               1.417    0.40 | 7.500    6.77 |13.583    2.79 | 19.67    0.40
               1.500    0.40 | 7.583    6.77 |13.667    2.79 | 19.75    0.40
               1.583    0.40 | 7.667    6.77 |13.750    2.79 | 19.83    0.40
               1.667    0.40 | 7.750    6.77 |13.833    2.79 | 19.92    0.40
               1.750    0.40 | 7.833    6.77 |13.917    2.79 | 20.00    0.40
               1.833    0.40 | 7.917    6.77 |14.000    2.79 | 20.08    0.40
               1.917    0.40 | 8.000    6.77 |14.083    2.79 | 20.17    0.40
               2.000    0.40 | 8.083    6.77 |14.167    2.79 | 20.25    0.40
               2.083    0.40 | 8.167    6.77 |14.250    2.79 | 20.33    0.40
               2.167    0.40 | 8.250    6.77 |14.333    1.59 | 20.42    0.40
               2.250    0.40 | 8.333   18.33 |14.417    1.59 | 20.50    0.40
               2.333    0.40 | 8.417   18.33 |14.500    1.59 | 20.58    0.40
               2.417    0.40 | 8.500   18.33 |14.583    1.59 | 20.67    0.40
               2.500    0.40 | 8.583   18.33 |14.667    1.59 | 20.75    0.40
               2.583    0.40 | 8.667   18.33 |14.750    1.59 | 20.83    0.40
               2.667    0.40 | 8.750   18.33 |14.833    1.59 | 20.92    0.40
               2.750    0.40 | 8.833   18.33 |14.917    1.59 | 21.00    0.40
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2.833	0.40	8.917	18.33	15.000	1.59	21.08	0.40
2.917	0.40	9.000	18.33	15.083	1.59	21.17	0.40
3.000	0.40	9.083	18.33	15.167	1.59	21.25	0.40
3.083	0.40	9.167	18.33	15.250	1.59	21.33	0.40
3.167	0.40	9.250	18.33	15.333	1.59	21.42	0.40
3.250	0.40	9.333	18.33	15.417	1.59	21.50	0.40
3.333	0.40	9.417	18.33	15.500	1.59	21.58	0.40
3.417	0.40	9.500	18.33	15.583	1.59	21.67	0.40
3.500	0.40	9.583	18.33	15.667	1.59	21.75	0.40
3.583	0.40	9.667	18.33	15.750	1.59	21.83	0.40
3.667	0.40	9.750	18.33	15.833	1.59	21.92	0.40
3.750	0.40	9.833	18.33	15.917	1.59	22.00	0.40
3.833	0.40	9.917	18.33	16.000	1.59	22.08	0.40
3.917	0.40	10.000	18.33	16.083	1.59	22.17	0.40
4.000	0.40	10.083	18.33	16.167	1.59	22.25	0.40
4.083	0.40	10.167	18.33	16.250	1.59	22.33	0.40
4.167	0.40	10.250	18.33	16.333	0.80	22.42	0.40
4.250	0.40	10.333	5.18	16.417	0.80	22.50	0.40
4.333	2.39	10.417	5.18	16.500	0.80	22.58	0.40
4.417	2.39	10.500	5.18	16.583	0.80	22.67	0.40
4.500	2.39	10.583	5.18	16.667	0.80	22.75	0.40
4.583	2.39	10.667	5.18	16.750	0.80	22.83	0.40
4.667	2.39	10.750	5.18	16.833	0.80	22.92	0.40
4.750	2.39	10.833	5.18	16.917	0.80	23.00	0.40
4.833	2.39	10.917	5.18	17.000	0.80	23.08	0.40
4.917	2.39	11.000	5.18	17.083	0.80	23.17	0.40
5.000	2.39	11.083	5.18	17.167	0.80	23.25	0.40
5.083	2.39	11.167	5.18	17.250	0.80	23.33	0.40
5.167	2.39	11.250	5.18	17.333	0.80	23.42	0.40
5.250	2.39	11.333	5.18	17.417	0.80	23.50	0.40
5.333	2.39	11.417	5.18	17.500	0.80	23.58	0.40
5.417	2.39	11.500	5.18	17.583	0.80	23.67	0.40
5.500	2.39	11.583	5.18	17.667	0.80	23.75	0.40
5.583	2.39	11.667	5.18	17.750	0.80	23.83	0.40
5.667	2.39	11.750	5.18	17.833	0.80	23.92	0.40
5.750	2.39	11.833	5.18	17.917	0.80	24.00	0.40
5.833	2.39	11.917	5.18	18.000	0.80	24.08	0.40
5.917	2.39	12.000	5.18	18.083	0.80	24.17	0.40
6.000	2.39	12.083	5.18	18.167	0.80	24.25	0.40
6.083	2.39	12.167	5.18	18.250	0.80		

Max.Eff.Inten.(mm/hr)=	18.33	13.09	
over (min)	5.00	25.00	
Storage Coeff. (min)=	5.57 (ii)	21.49 (ii)	
Unit Hyd. Tpeak (min)=	5.00	25.00	
Unit Hyd. peak (cms)=	0.20	0.05	
			TOTALS
PEAK FLOW (cms)=	0.09	0.01	0.100 (iii)
TIME TO PEAK (hrs)=	9.50	10.25	10.25
RUNOFF VOLUME (mm)=	78.70	42.77	71.51
TOTAL RAINFALL (mm)=	79.70	79.70	79.70
RUNOFF COEFFICIENT =	0.99	0.54	0.90

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0260)	

1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0203):	2.10	0.100	10.25	71.51
+ ID2= 2 (0256):	1.12	0.026	10.33	77.98
ID = 3 (0260):	3.22	0.126	10.25	73.77

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\cdb8232d-79e6-461f-abf3-b53ae11525c8\6ffa8b7e
Ptotal= 79.70 mm	Comments:

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	6.77	12.75	2.79	19.00	0.40
0.50	0.40	6.75	6.77	13.00	2.79	19.25	0.40
0.75	0.40	7.00	6.77	13.25	2.79	19.50	0.40
1.00	0.40	7.25	6.77	13.50	2.79	19.75	0.40
1.25	0.40	7.50	6.77	13.75	2.79	20.00	0.40
1.50	0.40	7.75	6.77	14.00	2.79	20.25	0.40
1.75	0.40	8.00	6.77	14.25	2.79	20.50	0.40
2.00	0.40	8.25	6.77	14.50	1.59	20.75	0.40
2.25	0.40	8.50	18.33	14.75	1.59	21.00	0.40
2.50	0.40	8.75	18.33	15.00	1.59	21.25	0.40
2.75	0.40	9.00	18.33	15.25	1.59	21.50	0.40
3.00	0.40	9.25	18.33	15.50	1.59	21.75	0.40
3.25	0.40	9.50	18.33	15.75	1.59	22.00	0.40
3.50	0.40	9.75	18.33	16.00	1.59	22.25	0.40
3.75	0.40	10.00	18.33	16.25	1.59	22.50	0.40
4.00	0.40	10.25	18.33	16.50	0.80	22.75	0.40
4.25	0.40	10.50	5.18	16.75	0.80	23.00	0.40
4.50	2.39	10.75	5.18	17.00	0.80	23.25	0.40
4.75	2.39	11.00	5.18	17.25	0.80	23.50	0.40
5.00	2.39	11.25	5.18	17.50	0.80	23.75	0.40
5.25	2.39	11.50	5.18	17.75	0.80	24.00	0.40
5.50	2.39	11.75	5.18	18.00	0.80	24.25	0.40
5.75	2.39	12.00	5.18	18.25	0.80		
6.00	2.39	12.25	5.18	18.50	0.40		
6.25	2.39	12.50	2.79	18.75	0.40		

CALIB	
STANDHYD (0204)	Area (ha)= 1.45
ID= 1 DT= 5.0 min	Total Imp(%)= 80.00 Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.16	0.29
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	98.32	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN

hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.00	6.167	2.39	12.250	5.18	18.33	0.40
0.167	0.00	6.250	2.39	12.333	2.79	18.42	0.40
0.250	0.00	6.333	6.77	12.417	2.79	18.50	0.40
0.333	0.40	6.417	6.77	12.500	2.79	18.58	0.40
0.417	0.40	6.500	6.77	12.583	2.79	18.67	0.40
0.500	0.40	6.583	6.77	12.667	2.79	18.75	0.40
0.583	0.40	6.667	6.77	12.750	2.79	18.83	0.40
0.667	0.40	6.750	6.77	12.833	2.79	18.92	0.40
0.750	0.40	6.833	6.77	12.917	2.79	19.00	0.40
0.833	0.40	6.917	6.77	13.000	2.79	19.08	0.40
0.917	0.40	7.000	6.77	13.083	2.79	19.17	0.40
1.000	0.40	7.083	6.77	13.167	2.79	19.25	0.40
1.083	0.40	7.167	6.77	13.250	2.79	19.33	0.40
1.167	0.40	7.250	6.77	13.333	2.79	19.42	0.40
1.250	0.40	7.333	6.77	13.417	2.79	19.50	0.40
1.333	0.40	7.417	6.77	13.500	2.79	19.58	0.40
1.417	0.40	7.500	6.77	13.583	2.79	19.67	0.40
1.500	0.40	7.583	6.77	13.667	2.79	19.75	0.40
1.583	0.40	7.667	6.77	13.750	2.79	19.83	0.40
1.667	0.40	7.750	6.77	13.833	2.79	19.92	0.40
1.750	0.40	7.833	6.77	13.917	2.79	20.00	0.40
1.833	0.40	7.917	6.77	14.000	2.79	20.08	0.40
1.917	0.40	8.000	6.77	14.083	2.79	20.17	0.40
2.000	0.40	8.083	6.77	14.167	2.79	20.25	0.40
2.083	0.40	8.167	6.77	14.250	2.79	20.33	0.40
2.167	0.40	8.250	6.77	14.333	1.59	20.42	0.40
2.250	0.40	8.333	18.33	14.417	1.59	20.50	0.40
2.333	0.40	8.417	18.33	14.500	1.59	20.58	0.40
2.417	0.40	8.500	18.33	14.583	1.59	20.67	0.40
2.500	0.40	8.583	18.33	14.667	1.59	20.75	0.40
2.583	0.40	8.667	18.33	14.750	1.59	20.83	0.40
2.667	0.40	8.750	18.33	14.833	1.59	20.92	0.40
2.750	0.40	8.833	18.33	14.917	1.59	21.00	0.40
2.833	0.40	8.917	18.33	15.000	1.59	21.08	0.40
2.917	0.40	9.000	18.33	15.083	1.59	21.17	0.40
3.000	0.40	9.083	18.33	15.167	1.59	21.25	0.40
3.083	0.40	9.167	18.33	15.250	1.59	21.33	0.40
3.167	0.40	9.250	18.33	15.333	1.59	21.42	0.40
3.250	0.40	9.333	18.33	15.417	1.59	21.50	0.40
3.333	0.40	9.417	18.33	15.500	1.59	21.58	0.40
3.417	0.40	9.500	18.33	15.583	1.59	21.67	0.40
3.500	0.40	9.583	18.33	15.667	1.59	21.75	0.40
3.583	0.40	9.667	18.33	15.750	1.59	21.83	0.40
3.667	0.40	9.750	18.33	15.833	1.59	21.92	0.40
3.750	0.40	9.833	18.33	15.917	1.59	22.00	0.40
3.833	0.40	9.917	18.33	16.000	1.59	22.08	0.40
3.917	0.40	10.000	18.33	16.083	1.59	22.17	0.40
4.000	0.40	10.083	18.33	16.167	1.59	22.25	0.40
4.083	0.40	10.167	18.33	16.250	1.59	22.33	0.40
4.167	0.40	10.250	18.33	16.333	0.80	22.42	0.40
4.250	0.40	10.333	5.18	16.417	0.80	22.50	0.40
4.333	2.39	10.417	5.18	16.500	0.80	22.58	0.40
4.417	2.39	10.500	5.18	16.583	0.80	22.67	0.40
4.500	2.39	10.583	5.18	16.667	0.80	22.75	0.40
4.583	2.39	10.667	5.18	16.750	0.80	22.83	0.40
4.667	2.39	10.750	5.18	16.833	0.80	22.92	0.40
4.750	2.39	10.833	5.18	16.917	0.80	23.00	0.40
4.833	2.39	10.917	5.18	17.000	0.80	23.08	0.40
4.917	2.39	11.000	5.18	17.083	0.80	23.17	0.40
5.000	2.39	11.083	5.18	17.167	0.80	23.25	0.40
5.083	2.39	11.167	5.18	17.250	0.80	23.33	0.40
5.167	2.39	11.250	5.18	17.333	0.80	23.42	0.40
5.250	2.39	11.333	5.18	17.417	0.80	23.50	0.40
5.333	2.39	11.417	5.18	17.500	0.80	23.58	0.40
5.417	2.39	11.500	5.18	17.583	0.80	23.67	0.40
5.500	2.39	11.583	5.18	17.667	0.80	23.75	0.40
5.583	2.39	11.667	5.18	17.750	0.80	23.83	0.40
5.667	2.39	11.750	5.18	17.833	0.80	23.92	0.40
5.750	2.39	11.833	5.18	17.917	0.80	24.00	0.40
5.833	2.39	11.917	5.18	18.000	0.80	24.08	0.40
5.917	2.39	12.000	5.18	18.083	0.80	24.17	0.40
6.000	2.39	12.083	5.18	18.167	0.80	24.25	0.40
6.083	2.39	12.167	5.18	18.250	0.80		

Max.Eff.Inten.(mm/hr)=	18.33	13.09	
over (min)	5.00	25.00	
Storage Coeff. (min)=	4.98 (ii)	20.91 (ii)	
Unit Hyd. Tpeak (min)=	5.00	25.00	
Unit Hyd. peak (cms)=	0.22	0.05	
			TOTALS
PEAK FLOW (cms)=	0.06	0.01	0.069 (iii)
TIME TO PEAK (hrs)=	9.50	10.25	10.25
RUNOFF VOLUME (mm)=	78.70	42.77	71.51
TOTAL RAINFALL (mm)=	79.70	79.70	79.70
RUNOFF COEFFICIENT =	0.99	0.54	0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0259)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0204):		1.45	0.069	10.25	71.51
+ ID2= 2 (0260):		3.22	0.126	10.25	73.77
ID = 3 (0259):		4.67	0.195	10.25	73.07

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\cdb8232d-79e6-461f-abf3-b53ae11525c8\6ffa8b7e
Ptotal= 79.70 mm	Comments:

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	6.77	12.75	2.79	19.00	0.40
0.50	0.40	6.75	6.77	13.00	2.79	19.25	0.40
0.75	0.40	7.00	6.77	13.25	2.79	19.50	0.40
1.00	0.40	7.25	6.77	13.50	2.79	19.75	0.40
1.25	0.40	7.50	6.77	13.75	2.79	20.00	0.40
1.50	0.40	7.75	6.77	14.00	2.79	20.25	0.40
1.75	0.40	8.00	6.77	14.25	2.79	20.50	0.40
2.00	0.40	8.25	6.77	14.50	1.59	20.75	0.40
2.25	0.40	8.50	18.33	14.75	1.59	21.00	0.40
2.50	0.40	8.75	18.33	15.00	1.59	21.25	0.40

2.75	0.40	9.00	18.33	15.25	1.59	21.50	0.40
3.00	0.40	9.25	18.33	15.50	1.59	21.75	0.40
3.25	0.40	9.50	18.33	15.75	1.59	22.00	0.40
3.50	0.40	9.75	18.33	16.00	1.59	22.25	0.40
3.75	0.40	10.00	18.33	16.25	1.59	22.50	0.40
4.00	0.40	10.25	18.33	16.50	0.80	22.75	0.40
4.25	0.40	10.50	5.18	16.75	0.80	23.00	0.40
4.50	2.39	10.75	5.18	17.00	0.80	23.25	0.40
4.75	2.39	11.00	5.18	17.25	0.80	23.50	0.40
5.00	2.39	11.25	5.18	17.50	0.80	23.75	0.40
5.25	2.39	11.50	5.18	17.75	0.80	24.00	0.40
5.50	2.39	11.75	5.18	18.00	0.80	24.25	0.40
5.75	2.39	12.00	5.18	18.25	0.80		
6.00	2.39	12.25	5.18	18.50	0.40		
6.25	2.39	12.50	2.79	18.75	0.40		

CALIB			
STANDHYD (0201)	Area (ha)=	5.27	
ID= 1 DT= 5.0 min	Total Imp(%)=	99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.22	0.05
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	187.44	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	2.39	12.250	5.18	18.33	0.40
0.167	0.00	6.250	2.39	12.333	2.79	18.42	0.40
0.250	0.00	6.333	6.77	12.417	2.79	18.50	0.40
0.333	0.40	6.417	6.77	12.500	2.79	18.58	0.40
0.417	0.40	6.500	6.77	12.583	2.79	18.67	0.40
0.500	0.40	6.583	6.77	12.667	2.79	18.75	0.40
0.583	0.40	6.667	6.77	12.750	2.79	18.83	0.40
0.667	0.40	6.750	6.77	12.833	2.79	18.92	0.40
0.750	0.40	6.833	6.77	12.917	2.79	19.00	0.40
0.833	0.40	6.917	6.77	13.000	2.79	19.08	0.40
0.917	0.40	7.000	6.77	13.083	2.79	19.17	0.40
1.000	0.40	7.083	6.77	13.167	2.79	19.25	0.40
1.083	0.40	7.167	6.77	13.250	2.79	19.33	0.40
1.167	0.40	7.250	6.77	13.333	2.79	19.42	0.40
1.250	0.40	7.333	6.77	13.417	2.79	19.50	0.40
1.333	0.40	7.417	6.77	13.500	2.79	19.58	0.40
1.417	0.40	7.500	6.77	13.583	2.79	19.67	0.40
1.500	0.40	7.583	6.77	13.667	2.79	19.75	0.40
1.583	0.40	7.667	6.77	13.750	2.79	19.83	0.40
1.667	0.40	7.750	6.77	13.833	2.79	19.92	0.40
1.750	0.40	7.833	6.77	13.917	2.79	20.00	0.40
1.833	0.40	7.917	6.77	14.000	2.79	20.08	0.40
1.917	0.40	8.000	6.77	14.083	2.79	20.17	0.40
2.000	0.40	8.083	6.77	14.167	2.79	20.25	0.40
2.083	0.40	8.167	6.77	14.250	2.79	20.33	0.40
2.167	0.40	8.250	6.77	14.333	1.59	20.42	0.40
2.250	0.40	8.333	18.33	14.417	1.59	20.50	0.40
2.333	0.40	8.417	18.33	14.500	1.59	20.58	0.40
2.417	0.40	8.500	18.33	14.583	1.59	20.67	0.40
2.500	0.40	8.583	18.33	14.667	1.59	20.75	0.40
2.583	0.40	8.667	18.33	14.750	1.59	20.83	0.40
2.667	0.40	8.750	18.33	14.833	1.59	20.92	0.40
2.750	0.40	8.833	18.33	14.917	1.59	21.00	0.40
2.833	0.40	8.917	18.33	15.000	1.59	21.08	0.40
2.917	0.40	9.000	18.33	15.083	1.59	21.17	0.40
3.000	0.40	9.083	18.33	15.167	1.59	21.25	0.40
3.083	0.40	9.167	18.33	15.250	1.59	21.33	0.40
3.167	0.40	9.250	18.33	15.333	1.59	21.42	0.40
3.250	0.40	9.333	18.33	15.417	1.59	21.50	0.40
3.333	0.40	9.417	18.33	15.500	1.59	21.58	0.40
3.417	0.40	9.500	18.33	15.583	1.59	21.67	0.40
3.500	0.40	9.583	18.33	15.667	1.59	21.75	0.40
3.583	0.40	9.667	18.33	15.750	1.59	21.83	0.40
3.667	0.40	9.750	18.33	15.833	1.59	21.92	0.40
3.750	0.40	9.833	18.33	15.917	1.59	22.00	0.40
3.833	0.40	9.917	18.33	16.000	1.59	22.08	0.40
3.917	0.40	10.000	18.33	16.083	1.59	22.17	0.40
4.000	0.40	10.083	18.33	16.167	1.59	22.25	0.40
4.083	0.40	10.167	18.33	16.250	1.59	22.33	0.40
4.167	0.40	10.250	18.33	16.333	0.80	22.42	0.40
4.250	0.40	10.333	5.18	16.417	0.80	22.50	0.40
4.333	2.39	10.417	5.18	16.500	0.80	22.58	0.40
4.417	2.39	10.500	5.18	16.583	0.80	22.67	0.40
4.500	2.39	10.583	5.18	16.667	0.80	22.75	0.40
4.583	2.39	10.667	5.18	16.750	0.80	22.83	0.40
4.667	2.39	10.750	5.18	16.833	0.80	22.92	0.40
4.750	2.39	10.833	5.18	16.917	0.80	23.00	0.40
4.833	2.39	10.917	5.18	17.000	0.80	23.08	0.40
4.917	2.39	11.000	5.18	17.083	0.80	23.17	0.40
5.000	2.39	11.083	5.18	17.167	0.80	23.25	0.40
5.083	2.39	11.167	5.18	17.250	0.80	23.33	0.40
5.167	2.39	11.250	5.18	17.333	0.80	23.42	0.40
5.250	2.39	11.333	5.18	17.417	0.80	23.50	0.40
5.333	2.39	11.417	5.18	17.500	0.80	23.58	0.40
5.417	2.39	11.500	5.18	17.583	0.80	23.67	0.40
5.500	2.39	11.583	5.18	17.667	0.80	23.75	0.40
5.583	2.39	11.667	5.18	17.750	0.80	23.83	0.40
5.667	2.39	11.750	5.18	17.833	0.80	23.92	0.40
5.750	2.39	11.833	5.18	17.917	0.80	24.00	0.40
5.833	2.39	11.917	5.18	18.000	0.80	24.08	0.40
5.917	2.39	12.000	5.18	18.083	0.80	24.17	0.40
6.000	2.39	12.083	5.18	18.167	0.80	24.25	0.40
6.083	2.39	12.167	5.18	18.250	0.80		

Max.Eff.Inten.(mm/hr)=	18.33	13.24	
over (min)	5.00	10.00	
Storage Coeff. (min)=	7.34 (ii)	9.56 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.17	0.12	
			TOTALS
PEAK FLOW (cms)=	0.27	0.00	0.268 (iii)
TIME TO PEAK (hrs)=	10.00	10.25	10.25
RUNOFF VOLUME (mm)=	78.70	42.77	78.34
TOTAL RAINFALL (mm)=	79.70	79.70	79.70
RUNOFF COEFFICIENT =	0.99	0.54	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| RESERVOIR(  0268)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1959      0.1883
                          0.0980     0.0369   |   0.2939      0.4335

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0201)     5.270      0.268     10.25      78.34
   OUTFLOW: ID= 1 (  0268)     5.270      0.157     10.33      78.32

                 PEAK   FLOW   REDUCTION [Qout/Qin](%)= 58.84
                 TIME SHIFT OF PEAK FLOW         (min)=  5.00
                 MAXIMUM  STORAGE   USED       (ha.m.)=  0.1290

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              cdb8232d-79e6-461f-abf3-b53ae11525c8\6ffa8b7e
| Ptotal= 79.70 mm |    Comments:
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  6.50    6.77 | 12.75    2.79 | 19.00    0.40
                0.50    0.40 |  6.75    6.77 | 13.00    2.79 | 19.25    0.40
                0.75    0.40 |  7.00    6.77 | 13.25    2.79 | 19.50    0.40
                1.00    0.40 |  7.25    6.77 | 13.50    2.79 | 19.75    0.40
                1.25    0.40 |  7.50    6.77 | 13.75    2.79 | 20.00    0.40
                1.50    0.40 |  7.75    6.77 | 14.00    2.79 | 20.25    0.40
                1.75    0.40 |  8.00    6.77 | 14.25    2.79 | 20.50    0.40
                2.00    0.40 |  8.25    6.77 | 14.50    1.59 | 20.75    0.40
                2.25    0.40 |  8.50   18.33 | 14.75    1.59 | 21.00    0.40
                2.50    0.40 |  8.75   18.33 | 15.00    1.59 | 21.25    0.40
                2.75    0.40 |  9.00   18.33 | 15.25    1.59 | 21.50    0.40
                3.00    0.40 |  9.25   18.33 | 15.50    1.59 | 21.75    0.40
                3.25    0.40 |  9.50   18.33 | 15.75    1.59 | 22.00    0.40
                3.50    0.40 |  9.75   18.33 | 16.00    1.59 | 22.25    0.40
                3.75    0.40 | 10.00   18.33 | 16.25    1.59 | 22.50    0.40
                4.00    0.40 | 10.25   18.33 | 16.50    0.80 | 22.75    0.40
                4.25    0.40 | 10.50    5.18 | 16.75    0.80 | 23.00    0.40
                4.50    2.39 | 10.75    5.18 | 17.00    0.80 | 23.25    0.40
                4.75    2.39 | 11.00    5.18 | 17.25    0.80 | 23.50    0.40
                5.00    2.39 | 11.25    5.18 | 17.50    0.80 | 23.75    0.40
                5.25    2.39 | 11.50    5.18 | 17.75    0.80 | 24.00    0.40
                5.50    2.39 | 11.75    5.18 | 18.00    0.80 | 24.25    0.40
                5.75    2.39 | 12.00    5.18 | 18.25    0.80 |
                6.00    2.39 | 12.25    5.18 | 18.50    0.40 |
                6.25    2.39 | 12.50    2.79 | 18.75    0.40 |

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| CALIB            |
| STANDHYD (  0202)|   Area    (ha)=   6.57
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
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                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.32         1.25
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     209.28        40.00
     Mannings n            =      0.013        0.250

    NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    0.00 |  6.167    2.39 |12.250    5.18 | 18.33    0.40
     0.167    0.00 |  6.250    2.39 |12.333    2.79 | 18.42    0.40
     0.250    0.00 |  6.333    6.77 |12.417    2.79 | 18.50    0.40
     0.333    0.40 |  6.417    6.77 |12.500    2.79 | 18.58    0.40
     0.417    0.40 |  6.500    6.77 |12.583    2.79 | 18.67    0.40
     0.500    0.40 |  6.583    6.77 |12.667    2.79 | 18.75    0.40
     0.583    0.40 |  6.667    6.77 |12.750    2.79 | 18.83    0.40
     0.667    0.40 |  6.750    6.77 |12.833    2.79 | 18.92    0.40
     0.750    0.40 |  6.833    6.77 |12.917    2.79 | 19.00    0.40
     0.833    0.40 |  6.917    6.77 |13.000    2.79 | 19.08    0.40
     0.917    0.40 |  7.000    6.77 |13.083    2.79 | 19.17    0.40
     1.000    0.40 |  7.083    6.77 |13.167    2.79 | 19.25    0.40
     1.083    0.40 |  7.167    6.77 |13.250    2.79 | 19.33    0.40
     1.167    0.40 |  7.250    6.77 |13.333    2.79 | 19.42    0.40
     1.250    0.40 |  7.333    6.77 |13.417    2.79 | 19.50    0.40
     1.333    0.40 |  7.417    6.77 |13.500    2.79 | 19.58    0.40
     1.417    0.40 |  7.500    6.77 |13.583    2.79 | 19.67    0.40
     1.500    0.40 |  7.583    6.77 |13.667    2.79 | 19.75    0.40
     1.583    0.40 |  7.667    6.77 |13.750    2.79 | 19.83    0.40
     1.667    0.40 |  7.750    6.77 |13.833    2.79 | 19.92    0.40
     1.750    0.40 |  7.833    6.77 |13.917    2.79 | 20.00    0.40
     1.833    0.40 |  7.917    6.77 |14.000    2.79 | 20.08    0.40
     1.917    0.40 |  8.000    6.77 |14.083    2.79 | 20.17    0.40
     2.000    0.40 |  8.083    6.77 |14.167    2.79 | 20.25    0.40
     2.083    0.40 |  8.167    6.77 |14.250    2.79 | 20.33    0.40
     2.167    0.40 |  8.250    6.77 |14.333    1.59 | 20.42    0.40
     2.250    0.40 |  8.333   18.33 |14.417    1.59 | 20.50    0.40
     2.333    0.40 |  8.417   18.33 |14.500    1.59 | 20.58    0.40
     2.417    0.40 |  8.500   18.33 |14.583    1.59 | 20.67    0.40
     2.500    0.40 |  8.583   18.33 |14.667    1.59 | 20.75    0.40
     2.583    0.40 |  8.667   18.33 |14.750    1.59 | 20.83    0.40
     2.667    0.40 |  8.750   18.33 |14.833    1.59 | 20.92    0.40
     2.750    0.40 |  8.833   18.33 |14.917    1.59 | 21.00    0.40
     2.833    0.40 |  8.917   18.33 |15.000    1.59 | 21.08    0.40
     2.917    0.40 |  9.000   18.33 |15.083    1.59 | 21.17    0.40
     3.000    0.40 |  9.083   18.33 |15.167    1.59 | 21.25    0.40
     3.083    0.40 |  9.167   18.33 |15.250    1.59 | 21.33    0.40
     3.167    0.40 |  9.250   18.33 |15.333    1.59 | 21.42    0.40
     3.250    0.40 |  9.333   18.33 |15.417    1.59 | 21.50    0.40
     3.333    0.40 |  9.417   18.33 |15.500    1.59 | 21.58    0.40
     3.417    0.40 |  9.500   18.33 |15.583    1.59 | 21.67    0.40
     3.500    0.40 |  9.583   18.33 |15.667    1.59 | 21.75    0.40
     3.583    0.40 |  9.667   18.33 |15.750    1.59 | 21.83    0.40
     3.667    0.40 |  9.750   18.33 |15.833    1.59 | 21.92    0.40
     3.750    0.40 |  9.833   18.33 |15.917    1.59 | 22.00    0.40
     3.833    0.40 |  9.917   18.33 |16.000    1.59 | 22.08    0.40
     3.917    0.40 | 10.000   18.33 |16.083    1.59 | 22.17    0.40
     4.000    0.40 | 10.083   18.33 |16.167    1.59 | 22.25    0.40
     4.083    0.40 | 10.167   18.33 |16.250    1.59 | 22.33    0.40
     4.167    0.40 | 10.250   18.33 |16.333    0.80 | 22.42    0.40
     4.250    0.40 | 10.333    5.18 |16.417    0.80 | 22.50    0.40
     4.333    2.39 | 10.417    5.18 |16.500    0.80 | 22.58    0.40
     4.417    2.39 | 10.500    5.18 |16.583    0.80 | 22.67    0.40
```

4.500	2.39	10.583	5.18	16.667	0.80	22.75	0.40
4.583	2.39	10.667	5.18	16.750	0.80	22.83	0.40
4.667	2.39	10.750	5.18	16.833	0.80	22.92	0.40
4.750	2.39	10.833	5.18	16.917	0.80	23.00	0.40
4.833	2.39	10.917	5.18	17.000	0.80	23.08	0.40
4.917	2.39	11.000	5.18	17.083	0.80	23.17	0.40
5.000	2.39	11.083	5.18	17.167	0.80	23.25	0.40
5.083	2.39	11.167	5.18	17.250	0.80	23.33	0.40
5.167	2.39	11.250	5.18	17.333	0.80	23.42	0.40
5.250	2.39	11.333	5.18	17.417	0.80	23.50	0.40
5.333	2.39	11.417	5.18	17.500	0.80	23.58	0.40
5.417	2.39	11.500	5.18	17.583	0.80	23.67	0.40
5.500	2.39	11.583	5.18	17.667	0.80	23.75	0.40
5.583	2.39	11.667	5.18	17.750	0.80	23.83	0.40
5.667	2.39	11.750	5.18	17.833	0.80	23.92	0.40
5.750	2.39	11.833	5.18	17.917	0.80	24.00	0.40
5.833	2.39	11.917	5.18	18.000	0.80	24.08	0.40
5.917	2.39	12.000	5.18	18.083	0.80	24.17	0.40
6.000	2.39	12.083	5.18	18.167	0.80	24.25	0.40
6.083	2.39	12.167	5.18	18.250	0.80		

Max.Eff.Inten.(mm/hr)=	18.33	13.09	
over (min)	10.00	25.00	
Storage Coeff. (min)=	7.84 (ii)	23.76 (ii)	
Unit Hyd. Tpeak (min)=	10.00	25.00	
Unit Hyd. peak (cms)=	0.13	0.05	
			TOTALS
PEAK FLOW (cms)=	0.27	0.04	0.313 (iii)
TIME TO PEAK (hrs)=	10.25	10.25	10.25
RUNOFF VOLUME (mm)=	78.70	42.77	71.87
TOTAL RAINFALL (mm)=	79.70	79.70	79.70
RUNOFF COEFFICIENT =	0.99	0.54	0.90

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0262)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0202):	6.57	0.313	10.25	71.87
+ ID2= 2 (0268):	5.27	0.157	10.33	78.32
ID = 3 (0262):	11.84	0.469	10.25	74.74

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0266)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0259):	4.67	0.195	10.25	73.07
+ ID2= 2 (0262):	11.84	0.469	10.25	74.74
ID = 3 (0266):	16.51	0.664	10.25	74.27

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0263)				
IN= 2---> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.2130	0.6563
	0.0190	0.1773	0.2520	0.6883
	0.0220	0.2128	0.2890	0.7150
	0.0260	0.2888	0.2980	0.7450
	0.0300	0.3648	0.3060	0.7700
	0.0650	0.4586	0.3150	0.8127
	0.1100	0.5155	0.3320	0.9290
	0.1680	0.5503	0.3390	0.9767
	0.1930	0.5804	0.3520	1.0680
	0.2000	0.6048	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0266)	16.510	0.664	10.25	74.27
OUTFLOW: ID= 1 (0263)	16.510	0.237	12.50	74.13

PEAK FLOW REDUCTION [Qout/Qin](%)= 35.74
TIME SHIFT OF PEAK FLOW (min)=135.00
MAXIMUM STORAGE USED (ha.m.)= 0.6762

ADD HYD (0261)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0206):	0.12	0.004	10.25	42.73
+ ID2= 2 (0263):	16.51	0.237	12.50	74.13
ID = 3 (0261):	16.64	0.238	12.50	73.89

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
      V    V   I    SSSSS  U   U    A    L              (v 5.0.2025)
      V    V   I    SS     U   U   A A   L
       V  V    I     SS    U   U  AAAAA  L
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
```


***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat

```
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\a52b752c-d053-4360-8934-d2b772b2c561\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\a52b752c-d053-4360-8934-d2b772b2c561\s


DATE: 07/06/2020                          TIME: 04:38:42

USER:



COMMENTS: _____________________________________________________________


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  ***********************************************
  ** SIMULATION : 5 Year 24 Hour AES            **
  ***********************************************


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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              cdb8232d-79e6-461f-abf3-b53ae11525c8\ab0cf43f
| Ptotal= 60.08 mm |    Comments:
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.00 |  6.50    5.11 | 12.75    2.10 | 19.00    0.30
                0.50    0.30 |  6.75    5.11 | 13.00    2.10 | 19.25    0.30
                0.75    0.30 |  7.00    5.11 | 13.25    2.10 | 19.50    0.30
                1.00    0.30 |  7.25    5.11 | 13.50    2.10 | 19.75    0.30
                1.25    0.30 |  7.50    5.11 | 13.75    2.10 | 20.00    0.30
                1.50    0.30 |  7.75    5.11 | 14.00    2.10 | 20.25    0.30
                1.75    0.30 |  8.00    5.11 | 14.25    2.10 | 20.50    0.30
                2.00    0.30 |  8.25    5.11 | 14.50    1.20 | 20.75    0.30
                2.25    0.30 |  8.50   13.82 | 14.75    1.20 | 21.00    0.30
                2.50    0.30 |  8.75   13.82 | 15.00    1.20 | 21.25    0.30
                2.75    0.30 |  9.00   13.82 | 15.25    1.20 | 21.50    0.30
                3.00    0.30 |  9.25   13.82 | 15.50    1.20 | 21.75    0.30
                3.25    0.30 |  9.50   13.82 | 15.75    1.20 | 22.00    0.30
                3.50    0.30 |  9.75   13.82 | 16.00    1.20 | 22.25    0.30
                3.75    0.30 | 10.00   13.82 | 16.25    1.20 | 22.50    0.30
                4.00    0.30 | 10.25   13.82 | 16.50    0.60 | 22.75    0.30
                4.25    0.30 | 10.50    3.91 | 16.75    0.60 | 23.00    0.30
                4.50    1.80 | 10.75    3.91 | 17.00    0.60 | 23.25    0.30
                4.75    1.80 | 11.00    3.91 | 17.25    0.60 | 23.50    0.30
                5.00    1.80 | 11.25    3.91 | 17.50    0.60 | 23.75    0.30
                5.25    1.80 | 11.50    3.91 | 17.75    0.60 | 24.00    0.30
                5.50    1.80 | 11.75    3.91 | 18.00    0.60 | 24.25    0.30
                5.75    1.80 | 12.00    3.91 | 18.25    0.60 |
                6.00    1.80 | 12.25    3.91 | 18.50    0.30 |
                6.25    1.80 | 12.50    2.10 | 18.75    0.30 |

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| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	1.80	12.250	3.91	18.33	0.30
0.167	0.00	6.250	1.80	12.333	2.10	18.42	0.30
0.250	0.00	6.333	5.11	12.417	2.10	18.50	0.30
0.333	0.30	6.417	5.11	12.500	2.10	18.58	0.30
0.417	0.30	6.500	5.11	12.583	2.10	18.67	0.30
0.500	0.30	6.583	5.11	12.667	2.10	18.75	0.30
0.583	0.30	6.667	5.11	12.750	2.10	18.83	0.30
0.667	0.30	6.750	5.11	12.833	2.10	18.92	0.30
0.750	0.30	6.833	5.11	12.917	2.10	19.00	0.30
0.833	0.30	6.917	5.11	13.000	2.10	19.08	0.30
0.917	0.30	7.000	5.11	13.083	2.10	19.17	0.30
1.000	0.30	7.083	5.11	13.167	2.10	19.25	0.30
1.083	0.30	7.167	5.11	13.250	2.10	19.33	0.30
1.167	0.30	7.250	5.11	13.333	2.10	19.42	0.30
1.250	0.30	7.333	5.11	13.417	2.10	19.50	0.30
1.333	0.30	7.417	5.11	13.500	2.10	19.58	0.30
1.417	0.30	7.500	5.11	13.583	2.10	19.67	0.30
1.500	0.30	7.583	5.11	13.667	2.10	19.75	0.30
1.583	0.30	7.667	5.11	13.750	2.10	19.83	0.30
1.667	0.30	7.750	5.11	13.833	2.10	19.92	0.30
1.750	0.30	7.833	5.11	13.917	2.10	20.00	0.30
1.833	0.30	7.917	5.11	14.000	2.10	20.08	0.30
1.917	0.30	8.000	5.11	14.083	2.10	20.17	0.30
2.000	0.30	8.083	5.11	14.167	2.10	20.25	0.30
2.083	0.30	8.167	5.11	14.250	2.10	20.33	0.30
2.167	0.30	8.250	5.11	14.333	1.20	20.42	0.30
2.250	0.30	8.333	13.82	14.417	1.20	20.50	0.30
2.333	0.30	8.417	13.82	14.500	1.20	20.58	0.30
2.417	0.30	8.500	13.82	14.583	1.20	20.67	0.30
2.500	0.30	8.583	13.82	14.667	1.20	20.75	0.30
2.583	0.30	8.667	13.82	14.750	1.20	20.83	0.30
2.667	0.30	8.750	13.82	14.833	1.20	20.92	0.30
2.750	0.30	8.833	13.82	14.917	1.20	21.00	0.30
2.833	0.30	8.917	13.82	15.000	1.20	21.08	0.30
2.917	0.30	9.000	13.82	15.083	1.20	21.17	0.30
3.000	0.30	9.083	13.82	15.167	1.20	21.25	0.30
3.083	0.30	9.167	13.82	15.250	1.20	21.33	0.30
3.167	0.30	9.250	13.82	15.333	1.20	21.42	0.30
3.250	0.30	9.333	13.82	15.417	1.20	21.50	0.30
3.333	0.30	9.417	13.82	15.500	1.20	21.58	0.30
3.417	0.30	9.500	13.82	15.583	1.20	21.67	0.30
3.500	0.30	9.583	13.82	15.667	1.20	21.75	0.30
3.583	0.30	9.667	13.82	15.750	1.20	21.83	0.30
3.667	0.30	9.750	13.82	15.833	1.20	21.92	0.30
3.750	0.30	9.833	13.82	15.917	1.20	22.00	0.30
3.833	0.30	9.917	13.82	16.000	1.20	22.08	0.30
3.917	0.30	10.000	13.82	16.083	1.20	22.17	0.30
4.000	0.30	10.083	13.82	16.167	1.20	22.25	0.30
4.083	0.30	10.167	13.82	16.250	1.20	22.33	0.30
4.167	0.30	10.250	13.82	16.333	0.60	22.42	0.30
4.250	0.30	10.333	3.91	16.417	0.60	22.50	0.30
4.333	1.80	10.417	3.91	16.500	0.60	22.58	0.30
4.417	1.80	10.500	3.91	16.583	0.60	22.67	0.30
4.500	1.80	10.583	3.91	16.667	0.60	22.75	0.30
4.583	1.80	10.667	3.91	16.750	0.60	22.83	0.30
4.667	1.80	10.750	3.91	16.833	0.60	22.92	0.30
4.750	1.80	10.833	3.91	16.917	0.60	23.00	0.30
4.833	1.80	10.917	3.91	17.000	0.60	23.08	0.30

4.917	1.80	11.000	3.91	17.083	0.60	23.17	0.30
5.000	1.80	11.083	3.91	17.167	0.60	23.25	0.30
5.083	1.80	11.167	3.91	17.250	0.60	23.33	0.30
5.167	1.80	11.250	3.91	17.333	0.60	23.42	0.30
5.250	1.80	11.333	3.91	17.417	0.60	23.50	0.30
5.333	1.80	11.417	3.91	17.500	0.60	23.58	0.30
5.417	1.80	11.500	3.91	17.583	0.60	23.67	0.30
5.500	1.80	11.583	3.91	17.667	0.60	23.75	0.30
5.583	1.80	11.667	3.91	17.750	0.60	23.83	0.30
5.667	1.80	11.750	3.91	17.833	0.60	23.92	0.30
5.750	1.80	11.833	3.91	17.917	0.60	24.00	0.30
5.833	1.80	11.917	3.91	18.000	0.60	24.08	0.30
5.917	1.80	12.000	3.91	18.083	0.60	24.17	0.30
6.000	1.80	12.083	3.91	18.167	0.60	24.25	0.30
6.083	1.80	12.167	3.91	18.250	0.60		

Unit Hyd Qpeak (cms)= 0.019

PEAK FLOW (cms)= 0.003 (i)
TIME TO PEAK (hrs)= 10.250
RUNOFF VOLUME (mm)= 27.343
TOTAL RAINFALL (mm)= 60.080
RUNOFF COEFFICIENT = 0.455

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\cdb8232d-79e6-461f-abf3-b53ae11525c8\ab0cf43f
Ptotal= 60.08 mm	Comments:

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	5.11	12.75	2.10	19.00	0.30
0.50	0.30	6.75	5.11	13.00	2.10	19.25	0.30
0.75	0.30	7.00	5.11	13.25	2.10	19.50	0.30
1.00	0.30	7.25	5.11	13.50	2.10	19.75	0.30
1.25	0.30	7.50	5.11	13.75	2.10	20.00	0.30
1.50	0.30	7.75	5.11	14.00	2.10	20.25	0.30
1.75	0.30	8.00	5.11	14.25	2.10	20.50	0.30
2.00	0.30	8.25	5.11	14.50	1.20	20.75	0.30
2.25	0.30	8.50	13.82	14.75	1.20	21.00	0.30
2.50	0.30	8.75	13.82	15.00	1.20	21.25	0.30
2.75	0.30	9.00	13.82	15.25	1.20	21.50	0.30
3.00	0.30	9.25	13.82	15.50	1.20	21.75	0.30
3.25	0.30	9.50	13.82	15.75	1.20	22.00	0.30
3.50	0.30	9.75	13.82	16.00	1.20	22.25	0.30
3.75	0.30	10.00	13.82	16.25	1.20	22.50	0.30
4.00	0.30	10.25	13.82	16.50	0.60	22.75	0.30
4.25	0.30	10.50	3.91	16.75	0.60	23.00	0.30
4.50	1.80	10.75	3.91	17.00	0.60	23.25	0.30
4.75	1.80	11.00	3.91	17.25	0.60	23.50	0.30
5.00	1.80	11.25	3.91	17.50	0.60	23.75	0.30
5.25	1.80	11.50	3.91	17.75	0.60	24.00	0.30
5.50	1.80	11.75	3.91	18.00	0.60	24.25	0.30
5.75	1.80	12.00	3.91	18.25	0.60		
6.00	1.80	12.25	3.91	18.50	0.30		
6.25	1.80	12.50	2.10	18.75	0.30		

CALIB / STANDHYD (0205) / ID= 1 DT= 5.0 min	Area (ha)= 1.12 Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.11	0.01
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	86.60	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	1.80	12.250	3.91	18.33	0.30
0.167	0.00	6.250	1.80	12.333	2.10	18.42	0.30
0.250	0.00	6.333	5.11	12.417	2.10	18.50	0.30
0.333	0.30	6.417	5.11	12.500	2.10	18.58	0.30
0.417	0.30	6.500	5.11	12.583	2.10	18.67	0.30
0.500	0.30	6.583	5.11	12.667	2.10	18.75	0.30
0.583	0.30	6.667	5.11	12.750	2.10	18.83	0.30
0.667	0.30	6.750	5.11	12.833	2.10	18.92	0.30
0.750	0.30	6.833	5.11	12.917	2.10	19.00	0.30
0.833	0.30	6.917	5.11	13.000	2.10	19.08	0.30
0.917	0.30	7.000	5.11	13.083	2.10	19.17	0.30
1.000	0.30	7.083	5.11	13.167	2.10	19.25	0.30
1.083	0.30	7.167	5.11	13.250	2.10	19.33	0.30
1.167	0.30	7.250	5.11	13.333	2.10	19.42	0.30
1.250	0.30	7.333	5.11	13.417	2.10	19.50	0.30
1.333	0.30	7.417	5.11	13.500	2.10	19.58	0.30
1.417	0.30	7.500	5.11	13.583	2.10	19.67	0.30
1.500	0.30	7.583	5.11	13.667	2.10	19.75	0.30
1.583	0.30	7.667	5.11	13.750	2.10	19.83	0.30
1.667	0.30	7.750	5.11	13.833	2.10	19.92	0.30
1.750	0.30	7.833	5.11	13.917	2.10	20.00	0.30
1.833	0.30	7.917	5.11	14.000	2.10	20.08	0.30
1.917	0.30	8.000	5.11	14.083	2.10	20.17	0.30
2.000	0.30	8.083	5.11	14.167	2.10	20.25	0.30
2.083	0.30	8.167	5.11	14.250	2.10	20.33	0.30
2.167	0.30	8.250	5.11	14.333	1.20	20.42	0.30
2.250	0.30	8.333	13.82	14.417	1.20	20.50	0.30
2.333	0.30	8.417	13.82	14.500	1.20	20.58	0.30
2.417	0.30	8.500	13.82	14.583	1.20	20.67	0.30
2.500	0.30	8.583	13.82	14.667	1.20	20.75	0.30
2.583	0.30	8.667	13.82	14.750	1.20	20.83	0.30
2.667	0.30	8.750	13.82	14.833	1.20	20.92	0.30
2.750	0.30	8.833	13.82	14.917	1.20	21.00	0.30
2.833	0.30	8.917	13.82	15.000	1.20	21.08	0.30
2.917	0.30	9.000	13.82	15.083	1.20	21.17	0.30
3.000	0.30	9.083	13.82	15.167	1.20	21.25	0.30
3.083	0.30	9.167	13.82	15.250	1.20	21.33	0.30
3.167	0.30	9.250	13.82	15.333	1.20	21.42	0.30
3.250	0.30	9.333	13.82	15.417	1.20	21.50	0.30
3.333	0.30	9.417	13.82	15.500	1.20	21.58	0.30
3.417	0.30	9.500	13.82	15.583	1.20	21.67	0.30
3.500	0.30	9.583	13.82	15.667	1.20	21.75	0.30
3.583	0.30	9.667	13.82	15.750	1.20	21.83	0.30
3.667	0.30	9.750	13.82	15.833	1.20	21.92	0.30
3.750	0.30	9.833	13.82	15.917	1.20	22.00	0.30
3.833	0.30	9.917	13.82	16.000	1.20	22.08	0.30

3.917	0.30	10.000	13.82	16.083	1.20	22.17	0.30
4.000	0.30	10.083	13.82	16.167	1.20	22.25	0.30
4.083	0.30	10.167	13.82	16.250	1.20	22.33	0.30
4.167	0.30	10.250	13.82	16.333	0.60	22.42	0.30
4.250	0.30	10.333	3.91	16.417	0.60	22.50	0.30
4.333	1.80	10.417	3.91	16.500	0.60	22.58	0.30
4.417	1.80	10.500	3.91	16.583	0.60	22.67	0.30
4.500	1.80	10.583	3.91	16.667	0.60	22.75	0.30
4.583	1.80	10.667	3.91	16.750	0.60	22.83	0.30
4.667	1.80	10.750	3.91	16.833	0.60	22.92	0.30
4.750	1.80	10.833	3.91	16.917	0.60	23.00	0.30
4.833	1.80	10.917	3.91	17.000	0.60	23.08	0.30
4.917	1.80	11.000	3.91	17.083	0.60	23.17	0.30
5.000	1.80	11.083	3.91	17.167	0.60	23.25	0.30
5.083	1.80	11.167	3.91	17.250	0.60	23.33	0.30
5.167	1.80	11.250	3.91	17.333	0.60	23.42	0.30
5.250	1.80	11.333	3.91	17.417	0.60	23.50	0.30
5.333	1.80	11.417	3.91	17.500	0.60	23.58	0.30
5.417	1.80	11.500	3.91	17.583	0.60	23.67	0.30
5.500	1.80	11.583	3.91	17.667	0.60	23.75	0.30
5.583	1.80	11.667	3.91	17.750	0.60	23.83	0.30
5.667	1.80	11.750	3.91	17.833	0.60	23.92	0.30
5.750	1.80	11.833	3.91	17.917	0.60	24.00	0.30
5.833	1.80	11.917	3.91	18.000	0.60	24.08	0.30
5.917	1.80	12.000	3.91	18.083	0.60	24.17	0.30
6.000	1.80	12.083	3.91	18.167	0.60	24.25	0.30
6.083	1.80	12.167	3.91	18.250	0.60		

Max.Eff.Inten.(mm/hr)=	13.82	8.77	
over (min)	5.00	10.00	
Storage Coeff. (min)=	5.17 (ii)	7.65 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.21	0.13	
			TOTALS
PEAK FLOW (cms)=	0.04	0.00	0.043 (iii)
TIME TO PEAK (hrs)=	9.50	10.25	10.25
RUNOFF VOLUME (mm)=	59.08	27.37	58.76
TOTAL RAINFALL (mm)=	60.08	60.08	60.08
RUNOFF COEFFICIENT =	0.98	0.46	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0256)|				
IN= 2---> OUT= 1 |				
DT= 5.0 min |	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0470	0.0750

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0205)	1.125	0.043	10.25	58.76
OUTFLOW: ID= 1 (0256)	1.125	0.020	10.42	58.41

PEAK FLOW REDUCTION [Qout/Qin](%)= 46.24
TIME SHIFT OF PEAK FLOW (min)= 10.00
MAXIMUM STORAGE USED (ha.m.)= 0.0318

READ STORM |	Filename: C:\Users\mventresca\AppData\Local\Temp\cdb8232d-79e6-461f-abf3-b53ae11525c8\ab0cf43f
Ptotal= 60.08 mm |	Comments:

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	5.11	12.75	2.10	19.00	0.30
0.50	0.30	6.75	5.11	13.00	2.10	19.25	0.30
0.75	0.30	7.00	5.11	13.25	2.10	19.50	0.30
1.00	0.30	7.25	5.11	13.50	2.10	19.75	0.30
1.25	0.30	7.50	5.11	13.75	2.10	20.00	0.30
1.50	0.30	7.75	5.11	14.00	2.10	20.25	0.30
1.75	0.30	8.00	5.11	14.25	2.10	20.50	0.30
2.00	0.30	8.25	5.11	14.50	1.20	20.75	0.30
2.25	0.30	8.50	13.82	14.75	1.20	21.00	0.30
2.50	0.30	8.75	13.82	15.00	1.20	21.25	0.30
2.75	0.30	9.00	13.82	15.25	1.20	21.50	0.30
3.00	0.30	9.25	13.82	15.50	1.20	21.75	0.30
3.25	0.30	9.50	13.82	15.75	1.20	22.00	0.30
3.50	0.30	9.75	13.82	16.00	1.20	22.25	0.30
3.75	0.30	10.00	13.82	16.25	1.20	22.50	0.30
4.00	0.30	10.25	13.82	16.50	0.60	22.75	0.30
4.25	0.30	10.50	3.91	16.75	0.60	23.00	0.30
4.50	1.80	10.75	3.91	17.00	0.60	23.25	0.30
4.75	1.80	11.00	3.91	17.25	0.60	23.50	0.30
5.00	1.80	11.25	3.91	17.50	0.60	23.75	0.30
5.25	1.80	11.50	3.91	17.75	0.60	24.00	0.30
5.50	1.80	11.75	3.91	18.00	0.60	24.25	0.30
5.75	1.80	12.00	3.91	18.25	0.60		
6.00	1.80	12.25	3.91	18.50	0.30		
6.25	1.80	12.50	2.10	18.75	0.30		

CALIB |		
STANDHYD (0203)|	Area (ha)=	2.10
ID= 1 DT= 5.0 min |	Total Imp(%)=	80.00 Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.68	0.42
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	118.18	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	1.80	12.250	3.91	18.33	0.30
0.167	0.00	6.250	1.80	12.333	2.10	18.42	0.30
0.250	0.00	6.333	5.11	12.417	2.10	18.50	0.30
0.333	0.30	6.417	5.11	12.500	2.10	18.58	0.30
0.417	0.30	6.500	5.11	12.583	2.10	18.67	0.30
0.500	0.30	6.583	5.11	12.667	2.10	18.75	0.30
0.583	0.30	6.667	5.11	12.750	2.10	18.83	0.30
0.667	0.30	6.750	5.11	12.833	2.10	18.92	0.30

0.750	0.30	6.833	5.11	12.917	2.10	19.00	0.30
0.833	0.30	6.917	5.11	13.000	2.10	19.08	0.30
0.917	0.30	7.000	5.11	13.083	2.10	19.17	0.30
1.000	0.30	7.083	5.11	13.167	2.10	19.25	0.30
1.083	0.30	7.167	5.11	13.250	2.10	19.33	0.30
1.167	0.30	7.250	5.11	13.333	2.10	19.42	0.30
1.250	0.30	7.333	5.11	13.417	2.10	19.50	0.30
1.333	0.30	7.417	5.11	13.500	2.10	19.58	0.30
1.417	0.30	7.500	5.11	13.583	2.10	19.67	0.30
1.500	0.30	7.583	5.11	13.667	2.10	19.75	0.30
1.583	0.30	7.667	5.11	13.750	2.10	19.83	0.30
1.667	0.30	7.750	5.11	13.833	2.10	19.92	0.30
1.750	0.30	7.833	5.11	13.917	2.10	20.00	0.30
1.833	0.30	7.917	5.11	14.000	2.10	20.08	0.30
1.917	0.30	8.000	5.11	14.083	2.10	20.17	0.30
2.000	0.30	8.083	5.11	14.167	2.10	20.25	0.30
2.083	0.30	8.167	5.11	14.250	2.10	20.33	0.30
2.167	0.30	8.250	5.11	14.333	1.20	20.42	0.30
2.250	0.30	8.333	13.82	14.417	1.20	20.50	0.30
2.333	0.30	8.417	13.82	14.500	1.20	20.58	0.30
2.417	0.30	8.500	13.82	14.583	1.20	20.67	0.30
2.500	0.30	8.583	13.82	14.667	1.20	20.75	0.30
2.583	0.30	8.667	13.82	14.750	1.20	20.83	0.30
2.667	0.30	8.750	13.82	14.833	1.20	20.92	0.30
2.750	0.30	8.833	13.82	14.917	1.20	21.00	0.30
2.833	0.30	8.917	13.82	15.000	1.20	21.08	0.30
2.917	0.30	9.000	13.82	15.083	1.20	21.17	0.30
3.000	0.30	9.083	13.82	15.167	1.20	21.25	0.30
3.083	0.30	9.167	13.82	15.250	1.20	21.33	0.30
3.167	0.30	9.250	13.82	15.333	1.20	21.42	0.30
3.250	0.30	9.333	13.82	15.417	1.20	21.50	0.30
3.333	0.30	9.417	13.82	15.500	1.20	21.58	0.30
3.417	0.30	9.500	13.82	15.583	1.20	21.67	0.30
3.500	0.30	9.583	13.82	15.667	1.20	21.75	0.30
3.583	0.30	9.667	13.82	15.750	1.20	21.83	0.30
3.667	0.30	9.750	13.82	15.833	1.20	21.92	0.30
3.750	0.30	9.833	13.82	15.917	1.20	22.00	0.30
3.833	0.30	9.917	13.82	16.000	1.20	22.08	0.30
3.917	0.30	10.000	13.82	16.083	1.20	22.17	0.30
4.000	0.30	10.083	13.82	16.167	1.20	22.25	0.30
4.083	0.30	10.167	13.82	16.250	1.20	22.33	0.30
4.167	0.30	10.250	13.82	16.333	0.60	22.42	0.30
4.250	0.30	10.333	3.91	16.417	0.60	22.50	0.30
4.333	1.80	10.417	3.91	16.500	0.60	22.58	0.30
4.417	1.80	10.500	3.91	16.583	0.60	22.67	0.30
4.500	1.80	10.583	3.91	16.667	0.60	22.75	0.30
4.583	1.80	10.667	3.91	16.750	0.60	22.83	0.30
4.667	1.80	10.750	3.91	16.833	0.60	22.92	0.30
4.750	1.80	10.833	3.91	16.917	0.60	23.00	0.30
4.833	1.80	10.917	3.91	17.000	0.60	23.08	0.30
4.917	1.80	11.000	3.91	17.083	0.60	23.17	0.30
5.000	1.80	11.083	3.91	17.167	0.60	23.25	0.30
5.083	1.80	11.167	3.91	17.250	0.60	23.33	0.30
5.167	1.80	11.250	3.91	17.333	0.60	23.42	0.30
5.250	1.80	11.333	3.91	17.417	0.60	23.50	0.30
5.333	1.80	11.417	3.91	17.500	0.60	23.58	0.30
5.417	1.80	11.500	3.91	17.583	0.60	23.67	0.30
5.500	1.80	11.583	3.91	17.667	0.60	23.75	0.30
5.583	1.80	11.667	3.91	17.750	0.60	23.83	0.30
5.667	1.80	11.750	3.91	17.833	0.60	23.92	0.30
5.750	1.80	11.833	3.91	17.917	0.60	24.00	0.30
5.833	1.80	11.917	3.91	18.000	0.60	24.08	0.30
5.917	1.80	12.000	3.91	18.083	0.60	24.17	0.30
6.000	1.80	12.083	3.91	18.167	0.60	24.25	0.30
		6.083	1.80	12.167	3.91	18.250	0.60

Max.Eff.Inten.(mm/hr)=	13.82	8.64	
over (min)	5.00	30.00	
Storage Coeff. (min)=	6.23 (ii)	25.03 (ii)	
Unit Hyd. Tpeak (min)=	5.00	30.00	
Unit Hyd. peak (cms)=	0.19	0.04	
			TOTALS
PEAK FLOW (cms)=	0.06	0.01	0.073 (iii)
TIME TO PEAK (hrs)=	9.75	10.33	10.25
RUNOFF VOLUME (mm)=	59.08	27.37	52.73
TOTAL RAINFALL (mm)=	60.08	60.08	60.08
RUNOFF COEFFICIENT =	0.98	0.46	0.88

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0260)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
	ID1= 1 (0203):	2.10	0.073	10.25	52.73
	+ ID2= 2 (0256):	1.12	0.020	10.42	58.41
	ID = 3 (0260):	3.22	0.093	10.25	54.71

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\cdb8232d-79e6-461f-abf3-b53ae11525c8\ab0cf43f
Ptotal= 60.08 mm	Comments:

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	5.11	12.75	2.10	19.00	0.30
0.50	0.30	6.75	5.11	13.00	2.10	19.25	0.30
0.75	0.30	7.00	5.11	13.25	2.10	19.50	0.30
1.00	0.30	7.25	5.11	13.50	2.10	19.75	0.30
1.25	0.30	7.50	5.11	13.75	2.10	20.00	0.30
1.50	0.30	7.75	5.11	14.00	2.10	20.25	0.30
1.75	0.30	8.00	5.11	14.25	2.10	20.50	0.30
2.00	0.30	8.25	5.11	14.50	1.20	20.75	0.30
2.25	0.30	8.50	13.82	14.75	1.20	21.00	0.30
2.50	0.30	8.75	13.82	15.00	1.20	21.25	0.30
2.75	0.30	9.00	13.82	15.25	1.20	21.50	0.30
3.00	0.30	9.25	13.82	15.50	1.20	21.75	0.30
3.25	0.30	9.50	13.82	15.75	1.20	22.00	0.30
3.50	0.30	9.75	13.82	16.00	1.20	22.25	0.30
3.75	0.30	10.00	13.82	16.25	1.20	22.50	0.30
4.00	0.30	10.25	13.82	16.50	0.60	22.75	0.30
4.25	0.30	10.50	3.91	16.75	0.60	23.00	0.30
4.50	1.80	10.75	3.91	17.00	0.60	23.25	0.30
4.75	1.80	11.00	3.91	17.25	0.60	23.50	0.30
5.00	1.80	11.25	3.91	17.50	0.60	23.75	0.30

5.25	1.80	11.50	3.91	17.75	0.60	24.00	0.30
5.50	1.80	11.75	3.91	18.00	0.60	24.25	0.30
5.75	1.80	12.00	3.91	18.25	0.60		
6.00	1.80	12.25	3.91	18.50	0.30		
6.25	1.80	12.50	2.10	18.75	0.30		

CALIB	
STANDHYD (0204)	Area (ha)= 1.45
ID= 1 DT= 5.0 min	Total Imp(%)= 80.00 Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.16	0.29
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	98.32	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	1.80	12.250	3.91	18.33	0.30
0.167	0.00	6.250	1.80	12.333	2.10	18.42	0.30
0.250	0.00	6.333	5.11	12.417	2.10	18.50	0.30
0.333	0.30	6.417	5.11	12.500	2.10	18.58	0.30
0.417	0.30	6.500	5.11	12.583	2.10	18.67	0.30
0.500	0.30	6.583	5.11	12.667	2.10	18.75	0.30
0.583	0.30	6.667	5.11	12.750	2.10	18.83	0.30
0.667	0.30	6.750	5.11	12.833	2.10	18.92	0.30
0.750	0.30	6.833	5.11	12.917	2.10	19.00	0.30
0.833	0.30	6.917	5.11	13.000	2.10	19.08	0.30
0.917	0.30	7.000	5.11	13.083	2.10	19.17	0.30
1.000	0.30	7.083	5.11	13.167	2.10	19.25	0.30
1.083	0.30	7.167	5.11	13.250	2.10	19.33	0.30
1.167	0.30	7.250	5.11	13.333	2.10	19.42	0.30
1.250	0.30	7.333	5.11	13.417	2.10	19.50	0.30
1.333	0.30	7.417	5.11	13.500	2.10	19.58	0.30
1.417	0.30	7.500	5.11	13.583	2.10	19.67	0.30
1.500	0.30	7.583	5.11	13.667	2.10	19.75	0.30
1.583	0.30	7.667	5.11	13.750	2.10	19.83	0.30
1.667	0.30	7.750	5.11	13.833	2.10	19.92	0.30
1.750	0.30	7.833	5.11	13.917	2.10	20.00	0.30
1.833	0.30	7.917	5.11	14.000	2.10	20.08	0.30
1.917	0.30	8.000	5.11	14.083	2.10	20.17	0.30
2.000	0.30	8.083	5.11	14.167	2.10	20.25	0.30
2.083	0.30	8.167	5.11	14.250	2.10	20.33	0.30
2.167	0.30	8.250	5.11	14.333	1.20	20.42	0.30
2.250	0.30	8.333	13.82	14.417	1.20	20.50	0.30
2.333	0.30	8.417	13.82	14.500	1.20	20.58	0.30
2.417	0.30	8.500	13.82	14.583	1.20	20.67	0.30
2.500	0.30	8.583	13.82	14.667	1.20	20.75	0.30
2.583	0.30	8.667	13.82	14.750	1.20	20.83	0.30
2.667	0.30	8.750	13.82	14.833	1.20	20.92	0.30
2.750	0.30	8.833	13.82	14.917	1.20	21.00	0.30
2.833	0.30	8.917	13.82	15.000	1.20	21.08	0.30
2.917	0.30	9.000	13.82	15.083	1.20	21.17	0.30
3.000	0.30	9.083	13.82	15.167	1.20	21.25	0.30
3.083	0.30	9.167	13.82	15.250	1.20	21.33	0.30
3.167	0.30	9.250	13.82	15.333	1.20	21.42	0.30
3.250	0.30	9.333	13.82	15.417	1.20	21.50	0.30
3.333	0.30	9.417	13.82	15.500	1.20	21.58	0.30
3.417	0.30	9.500	13.82	15.583	1.20	21.67	0.30
3.500	0.30	9.583	13.82	15.667	1.20	21.75	0.30
3.583	0.30	9.667	13.82	15.750	1.20	21.83	0.30
3.667	0.30	9.750	13.82	15.833	1.20	21.92	0.30
3.750	0.30	9.833	13.82	15.917	1.20	22.00	0.30
3.833	0.30	9.917	13.82	16.000	1.20	22.08	0.30
3.917	0.30	10.000	13.82	16.083	1.20	22.17	0.30
4.000	0.30	10.083	13.82	16.167	1.20	22.25	0.30
4.083	0.30	10.167	13.82	16.250	1.20	22.33	0.30
4.167	0.30	10.250	13.82	16.333	0.60	22.42	0.30
4.250	0.30	10.333	3.91	16.417	0.60	22.50	0.30
4.333	1.80	10.417	3.91	16.500	0.60	22.58	0.30
4.417	1.80	10.500	3.91	16.583	0.60	22.67	0.30
4.500	1.80	10.583	3.91	16.667	0.60	22.75	0.30
4.583	1.80	10.667	3.91	16.750	0.60	22.83	0.30
4.667	1.80	10.750	3.91	16.833	0.60	22.92	0.30
4.750	1.80	10.833	3.91	16.917	0.60	23.00	0.30
4.833	1.80	10.917	3.91	17.000	0.60	23.08	0.30
4.917	1.80	11.000	3.91	17.083	0.60	23.17	0.30
5.000	1.80	11.083	3.91	17.167	0.60	23.25	0.30
5.083	1.80	11.167	3.91	17.250	0.60	23.33	0.30
5.167	1.80	11.250	3.91	17.333	0.60	23.42	0.30
5.250	1.80	11.333	3.91	17.417	0.60	23.50	0.30
5.333	1.80	11.417	3.91	17.500	0.60	23.58	0.30
5.417	1.80	11.500	3.91	17.583	0.60	23.67	0.30
5.500	1.80	11.583	3.91	17.667	0.60	23.75	0.30
5.583	1.80	11.667	3.91	17.750	0.60	23.83	0.30
5.667	1.80	11.750	3.91	17.833	0.60	23.92	0.30
5.750	1.80	11.833	3.91	17.917	0.60	24.00	0.30
5.833	1.80	11.917	3.91	18.000	0.60	24.08	0.30
5.917	1.80	12.000	3.91	18.083	0.60	24.17	0.30
6.000	1.80	12.083	3.91	18.167	0.60	24.25	0.30
6.083	1.80	12.167	3.91	18.250	0.60		

Max.Eff.Inten.(mm/hr)=	13.82	8.64		
over (min)	5.00	25.00		
Storage Coeff. (min)=	5.58 (ii)	24.38 (ii)		
Unit Hyd. Tpeak (min)=	5.00	25.00		
Unit Hyd. peak (cms)=	0.20	0.05		
			TOTALS	
PEAK FLOW (cms)=	0.04	0.01	0.051 (iii)	
TIME TO PEAK (hrs)=	9.50	10.25	10.25	
RUNOFF VOLUME (mm)=	59.08	27.37	52.73	
TOTAL RAINFALL (mm)=	60.08	60.08	60.08	
RUNOFF COEFFICIENT =	0.98	0.46	0.88	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0259)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0204):	1.45	0.051	10.25	52.73
+ ID2= 2 (0260):	3.22	0.093	10.25	54.71

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       ID = 3 (  0259):     4.67   0.144    10.25    54.10

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              cdb8232d-79e6-461f-abf3-b53ae11525c8\ab0cf43f
| Ptotal= 60.08 mm |    Comments:
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```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	5.11	12.75	2.10	19.00	0.30
0.50	0.30	6.75	5.11	13.00	2.10	19.25	0.30
0.75	0.30	7.00	5.11	13.25	2.10	19.50	0.30
1.00	0.30	7.25	5.11	13.50	2.10	19.75	0.30
1.25	0.30	7.50	5.11	13.75	2.10	20.00	0.30
1.50	0.30	7.75	5.11	14.00	2.10	20.25	0.30
1.75	0.30	8.00	5.11	14.25	2.10	20.50	0.30
2.00	0.30	8.25	5.11	14.50	1.20	20.75	0.30
2.25	0.30	8.50	13.82	14.75	1.20	21.00	0.30
2.50	0.30	8.75	13.82	15.00	1.20	21.25	0.30
2.75	0.30	9.00	13.82	15.25	1.20	21.50	0.30
3.00	0.30	9.25	13.82	15.50	1.20	21.75	0.30
3.25	0.30	9.50	13.82	15.75	1.20	22.00	0.30
3.50	0.30	9.75	13.82	16.00	1.20	22.25	0.30
3.75	0.30	10.00	13.82	16.25	1.20	22.50	0.30
4.00	0.30	10.25	13.82	16.50	0.60	22.75	0.30
4.25	0.30	10.50	3.91	16.75	0.60	23.00	0.30
4.50	1.80	10.75	3.91	17.00	0.60	23.25	0.30
4.75	1.80	11.00	3.91	17.25	0.60	23.50	0.30
5.00	1.80	11.25	3.91	17.50	0.60	23.75	0.30
5.25	1.80	11.50	3.91	17.75	0.60	24.00	0.30
5.50	1.80	11.75	3.91	18.00	0.60	24.25	0.30
5.75	1.80	12.00	3.91	18.25	0.60		
6.00	1.80	12.25	3.91	18.50	0.30		
6.25	1.80	12.50	2.10	18.75	0.30		

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| CALIB            |
| STANDHYD (  0201)|   Area    (ha)=   5.27
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
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		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.22	0.05
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	187.44	40.00
Mannings n	=	0.013	0.250

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        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
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---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	1.80	12.250	3.91	18.33	0.30
0.167	0.00	6.250	1.80	12.333	2.10	18.42	0.30
0.250	0.00	6.333	5.11	12.417	2.10	18.50	0.30
0.333	0.30	6.417	5.11	12.500	2.10	18.58	0.30
0.417	0.30	6.500	5.11	12.583	2.10	18.67	0.30
0.500	0.30	6.583	5.11	12.667	2.10	18.75	0.30
0.583	0.30	6.667	5.11	12.750	2.10	18.83	0.30
0.667	0.30	6.750	5.11	12.833	2.10	18.92	0.30
0.750	0.30	6.833	5.11	12.917	2.10	19.00	0.30
0.833	0.30	6.917	5.11	13.000	2.10	19.08	0.30
0.917	0.30	7.000	5.11	13.083	2.10	19.17	0.30
1.000	0.30	7.083	5.11	13.167	2.10	19.25	0.30
1.083	0.30	7.167	5.11	13.250	2.10	19.33	0.30
1.167	0.30	7.250	5.11	13.333	2.10	19.42	0.30
1.250	0.30	7.333	5.11	13.417	2.10	19.50	0.30
1.333	0.30	7.417	5.11	13.500	2.10	19.58	0.30
1.417	0.30	7.500	5.11	13.583	2.10	19.67	0.30
1.500	0.30	7.583	5.11	13.667	2.10	19.75	0.30
1.583	0.30	7.667	5.11	13.750	2.10	19.83	0.30
1.667	0.30	7.750	5.11	13.833	2.10	19.92	0.30
1.750	0.30	7.833	5.11	13.917	2.10	20.00	0.30
1.833	0.30	7.917	5.11	14.000	2.10	20.08	0.30
1.917	0.30	8.000	5.11	14.083	2.10	20.17	0.30
2.000	0.30	8.083	5.11	14.167	2.10	20.25	0.30
2.083	0.30	8.167	5.11	14.250	2.10	20.33	0.30
2.167	0.30	8.250	5.11	14.333	1.20	20.42	0.30
2.250	0.30	8.333	13.82	14.417	1.20	20.50	0.30
2.333	0.30	8.417	13.82	14.500	1.20	20.58	0.30
2.417	0.30	8.500	13.82	14.583	1.20	20.67	0.30
2.500	0.30	8.583	13.82	14.667	1.20	20.75	0.30
2.583	0.30	8.667	13.82	14.750	1.20	20.83	0.30
2.667	0.30	8.750	13.82	14.833	1.20	20.92	0.30
2.750	0.30	8.833	13.82	14.917	1.20	21.00	0.30
2.833	0.30	8.917	13.82	15.000	1.20	21.08	0.30
2.917	0.30	9.000	13.82	15.083	1.20	21.17	0.30
3.000	0.30	9.083	13.82	15.167	1.20	21.25	0.30
3.083	0.30	9.167	13.82	15.250	1.20	21.33	0.30
3.167	0.30	9.250	13.82	15.333	1.20	21.42	0.30
3.250	0.30	9.333	13.82	15.417	1.20	21.50	0.30
3.333	0.30	9.417	13.82	15.500	1.20	21.58	0.30
3.417	0.30	9.500	13.82	15.583	1.20	21.67	0.30
3.500	0.30	9.583	13.82	15.667	1.20	21.75	0.30
3.583	0.30	9.667	13.82	15.750	1.20	21.83	0.30
3.667	0.30	9.750	13.82	15.833	1.20	21.92	0.30
3.750	0.30	9.833	13.82	15.917	1.20	22.00	0.30
3.833	0.30	9.917	13.82	16.000	1.20	22.08	0.30
3.917	0.30	10.000	13.82	16.083	1.20	22.17	0.30
4.000	0.30	10.083	13.82	16.167	1.20	22.25	0.30
4.083	0.30	10.167	13.82	16.250	1.20	22.33	0.30
4.167	0.30	10.250	13.82	16.333	0.60	22.42	0.30
4.250	0.30	10.333	3.91	16.417	0.60	22.50	0.30
4.333	1.80	10.417	3.91	16.500	0.60	22.58	0.30
4.417	1.80	10.500	3.91	16.583	0.60	22.67	0.30
4.500	1.80	10.583	3.91	16.667	0.60	22.75	0.30
4.583	1.80	10.667	3.91	16.750	0.60	22.83	0.30
4.667	1.80	10.750	3.91	16.833	0.60	22.92	0.30
4.750	1.80	10.833	3.91	16.917	0.60	23.00	0.30
4.833	1.80	10.917	3.91	17.000	0.60	23.08	0.30
4.917	1.80	11.000	3.91	17.083	0.60	23.17	0.30
5.000	1.80	11.083	3.91	17.167	0.60	23.25	0.30
5.083	1.80	11.167	3.91	17.250	0.60	23.33	0.30
5.167	1.80	11.250	3.91	17.333	0.60	23.42	0.30
5.250	1.80	11.333	3.91	17.417	0.60	23.50	0.30
5.333	1.80	11.417	3.91	17.500	0.60	23.58	0.30
5.417	1.80	11.500	3.91	17.583	0.60	23.67	0.30
5.500	1.80	11.583	3.91	17.667	0.60	23.75	0.30
5.583	1.80	11.667	3.91	17.750	0.60	23.83	0.30
5.667	1.80	11.750	3.91	17.833	0.60	23.92	0.30

5.750	1.80	11.833	3.91	17.917	0.60	24.00	0.30
5.833	1.80	11.917	3.91	18.000	0.60	24.08	0.30
5.917	1.80	12.000	3.91	18.083	0.60	24.17	0.30
6.000	1.80	12.083	3.91	18.167	0.60	24.25	0.30
6.083	1.80	12.167	3.91	18.250	0.60		

Max.Eff.Inten.(mm/hr)=	13.82	8.77	
over (min)	10.00	15.00	
Storage Coeff. (min)=	8.22 (ii)	10.70 (ii)	
Unit Hyd. Tpeak (min)=	10.00	15.00	
Unit Hyd. peak (cms)=	0.13	0.09	
			TOTALS
PEAK FLOW (cms)=	0.20	0.00	0.202 (iii)
TIME TO PEAK (hrs)=	10.25	10.25	10.25
RUNOFF VOLUME (mm)=	59.08	27.37	58.76
TOTAL RAINFALL (mm)=	60.08	60.08	60.08
RUNOFF COEFFICIENT =	0.98	0.46	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0268)| IN= 2---> OUT= 1 | DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1959	0.1883
	0.0980	0.0369	0.2939	0.4335

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)	5.270	0.202	10.25	58.76
OUTFLOW: ID= 1 (0268)	5.270	0.130	10.42	58.75

PEAK FLOW REDUCTION [Qout/Qin](%)= 64.65
TIME SHIFT OF PEAK FLOW (min)= 10.00
MAXIMUM STORAGE USED (ha.m.)= 0.0870

READ STORM | Ptotal= 60.08 mm	Filename: C:\Users\mventresca\AppData\Local\Temp\cdb8232d-79e6-461f-abf3-b53ae11525c8\ab0cf43f
	Comments:

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	5.11	12.75	2.10	19.00	0.30
0.50	0.30	6.75	5.11	13.00	2.10	19.25	0.30
0.75	0.30	7.00	5.11	13.25	2.10	19.50	0.30
1.00	0.30	7.25	5.11	13.50	2.10	19.75	0.30
1.25	0.30	7.50	5.11	13.75	2.10	20.00	0.30
1.50	0.30	7.75	5.11	14.00	2.10	20.25	0.30
1.75	0.30	8.00	5.11	14.25	2.10	20.50	0.30
2.00	0.30	8.25	5.11	14.50	1.20	20.75	0.30
2.25	0.30	8.50	13.82	14.75	1.20	21.00	0.30
2.50	0.30	8.75	13.82	15.00	1.20	21.25	0.30
2.75	0.30	9.00	13.82	15.25	1.20	21.50	0.30
3.00	0.30	9.25	13.82	15.50	1.20	21.75	0.30
3.25	0.30	9.50	13.82	15.75	1.20	22.00	0.30
3.50	0.30	9.75	13.82	16.00	1.20	22.25	0.30
3.75	0.30	10.00	13.82	16.25	1.20	22.50	0.30
4.00	0.30	10.25	13.82	16.50	0.60	22.75	0.30
4.25	0.30	10.50	3.91	16.75	0.60	23.00	0.30
4.50	1.80	10.75	3.91	17.00	0.60	23.25	0.30
4.75	1.80	11.00	3.91	17.25	0.60	23.50	0.30
5.00	1.80	11.25	3.91	17.50	0.60	23.75	0.30
5.25	1.80	11.50	3.91	17.75	0.60	24.00	0.30
5.50	1.80	11.75	3.91	18.00	0.60	24.25	0.30
5.75	1.80	12.00	3.91	18.25	0.60		
6.00	1.80	12.25	3.91	18.50	0.30		
6.25	1.80	12.50	2.10	18.75	0.30		

CALIB | STANDHYD (0202)| ID= 1 DT= 5.0 min	Area (ha)= 6.57 Total Imp(%)= 81.00 Dir. Conn.(%)= 81.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.32	1.25
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	209.28	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	1.80	12.250	3.91	18.33	0.30
0.167	0.00	6.250	1.80	12.333	2.10	18.42	0.30
0.250	0.00	6.333	5.11	12.417	2.10	18.50	0.30
0.333	0.30	6.417	5.11	12.500	2.10	18.58	0.30
0.417	0.30	6.500	5.11	12.583	2.10	18.67	0.30
0.500	0.30	6.583	5.11	12.667	2.10	18.75	0.30
0.583	0.30	6.667	5.11	12.750	2.10	18.83	0.30
0.667	0.30	6.750	5.11	12.833	2.10	18.92	0.30
0.750	0.30	6.833	5.11	12.917	2.10	19.00	0.30
0.833	0.30	6.917	5.11	13.000	2.10	19.08	0.30
0.917	0.30	7.000	5.11	13.083	2.10	19.17	0.30
1.000	0.30	7.083	5.11	13.167	2.10	19.25	0.30
1.083	0.30	7.167	5.11	13.250	2.10	19.33	0.30
1.167	0.30	7.250	5.11	13.333	2.10	19.42	0.30
1.250	0.30	7.333	5.11	13.417	2.10	19.50	0.30
1.333	0.30	7.417	5.11	13.500	2.10	19.58	0.30
1.417	0.30	7.500	5.11	13.583	2.10	19.67	0.30
1.500	0.30	7.583	5.11	13.667	2.10	19.75	0.30
1.583	0.30	7.667	5.11	13.750	2.10	19.83	0.30
1.667	0.30	7.750	5.11	13.833	2.10	19.92	0.30
1.750	0.30	7.833	5.11	13.917	2.10	20.00	0.30
1.833	0.30	7.917	5.11	14.000	2.10	20.08	0.30
1.917	0.30	8.000	5.11	14.083	2.10	20.17	0.30
2.000	0.30	8.083	5.11	14.167	2.10	20.25	0.30
2.083	0.30	8.167	5.11	14.250	2.10	20.33	0.30
2.167	0.30	8.250	5.11	14.333	1.20	20.42	0.30
2.250	0.30	8.333	13.82	14.417	1.20	20.50	0.30
2.333	0.30	8.417	13.82	14.500	1.20	20.58	0.30
2.417	0.30	8.500	13.82	14.583	1.20	20.67	0.30

2.500	0.30	8.583	13.82	14.667	1.20	20.75	0.30
2.583	0.30	8.667	13.82	14.750	1.20	20.83	0.30
2.667	0.30	8.750	13.82	14.833	1.20	20.92	0.30
2.750	0.30	8.833	13.82	14.917	1.20	21.00	0.30
2.833	0.30	8.917	13.82	15.000	1.20	21.08	0.30
2.917	0.30	9.000	13.82	15.083	1.20	21.17	0.30
3.000	0.30	9.083	13.82	15.167	1.20	21.25	0.30
3.083	0.30	9.167	13.82	15.250	1.20	21.33	0.30
3.167	0.30	9.250	13.82	15.333	1.20	21.42	0.30
3.250	0.30	9.333	13.82	15.417	1.20	21.50	0.30
3.333	0.30	9.417	13.82	15.500	1.20	21.58	0.30
3.417	0.30	9.500	13.82	15.583	1.20	21.67	0.30
3.500	0.30	9.583	13.82	15.667	1.20	21.75	0.30
3.583	0.30	9.667	13.82	15.750	1.20	21.83	0.30
3.667	0.30	9.750	13.82	15.833	1.20	21.92	0.30
3.750	0.30	9.833	13.82	15.917	1.20	22.00	0.30
3.833	0.30	9.917	13.82	16.000	1.20	22.08	0.30
3.917	0.30	10.000	13.82	16.083	1.20	22.17	0.30
4.000	0.30	10.083	13.82	16.167	1.20	22.25	0.30
4.083	0.30	10.167	13.82	16.250	1.20	22.33	0.30
4.167	0.30	10.250	13.82	16.333	0.60	22.42	0.30
4.250	0.30	10.333	3.91	16.417	0.60	22.50	0.30
4.333	1.80	10.417	3.91	16.500	0.60	22.58	0.30
4.417	1.80	10.500	3.91	16.583	0.60	22.67	0.30
4.500	1.80	10.583	3.91	16.667	0.60	22.75	0.30
4.583	1.80	10.667	3.91	16.750	0.60	22.83	0.30
4.667	1.80	10.750	3.91	16.833	0.60	22.92	0.30
4.750	1.80	10.833	3.91	16.917	0.60	23.00	0.30
4.833	1.80	10.917	3.91	17.000	0.60	23.08	0.30
4.917	1.80	11.000	3.91	17.083	0.60	23.17	0.30
5.000	1.80	11.083	3.91	17.167	0.60	23.25	0.30
5.083	1.80	11.167	3.91	17.250	0.60	23.33	0.30
5.167	1.80	11.250	3.91	17.333	0.60	23.42	0.30
5.250	1.80	11.333	3.91	17.417	0.60	23.50	0.30
5.333	1.80	11.417	3.91	17.500	0.60	23.58	0.30
5.417	1.80	11.500	3.91	17.583	0.60	23.67	0.30
5.500	1.80	11.583	3.91	17.667	0.60	23.75	0.30
5.583	1.80	11.667	3.91	17.750	0.60	23.83	0.30
5.667	1.80	11.750	3.91	17.833	0.60	23.92	0.30
5.750	1.80	11.833	3.91	17.917	0.60	24.00	0.30
5.833	1.80	11.917	3.91	18.000	0.60	24.08	0.30
5.917	1.80	12.000	3.91	18.083	0.60	24.17	0.30
6.000	1.80	12.083	3.91	18.167	0.60	24.25	0.30
6.083	1.80	12.167	3.91	18.250	0.60		

			TOTALS
Max.Eff.Inten.(mm/hr)=	13.82	8.64	
over (min)	10.00	30.00	
Storage Coeff. (min)=	8.78 (ii)	27.58 (ii)	
Unit Hyd. Tpeak (min)=	10.00	30.00	
Unit Hyd. peak (cms)=	0.12	0.04	
PEAK FLOW (cms)=	0.20	0.03	0.230 (iii)
TIME TO PEAK (hrs)=	10.25	10.33	10.25
RUNOFF VOLUME (mm)=	59.08	27.37	53.05
TOTAL RAINFALL (mm)=	60.08	60.08	60.08
RUNOFF COEFFICIENT =	0.98	0.46	0.88

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0262)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0202):	6.57	0.230	10.25	53.05
+ ID2= 2 (0268):	5.27	0.130	10.42	58.75
ID = 3 (0262):	11.84	0.359	10.25	55.59

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0266)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0259):	4.67	0.144	10.25	54.10
+ ID2= 2 (0262):	11.84	0.359	10.25	55.59
ID = 3 (0266):	16.51	0.503	10.25	55.17

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0263)
IN= 2---> OUT= 1
DT= 5.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.2130	0.6563
0.0190	0.1773	0.2520	0.6883
0.0220	0.2128	0.2890	0.7150
0.0260	0.2888	0.2980	0.7450
0.0300	0.3648	0.3060	0.7700
0.0650	0.4586	0.3150	0.8127
0.1100	0.5155	0.3320	0.9290
0.1680	0.5503	0.3390	0.9767
0.1930	0.5804	0.3520	1.0680
0.2000	0.6048	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0266)	16.510	0.503	10.25	55.17
OUTFLOW: ID= 1 (0263)	16.510	0.173	12.83	55.02

PEAK FLOW REDUCTION [Qout/Qin](%)= 34.41
TIME SHIFT OF PEAK FLOW (min)=155.00
MAXIMUM STORAGE USED (ha.m.)= 0.5564

ADD HYD (0261)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0206):	0.12	0.003	10.25	27.34
+ ID2= 2 (0263):	16.51	0.173	12.83	55.02
ID = 3 (0261):	16.64	0.174	12.83	54.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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      V    V   I    SSSSS  U   U    A    L             (v 5.0.2025)
      V    V   I    SS     U   U   A A   L
       V  V    I     SS    U   U  AAAAA  L
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 5.0\VO2\voin.dat
  Output  filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\3ad0a445-98ef-4dce-9217-ba887e56117d\s
  Summary filename: C:\Users\mventresca\AppData\Local\Civica\VH5\4d9d4227-6f21-
4bf8-aeac-18a29a864848\3ad0a445-98ef-4dce-9217-ba887e56117d\s


DATE: 07/06/2020                          TIME: 04:38:42

USER:



COMMENTS: _____________________________________________________________


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  ***********************************************
  ** SIMULATION : 50 Year 24 Hour AES           **
  ***********************************************


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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              cdb8232d-79e6-461f-abf3-b53ae11525c8\1089df3a
| Ptotal= 87.80 mm |    Comments:
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	7.46	12.75	3.07	19.00	0.44
0.50	0.44	6.75	7.46	13.00	3.07	19.25	0.44
0.75	0.44	7.00	7.46	13.25	3.07	19.50	0.44
1.00	0.44	7.25	7.46	13.50	3.07	19.75	0.44
1.25	0.44	7.50	7.46	13.75	3.07	20.00	0.44
1.50	0.44	7.75	7.46	14.00	3.07	20.25	0.44
1.75	0.44	8.00	7.46	14.25	3.07	20.50	0.44
2.00	0.44	8.25	7.46	14.50	1.76	20.75	0.44
2.25	0.44	8.50	20.19	14.75	1.76	21.00	0.44
2.50	0.44	8.75	20.19	15.00	1.76	21.25	0.44
2.75	0.44	9.00	20.19	15.25	1.76	21.50	0.44
3.00	0.44	9.25	20.19	15.50	1.76	21.75	0.44
3.25	0.44	9.50	20.19	15.75	1.76	22.00	0.44
3.50	0.44	9.75	20.19	16.00	1.76	22.25	0.44
3.75	0.44	10.00	20.19	16.25	1.76	22.50	0.44
4.00	0.44	10.25	20.19	16.50	0.88	22.75	0.44
4.25	0.44	10.50	5.71	16.75	0.88	23.00	0.44
4.50	2.63	10.75	5.71	17.00	0.88	23.25	0.44
4.75	2.63	11.00	5.71	17.25	0.88	23.50	0.44
5.00	2.63	11.25	5.71	17.50	0.88	23.75	0.44
5.25	2.63	11.50	5.71	17.75	0.88	24.00	0.44
5.50	2.63	11.75	5.71	18.00	0.88	24.25	0.44
5.75	2.63	12.00	5.71	18.25	0.88		
6.00	2.63	12.25	5.71	18.50	0.44		
6.25	2.63	12.50	3.07	18.75	0.44		

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| CALIB            |
| NASHYD   (  0206)|   Area    (ha)=   0.12   Curve Number   (CN)= 82.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
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---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	2.63	12.250	5.71	18.33	0.44
0.167	0.00	6.250	2.63	12.333	3.07	18.42	0.44
0.250	0.00	6.333	7.46	12.417	3.07	18.50	0.44
0.333	0.44	6.417	7.46	12.500	3.07	18.58	0.44
0.417	0.44	6.500	7.46	12.583	3.07	18.67	0.44
0.500	0.44	6.583	7.46	12.667	3.07	18.75	0.44
0.583	0.44	6.667	7.46	12.750	3.07	18.83	0.44
0.667	0.44	6.750	7.46	12.833	3.07	18.92	0.44
0.750	0.44	6.833	7.46	12.917	3.07	19.00	0.44
0.833	0.44	6.917	7.46	13.000	3.07	19.08	0.44
0.917	0.44	7.000	7.46	13.083	3.07	19.17	0.44
1.000	0.44	7.083	7.46	13.167	3.07	19.25	0.44
1.083	0.44	7.167	7.46	13.250	3.07	19.33	0.44
1.167	0.44	7.250	7.46	13.333	3.07	19.42	0.44
1.250	0.44	7.333	7.46	13.417	3.07	19.50	0.44
1.333	0.44	7.417	7.46	13.500	3.07	19.58	0.44
1.417	0.44	7.500	7.46	13.583	3.07	19.67	0.44
1.500	0.44	7.583	7.46	13.667	3.07	19.75	0.44
1.583	0.44	7.667	7.46	13.750	3.07	19.83	0.44
1.667	0.44	7.750	7.46	13.833	3.07	19.92	0.44
1.750	0.44	7.833	7.46	13.917	3.07	20.00	0.44
1.833	0.44	7.917	7.46	14.000	3.07	20.08	0.44
1.917	0.44	8.000	7.46	14.083	3.07	20.17	0.44
2.000	0.44	8.083	7.46	14.167	3.07	20.25	0.44
2.083	0.44	8.167	7.46	14.250	3.07	20.33	0.44
2.167	0.44	8.250	7.46	14.333	1.76	20.42	0.44
2.250	0.44	8.333	20.19	14.417	1.76	20.50	0.44
2.333	0.44	8.417	20.19	14.500	1.76	20.58	0.44
2.417	0.44	8.500	20.19	14.583	1.76	20.67	0.44
2.500	0.44	8.583	20.19	14.667	1.76	20.75	0.44
2.583	0.44	8.667	20.19	14.750	1.76	20.83	0.44
2.667	0.44	8.750	20.19	14.833	1.76	20.92	0.44
2.750	0.44	8.833	20.19	14.917	1.76	21.00	0.44
2.833	0.44	8.917	20.19	15.000	1.76	21.08	0.44

2.917	0.44	9.000	20.19	15.083	1.76	21.17	0.44
3.000	0.44	9.083	20.19	15.167	1.76	21.25	0.44
3.083	0.44	9.167	20.19	15.250	1.76	21.33	0.44
3.167	0.44	9.250	20.19	15.333	1.76	21.42	0.44
3.250	0.44	9.333	20.19	15.417	1.76	21.50	0.44
3.333	0.44	9.417	20.19	15.500	1.76	21.58	0.44
3.417	0.44	9.500	20.19	15.583	1.76	21.67	0.44
3.500	0.44	9.583	20.19	15.667	1.76	21.75	0.44
3.583	0.44	9.667	20.19	15.750	1.76	21.83	0.44
3.667	0.44	9.750	20.19	15.833	1.76	21.92	0.44
3.750	0.44	9.833	20.19	15.917	1.76	22.00	0.44
3.833	0.44	9.917	20.19	16.000	1.76	22.08	0.44
3.917	0.44	10.000	20.19	16.083	1.76	22.17	0.44
4.000	0.44	10.083	20.19	16.167	1.76	22.25	0.44
4.083	0.44	10.167	20.19	16.250	1.76	22.33	0.44
4.167	0.44	10.250	20.19	16.333	0.88	22.42	0.44
4.250	0.44	10.333	5.71	16.417	0.88	22.50	0.44
4.333	2.63	10.417	5.71	16.500	0.88	22.58	0.44
4.417	2.63	10.500	5.71	16.583	0.88	22.67	0.44
4.500	2.63	10.583	5.71	16.667	0.88	22.75	0.44
4.583	2.63	10.667	5.71	16.750	0.88	22.83	0.44
4.667	2.63	10.750	5.71	16.833	0.88	22.92	0.44
4.750	2.63	10.833	5.71	16.917	0.88	23.00	0.44
4.833	2.63	10.917	5.71	17.000	0.88	23.08	0.44
4.917	2.63	11.000	5.71	17.083	0.88	23.17	0.44
5.000	2.63	11.083	5.71	17.167	0.88	23.25	0.44
5.083	2.63	11.167	5.71	17.250	0.88	23.33	0.44
5.167	2.63	11.250	5.71	17.333	0.88	23.42	0.44
5.250	2.63	11.333	5.71	17.417	0.88	23.50	0.44
5.333	2.63	11.417	5.71	17.500	0.88	23.58	0.44
5.417	2.63	11.500	5.71	17.583	0.88	23.67	0.44
5.500	2.63	11.583	5.71	17.667	0.88	23.75	0.44
5.583	2.63	11.667	5.71	17.750	0.88	23.83	0.44
5.667	2.63	11.750	5.71	17.833	0.88	23.92	0.44
5.750	2.63	11.833	5.71	17.917	0.88	24.00	0.44
5.833	2.63	11.917	5.71	18.000	0.88	24.08	0.44
5.917	2.63	12.000	5.71	18.083	0.88	24.17	0.44
6.000	2.63	12.083	5.71	18.167	0.88	24.25	0.44
6.083	2.63	12.167	5.71	18.250	0.88		

Unit Hyd Qpeak (cms)= 0.019

PEAK FLOW (cms)= 0.005 (i)
TIME TO PEAK (hrs)= 10.250
RUNOFF VOLUME (mm)= 49.434
TOTAL RAINFALL (mm)= 87.800
RUNOFF COEFFICIENT = 0.563

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

READ STORM	Filename: C:\Users\mventresca\AppData\Local\Temp\cdb8232d-79e6-461f-abf3-b53ae11525c8\1089df3a
Ptotal= 87.80 mm	Comments:

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	7.46	12.75	3.07	19.00	0.44
0.50	0.44	6.75	7.46	13.00	3.07	19.25	0.44
0.75	0.44	7.00	7.46	13.25	3.07	19.50	0.44
1.00	0.44	7.25	7.46	13.50	3.07	19.75	0.44
1.25	0.44	7.50	7.46	13.75	3.07	20.00	0.44
1.50	0.44	7.75	7.46	14.00	3.07	20.25	0.44
1.75	0.44	8.00	7.46	14.25	3.07	20.50	0.44
2.00	0.44	8.25	7.46	14.50	1.76	20.75	0.44
2.25	0.44	8.50	20.19	14.75	1.76	21.00	0.44
2.50	0.44	8.75	20.19	15.00	1.76	21.25	0.44
2.75	0.44	9.00	20.19	15.25	1.76	21.50	0.44
3.00	0.44	9.25	20.19	15.50	1.76	21.75	0.44
3.25	0.44	9.50	20.19	15.75	1.76	22.00	0.44
3.50	0.44	9.75	20.19	16.00	1.76	22.25	0.44
3.75	0.44	10.00	20.19	16.25	1.76	22.50	0.44
4.00	0.44	10.25	20.19	16.50	0.88	22.75	0.44
4.25	0.44	10.50	5.71	16.75	0.88	23.00	0.44
4.50	2.63	10.75	5.71	17.00	0.88	23.25	0.44
4.75	2.63	11.00	5.71	17.25	0.88	23.50	0.44
5.00	2.63	11.25	5.71	17.50	0.88	23.75	0.44
5.25	2.63	11.50	5.71	17.75	0.88	24.00	0.44
5.50	2.63	11.75	5.71	18.00	0.88	24.25	0.44
5.75	2.63	12.00	5.71	18.25	0.88		
6.00	2.63	12.25	5.71	18.50	0.44		
6.25	2.63	12.50	3.07	18.75	0.44		

CALIB	
STANDHYD (0205)	Area (ha)= 1.12
ID= 1 DT= 5.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.11	0.01
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	86.60	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	2.63	12.250	5.71	18.33	0.44
0.167	0.00	6.250	2.63	12.333	3.07	18.42	0.44
0.250	0.00	6.333	7.46	12.417	3.07	18.50	0.44
0.333	0.44	6.417	7.46	12.500	3.07	18.58	0.44
0.417	0.44	6.500	7.46	12.583	3.07	18.67	0.44
0.500	0.44	6.583	7.46	12.667	3.07	18.75	0.44
0.583	0.44	6.667	7.46	12.750	3.07	18.83	0.44
0.667	0.44	6.750	7.46	12.833	3.07	18.92	0.44
0.750	0.44	6.833	7.46	12.917	3.07	19.00	0.44
0.833	0.44	6.917	7.46	13.000	3.07	19.08	0.44
0.917	0.44	7.000	7.46	13.083	3.07	19.17	0.44
1.000	0.44	7.083	7.46	13.167	3.07	19.25	0.44
1.083	0.44	7.167	7.46	13.250	3.07	19.33	0.44
1.167	0.44	7.250	7.46	13.333	3.07	19.42	0.44
1.250	0.44	7.333	7.46	13.417	3.07	19.50	0.44
1.333	0.44	7.417	7.46	13.500	3.07	19.58	0.44
1.417	0.44	7.500	7.46	13.583	3.07	19.67	0.44
1.500	0.44	7.583	7.46	13.667	3.07	19.75	0.44
1.583	0.44	7.667	7.46	13.750	3.07	19.83	0.44
1.667	0.44	7.750	7.46	13.833	3.07	19.92	0.44
1.750	0.44	7.833	7.46	13.917	3.07	20.00	0.44
1.833	0.44	7.917	7.46	14.000	3.07	20.08	0.44

1.917	0.44	8.000	7.46	14.083	3.07	20.17	0.44
2.000	0.44	8.083	7.46	14.167	3.07	20.25	0.44
2.083	0.44	8.167	7.46	14.250	3.07	20.33	0.44
2.167	0.44	8.250	7.46	14.333	1.76	20.42	0.44
2.250	0.44	8.333	20.19	14.417	1.76	20.50	0.44
2.333	0.44	8.417	20.19	14.500	1.76	20.58	0.44
2.417	0.44	8.500	20.19	14.583	1.76	20.67	0.44
2.500	0.44	8.583	20.19	14.667	1.76	20.75	0.44
2.583	0.44	8.667	20.19	14.750	1.76	20.83	0.44
2.667	0.44	8.750	20.19	14.833	1.76	20.92	0.44
2.750	0.44	8.833	20.19	14.917	1.76	21.00	0.44
2.833	0.44	8.917	20.19	15.000	1.76	21.08	0.44
2.917	0.44	9.000	20.19	15.083	1.76	21.17	0.44
3.000	0.44	9.083	20.19	15.167	1.76	21.25	0.44
3.083	0.44	9.167	20.19	15.250	1.76	21.33	0.44
3.167	0.44	9.250	20.19	15.333	1.76	21.42	0.44
3.250	0.44	9.333	20.19	15.417	1.76	21.50	0.44
3.333	0.44	9.417	20.19	15.500	1.76	21.58	0.44
3.417	0.44	9.500	20.19	15.583	1.76	21.67	0.44
3.500	0.44	9.583	20.19	15.667	1.76	21.75	0.44
3.583	0.44	9.667	20.19	15.750	1.76	21.83	0.44
3.667	0.44	9.750	20.19	15.833	1.76	21.92	0.44
3.750	0.44	9.833	20.19	15.917	1.76	22.00	0.44
3.833	0.44	9.917	20.19	16.000	1.76	22.08	0.44
3.917	0.44	10.000	20.19	16.083	1.76	22.17	0.44
4.000	0.44	10.083	20.19	16.167	1.76	22.25	0.44
4.083	0.44	10.167	20.19	16.250	1.76	22.33	0.44
4.167	0.44	10.250	20.19	16.333	0.88	22.42	0.44
4.250	0.44	10.333	5.71	16.417	0.88	22.50	0.44
4.333	2.63	10.417	5.71	16.500	0.88	22.58	0.44
4.417	2.63	10.500	5.71	16.583	0.88	22.67	0.44
4.500	2.63	10.583	5.71	16.667	0.88	22.75	0.44
4.583	2.63	10.667	5.71	16.750	0.88	22.83	0.44
4.667	2.63	10.750	5.71	16.833	0.88	22.92	0.44
4.750	2.63	10.833	5.71	16.917	0.88	23.00	0.44
4.833	2.63	10.917	5.71	17.000	0.88	23.08	0.44
4.917	2.63	11.000	5.71	17.083	0.88	23.17	0.44
5.000	2.63	11.083	5.71	17.167	0.88	23.25	0.44
5.083	2.63	11.167	5.71	17.250	0.88	23.33	0.44
5.167	2.63	11.250	5.71	17.333	0.88	23.42	0.44
5.250	2.63	11.333	5.71	17.417	0.88	23.50	0.44
5.333	2.63	11.417	5.71	17.500	0.88	23.58	0.44
5.417	2.63	11.500	5.71	17.583	0.88	23.67	0.44
5.500	2.63	11.583	5.71	17.667	0.88	23.75	0.44
5.583	2.63	11.667	5.71	17.750	0.88	23.83	0.44
5.667	2.63	11.750	5.71	17.833	0.88	23.92	0.44
5.750	2.63	11.833	5.71	17.917	0.88	24.00	0.44
5.833	2.63	11.917	5.71	18.000	0.88	24.08	0.44
5.917	2.63	12.000	5.71	18.083	0.88	24.17	0.44
6.000	2.63	12.083	5.71	18.167	0.88	24.25	0.44
6.083	2.63	12.167	5.71	18.250	0.88		

Max.Eff.Inten.(mm/hr)=	20.19	15.13	
over (min)	5.00	10.00	
Storage Coeff. (min)=	4.44 (ii)	6.57 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.23	0.14	
			TOTALS
PEAK FLOW (cms)=	0.06	0.00	0.063 (iii)
TIME TO PEAK (hrs)=	9.50	10.25	10.25
RUNOFF VOLUME (mm)=	86.80	49.48	86.42
TOTAL RAINFALL (mm)=	87.80	87.80	87.80
RUNOFF COEFFICIENT =	0.99	0.56	0.98

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***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  82.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| RESERVOIR(  0256)|
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0470      0.0750

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0205)      1.125      0.063     10.25       86.42
   OUTFLOW: ID= 1 (  0256)      1.125      0.029     10.33       86.07

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 46.42
                  TIME SHIFT OF PEAK FLOW         (min)=  5.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0467

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              cdb8232d-79e6-461f-abf3-b53ae11525c8\1089df3a
| Ptotal= 87.80 mm |    Comments:
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TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	7.46	12.75	3.07	19.00	0.44
0.50	0.44	6.75	7.46	13.00	3.07	19.25	0.44
0.75	0.44	7.00	7.46	13.25	3.07	19.50	0.44
1.00	0.44	7.25	7.46	13.50	3.07	19.75	0.44
1.25	0.44	7.50	7.46	13.75	3.07	20.00	0.44
1.50	0.44	7.75	7.46	14.00	3.07	20.25	0.44
1.75	0.44	8.00	7.46	14.25	3.07	20.50	0.44
2.00	0.44	8.25	7.46	14.50	1.76	20.75	0.44
2.25	0.44	8.50	20.19	14.75	1.76	21.00	0.44
2.50	0.44	8.75	20.19	15.00	1.76	21.25	0.44
2.75	0.44	9.00	20.19	15.25	1.76	21.50	0.44
3.00	0.44	9.25	20.19	15.50	1.76	21.75	0.44
3.25	0.44	9.50	20.19	15.75	1.76	22.00	0.44
3.50	0.44	9.75	20.19	16.00	1.76	22.25	0.44
3.75	0.44	10.00	20.19	16.25	1.76	22.50	0.44
4.00	0.44	10.25	20.19	16.50	0.88	22.75	0.44
4.25	0.44	10.50	5.71	16.75	0.88	23.00	0.44
4.50	2.63	10.75	5.71	17.00	0.88	23.25	0.44
4.75	2.63	11.00	5.71	17.25	0.88	23.50	0.44
5.00	2.63	11.25	5.71	17.50	0.88	23.75	0.44
5.25	2.63	11.50	5.71	17.75	0.88	24.00	0.44
5.50	2.63	11.75	5.71	18.00	0.88	24.25	0.44
5.75	2.63	12.00	5.71	18.25	0.88		
6.00	2.63	12.25	5.71	18.50	0.44		
6.25	2.63	12.50	3.07	18.75	0.44		

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| CALIB           |
| STANDHYD (  0203)|   Area    (ha)=   2.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
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                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.68         0.42
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     118.18        40.00
     Mannings n             =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
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---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	2.63	12.250	5.71	18.33	0.44
0.167	0.00	6.250	2.63	12.333	3.07	18.42	0.44
0.250	0.00	6.333	7.46	12.417	3.07	18.50	0.44
0.333	0.44	6.417	7.46	12.500	3.07	18.58	0.44
0.417	0.44	6.500	7.46	12.583	3.07	18.67	0.44
0.500	0.44	6.583	7.46	12.667	3.07	18.75	0.44
0.583	0.44	6.667	7.46	12.750	3.07	18.83	0.44
0.667	0.44	6.750	7.46	12.833	3.07	18.92	0.44
0.750	0.44	6.833	7.46	12.917	3.07	19.00	0.44
0.833	0.44	6.917	7.46	13.000	3.07	19.08	0.44
0.917	0.44	7.000	7.46	13.083	3.07	19.17	0.44
1.000	0.44	7.083	7.46	13.167	3.07	19.25	0.44
1.083	0.44	7.167	7.46	13.250	3.07	19.33	0.44
1.167	0.44	7.250	7.46	13.333	3.07	19.42	0.44
1.250	0.44	7.333	7.46	13.417	3.07	19.50	0.44
1.333	0.44	7.417	7.46	13.500	3.07	19.58	0.44
1.417	0.44	7.500	7.46	13.583	3.07	19.67	0.44
1.500	0.44	7.583	7.46	13.667	3.07	19.75	0.44
1.583	0.44	7.667	7.46	13.750	3.07	19.83	0.44
1.667	0.44	7.750	7.46	13.833	3.07	19.92	0.44
1.750	0.44	7.833	7.46	13.917	3.07	20.00	0.44
1.833	0.44	7.917	7.46	14.000	3.07	20.08	0.44
1.917	0.44	8.000	7.46	14.083	3.07	20.17	0.44
2.000	0.44	8.083	7.46	14.167	3.07	20.25	0.44
2.083	0.44	8.167	7.46	14.250	3.07	20.33	0.44
2.167	0.44	8.250	7.46	14.333	1.76	20.42	0.44
2.250	0.44	8.333	20.19	14.417	1.76	20.50	0.44
2.333	0.44	8.417	20.19	14.500	1.76	20.58	0.44
2.417	0.44	8.500	20.19	14.583	1.76	20.67	0.44
2.500	0.44	8.583	20.19	14.667	1.76	20.75	0.44
2.583	0.44	8.667	20.19	14.750	1.76	20.83	0.44
2.667	0.44	8.750	20.19	14.833	1.76	20.92	0.44
2.750	0.44	8.833	20.19	14.917	1.76	21.00	0.44
2.833	0.44	8.917	20.19	15.000	1.76	21.08	0.44
2.917	0.44	9.000	20.19	15.083	1.76	21.17	0.44
3.000	0.44	9.083	20.19	15.167	1.76	21.25	0.44
3.083	0.44	9.167	20.19	15.250	1.76	21.33	0.44
3.167	0.44	9.250	20.19	15.333	1.76	21.42	0.44
3.250	0.44	9.333	20.19	15.417	1.76	21.50	0.44
3.333	0.44	9.417	20.19	15.500	1.76	21.58	0.44
3.417	0.44	9.500	20.19	15.583	1.76	21.67	0.44
3.500	0.44	9.583	20.19	15.667	1.76	21.75	0.44
3.583	0.44	9.667	20.19	15.750	1.76	21.83	0.44
3.667	0.44	9.750	20.19	15.833	1.76	21.92	0.44
3.750	0.44	9.833	20.19	15.917	1.76	22.00	0.44
3.833	0.44	9.917	20.19	16.000	1.76	22.08	0.44
3.917	0.44	10.000	20.19	16.083	1.76	22.17	0.44
4.000	0.44	10.083	20.19	16.167	1.76	22.25	0.44
4.083	0.44	10.167	20.19	16.250	1.76	22.33	0.44
4.167	0.44	10.250	20.19	16.333	0.88	22.42	0.44
4.250	0.44	10.333	5.71	16.417	0.88	22.50	0.44
4.333	2.63	10.417	5.71	16.500	0.88	22.58	0.44
4.417	2.63	10.500	5.71	16.583	0.88	22.67	0.44
4.500	2.63	10.583	5.71	16.667	0.88	22.75	0.44
4.583	2.63	10.667	5.71	16.750	0.88	22.83	0.44
4.667	2.63	10.750	5.71	16.833	0.88	22.92	0.44
4.750	2.63	10.833	5.71	16.917	0.88	23.00	0.44
4.833	2.63	10.917	5.71	17.000	0.88	23.08	0.44
4.917	2.63	11.000	5.71	17.083	0.88	23.17	0.44
5.000	2.63	11.083	5.71	17.167	0.88	23.25	0.44
5.083	2.63	11.167	5.71	17.250	0.88	23.33	0.44
5.167	2.63	11.250	5.71	17.333	0.88	23.42	0.44
5.250	2.63	11.333	5.71	17.417	0.88	23.50	0.44
5.333	2.63	11.417	5.71	17.500	0.88	23.58	0.44
5.417	2.63	11.500	5.71	17.583	0.88	23.67	0.44
5.500	2.63	11.583	5.71	17.667	0.88	23.75	0.44
5.583	2.63	11.667	5.71	17.750	0.88	23.83	0.44
5.667	2.63	11.750	5.71	17.833	0.88	23.92	0.44
5.750	2.63	11.833	5.71	17.917	0.88	24.00	0.44
5.833	2.63	11.917	5.71	18.000	0.88	24.08	0.44
5.917	2.63	12.000	5.71	18.083	0.88	24.17	0.44
6.000	2.63	12.083	5.71	18.167	0.88	24.25	0.44
6.083	2.63	12.167	5.71	18.250	0.88		

```
     Max.Eff.Inten.(mm/hr)=      20.19        14.97
               over (min)         5.00        25.00
     Storage Coeff.  (min)=       5.36 (ii)   20.44 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.21         0.05
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.09         0.02          0.110 (iii)
     TIME TO PEAK    (hrs)=       9.50        10.25          10.25
     RUNOFF VOLUME    (mm)=      86.80        49.48          79.33
     TOTAL RAINFALL   (mm)=      87.80        87.80          87.80
     RUNOFF COEFFICIENT   =       0.99         0.56           0.90

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0260)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0203):     2.10   0.110    10.25    79.33
      + ID2= 2 (  0256):     1.12   0.029    10.33    86.07
        ================================================
        ID = 3 (  0260):     3.22   0.139    10.25    81.68

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
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	cdb8232d-79e6-461f-abf3-b53ae11525c8\1089df3a
Ptotal= 87.80 mm	Comments:

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	7.46	12.75	3.07	19.00	0.44
0.50	0.44	6.75	7.46	13.00	3.07	19.25	0.44
0.75	0.44	7.00	7.46	13.25	3.07	19.50	0.44
1.00	0.44	7.25	7.46	13.50	3.07	19.75	0.44
1.25	0.44	7.50	7.46	13.75	3.07	20.00	0.44
1.50	0.44	7.75	7.46	14.00	3.07	20.25	0.44
1.75	0.44	8.00	7.46	14.25	3.07	20.50	0.44
2.00	0.44	8.25	7.46	14.50	1.76	20.75	0.44
2.25	0.44	8.50	20.19	14.75	1.76	21.00	0.44
2.50	0.44	8.75	20.19	15.00	1.76	21.25	0.44
2.75	0.44	9.00	20.19	15.25	1.76	21.50	0.44
3.00	0.44	9.25	20.19	15.50	1.76	21.75	0.44
3.25	0.44	9.50	20.19	15.75	1.76	22.00	0.44
3.50	0.44	9.75	20.19	16.00	1.76	22.25	0.44
3.75	0.44	10.00	20.19	16.25	1.76	22.50	0.44
4.00	0.44	10.25	20.19	16.50	0.88	22.75	0.44
4.25	0.44	10.50	5.71	16.75	0.88	23.00	0.44
4.50	2.63	10.75	5.71	17.00	0.88	23.25	0.44
4.75	2.63	11.00	5.71	17.25	0.88	23.50	0.44
5.00	2.63	11.25	5.71	17.50	0.88	23.75	0.44
5.25	2.63	11.50	5.71	17.75	0.88	24.00	0.44
5.50	2.63	11.75	5.71	18.00	0.88	24.25	0.44
5.75	2.63	12.00	5.71	18.25	0.88		
6.00	2.63	12.25	5.71	18.50	0.44		
6.25	2.63	12.50	3.07	18.75	0.44		

CALIB	
STANDHYD (0204)	Area (ha)= 1.45
ID= 1 DT= 5.0 min	Total Imp(%)= 80.00 Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.16	0.29
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	98.32	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	2.63	12.250	5.71	18.33	0.44
0.167	0.00	6.250	2.63	12.333	3.07	18.42	0.44
0.250	0.00	6.333	7.46	12.417	3.07	18.50	0.44
0.333	0.44	6.417	7.46	12.500	3.07	18.58	0.44
0.417	0.44	6.500	7.46	12.583	3.07	18.67	0.44
0.500	0.44	6.583	7.46	12.667	3.07	18.75	0.44
0.583	0.44	6.667	7.46	12.750	3.07	18.83	0.44
0.667	0.44	6.750	7.46	12.833	3.07	18.92	0.44
0.750	0.44	6.833	7.46	12.917	3.07	19.00	0.44
0.833	0.44	6.917	7.46	13.000	3.07	19.08	0.44
0.917	0.44	7.000	7.46	13.083	3.07	19.17	0.44
1.000	0.44	7.083	7.46	13.167	3.07	19.25	0.44
1.083	0.44	7.167	7.46	13.250	3.07	19.33	0.44
1.167	0.44	7.250	7.46	13.333	3.07	19.42	0.44
1.250	0.44	7.333	7.46	13.417	3.07	19.50	0.44
1.333	0.44	7.417	7.46	13.500	3.07	19.58	0.44
1.417	0.44	7.500	7.46	13.583	3.07	19.67	0.44
1.500	0.44	7.583	7.46	13.667	3.07	19.75	0.44
1.583	0.44	7.667	7.46	13.750	3.07	19.83	0.44
1.667	0.44	7.750	7.46	13.833	3.07	19.92	0.44
1.750	0.44	7.833	7.46	13.917	3.07	20.00	0.44
1.833	0.44	7.917	7.46	14.000	3.07	20.08	0.44
1.917	0.44	8.000	7.46	14.083	3.07	20.17	0.44
2.000	0.44	8.083	7.46	14.167	3.07	20.25	0.44
2.083	0.44	8.167	7.46	14.250	3.07	20.33	0.44
2.167	0.44	8.250	7.46	14.333	1.76	20.42	0.44
2.250	0.44	8.333	20.19	14.417	1.76	20.50	0.44
2.333	0.44	8.417	20.19	14.500	1.76	20.58	0.44
2.417	0.44	8.500	20.19	14.583	1.76	20.67	0.44
2.500	0.44	8.583	20.19	14.667	1.76	20.75	0.44
2.583	0.44	8.667	20.19	14.750	1.76	20.83	0.44
2.667	0.44	8.750	20.19	14.833	1.76	20.92	0.44
2.750	0.44	8.833	20.19	14.917	1.76	21.00	0.44
2.833	0.44	8.917	20.19	15.000	1.76	21.08	0.44
2.917	0.44	9.000	20.19	15.083	1.76	21.17	0.44
3.000	0.44	9.083	20.19	15.167	1.76	21.25	0.44
3.083	0.44	9.167	20.19	15.250	1.76	21.33	0.44
3.167	0.44	9.250	20.19	15.333	1.76	21.42	0.44
3.250	0.44	9.333	20.19	15.417	1.76	21.50	0.44
3.333	0.44	9.417	20.19	15.500	1.76	21.58	0.44
3.417	0.44	9.500	20.19	15.583	1.76	21.67	0.44
3.500	0.44	9.583	20.19	15.667	1.76	21.75	0.44
3.583	0.44	9.667	20.19	15.750	1.76	21.83	0.44
3.667	0.44	9.750	20.19	15.833	1.76	21.92	0.44
3.750	0.44	9.833	20.19	15.917	1.76	22.00	0.44
3.833	0.44	9.917	20.19	16.000	1.76	22.08	0.44
3.917	0.44	10.000	20.19	16.083	1.76	22.17	0.44
4.000	0.44	10.083	20.19	16.167	1.76	22.25	0.44
4.083	0.44	10.167	20.19	16.250	1.76	22.33	0.44
4.167	0.44	10.250	20.19	16.333	0.88	22.42	0.44
4.250	0.44	10.333	5.71	16.417	0.88	22.50	0.44
4.333	2.63	10.417	5.71	16.500	0.88	22.58	0.44
4.417	2.63	10.500	5.71	16.583	0.88	22.67	0.44
4.500	2.63	10.583	5.71	16.667	0.88	22.75	0.44
4.583	2.63	10.667	5.71	16.750	0.88	22.83	0.44
4.667	2.63	10.750	5.71	16.833	0.88	22.92	0.44
4.750	2.63	10.833	5.71	16.917	0.88	23.00	0.44
4.833	2.63	10.917	5.71	17.000	0.88	23.08	0.44
4.917	2.63	11.000	5.71	17.083	0.88	23.17	0.44
5.000	2.63	11.083	5.71	17.167	0.88	23.25	0.44
5.083	2.63	11.167	5.71	17.250	0.88	23.33	0.44
5.167	2.63	11.250	5.71	17.333	0.88	23.42	0.44
5.250	2.63	11.333	5.71	17.417	0.88	23.50	0.44
5.333	2.63	11.417	5.71	17.500	0.88	23.58	0.44
5.417	2.63	11.500	5.71	17.583	0.88	23.67	0.44
5.500	2.63	11.583	5.71	17.667	0.88	23.75	0.44
5.583	2.63	11.667	5.71	17.750	0.88	23.83	0.44
5.667	2.63	11.750	5.71	17.833	0.88	23.92	0.44
5.750	2.63	11.833	5.71	17.917	0.88	24.00	0.44
5.833	2.63	11.917	5.71	18.000	0.88	24.08	0.44
5.917	2.63	12.000	5.71	18.083	0.88	24.17	0.44
6.000	2.63	12.083	5.71	18.167	0.88	24.25	0.44
6.083	2.63	12.167	5.71	18.250	0.88		

Max.Eff.Inten.(mm/hr)=		20.19	14.97
	over (min)	5.00	20.00
Storage Coeff. (min)=		4.80 (ii)	19.88 (ii)

```
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.22         0.06
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.07         0.01          0.077 (iii)
     TIME TO PEAK    (hrs)=       9.50        10.25         10.25
     RUNOFF VOLUME    (mm)=      86.80        49.48         79.33
     TOTAL RAINFALL   (mm)=      87.80        87.80         87.80
     RUNOFF COEFFICIENT   =       0.99         0.56          0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0259)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0204):     1.45   0.077    10.25    79.33
     + ID2= 2 (  0260):     3.22   0.139    10.25    81.68
       ================================================
       ID = 3 (  0259):     4.67   0.216    10.25    80.95

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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|    READ STORM    |    Filename: C:\Users\mventresca\AppD
|                  |              ata\Local\Temp\
|                  |              cdb8232d-79e6-461f-abf3-b53ae11525c8\1089df3a
| Ptotal= 87.80 mm |    Comments:
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	7.46	12.75	3.07	19.00	0.44
0.50	0.44	6.75	7.46	13.00	3.07	19.25	0.44
0.75	0.44	7.00	7.46	13.25	3.07	19.50	0.44
1.00	0.44	7.25	7.46	13.50	3.07	19.75	0.44
1.25	0.44	7.50	7.46	13.75	3.07	20.00	0.44
1.50	0.44	7.75	7.46	14.00	3.07	20.25	0.44
1.75	0.44	8.00	7.46	14.25	3.07	20.50	0.44
2.00	0.44	8.25	7.46	14.50	1.76	20.75	0.44
2.25	0.44	8.50	20.19	14.75	1.76	21.00	0.44
2.50	0.44	8.75	20.19	15.00	1.76	21.25	0.44
2.75	0.44	9.00	20.19	15.25	1.76	21.50	0.44
3.00	0.44	9.25	20.19	15.50	1.76	21.75	0.44
3.25	0.44	9.50	20.19	15.75	1.76	22.00	0.44
3.50	0.44	9.75	20.19	16.00	1.76	22.25	0.44
3.75	0.44	10.00	20.19	16.25	1.76	22.50	0.44
4.00	0.44	10.25	20.19	16.50	0.88	22.75	0.44
4.25	0.44	10.50	5.71	16.75	0.88	23.00	0.44
4.50	2.63	10.75	5.71	17.00	0.88	23.25	0.44
4.75	2.63	11.00	5.71	17.25	0.88	23.50	0.44
5.00	2.63	11.25	5.71	17.50	0.88	23.75	0.44
5.25	2.63	11.50	5.71	17.75	0.88	24.00	0.44
5.50	2.63	11.75	5.71	18.00	0.88	24.25	0.44
5.75	2.63	12.00	5.71	18.25	0.88		
6.00	2.63	12.25	5.71	18.50	0.44		
6.25	2.63	12.50	3.07	18.75	0.44		

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| CALIB            |
| STANDHYD (  0201)|   Area    (ha)=   5.27
|ID= 1 DT= 5.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       5.22         0.05
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     187.44        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	2.63	12.250	5.71	18.33	0.44
0.167	0.00	6.250	2.63	12.333	3.07	18.42	0.44
0.250	0.00	6.333	7.46	12.417	3.07	18.50	0.44
0.333	0.44	6.417	7.46	12.500	3.07	18.58	0.44
0.417	0.44	6.500	7.46	12.583	3.07	18.67	0.44
0.500	0.44	6.583	7.46	12.667	3.07	18.75	0.44
0.583	0.44	6.667	7.46	12.750	3.07	18.83	0.44
0.667	0.44	6.750	7.46	12.833	3.07	18.92	0.44
0.750	0.44	6.833	7.46	12.917	3.07	19.00	0.44
0.833	0.44	6.917	7.46	13.000	3.07	19.08	0.44
0.917	0.44	7.000	7.46	13.083	3.07	19.17	0.44
1.000	0.44	7.083	7.46	13.167	3.07	19.25	0.44
1.083	0.44	7.167	7.46	13.250	3.07	19.33	0.44
1.167	0.44	7.250	7.46	13.333	3.07	19.42	0.44
1.250	0.44	7.333	7.46	13.417	3.07	19.50	0.44
1.333	0.44	7.417	7.46	13.500	3.07	19.58	0.44
1.417	0.44	7.500	7.46	13.583	3.07	19.67	0.44
1.500	0.44	7.583	7.46	13.667	3.07	19.75	0.44
1.583	0.44	7.667	7.46	13.750	3.07	19.83	0.44
1.667	0.44	7.750	7.46	13.833	3.07	19.92	0.44
1.750	0.44	7.833	7.46	13.917	3.07	20.00	0.44
1.833	0.44	7.917	7.46	14.000	3.07	20.08	0.44
1.917	0.44	8.000	7.46	14.083	3.07	20.17	0.44
2.000	0.44	8.083	7.46	14.167	3.07	20.25	0.44
2.083	0.44	8.167	7.46	14.250	3.07	20.33	0.44
2.167	0.44	8.250	7.46	14.333	1.76	20.42	0.44
2.250	0.44	8.333	20.19	14.417	1.76	20.50	0.44
2.333	0.44	8.417	20.19	14.500	1.76	20.58	0.44
2.417	0.44	8.500	20.19	14.583	1.76	20.67	0.44
2.500	0.44	8.583	20.19	14.667	1.76	20.75	0.44
2.583	0.44	8.667	20.19	14.750	1.76	20.83	0.44
2.667	0.44	8.750	20.19	14.833	1.76	20.92	0.44
2.750	0.44	8.833	20.19	14.917	1.76	21.00	0.44
2.833	0.44	8.917	20.19	15.000	1.76	21.08	0.44
2.917	0.44	9.000	20.19	15.083	1.76	21.17	0.44
3.000	0.44	9.083	20.19	15.167	1.76	21.25	0.44
3.083	0.44	9.167	20.19	15.250	1.76	21.33	0.44
3.167	0.44	9.250	20.19	15.333	1.76	21.42	0.44
3.250	0.44	9.333	20.19	15.417	1.76	21.50	0.44
3.333	0.44	9.417	20.19	15.500	1.76	21.58	0.44
3.417	0.44	9.500	20.19	15.583	1.76	21.67	0.44
3.500	0.44	9.583	20.19	15.667	1.76	21.75	0.44

3.583	0.44	9.667	20.19	15.750	1.76	21.83	0.44
3.667	0.44	9.750	20.19	15.833	1.76	21.92	0.44
3.750	0.44	9.833	20.19	15.917	1.76	22.00	0.44
3.833	0.44	9.917	20.19	16.000	1.76	22.08	0.44
3.917	0.44	10.000	20.19	16.083	1.76	22.17	0.44
4.000	0.44	10.083	20.19	16.167	1.76	22.25	0.44
4.083	0.44	10.167	20.19	16.250	1.76	22.33	0.44
4.167	0.44	10.250	20.19	16.333	0.88	22.42	0.44
4.250	0.44	10.333	5.71	16.417	0.88	22.50	0.44
4.333	2.63	10.417	5.71	16.500	0.88	22.58	0.44
4.417	2.63	10.500	5.71	16.583	0.88	22.67	0.44
4.500	2.63	10.583	5.71	16.667	0.88	22.75	0.44
4.583	2.63	10.667	5.71	16.750	0.88	22.83	0.44
4.667	2.63	10.750	5.71	16.833	0.88	22.92	0.44
4.750	2.63	10.833	5.71	16.917	0.88	23.00	0.44
4.833	2.63	10.917	5.71	17.000	0.88	23.08	0.44
4.917	2.63	11.000	5.71	17.083	0.88	23.17	0.44
5.000	2.63	11.083	5.71	17.167	0.88	23.25	0.44
5.083	2.63	11.167	5.71	17.250	0.88	23.33	0.44
5.167	2.63	11.250	5.71	17.333	0.88	23.42	0.44
5.250	2.63	11.333	5.71	17.417	0.88	23.50	0.44
5.333	2.63	11.417	5.71	17.500	0.88	23.58	0.44
5.417	2.63	11.500	5.71	17.583	0.88	23.67	0.44
5.500	2.63	11.583	5.71	17.667	0.88	23.75	0.44
5.583	2.63	11.667	5.71	17.750	0.88	23.83	0.44
5.667	2.63	11.750	5.71	17.833	0.88	23.92	0.44
5.750	2.63	11.833	5.71	17.917	0.88	24.00	0.44
5.833	2.63	11.917	5.71	18.000	0.88	24.08	0.44
5.917	2.63	12.000	5.71	18.083	0.88	24.17	0.44
6.000	2.63	12.083	5.71	18.167	0.88	24.25	0.44
6.083	2.63	12.167	5.71	18.250	0.88		

Max.Eff.Inten.(mm/hr)=	20.19	15.13	
over (min)	5.00	10.00	
Storage Coeff. (min)=	7.06 (ii)	9.19 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.17	0.12	
			TOTALS
PEAK FLOW (cms)=	0.29	0.00	0.295 (iii)
TIME TO PEAK (hrs)=	10.00	10.25	10.25
RUNOFF VOLUME (mm)=	86.80	49.48	86.43
TOTAL RAINFALL (mm)=	87.80	87.80	87.80
RUNOFF COEFFICIENT =	0.99	0.56	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0268) IN= 2---> OUT= 1 DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1959	0.1883
	0.0980	0.0369	0.2939	0.4335

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)	5.270	0.295	10.25	86.43
OUTFLOW: ID= 1 (0268)	5.270	0.169	10.33	86.41

PEAK FLOW REDUCTION [Qout/Qin](%)= 57.26
TIME SHIFT OF PEAK FLOW (min)= 5.00
MAXIMUM STORAGE USED (ha.m.)= 0.1467

READ STORM Ptotal= 87.80 mm	Filename: C:\Users\mventresca\AppData\Local\Temp\cdb8232d-79e6-461f-abf3-b53ae11525c8\1089df3a Comments:

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.00	6.50	7.46	12.75	3.07	19.00	0.44
0.50	0.44	6.75	7.46	13.00	3.07	19.25	0.44
0.75	0.44	7.00	7.46	13.25	3.07	19.50	0.44
1.00	0.44	7.25	7.46	13.50	3.07	19.75	0.44
1.25	0.44	7.50	7.46	13.75	3.07	20.00	0.44
1.50	0.44	7.75	7.46	14.00	3.07	20.25	0.44
1.75	0.44	8.00	7.46	14.25	3.07	20.50	0.44
2.00	0.44	8.25	7.46	14.50	1.76	20.75	0.44
2.25	0.44	8.50	20.19	14.75	1.76	21.00	0.44
2.50	0.44	8.75	20.19	15.00	1.76	21.25	0.44
2.75	0.44	9.00	20.19	15.25	1.76	21.50	0.44
3.00	0.44	9.25	20.19	15.50	1.76	21.75	0.44
3.25	0.44	9.50	20.19	15.75	1.76	22.00	0.44
3.50	0.44	9.75	20.19	16.00	1.76	22.25	0.44
3.75	0.44	10.00	20.19	16.25	1.76	22.50	0.44
4.00	0.44	10.25	20.19	16.50	0.88	22.75	0.44
4.25	0.44	10.50	5.71	16.75	0.88	23.00	0.44
4.50	2.63	10.75	5.71	17.00	0.88	23.25	0.44
4.75	2.63	11.00	5.71	17.25	0.88	23.50	0.44
5.00	2.63	11.25	5.71	17.50	0.88	23.75	0.44
5.25	2.63	11.50	5.71	17.75	0.88	24.00	0.44
5.50	2.63	11.75	5.71	18.00	0.88	24.25	0.44
5.75	2.63	12.00	5.71	18.25	0.88		
6.00	2.63	12.25	5.71	18.50	0.44		
6.25	2.63	12.50	3.07	18.75	0.44		

CALIB STANDHYD (0202) ID= 1 DT= 5.0 min	Area (ha)= 6.57 Total Imp(%)= 81.00 Dir. Conn.(%)= 81.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.32	1.25
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	209.28	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.00	6.167	2.63	12.250	5.71	18.33	0.44
0.167	0.00	6.250	2.63	12.333	3.07	18.42	0.44
0.250	0.00	6.333	7.46	12.417	3.07	18.50	0.44

0.333	0.44	6.417	7.46	12.500	3.07	18.58	0.44
0.417	0.44	6.500	7.46	12.583	3.07	18.67	0.44
0.500	0.44	6.583	7.46	12.667	3.07	18.75	0.44
0.583	0.44	6.667	7.46	12.750	3.07	18.83	0.44
0.667	0.44	6.750	7.46	12.833	3.07	18.92	0.44
0.750	0.44	6.833	7.46	12.917	3.07	19.00	0.44
0.833	0.44	6.917	7.46	13.000	3.07	19.08	0.44
0.917	0.44	7.000	7.46	13.083	3.07	19.17	0.44
1.000	0.44	7.083	7.46	13.167	3.07	19.25	0.44
1.083	0.44	7.167	7.46	13.250	3.07	19.33	0.44
1.167	0.44	7.250	7.46	13.333	3.07	19.42	0.44
1.250	0.44	7.333	7.46	13.417	3.07	19.50	0.44
1.333	0.44	7.417	7.46	13.500	3.07	19.58	0.44
1.417	0.44	7.500	7.46	13.583	3.07	19.67	0.44
1.500	0.44	7.583	7.46	13.667	3.07	19.75	0.44
1.583	0.44	7.667	7.46	13.750	3.07	19.83	0.44
1.667	0.44	7.750	7.46	13.833	3.07	19.92	0.44
1.750	0.44	7.833	7.46	13.917	3.07	20.00	0.44
1.833	0.44	7.917	7.46	14.000	3.07	20.08	0.44
1.917	0.44	8.000	7.46	14.083	3.07	20.17	0.44
2.000	0.44	8.083	7.46	14.167	3.07	20.25	0.44
2.083	0.44	8.167	7.46	14.250	3.07	20.33	0.44
2.167	0.44	8.250	7.46	14.333	1.76	20.42	0.44
2.250	0.44	8.333	20.19	14.417	1.76	20.50	0.44
2.333	0.44	8.417	20.19	14.500	1.76	20.58	0.44
2.417	0.44	8.500	20.19	14.583	1.76	20.67	0.44
2.500	0.44	8.583	20.19	14.667	1.76	20.75	0.44
2.583	0.44	8.667	20.19	14.750	1.76	20.83	0.44
2.667	0.44	8.750	20.19	14.833	1.76	20.92	0.44
2.750	0.44	8.833	20.19	14.917	1.76	21.00	0.44
2.833	0.44	8.917	20.19	15.000	1.76	21.08	0.44
2.917	0.44	9.000	20.19	15.083	1.76	21.17	0.44
3.000	0.44	9.083	20.19	15.167	1.76	21.25	0.44
3.083	0.44	9.167	20.19	15.250	1.76	21.33	0.44
3.167	0.44	9.250	20.19	15.333	1.76	21.42	0.44
3.250	0.44	9.333	20.19	15.417	1.76	21.50	0.44
3.333	0.44	9.417	20.19	15.500	1.76	21.58	0.44
3.417	0.44	9.500	20.19	15.583	1.76	21.67	0.44
3.500	0.44	9.583	20.19	15.667	1.76	21.75	0.44
3.583	0.44	9.667	20.19	15.750	1.76	21.83	0.44
3.667	0.44	9.750	20.19	15.833	1.76	21.92	0.44
3.750	0.44	9.833	20.19	15.917	1.76	22.00	0.44
3.833	0.44	9.917	20.19	16.000	1.76	22.08	0.44
3.917	0.44	10.000	20.19	16.083	1.76	22.17	0.44
4.000	0.44	10.083	20.19	16.167	1.76	22.25	0.44
4.083	0.44	10.167	20.19	16.250	1.76	22.33	0.44
4.167	0.44	10.250	20.19	16.333	0.88	22.42	0.44
4.250	0.44	10.333	5.71	16.417	0.88	22.50	0.44
4.333	2.63	10.417	5.71	16.500	0.88	22.58	0.44
4.417	2.63	10.500	5.71	16.583	0.88	22.67	0.44
4.500	2.63	10.583	5.71	16.667	0.88	22.75	0.44
4.583	2.63	10.667	5.71	16.750	0.88	22.83	0.44
4.667	2.63	10.750	5.71	16.833	0.88	22.92	0.44
4.750	2.63	10.833	5.71	16.917	0.88	23.00	0.44
4.833	2.63	10.917	5.71	17.000	0.88	23.08	0.44
4.917	2.63	11.000	5.71	17.083	0.88	23.17	0.44
5.000	2.63	11.083	5.71	17.167	0.88	23.25	0.44
5.083	2.63	11.167	5.71	17.250	0.88	23.33	0.44
5.167	2.63	11.250	5.71	17.333	0.88	23.42	0.44
5.250	2.63	11.333	5.71	17.417	0.88	23.50	0.44
5.333	2.63	11.417	5.71	17.500	0.88	23.58	0.44
5.417	2.63	11.500	5.71	17.583	0.88	23.67	0.44
5.500	2.63	11.583	5.71	17.667	0.88	23.75	0.44
5.583	2.63	11.667	5.71	17.750	0.88	23.83	0.44
5.667	2.63	11.750	5.71	17.833	0.88	23.92	0.44
5.750	2.63	11.833	5.71	17.917	0.88	24.00	0.44
5.833	2.63	11.917	5.71	18.000	0.88	24.08	0.44
5.917	2.63	12.000	5.71	18.083	0.88	24.17	0.44
6.000	2.63	12.083	5.71	18.167	0.88	24.25	0.44
6.083	2.63	12.167	5.71	18.250	0.88		

Max.Eff.Inten.(mm/hr)=	20.19	14.97	
over (min)	10.00	25.00	
Storage Coeff. (min)=	7.55 (ii)	22.63 (ii)	
Unit Hyd. Tpeak (min)=	10.00	25.00	
Unit Hyd. peak (cms)=	0.13	0.05	
			TOTALS
PEAK FLOW (cms)=	0.30	0.05	0.347 (iii)
TIME TO PEAK (hrs)=	10.25	10.25	10.25
RUNOFF VOLUME (mm)=	86.80	49.48	79.71
TOTAL RAINFALL (mm)=	87.80	87.80	87.80
RUNOFF COEFFICIENT =	0.99	0.56	0.91

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0262)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0202):	6.57	0.347	10.25	79.71
+ ID2= 2 (0268):	5.27	0.169	10.33	86.41
ID = 3 (0262):	11.84	0.514	10.25	82.69

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0266)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0259):	4.67	0.216	10.25	80.95
+ ID2= 2 (0262):	11.84	0.514	10.25	82.69
ID = 3 (0266):	16.51	0.730	10.25	82.20

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0263)
IN= 2---> OUT= 1
DT= 5.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.2130	0.6563
0.0190	0.1773	0.2520	0.6883
0.0220	0.2128	0.2890	0.7150
0.0260	0.2888	0.2980	0.7450
0.0300	0.3648	0.3060	0.7700
0.0650	0.4586	0.3150	0.8127

```
                        0.1100     0.5155   |   0.3320      0.9290
                        0.1680     0.5503   |   0.3390      0.9767
                        0.1930     0.5804   |   0.3520      1.0680
                        0.2000     0.6048   |   0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0266)     16.510      0.730     10.25      82.20
   OUTFLOW: ID= 1 (  0263)     16.510      0.289     12.33      82.06

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 39.60
                  TIME SHIFT OF PEAK FLOW         (min)=125.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.7152

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0261)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0206):     0.12   0.005    10.25    49.43
     + ID2= 2 (  0263):    16.51   0.289    12.33    82.06
       ================================================
       ID = 3 (  0261):    16.64   0.291    12.33    81.81

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
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Appendix B
Background Information

FORWARD ENGINEERING

& ASSOCIATES INC.

Geotechnical, Environmental, Inspection & Material Testing Services

244 Brockport Drive, Unit 15, Toronto, Ontario, M9W 6X9, Tel: (416)798-3500, Fax:(416)798-8481

REPORT
GROUNDWATER MONITORING PROGRAM

PROPOSED INDUSTRIAL BUILDING

PILLSWORTH ROAD
CALEDON, ONTARIO

PREPARED FOR:
ANATOLIA CAPITAL CORP.
8300 Huntington Rd,
Vaughan, ON
L4L 1A5

September 16, 2019
Ref. No. G4049-B

Distribution: 1 PDF Copy– ANATOLIA CAPITAL CORP.

1 PDF Copy–FORWARD ENGINEERING & ASSOCIATES INC.

Contents

LIST OF ENCLOSURES:

INTRODUCTION

This report presents the results of the groundwater level monitoring program carried out by Forward Engineering & Associates Inc., for the proposed development on Pillsworth Road, Caledon, Ontario.

The location of the proposed storm water management pond is shown on Drawing No. 1. The location of the Borehole/Monitoring Well (BH/MW) installed during this program is also presented on Drawing No. 1.

PURPOSE AND SCOPE

The objectives (purpose) of this investigation were to determine the following:

- The extent, depth and properties of the predominant fill/soil strata.
- The groundwater levels.

On completion of the field works, this report was prepared.

FIELD WORKS:

Field Works:

Borehole Investigation:

The field work for the borehole investigation consisted of two [2] borehole/monitoring wells (BH/MW-21 & BH/MW-22) drilled on June 8th, 2018, under the supervision of a member of our staff.

The boreholes were located within the proposed storm water management pond as shown on Drawing No. 1. The drilled boreholes extended to a depth of about 8.1 m below the Existing Ground Surface Level (EGSL).

Soils were sampled in the boreholes following the Standard Penetration Test (SPT) method using a CME 55 with solid augers. The samples were logged in the field and appropriately stored in plastic bags and re-examined in more detail in the laboratory. The samples were stored for a period of three months and then discarded.

Groundwater observations were made in the open boreholes, during and upon completion of the drilling operation. The results are recorded on the Log of Borehole sheets.

The boreholes were equipped with a standpipe monitoring wells to facilitate future measurements of the stabilized groundwater level.

Elevations referred to in this report are metric and geodetic. The ground level elevations at the borehole locations were interpolated from the Topographic Survey drawing dated May 24, 2017 and completed by David J. Pesce Surveying which was provided to us by the client.

Laboratory Testing:

Laboratory testing consisted of determination of the in-situ moisture content of the retrieved and representative soil samples.

SUB-SURFACE CONDITIONS AND GROUNDWATER RECORDS

The subsurface conditions encountered at the borehole locations are shown on the Log of Borehole sheets, presented in Appendix A and can be summarized as follows:

Topsoil/Organic Soil — A layer of topsoil/organic soil was encountered at the surface of the boreholes, with a thickness of about 100 mm.

Reworked/ Disturbed Soil — A layer of reworked/disturbed soil was found below the topsoil consisting mainly of brown clayey silt and found generally in loose to compact state of packing. This layer extended to a depth ranging from about 0.76 m to 1.14 m below EGSL.

Groundwater — Groundwater observations in the boreholes are outlined in the following tables:

Table 1-Groundwater and Cave-in Observations Upon Completion of Drilling

Borehole No.	Groundwater Depth Below EGSL	Cave-in Depth Below EGSL
BH/MW-21	6.7 m	Open
BH/MW-22	Dry	7.3 m

The water level in the installed monitoring wells of the boreholes was measured on two occasions after completion of drilling. Observations are recorded in the following table:

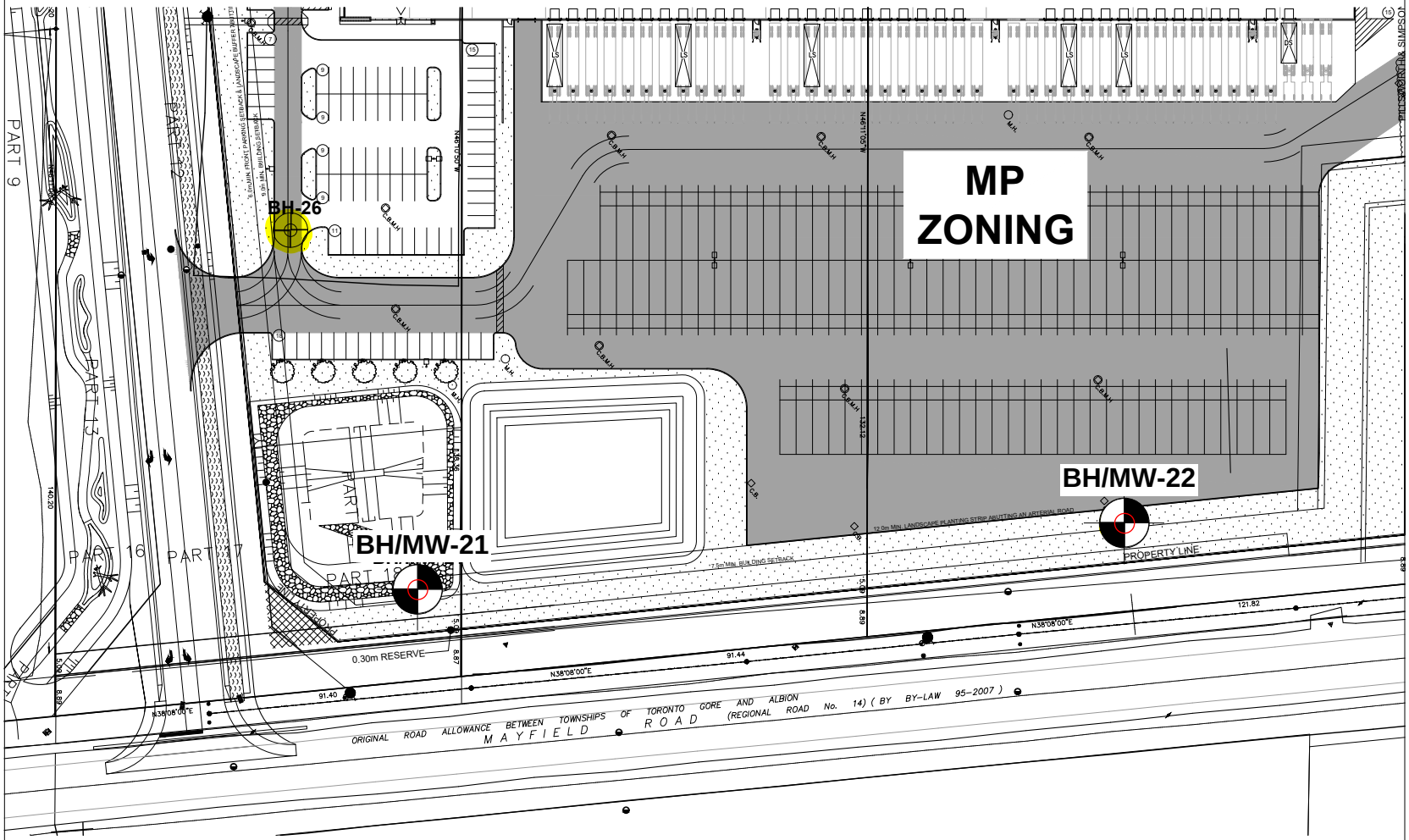
Table 2-Groundwater Depth and Elevations in Monitoring Wells:

Date (dd/mm/yy)	BH/MW-21 Groundwater Depth Below EGSL (Elevation of Groundwater)	BH/MW-22 Groundwater Depth Below EGSL / Elevation of Groundwater (m)
28/06/2018	3.0 m (227.40 m)	4.75 m (225.25 m)
27/07/2019	3.4 m (227.00 m)	2.35 m (227.65 m)
30/08/2019	3.75 m (226.65 m)	2.27 m (227.73 m)

We trust this report contains information requested at this time. However, if any clarification is required, or if we can be of further assistance, please contact this office.

Yours truly,
Forward Engineering & Associates Inc.

G. S. Semaan, M.Eng., P.Eng.
Principal



NOTES:

BH/MW

= BOREHOLE/ MONITORING WELL LOCATION

N

BOREHOLE LOCATION PLAN

Rev.	DATE	REVISION / ISSUE
04		
03		
02		
01		

Project Name: PROPOSED INDUSTRIAL BUILDING

Address: SIMPSON ROAD, VAUGHAN, ON.

PROJECT No.	:4049-B
DESIGN BY	:P.R.
DRAWING DATE	:Sept 19, 2019
DRAWN BY: P.R.	PAGE 1 of 1
CHECKED BY: G.S.	

FORWARD ENGINEERING & Associates Inc.

Forward Engineering & Associates Inc.
244 Brockport Drive, Unit 15
Toronto, Ontario M9W 6X9
Tel: 416-798-3500 Fax: 416-798-8481

www.forward**engineering**.ca

APPENDIX A

LOG OF BOREHOLE SHEETS

(BH/MW-21 & BH/MW-22)

Project No: 4049-B

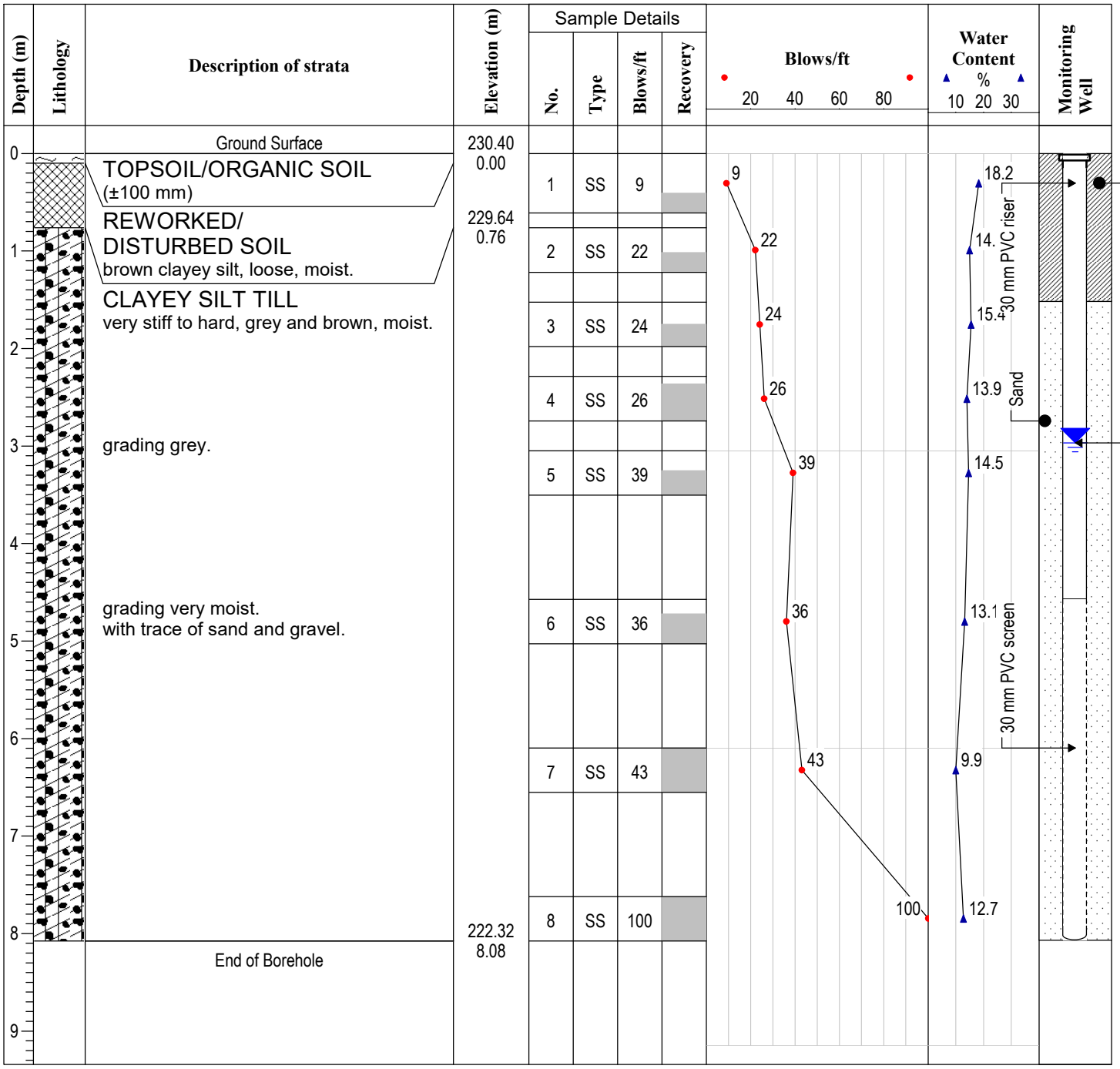
Log of Borehole BH/MW-21

Project: PROPOSED INDUSTRIAL BUILDING

Client: ANATOLIA CAPITAL CORP.

Enclosure: 22

Location: SIMPSON ROAD, VAUGHAN, ON



Remarks: Upon completion of drilling, the borehole was open and water was measured at 6.7 m.

Drill Method: CME 55 SOLID AUGER

Drill Date: 8 JUNE, 2018

Datum: GEODETIC

FORWARD ENGINEERING & ASSOCIATES INC.
244 Brockport Drive, Unit 15, Toronto, Ontario, M9W 6X9

Engineer: M.T.

Checked by: G.S.

Sheet No. 1 of 1

Project No: 4049-B

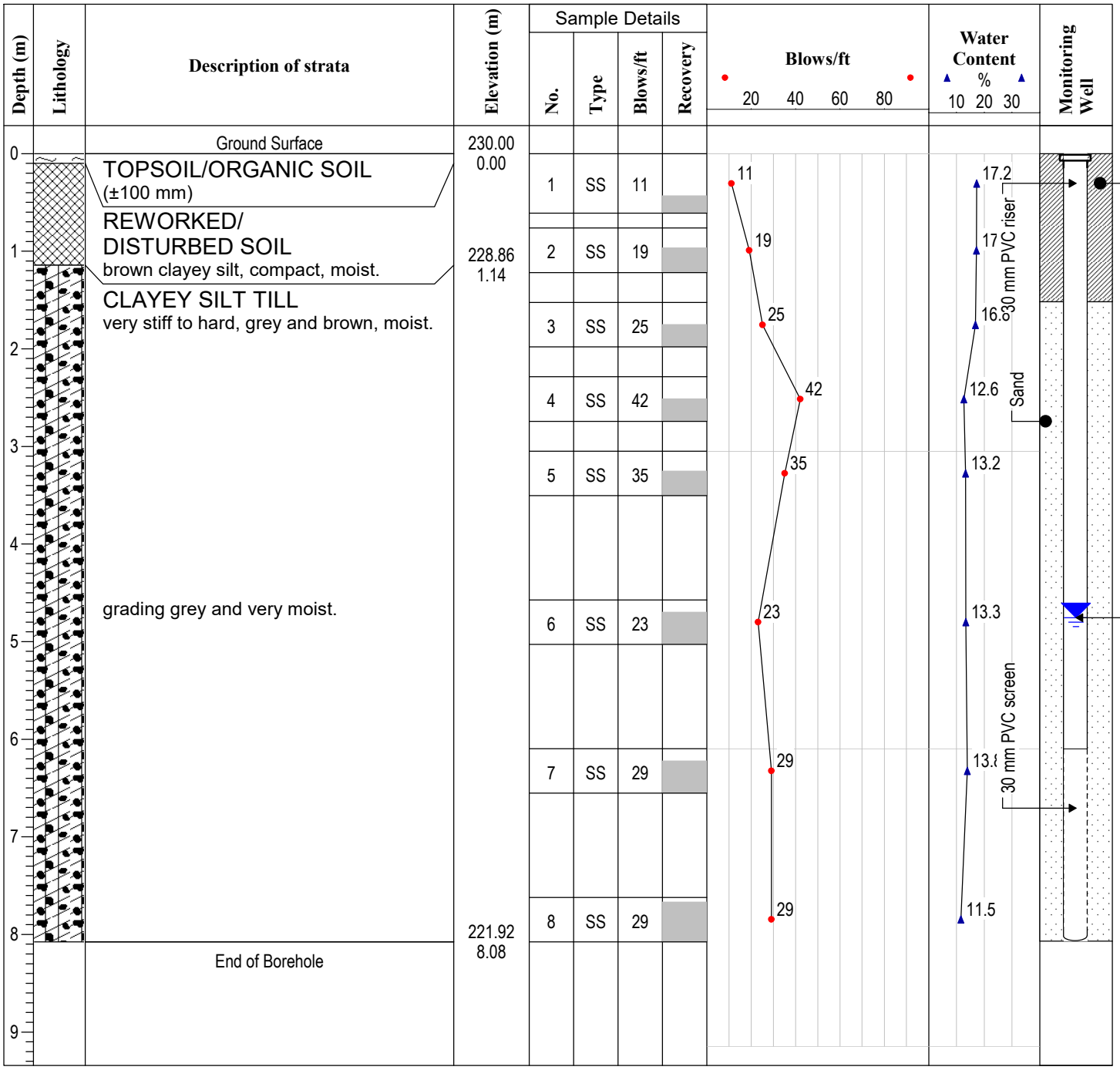
Log of Borehole BH/MW-22

Project: PROPOSED INDUSTRIAL BUILDING

Client: ANATOLIA CAPITAL CORP.

Enclosure: 23

Location: SIMPSON ROAD, VAUGHAN, ON



Remarks: Upon completion of drilling, the borehole was open to 7.3 m and dry.

Drill Method: CME 55 SOLID AUGER

Drill Date: 8 JUNE, 2018

Datum: GEODETIC

FORWARD ENGINEERING & ASSOCIATES INC.
244 Brockport Drive, Unit 15, Toronto, Ontario, M9W 6X9

Engineer: M.T.

Checked by: G.S.

Sheet No. 1 of 1

Memo

To: Geoff Hebbert, Town of Caledon

From: David Sinke, Brian Bishop

Date: August 31, 2017

File: 113126

cc: Felix Wong

Re: **Simpson Road Extension Stormwater Management Facility**

The Town of Caledon is seeking to proceed with the detailed design of a section of the Simpson Road extension, specifically the section from the existing terminus south of Parr Boulevard to Mayfield Road. The Town is in an ongoing process of development of the surrounding industrial lands, including the lands immediately to the east of Simpson Road, which will ultimately drain to a neighbourhood SWM facility. The Town is proceeding in advance of any detailed stormwater management information from the private lands.

This memo outlines the stormwater management (SWM) requirements to provide quantity control for the Town lands, i.e. the road right of way only. The Town is also proposing to build a facility with a larger volume than that simply required for the road ROW. This is to optimize the available land, and to allow for both future water quality controls, and the ultimate connection of the stormwater management control for the lands to the east, as they will share the outlet.

Amec Foster Wheeler proposes that the most accurate approach to determine these requirements is to calculate the total SWM requirements for this entire developing and contributing drainage area, and then calculate the proportionate quantity control requirements for the road ROW only based on pro-rating the resulting total by the relative contributing drainage areas.

The sizing is consistent with the approach taken in the Simpson Road Environmental Study Report (AMEC Environment & Infrastructure, December 2012) as well as the Bolton South Industrial Lands Master Environmental Servicing Plan (Burnside Development Services, December 2000). SWM requirements have therefore been calculated using the methodology applied in the Bolton South Industrial Lands Master Environmental Servicing Plan (Bolton South MESP), along with the currently estimated drainage areas for the proposed road extension and surrounding areas (refer to the storm drainage area plan in the package of engineering drawings).

3450 Harvester Road Unit 100
Burlington, Ontario L7N 3W5
Tel +1 905 335 2353
Fax +1 905 335-1414
amecfw.com

Amec Foster Wheeler Environment & Infrastructure
Registered office: 2020 Winston Park Drive, Suite 700, Oakville, Ontario L6H 6X7
Registered in Canada No. 773289-9; GST: 899879050 RT0008; DUNS: 25-362-6642

Visual OTTHYMO (VO2) version 2.4 has been applied for the resulting hydrologic simulations. Applied parameters are consistent with the approach taken in the Bolton South MESP; key parameters are presented in Table 1.

TABLE 1
ASSUMED HYDROLOGIC PARAMETERIZATION

Sub-Catchment ID	Description	Area (ha)	Total Imperviousness (%)	Directly Connected Imperviousness (%)	SCS Curve Number
100	Rooftops for future lots – assumed 35% of total lot area	5.276	99	99	83
200	Remainder of future lots (parking, landscaping)	9.799	80	80	83
300	Simpson Road Extension	1.430	80	80	83
TOTAL	**NA**	**16.505**	**86**	**86**	**83**

As noted in Table 1, rooftop area for future industrial lots has been assumed to be 35% of the total available lot area; this is generally consistent with existing industrial developments in the area as well as the approach taken in the Bolton South MESP (refer to Appendix K from that report).

The 12-hour AES design storm distribution (2 through 100-year return periods) has been applied for hydrologic modelling. It should be noted that the Bolton South MESP applied a 24-hour AES design storm distribution, however based on AMEC's experienced within the Humber River watershed, the 12-hour AES design storm is the most commonly applied distribution.

As specified in the Bolton South MESP, the Town of Caledon requires on-site controls for industrial and commercial lots such that rooftop discharge is limited to 42 L/s/ha, and total lot discharge (including rooftops) is limited to 180 L/s/ha. In order to be consistent with the original criteria (and to avoid oversizing the SWM facility), these functions have been developed prior to sizing the SWM facility, based on limiting simulated 100-year discharges to these values (refer to the attached model schematic and VO2 model output). Based on this analysis, a total of 1,330 m^3 of rooftop storage would be required for the 5.276 ha of estimated rooftop area. No additional lot-level would controls would be required to meet the lot discharge criteria of 180 L/s/ha, as the resulting 100-year peak discharge (controlled rooftops + uncontrolled lot drainage) is less than this criteria.

With the foregoing determined, SWM sizing has been undertaken incrementally for the 2 through 100-year return periods. Peak flow targets have been developed consistent with the approach taken in the Bolton South MESP, namely the unitary flow equations originally developed as part of the Humber River Watershed Hydrology/Hydraulics and Stormwater Management Study (Aquafor Beech Limited, November 1997). Equation F (applicable for the West Humber River Watershed) has been applied for this area (actually part of the Rainbow Creek subwatershed); a copy has been attached for reference. Simulated peak inflows, outflows (based on the previously noted targets), and resulting storage volumes, are summarized in Table 2.

TABLE 2
SIMULATED PEAK FLOWS AND STORAGE VOLUMES FOR FUTURE SWM FACILITY

Parameter	Specified Return Period (years)					
	2	5	10	25	50	100
Peak Inflow (m^3/s)	0.738	0.910	1.029	1.177	1.287	1.398
Target Discharge (m^3/s)	0.124	0.189	0.233	0.293	0.342	0.387
Resulting Storage (m^3)	4,400	5,700	6,600	7,500	7,900	8,300

Based on the foregoing, a SWM facility with 8,300 m^3 of storage would ultimately be required to meet the required quantity control. As noted, this does not account for any quality control requirements (i.e. permanent pool and extended detention storage).

Interim Town Facility

As noted previously, the Town of Caledon's current focus is upon constructing only that portion necessary to control the imperviousness associated with the Simpson Road Extension. Based on the drainage areas presented in Table 1, this would represent some 8.7% of the total contributing drainage area. Accordingly, this would equate to a storage volume of some 719 m^3,

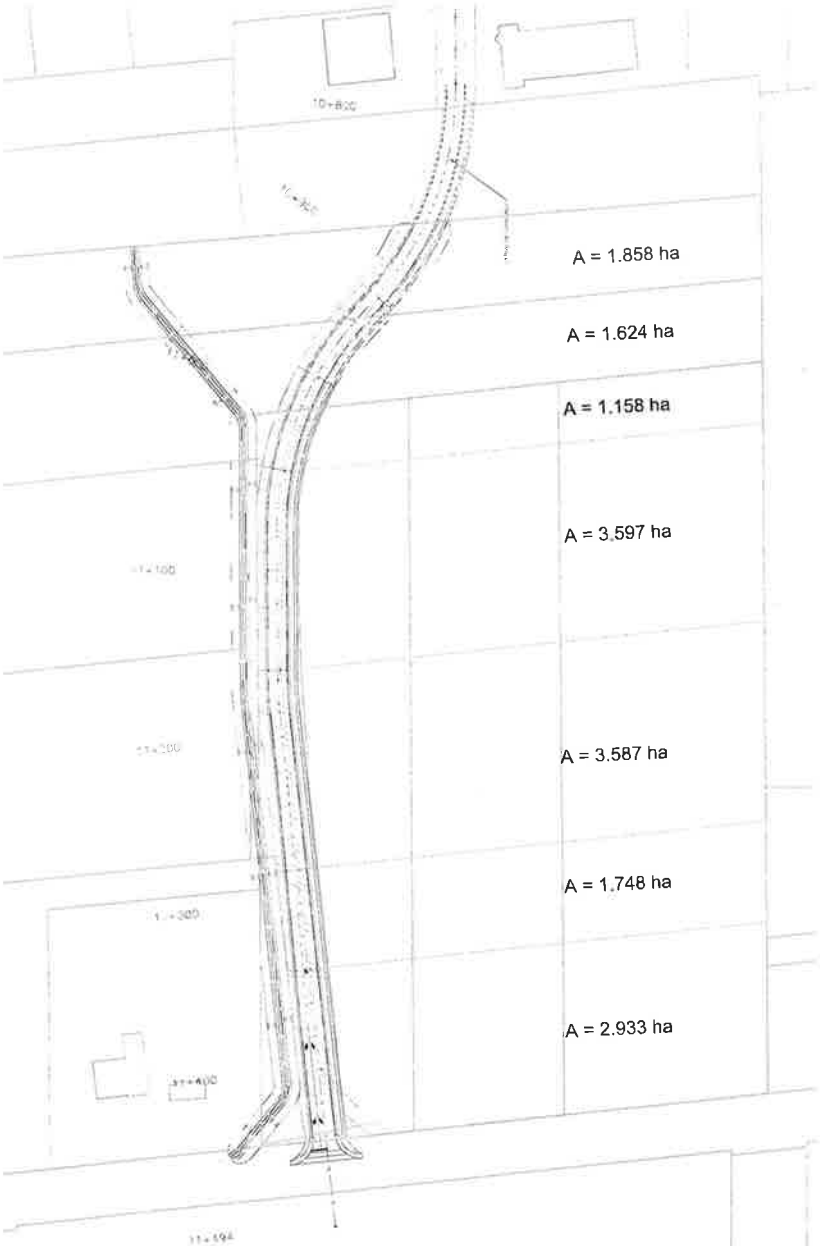
A review of the available land and a preliminary design has developed a stormwater management facility with an active storage of 1500 m^3 (ref. drawing package). Therefore the Town has approximately double the required 100 year storage available to treat the Town's land.

Interim Operation

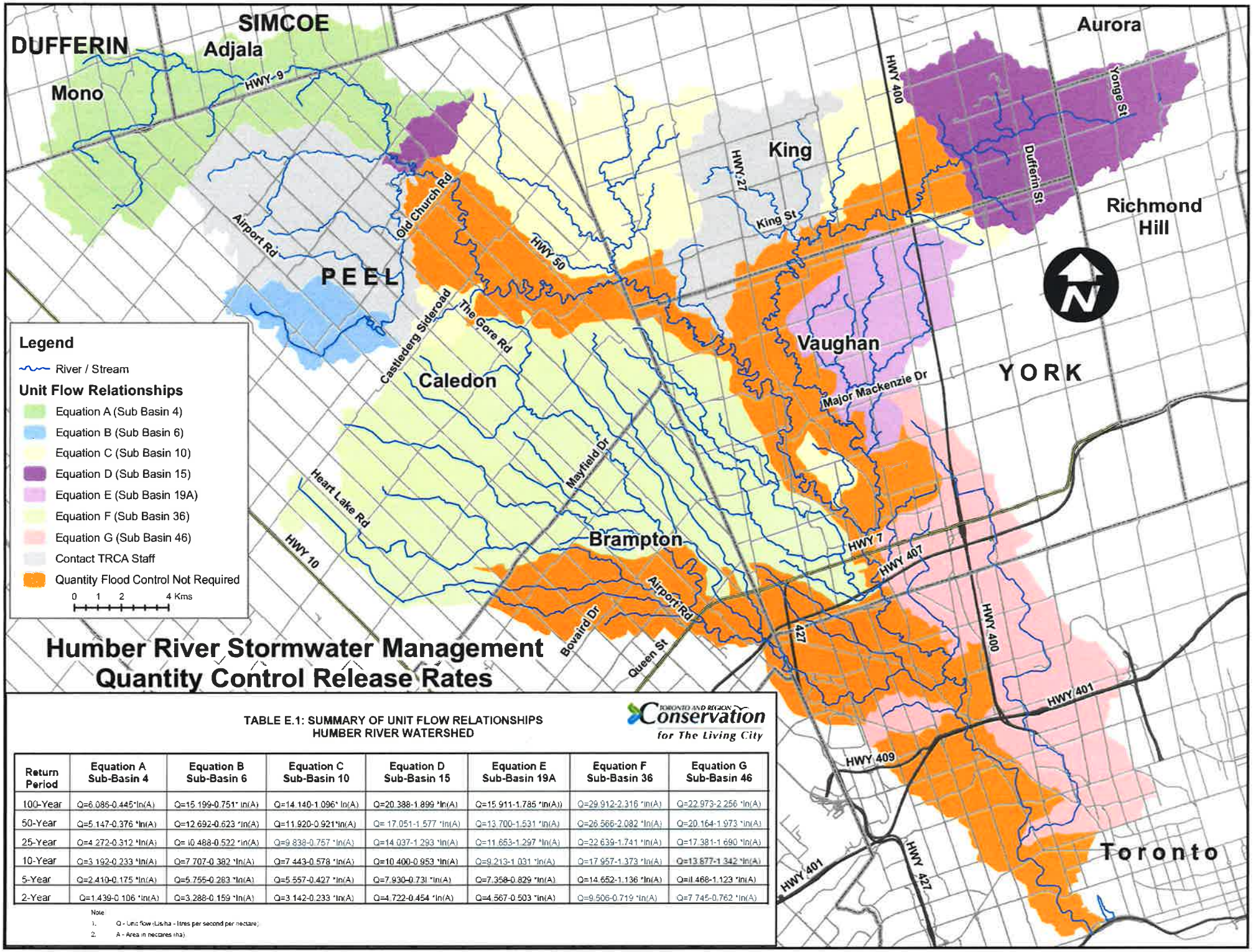
In the interim, the Town is proposing a single-function facility, to provide the required 100 year control. Calculations are appended to demonstrate that the target release rate (ore-rated) for this drainage area may be achieved with a 160 mm diameter orifice. A valve is proposed so that the facility may be retrofit in the near future for the additional development.

Ultimate Facility and Operation

The Town expects to receive additional design information from the adjacent lands in the near future. At that time, the outlet control structure shall be modified to incorporate the requisite extended detention control volume and drawdown, and to add the ultimate 100 year outflow control structure.



Total Drainage Area = 16.505 ha
Area Road = 1.430 ha
Area North 2 Parcels = 3.210 ha
Area South Parcel = 11.865 ha



Humber River Stormwater Management Quantity Control Release Rates

TABLE E.1: SUMMARY OF UNIT FLOW RELATIONSHIPS
HUMBER RIVER WATERSHED

Toronto and Region Conservation for The Living City

Return Period	Equation A Sub-Basin 4	Equation B Sub-Basin 6	Equation C Sub-Basin 10	Equation D Sub-Basin 15	Equation E Sub-Basin 19A	Equation F Sub-Basin 36	Equation G Sub-Basin 46
100-Year	Q=6.086-0.445*ln(A)	Q=15.199-0.751* ln(A)	Q=14.140-1.096* ln(A)	Q=20.388-1.899 *ln(A)	Q=15.911-1.785 *ln(A))	Q=29.912-2.316 *ln(A)	Q=22.973-2.256 *ln(A)
50-Year	Q=5.147-0.376 *ln(A)	Q=12.692-0.623 *ln(A)	Q=11.920-0.921*ln(A)	Q= 17.051-1.577 *ln(A)	Q=13.700-1.531 *ln(A)	Q=26.566-2.082 *ln(A)	Q=20.164-1.973 *ln(A)
25-Year	Q=4.272-0.312 *ln(A)	Q= 10.488-0.522 *ln(A)	Q=9.838-0.757 *ln(A)	Q=14.037-1.293 *ln(A)	Q=11.653-1.297 *ln(A)	Q=22.639-1.741 *ln(A)	Q=17.381-1.690 *ln(A)
10-Year	Q=3.192-0.233 *ln(A)	Q=7.707-0.382 *ln(A)	Q=7.443-0.578 *ln(A)	Q=10.400-0.953 *ln(A)	Q=9.213-1.031 *ln(A)	Q=17.957-1.373 *ln(A)	Q=13.877-1.342 *ln(A)
5-Year	Q=2.410-0.175 *ln(A)	Q=5.755-0.283 *ln(A)	Q=5.557-0.427 *ln(A)	Q=7.930-0.731 *ln(A)	Q=7.358-0.829 *ln(A)	Q=14.652-1.136 *ln(A)	Q=11.468-1.123 *ln(A)
2-Year	Q=1.439-0.106 *ln(A)	Q=3.288-0.159 *ln(A)	Q=3.142-0.233 *ln(A)	Q=4.722-0.454 *ln(A)	Q=4.567-0.503 *ln(A)	Q=9.506-0.719 *ln(A)	Q=7.745-0.762 *ln(A)

Note
1. Q - Unit flow (L/s/ha - litres per second per hectare)
2. A - Area in hectares (ha)

Town of Caledon - Simpson Road - Preliminary Design of 100 Year SWM

	d	L	W	A	Aavg	Vol
Permanent Pool	0	26	21	546		0
	0.4	28.4	24	681.6	613.8	245.52
	0.8	30.8	27	831.6	756.6	605.28
	1.7	36.2	33.75	1221.75	883.875	1502.588

Target Q100 (m^3/s)	Target Vol for Total DA		
0.387	8300		
0.07006	1502.588	<--	Proposed 18%

100 yr max operating

h	0.4	0.8	1.2	1.7
h net	0.32	0.72	1.12	1.62
g	9.806	9.806	9.806	9.806
c	0.62	0.62	0.62	0.62
dia	0.16	0.16	0.16	0.16
pi	3.141593	3.141593	3.141593	3.141593
a	0.020106	0.020106	0.020106	0.020106
sqrt(2gh)	2.505163	3.757744	4.68673	5.636616
q	0.031229	0.046843	0.058424	0.070265

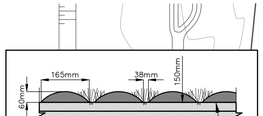
estimated proportionate Q_{100} target

Simpson Road
1/3/26
31/8/17
BB

Appendix C
Engineering Drawings

TOTAL POND BLOCK AREA	1.10ha

DESCRIPTION	PROVIDED STORAGE	REQUIRED STORAGE
PERMANENT POOL EL.227.15–229.00	3,680m^3	3,550m^3
EROSION CONTROL EL.229.00–229.75	3,800m^3	3,582m^3
2YR. W.L. EL.229.00–229.95	4,850m^3	4,850m^3
5YR. W.L. EL.229.00–230.15	5,850m^3	5,638m^3
10YR. W.L. EL.229.00–230.25	6,350m^3	6,198m^3
25YR. W.L. EL.229.00–230.40	7,150m^3	7,105m^3
50YR. W.L. EL.229.00–230.55	7,900m^3	7,739m^3
100YR. W.L. EL.229.00–230.85	10,550m^3	8,628m^3

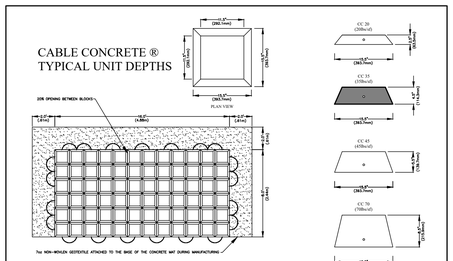


DETAIL OF TIED CONCRETE BLOCK MAT BY TERRAFIX (FLEXAMAT PLUS)
N.T.S.

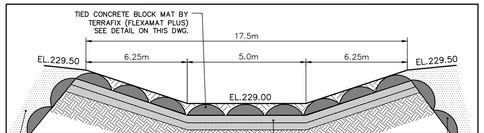
DETAIL OF TURF SLAB
N.T.S.

PERMANENT DEWATERING SUMP
N.T.S.

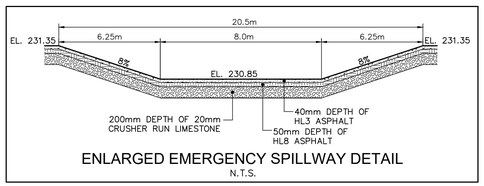
DETAIL OF ACCESS ROAD (MAX. 8%)
N.T.S.



IECS	INTERNATIONAL EROSION CONTROL SYSTEMS 22323 Hoskins Line, Roxbury, ON, N0L 2G0 Phone: 800-821-7462 Fax: 866-496-1990 www.iecs.com	CABLE CONCRETE ® TYPICAL UNIT DEPTHS	
		DRAWN BY: D. J	CHECKED BY: L.A
		SCALE: N.T.S	DATE: 10/21/13 SHEET 1 OF 1



ENLARGED DESIGN SPILLWAY DETAIL
N.T.S.



ENLARGED EMERGENCY SPILLWAY DETAIL
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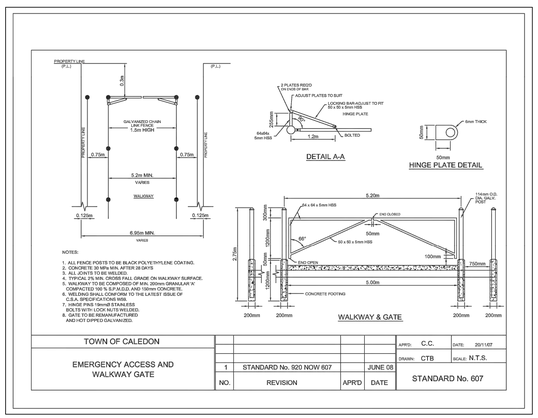
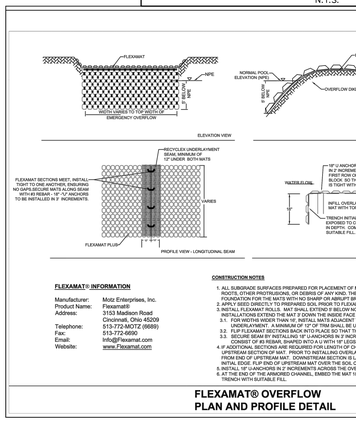


TOWN OF CALEDON								
EMERGENCY ACCESS AND WALKWAY GATE						APP'D: C.C.	DATE: 20/11/07	
						DRAWN: CTB	SCALE: N.T.S.	
	1	STANDARD No. 920 NOW 607			JUNE 08	STANDARD No. 607		
	NO.	REVISION	APP'D	DATE				



FLEXAMAT® INFORMATION

Manufacturer: Motz Enterprises, Inc.
Product Name: Flexamat®
Address: 3153 Madison Road, Cincinnati, Ohio 45209
Telephone: 513-772-MOTZ (6689)
Fax: 513-772-6690
Email: Info@Flexamat.com
Website: www.Flexamat.com

CONSTRUCTION NOTES

1. ALL SUBGRADE SURFACES PREPARED FOR PLACEMENT OF MATS SHALL BE SMOOTH AND FREE OF ALL ROCKS, STICKS, ROOTS, OTHER PROTRUSIONS, OR DEBRIS OF ANY KIND. THE PREPARED SURFACE SHALL PROVIDE A FIRM UNYIELDING FOUNDATION FOR THE MATS AND BE FREE OF STANDING WATER DURING INSTALLATION.
2. ADD FLEXAMAT DIRECTLY TO PREPARED SOIL PRIOR TO FLEXAMAT INSTALLATION. USE SEED PER PROJECT SPECIFICATIONS.
3. INSTALL FLEXAMAT ROLLS. MAT SHALL EXTEND 9' BELOW NORMAL POND ELEVATION. FOR EMERGENCY OVERFLOW INSTALLATIONS EXTEND THE MAT 9' DOWN THE INSIDE FACE OF THE OVERFLOW DIKE 2.
   3.1. FOR WIDTHS WIDER THAN 18', INSTALL MATS ADJACENT TO ONE ANOTHER. BRIDGE LONGITUDINAL SEAM WITH RECYCLED UNDERLAYMENT SEAM, MINIMUM OF 12" UNDER BOTH MATS AND PLACED DIRECTLY ADJACENT THE SUBGRADE.
   3.2. FLIP FLEXAMAT SECTIONS BACK INTO PLACE SO THAT THEY FIT TIGHTLY.
   3.3. SECURE SEAM BY INSTALLING 18" U-ANCHORS IN 2' INCREMENTS THE LENGTH OF THE LONGITUDINAL SEAM. U-ANCHORS CONSIST OF #3 REBAR, BHAPED INTO A U WITH 18" LEGS.
4. 9" ADDITIONAL SECTIONS ARE REQUIRED FOR LENGTH OF CHANNEL. OVERLAP THE DOWNSTREAM SECTION 18" WITH UPSTREAM SECTION. INSTALL 18" U-ANCHORS IN 2' INCREMENTS ACROSS THE OVERLAP. INSTALL 18" U-ANCHORS 18" FROM END OF UPSTREAM MAT. DOWNSTREAM SECTION IS LAID IN THE SHALLOW TRENCH. LIGHTLY SPREAD TOPSOIL OVER INITIAL EDGE. PUT END OF UPSTREAM MAT OVER THE SOIL COVERED INITIAL LEADING EDGE OF DOWNSTREAM MAT.
5. BETTING THE MATS SHALL BE IN 2' INCREMENTS ACROSS THE OVERLAP.
6. AT THE END OF THE AMENDED CHANNEL, EMBED THE MAT 18" IN A TERMINATION TRENCH. FILL AND COMPACT TERMINATION TRENCH WITH SUITABLE FILL.

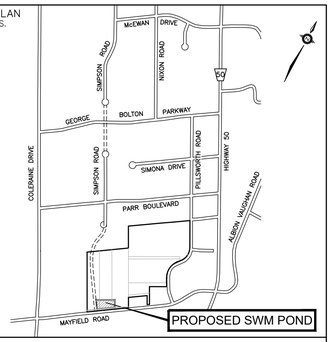
FLEXAMAT® OVERFLOW PLAN AND PROFILE DETAIL

Flexamat

LIST OF DRAWINGS

SWM–1	SIMPSON ROAD SWM POND
SWM–2	SWM POND SECTIONS (SEC–1 TO SEC–5)
SWM–3	CONTROL FLOW STRUCTURE DETAIL
SWM–4	CONTROL MANHOLE 9 AND MANHOLE 10 DETAIL, STORM MANHOLE DATA
SWM–5	STORM OUTFALL DETAIL

KEY PLAN
N.T.S.



NOTES

1. THE LOCATION OF ALL UNDERGROUND AND ABOVE GROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON CONTRACT DRAWINGS, AND WHERE SHOWN THE ACCURACY OF THE LOCATION AND ELEVATION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF SUCH UTILITIES AND STRUCTURES AND SHALL ASSUME ALL LIABILITIES OF DAMAGE.
2. ALL AREAS DISTURBED DURING CONSTRUCTION OF SEWERS AND WATERMAINS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER, TO THE SATISFACTION OF THE TOWN OF CALEDON .

LEGEND

230.07 / (231.05)	DENOTES PROPOSED ELEVATION DENOTES EXISTING ELEVATION
231.0	DENOTES EXISTING CONTOUR ELEVATION
	DENOTES 100 YR. WATER LEVEL
	DENOTES PERMANENT POOL LEVEL
	DENOTES PROPOSED POND CONTOUR LINE
	DENOTES 1.0m DEPTH OF CLAY LINER
	DENOTES 300mm OF 50mm CRUSHER RUN LIMESTONE
	DENOTES TIED CONCRETE BLOCK MAT BY TERRAFIX (FLEXAMAT)
	DENOTES CABLE CONCRETE MATTING

NO.	BY	DATE	REVISION	CONCL. CHECKED	TOWN APPR'D

NO.	DATE	ISSUED FOR

BENCH MARK:
ELEVATIONS SHOWN HEREON ARE GEODETIC AND ARE RELATED TO CITY OF BRAMPTON CONTROL MONUNENT No. 010840151 HAVING A POSTED ELEVATION OF 229.82 METRES.

PROFESSIONAL ENGINEER
F. TCHOURKINE
AUG. 14, 2020
PROVINCE OF ONTARIO

ANATOLIA CAPITAL CORPORATION

SCHAEFFERS
CONSULTING ENGINEERS
SCHAEFFER & ASSOCIATES LTD.

6 Ronrose Drive, Concord, Ontario L4K 4R3
Tel: (905) 738-6100
Fax: (905) 738-6875
E-mail: design@schaeffers.com

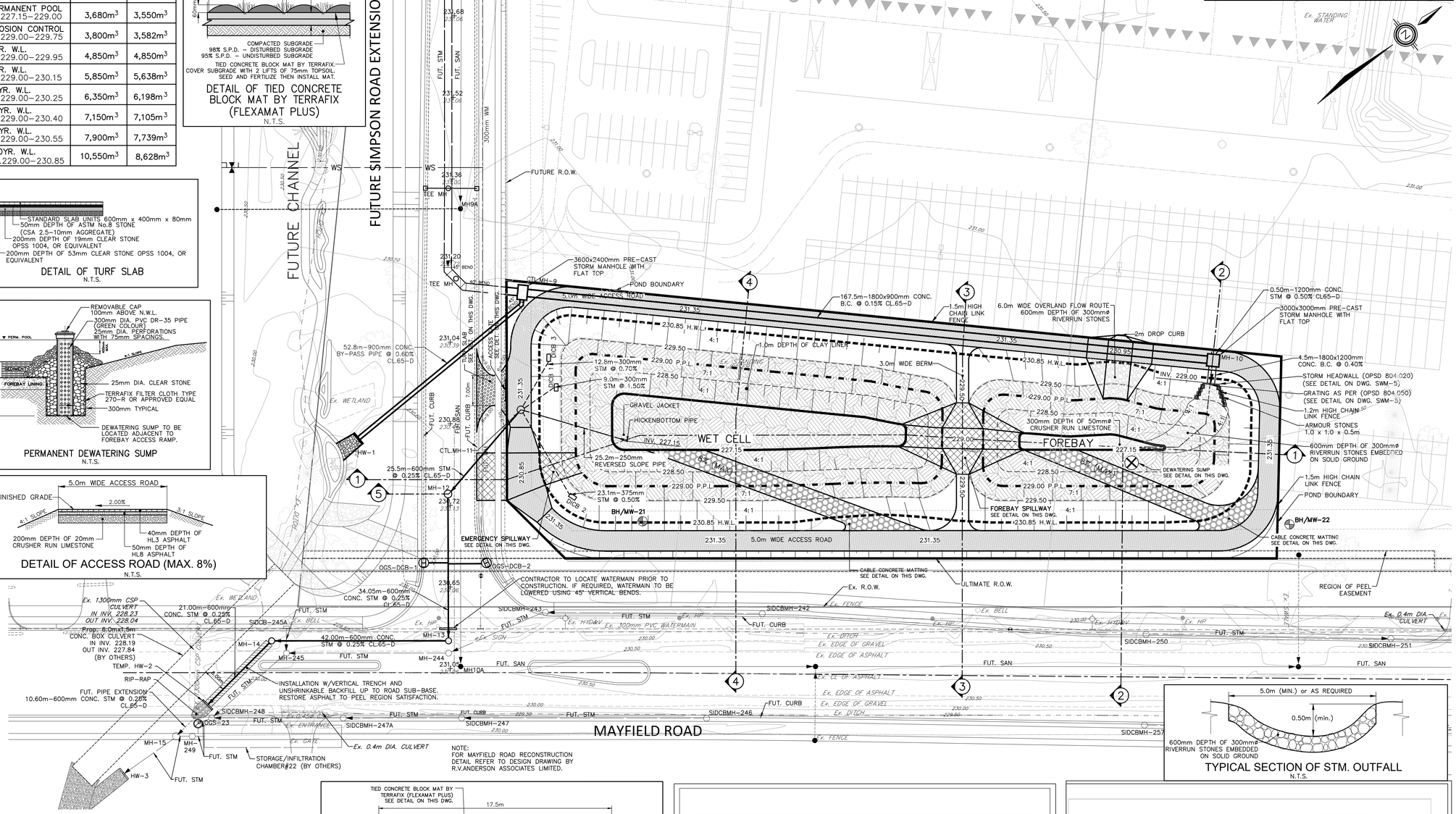
Region of Peel
Working for you.

TOWN OF CALEDON

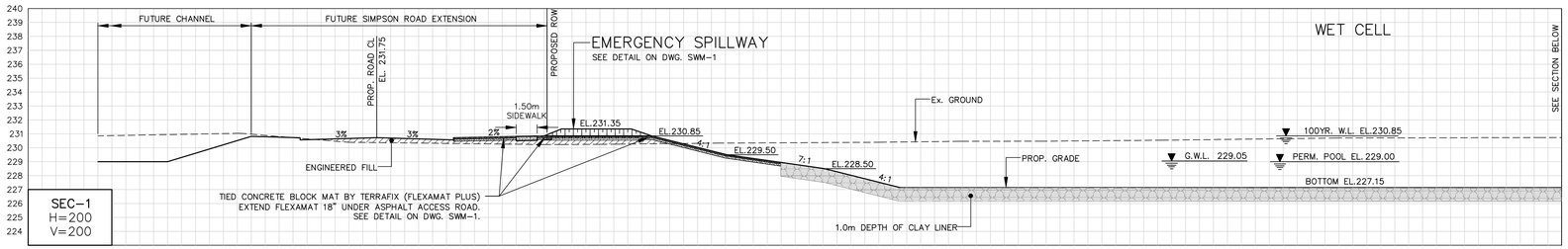
SIMPSON ROAD SWM POND

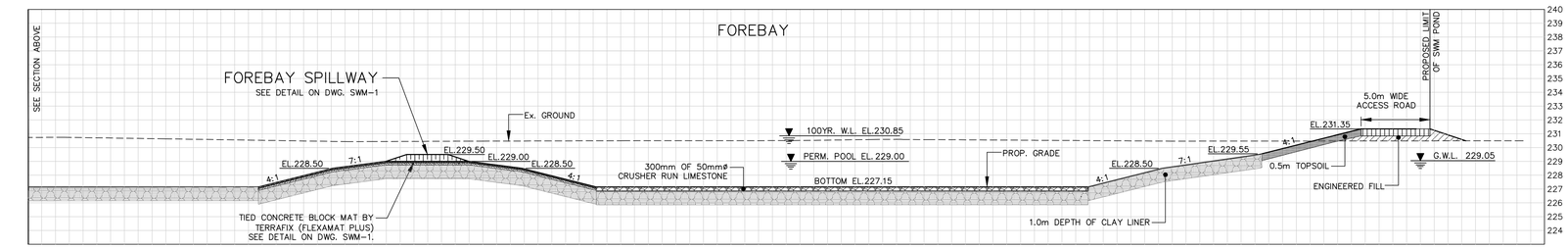
CITY FILE: XXX

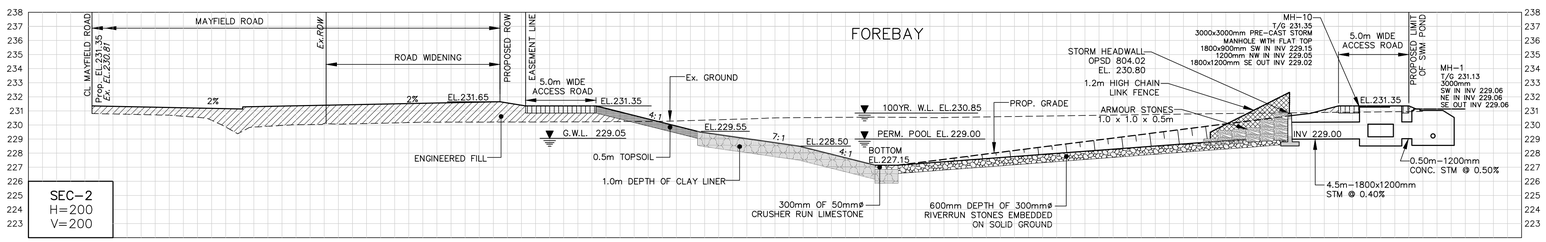
SCALE:	1:500	PROJECT No.	2019-4841
DESIGNED BY:	F.T.	DRAWN BY:	AM
CHECKED BY:	P.S.	DATE:	OCT. 2019
		DRAWING No.	SWM-1

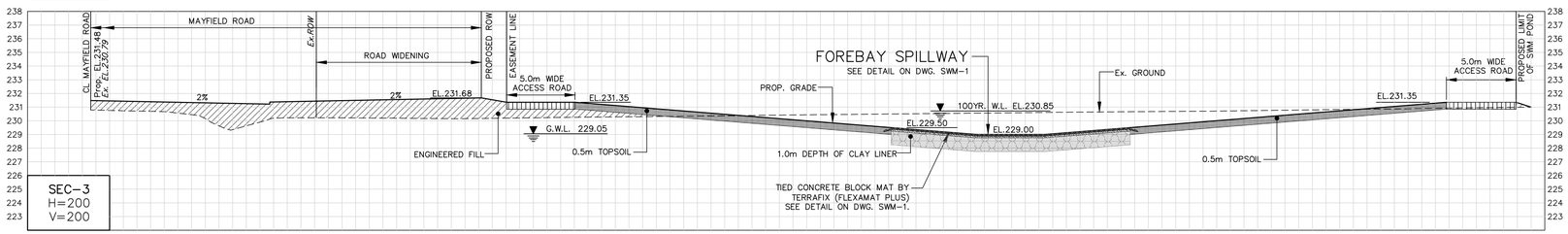


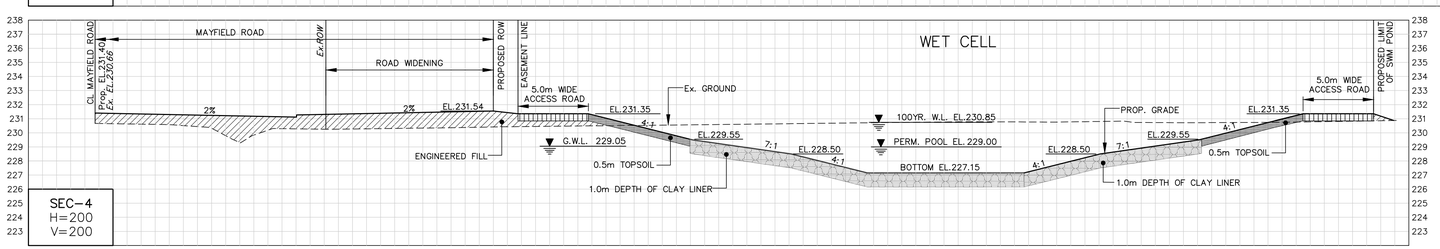
TYPICAL SECTION OF STM. OUTFALL
N.T.S.

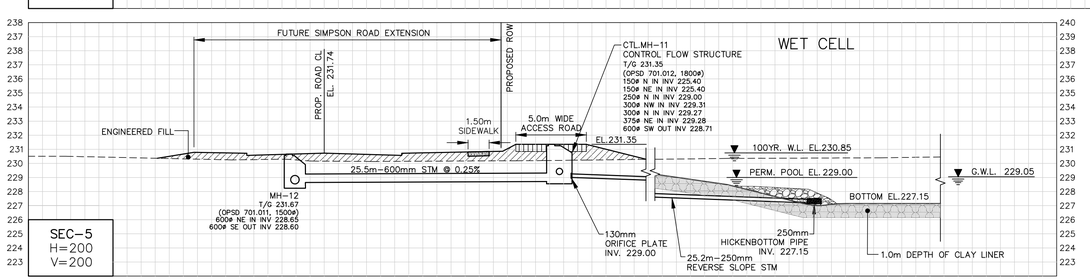












NOTE:
GROUNDWATER CONDITIONS ARE BASED ON GROUNDWATER MONITORING PROGRAM REPORT BY FORWARD ENGINEERING & ASSOCIATES INC. DATED MAY 31, 2020.

NOTES

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NO.	BY	DATE	REVISION	CONCL. CHECKED	TOWN APPR'D

NO.	DATE	ISSUED FOR

BENCH MARK:
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LICENCE — PROFESSIONAL ENGINEER — F. TCHOURKINE — AUG. 4, 2020 — PROVINCE OF ONTARIO

ANATOLIA CAPITAL CORPORATION

SCHAEFFERS
CONSULTING ENGINEERS
SCHAEFFER & ASSOCIATES LTD.
6 Ronrose Drive, Concord, Ontario L4K 4R3
Tel: (905) 738-6100
Fax: (905) 738-6875
E-mail: design@schaeffers.com

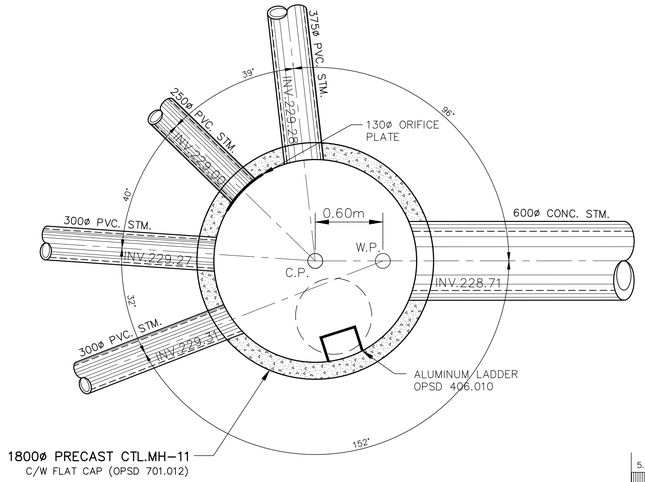
Region of Peel
Working for you

TOWN OF CALEDON

SWM POND SECTIONS
SEC-1 TO SEC-5

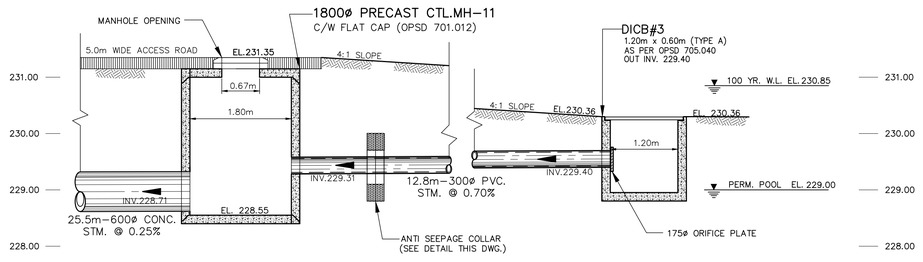
CITY FILE: XXX

SCALE: 1:200		PROJECT No.	2019-4841
DESIGNED BY: F.T.	DRAWN BY: AM	DRAWING No.	SWM-2
CHECKED BY: P.S.	DATE: OCT. 2019		



1800ø PRECAST CTL.MH–11
C/W FLAT CAP (OPSD 701.012)

PLAN VIEW OF CTL.MH–11
SCALE 1:25



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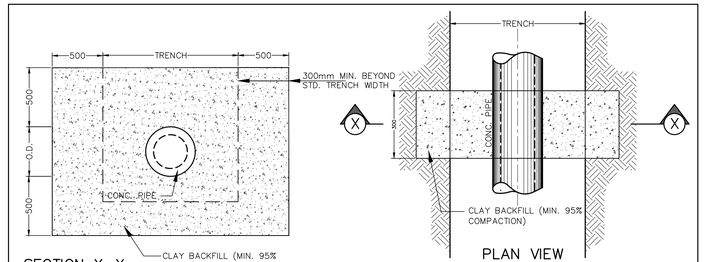
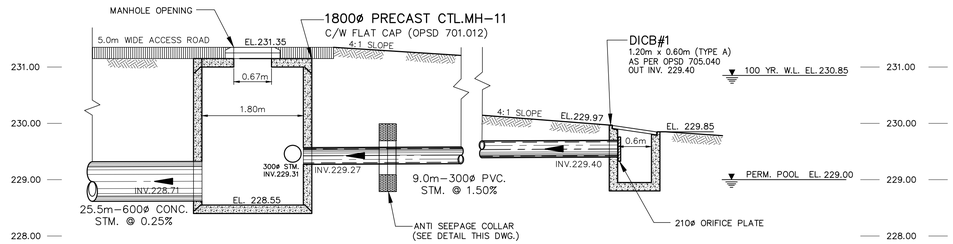


SECTION X–X

PLAN VIEW

DETAIL OF ANTI–SEEPAGE COLLAR
GEOTECHNICAL ENGINEER RECOMMENDATION
TO BE CONFIRMED PRIOR TO APPROVAL
N.T.S.



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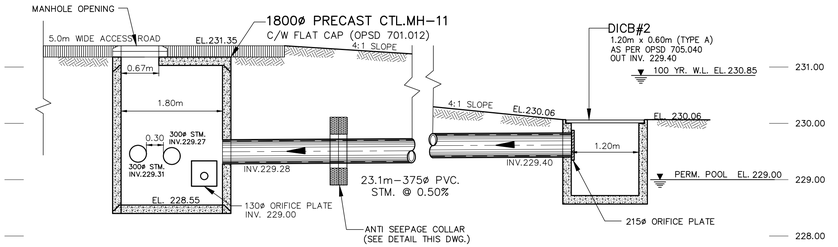

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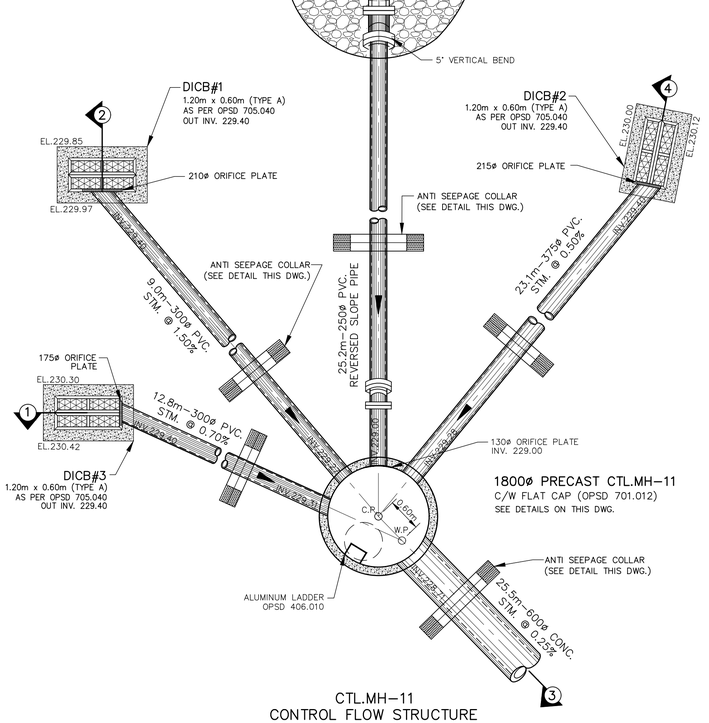
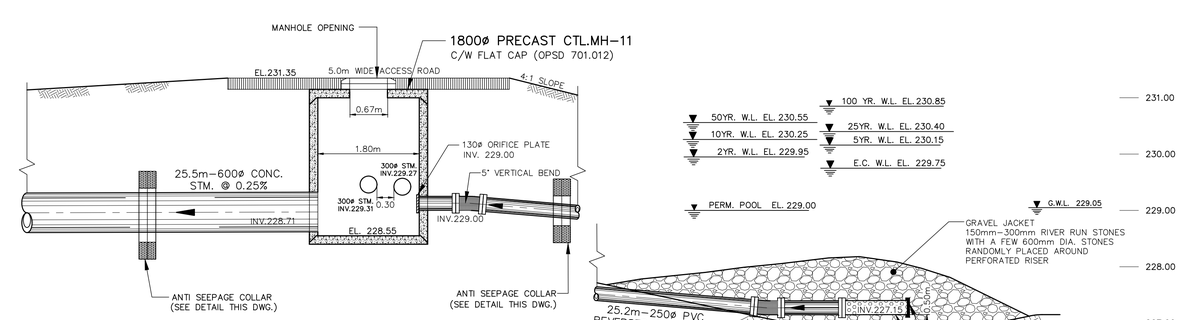


CTL.MH–11
CONTROL FLOW STRUCTURE
PLAN VIEW
SCALE 1:50



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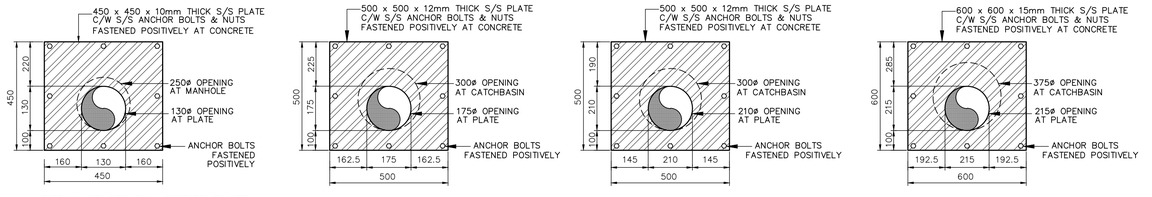
SCALE 1:50



DETAIL OF 130 DIA. ORIFICE PLATE
N.T.S.

DETAIL OF 175 DIA. ORIFICE PLATE
N.T.S.

DETAIL OF 210 DIA. ORIFICE PLATE
N.T.S.

DETAIL OF 215 DIA. ORIFICE PLATE
N.T.S.

NO.	BY	DATE	REVISION	CONCL. CHECKED	TOWN APPR'D

NO.	DATE	ISSUED FOR

BENCH MARK:
ELEVATIONS SHOWN HEREON ARE GEODETIC AND ARE RELATED TO CITY OF BRAMPTON CONTROL MONUMENT No. 010840151 HAVING A POSTED ELEVATION OF 229.82 METRES.

PROFESSIONAL ENGINEER
F. TCHOURKINE
AUG. 4, 2020
PROVINCE OF ONTARIO

ANATOLIA CAPITAL CORPORATION

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CONSULTING ENGINEERS
SCHAEFFER & ASSOCIATES LTD.
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E-mail: design@schaeffers.com

Region of Peel
Working for you

TOWN OF CALEDON

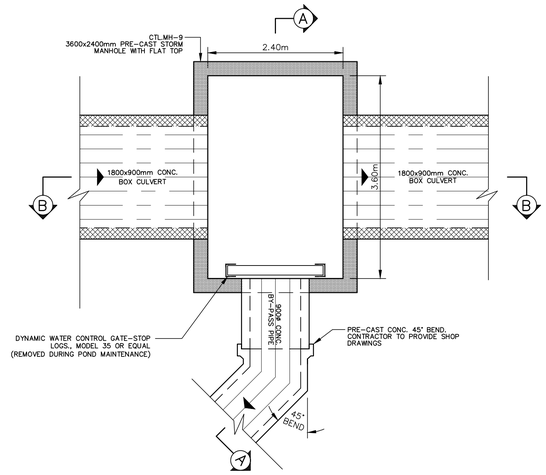
CONTROL FLOW STRUCTURE DETAIL

CITY FILE: XXX

SCALE: AS SHOWN		PROJECT No.	2019-4841
DESIGNED BY: F.T.	DRAWN BY: AM	DRAWING No.	SWM-3
CHECKED BY: P.S.	DATE: OCT. 2019		

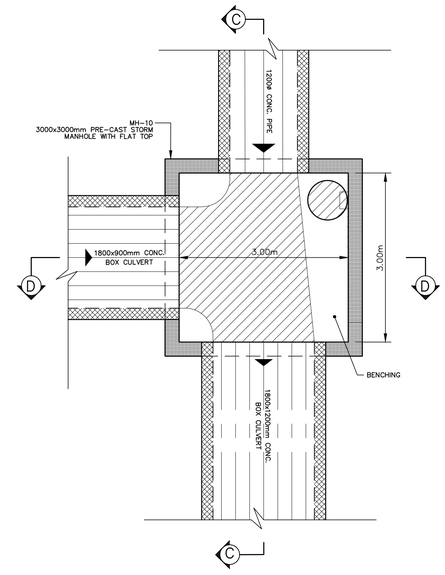
STORM MANHOLES, DICBs, HEADWALLS

NAME	ELEVATION	SIZE	SPECIFICATION
CTL.MH–9	T/G = 231.35 SW INV IN = 229.43 NE INV OUT = 229.40 SE INV OUT = 228.65	3600x2400mm	
10	T/G = 231.35 SW INV IN = 229.15 NW INV IN = 229.05 SE INV OUT = 229.02	3000x3000mm	
CTL.MH–11	T/G = 231.35 N INV IN = 225.40 NE INV IN = 225.40 N INV IN = 229.00 NW INV IN = 229.31 N INV IN = 229.27 NE INV IN = 229.28 SW INV OUT = 228.71	1800mm	OPSD 701.012
12	T/G = 231.67 NE INV IN = 228.65 SE INV OUT = 228.60	1500mm	OPSD 701.011
13	T/G = 231.02 NW INV IN = 228.52 SW INV OUT = 228.47	1500mm	OPSD 701.011
14	T/G = 230.85 NE INV IN = 228.36 S INV OUT = 228.34	1500mm	OPSD 701.011
15	T/G = 230.70 NE INV IN = 228.31 N INV IN = 228.26 S INV OUT = 228.15	1500mm	OPSD 701.011
SIDCBMH–242	T/G = 231.30 SW INV OUT = 229.59	1500mm	OPSD 701.011
SIDCBMH–243	T/G = 231.05 NE INV IN = 229.33 S INV OUT = 229.31	1500mm	OPSD 701.011
244	T/G = 230.85 N INV IN = 229.19 SW INV OUT = 229.17	1500mm	OPSD 701.011
245	T/G = 230.75 NW INV IN = 229.00 NE INV IN = 228.97 S INV OUT = 228.95	1500mm	OPSD 701.011
SIDCBMH–246	T/G = 231.29 SW INV OUT = 229.50	1500mm	OPSD 701.011
SIDCBMH–247	T/G = 230.99 NE INV IN = 229.21 SW INV OUT = 229.17	1500mm	OPSD 701.011
SIDCBMH–247A	T/G = 230.85 NE INV IN = 229.03 SW INV OUT = 229.00	1500mm	OPSD 701.011
SIDCBMH–248	T/G = 230.65 NE INV IN = 228.84 NW INV IN = 228.84 SW INV OUT = 228.44	1500mm	OPSD 701.011
OGS–23	T/G = 230.67 NW INV IN = 228.43 SE INV OUT = 228.41	1500mm	OPSD 701.011
249	T/G = 230.65 NW INV IN = 228.40 NE INV IN = 228.40 SW INV OUT = 228.33	1500mm	OPSD 701.011
SIDCB–245A	T/G = 230.56 SE INV OUT = 229.11	600x1450mm	OPSD 705.020
HW–1	T/G = 229.80 N INV IN = 228.35		OPSD 804.020
TEMP. HW–2	T/G = 229.40 N INV IN = 228.29		OPSD 804.030
HW–3	T/G = 229.40 N INV IN = 228.12		OPSD 804.030



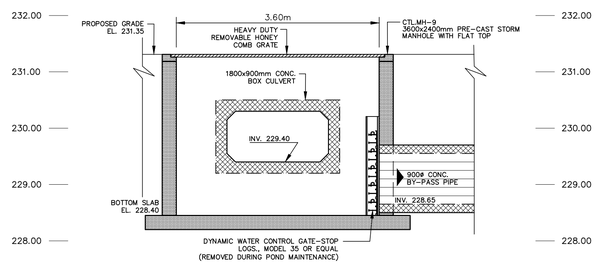
PLAN VIEW OF STORM CTL.MH–9

SCALE: 1:50



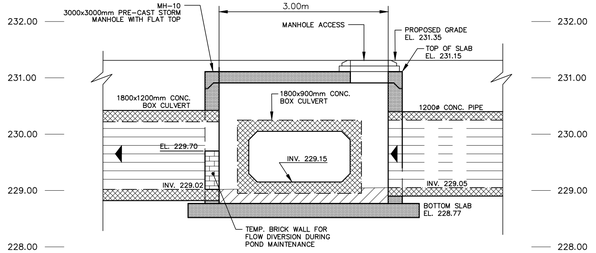
PLAN VIEW OF STORM MH–10

SCALE: 1:50



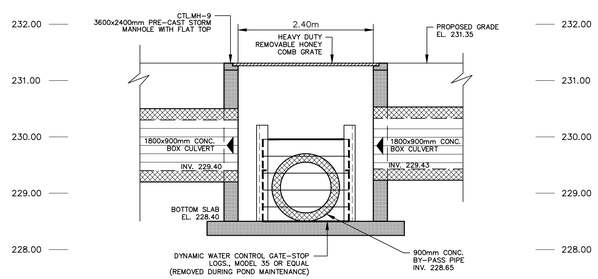
SECTION 'A'–'A'

SCALE: 1:50



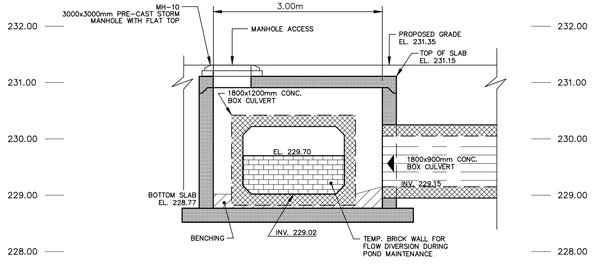
SECTION 'C'–'C'

SCALE: 1:50



SECTION 'B'–'B'

SCALE: 1:50



SECTION 'D'–'D'

SCALE: 1:50

NO.	BY	DATE	REVISION	CONCL. CHECKED	TOWN APPR'D

NO.	DATE	ISSUED FOR

BENCH MARK:

ELEVATIONS SHOWN HEREON ARE GEODETIC AND ARE RELATED TO CITY OF BRAMPTON CONTROL MONUNENT No. 010840151 HAVING A POSTED ELEVATION OF 229.82 METRES.

LICENCE — PROFESSIONAL ENGINEER — F. TCHOURKINE — AUG. 4, 2020 — PROVINCE OF ONTARIO

ANATOLIA CAPITAL CORPORATION

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Region of Peel
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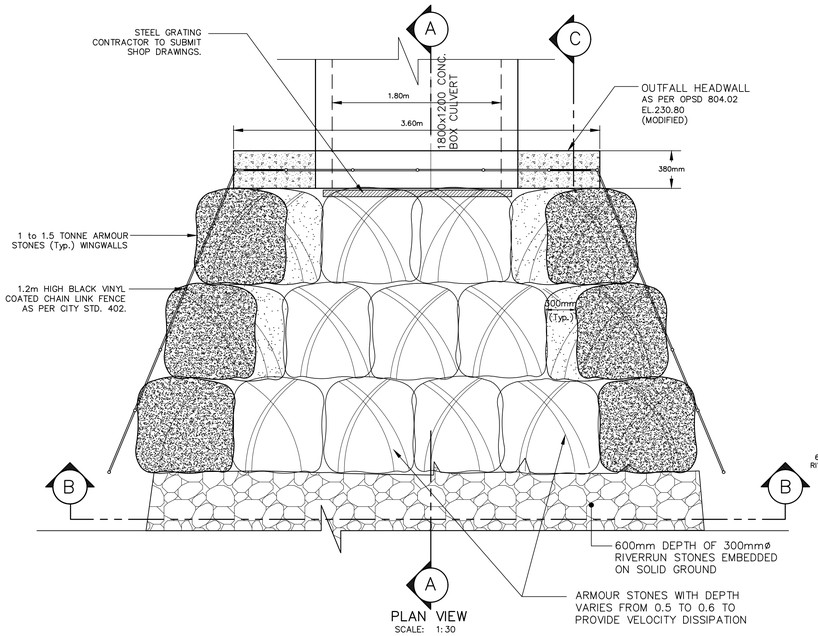
TOWN OF CALEDON

CONTROL MANHOLE 9 AND MANHOLE 10 DETAIL, STORM MANHOLE DATA

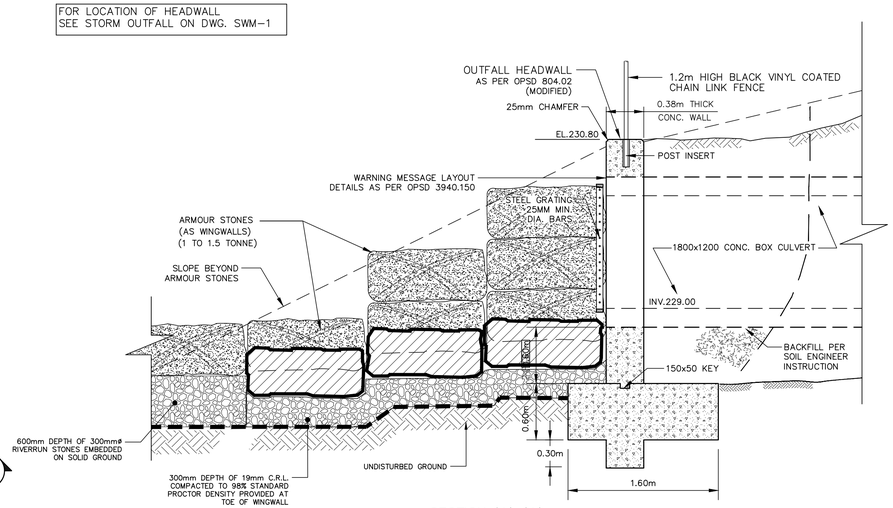
CITY FILE: XXX

SCALE: AS SHOWN		PROJECT No.	2019-4841
DESIGNED BY: F.T.	DRAWN BY: AM		
CHECKED BY: P.S.	DATE: OCT. 2019	DRAWING No.	SWM-4

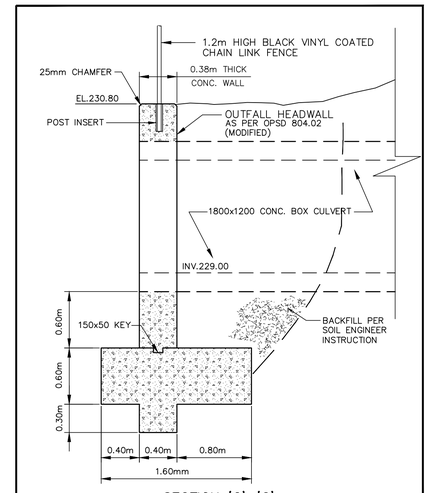


PLAN VIEW
SCALE: 1:30

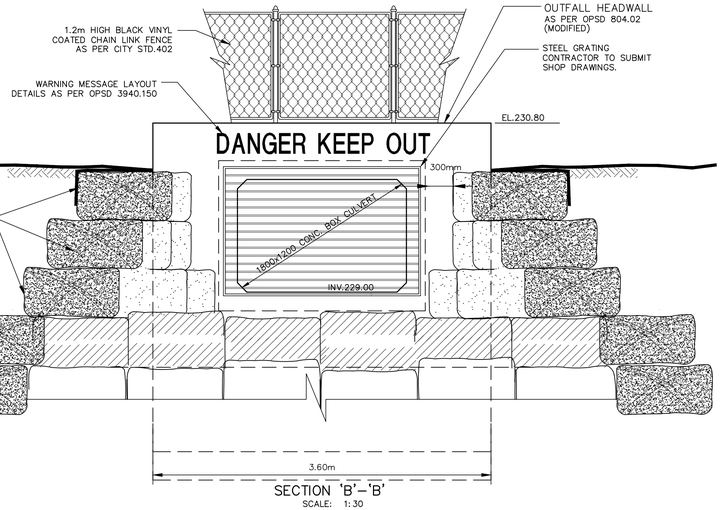
FOR LOCATION OF HEADWALL
SEE STORM OUTFALL ON DWG. SWM-1



SECTION 'A'–'A'
SCALE: 1:30



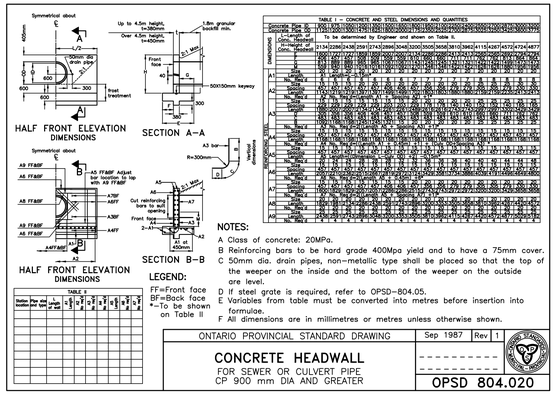
SECTION 'C'–'C'
SCALE: 1:30

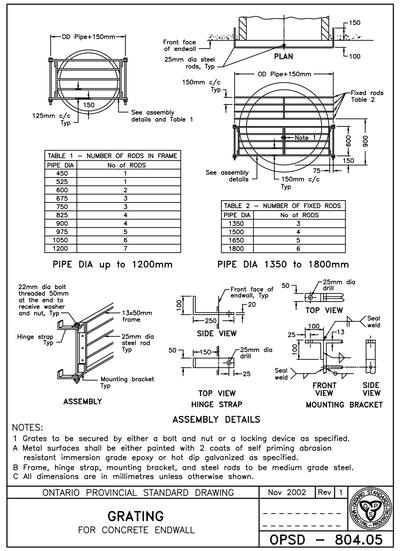


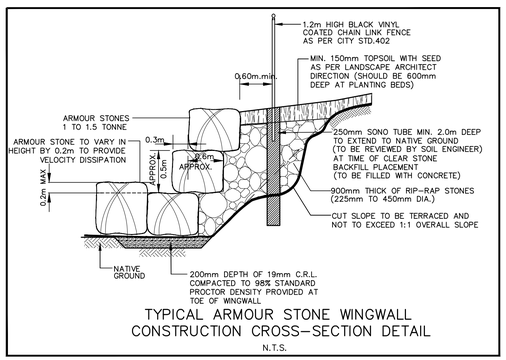
SECTION 'B'–'B'
SCALE: 1:30

ARMOUR STONE NOTES:

1. ALL ARMOUR STONE SHALL BE SELECTED, HARD, SOUND, DURABLE, QUARRIED STONE WITH A HIGH RESISTANCE TO WEATHERING AND DISINTEGRATION UNDER FREEZING, THAWING, WETTING AND DRYING CYCLES AND SHALL BE OF A QUALITY TO ENSURE PERMANENCE IN THE CLIMATE AND CONDITIONS IN WHICH IT IS TO BE USED. THE INDIVIDUAL STONES SHALL BE FREE FROM WEAK BEDDING PLANES, CRACKS OR CREVICES OR OTHER DEFECTS THAT WOULD TEND TO INCREASE ITS DETERIORATION FROM NATURAL CAUSES OR BREAKAGE IN HANDLING OR PLACING. ARGILLACEOUS MATERIAL SUCH AS SHALES OR QUARRIED STONE FROM THINLY BEDDED STRATA OF SHALEY NATURE WILL NOT BE ACCEPTED. IN ALL CASES, THE STONES SHALL BE ROUGHLY CUBICAL IN SHAPE AND SHALL BE APPROXIMATELY EQUAL IN SIZE WITH RELATIVELY UNIFORM AND SMOOTH EXPOSED FRONT FACE. THE GREATEST DIMENSION OF EACH STONE SHALL BE NOT MORE THAN 2.5 TIMES THE LEAST DIMENSION.
2. ARMOUR STONE SHALL BE FROM QUARRIES WHICH HAVE PRODUCED ARMOUR STONE, OF THE SIZE SPECIFIED, WITH A CONCLUSIVE HISTORY OF PREVIOUS SUCCESSFUL USE IN SHORELINE STRUCTURES.
3. ARMOUR STONE SHALL HAVE: MINIMUM RELATIVE DENSITY (TESTED TO ASTM C127) OF 2.6; MAXIMUM ABSORPTION OF 2.0% (TESTED TO ASTM C127); MAXIMUM 35% ABRASION WEAR (LOS ANGELES ABRASION TEST TO ASTM C535).
4. ALL ARMOUR STONE MUST BE STOCKPILED AT THE QUARRY FOR AN INITIAL CURING PERIOD OF A MINIMUM OF 48 HOURS PRIOR TO TRANSPORT TO THE SITE.
5. LIMESTONE DOLOMITE ARMOUR STONE QUARRIED AFTER A PERIOD TWO WEEKS PRIOR TO THE TIME WHEN THE 24–HOUR AVERAGE AIR TEMPERATURE AT THE QUARRY IS LESS THAN OR EQUAL TO –4C FOR 3 CONSECUTIVE DAYS WILL NOT BE ACCEPTED UNLESS THE CONTRACTOR CAN CONCLUSIVELY SHOW THAT THE ROCK HAS A HISTORY OF BEING DURABLE IRRESPECTIVE OF THE TIME OF YEAR IT WAS QUARRIED. STONE QUARRIED AFTER THIS TWO WEEK PERIOD WILL ONLY BE ACCEPTED AFTER THE STONES HAVE BEEN STORED AT THE QUARRY AND INSPECTED FOR SUITABILITY AFTER AN ADDITIONAL CURING PERIOD.
6. THE CONTRACTOR SHALL CHECK ALL ARMOUR STONE AT THE QUARRY FOR CONFORMANCE TO SPECIFICATIONS AND MARK EACH PROPOSED PIECE.
7. ALL ARMOUR STONES SHALL BE PLACED TO THE LINES AND GRADES INDICATED ON THE CONTRACT DRAWINGS. THE STONES SHALL BE INDIVIDUALLY AND CAREFULLY PLACED IN A SUITABLE POSITION AND REGULAR ALIGNMENT AND IN DIRECT CONTACT WITH THE ADJACENT STONES IN ORDER TO PROVIDE A TIGHTLY KNIT STRUCTURE. EACH ARMOUR STONE SHALL BE SECURE AND STABLE AND KEYED IN THE ADJOINING STONES. THE STONES SHALL BE PLACES SO THAT THE EXPOSED FRONT FACE OF THE STONES AND THE TOP OF THE STONES FORM A RELATIVELY UNIFORM AND STRAIGHT LINE. THE OVERALL UNIFORM APPEARANCE OF THE PLACED ARMOUR STONE IS VERY IMPORTANT AND THE CONTRACTOR WILL BE REQUIRED, AT HIS OWN EXPENCE, TO REMOVE AND/OR RESET STONES IN ORDER TO OBTAIN A UNIFORM SURFACE TO THE SATISFACTION OF THE ENGINEER.







TYPICAL ARMOUR STONE WINGWALL
CONSTRUCTION CROSS–SECTION DETAIL
N.T.S.

NOTES:

1. ALL DIMENSIONS AND ELEVATIONS ARE IN METRIC.
2. ALL CONCRETE SHALL HAVE 30MPa COMPRESSIVE STRENGTH IN 28 DAYS WITH MAX. WAYER/CEMENTING MATERIALS RATIO OF 0.50 @ 5–8% AIR ENTRAINED.
3. REINFORCING STEEL HAVE 400MPa MINIMUM YIELD STRENGTH CONFORMING TO C.S.A. SPECIFICATION G.30.18–M2.
4. REINFORCING BARS SHALL BE LAPPED 36 BAR DIAMETERS AT SPLICES.
5. ALL REINFORCING SHALL BE PROTECTED BY THE THICKNESS OF CONCRETE SPECIFIED ON THE DRAWINGS AND/OR AS FOLLOWS:

a) CONCRETE POURED AGAINST THE GROUND WITHOUT FORMS 75mm
b) CONCRETE EXPOSED TO WEATHER, WATER OR TO GROUND, BUT IN FORMS 50mm

6. SUBMIT SHOP DRAWINGS FOR REINFORCING STEEL BARS TO SCHAEFFERS CONSULTING ENGINEERS FOR REVIEW AND OBTAIN APPROVAL BEFORE FABRICATING STEEL.
7. BEFORE PLACING CONCRETE FOR FOOTINGS OBTAIN APPROVAL FROM PROFESSIONAL SOIL ENGINEER.
8. PROVIDE EPOXY COATED RE–BARS FOR ALL EXPOSED SURFACES OF HEADWALLS.
9. THE SOIL CONSULTANT SHALL VERIFY ON SITE THAT THE BEARING CAPACITY OF THE SUBGRADE UNDER HEADWALL FOUNDATION IS 200KPa OR HIGHER.

NO.	BY	DATE	REVISION	CONCL. CHECKED	TOWN APPR'D

NO.	DATE	ISSUED FOR

BENCH MARK:

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PROFESSIONAL ENGINEER
F. TCHOURKINE
AUG. 4, 2020
PROVINCE OF ONTARIO

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Region of Peel
Working for you.

TOWN OF CALEDON

STORM OUTFALL DETAIL
(1800x1200mm CONC. BOX CULVERT)

CITY FILE: XXX

SCALE: AS SHOWN			PROJECT No. 2019-4841
DESIGNED BY: F.T.	DRAWN BY: AM		
CHECKED BY: P.S.	DATE: OCT. 2019		DRAWING No. SWM-5

D.2. Existing Flows

GEI Consultants

Existing Peak Flow Rates (m3/s)

Simpson Road MESP Updates
Project# 2301130
June-24

Catchment ID	Area (ha)	Storm Event (m3/s) - 6hr AES					
		2-YR	5-YR	10-YR	25-YR	50-YR	100-YR
24.10 / 7417	90.03	0.420	0.741	0.974	1.281	1.518	1.756
Subject Site	24.75	0.159	0.358	0.565	0.851	1.117	1.395

Catchment ID	Area (ha)	Storm Event (m3/s) -12HR AES					
		2-YR	5-YR	10-YR	25-YR	50-YR	100-YR
24.10 / 7417	90.03	0.500	0.813	1.038	1.331	1.553	1.779
Subject Site	24.75	0.190	0.393	0.602	0.884	1.143	1.413

Catchment ID	Area (ha)	Storm Event (m3/s) -24HR AES					
		2-YR	5-YR	10-YR	25-YR	50-YR	100-YR
24.10 / 7417	90.03	0.503	0.788	0.988	1.248	1.444	1.644
Subject Site	24.75	0.191	0.381	0.573	0.829	1.063	1.306

The Modified Index Flood Method referenced in the MTO Drainage Management Manual is the following formula:

$$Q_2 = Q_1(A_2/A_1)^{0.75}$$

Where:

- A1 = the known larger area;
- A2 = the smaller area;
- Q1 = the available flow available for the A1 area; and
- Q2 = the unknown variable.

D.3. Draining To Box Culvert

GEI Consultants

Kevin Surja

Allowable Release Rates

TRCA Unit Flow Rate Calcs

Simpson Road MESP Updates

Project #: 2301130

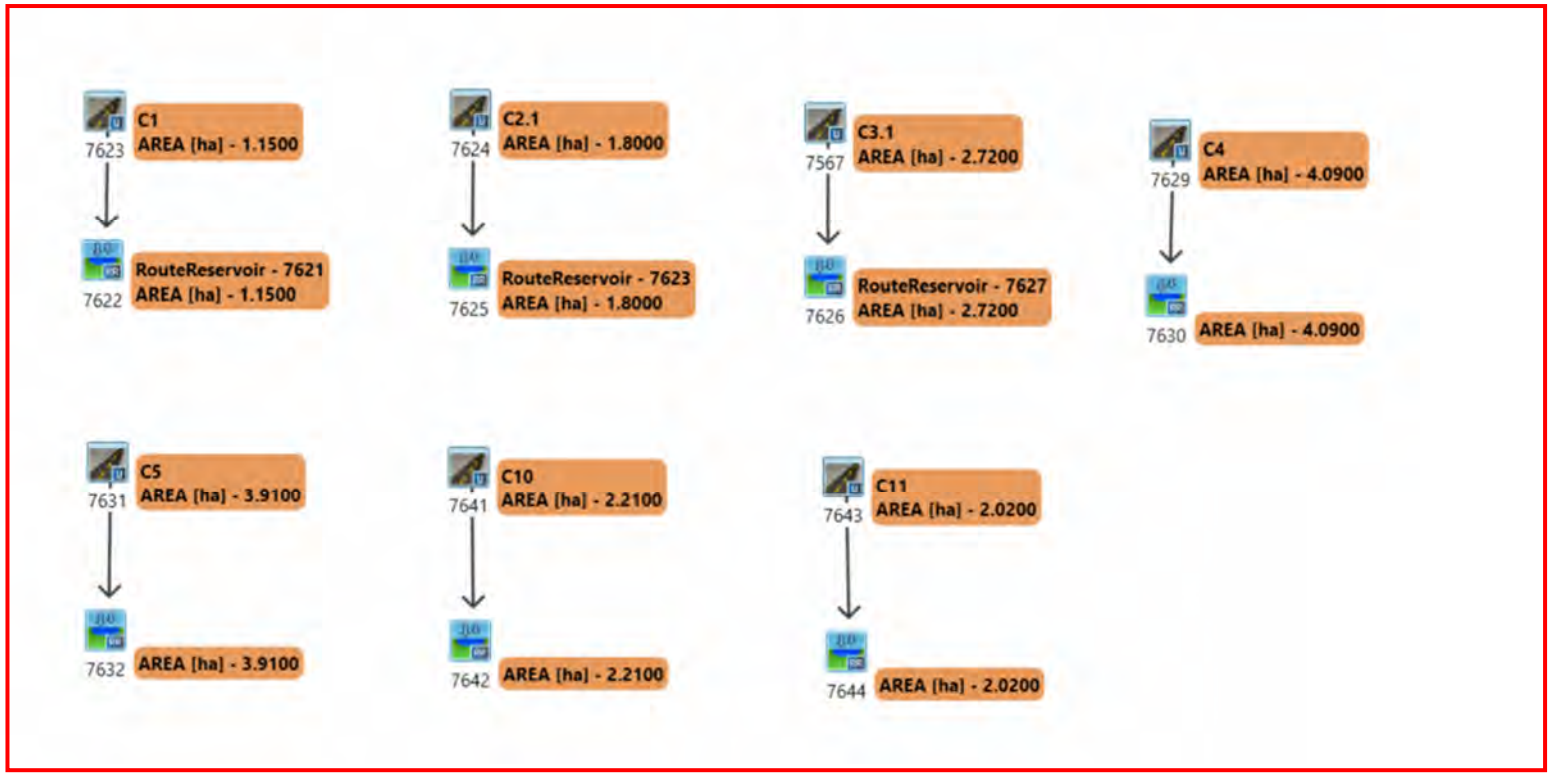
Jun-24

Unit Rate (TRCA Guidelines)

Catchment	Area	Return Period (cms)					
	ha	2-YR	5-YR	10-YR	25-YR	50-YR	100-YR
C1	1.15	0.0108	0.0167	0.0204	0.0258	0.0302	0.0340
C2.1	1.8	0.0164	0.0252	0.0309	0.0389	0.0456	0.0514
C3.1	2.72	0.0239	0.0368	0.0451	0.0568	0.0666	0.0751
C4	4.09	0.0347	0.0534	0.0655	0.0826	0.0967	0.1090
C5	3.91	0.0333	0.0512	0.0629	0.0792	0.0928	0.1046
C10	2.21	0.0197	0.0304	0.0373	0.0470	0.0551	0.0620
C11	2.02	0.0182	0.0280	0.0343	0.0433	0.0507	0.0571
	17.9	**0.157**	**0.242**	**0.296**	**0.374**	**0.438**	**0.493**

File No. 2301130
Simpson Road MESP
Town of Caledon
2 - 100-Year 6/12/24HR AES Storms, 4-hour Chicago Design Storms
Post development Model Output
June 2024

VO6 Model Schematic



GEI Consultants

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                  *****  D E T A I L E D   O U T P U T *****


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a4eb17eaad57\6cb9ef31-da97-4733-a3bc-fcbc9ec3fbae\s


DATE: 06/14/2024                          TIME: 12:48:34

USER:


COMMENTS: _____________________________________________________


------------------------------------------------------------------------------------------------------------
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  ***********************************************
  ** SIMULATION : 1. 2 Year 6 Hour AES (Bloor,  **
  ***********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\ygollamudi\AppD
|                  |              ata\Local\Temp\
|                  |              3c3f87d5-a26e-4c6b-b2ae-56a7ba29ab7f\acb042c3
| Ptotal= 36.00 mm |    Comments: 2 Year 6 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.00    0.00 |  1.75   12.24 |  3.50    5.04 |  5.25    0.72
                0.25    0.72 |  2.00   12.24 |  3.75    2.88 |  5.50    0.72
                0.50    0.72 |  2.25   33.12 |  4.00    2.88 |  5.75    0.72
                0.75    0.72 |  2.50   33.12 |  4.25    1.44 |  6.00    0.72
                1.00    0.72 |  2.75    9.36 |  4.50    1.44 |
                1.25    4.32 |  3.00    9.36 |  4.75    0.72 |
                1.50    4.32 |  3.25    5.04 |  5.00    0.72 |

------------------------------------------------------------------------------

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| CALIB            |
| STANDHYD (  7567)|   Area    (ha)=   2.72
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.69         0.03
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=     134.66        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	4.32	3.150	9.36	4.72	1.44
0.033	0.00	1.600	4.32	3.167	9.36	4.73	1.44
0.050	0.00	1.617	4.32	3.183	9.36	4.75	1.44
0.067	0.00	1.633	4.32	3.200	9.36	4.77	0.72
0.083	0.00	1.650	4.32	3.217	9.36	4.78	0.72
0.100	0.00	1.667	4.32	3.233	9.36	4.80	0.72
0.117	0.00	1.683	4.32	3.250	9.36	4.82	0.72
0.133	0.00	1.700	4.32	3.267	5.04	4.83	0.72
0.150	0.00	1.717	4.32	3.283	5.04	4.85	0.72
0.167	0.00	1.733	4.32	3.300	5.04	4.87	0.72
0.183	0.00	1.750	4.32	3.317	5.04	4.88	0.72
0.200	0.00	1.767	12.24	3.333	5.04	4.90	0.72
0.217	0.00	1.783	12.24	3.350	5.04	4.92	0.72
0.233	0.00	1.800	12.24	3.367	5.04	4.93	0.72
0.250	0.00	1.817	12.24	3.383	5.04	4.95	0.72
0.267	0.72	1.833	12.24	3.400	5.04	4.97	0.72
0.283	0.72	1.850	12.24	3.417	5.04	4.98	0.72
0.300	0.72	1.867	12.24	3.433	5.04	5.00	0.72
0.317	0.72	1.883	12.24	3.450	5.04	5.02	0.72
0.333	0.72	1.900	12.24	3.467	5.04	5.03	0.72
0.350	0.72	1.917	12.24	3.483	5.04	5.05	0.72
0.367	0.72	1.933	12.24	3.500	5.04	5.07	0.72
0.383	0.72	1.950	12.24	3.517	5.04	5.08	0.72
0.400	0.72	1.967	12.24	3.533	5.04	5.10	0.72
0.417	0.72	1.983	12.24	3.550	5.04	5.12	0.72
0.433	0.72	2.000	12.24	3.567	5.04	5.13	0.72
0.450	0.72	2.017	12.24	3.583	5.04	5.15	0.72
0.467	0.72	2.033	12.24	3.600	5.04	5.17	0.72
0.483	0.72	2.050	12.24	3.617	5.04	5.18	0.72
0.500	0.72	2.067	12.24	3.633	5.04	5.20	0.72
0.517	0.72	2.083	12.24	3.650	5.04	5.22	0.72
0.533	0.72	2.100	12.24	3.667	5.04	5.23	0.72
0.550	0.72	2.117	12.24	3.683	5.04	5.25	0.72
0.567	0.72	2.133	12.24	3.700	5.04	5.27	0.72
0.583	0.72	2.150	12.24	3.717	5.04	5.28	0.72
0.600	0.72	2.167	12.24	3.733	5.04	5.30	0.72
0.617	0.72	2.183	12.24	3.750	5.04	5.32	0.72
0.633	0.72	2.200	12.24	3.767	2.88	5.33	0.72
0.650	0.72	2.217	12.24	3.783	2.88	5.35	0.72
0.667	0.72	2.233	12.24	3.800	2.88	5.37	0.72
0.683	0.72	2.250	12.24	3.817	2.88	5.38	0.72
0.700	0.72	2.267	33.12	3.833	2.88	5.40	0.72
0.717	0.72	2.283	33.12	3.850	2.88	5.42	0.72
0.733	0.72	2.300	33.12	3.867	2.88	5.43	0.72
0.750	0.72	2.317	33.12	3.883	2.88	5.45	0.72
0.767	0.72	2.333	33.12	3.900	2.88	5.47	0.72
0.783	0.72	2.350	33.12	3.917	2.88	5.48	0.72
0.800	0.72	2.367	33.12	3.933	2.88	5.50	0.72
0.817	0.72	2.383	33.12	3.950	2.88	5.52	0.72
0.833	0.72	2.400	33.12	3.967	2.88	5.53	0.72
0.850	0.72	2.417	33.12	3.983	2.88	5.55	0.72
0.867	0.72	2.433	33.12	4.000	2.88	5.57	0.72
0.883	0.72	2.450	33.12	4.017	2.88	5.58	0.72
0.900	0.72	2.467	33.12	4.033	2.88	5.60	0.72
0.917	0.72	2.483	33.12	4.050	2.88	5.62	0.72
0.933	0.72	2.500	33.12	4.067	2.88	5.63	0.72
0.950	0.72	2.517	33.12	4.083	2.88	5.65	0.72
0.967	0.72	2.533	33.12	4.100	2.88	5.67	0.72
0.983	0.72	2.550	33.12	4.117	2.88	5.68	0.72
1.000	0.72	2.567	33.12	4.133	2.88	5.70	0.72
1.017	0.72	2.583	33.12	4.150	2.88	5.72	0.72
1.033	0.72	2.600	33.12	4.167	2.88	5.73	0.72
1.050	0.72	2.617	33.12	4.183	2.88	5.75	0.72
1.067	0.72	2.633	33.12	4.200	2.88	5.77	0.72
1.083	0.72	2.650	33.12	4.217	2.88	5.78	0.72
1.100	0.72	2.667	33.12	4.233	2.88	5.80	0.72
1.117	0.72	2.683	33.12	4.250	2.88	5.82	0.72
1.133	0.72	2.700	33.12	4.267	1.44	5.83	0.72
1.150	0.72	2.717	33.12	4.283	1.44	5.85	0.72
1.167	0.72	2.733	33.12	4.300	1.44	5.87	0.72
1.183	0.72	2.750	33.12	4.317	1.44	5.88	0.72
1.200	0.72	2.767	9.36	4.333	1.44	5.90	0.72

1.217	0.72	2.783	9.36	4.350	1.44	5.92	0.72
1.233	0.72	2.800	9.36	4.367	1.44	5.93	0.72
1.250	0.72	2.817	9.36	4.383	1.44	5.95	0.72
1.267	4.32	2.833	9.36	4.400	1.44	5.97	0.72
1.283	4.32	2.850	9.36	4.417	1.44	5.98	0.72
1.300	4.32	2.867	9.36	4.433	1.44	6.00	0.72
1.317	4.32	2.883	9.36	4.450	1.44	6.02	0.72
1.333	4.32	2.900	9.36	4.467	1.44	6.03	0.72
1.350	4.32	2.917	9.36	4.483	1.44	6.05	0.72
1.367	4.32	2.933	9.36	4.500	1.44	6.07	0.72
1.383	4.32	2.950	9.36	4.517	1.44	6.08	0.72
1.400	4.32	2.967	9.36	4.533	1.44	6.10	0.72
1.417	4.32	2.983	9.36	4.550	1.44	6.12	0.72
1.433	4.32	3.000	9.36	4.567	1.44	6.13	0.72
1.450	4.32	3.017	9.36	4.583	1.44	6.15	0.72
1.467	4.32	3.033	9.36	4.600	1.44	6.17	0.72
1.483	4.32	3.050	9.36	4.617	1.44	6.18	0.72
1.500	4.32	3.067	9.36	4.633	1.44	6.20	0.72
1.517	4.32	3.083	9.36	4.650	1.44	6.22	0.72
1.533	4.32	3.100	9.36	4.667	1.44	6.23	0.72
1.550	4.32	3.117	9.36	4.683	1.44	6.25	0.72
1.567	4.32	3.133	9.36	4.700	1.44		

Max.Eff.Inten.(mm/hr)=	33.12	17.87	
over (min)	5.00	8.00	
Storage Coeff. (min)=	4.75 (ii)	7.40 (ii)	
Unit Hyd. Tpeak (min)=	5.00	8.00	
Unit Hyd. peak (cms)=	0.23	0.15	
			TOTALS
PEAK FLOW (cms)=	0.25	0.00	0.248 (iii)
TIME TO PEAK (hrs)=	2.75	2.77	2.75
RUNOFF VOLUME (mm)=	35.00	15.00	34.80
TOTAL RAINFALL (mm)=	36.00	36.00	36.00
RUNOFF COEFFICIENT =	0.97	0.42	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7626)|	OVERFLOW IS OFF				
IN= 2---> OUT= 1					
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)	
	0.0000	0.0000	0.0568	0.1530	
	0.0239	0.0780	0.0660	0.1730	
	0.0370	0.1040	0.0751	0.2000	
	0.0451	0.1250	0.0000	0.0000	

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7567)	2.720	0.248	2.75	34.80
OUTFLOW: ID= 1 (7626)	2.720	0.023	4.00	33.59

PEAK FLOW REDUCTION [Qout/Qin](%)= 9.23
TIME SHIFT OF PEAK FLOW (min)= 75.00
MAXIMUM STORAGE USED (ha.m.)= 0.0748

CALIB |				
STANDHYD (7624)|	Area (ha)= 1.80			
ID= 1 DT= 1.0 min |	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00		

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.78	0.02
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.00	0.50
Length (m)=	109.54	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	4.32	3.150	9.36	4.72	1.44
0.033	0.00	1.600	4.32	3.167	9.36	4.73	1.44
0.050	0.00	1.617	4.32	3.183	9.36	4.75	1.44
0.067	0.00	1.633	4.32	3.200	9.36	4.77	0.72
0.083	0.00	1.650	4.32	3.217	9.36	4.78	0.72
0.100	0.00	1.667	4.32	3.233	9.36	4.80	0.72
0.117	0.00	1.683	4.32	3.250	9.36	4.82	0.72
0.133	0.00	1.700	4.32	3.267	5.04	4.83	0.72
0.150	0.00	1.717	4.32	3.283	5.04	4.85	0.72
0.167	0.00	1.733	4.32	3.300	5.04	4.87	0.72
0.183	0.00	1.750	4.32	3.317	5.04	4.88	0.72
0.200	0.00	1.767	12.24	3.333	5.04	4.90	0.72
0.217	0.00	1.783	12.24	3.350	5.04	4.92	0.72
0.233	0.00	1.800	12.24	3.367	5.04	4.93	0.72
0.250	0.00	1.817	12.24	3.383	5.04	4.95	0.72
0.267	0.72	1.833	12.24	3.400	5.04	4.97	0.72
0.283	0.72	1.850	12.24	3.417	5.04	4.98	0.72
0.300	0.72	1.867	12.24	3.433	5.04	5.00	0.72
0.317	0.72	1.883	12.24	3.450	5.04	5.02	0.72
0.333	0.72	1.900	12.24	3.467	5.04	5.03	0.72
0.350	0.72	1.917	12.24	3.483	5.04	5.05	0.72
0.367	0.72	1.933	12.24	3.500	5.04	5.07	0.72
0.383	0.72	1.950	12.24	3.517	5.04	5.08	0.72
0.400	0.72	1.967	12.24	3.533	5.04	5.10	0.72
0.417	0.72	1.983	12.24	3.550	5.04	5.12	0.72
0.433	0.72	2.000	12.24	3.567	5.04	5.13	0.72
0.450	0.72	2.017	12.24	3.583	5.04	5.15	0.72
0.467	0.72	2.033	12.24	3.600	5.04	5.17	0.72
0.483	0.72	2.050	12.24	3.617	5.04	5.18	0.72
0.500	0.72	2.067	12.24	3.633	5.04	5.20	0.72
0.517	0.72	2.083	12.24	3.650	5.04	5.22	0.72
0.533	0.72	2.100	12.24	3.667	5.04	5.23	0.72
0.550	0.72	2.117	12.24	3.683	5.04	5.25	0.72
0.567	0.72	2.133	12.24	3.700	5.04	5.27	0.72
0.583	0.72	2.150	12.24	3.717	5.04	5.28	0.72
0.600	0.72	2.167	12.24	3.733	5.04	5.30	0.72
0.617	0.72	2.183	12.24	3.750	5.04	5.32	0.72
0.633	0.72	2.200	12.24	3.767	2.88	5.33	0.72
0.650	0.72	2.217	12.24	3.783	2.88	5.35	0.72
0.667	0.72	2.233	12.24	3.800	2.88	5.37	0.72
0.683	0.72	2.250	12.24	3.817	2.88	5.38	0.72
0.700	0.72	2.267	33.12	3.833	2.88	5.40	0.72
0.717	0.72	2.283	33.12	3.850	2.88	5.42	0.72
0.733	0.72	2.300	33.12	3.867	2.88	5.43	0.72
0.750	0.72	2.317	33.12	3.883	2.88	5.45	0.72
0.767	0.72	2.333	33.12	3.900	2.88	5.47	0.72
0.783	0.72	2.350	33.12	3.917	2.88	5.48	0.72
0.800	0.72	2.367	33.12	3.933	2.88	5.50	0.72
0.817	0.72	2.383	33.12	3.950	2.88	5.52	0.72
0.833	0.72	2.400	33.12	3.967	2.88	5.53	0.72
0.850	0.72	2.417	33.12	3.983	2.88	5.55	0.72
0.867	0.72	2.433	33.12	4.000	2.88	5.57	0.72
0.883	0.72	2.450	33.12	4.017	2.88	5.58	0.72
0.900	0.72	2.467	33.12	4.033	2.88	5.60	0.72
0.917	0.72	2.483	33.12	4.050	2.88	5.62	0.72
0.933	0.72	2.500	33.12	4.067	2.88	5.63	0.72
0.950	0.72	2.517	33.12	4.083	2.88	5.65	0.72
0.967	0.72	2.533	33.12	4.100	2.88	5.67	0.72
0.983	0.72	2.550	33.12	4.117	2.88	5.68	0.72
1.000	0.72	2.567	33.12	4.133	2.88	5.70	0.72
1.017	0.72	2.583	33.12	4.150	2.88	5.72	0.72
1.033	0.72	2.600	33.12	4.167	2.88	5.73	0.72
1.050	0.72	2.617	33.12	4.183	2.88	5.75	0.72
1.067	0.72	2.633	33.12	4.200	2.88	5.77	0.72
1.083	0.72	2.650	33.12	4.217	2.88	5.78	0.72
1.100	0.72	2.667	33.12	4.233	2.88	5.80	0.72
1.117	0.72	2.683	33.12	4.250	2.88	5.82	0.72
1.133	0.72	2.700	33.12	4.267	1.44	5.83	0.72
1.150	0.72	2.717	33.12	4.283	1.44	5.85	0.72
1.167	0.72	2.733	33.12	4.300	1.44	5.87	0.72
1.183	0.72	2.750	33.12	4.317	1.44	5.88	0.72

1.200	0.72	2.767	9.36	4.333	1.44	5.90	0.72
1.217	0.72	2.783	9.36	4.350	1.44	5.92	0.72
1.233	0.72	2.800	9.36	4.367	1.44	5.93	0.72
1.250	0.72	2.817	9.36	4.383	1.44	5.95	0.72
1.267	4.32	2.833	9.36	4.400	1.44	5.97	0.72
1.283	4.32	2.850	9.36	4.417	1.44	5.98	0.72
1.300	4.32	2.867	9.36	4.433	1.44	6.00	0.72
1.317	4.32	2.883	9.36	4.450	1.44	6.02	0.72
1.333	4.32	2.900	9.36	4.467	1.44	6.03	0.72
1.350	4.32	2.917	9.36	4.483	1.44	6.05	0.72
1.367	4.32	2.933	9.36	4.500	1.44	6.07	0.72
1.383	4.32	2.950	9.36	4.517	1.44	6.08	0.72
1.400	4.32	2.967	9.36	4.533	1.44	6.10	0.72
1.417	4.32	2.983	9.36	4.550	1.44	6.12	0.72
1.433	4.32	3.000	9.36	4.567	1.44	6.13	0.72
1.450	4.32	3.017	9.36	4.583	1.44	6.15	0.72
1.467	4.32	3.033	9.36	4.600	1.44	6.17	0.72
1.483	4.32	3.050	9.36	4.617	1.44	6.18	0.72
1.500	4.32	3.067	9.36	4.633	1.44	6.20	0.72
1.517	4.32	3.083	9.36	4.650	1.44	6.22	0.72
1.533	4.32	3.100	9.36	4.667	1.44	6.23	0.72
1.550	4.32	3.117	9.36	4.683	1.44	6.25	0.72
1.567	4.32	3.133	9.36	4.700	1.44		

Max.Eff.Inten.(mm/hr)=	33.12	22.33	
over (min)	5.00	7.00	
Storage Coeff. (min)=	4.20 (ii)	6.85 (ii)	
Unit Hyd. Tpeak (min)=	5.00	7.00	
Unit Hyd. peak (cms)=	0.25	0.16	
			TOTALS
PEAK FLOW (cms)=	0.16	0.00	0.165 (iii)
TIME TO PEAK (hrs)=	2.75	2.77	2.75
RUNOFF VOLUME (mm)=	35.00	18.98	34.84
TOTAL RAINFALL (mm)=	36.00	36.00	36.00
RUNOFF COEFFICIENT =	0.97	0.53	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 90.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7625)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0389	0.1013
	0.0164	0.0514	0.0456	0.1141
	0.0252	0.0690	0.0514	0.1288
	0.0309	0.0825	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (	7624)	1.800	0.165	2.75	34.84
OUTFLOW: ID= 1 (	7625)	1.800	0.016	3.93	33.79

PEAK FLOW REDUCTION [Qout/Qin](%)= 9.54
TIME SHIFT OF PEAK FLOW (min)= 71.00
MAXIMUM STORAGE USED (ha.m.)= 0.0493

CALIB		
STANDHYD (7623)	Area (ha)=	1.15
ID= 1 DT= 1.0 min	Total Imp(%)=	99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.14	0.01
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	87.56	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	4.32	3.150	9.36	4.72	1.44
0.033	0.00	1.600	4.32	3.167	9.36	4.73	1.44
0.050	0.00	1.617	4.32	3.183	9.36	4.75	1.44
0.067	0.00	1.633	4.32	3.200	9.36	4.77	0.72
0.083	0.00	1.650	4.32	3.217	9.36	4.78	0.72
0.100	0.00	1.667	4.32	3.233	9.36	4.80	0.72
0.117	0.00	1.683	4.32	3.250	9.36	4.82	0.72
0.133	0.00	1.700	4.32	3.267	5.04	4.83	0.72
0.150	0.00	1.717	4.32	3.283	5.04	4.85	0.72
0.167	0.00	1.733	4.32	3.300	5.04	4.87	0.72
0.183	0.00	1.750	4.32	3.317	5.04	4.88	0.72
0.200	0.00	1.767	12.24	3.333	5.04	4.90	0.72
0.217	0.00	1.783	12.24	3.350	5.04	4.92	0.72
0.233	0.00	1.800	12.24	3.367	5.04	4.93	0.72
0.250	0.00	1.817	12.24	3.383	5.04	4.95	0.72
0.267	0.72	1.833	12.24	3.400	5.04	4.97	0.72
0.283	0.72	1.850	12.24	3.417	5.04	4.98	0.72
0.300	0.72	1.867	12.24	3.433	5.04	5.00	0.72
0.317	0.72	1.883	12.24	3.450	5.04	5.02	0.72
0.333	0.72	1.900	12.24	3.467	5.04	5.03	0.72
0.350	0.72	1.917	12.24	3.483	5.04	5.05	0.72
0.367	0.72	1.933	12.24	3.500	5.04	5.07	0.72
0.383	0.72	1.950	12.24	3.517	5.04	5.08	0.72
0.400	0.72	1.967	12.24	3.533	5.04	5.10	0.72
0.417	0.72	1.983	12.24	3.550	5.04	5.12	0.72
0.433	0.72	2.000	12.24	3.567	5.04	5.13	0.72
0.450	0.72	2.017	12.24	3.583	5.04	5.15	0.72
0.467	0.72	2.033	12.24	3.600	5.04	5.17	0.72
0.483	0.72	2.050	12.24	3.617	5.04	5.18	0.72
0.500	0.72	2.067	12.24	3.633	5.04	5.20	0.72
0.517	0.72	2.083	12.24	3.650	5.04	5.22	0.72
0.533	0.72	2.100	12.24	3.667	5.04	5.23	0.72
0.550	0.72	2.117	12.24	3.683	5.04	5.25	0.72
0.567	0.72	2.133	12.24	3.700	5.04	5.27	0.72
0.583	0.72	2.150	12.24	3.717	5.04	5.28	0.72
0.600	0.72	2.167	12.24	3.733	5.04	5.30	0.72
0.617	0.72	2.183	12.24	3.750	5.04	5.32	0.72
0.633	0.72	2.200	12.24	3.767	2.88	5.33	0.72
0.650	0.72	2.217	12.24	3.783	2.88	5.35	0.72
0.667	0.72	2.233	12.24	3.800	2.88	5.37	0.72
0.683	0.72	2.250	12.24	3.817	2.88	5.38	0.72
0.700	0.72	2.267	33.12	3.833	2.88	5.40	0.72
0.717	0.72	2.283	33.12	3.850	2.88	5.42	0.72
0.733	0.72	2.300	33.12	3.867	2.88	5.43	0.72
0.750	0.72	2.317	33.12	3.883	2.88	5.45	0.72
0.767	0.72	2.333	33.12	3.900	2.88	5.47	0.72
0.783	0.72	2.350	33.12	3.917	2.88	5.48	0.72
0.800	0.72	2.367	33.12	3.933	2.88	5.50	0.72
0.817	0.72	2.383	33.12	3.950	2.88	5.52	0.72
0.833	0.72	2.400	33.12	3.967	2.88	5.53	0.72
0.850	0.72	2.417	33.12	3.983	2.88	5.55	0.72
0.867	0.72	2.433	33.12	4.000	2.88	5.57	0.72
0.883	0.72	2.450	33.12	4.017	2.88	5.58	0.72
0.900	0.72	2.467	33.12	4.033	2.88	5.60	0.72
0.917	0.72	2.483	33.12	4.050	2.88	5.62	0.72
0.933	0.72	2.500	33.12	4.067	2.88	5.63	0.72
0.950	0.72	2.517	33.12	4.083	2.88	5.65	0.72
0.967	0.72	2.533	33.12	4.100	2.88	5.67	0.72
0.983	0.72	2.550	33.12	4.117	2.88	5.68	0.72
1.000	0.72	2.567	33.12	4.133	2.88	5.70	0.72
1.017	0.72	2.583	33.12	4.150	2.88	5.72	0.72
1.033	0.72	2.600	33.12	4.167	2.88	5.73	0.72
1.050	0.72	2.617	33.12	4.183	2.88	5.75	0.72
1.067	0.72	2.633	33.12	4.200	2.88	5.77	0.72
1.083	0.72	2.650	33.12	4.217	2.88	5.78	0.72
1.100	0.72	2.667	33.12	4.233	2.88	5.80	0.72
1.117	0.72	2.683	33.12	4.250	2.88	5.82	0.72
1.133	0.72	2.700	33.12	4.267	1.44	5.83	0.72
1.150	0.72	2.717	33.12	4.283	1.44	5.85	0.72
1.167	0.72	2.733	33.12	4.300	1.44	5.87	0.72

1.183	0.72	2.750	33.12	4.317	1.44	5.88	0.72
1.200	0.72	2.767	9.36	4.333	1.44	5.90	0.72
1.217	0.72	2.783	9.36	4.350	1.44	5.92	0.72
1.233	0.72	2.800	9.36	4.367	1.44	5.93	0.72
1.250	0.72	2.817	9.36	4.383	1.44	5.95	0.72
1.267	4.32	2.833	9.36	4.400	1.44	5.97	0.72
1.283	4.32	2.850	9.36	4.417	1.44	5.98	0.72
1.300	4.32	2.867	9.36	4.433	1.44	6.00	0.72
1.317	4.32	2.883	9.36	4.450	1.44	6.02	0.72
1.333	4.32	2.900	9.36	4.467	1.44	6.03	0.72
1.350	4.32	2.917	9.36	4.483	1.44	6.05	0.72
1.367	4.32	2.933	9.36	4.500	1.44	6.07	0.72
1.383	4.32	2.950	9.36	4.517	1.44	6.08	0.72
1.400	4.32	2.967	9.36	4.533	1.44	6.10	0.72
1.417	4.32	2.983	9.36	4.550	1.44	6.12	0.72
1.433	4.32	3.000	9.36	4.567	1.44	6.13	0.72
1.450	4.32	3.017	9.36	4.583	1.44	6.15	0.72
1.467	4.32	3.033	9.36	4.600	1.44	6.17	0.72
1.483	4.32	3.050	9.36	4.617	1.44	6.18	0.72
1.500	4.32	3.067	9.36	4.633	1.44	6.20	0.72
1.517	4.32	3.083	9.36	4.650	1.44	6.22	0.72
1.533	4.32	3.100	9.36	4.667	1.44	6.23	0.72
1.550	4.32	3.117	9.36	4.683	1.44	6.25	0.72
1.567	4.32	3.133	9.36	4.700	1.44		

Max.Eff.Inten.(mm/hr)=	33.12	17.87	
over (min)	5.00	7.00	
Storage Coeff. (min)=	3.67 (ii)	6.32 (ii)	
Unit Hyd. Tpeak (min)=	5.00	7.00	
Unit Hyd. peak (cms)=	0.27	0.17	
			TOTALS
PEAK FLOW (cms)=	0.10	0.00	0.105 (iii)
TIME TO PEAK (hrs)=	2.75	2.77	2.75
RUNOFF VOLUME (mm)=	35.00	15.01	34.80
TOTAL RAINFALL (mm)=	36.00	36.00	36.00
RUNOFF COEFFICIENT =	0.97	0.42	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7622)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0258	0.0650
	0.0108	0.0330	0.0302	0.0725
	0.0167	0.0440	0.0340	0.0820
	0.0204	0.0525	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (	7623)	1.150	0.105	2.75	34.80
OUTFLOW: ID= 1 (	7622)	1.150	0.010	3.90	33.84

PEAK FLOW REDUCTION [Qout/Qin](%)= 9.75
TIME SHIFT OF PEAK FLOW (min)= 69.00
MAXIMUM STORAGE USED (ha.m.)= 0.0313

CALIB				
STANDHYD (7629)	Area (ha)= 4.09			
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00		Dir. Conn.(%)= 99.00	
		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	4.05	0.04	
Dep. Storage	(mm)=	1.00	1.50	
Average Slope	(%)=	1.00	0.50	
Length	(m)=	165.13	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	4.32	3.150	9.36	4.72	1.44
0.033	0.00	1.600	4.32	3.167	9.36	4.73	1.44
0.050	0.00	1.617	4.32	3.183	9.36	4.75	1.44
0.067	0.00	1.633	4.32	3.200	9.36	4.77	0.72
0.083	0.00	1.650	4.32	3.217	9.36	4.78	0.72
0.100	0.00	1.667	4.32	3.233	9.36	4.80	0.72
0.117	0.00	1.683	4.32	3.250	9.36	4.82	0.72
0.133	0.00	1.700	4.32	3.267	5.04	4.83	0.72
0.150	0.00	1.717	4.32	3.283	5.04	4.85	0.72
0.167	0.00	1.733	4.32	3.300	5.04	4.87	0.72
0.183	0.00	1.750	4.32	3.317	5.04	4.88	0.72
0.200	0.00	1.767	12.24	3.333	5.04	4.90	0.72
0.217	0.00	1.783	12.24	3.350	5.04	4.92	0.72
0.233	0.00	1.800	12.24	3.367	5.04	4.93	0.72
0.250	0.00	1.817	12.24	3.383	5.04	4.95	0.72
0.267	0.72	1.833	12.24	3.400	5.04	4.97	0.72
0.283	0.72	1.850	12.24	3.417	5.04	4.98	0.72
0.300	0.72	1.867	12.24	3.433	5.04	5.00	0.72
0.317	0.72	1.883	12.24	3.450	5.04	5.02	0.72
0.333	0.72	1.900	12.24	3.467	5.04	5.03	0.72
0.350	0.72	1.917	12.24	3.483	5.04	5.05	0.72
0.367	0.72	1.933	12.24	3.500	5.04	5.07	0.72
0.383	0.72	1.950	12.24	3.517	5.04	5.08	0.72
0.400	0.72	1.967	12.24	3.533	5.04	5.10	0.72
0.417	0.72	1.983	12.24	3.550	5.04	5.12	0.72
0.433	0.72	2.000	12.24	3.567	5.04	5.13	0.72
0.450	0.72	2.017	12.24	3.583	5.04	5.15	0.72
0.467	0.72	2.033	12.24	3.600	5.04	5.17	0.72
0.483	0.72	2.050	12.24	3.617	5.04	5.18	0.72
0.500	0.72	2.067	12.24	3.633	5.04	5.20	0.72
0.517	0.72	2.083	12.24	3.650	5.04	5.22	0.72
0.533	0.72	2.100	12.24	3.667	5.04	5.23	0.72
0.550	0.72	2.117	12.24	3.683	5.04	5.25	0.72
0.567	0.72	2.133	12.24	3.700	5.04	5.27	0.72
0.583	0.72	2.150	12.24	3.717	5.04	5.28	0.72
0.600	0.72	2.167	12.24	3.733	5.04	5.30	0.72
0.617	0.72	2.183	12.24	3.750	5.04	5.32	0.72
0.633	0.72	2.200	12.24	3.767	2.88	5.33	0.72
0.650	0.72	2.217	12.24	3.783	2.88	5.35	0.72
0.667	0.72	2.233	12.24	3.800	2.88	5.37	0.72
0.683	0.72	2.250	12.24	3.817	2.88	5.38	0.72
0.700	0.72	2.267	33.12	3.833	2.88	5.40	0.72
0.717	0.72	2.283	33.12	3.850	2.88	5.42	0.72
0.733	0.72	2.300	33.12	3.867	2.88	5.43	0.72
0.750	0.72	2.317	33.12	3.883	2.88	5.45	0.72
0.767	0.72	2.333	33.12	3.900	2.88	5.47	0.72
0.783	0.72	2.350	33.12	3.917	2.88	5.48	0.72
0.800	0.72	2.367	33.12	3.933	2.88	5.50	0.72
0.817	0.72	2.383	33.12	3.950	2.88	5.52	0.72
0.833	0.72	2.400	33.12	3.967	2.88	5.53	0.72
0.850	0.72	2.417	33.12	3.983	2.88	5.55	0.72
0.867	0.72	2.433	33.12	4.000	2.88	5.57	0.72
0.883	0.72	2.450	33.12	4.017	2.88	5.58	0.72
0.900	0.72	2.467	33.12	4.033	2.88	5.60	0.72
0.917	0.72	2.483	33.12	4.050	2.88	5.62	0.72
0.933	0.72	2.500	33.12	4.067	2.88	5.63	0.72
0.950	0.72	2.517	33.12	4.083	2.88	5.65	0.72
0.967	0.72	2.533	33.12	4.100	2.88	5.67	0.72
0.983	0.72	2.550	33.12	4.117	2.88	5.68	0.72
1.000	0.72	2.567	33.12	4.133	2.88	5.70	0.72
1.017	0.72	2.583	33.12	4.150	2.88	5.72	0.72
1.033	0.72	2.600	33.12	4.167	2.88	5.73	0.72
1.050	0.72	2.617	33.12	4.183	2.88	5.75	0.72
1.067	0.72	2.633	33.12	4.200	2.88	5.77	0.72
1.083	0.72	2.650	33.12	4.217	2.88	5.78	0.72
1.100	0.72	2.667	33.12	4.233	2.88	5.80	0.72
1.117	0.72	2.683	33.12	4.250	2.88	5.82	0.72
1.133	0.72	2.700	33.12	4.267	1.44	5.83	0.72
1.150	0.72	2.717	33.12	4.283	1.44	5.85	0.72

1.167	0.72	2.733	33.12	4.300	1.44	5.87	0.72
1.183	0.72	2.750	33.12	4.317	1.44	5.88	0.72
1.200	0.72	2.767	9.36	4.333	1.44	5.90	0.72
1.217	0.72	2.783	9.36	4.350	1.44	5.92	0.72
1.233	0.72	2.800	9.36	4.367	1.44	5.93	0.72
1.250	0.72	2.817	9.36	4.383	1.44	5.95	0.72
1.267	4.32	2.833	9.36	4.400	1.44	5.97	0.72
1.283	4.32	2.850	9.36	4.417	1.44	5.98	0.72
1.300	4.32	2.867	9.36	4.433	1.44	6.00	0.72
1.317	4.32	2.883	9.36	4.450	1.44	6.02	0.72
1.333	4.32	2.900	9.36	4.467	1.44	6.03	0.72
1.350	4.32	2.917	9.36	4.483	1.44	6.05	0.72
1.367	4.32	2.933	9.36	4.500	1.44	6.07	0.72
1.383	4.32	2.950	9.36	4.517	1.44	6.08	0.72
1.400	4.32	2.967	9.36	4.533	1.44	6.10	0.72
1.417	4.32	2.983	9.36	4.550	1.44	6.12	0.72
1.433	4.32	3.000	9.36	4.567	1.44	6.13	0.72
1.450	4.32	3.017	9.36	4.583	1.44	6.15	0.72
1.467	4.32	3.033	9.36	4.600	1.44	6.17	0.72
1.483	4.32	3.050	9.36	4.617	1.44	6.18	0.72
1.500	4.32	3.067	9.36	4.633	1.44	6.20	0.72
1.517	4.32	3.083	9.36	4.650	1.44	6.22	0.72
1.533	4.32	3.100	9.36	4.667	1.44	6.23	0.72
1.550	4.32	3.117	9.36	4.683	1.44	6.25	0.72
1.567	4.32	3.133	9.36	4.700	1.44		

Max.Eff.Inten.(mm/hr)=	33.12	17.87	
over (min)	5.00	9.00	
Storage Coeff. (min)=	5.37 (ii)	8.02 (ii)	
Unit Hyd. Tpeak (min)=	5.00	9.00	
Unit Hyd. peak (cms)=	0.22	0.14	
			TOTALS
PEAK FLOW (cms)=	0.37	0.00	0.373 (iii)
TIME TO PEAK (hrs)=	2.75	2.78	2.75
RUNOFF VOLUME (mm)=	35.00	15.00	34.80
TOTAL RAINFALL (mm)=	36.00	36.00	36.00
RUNOFF COEFFICIENT =	0.97	0.42	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7630)| IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0826	0.2320
	0.0347	0.1170	0.0967	0.2609
	0.0534	0.1580	0.1090	0.2940
	0.0655	0.1890	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7629)	4.090	0.373	2.75	34.80
OUTFLOW: ID= 1 (7630)	4.090	0.034	4.08	33.45

PEAK FLOW REDUCTION [Qout/Qin](%)= 8.99
TIME SHIFT OF PEAK FLOW (min)= 80.00
MAXIMUM STORAGE USED (ha.m.)= 0.1130

CALIB | STANDHYD (7631)| ID= 1 DT= 1.0 min	Area (ha)= 3.91	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.87	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	161.45	40.00

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	4.32	3.150	9.36	4.72	1.44
0.033	0.00	1.600	4.32	3.167	9.36	4.73	1.44
0.050	0.00	1.617	4.32	3.183	9.36	4.75	1.44
0.067	0.00	1.633	4.32	3.200	9.36	4.77	0.72
0.083	0.00	1.650	4.32	3.217	9.36	4.78	0.72
0.100	0.00	1.667	4.32	3.233	9.36	4.80	0.72
0.117	0.00	1.683	4.32	3.250	9.36	4.82	0.72
0.133	0.00	1.700	4.32	3.267	5.04	4.83	0.72
0.150	0.00	1.717	4.32	3.283	5.04	4.85	0.72
0.167	0.00	1.733	4.32	3.300	5.04	4.87	0.72
0.183	0.00	1.750	4.32	3.317	5.04	4.88	0.72
0.200	0.00	1.767	12.24	3.333	5.04	4.90	0.72
0.217	0.00	1.783	12.24	3.350	5.04	4.92	0.72
0.233	0.00	1.800	12.24	3.367	5.04	4.93	0.72
0.250	0.00	1.817	12.24	3.383	5.04	4.95	0.72
0.267	0.72	1.833	12.24	3.400	5.04	4.97	0.72
0.283	0.72	1.850	12.24	3.417	5.04	4.98	0.72
0.300	0.72	1.867	12.24	3.433	5.04	5.00	0.72
0.317	0.72	1.883	12.24	3.450	5.04	5.02	0.72
0.333	0.72	1.900	12.24	3.467	5.04	5.03	0.72
0.350	0.72	1.917	12.24	3.483	5.04	5.05	0.72
0.367	0.72	1.933	12.24	3.500	5.04	5.07	0.72
0.383	0.72	1.950	12.24	3.517	5.04	5.08	0.72
0.400	0.72	1.967	12.24	3.533	5.04	5.10	0.72
0.417	0.72	1.983	12.24	3.550	5.04	5.12	0.72
0.433	0.72	2.000	12.24	3.567	5.04	5.13	0.72
0.450	0.72	2.017	12.24	3.583	5.04	5.15	0.72
0.467	0.72	2.033	12.24	3.600	5.04	5.17	0.72
0.483	0.72	2.050	12.24	3.617	5.04	5.18	0.72
0.500	0.72	2.067	12.24	3.633	5.04	5.20	0.72
0.517	0.72	2.083	12.24	3.650	5.04	5.22	0.72
0.533	0.72	2.100	12.24	3.667	5.04	5.23	0.72
0.550	0.72	2.117	12.24	3.683	5.04	5.25	0.72
0.567	0.72	2.133	12.24	3.700	5.04	5.27	0.72
0.583	0.72	2.150	12.24	3.717	5.04	5.28	0.72
0.600	0.72	2.167	12.24	3.733	5.04	5.30	0.72
0.617	0.72	2.183	12.24	3.750	5.04	5.32	0.72
0.633	0.72	2.200	12.24	3.767	2.88	5.33	0.72
0.650	0.72	2.217	12.24	3.783	2.88	5.35	0.72
0.667	0.72	2.233	12.24	3.800	2.88	5.37	0.72
0.683	0.72	2.250	12.24	3.817	2.88	5.38	0.72
0.700	0.72	2.267	33.12	3.833	2.88	5.40	0.72
0.717	0.72	2.283	33.12	3.850	2.88	5.42	0.72
0.733	0.72	2.300	33.12	3.867	2.88	5.43	0.72
0.750	0.72	2.317	33.12	3.883	2.88	5.45	0.72
0.767	0.72	2.333	33.12	3.900	2.88	5.47	0.72
0.783	0.72	2.350	33.12	3.917	2.88	5.48	0.72
0.800	0.72	2.367	33.12	3.933	2.88	5.50	0.72
0.817	0.72	2.383	33.12	3.950	2.88	5.52	0.72
0.833	0.72	2.400	33.12	3.967	2.88	5.53	0.72
0.850	0.72	2.417	33.12	3.983	2.88	5.55	0.72
0.867	0.72	2.433	33.12	4.000	2.88	5.57	0.72
0.883	0.72	2.450	33.12	4.017	2.88	5.58	0.72
0.900	0.72	2.467	33.12	4.033	2.88	5.60	0.72
0.917	0.72	2.483	33.12	4.050	2.88	5.62	0.72
0.933	0.72	2.500	33.12	4.067	2.88	5.63	0.72
0.950	0.72	2.517	33.12	4.083	2.88	5.65	0.72
0.967	0.72	2.533	33.12	4.100	2.88	5.67	0.72
0.983	0.72	2.550	33.12	4.117	2.88	5.68	0.72
1.000	0.72	2.567	33.12	4.133	2.88	5.70	0.72
1.017	0.72	2.583	33.12	4.150	2.88	5.72	0.72
1.033	0.72	2.600	33.12	4.167	2.88	5.73	0.72
1.050	0.72	2.617	33.12	4.183	2.88	5.75	0.72
1.067	0.72	2.633	33.12	4.200	2.88	5.77	0.72
1.083	0.72	2.650	33.12	4.217	2.88	5.78	0.72
1.100	0.72	2.667	33.12	4.233	2.88	5.80	0.72
1.117	0.72	2.683	33.12	4.250	2.88	5.82	0.72
1.133	0.72	2.700	33.12	4.267	1.44	5.83	0.72

1.150	0.72	2.717	33.12	4.283	1.44	5.85	0.72
1.167	0.72	2.733	33.12	4.300	1.44	5.87	0.72
1.183	0.72	2.750	33.12	4.317	1.44	5.88	0.72
1.200	0.72	2.767	9.36	4.333	1.44	5.90	0.72
1.217	0.72	2.783	9.36	4.350	1.44	5.92	0.72
1.233	0.72	2.800	9.36	4.367	1.44	5.93	0.72
1.250	0.72	2.817	9.36	4.383	1.44	5.95	0.72
1.267	4.32	2.833	9.36	4.400	1.44	5.97	0.72
1.283	4.32	2.850	9.36	4.417	1.44	5.98	0.72
1.300	4.32	2.867	9.36	4.433	1.44	6.00	0.72
1.317	4.32	2.883	9.36	4.450	1.44	6.02	0.72
1.333	4.32	2.900	9.36	4.467	1.44	6.03	0.72
1.350	4.32	2.917	9.36	4.483	1.44	6.05	0.72
1.367	4.32	2.933	9.36	4.500	1.44	6.07	0.72
1.383	4.32	2.950	9.36	4.517	1.44	6.08	0.72
1.400	4.32	2.967	9.36	4.533	1.44	6.10	0.72
1.417	4.32	2.983	9.36	4.550	1.44	6.12	0.72
1.433	4.32	3.000	9.36	4.567	1.44	6.13	0.72
1.450	4.32	3.017	9.36	4.583	1.44	6.15	0.72
1.467	4.32	3.033	9.36	4.600	1.44	6.17	0.72
1.483	4.32	3.050	9.36	4.617	1.44	6.18	0.72
1.500	4.32	3.067	9.36	4.633	1.44	6.20	0.72
1.517	4.32	3.083	9.36	4.650	1.44	6.22	0.72
1.533	4.32	3.100	9.36	4.667	1.44	6.23	0.72
1.550	4.32	3.117	9.36	4.683	1.44	6.25	0.72
1.567	4.32	3.133	9.36	4.700	1.44		

Max.Eff.Inten.(mm/hr)=		33.12	17.87
over (min)		5.00	8.00
Storage Coeff. (min)=		5.30 (ii)	7.95 (ii)
Unit Hyd. Tpeak (min)=		5.00	8.00
Unit Hyd. peak (cms)=		0.22	0.14
			TOTALS
PEAK FLOW	(cms)=	0.35	0.00	0.357 (iii)
TIME TO PEAK	(hrs)=	2.75	2.78	2.75
RUNOFF VOLUME	(mm)=	35.00	15.00	34.80
TOTAL RAINFALL	(mm)=	36.00	36.00	36.00
RUNOFF COEFFICIENT	=	0.97	0.42	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7632)	IN= 2---> OUT= 1	DT= 1.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0792	0.2220
0.0333	0.1130	0.0928	0.2500
0.0512	0.1510	0.1046	0.2810
0.0629	0.1810	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (	7631)	3.910	0.357	2.75	34.80
OUTFLOW: ID= 1 (	7632)	3.910	0.032	4.10	33.43

PEAK FLOW REDUCTION [Qout/Qin](%)= 8.94
TIME SHIFT OF PEAK FLOW (min)= 81.00
MAXIMUM STORAGE USED (ha.m.)= 0.1082

CALIB	STANDHYD (7641)	ID= 1 DT= 1.0 min

Area (ha)= 2.21
Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.19	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50

Length	(m)=	121.38	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	4.32	3.150	9.36	4.72	1.44
0.033	0.00	1.600	4.32	3.167	9.36	4.73	1.44
0.050	0.00	1.617	4.32	3.183	9.36	4.75	1.44
0.067	0.00	1.633	4.32	3.200	9.36	4.77	0.72
0.083	0.00	1.650	4.32	3.217	9.36	4.78	0.72
0.100	0.00	1.667	4.32	3.233	9.36	4.80	0.72
0.117	0.00	1.683	4.32	3.250	9.36	4.82	0.72
0.133	0.00	1.700	4.32	3.267	5.04	4.83	0.72
0.150	0.00	1.717	4.32	3.283	5.04	4.85	0.72
0.167	0.00	1.733	4.32	3.300	5.04	4.87	0.72
0.183	0.00	1.750	4.32	3.317	5.04	4.88	0.72
0.200	0.00	1.767	12.24	3.333	5.04	4.90	0.72
0.217	0.00	1.783	12.24	3.350	5.04	4.92	0.72
0.233	0.00	1.800	12.24	3.367	5.04	4.93	0.72
0.250	0.00	1.817	12.24	3.383	5.04	4.95	0.72
0.267	0.72	1.833	12.24	3.400	5.04	4.97	0.72
0.283	0.72	1.850	12.24	3.417	5.04	4.98	0.72
0.300	0.72	1.867	12.24	3.433	5.04	5.00	0.72
0.317	0.72	1.883	12.24	3.450	5.04	5.02	0.72
0.333	0.72	1.900	12.24	3.467	5.04	5.03	0.72
0.350	0.72	1.917	12.24	3.483	5.04	5.05	0.72
0.367	0.72	1.933	12.24	3.500	5.04	5.07	0.72
0.383	0.72	1.950	12.24	3.517	5.04	5.08	0.72
0.400	0.72	1.967	12.24	3.533	5.04	5.10	0.72
0.417	0.72	1.983	12.24	3.550	5.04	5.12	0.72
0.433	0.72	2.000	12.24	3.567	5.04	5.13	0.72
0.450	0.72	2.017	12.24	3.583	5.04	5.15	0.72
0.467	0.72	2.033	12.24	3.600	5.04	5.17	0.72
0.483	0.72	2.050	12.24	3.617	5.04	5.18	0.72
0.500	0.72	2.067	12.24	3.633	5.04	5.20	0.72
0.517	0.72	2.083	12.24	3.650	5.04	5.22	0.72
0.533	0.72	2.100	12.24	3.667	5.04	5.23	0.72
0.550	0.72	2.117	12.24	3.683	5.04	5.25	0.72
0.567	0.72	2.133	12.24	3.700	5.04	5.27	0.72
0.583	0.72	2.150	12.24	3.717	5.04	5.28	0.72
0.600	0.72	2.167	12.24	3.733	5.04	5.30	0.72
0.617	0.72	2.183	12.24	3.750	5.04	5.32	0.72
0.633	0.72	2.200	12.24	3.767	2.88	5.33	0.72
0.650	0.72	2.217	12.24	3.783	2.88	5.35	0.72
0.667	0.72	2.233	12.24	3.800	2.88	5.37	0.72
0.683	0.72	2.250	12.24	3.817	2.88	5.38	0.72
0.700	0.72	2.267	33.12	3.833	2.88	5.40	0.72
0.717	0.72	2.283	33.12	3.850	2.88	5.42	0.72
0.733	0.72	2.300	33.12	3.867	2.88	5.43	0.72
0.750	0.72	2.317	33.12	3.883	2.88	5.45	0.72
0.767	0.72	2.333	33.12	3.900	2.88	5.47	0.72
0.783	0.72	2.350	33.12	3.917	2.88	5.48	0.72
0.800	0.72	2.367	33.12	3.933	2.88	5.50	0.72
0.817	0.72	2.383	33.12	3.950	2.88	5.52	0.72
0.833	0.72	2.400	33.12	3.967	2.88	5.53	0.72
0.850	0.72	2.417	33.12	3.983	2.88	5.55	0.72
0.867	0.72	2.433	33.12	4.000	2.88	5.57	0.72
0.883	0.72	2.450	33.12	4.017	2.88	5.58	0.72
0.900	0.72	2.467	33.12	4.033	2.88	5.60	0.72
0.917	0.72	2.483	33.12	4.050	2.88	5.62	0.72
0.933	0.72	2.500	33.12	4.067	2.88	5.63	0.72
0.950	0.72	2.517	33.12	4.083	2.88	5.65	0.72
0.967	0.72	2.533	33.12	4.100	2.88	5.67	0.72
0.983	0.72	2.550	33.12	4.117	2.88	5.68	0.72
1.000	0.72	2.567	33.12	4.133	2.88	5.70	0.72
1.017	0.72	2.583	33.12	4.150	2.88	5.72	0.72
1.033	0.72	2.600	33.12	4.167	2.88	5.73	0.72
1.050	0.72	2.617	33.12	4.183	2.88	5.75	0.72
1.067	0.72	2.633	33.12	4.200	2.88	5.77	0.72
1.083	0.72	2.650	33.12	4.217	2.88	5.78	0.72
1.100	0.72	2.667	33.12	4.233	2.88	5.80	0.72
1.117	0.72	2.683	33.12	4.250	2.88	5.82	0.72

1.133	0.72	2.700	33.12	4.267	1.44	5.83	0.72
1.150	0.72	2.717	33.12	4.283	1.44	5.85	0.72
1.167	0.72	2.733	33.12	4.300	1.44	5.87	0.72
1.183	0.72	2.750	33.12	4.317	1.44	5.88	0.72
1.200	0.72	2.767	9.36	4.333	1.44	5.90	0.72
1.217	0.72	2.783	9.36	4.350	1.44	5.92	0.72
1.233	0.72	2.800	9.36	4.367	1.44	5.93	0.72
1.250	0.72	2.817	9.36	4.383	1.44	5.95	0.72
1.267	4.32	2.833	9.36	4.400	1.44	5.97	0.72
1.283	4.32	2.850	9.36	4.417	1.44	5.98	0.72
1.300	4.32	2.867	9.36	4.433	1.44	6.00	0.72
1.317	4.32	2.883	9.36	4.450	1.44	6.02	0.72
1.333	4.32	2.900	9.36	4.467	1.44	6.03	0.72
1.350	4.32	2.917	9.36	4.483	1.44	6.05	0.72
1.367	4.32	2.933	9.36	4.500	1.44	6.07	0.72
1.383	4.32	2.950	9.36	4.517	1.44	6.08	0.72
1.400	4.32	2.967	9.36	4.533	1.44	6.10	0.72
1.417	4.32	2.983	9.36	4.550	1.44	6.12	0.72
1.433	4.32	3.000	9.36	4.567	1.44	6.13	0.72
1.450	4.32	3.017	9.36	4.583	1.44	6.15	0.72
1.467	4.32	3.033	9.36	4.600	1.44	6.17	0.72
1.483	4.32	3.050	9.36	4.617	1.44	6.18	0.72
1.500	4.32	3.067	9.36	4.633	1.44	6.20	0.72
1.517	4.32	3.083	9.36	4.650	1.44	6.22	0.72
1.533	4.32	3.100	9.36	4.667	1.44	6.23	0.72
1.550	4.32	3.117	9.36	4.683	1.44	6.25	0.72
1.567	4.32	3.133	9.36	4.700	1.44		

Max.Eff.Inten.(mm/hr)=	33.12	17.87	
over (min)	5.00	8.00	
Storage Coeff. (min)=	4.46 (ii)	7.11 (ii)	
Unit Hyd. Tpeak (min)=	5.00	8.00	
Unit Hyd. peak (cms)=	0.24	0.15	
			TOTALS
PEAK FLOW (cms)=	0.20	0.00	0.202 (iii)
TIME TO PEAK (hrs)=	2.75	2.77	2.75
RUNOFF VOLUME (mm)=	35.00	15.01	34.80
TOTAL RAINFALL (mm)=	36.00	36.00	36.00
RUNOFF COEFFICIENT =	0.97	0.42	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7642)	OVERFLOW IS OFF
IN= 2---> OUT= 1	
DT= 1.0 min	

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0470	0.1250
0.0197	0.0630	0.0551	0.1410
0.0304	0.0850	0.0620	0.1580
0.0373	0.1020	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7641)	2.210	0.202	2.75	34.80
OUTFLOW: ID= 1 (7642)	2.210	0.019	3.97	33.67

PEAK FLOW REDUCTION [Qout/Qin](%)= 9.38
TIME SHIFT OF PEAK FLOW (min)= 73.00
MAXIMUM STORAGE USED (ha.m.)= 0.0606

CALIB	
STANDHYD (7643)	Area (ha)= 2.02
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.00	0.02
Dep. Storage (mm)=	1.00	1.50

Average Slope (%)=	1.00	0.50
Length (m)=	116.05	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	4.32	3.150	9.36	4.72	1.44
0.033	0.00	1.600	4.32	3.167	9.36	4.73	1.44
0.050	0.00	1.617	4.32	3.183	9.36	4.75	1.44
0.067	0.00	1.633	4.32	3.200	9.36	4.77	0.72
0.083	0.00	1.650	4.32	3.217	9.36	4.78	0.72
0.100	0.00	1.667	4.32	3.233	9.36	4.80	0.72
0.117	0.00	1.683	4.32	3.250	9.36	4.82	0.72
0.133	0.00	1.700	4.32	3.267	5.04	4.83	0.72
0.150	0.00	1.717	4.32	3.283	5.04	4.85	0.72
0.167	0.00	1.733	4.32	3.300	5.04	4.87	0.72
0.183	0.00	1.750	4.32	3.317	5.04	4.88	0.72
0.200	0.00	1.767	12.24	3.333	5.04	4.90	0.72
0.217	0.00	1.783	12.24	3.350	5.04	4.92	0.72
0.233	0.00	1.800	12.24	3.367	5.04	4.93	0.72
0.250	0.00	1.817	12.24	3.383	5.04	4.95	0.72
0.267	0.72	1.833	12.24	3.400	5.04	4.97	0.72
0.283	0.72	1.850	12.24	3.417	5.04	4.98	0.72
0.300	0.72	1.867	12.24	3.433	5.04	5.00	0.72
0.317	0.72	1.883	12.24	3.450	5.04	5.02	0.72
0.333	0.72	1.900	12.24	3.467	5.04	5.03	0.72
0.350	0.72	1.917	12.24	3.483	5.04	5.05	0.72
0.367	0.72	1.933	12.24	3.500	5.04	5.07	0.72
0.383	0.72	1.950	12.24	3.517	5.04	5.08	0.72
0.400	0.72	1.967	12.24	3.533	5.04	5.10	0.72
0.417	0.72	1.983	12.24	3.550	5.04	5.12	0.72
0.433	0.72	2.000	12.24	3.567	5.04	5.13	0.72
0.450	0.72	2.017	12.24	3.583	5.04	5.15	0.72
0.467	0.72	2.033	12.24	3.600	5.04	5.17	0.72
0.483	0.72	2.050	12.24	3.617	5.04	5.18	0.72
0.500	0.72	2.067	12.24	3.633	5.04	5.20	0.72
0.517	0.72	2.083	12.24	3.650	5.04	5.22	0.72
0.533	0.72	2.100	12.24	3.667	5.04	5.23	0.72
0.550	0.72	2.117	12.24	3.683	5.04	5.25	0.72
0.567	0.72	2.133	12.24	3.700	5.04	5.27	0.72
0.583	0.72	2.150	12.24	3.717	5.04	5.28	0.72
0.600	0.72	2.167	12.24	3.733	5.04	5.30	0.72
0.617	0.72	2.183	12.24	3.750	5.04	5.32	0.72
0.633	0.72	2.200	12.24	3.767	2.88	5.33	0.72
0.650	0.72	2.217	12.24	3.783	2.88	5.35	0.72
0.667	0.72	2.233	12.24	3.800	2.88	5.37	0.72
0.683	0.72	2.250	12.24	3.817	2.88	5.38	0.72
0.700	0.72	2.267	33.12	3.833	2.88	5.40	0.72
0.717	0.72	2.283	33.12	3.850	2.88	5.42	0.72
0.733	0.72	2.300	33.12	3.867	2.88	5.43	0.72
0.750	0.72	2.317	33.12	3.883	2.88	5.45	0.72
0.767	0.72	2.333	33.12	3.900	2.88	5.47	0.72
0.783	0.72	2.350	33.12	3.917	2.88	5.48	0.72
0.800	0.72	2.367	33.12	3.933	2.88	5.50	0.72
0.817	0.72	2.383	33.12	3.950	2.88	5.52	0.72
0.833	0.72	2.400	33.12	3.967	2.88	5.53	0.72
0.850	0.72	2.417	33.12	3.983	2.88	5.55	0.72
0.867	0.72	2.433	33.12	4.000	2.88	5.57	0.72
0.883	0.72	2.450	33.12	4.017	2.88	5.58	0.72
0.900	0.72	2.467	33.12	4.033	2.88	5.60	0.72
0.917	0.72	2.483	33.12	4.050	2.88	5.62	0.72
0.933	0.72	2.500	33.12	4.067	2.88	5.63	0.72
0.950	0.72	2.517	33.12	4.083	2.88	5.65	0.72
0.967	0.72	2.533	33.12	4.100	2.88	5.67	0.72
0.983	0.72	2.550	33.12	4.117	2.88	5.68	0.72
1.000	0.72	2.567	33.12	4.133	2.88	5.70	0.72
1.017	0.72	2.583	33.12	4.150	2.88	5.72	0.72
1.033	0.72	2.600	33.12	4.167	2.88	5.73	0.72
1.050	0.72	2.617	33.12	4.183	2.88	5.75	0.72
1.067	0.72	2.633	33.12	4.200	2.88	5.77	0.72
1.083	0.72	2.650	33.12	4.217	2.88	5.78	0.72
1.100	0.72	2.667	33.12	4.233	2.88	5.80	0.72

1.117	0.72	2.683	33.12	4.250	2.88	5.82	0.72
1.133	0.72	2.700	33.12	4.267	1.44	5.83	0.72
1.150	0.72	2.717	33.12	4.283	1.44	5.85	0.72
1.167	0.72	2.733	33.12	4.300	1.44	5.87	0.72
1.183	0.72	2.750	33.12	4.317	1.44	5.88	0.72
1.200	0.72	2.767	9.36	4.333	1.44	5.90	0.72
1.217	0.72	2.783	9.36	4.350	1.44	5.92	0.72
1.233	0.72	2.800	9.36	4.367	1.44	5.93	0.72
1.250	0.72	2.817	9.36	4.383	1.44	5.95	0.72
1.267	4.32	2.833	9.36	4.400	1.44	5.97	0.72
1.283	4.32	2.850	9.36	4.417	1.44	5.98	0.72
1.300	4.32	2.867	9.36	4.433	1.44	6.00	0.72
1.317	4.32	2.883	9.36	4.450	1.44	6.02	0.72
1.333	4.32	2.900	9.36	4.467	1.44	6.03	0.72
1.350	4.32	2.917	9.36	4.483	1.44	6.05	0.72
1.367	4.32	2.933	9.36	4.500	1.44	6.07	0.72
1.383	4.32	2.950	9.36	4.517	1.44	6.08	0.72
1.400	4.32	2.967	9.36	4.533	1.44	6.10	0.72
1.417	4.32	2.983	9.36	4.550	1.44	6.12	0.72
1.433	4.32	3.000	9.36	4.567	1.44	6.13	0.72
1.450	4.32	3.017	9.36	4.583	1.44	6.15	0.72
1.467	4.32	3.033	9.36	4.600	1.44	6.17	0.72
1.483	4.32	3.050	9.36	4.617	1.44	6.18	0.72
1.500	4.32	3.067	9.36	4.633	1.44	6.20	0.72
1.517	4.32	3.083	9.36	4.650	1.44	6.22	0.72
1.533	4.32	3.100	9.36	4.667	1.44	6.23	0.72
1.550	4.32	3.117	9.36	4.683	1.44	6.25	0.72
1.567	4.32	3.133	9.36	4.700	1.44		

Max.Eff.Inten.(mm/hr)=	33.12	17.87	
over (min)	5.00	7.00	
Storage Coeff. (min)=	4.35 (ii)	6.99 (ii)	
Unit Hyd. Tpeak (min)=	5.00	7.00	
Unit Hyd. peak (cms)=	0.25	0.16	
			TOTALS
PEAK FLOW (cms)=	0.18	0.00	0.185 (iii)
TIME TO PEAK (hrs)=	2.75	2.77	2.75
RUNOFF VOLUME (mm)=	35.00	15.01	34.80
TOTAL RAINFALL (mm)=	36.00	36.00	36.00
RUNOFF COEFFICIENT =	0.97	0.42	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7644)| IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0433	0.1140
	0.0182	0.0580	0.0507	0.1280
	0.0280	0.0775	0.0571	0.1440
	0.0343	0.0930	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7643)	2.020	0.185	2.75	34.80
OUTFLOW: ID= 1 (7644)	2.020	0.017	3.95	33.69

PEAK FLOW REDUCTION [Qout/Qin](%)= 9.41
TIME SHIFT OF PEAK FLOW (min)= 72.00
MAXIMUM STORAGE USED (ha.m.)= 0.0554

```
      V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
      V    V   I    SS     U   U   A A   L
       V  V    I      SS   U   U  AAAAA  L
        V V    I       SS  U   U  A   A  L
```

```
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
```

Developed and Distributed by Smart City Water Inc

***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-a4eb17eaad57\4d815fcd-1a8b-4e9a-bd47-d9c8a6ef6f87\s
Summary filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-a4eb17eaad57\4d815fcd-1a8b-4e9a-bd47-d9c8a6ef6f87\s

DATE: 06/14/2024 TIME: 12:48:34

USER:

COMMENTS: _____

** SIMULATION : 2. 2 Year 12 Hour AES (Bloor, **

READ STORM | Ptotal= 42.00 mm	Filename: C:\Users\ygollamudi\AppData\Local\Temp\3c3f87d5-a26e-4c6b-b2ae-56a7ba29ab7f\e2501d61 Comments: 2 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	3.25	7.14	6.50	2.94	9.75	0.42
0.25	0.42	3.50	7.14	6.75	2.94	10.00	0.42
0.50	0.42	3.75	7.14	7.00	2.94	10.25	0.42
0.75	0.42	4.00	7.14	7.25	1.68	10.50	0.42
1.00	0.42	4.25	19.32	7.50	1.68	10.75	0.42
1.25	0.42	4.50	19.32	7.75	1.68	11.00	0.42
1.50	0.42	4.75	19.32	8.00	1.68	11.25	0.42
1.75	0.42	5.00	19.32	8.25	0.84	11.50	0.42
2.00	0.42	5.25	5.46	8.50	0.84	11.75	0.42
2.25	2.52	5.50	5.46	8.75	0.84	12.00	0.42
2.50	2.52	5.75	5.46	9.00	0.84		
2.75	2.52	6.00	5.46	9.25	0.42		
3.00	2.52	6.25	2.94	9.50	0.42		

CALIB | STANDHYD (7567)| ID= 1 DT= 1.0 min |	Area (ha)= 2.72 Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.69	0.03
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	134.66	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

GEI Consultants

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	2.52	6.150	5.46	9.22	0.84
0.033	0.00	3.100	2.52	6.167	5.46	9.23	0.84
0.050	0.00	3.117	2.52	6.183	5.46	9.25	0.84
0.067	0.00	3.133	2.52	6.200	5.46	9.27	0.42
0.083	0.00	3.150	2.52	6.217	5.46	9.28	0.42
0.100	0.00	3.167	2.52	6.233	5.46	9.30	0.42
0.117	0.00	3.183	2.52	6.250	5.46	9.32	0.42
0.133	0.00	3.200	2.52	6.267	2.94	9.33	0.42
0.150	0.00	3.217	2.52	6.283	2.94	9.35	0.42
0.167	0.00	3.233	2.52	6.300	2.94	9.37	0.42
0.183	0.00	3.250	2.52	6.317	2.94	9.38	0.42
0.200	0.00	3.267	7.14	6.333	2.94	9.40	0.42
0.217	0.00	3.283	7.14	6.350	2.94	9.42	0.42
0.233	0.00	3.300	7.14	6.367	2.94	9.43	0.42
0.250	0.00	3.317	7.14	6.383	2.94	9.45	0.42
0.267	0.42	3.333	7.14	6.400	2.94	9.47	0.42
0.283	0.42	3.350	7.14	6.417	2.94	9.48	0.42
0.300	0.42	3.367	7.14	6.433	2.94	9.50	0.42
0.317	0.42	3.383	7.14	6.450	2.94	9.52	0.42
0.333	0.42	3.400	7.14	6.467	2.94	9.53	0.42
0.350	0.42	3.417	7.14	6.483	2.94	9.55	0.42
0.367	0.42	3.433	7.14	6.500	2.94	9.57	0.42
0.383	0.42	3.450	7.14	6.517	2.94	9.58	0.42
0.400	0.42	3.467	7.14	6.533	2.94	9.60	0.42
0.417	0.42	3.483	7.14	6.550	2.94	9.62	0.42
0.433	0.42	3.500	7.14	6.567	2.94	9.63	0.42
0.450	0.42	3.517	7.14	6.583	2.94	9.65	0.42
0.467	0.42	3.533	7.14	6.600	2.94	9.67	0.42
0.483	0.42	3.550	7.14	6.617	2.94	9.68	0.42
0.500	0.42	3.567	7.14	6.633	2.94	9.70	0.42
0.517	0.42	3.583	7.14	6.650	2.94	9.72	0.42
0.533	0.42	3.600	7.14	6.667	2.94	9.73	0.42
0.550	0.42	3.617	7.14	6.683	2.94	9.75	0.42
0.567	0.42	3.633	7.14	6.700	2.94	9.77	0.42
0.583	0.42	3.650	7.14	6.717	2.94	9.78	0.42
0.600	0.42	3.667	7.14	6.733	2.94	9.80	0.42
0.617	0.42	3.683	7.14	6.750	2.94	9.82	0.42
0.633	0.42	3.700	7.14	6.767	2.94	9.83	0.42
0.650	0.42	3.717	7.14	6.783	2.94	9.85	0.42
0.667	0.42	3.733	7.14	6.800	2.94	9.87	0.42
0.683	0.42	3.750	7.14	6.817	2.94	9.88	0.42
0.700	0.42	3.767	7.14	6.833	2.94	9.90	0.42
0.717	0.42	3.783	7.14	6.850	2.94	9.92	0.42
0.733	0.42	3.800	7.14	6.867	2.94	9.93	0.42
0.750	0.42	3.817	7.14	6.883	2.94	9.95	0.42
0.767	0.42	3.833	7.14	6.900	2.94	9.97	0.42
0.783	0.42	3.850	7.14	6.917	2.94	9.98	0.42
0.800	0.42	3.867	7.14	6.933	2.94	10.00	0.42
0.817	0.42	3.883	7.14	6.950	2.94	10.02	0.42
0.833	0.42	3.900	7.14	6.967	2.94	10.03	0.42
0.850	0.42	3.917	7.14	6.983	2.94	10.05	0.42
0.867	0.42	3.933	7.14	7.000	2.94	10.07	0.42
0.883	0.42	3.950	7.14	7.017	2.94	10.08	0.42
0.900	0.42	3.967	7.14	7.033	2.94	10.10	0.42
0.917	0.42	3.983	7.14	7.050	2.94	10.12	0.42
0.933	0.42	4.000	7.14	7.067	2.94	10.13	0.42
0.950	0.42	4.017	7.14	7.083	2.94	10.15	0.42
0.967	0.42	4.033	7.14	7.100	2.94	10.17	0.42
0.983	0.42	4.050	7.14	7.117	2.94	10.18	0.42
1.000	0.42	4.067	7.14	7.133	2.94	10.20	0.42
1.017	0.42	4.083	7.14	7.150	2.94	10.22	0.42
1.033	0.42	4.100	7.14	7.167	2.94	10.23	0.42
1.050	0.42	4.117	7.14	7.183	2.94	10.25	0.42
1.067	0.42	4.133	7.14	7.200	2.94	10.27	0.42
1.083	0.42	4.150	7.14	7.217	2.94	10.28	0.42
1.100	0.42	4.167	7.14	7.233	2.94	10.30	0.42
1.117	0.42	4.183	7.14	7.250	2.94	10.32	0.42
1.133	0.42	4.200	7.14	7.267	1.68	10.33	0.42
1.150	0.42	4.217	7.14	7.283	1.68	10.35	0.42
1.167	0.42	4.233	7.14	7.300	1.68	10.37	0.42
1.183	0.42	4.250	7.14	7.317	1.68	10.38	0.42
1.200	0.42	4.267	19.32	7.333	1.68	10.40	0.42
1.217	0.42	4.283	19.32	7.350	1.68	10.42	0.42
1.233	0.42	4.300	19.32	7.367	1.68	10.43	0.42
1.250	0.42	4.317	19.32	7.383	1.68	10.45	0.42
1.267	0.42	4.333	19.32	7.400	1.68	10.47	0.42
1.283	0.42	4.350	19.32	7.417	1.68	10.48	0.42
1.300	0.42	4.367	19.32	7.433	1.68	10.50	0.42
1.317	0.42	4.383	19.32	7.450	1.68	10.52	0.42
1.333	0.42	4.400	19.32	7.467	1.68	10.53	0.42
1.350	0.42	4.417	19.32	7.483	1.68	10.55	0.42
1.367	0.42	4.433	19.32	7.500	1.68	10.57	0.42
1.383	0.42	4.450	19.32	7.517	1.68	10.58	0.42
1.400	0.42	4.467	19.32	7.533	1.68	10.60	0.42
1.417	0.42	4.483	19.32	7.550	1.68	10.62	0.42
1.433	0.42	4.500	19.32	7.567	1.68	10.63	0.42
1.450	0.42	4.517	19.32	7.583	1.68	10.65	0.42
1.467	0.42	4.533	19.32	7.600	1.68	10.67	0.42
1.483	0.42	4.550	19.32	7.617	1.68	10.68	0.42
1.500	0.42	4.567	19.32	7.633	1.68	10.70	0.42
1.517	0.42	4.583	19.32	7.650	1.68	10.72	0.42
1.533	0.42	4.600	19.32	7.667	1.68	10.73	0.42
1.550	0.42	4.617	19.32	7.683	1.68	10.75	0.42
1.567	0.42	4.633	19.32	7.700	1.68	10.77	0.42
1.583	0.42	4.650	19.32	7.717	1.68	10.78	0.42
1.600	0.42	4.667	19.32	7.733	1.68	10.80	0.42
1.617	0.42	4.683	19.32	7.750	1.68	10.82	0.42
1.633	0.42	4.700	19.32	7.767	1.68	10.83	0.42
1.650	0.42	4.717	19.32	7.783	1.68	10.85	0.42
1.667	0.42	4.733	19.32	7.800	1.68	10.87	0.42
1.683	0.42	4.750	19.32	7.817	1.68	10.88	0.42
1.700	0.42	4.767	19.32	7.833	1.68	10.90	0.42
1.717	0.42	4.783	19.32	7.850	1.68	10.92	0.42
1.733	0.42	4.800	19.32	7.867	1.68	10.93	0.42
1.750	0.42	4.817	19.32	7.883	1.68	10.95	0.42
1.767	0.42	4.833	19.32	7.900	1.68	10.97	0.42
1.783	0.42	4.850	19.32	7.917	1.68	10.98	0.42
1.800	0.42	4.867	19.32	7.933	1.68	11.00	0.42
1.817	0.42	4.883	19.32	7.950	1.68	11.02	0.42
1.833	0.42	4.900	19.32	7.967	1.68	11.03	0.42
1.850	0.42	4.917	19.32	7.983	1.68	11.05	0.42
1.867	0.42	4.933	19.32	8.000	1.68	11.07	0.42
1.883	0.42	4.950	19.32	8.017	1.68	11.08	0.42
1.900	0.42	4.967	19.32	8.033	1.68	11.10	0.42
1.917	0.42	4.983	19.32	8.050	1.68	11.12	0.42
1.933	0.42	5.000	19.32	8.067	1.68	11.13	0.42
1.950	0.42	5.017	19.32	8.083	1.68	11.15	0.42
1.967	0.42	5.033	19.32	8.100	1.68	11.17	0.42
1.983	0.42	5.050	19.32	8.117	1.68	11.18	0.42
2.000	0.42	5.067	19.32	8.133	1.68	11.20	0.42
2.017	0.42	5.083	19.32	8.150	1.68	11.22	0.42
2.033	0.42	5.100	19.32	8.167	1.68	11.23	0.42
2.050	0.42	5.117	19.32	8.183	1.68	11.25	0.42
2.067	0.42	5.133	19.32	8.200	1.68	11.27	0.42
2.083	0.42	5.150	19.32	8.217	1.68	11.28	0.42
2.100	0.42	5.167	19.32	8.233	1.68	11.30	0.42
2.117	0.42	5.183	19.32	8.250	1.68	11.32	0.42
2.133	0.42	5.200	19.32	8.267	0.84	11.33	0.42
2.150	0.42	5.217	19.32	8.283	0.84	11.35	0.42
2.167	0.42	5.233	19.32	8.300	0.84	11.37	0.42
2.183	0.42	5.250	19.31	8.317	0.84	11.38	0.42
2.200	0.42	5.267	5.46	8.333	0.84	11.40	0.42
2.217	0.42	5.283	5.46	8.350	0.84	11.42	0.42
2.233	0.42	5.300	5.46	8.367	0.84	11.43	0.42
2.250	0.42	5.317	5.46	8.383	0.84	11.45	0.42
2.267	2.52	5.333	5.46	8.400	0.84	11.47	0.42
2.283	2.52	5.350	5.46	8.417	0.84	11.48	0.42
2.300	2.52	5.367	5.46	8.433	0.84	11.50	0.42
2.317	2.52	5.383	5.46	8.450	0.84	11.52	0.42
2.333	2.52	5.400	5.46	8.467	0.84	11.53	0.42
2.350	2.52	5.417	5.46	8.483	0.84	11.55	0.42
2.367	2.52	5.433	5.46	8.500	0.84	11.57	0.42
2.383	2.52	5.450	5.46	8.517	0.84	11.58	0.42
2.400	2.52	5.467	5.46	8.533	0.84	11.60	0.42
2.417	2.52	5.483	5.46	8.550	0.84	11.62	0.42
2.433	2.52	5.500	5.46	8.567	0.84	11.63	0.42
2.450	2.52	5.517	5.46	8.583	0.84	11.65	0.42
2.467	2.52	5.533	5.46	8.600	0.84	11.67	0.42
2.483	2.52	5.550	5.46	8.617	0.84	11.68	0.42

2.500	2.52	5.567	5.46	8.633	0.84	11.70	0.42
2.517	2.52	5.583	5.46	8.650	0.84	11.72	0.42
2.533	2.52	5.600	5.46	8.667	0.84	11.73	0.42
2.550	2.52	5.617	5.46	8.683	0.84	11.75	0.42
2.567	2.52	5.633	5.46	8.700	0.84	11.77	0.42
2.583	2.52	5.650	5.46	8.717	0.84	11.78	0.42
2.600	2.52	5.667	5.46	8.733	0.84	11.80	0.42
2.617	2.52	5.683	5.46	8.750	0.84	11.82	0.42
2.633	2.52	5.700	5.46	8.767	0.84	11.83	0.42
2.650	2.52	5.717	5.46	8.783	0.84	11.85	0.42
2.667	2.52	5.733	5.46	8.800	0.84	11.87	0.42
2.683	2.52	5.750	5.46	8.817	0.84	11.88	0.42
2.700	2.52	5.767	5.46	8.833	0.84	11.90	0.42
2.717	2.52	5.783	5.46	8.850	0.84	11.92	0.42
2.733	2.52	5.800	5.46	8.867	0.84	11.93	0.42
2.750	2.52	5.817	5.46	8.883	0.84	11.95	0.42
2.767	2.52	5.833	5.46	8.900	0.84	11.97	0.42
2.783	2.52	5.850	5.46	8.917	0.84	11.98	0.42
2.800	2.52	5.867	5.46	8.933	0.84	12.00	0.42
2.817	2.52	5.883	5.46	8.950	0.84	12.02	0.42
2.833	2.52	5.900	5.46	8.967	0.84	12.03	0.42
2.850	2.52	5.917	5.46	8.983	0.84	12.05	0.42
2.867	2.52	5.933	5.46	9.000	0.84	12.07	0.42
2.883	2.52	5.950	5.46	9.017	0.84	12.08	0.42
2.900	2.52	5.967	5.46	9.033	0.84	12.10	0.42
2.917	2.52	5.983	5.46	9.050	0.84	12.12	0.42
2.933	2.52	6.000	5.46	9.067	0.84	12.13	0.42
2.950	2.52	6.017	5.46	9.083	0.84	12.15	0.42
2.967	2.52	6.033	5.46	9.100	0.84	12.17	0.42
2.983	2.52	6.050	5.46	9.117	0.84	12.18	0.42
3.000	2.52	6.067	5.46	9.133	0.84	12.20	0.42
3.017	2.52	6.083	5.46	9.150	0.84	12.22	0.42
3.033	2.52	6.100	5.46	9.167	0.84	12.23	0.42
3.050	2.52	6.117	5.46	9.183	0.84	12.25	0.42
3.067	2.52	6.133	5.46	9.200	0.84		

Max.Eff.Inten.(mm/hr)=	19.32	11.73	
over (min)	6.00	10.00	
Storage Coeff. (min)=	5.89 (ii)	9.18 (ii)	
Unit Hyd. Tpeak (min)=	6.00	10.00	
Unit Hyd. peak (cms)=	0.19	0.12	
			TOTALS
PEAK FLOW (cms)=	0.14	0.00	0.145 (iii)
TIME TO PEAK (hrs)=	5.23	5.27	5.25
RUNOFF VOLUME (mm)=	41.00	19.22	40.78
TOTAL RAINFALL (mm)=	42.00	42.00	42.00
RUNOFF COEFFICIENT =	0.98	0.46	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7626)	OVERFLOW IS OFF				
IN= 2---> OUT= 1					
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)	
	0.0000	0.0000	0.0568	0.1530	
	0.0239	0.0780	0.0660	0.1730	
	0.0370	0.1040	0.0751	0.2000	
	0.0451	0.1250	0.0000	0.0000	

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7567)	2.720	0.145	5.25	40.78
OUTFLOW: ID= 1 (7626)	2.720	0.024	6.55	38.90

PEAK FLOW REDUCTION [Qout/Qin](%)= 16.27
TIME SHIFT OF PEAK FLOW (min)= 78.00
MAXIMUM STORAGE USED (ha.m.)= 0.0772

CALIB		
STANDHYD (7624)	Area (ha)=	1.80
ID= 1 DT= 1.0 min	Total Imp(%)=	99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.78	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	109.54	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	2.52	6.150	5.46	9.22	0.84
0.033	0.00	3.100	2.52	6.167	5.46	9.23	0.84
0.050	0.00	3.117	2.52	6.183	5.46	9.25	0.84
0.067	0.00	3.133	2.52	6.200	5.46	9.27	0.42
0.083	0.00	3.150	2.52	6.217	5.46	9.28	0.42
0.100	0.00	3.167	2.52	6.233	5.46	9.30	0.42
0.117	0.00	3.183	2.52	6.250	5.46	9.32	0.42
0.133	0.00	3.200	2.52	6.267	2.94	9.33	0.42
0.150	0.00	3.217	2.52	6.283	2.94	9.35	0.42
0.167	0.00	3.233	2.52	6.300	2.94	9.37	0.42
0.183	0.00	3.250	2.52	6.317	2.94	9.38	0.42
0.200	0.00	3.267	7.14	6.333	2.94	9.40	0.42
0.217	0.00	3.283	7.14	6.350	2.94	9.42	0.42
0.233	0.00	3.300	7.14	6.367	2.94	9.43	0.42
0.250	0.00	3.317	7.14	6.383	2.94	9.45	0.42
0.267	0.42	3.333	7.14	6.400	2.94	9.47	0.42
0.283	0.42	3.350	7.14	6.417	2.94	9.48	0.42
0.300	0.42	3.367	7.14	6.433	2.94	9.50	0.42
0.317	0.42	3.383	7.14	6.450	2.94	9.52	0.42
0.333	0.42	3.400	7.14	6.467	2.94	9.53	0.42
0.350	0.42	3.417	7.14	6.483	2.94	9.55	0.42
0.367	0.42	3.433	7.14	6.500	2.94	9.57	0.42
0.383	0.42	3.450	7.14	6.517	2.94	9.58	0.42
0.400	0.42	3.467	7.14	6.533	2.94	9.60	0.42
0.417	0.42	3.483	7.14	6.550	2.94	9.62	0.42
0.433	0.42	3.500	7.14	6.567	2.94	9.63	0.42
0.450	0.42	3.517	7.14	6.583	2.94	9.65	0.42
0.467	0.42	3.533	7.14	6.600	2.94	9.67	0.42
0.483	0.42	3.550	7.14	6.617	2.94	9.68	0.42
0.500	0.42	3.567	7.14	6.633	2.94	9.70	0.42
0.517	0.42	3.583	7.14	6.650	2.94	9.72	0.42
0.533	0.42	3.600	7.14	6.667	2.94	9.73	0.42
0.550	0.42	3.617	7.14	6.683	2.94	9.75	0.42
0.567	0.42	3.633	7.14	6.700	2.94	9.77	0.42
0.583	0.42	3.650	7.14	6.717	2.94	9.78	0.42
0.600	0.42	3.667	7.14	6.733	2.94	9.80	0.42
0.617	0.42	3.683	7.14	6.750	2.94	9.82	0.42
0.633	0.42	3.700	7.14	6.767	2.94	9.83	0.42
0.650	0.42	3.717	7.14	6.783	2.94	9.85	0.42
0.667	0.42	3.733	7.14	6.800	2.94	9.87	0.42
0.683	0.42	3.750	7.14	6.817	2.94	9.88	0.42
0.700	0.42	3.767	7.14	6.833	2.94	9.90	0.42
0.717	0.42	3.783	7.14	6.850	2.94	9.92	0.42
0.733	0.42	3.800	7.14	6.867	2.94	9.93	0.42
0.750	0.42	3.817	7.14	6.883	2.94	9.95	0.42
0.767	0.42	3.833	7.14	6.900	2.94	9.97	0.42
0.783	0.42	3.850	7.14	6.917	2.94	9.98	0.42
0.800	0.42	3.867	7.14	6.933	2.94	10.00	0.42
0.817	0.42	3.883	7.14	6.950	2.94	10.02	0.42
0.833	0.42	3.900	7.14	6.967	2.94	10.03	0.42
0.850	0.42	3.917	7.14	6.983	2.94	10.05	0.42
0.867	0.42	3.933	7.14	7.000	2.94	10.07	0.42
0.883	0.42	3.950	7.14	7.017	2.94	10.08	0.42
0.900	0.42	3.967	7.14	7.033	2.94	10.10	0.42
0.917	0.42	3.983	7.14	7.050	2.94	10.12	0.42
0.933	0.42	4.000	7.14	7.067	2.94	10.13	0.42
0.950	0.42	4.017	7.14	7.083	2.94	10.15	0.42
0.967	0.42	4.033	7.14	7.100	2.94	10.17	0.42

0.983	0.42	4.050	7.14	7.117	2.94	10.18	0.42
1.000	0.42	4.067	7.14	7.133	2.94	10.20	0.42
1.017	0.42	4.083	7.14	7.150	2.94	10.22	0.42
1.033	0.42	4.100	7.14	7.167	2.94	10.23	0.42
1.050	0.42	4.117	7.14	7.183	2.94	10.25	0.42
1.067	0.42	4.133	7.14	7.200	2.94	10.27	0.42
1.083	0.42	4.150	7.14	7.217	2.94	10.28	0.42
1.100	0.42	4.167	7.14	7.233	2.94	10.30	0.42
1.117	0.42	4.183	7.14	7.250	2.94	10.32	0.42
1.133	0.42	4.200	7.14	7.267	1.68	10.33	0.42
1.150	0.42	4.217	7.14	7.283	1.68	10.35	0.42
1.167	0.42	4.233	7.14	7.300	1.68	10.37	0.42
1.183	0.42	4.250	7.14	7.317	1.68	10.38	0.42
1.200	0.42	4.267	19.32	7.333	1.68	10.40	0.42
1.217	0.42	4.283	19.32	7.350	1.68	10.42	0.42
1.233	0.42	4.300	19.32	7.367	1.68	10.43	0.42
1.250	0.42	4.317	19.32	7.383	1.68	10.45	0.42
1.267	0.42	4.333	19.32	7.400	1.68	10.47	0.42
1.283	0.42	4.350	19.32	7.417	1.68	10.48	0.42
1.300	0.42	4.367	19.32	7.433	1.68	10.50	0.42
1.317	0.42	4.383	19.32	7.450	1.68	10.52	0.42
1.333	0.42	4.400	19.32	7.467	1.68	10.53	0.42
1.350	0.42	4.417	19.32	7.483	1.68	10.55	0.42
1.367	0.42	4.433	19.32	7.500	1.68	10.57	0.42
1.383	0.42	4.450	19.32	7.517	1.68	10.58	0.42
1.400	0.42	4.467	19.32	7.533	1.68	10.60	0.42
1.417	0.42	4.483	19.32	7.550	1.68	10.62	0.42
1.433	0.42	4.500	19.32	7.567	1.68	10.63	0.42
1.450	0.42	4.517	19.32	7.583	1.68	10.65	0.42
1.467	0.42	4.533	19.32	7.600	1.68	10.67	0.42
1.483	0.42	4.550	19.32	7.617	1.68	10.68	0.42
1.500	0.42	4.567	19.32	7.633	1.68	10.70	0.42
1.517	0.42	4.583	19.32	7.650	1.68	10.72	0.42
1.533	0.42	4.600	19.32	7.667	1.68	10.73	0.42
1.550	0.42	4.617	19.32	7.683	1.68	10.75	0.42
1.567	0.42	4.633	19.32	7.700	1.68	10.77	0.42
1.583	0.42	4.650	19.32	7.717	1.68	10.78	0.42
1.600	0.42	4.667	19.32	7.733	1.68	10.80	0.42
1.617	0.42	4.683	19.32	7.750	1.68	10.82	0.42
1.633	0.42	4.700	19.32	7.767	1.68	10.83	0.42
1.650	0.42	4.717	19.32	7.783	1.68	10.85	0.42
1.667	0.42	4.733	19.32	7.800	1.68	10.87	0.42
1.683	0.42	4.750	19.32	7.817	1.68	10.88	0.42
1.700	0.42	4.767	19.32	7.833	1.68	10.90	0.42
1.717	0.42	4.783	19.32	7.850	1.68	10.92	0.42
1.733	0.42	4.800	19.32	7.867	1.68	10.93	0.42
1.750	0.42	4.817	19.32	7.883	1.68	10.95	0.42
1.767	0.42	4.833	19.32	7.900	1.68	10.97	0.42
1.783	0.42	4.850	19.32	7.917	1.68	10.98	0.42
1.800	0.42	4.867	19.32	7.933	1.68	11.00	0.42
1.817	0.42	4.883	19.32	7.950	1.68	11.02	0.42
1.833	0.42	4.900	19.32	7.967	1.68	11.03	0.42
1.850	0.42	4.917	19.32	7.983	1.68	11.05	0.42
1.867	0.42	4.933	19.32	8.000	1.68	11.07	0.42
1.883	0.42	4.950	19.32	8.017	1.68	11.08	0.42
1.900	0.42	4.967	19.32	8.033	1.68	11.10	0.42
1.917	0.42	4.983	19.32	8.050	1.68	11.12	0.42
1.933	0.42	5.000	19.32	8.067	1.68	11.13	0.42
1.950	0.42	5.017	19.32	8.083	1.68	11.15	0.42
1.967	0.42	5.033	19.32	8.100	1.68	11.17	0.42
1.983	0.42	5.050	19.32	8.117	1.68	11.18	0.42
2.000	0.42	5.067	19.32	8.133	1.68	11.20	0.42
2.017	0.42	5.083	19.32	8.150	1.68	11.22	0.42
2.033	0.42	5.100	19.32	8.167	1.68	11.23	0.42
2.050	0.42	5.117	19.32	8.183	1.68	11.25	0.42
2.067	0.42	5.133	19.32	8.200	1.68	11.27	0.42
2.083	0.42	5.150	19.32	8.217	1.68	11.28	0.42
2.100	0.42	5.167	19.32	8.233	1.68	11.30	0.42
2.117	0.42	5.183	19.32	8.250	1.68	11.32	0.42
2.133	0.42	5.200	19.32	8.267	0.84	11.33	0.42
2.150	0.42	5.217	19.32	8.283	0.84	11.35	0.42
2.167	0.42	5.233	19.32	8.300	0.84	11.37	0.42
2.183	0.42	5.250	19.31	8.317	0.84	11.38	0.42
2.200	0.42	5.267	5.46	8.333	0.84	11.40	0.42
2.217	0.42	5.283	5.46	8.350	0.84	11.42	0.42
2.233	0.42	5.300	5.46	8.367	0.84	11.43	0.42
2.250	0.42	5.317	5.46	8.383	0.84	11.45	0.42
2.267	2.52	5.333	5.46	8.400	0.84	11.47	0.42
2.283	2.52	5.350	5.46	8.417	0.84	11.48	0.42
2.300	2.52	5.367	5.46	8.433	0.84	11.50	0.42
2.317	2.52	5.383	5.46	8.450	0.84	11.52	0.42
2.333	2.52	5.400	5.46	8.467	0.84	11.53	0.42
2.350	2.52	5.417	5.46	8.483	0.84	11.55	0.42
2.367	2.52	5.433	5.46	8.500	0.84	11.57	0.42
2.383	2.52	5.450	5.46	8.517	0.84	11.58	0.42
2.400	2.52	5.467	5.46	8.533	0.84	11.60	0.42
2.417	2.52	5.483	5.46	8.550	0.84	11.62	0.42
2.433	2.52	5.500	5.46	8.567	0.84	11.63	0.42
2.450	2.52	5.517	5.46	8.583	0.84	11.65	0.42
2.467	2.52	5.533	5.46	8.600	0.84	11.67	0.42
2.483	2.52	5.550	5.46	8.617	0.84	11.68	0.42
2.500	2.52	5.567	5.46	8.633	0.84	11.70	0.42
2.517	2.52	5.583	5.46	8.650	0.84	11.72	0.42
2.533	2.52	5.600	5.46	8.667	0.84	11.73	0.42
2.550	2.52	5.617	5.46	8.683	0.84	11.75	0.42
2.567	2.52	5.633	5.46	8.700	0.84	11.77	0.42
2.583	2.52	5.650	5.46	8.717	0.84	11.78	0.42
2.600	2.52	5.667	5.46	8.733	0.84	11.80	0.42
2.617	2.52	5.683	5.46	8.750	0.84	11.82	0.42
2.633	2.52	5.700	5.46	8.767	0.84	11.83	0.42
2.650	2.52	5.717	5.46	8.783	0.84	11.85	0.42
2.667	2.52	5.733	5.46	8.800	0.84	11.87	0.42
2.683	2.52	5.750	5.46	8.817	0.84	11.88	0.42
2.700	2.52	5.767	5.46	8.833	0.84	11.90	0.42
2.717	2.52	5.783	5.46	8.850	0.84	11.92	0.42
2.733	2.52	5.800	5.46	8.867	0.84	11.93	0.42
2.750	2.52	5.817	5.46	8.883	0.84	11.95	0.42
2.767	2.52	5.833	5.46	8.900	0.84	11.97	0.42
2.783	2.52	5.850	5.46	8.917	0.84	11.98	0.42
2.800	2.52	5.867	5.46	8.933	0.84	12.00	0.42
2.817	2.52	5.883	5.46	8.950	0.84	12.02	0.42
2.833	2.52	5.900	5.46	8.967	0.84	12.03	0.42
2.850	2.52	5.917	5.46	8.983	0.84	12.05	0.42
2.867	2.52	5.933	5.46	9.000	0.84	12.07	0.42
2.883	2.52	5.950	5.46	9.017	0.84	12.08	0.42
2.900	2.52	5.967	5.46	9.033	0.84	12.10	0.42
2.917	2.52	5.983	5.46	9.050	0.84	12.12	0.42
2.933	2.52	6.000	5.46	9.067	0.84	12.13	0.42
2.950	2.52	6.017	5.46	9.083	0.84	12.15	0.42
2.967	2.52	6.033	5.46	9.100	0.84	12.17	0.42
2.983	2.52	6.050	5.46	9.117	0.84	12.18	0.42
3.000	2.52	6.067	5.46	9.133	0.84	12.20	0.42
3.017	2.52	6.083	5.46	9.150	0.84	12.22	0.42
3.033	2.52	6.100	5.46	9.167	0.84	12.23	0.42
3.050	2.52	6.117	5.46	9.183	0.84	12.25	0.42
3.067	2.52	6.133	5.46	9.200	0.84		

Max.Eff.Inten.(mm/hr)=	19.32	14.22	
over (min)	5.00	9.00	
Storage Coeff. (min)=	5.21 (ii)	8.49 (ii)	
Unit Hyd. Tpeak (min)=	5.00	9.00	
Unit Hyd. peak (cms)=	0.22	0.13	
			TOTALS
PEAK FLOW (cms)=	0.10	0.00	0.096 (iii)
TIME TO PEAK (hrs)=	5.23	5.25	5.25
RUNOFF VOLUME (mm)=	41.00	23.87	40.83
TOTAL RAINFALL (mm)=	42.00	42.00	42.00
RUNOFF COEFFICIENT =	0.98	0.57	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 90.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7625)|	OVERFLOW IS OFF			
IN= 2---> OUT= 1 |				
DT= 1.0 min |	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)

0.0000	0.0000	0.0389	0.1013
0.0164	0.0514	0.0456	0.1141
0.0252	0.0690	0.0514	0.1288
0.0309	0.0825	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7624)	1.800	0.096	5.25	40.83
OUTFLOW: ID= 1 (7625)	1.800	0.016	6.48	39.17

PEAK FLOW REDUCTION [Qout/Qin](%)= 16.81
TIME SHIFT OF PEAK FLOW (min)= 74.00
MAXIMUM STORAGE USED (ha.m.)= 0.0507

CALIB
STANDHYD (7623)| Area (ha)= 1.15
ID= 1 DT= 1.0 min | Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.14	0.01
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	87.56	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	2.52	6.150	5.46	9.22	0.84
0.033	0.00	3.100	2.52	6.167	5.46	9.23	0.84
0.050	0.00	3.117	2.52	6.183	5.46	9.25	0.84
0.067	0.00	3.133	2.52	6.200	5.46	9.27	0.42
0.083	0.00	3.150	2.52	6.217	5.46	9.28	0.42
0.100	0.00	3.167	2.52	6.233	5.46	9.30	0.42
0.117	0.00	3.183	2.52	6.250	5.46	9.32	0.42
0.133	0.00	3.200	2.52	6.267	2.94	9.33	0.42
0.150	0.00	3.217	2.52	6.283	2.94	9.35	0.42
0.167	0.00	3.233	2.52	6.300	2.94	9.37	0.42
0.183	0.00	3.250	2.52	6.317	2.94	9.38	0.42
0.200	0.00	3.267	7.14	6.333	2.94	9.40	0.42
0.217	0.00	3.283	7.14	6.350	2.94	9.42	0.42
0.233	0.00	3.300	7.14	6.367	2.94	9.43	0.42
0.250	0.00	3.317	7.14	6.383	2.94	9.45	0.42
0.267	0.42	3.333	7.14	6.400	2.94	9.47	0.42
0.283	0.42	3.350	7.14	6.417	2.94	9.48	0.42
0.300	0.42	3.367	7.14	6.433	2.94	9.50	0.42
0.317	0.42	3.383	7.14	6.450	2.94	9.52	0.42
0.333	0.42	3.400	7.14	6.467	2.94	9.53	0.42
0.350	0.42	3.417	7.14	6.483	2.94	9.55	0.42
0.367	0.42	3.433	7.14	6.500	2.94	9.57	0.42
0.383	0.42	3.450	7.14	6.517	2.94	9.58	0.42
0.400	0.42	3.467	7.14	6.533	2.94	9.60	0.42
0.417	0.42	3.483	7.14	6.550	2.94	9.62	0.42
0.433	0.42	3.500	7.14	6.567	2.94	9.63	0.42
0.450	0.42	3.517	7.14	6.583	2.94	9.65	0.42
0.467	0.42	3.533	7.14	6.600	2.94	9.67	0.42
0.483	0.42	3.550	7.14	6.617	2.94	9.68	0.42
0.500	0.42	3.567	7.14	6.633	2.94	9.70	0.42
0.517	0.42	3.583	7.14	6.650	2.94	9.72	0.42
0.533	0.42	3.600	7.14	6.667	2.94	9.73	0.42
0.550	0.42	3.617	7.14	6.683	2.94	9.75	0.42
0.567	0.42	3.633	7.14	6.700	2.94	9.77	0.42
0.583	0.42	3.650	7.14	6.717	2.94	9.78	0.42
0.600	0.42	3.667	7.14	6.733	2.94	9.80	0.42
0.617	0.42	3.683	7.14	6.750	2.94	9.82	0.42
0.633	0.42	3.700	7.14	6.767	2.94	9.83	0.42
0.650	0.42	3.717	7.14	6.783	2.94	9.85	0.42
0.667	0.42	3.733	7.14	6.800	2.94	9.87	0.42
0.683	0.42	3.750	7.14	6.817	2.94	9.88	0.42
0.700	0.42	3.767	7.14	6.833	2.94	9.90	0.42
0.717	0.42	3.783	7.14	6.850	2.94	9.92	0.42
0.733	0.42	3.800	7.14	6.867	2.94	9.93	0.42
0.750	0.42	3.817	7.14	6.883	2.94	9.95	0.42
0.767	0.42	3.833	7.14	6.900	2.94	9.97	0.42
0.783	0.42	3.850	7.14	6.917	2.94	9.98	0.42
0.800	0.42	3.867	7.14	6.933	2.94	10.00	0.42
0.817	0.42	3.883	7.14	6.950	2.94	10.02	0.42
0.833	0.42	3.900	7.14	6.967	2.94	10.03	0.42
0.850	0.42	3.917	7.14	6.983	2.94	10.05	0.42
0.867	0.42	3.933	7.14	7.000	2.94	10.07	0.42
0.883	0.42	3.950	7.14	7.017	2.94	10.08	0.42
0.900	0.42	3.967	7.14	7.033	2.94	10.10	0.42
0.917	0.42	3.983	7.14	7.050	2.94	10.12	0.42
0.933	0.42	4.000	7.14	7.067	2.94	10.13	0.42
0.950	0.42	4.017	7.14	7.083	2.94	10.15	0.42
0.967	0.42	4.033	7.14	7.100	2.94	10.17	0.42
0.983	0.42	4.050	7.14	7.117	2.94	10.18	0.42
1.000	0.42	4.067	7.14	7.133	2.94	10.20	0.42
1.017	0.42	4.083	7.14	7.150	2.94	10.22	0.42
1.033	0.42	4.100	7.14	7.167	2.94	10.23	0.42
1.050	0.42	4.117	7.14	7.183	2.94	10.25	0.42
1.067	0.42	4.133	7.14	7.200	2.94	10.27	0.42
1.083	0.42	4.150	7.14	7.217	2.94	10.28	0.42
1.100	0.42	4.167	7.14	7.233	2.94	10.30	0.42
1.117	0.42	4.183	7.14	7.250	2.94	10.32	0.42
1.133	0.42	4.200	7.14	7.267	1.68	10.33	0.42
1.150	0.42	4.217	7.14	7.283	1.68	10.35	0.42
1.167	0.42	4.233	7.14	7.300	1.68	10.37	0.42
1.183	0.42	4.250	7.14	7.317	1.68	10.38	0.42
1.200	0.42	4.267	19.32	7.333	1.68	10.40	0.42
1.217	0.42	4.283	19.32	7.350	1.68	10.42	0.42
1.233	0.42	4.300	19.32	7.367	1.68	10.43	0.42
1.250	0.42	4.317	19.32	7.383	1.68	10.45	0.42
1.267	0.42	4.333	19.32	7.400	1.68	10.47	0.42
1.283	0.42	4.350	19.32	7.417	1.68	10.48	0.42
1.300	0.42	4.367	19.32	7.433	1.68	10.50	0.42
1.317	0.42	4.383	19.32	7.450	1.68	10.52	0.42
1.333	0.42	4.400	19.32	7.467	1.68	10.53	0.42
1.350	0.42	4.417	19.32	7.483	1.68	10.55	0.42
1.367	0.42	4.433	19.32	7.500	1.68	10.57	0.42
1.383	0.42	4.450	19.32	7.517	1.68	10.58	0.42
1.400	0.42	4.467	19.32	7.533	1.68	10.60	0.42
1.417	0.42	4.483	19.32	7.550	1.68	10.62	0.42
1.433	0.42	4.500	19.32	7.567	1.68	10.63	0.42
1.450	0.42	4.517	19.32	7.583	1.68	10.65	0.42
1.467	0.42	4.533	19.32	7.600	1.68	10.67	0.42
1.483	0.42	4.550	19.32	7.617	1.68	10.68	0.42
1.500	0.42	4.567	19.32	7.633	1.68	10.70	0.42
1.517	0.42	4.583	19.32	7.650	1.68	10.72	0.42
1.533	0.42	4.600	19.32	7.667	1.68	10.73	0.42
1.550	0.42	4.617	19.32	7.683	1.68	10.75	0.42
1.567	0.42	4.633	19.32	7.700	1.68	10.77	0.42
1.583	0.42	4.650	19.32	7.717	1.68	10.78	0.42
1.600	0.42	4.667	19.32	7.733	1.68	10.80	0.42
1.617	0.42	4.683	19.32	7.750	1.68	10.82	0.42
1.633	0.42	4.700	19.32	7.767	1.68	10.83	0.42
1.650	0.42	4.717	19.32	7.783	1.68	10.85	0.42
1.667	0.42	4.733	19.32	7.800	1.68	10.87	0.42
1.683	0.42	4.750	19.32	7.817	1.68	10.88	0.42
1.700	0.42	4.767	19.32	7.833	1.68	10.90	0.42
1.717	0.42	4.783	19.32	7.850	1.68	10.92	0.42
1.733	0.42	4.800	19.32	7.867	1.68	10.93	0.42
1.750	0.42	4.817	19.32	7.883	1.68	10.95	0.42
1.767	0.42	4.833	19.32	7.900	1.68	10.97	0.42
1.783	0.42	4.850	19.32	7.917	1.68	10.98	0.42
1.800	0.42	4.867	19.32	7.933	1.68	11.00	0.42
1.817	0.42	4.883	19.32	7.950	1.68	11.02	0.42
1.833	0.42	4.900	19.32	7.967	1.68	11.03	0.42
1.850	0.42	4.917	19.32	7.983	1.68	11.05	0.42
1.867	0.42	4.933	19.32	8.000	1.68	11.07	0.42
1.883	0.42	4.950	19.32	8.017	1.68	11.08	0.42
1.900	0.42	4.967	19.32	8.033	1.68	11.10	0.42
1.917	0.42	4.983	19.32	8.050	1.68	11.12	0.42
1.933	0.42	5.000	19.32	8.067	1.68	11.13	0.42
1.950	0.42	5.017	19.32	8.083	1.68	11.15	0.42
1.967	0.42	5.033	19.32	8.100	1.68	11.17	0.42
1.983	0.42	5.050	19.32	8.117	1.68	11.18	0.42

2.000	0.42	5.067	19.32	8.133	1.68	11.20	0.42
2.017	0.42	5.083	19.32	8.150	1.68	11.22	0.42
2.033	0.42	5.100	19.32	8.167	1.68	11.23	0.42
2.050	0.42	5.117	19.32	8.183	1.68	11.25	0.42
2.067	0.42	5.133	19.32	8.200	1.68	11.27	0.42
2.083	0.42	5.150	19.32	8.217	1.68	11.28	0.42
2.100	0.42	5.167	19.32	8.233	1.68	11.30	0.42
2.117	0.42	5.183	19.32	8.250	1.68	11.32	0.42
2.133	0.42	5.200	19.32	8.267	0.84	11.33	0.42
2.150	0.42	5.217	19.32	8.283	0.84	11.35	0.42
2.167	0.42	5.233	19.32	8.300	0.84	11.37	0.42
2.183	0.42	5.250	19.31	8.317	0.84	11.38	0.42
2.200	0.42	5.267	5.46	8.333	0.84	11.40	0.42
2.217	0.42	5.283	5.46	8.350	0.84	11.42	0.42
2.233	0.42	5.300	5.46	8.367	0.84	11.43	0.42
2.250	0.42	5.317	5.46	8.383	0.84	11.45	0.42
2.267	2.52	5.333	5.46	8.400	0.84	11.47	0.42
2.283	2.52	5.350	5.46	8.417	0.84	11.48	0.42
2.300	2.52	5.367	5.46	8.433	0.84	11.50	0.42
2.317	2.52	5.383	5.46	8.450	0.84	11.52	0.42
2.333	2.52	5.400	5.46	8.467	0.84	11.53	0.42
2.350	2.52	5.417	5.46	8.483	0.84	11.55	0.42
2.367	2.52	5.433	5.46	8.500	0.84	11.57	0.42
2.383	2.52	5.450	5.46	8.517	0.84	11.58	0.42
2.400	2.52	5.467	5.46	8.533	0.84	11.60	0.42
2.417	2.52	5.483	5.46	8.550	0.84	11.62	0.42
2.433	2.52	5.500	5.46	8.567	0.84	11.63	0.42
2.450	2.52	5.517	5.46	8.583	0.84	11.65	0.42
2.467	2.52	5.533	5.46	8.600	0.84	11.67	0.42
2.483	2.52	5.550	5.46	8.617	0.84	11.68	0.42
2.500	2.52	5.567	5.46	8.633	0.84	11.70	0.42
2.517	2.52	5.583	5.46	8.650	0.84	11.72	0.42
2.533	2.52	5.600	5.46	8.667	0.84	11.73	0.42
2.550	2.52	5.617	5.46	8.683	0.84	11.75	0.42
2.567	2.52	5.633	5.46	8.700	0.84	11.77	0.42
2.583	2.52	5.650	5.46	8.717	0.84	11.78	0.42
2.600	2.52	5.667	5.46	8.733	0.84	11.80	0.42
2.617	2.52	5.683	5.46	8.750	0.84	11.82	0.42
2.633	2.52	5.700	5.46	8.767	0.84	11.83	0.42
2.650	2.52	5.717	5.46	8.783	0.84	11.85	0.42
2.667	2.52	5.733	5.46	8.800	0.84	11.87	0.42
2.683	2.52	5.750	5.46	8.817	0.84	11.88	0.42
2.700	2.52	5.767	5.46	8.833	0.84	11.90	0.42
2.717	2.52	5.783	5.46	8.850	0.84	11.92	0.42
2.733	2.52	5.800	5.46	8.867	0.84	11.93	0.42
2.750	2.52	5.817	5.46	8.883	0.84	11.95	0.42
2.767	2.52	5.833	5.46	8.900	0.84	11.97	0.42
2.783	2.52	5.850	5.46	8.917	0.84	11.98	0.42
2.800	2.52	5.867	5.46	8.933	0.84	12.00	0.42
2.817	2.52	5.883	5.46	8.950	0.84	12.02	0.42
2.833	2.52	5.900	5.46	8.967	0.84	12.03	0.42
2.850	2.52	5.917	5.46	8.983	0.84	12.05	0.42
2.867	2.52	5.933	5.46	9.000	0.84	12.07	0.42
2.883	2.52	5.950	5.46	9.017	0.84	12.08	0.42
2.900	2.52	5.967	5.46	9.033	0.84	12.10	0.42
2.917	2.52	5.983	5.46	9.050	0.84	12.12	0.42
2.933	2.52	6.000	5.46	9.067	0.84	12.13	0.42
2.950	2.52	6.017	5.46	9.083	0.84	12.15	0.42
2.967	2.52	6.033	5.46	9.100	0.84	12.17	0.42
2.983	2.52	6.050	5.46	9.117	0.84	12.18	0.42
3.000	2.52	6.067	5.46	9.133	0.84	12.20	0.42
3.017	2.52	6.083	5.46	9.150	0.84	12.22	0.42
3.033	2.52	6.100	5.46	9.167	0.84	12.23	0.42
3.050	2.52	6.117	5.46	9.183	0.84	12.25	0.42
3.067	2.52	6.133	5.46	9.200	0.84		

Max.Eff.Inten.(mm/hr)=	19.32	11.73	
over (min)	5.00	8.00	
Storage Coeff. (min)=	4.55 (ii)	7.84 (ii)	
Unit Hyd. Tpeak (min)=	5.00	8.00	
Unit Hyd. peak (cms)=	0.24	0.14	
			TOTALS
PEAK FLOW (cms)=	0.06	0.00	0.061 (iii)
TIME TO PEAK (hrs)=	5.22	5.25	5.25
RUNOFF VOLUME (mm)=	40.99	19.22	40.78
TOTAL RAINFALL (mm)=	42.00	42.00	42.00
RUNOFF COEFFICIENT =	0.98	0.46	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7622)| IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0258	0.0650
	0.0108	0.0330	0.0302	0.0725
	0.0167	0.0440	0.0340	0.0820
	0.0204	0.0525	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7623)	1.150	0.061	5.25	40.78
OUTFLOW: ID= 1 (7622)	1.150	0.011	6.43	39.26

PEAK FLOW REDUCTION [Qout/Qin](%)= 17.16
TIME SHIFT OF PEAK FLOW (min)= 71.00
MAXIMUM STORAGE USED (ha.m.)= 0.0322

CALIB | STANDHYD (7629)| ID= 1 DT= 1.0 min |	Area (ha)= 4.09 Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00
	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	4.05	0.04
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.00	0.50
Length (m)=	165.13	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	2.52	6.150	5.46	9.22	0.84
0.033	0.00	3.100	2.52	6.167	5.46	9.23	0.84
0.050	0.00	3.117	2.52	6.183	5.46	9.25	0.84
0.067	0.00	3.133	2.52	6.200	5.46	9.27	0.42
0.083	0.00	3.150	2.52	6.217	5.46	9.28	0.42
0.100	0.00	3.167	2.52	6.233	5.46	9.30	0.42
0.117	0.00	3.183	2.52	6.250	5.46	9.32	0.42
0.133	0.00	3.200	2.52	6.267	2.94	9.33	0.42
0.150	0.00	3.217	2.52	6.283	2.94	9.35	0.42
0.167	0.00	3.233	2.52	6.300	2.94	9.37	0.42
0.183	0.00	3.250	2.52	6.317	2.94	9.38	0.42
0.200	0.00	3.267	7.14	6.333	2.94	9.40	0.42
0.217	0.00	3.283	7.14	6.350	2.94	9.42	0.42
0.233	0.00	3.300	7.14	6.367	2.94	9.43	0.42
0.250	0.00	3.317	7.14	6.383	2.94	9.45	0.42
0.267	0.42	3.333	7.14	6.400	2.94	9.47	0.42
0.283	0.42	3.350	7.14	6.417	2.94	9.48	0.42
0.300	0.42	3.367	7.14	6.433	2.94	9.50	0.42
0.317	0.42	3.383	7.14	6.450	2.94	9.52	0.42
0.333	0.42	3.400	7.14	6.467	2.94	9.53	0.42
0.350	0.42	3.417	7.14	6.483	2.94	9.55	0.42
0.367	0.42	3.433	7.14	6.500	2.94	9.57	0.42
0.383	0.42	3.450	7.14	6.517	2.94	9.58	0.42
0.400	0.42	3.467	7.14	6.533	2.94	9.60	0.42
0.417	0.42	3.483	7.14	6.550	2.94	9.62	0.42
0.433	0.42	3.500	7.14	6.567	2.94	9.63	0.42
0.450	0.42	3.517	7.14	6.583	2.94	9.65	0.42
0.467	0.42	3.533	7.14	6.600	2.94	9.67	0.42

0.483	0.42	3.550	7.14	6.617	2.94	9.68	0.42
0.500	0.42	3.567	7.14	6.633	2.94	9.70	0.42
0.517	0.42	3.583	7.14	6.650	2.94	9.72	0.42
0.533	0.42	3.600	7.14	6.667	2.94	9.73	0.42
0.550	0.42	3.617	7.14	6.683	2.94	9.75	0.42
0.567	0.42	3.633	7.14	6.700	2.94	9.77	0.42
0.583	0.42	3.650	7.14	6.717	2.94	9.78	0.42
0.600	0.42	3.667	7.14	6.733	2.94	9.80	0.42
0.617	0.42	3.683	7.14	6.750	2.94	9.82	0.42
0.633	0.42	3.700	7.14	6.767	2.94	9.83	0.42
0.650	0.42	3.717	7.14	6.783	2.94	9.85	0.42
0.667	0.42	3.733	7.14	6.800	2.94	9.87	0.42
0.683	0.42	3.750	7.14	6.817	2.94	9.88	0.42
0.700	0.42	3.767	7.14	6.833	2.94	9.90	0.42
0.717	0.42	3.783	7.14	6.850	2.94	9.92	0.42
0.733	0.42	3.800	7.14	6.867	2.94	9.93	0.42
0.750	0.42	3.817	7.14	6.883	2.94	9.95	0.42
0.767	0.42	3.833	7.14	6.900	2.94	9.97	0.42
0.783	0.42	3.850	7.14	6.917	2.94	9.98	0.42
0.800	0.42	3.867	7.14	6.933	2.94	10.00	0.42
0.817	0.42	3.883	7.14	6.950	2.94	10.02	0.42
0.833	0.42	3.900	7.14	6.967	2.94	10.03	0.42
0.850	0.42	3.917	7.14	6.983	2.94	10.05	0.42
0.867	0.42	3.933	7.14	7.000	2.94	10.07	0.42
0.883	0.42	3.950	7.14	7.017	2.94	10.08	0.42
0.900	0.42	3.967	7.14	7.033	2.94	10.10	0.42
0.917	0.42	3.983	7.14	7.050	2.94	10.12	0.42
0.933	0.42	4.000	7.14	7.067	2.94	10.13	0.42
0.950	0.42	4.017	7.14	7.083	2.94	10.15	0.42
0.967	0.42	4.033	7.14	7.100	2.94	10.17	0.42
0.983	0.42	4.050	7.14	7.117	2.94	10.18	0.42
1.000	0.42	4.067	7.14	7.133	2.94	10.20	0.42
1.017	0.42	4.083	7.14	7.150	2.94	10.22	0.42
1.033	0.42	4.100	7.14	7.167	2.94	10.23	0.42
1.050	0.42	4.117	7.14	7.183	2.94	10.25	0.42
1.067	0.42	4.133	7.14	7.200	2.94	10.27	0.42
1.083	0.42	4.150	7.14	7.217	2.94	10.28	0.42
1.100	0.42	4.167	7.14	7.233	2.94	10.30	0.42
1.117	0.42	4.183	7.14	7.250	2.94	10.32	0.42
1.133	0.42	4.200	7.14	7.267	1.68	10.33	0.42
1.150	0.42	4.217	7.14	7.283	1.68	10.35	0.42
1.167	0.42	4.233	7.14	7.300	1.68	10.37	0.42
1.183	0.42	4.250	7.14	7.317	1.68	10.38	0.42
1.200	0.42	4.267	19.32	7.333	1.68	10.40	0.42
1.217	0.42	4.283	19.32	7.350	1.68	10.42	0.42
1.233	0.42	4.300	19.32	7.367	1.68	10.43	0.42
1.250	0.42	4.317	19.32	7.383	1.68	10.45	0.42
1.267	0.42	4.333	19.32	7.400	1.68	10.47	0.42
1.283	0.42	4.350	19.32	7.417	1.68	10.48	0.42
1.300	0.42	4.367	19.32	7.433	1.68	10.50	0.42
1.317	0.42	4.383	19.32	7.450	1.68	10.52	0.42
1.333	0.42	4.400	19.32	7.467	1.68	10.53	0.42
1.350	0.42	4.417	19.32	7.483	1.68	10.55	0.42
1.367	0.42	4.433	19.32	7.500	1.68	10.57	0.42
1.383	0.42	4.450	19.32	7.517	1.68	10.58	0.42
1.400	0.42	4.467	19.32	7.533	1.68	10.60	0.42
1.417	0.42	4.483	19.32	7.550	1.68	10.62	0.42
1.433	0.42	4.500	19.32	7.567	1.68	10.63	0.42
1.450	0.42	4.517	19.32	7.583	1.68	10.65	0.42
1.467	0.42	4.533	19.32	7.600	1.68	10.67	0.42
1.483	0.42	4.550	19.32	7.617	1.68	10.68	0.42
1.500	0.42	4.567	19.32	7.633	1.68	10.70	0.42
1.517	0.42	4.583	19.32	7.650	1.68	10.72	0.42
1.533	0.42	4.600	19.32	7.667	1.68	10.73	0.42
1.550	0.42	4.617	19.32	7.683	1.68	10.75	0.42
1.567	0.42	4.633	19.32	7.700	1.68	10.77	0.42
1.583	0.42	4.650	19.32	7.717	1.68	10.78	0.42
1.600	0.42	4.667	19.32	7.733	1.68	10.80	0.42
1.617	0.42	4.683	19.32	7.750	1.68	10.82	0.42
1.633	0.42	4.700	19.32	7.767	1.68	10.83	0.42
1.650	0.42	4.717	19.32	7.783	1.68	10.85	0.42
1.667	0.42	4.733	19.32	7.800	1.68	10.87	0.42
1.683	0.42	4.750	19.32	7.817	1.68	10.88	0.42
1.700	0.42	4.767	19.32	7.833	1.68	10.90	0.42
1.717	0.42	4.783	19.32	7.850	1.68	10.92	0.42
1.733	0.42	4.800	19.32	7.867	1.68	10.93	0.42
1.750	0.42	4.817	19.32	7.883	1.68	10.95	0.42
1.767	0.42	4.833	19.32	7.900	1.68	10.97	0.42
1.783	0.42	4.850	19.32	7.917	1.68	10.98	0.42
1.800	0.42	4.867	19.32	7.933	1.68	11.00	0.42
1.817	0.42	4.883	19.32	7.950	1.68	11.02	0.42
1.833	0.42	4.900	19.32	7.967	1.68	11.03	0.42
1.850	0.42	4.917	19.32	7.983	1.68	11.05	0.42
1.867	0.42	4.933	19.32	8.000	1.68	11.07	0.42
1.883	0.42	4.950	19.32	8.017	1.68	11.08	0.42
1.900	0.42	4.967	19.32	8.033	1.68	11.10	0.42
1.917	0.42	4.983	19.32	8.050	1.68	11.12	0.42
1.933	0.42	5.000	19.32	8.067	1.68	11.13	0.42
1.950	0.42	5.017	19.32	8.083	1.68	11.15	0.42
1.967	0.42	5.033	19.32	8.100	1.68	11.17	0.42
1.983	0.42	5.050	19.32	8.117	1.68	11.18	0.42
2.000	0.42	5.067	19.32	8.133	1.68	11.20	0.42
2.017	0.42	5.083	19.32	8.150	1.68	11.22	0.42
2.033	0.42	5.100	19.32	8.167	1.68	11.23	0.42
2.050	0.42	5.117	19.32	8.183	1.68	11.25	0.42
2.067	0.42	5.133	19.32	8.200	1.68	11.27	0.42
2.083	0.42	5.150	19.32	8.217	1.68	11.28	0.42
2.100	0.42	5.167	19.32	8.233	1.68	11.30	0.42
2.117	0.42	5.183	19.32	8.250	1.68	11.32	0.42
2.133	0.42	5.200	19.32	8.267	0.84	11.33	0.42
2.150	0.42	5.217	19.32	8.283	0.84	11.35	0.42
2.167	0.42	5.233	19.32	8.300	0.84	11.37	0.42
2.183	0.42	5.250	19.31	8.317	0.84	11.38	0.42
2.200	0.42	5.267	5.46	8.333	0.84	11.40	0.42
2.217	0.42	5.283	5.46	8.350	0.84	11.42	0.42
2.233	0.42	5.300	5.46	8.367	0.84	11.43	0.42
2.250	0.42	5.317	5.46	8.383	0.84	11.45	0.42
2.267	2.52	5.333	5.46	8.400	0.84	11.47	0.42
2.283	2.52	5.350	5.46	8.417	0.84	11.48	0.42
2.300	2.52	5.367	5.46	8.433	0.84	11.50	0.42
2.317	2.52	5.383	5.46	8.450	0.84	11.52	0.42
2.333	2.52	5.400	5.46	8.467	0.84	11.53	0.42
2.350	2.52	5.417	5.46	8.483	0.84	11.55	0.42
2.367	2.52	5.433	5.46	8.500	0.84	11.57	0.42
2.383	2.52	5.450	5.46	8.517	0.84	11.58	0.42
2.400	2.52	5.467	5.46	8.533	0.84	11.60	0.42
2.417	2.52	5.483	5.46	8.550	0.84	11.62	0.42
2.433	2.52	5.500	5.46	8.567	0.84	11.63	0.42
2.450	2.52	5.517	5.46	8.583	0.84	11.65	0.42
2.467	2.52	5.533	5.46	8.600	0.84	11.67	0.42
2.483	2.52	5.550	5.46	8.617	0.84	11.68	0.42
2.500	2.52	5.567	5.46	8.633	0.84	11.70	0.42
2.517	2.52	5.583	5.46	8.650	0.84	11.72	0.42
2.533	2.52	5.600	5.46	8.667	0.84	11.73	0.42
2.550	2.52	5.617	5.46	8.683	0.84	11.75	0.42
2.567	2.52	5.633	5.46	8.700	0.84	11.77	0.42
2.583	2.52	5.650	5.46	8.717	0.84	11.78	0.42
2.600	2.52	5.667	5.46	8.733	0.84	11.80	0.42
2.617	2.52	5.683	5.46	8.750	0.84	11.82	0.42
2.633	2.52	5.700	5.46	8.767	0.84	11.83	0.42
2.650	2.52	5.717	5.46	8.783	0.84	11.85	0.42
2.667	2.52	5.733	5.46	8.800	0.84	11.87	0.42
2.683	2.52	5.750	5.46	8.817	0.84	11.88	0.42
2.700	2.52	5.767	5.46	8.833	0.84	11.90	0.42
2.717	2.52	5.783	5.46	8.850	0.84	11.92	0.42
2.733	2.52	5.800	5.46	8.867	0.84	11.93	0.42
2.750	2.52	5.817	5.46	8.883	0.84	11.95	0.42
2.767	2.52	5.833	5.46	8.900	0.84	11.97	0.42
2.783	2.52	5.850	5.46	8.917	0.84	11.98	0.42
2.800	2.52	5.867	5.46	8.933	0.84	12.00	0.42
2.817	2.52	5.883	5.46	8.950	0.84	12.02	0.42
2.833	2.52	5.900	5.46	8.967	0.84	12.03	0.42
2.850	2.52	5.917	5.46	8.983	0.84	12.05	0.42
2.867	2.52	5.933	5.46	9.000	0.84	12.07	0.42
2.883	2.52	5.950	5.46	9.017	0.84	12.08	0.42
2.900	2.52	5.967	5.46	9.033	0.84	12.10	0.42
2.917	2.52	5.983	5.46	9.050	0.84	12.12	0.42
2.933	2.52	6.000	5.46	9.067	0.84	12.13	0.42
2.950	2.52	6.017	5.46	9.083	0.84	12.15	0.42
2.967	2.52	6.033	5.46	9.100	0.84	12.17	0.42
2.983	2.52	6.050	5.46	9.117	0.84	12.18	0.42
3.000	2.52	6.067	5.46	9.133	0.84	12.20	0.42

3.017	2.52	6.083	5.46	9.150	0.84	12.22	0.42
3.033	2.52	6.100	5.46	9.167	0.84	12.23	0.42
3.050	2.52	6.117	5.46	9.183	0.84	12.25	0.42
3.067	2.52	6.133	5.46	9.200	0.84		

Max.Eff.Inten.(mm/hr)=	19.32	11.73	
over (min)	7.00	10.00	
Storage Coeff. (min)=	6.66 (ii)	9.95 (ii)	
Unit Hyd. Tpeak (min)=	7.00	10.00	
Unit Hyd. peak (cms)=	0.17	0.11	
			TOTALS
PEAK FLOW (cms)=	0.22	0.00	0.219 (iii)
TIME TO PEAK (hrs)=	5.25	5.27	5.25
RUNOFF VOLUME (mm)=	41.00	19.22	40.78
TOTAL RAINFALL (mm)=	42.00	42.00	42.00
RUNOFF COEFFICIENT =	0.98	0.46	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7630)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0826	0.2320
	0.0347	0.1170	0.0967	0.2609
	0.0534	0.1580	0.1090	0.2940
	0.0655	0.1890	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2	(7629)	4.090	0.219	5.25	40.78
OUTFLOW: ID= 1	(7630)	4.090	0.035	6.65	38.70

PEAK FLOW REDUCTION [Qout/Qin](%)= 15.85
TIME SHIFT OF PEAK FLOW (min)= 84.00
MAXIMUM STORAGE USED (ha.m.)= 0.1167

CALIB			
STANDHYD (7631)	Area (ha)= 3.91		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	3.87	0.04	
Dep. Storage (mm)=	1.00	1.50	
Average Slope (%)=	1.00	0.50	
Length (m)=	161.45	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	2.52	6.150	5.46	9.22	0.84
0.033	0.00	3.100	2.52	6.167	5.46	9.23	0.84
0.050	0.00	3.117	2.52	6.183	5.46	9.25	0.84
0.067	0.00	3.133	2.52	6.200	5.46	9.27	0.42
0.083	0.00	3.150	2.52	6.217	5.46	9.28	0.42
0.100	0.00	3.167	2.52	6.233	5.46	9.30	0.42
0.117	0.00	3.183	2.52	6.250	5.46	9.32	0.42
0.133	0.00	3.200	2.52	6.267	2.94	9.33	0.42
0.150	0.00	3.217	2.52	6.283	2.94	9.35	0.42
0.167	0.00	3.233	2.52	6.300	2.94	9.37	0.42
0.183	0.00	3.250	2.52	6.317	2.94	9.38	0.42
0.200	0.00	3.267	7.14	6.333	2.94	9.40	0.42
0.217	0.00	3.283	7.14	6.350	2.94	9.42	0.42
0.233	0.00	3.300	7.14	6.367	2.94	9.43	0.42
0.250	0.00	3.317	7.14	6.383	2.94	9.45	0.42
0.267	0.42	3.333	7.14	6.400	2.94	9.47	0.42
0.283	0.42	3.350	7.14	6.417	2.94	9.48	0.42
0.300	0.42	3.367	7.14	6.433	2.94	9.50	0.42
0.317	0.42	3.383	7.14	6.450	2.94	9.52	0.42
0.333	0.42	3.400	7.14	6.467	2.94	9.53	0.42
0.350	0.42	3.417	7.14	6.483	2.94	9.55	0.42
0.367	0.42	3.433	7.14	6.500	2.94	9.57	0.42
0.383	0.42	3.450	7.14	6.517	2.94	9.58	0.42
0.400	0.42	3.467	7.14	6.533	2.94	9.60	0.42
0.417	0.42	3.483	7.14	6.550	2.94	9.62	0.42
0.433	0.42	3.500	7.14	6.567	2.94	9.63	0.42
0.450	0.42	3.517	7.14	6.583	2.94	9.65	0.42
0.467	0.42	3.533	7.14	6.600	2.94	9.67	0.42
0.483	0.42	3.550	7.14	6.617	2.94	9.68	0.42
0.500	0.42	3.567	7.14	6.633	2.94	9.70	0.42
0.517	0.42	3.583	7.14	6.650	2.94	9.72	0.42
0.533	0.42	3.600	7.14	6.667	2.94	9.73	0.42
0.550	0.42	3.617	7.14	6.683	2.94	9.75	0.42
0.567	0.42	3.633	7.14	6.700	2.94	9.77	0.42
0.583	0.42	3.650	7.14	6.717	2.94	9.78	0.42
0.600	0.42	3.667	7.14	6.733	2.94	9.80	0.42
0.617	0.42	3.683	7.14	6.750	2.94	9.82	0.42
0.633	0.42	3.700	7.14	6.767	2.94	9.83	0.42
0.650	0.42	3.717	7.14	6.783	2.94	9.85	0.42
0.667	0.42	3.733	7.14	6.800	2.94	9.87	0.42
0.683	0.42	3.750	7.14	6.817	2.94	9.88	0.42
0.700	0.42	3.767	7.14	6.833	2.94	9.90	0.42
0.717	0.42	3.783	7.14	6.850	2.94	9.92	0.42
0.733	0.42	3.800	7.14	6.867	2.94	9.93	0.42
0.750	0.42	3.817	7.14	6.883	2.94	9.95	0.42
0.767	0.42	3.833	7.14	6.900	2.94	9.97	0.42
0.783	0.42	3.850	7.14	6.917	2.94	9.98	0.42
0.800	0.42	3.867	7.14	6.933	2.94	10.00	0.42
0.817	0.42	3.883	7.14	6.950	2.94	10.02	0.42
0.833	0.42	3.900	7.14	6.967	2.94	10.03	0.42
0.850	0.42	3.917	7.14	6.983	2.94	10.05	0.42
0.867	0.42	3.933	7.14	7.000	2.94	10.07	0.42
0.883	0.42	3.950	7.14	7.017	2.94	10.08	0.42
0.900	0.42	3.967	7.14	7.033	2.94	10.10	0.42
0.917	0.42	3.983	7.14	7.050	2.94	10.12	0.42
0.933	0.42	4.000	7.14	7.067	2.94	10.13	0.42
0.950	0.42	4.017	7.14	7.083	2.94	10.15	0.42
0.967	0.42	4.033	7.14	7.100	2.94	10.17	0.42
0.983	0.42	4.050	7.14	7.117	2.94	10.18	0.42
1.000	0.42	4.067	7.14	7.133	2.94	10.20	0.42
1.017	0.42	4.083	7.14	7.150	2.94	10.22	0.42
1.033	0.42	4.100	7.14	7.167	2.94	10.23	0.42
1.050	0.42	4.117	7.14	7.183	2.94	10.25	0.42
1.067	0.42	4.133	7.14	7.200	2.94	10.27	0.42
1.083	0.42	4.150	7.14	7.217	2.94	10.28	0.42
1.100	0.42	4.167	7.14	7.233	2.94	10.30	0.42
1.117	0.42	4.183	7.14	7.250	2.94	10.32	0.42
1.133	0.42	4.200	7.14	7.267	1.68	10.33	0.42
1.150	0.42	4.217	7.14	7.283	1.68	10.35	0.42
1.167	0.42	4.233	7.14	7.300	1.68	10.37	0.42
1.183	0.42	4.250	7.14	7.317	1.68	10.38	0.42
1.200	0.42	4.267	19.32	7.333	1.68	10.40	0.42
1.217	0.42	4.283	19.32	7.350	1.68	10.42	0.42
1.233	0.42	4.300	19.32	7.367	1.68	10.43	0.42
1.250	0.42	4.317	19.32	7.383	1.68	10.45	0.42
1.267	0.42	4.333	19.32	7.400	1.68	10.47	0.42
1.283	0.42	4.350	19.32	7.417	1.68	10.48	0.42
1.300	0.42	4.367	19.32	7.433	1.68	10.50	0.42
1.317	0.42	4.383	19.32	7.450	1.68	10.52	0.42
1.333	0.42	4.400	19.32	7.467	1.68	10.53	0.42
1.350	0.42	4.417	19.32	7.483	1.68	10.55	0.42
1.367	0.42	4.433	19.32	7.500	1.68	10.57	0.42
1.383	0.42	4.450	19.32	7.517	1.68	10.58	0.42
1.400	0.42	4.467	19.32	7.533	1.68	10.60	0.42
1.417	0.42	4.483	19.32	7.550	1.68	10.62	0.42
1.433	0.42	4.500	19.32	7.567	1.68	10.63	0.42
1.450	0.42	4.517	19.32	7.583	1.68	10.65	0.42
1.467	0.42	4.533	19.32	7.600	1.68	10.67	0.42
1.483	0.42	4.550	19.32	7.617	1.68	10.68	0.42

1.500	0.42	4.567	19.32	7.633	1.68	10.70	0.42
1.517	0.42	4.583	19.32	7.650	1.68	10.72	0.42
1.533	0.42	4.600	19.32	7.667	1.68	10.73	0.42
1.550	0.42	4.617	19.32	7.683	1.68	10.75	0.42
1.567	0.42	4.633	19.32	7.700	1.68	10.77	0.42
1.583	0.42	4.650	19.32	7.717	1.68	10.78	0.42
1.600	0.42	4.667	19.32	7.733	1.68	10.80	0.42
1.617	0.42	4.683	19.32	7.750	1.68	10.82	0.42
1.633	0.42	4.700	19.32	7.767	1.68	10.83	0.42
1.650	0.42	4.717	19.32	7.783	1.68	10.85	0.42
1.667	0.42	4.733	19.32	7.800	1.68	10.87	0.42
1.683	0.42	4.750	19.32	7.817	1.68	10.88	0.42
1.700	0.42	4.767	19.32	7.833	1.68	10.90	0.42
1.717	0.42	4.783	19.32	7.850	1.68	10.92	0.42
1.733	0.42	4.800	19.32	7.867	1.68	10.93	0.42
1.750	0.42	4.817	19.32	7.883	1.68	10.95	0.42
1.767	0.42	4.833	19.32	7.900	1.68	10.97	0.42
1.783	0.42	4.850	19.32	7.917	1.68	10.98	0.42
1.800	0.42	4.867	19.32	7.933	1.68	11.00	0.42
1.817	0.42	4.883	19.32	7.950	1.68	11.02	0.42
1.833	0.42	4.900	19.32	7.967	1.68	11.03	0.42
1.850	0.42	4.917	19.32	7.983	1.68	11.05	0.42
1.867	0.42	4.933	19.32	8.000	1.68	11.07	0.42
1.883	0.42	4.950	19.32	8.017	1.68	11.08	0.42
1.900	0.42	4.967	19.32	8.033	1.68	11.10	0.42
1.917	0.42	4.983	19.32	8.050	1.68	11.12	0.42
1.933	0.42	5.000	19.32	8.067	1.68	11.13	0.42
1.950	0.42	5.017	19.32	8.083	1.68	11.15	0.42
1.967	0.42	5.033	19.32	8.100	1.68	11.17	0.42
1.983	0.42	5.050	19.32	8.117	1.68	11.18	0.42
2.000	0.42	5.067	19.32	8.133	1.68	11.20	0.42
2.017	0.42	5.083	19.32	8.150	1.68	11.22	0.42
2.033	0.42	5.100	19.32	8.167	1.68	11.23	0.42
2.050	0.42	5.117	19.32	8.183	1.68	11.25	0.42
2.067	0.42	5.133	19.32	8.200	1.68	11.27	0.42
2.083	0.42	5.150	19.32	8.217	1.68	11.28	0.42
2.100	0.42	5.167	19.32	8.233	1.68	11.30	0.42
2.117	0.42	5.183	19.32	8.250	1.68	11.32	0.42
2.133	0.42	5.200	19.32	8.267	0.84	11.33	0.42
2.150	0.42	5.217	19.32	8.283	0.84	11.35	0.42
2.167	0.42	5.233	19.32	8.300	0.84	11.37	0.42
2.183	0.42	5.250	19.31	8.317	0.84	11.38	0.42
2.200	0.42	5.267	5.46	8.333	0.84	11.40	0.42
2.217	0.42	5.283	5.46	8.350	0.84	11.42	0.42
2.233	0.42	5.300	5.46	8.367	0.84	11.43	0.42
2.250	0.42	5.317	5.46	8.383	0.84	11.45	0.42
2.267	2.52	5.333	5.46	8.400	0.84	11.47	0.42
2.283	2.52	5.350	5.46	8.417	0.84	11.48	0.42
2.300	2.52	5.367	5.46	8.433	0.84	11.50	0.42
2.317	2.52	5.383	5.46	8.450	0.84	11.52	0.42
2.333	2.52	5.400	5.46	8.467	0.84	11.53	0.42
2.350	2.52	5.417	5.46	8.483	0.84	11.55	0.42
2.367	2.52	5.433	5.46	8.500	0.84	11.57	0.42
2.383	2.52	5.450	5.46	8.517	0.84	11.58	0.42
2.400	2.52	5.467	5.46	8.533	0.84	11.60	0.42
2.417	2.52	5.483	5.46	8.550	0.84	11.62	0.42
2.433	2.52	5.500	5.46	8.567	0.84	11.63	0.42
2.450	2.52	5.517	5.46	8.583	0.84	11.65	0.42
2.467	2.52	5.533	5.46	8.600	0.84	11.67	0.42
2.483	2.52	5.550	5.46	8.617	0.84	11.68	0.42
2.500	2.52	5.567	5.46	8.633	0.84	11.70	0.42
2.517	2.52	5.583	5.46	8.650	0.84	11.72	0.42
2.533	2.52	5.600	5.46	8.667	0.84	11.73	0.42
2.550	2.52	5.617	5.46	8.683	0.84	11.75	0.42
2.567	2.52	5.633	5.46	8.700	0.84	11.77	0.42
2.583	2.52	5.650	5.46	8.717	0.84	11.78	0.42
2.600	2.52	5.667	5.46	8.733	0.84	11.80	0.42
2.617	2.52	5.683	5.46	8.750	0.84	11.82	0.42
2.633	2.52	5.700	5.46	8.767	0.84	11.83	0.42
2.650	2.52	5.717	5.46	8.783	0.84	11.85	0.42
2.667	2.52	5.733	5.46	8.800	0.84	11.87	0.42
2.683	2.52	5.750	5.46	8.817	0.84	11.88	0.42
2.700	2.52	5.767	5.46	8.833	0.84	11.90	0.42
2.717	2.52	5.783	5.46	8.850	0.84	11.92	0.42
2.733	2.52	5.800	5.46	8.867	0.84	11.93	0.42
2.750	2.52	5.817	5.46	8.883	0.84	11.95	0.42
2.767	2.52	5.833	5.46	8.900	0.84	11.97	0.42
2.783	2.52	5.850	5.46	8.917	0.84	11.98	0.42
2.800	2.52	5.867	5.46	8.933	0.84	12.00	0.42
2.817	2.52	5.883	5.46	8.950	0.84	12.02	0.42
2.833	2.52	5.900	5.46	8.967	0.84	12.03	0.42
2.850	2.52	5.917	5.46	8.983	0.84	12.05	0.42
2.867	2.52	5.933	5.46	9.000	0.84	12.07	0.42
2.883	2.52	5.950	5.46	9.017	0.84	12.08	0.42
2.900	2.52	5.967	5.46	9.033	0.84	12.10	0.42
2.917	2.52	5.983	5.46	9.050	0.84	12.12	0.42
2.933	2.52	6.000	5.46	9.067	0.84	12.13	0.42
2.950	2.52	6.017	5.46	9.083	0.84	12.15	0.42
2.967	2.52	6.033	5.46	9.100	0.84	12.17	0.42
2.983	2.52	6.050	5.46	9.117	0.84	12.18	0.42
3.000	2.52	6.067	5.46	9.133	0.84	12.20	0.42
3.017	2.52	6.083	5.46	9.150	0.84	12.22	0.42
3.033	2.52	6.100	5.46	9.167	0.84	12.23	0.42
3.050	2.52	6.117	5.46	9.183	0.84	12.25	0.42
3.067	2.52	6.133	5.46	9.200	0.84		

Max.Eff.Inten.(mm/hr)=		19.32	11.73
over (min)		7.00	10.00
Storage Coeff. (min)=		6.57 (ii)	9.86 (ii)
Unit Hyd. Tpeak (min)=		7.00	10.00
Unit Hyd. peak (cms)=		0.17	0.11
			TOTALS
PEAK FLOW	(cms)=	0.21	0.00	0.209 (iii)
TIME TO PEAK	(hrs)=	5.25	5.27	5.25
RUNOFF VOLUME	(mm)=	41.00	19.22	40.78
TOTAL RAINFALL	(mm)=	42.00	42.00	42.00
RUNOFF COEFFICIENT	=	0.98	0.46	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7632) IN= 2---> OUT= 1 / DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0792	0.2220
	0.0333	0.1130	0.0928	0.2500
	0.0512	0.1510	0.1046	0.2810
	0.0629	0.1810	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7631)		3.910	0.209	5.25	40.78
OUTFLOW: ID= 1 (7632)		3.910	0.033	6.67	38.66

PEAK FLOW REDUCTION [Qout/Qin](%)= 15.76
TIME SHIFT OF PEAK FLOW (min)= 85.00
MAXIMUM STORAGE USED (ha.m.)= 0.1117

CALIB / STANDHYD (7641) / ID= 1 DT= 1.0 min	Area (ha)= 2.21 / Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.19	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	121.38	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	2.52	6.150	5.46	9.22	0.84
0.033	0.00	3.100	2.52	6.167	5.46	9.23	0.84
0.050	0.00	3.117	2.52	6.183	5.46	9.25	0.84
0.067	0.00	3.133	2.52	6.200	5.46	9.27	0.42
0.083	0.00	3.150	2.52	6.217	5.46	9.28	0.42
0.100	0.00	3.167	2.52	6.233	5.46	9.30	0.42
0.117	0.00	3.183	2.52	6.250	5.46	9.32	0.42
0.133	0.00	3.200	2.52	6.267	2.94	9.33	0.42
0.150	0.00	3.217	2.52	6.283	2.94	9.35	0.42
0.167	0.00	3.233	2.52	6.300	2.94	9.37	0.42
0.183	0.00	3.250	2.52	6.317	2.94	9.38	0.42
0.200	0.00	3.267	7.14	6.333	2.94	9.40	0.42
0.217	0.00	3.283	7.14	6.350	2.94	9.42	0.42
0.233	0.00	3.300	7.14	6.367	2.94	9.43	0.42
0.250	0.00	3.317	7.14	6.383	2.94	9.45	0.42
0.267	0.42	3.333	7.14	6.400	2.94	9.47	0.42
0.283	0.42	3.350	7.14	6.417	2.94	9.48	0.42
0.300	0.42	3.367	7.14	6.433	2.94	9.50	0.42
0.317	0.42	3.383	7.14	6.450	2.94	9.52	0.42
0.333	0.42	3.400	7.14	6.467	2.94	9.53	0.42
0.350	0.42	3.417	7.14	6.483	2.94	9.55	0.42
0.367	0.42	3.433	7.14	6.500	2.94	9.57	0.42
0.383	0.42	3.450	7.14	6.517	2.94	9.58	0.42
0.400	0.42	3.467	7.14	6.533	2.94	9.60	0.42
0.417	0.42	3.483	7.14	6.550	2.94	9.62	0.42
0.433	0.42	3.500	7.14	6.567	2.94	9.63	0.42
0.450	0.42	3.517	7.14	6.583	2.94	9.65	0.42
0.467	0.42	3.533	7.14	6.600	2.94	9.67	0.42
0.483	0.42	3.550	7.14	6.617	2.94	9.68	0.42
0.500	0.42	3.567	7.14	6.633	2.94	9.70	0.42
0.517	0.42	3.583	7.14	6.650	2.94	9.72	0.42
0.533	0.42	3.600	7.14	6.667	2.94	9.73	0.42
0.550	0.42	3.617	7.14	6.683	2.94	9.75	0.42
0.567	0.42	3.633	7.14	6.700	2.94	9.77	0.42
0.583	0.42	3.650	7.14	6.717	2.94	9.78	0.42
0.600	0.42	3.667	7.14	6.733	2.94	9.80	0.42
0.617	0.42	3.683	7.14	6.750	2.94	9.82	0.42
0.633	0.42	3.700	7.14	6.767	2.94	9.83	0.42
0.650	0.42	3.717	7.14	6.783	2.94	9.85	0.42
0.667	0.42	3.733	7.14	6.800	2.94	9.87	0.42
0.683	0.42	3.750	7.14	6.817	2.94	9.88	0.42
0.700	0.42	3.767	7.14	6.833	2.94	9.90	0.42
0.717	0.42	3.783	7.14	6.850	2.94	9.92	0.42
0.733	0.42	3.800	7.14	6.867	2.94	9.93	0.42
0.750	0.42	3.817	7.14	6.883	2.94	9.95	0.42
0.767	0.42	3.833	7.14	6.900	2.94	9.97	0.42
0.783	0.42	3.850	7.14	6.917	2.94	9.98	0.42
0.800	0.42	3.867	7.14	6.933	2.94	10.00	0.42
0.817	0.42	3.883	7.14	6.950	2.94	10.02	0.42
0.833	0.42	3.900	7.14	6.967	2.94	10.03	0.42
0.850	0.42	3.917	7.14	6.983	2.94	10.05	0.42
0.867	0.42	3.933	7.14	7.000	2.94	10.07	0.42
0.883	0.42	3.950	7.14	7.017	2.94	10.08	0.42
0.900	0.42	3.967	7.14	7.033	2.94	10.10	0.42
0.917	0.42	3.983	7.14	7.050	2.94	10.12	0.42
0.933	0.42	4.000	7.14	7.067	2.94	10.13	0.42
0.950	0.42	4.017	7.14	7.083	2.94	10.15	0.42
0.967	0.42	4.033	7.14	7.100	2.94	10.17	0.42
0.983	0.42	4.050	7.14	7.117	2.94	10.18	0.42
1.000	0.42	4.067	7.14	7.133	2.94	10.20	0.42
1.017	0.42	4.083	7.14	7.150	2.94	10.22	0.42
1.033	0.42	4.100	7.14	7.167	2.94	10.23	0.42
1.050	0.42	4.117	7.14	7.183	2.94	10.25	0.42
1.067	0.42	4.133	7.14	7.200	2.94	10.27	0.42
1.083	0.42	4.150	7.14	7.217	2.94	10.28	0.42
1.100	0.42	4.167	7.14	7.233	2.94	10.30	0.42
1.117	0.42	4.183	7.14	7.250	2.94	10.32	0.42
1.133	0.42	4.200	7.14	7.267	1.68	10.33	0.42
1.150	0.42	4.217	7.14	7.283	1.68	10.35	0.42
1.167	0.42	4.233	7.14	7.300	1.68	10.37	0.42
1.183	0.42	4.250	7.14	7.317	1.68	10.38	0.42
1.200	0.42	4.267	19.32	7.333	1.68	10.40	0.42
1.217	0.42	4.283	19.32	7.350	1.68	10.42	0.42
1.233	0.42	4.300	19.32	7.367	1.68	10.43	0.42
1.250	0.42	4.317	19.32	7.383	1.68	10.45	0.42
1.267	0.42	4.333	19.32	7.400	1.68	10.47	0.42
1.283	0.42	4.350	19.32	7.417	1.68	10.48	0.42
1.300	0.42	4.367	19.32	7.433	1.68	10.50	0.42
1.317	0.42	4.383	19.32	7.450	1.68	10.52	0.42
1.333	0.42	4.400	19.32	7.467	1.68	10.53	0.42
1.350	0.42	4.417	19.32	7.483	1.68	10.55	0.42
1.367	0.42	4.433	19.32	7.500	1.68	10.57	0.42
1.383	0.42	4.450	19.32	7.517	1.68	10.58	0.42
1.400	0.42	4.467	19.32	7.533	1.68	10.60	0.42
1.417	0.42	4.483	19.32	7.550	1.68	10.62	0.42
1.433	0.42	4.500	19.32	7.567	1.68	10.63	0.42
1.450	0.42	4.517	19.32	7.583	1.68	10.65	0.42
1.467	0.42	4.533	19.32	7.600	1.68	10.67	0.42
1.483	0.42	4.550	19.32	7.617	1.68	10.68	0.42
1.500	0.42	4.567	19.32	7.633	1.68	10.70	0.42
1.517	0.42	4.583	19.32	7.650	1.68	10.72	0.42
1.533	0.42	4.600	19.32	7.667	1.68	10.73	0.42
1.550	0.42	4.617	19.32	7.683	1.68	10.75	0.42
1.567	0.42	4.633	19.32	7.700	1.68	10.77	0.42
1.583	0.42	4.650	19.32	7.717	1.68	10.78	0.42
1.600	0.42	4.667	19.32	7.733	1.68	10.80	0.42
1.617	0.42	4.683	19.32	7.750	1.68	10.82	0.42
1.633	0.42	4.700	19.32	7.767	1.68	10.83	0.42
1.650	0.42	4.717	19.32	7.783	1.68	10.85	0.42
1.667	0.42	4.733	19.32	7.800	1.68	10.87	0.42
1.683	0.42	4.750	19.32	7.817	1.68	10.88	0.42
1.700	0.42	4.767	19.32	7.833	1.68	10.90	0.42
1.717	0.42	4.783	19.32	7.850	1.68	10.92	0.42
1.733	0.42	4.800	19.32	7.867	1.68	10.93	0.42
1.750	0.42	4.817	19.32	7.883	1.68	10.95	0.42
1.767	0.42	4.833	19.32	7.900	1.68	10.97	0.42
1.783	0.42	4.850	19.32	7.917	1.68	10.98	0.42
1.800	0.42	4.867	19.32	7.933	1.68	11.00	0.42
1.817	0.42	4.883	19.32	7.950	1.68	11.02	0.42
1.833	0.42	4.900	19.32	7.967	1.68	11.03	0.42
1.850	0.42	4.917	19.32	7.983	1.68	11.05	0.42
1.867	0.42	4.933	19.32	8.000	1.68	11.07	0.42
1.883	0.42	4.950	19.32	8.017	1.68	11.08	0.42
1.900	0.42	4.967	19.32	8.033	1.68	11.10	0.42
1.917	0.42	4.983	19.32	8.050	1.68	11.12	0.42
1.933	0.42	5.000	19.32	8.067	1.68	11.13	0.42
1.950	0.42	5.017	19.32	8.083	1.68	11.15	0.42
1.967	0.42	5.033	19.32	8.100	1.68	11.17	0.42
1.983	0.42	5.050	19.32	8.117	1.68	11.18	0.42
2.000	0.42	5.067	19.32	8.133	1.68	11.20	0.42
2.017	0.42	5.083	19.32	8.150	1.68	11.22	0.42
2.033	0.42	5.100	19.32	8.167	1.68	11.23	0.42
2.050	0.42	5.117	19.32	8.183	1.68	11.25	0.42
2.067	0.42	5.133	19.32	8.200	1.68	11.27	0.42
2.083	0.42	5.150	19.32	8.217	1.68	11.28	0.42
2.100	0.42	5.167	19.32	8.233	1.68	11.30	0.42
2.117	0.42	5.183	19.32	8.250	1.68	11.32	0.42
2.133	0.42	5.200	19.32	8.267	0.84	11.33	0.42
2.150	0.42	5.217	19.32	8.283	0.84	11.35	0.42
2.167	0.42	5.233	19.32	8.300	0.84	11.37	0.42
2.183	0.42	5.250	19.31	8.317	0.84	11.38	0.42
2.200	0.42	5.267	5.46	8.333	0.84	11.40	0.42
2.217	0.42	5.283	5.46	8.350	0.84	11.42	0.42
2.233	0.42	5.300	5.46	8.367	0.84	11.43	0.42
2.250	0.42	5.317	5.46	8.383	0.84	11.45	0.42
2.267	2.52	5.333	5.46	8.400	0.84	11.47	0.42
2.283	2.52	5.350	5.46	8.417	0.84	11.48	0.42
2.300	2.52	5.367	5.46	8.433	0.84	11.50	0.42
2.317	2.52	5.383	5.46	8.450	0.84	11.52	0.42
2.333	2.52	5.400	5.46	8.467	0.84	11.53	0.42
2.350	2.52	5.417	5.46	8.483	0.84	11.55	0.42
2.367	2.52	5.433	5.46	8.500	0.84	11.57	0.42
2.383	2.52	5.450	5.46	8.517	0.84	11.58	0.42
2.400	2.52	5.467	5.46	8.533	0.84	11.60	0.42
2.417	2.52	5.483	5.46	8.550	0.84	11.62	0.42
2.433	2.52	5.500	5.46	8.567	0.84	11.63	0.42
2.450	2.52	5.517	5.46	8.583	0.84	11.65	0.42
2.467	2.52	5.533	5.46	8.600	0.84	11.67	0.42
2.483	2.52	5.550	5.46	8.617	0.84	11.68	0.42
2.500	2.52	5.567	5.46	8.633	0.84	11.70	0.42

2.517	2.52	5.583	5.46	8.650	0.84	11.72	0.42
2.533	2.52	5.600	5.46	8.667	0.84	11.73	0.42
2.550	2.52	5.617	5.46	8.683	0.84	11.75	0.42
2.567	2.52	5.633	5.46	8.700	0.84	11.77	0.42
2.583	2.52	5.650	5.46	8.717	0.84	11.78	0.42
2.600	2.52	5.667	5.46	8.733	0.84	11.80	0.42
2.617	2.52	5.683	5.46	8.750	0.84	11.82	0.42
2.633	2.52	5.700	5.46	8.767	0.84	11.83	0.42
2.650	2.52	5.717	5.46	8.783	0.84	11.85	0.42
2.667	2.52	5.733	5.46	8.800	0.84	11.87	0.42
2.683	2.52	5.750	5.46	8.817	0.84	11.88	0.42
2.700	2.52	5.767	5.46	8.833	0.84	11.90	0.42
2.717	2.52	5.783	5.46	8.850	0.84	11.92	0.42
2.733	2.52	5.800	5.46	8.867	0.84	11.93	0.42
2.750	2.52	5.817	5.46	8.883	0.84	11.95	0.42
2.767	2.52	5.833	5.46	8.900	0.84	11.97	0.42
2.783	2.52	5.850	5.46	8.917	0.84	11.98	0.42
2.800	2.52	5.867	5.46	8.933	0.84	12.00	0.42
2.817	2.52	5.883	5.46	8.950	0.84	12.02	0.42
2.833	2.52	5.900	5.46	8.967	0.84	12.03	0.42
2.850	2.52	5.917	5.46	8.983	0.84	12.05	0.42
2.867	2.52	5.933	5.46	9.000	0.84	12.07	0.42
2.883	2.52	5.950	5.46	9.017	0.84	12.08	0.42
2.900	2.52	5.967	5.46	9.033	0.84	12.10	0.42
2.917	2.52	5.983	5.46	9.050	0.84	12.12	0.42
2.933	2.52	6.000	5.46	9.067	0.84	12.13	0.42
2.950	2.52	6.017	5.46	9.083	0.84	12.15	0.42
2.967	2.52	6.033	5.46	9.100	0.84	12.17	0.42
2.983	2.52	6.050	5.46	9.117	0.84	12.18	0.42
3.000	2.52	6.067	5.46	9.133	0.84	12.20	0.42
3.017	2.52	6.083	5.46	9.150	0.84	12.22	0.42
3.033	2.52	6.100	5.46	9.167	0.84	12.23	0.42
3.050	2.52	6.117	5.46	9.183	0.84	12.25	0.42
3.067	2.52	6.133	5.46	9.200	0.84		

Max.Eff.Inten.(mm/hr)=	19.32	11.73	
over (min)	6.00	9.00	
Storage Coeff. (min)=	5.54 (ii)	8.82 (ii)	
Unit Hyd. Tpeak (min)=	6.00	9.00	
Unit Hyd. peak (cms)=	0.20	0.13	
			TOTALS
PEAK FLOW (cms)=	0.12	0.00	0.118 (iii)
TIME TO PEAK (hrs)=	5.23	5.27	5.25
RUNOFF VOLUME (mm)=	41.00	19.22	40.78
TOTAL RAINFALL (mm)=	42.00	42.00	42.00
RUNOFF COEFFICIENT =	0.98	0.46	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7642)	OVERFLOW IS OFF
IN= 2---> OUT= 1	
DT= 1.0 min	

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0470	0.1250
0.0197	0.0630	0.0551	0.1410
0.0304	0.0850	0.0620	0.1580
0.0373	0.1020	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7641)	2.210	0.118	5.25	40.78
OUTFLOW: ID= 1 (7642)	2.210	0.020	6.52	39.02

PEAK FLOW REDUCTION [Qout/Qin](%)= 16.54
TIME SHIFT OF PEAK FLOW (min)= 76.00
MAXIMUM STORAGE USED (ha.m.)= 0.0625

CALIB	
STANDHYD (7643)	Area (ha)= 2.02
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.00	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	116.05	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	2.52	6.150	5.46	9.22	0.84
0.033	0.00	3.100	2.52	6.167	5.46	9.23	0.84
0.050	0.00	3.117	2.52	6.183	5.46	9.25	0.84
0.067	0.00	3.133	2.52	6.200	5.46	9.27	0.42
0.083	0.00	3.150	2.52	6.217	5.46	9.28	0.42
0.100	0.00	3.167	2.52	6.233	5.46	9.30	0.42
0.117	0.00	3.183	2.52	6.250	5.46	9.32	0.42
0.133	0.00	3.200	2.52	6.267	2.94	9.33	0.42
0.150	0.00	3.217	2.52	6.283	2.94	9.35	0.42
0.167	0.00	3.233	2.52	6.300	2.94	9.37	0.42
0.183	0.00	3.250	2.52	6.317	2.94	9.38	0.42
0.200	0.00	3.267	7.14	6.333	2.94	9.40	0.42
0.217	0.00	3.283	7.14	6.350	2.94	9.42	0.42
0.233	0.00	3.300	7.14	6.367	2.94	9.43	0.42
0.250	0.00	3.317	7.14	6.383	2.94	9.45	0.42
0.267	0.42	3.333	7.14	6.400	2.94	9.47	0.42
0.283	0.42	3.350	7.14	6.417	2.94	9.48	0.42
0.300	0.42	3.367	7.14	6.433	2.94	9.50	0.42
0.317	0.42	3.383	7.14	6.450	2.94	9.52	0.42
0.333	0.42	3.400	7.14	6.467	2.94	9.53	0.42
0.350	0.42	3.417	7.14	6.483	2.94	9.55	0.42
0.367	0.42	3.433	7.14	6.500	2.94	9.57	0.42
0.383	0.42	3.450	7.14	6.517	2.94	9.58	0.42
0.400	0.42	3.467	7.14	6.533	2.94	9.60	0.42
0.417	0.42	3.483	7.14	6.550	2.94	9.62	0.42
0.433	0.42	3.500	7.14	6.567	2.94	9.63	0.42
0.450	0.42	3.517	7.14	6.583	2.94	9.65	0.42
0.467	0.42	3.533	7.14	6.600	2.94	9.67	0.42
0.483	0.42	3.550	7.14	6.617	2.94	9.68	0.42
0.500	0.42	3.567	7.14	6.633	2.94	9.70	0.42
0.517	0.42	3.583	7.14	6.650	2.94	9.72	0.42
0.533	0.42	3.600	7.14	6.667	2.94	9.73	0.42
0.550	0.42	3.617	7.14	6.683	2.94	9.75	0.42
0.567	0.42	3.633	7.14	6.700	2.94	9.77	0.42
0.583	0.42	3.650	7.14	6.717	2.94	9.78	0.42
0.600	0.42	3.667	7.14	6.733	2.94	9.80	0.42
0.617	0.42	3.683	7.14	6.750	2.94	9.82	0.42
0.633	0.42	3.700	7.14	6.767	2.94	9.83	0.42
0.650	0.42	3.717	7.14	6.783	2.94	9.85	0.42
0.667	0.42	3.733	7.14	6.800	2.94	9.87	0.42
0.683	0.42	3.750	7.14	6.817	2.94	9.88	0.42
0.700	0.42	3.767	7.14	6.833	2.94	9.90	0.42
0.717	0.42	3.783	7.14	6.850	2.94	9.92	0.42
0.733	0.42	3.800	7.14	6.867	2.94	9.93	0.42
0.750	0.42	3.817	7.14	6.883	2.94	9.95	0.42
0.767	0.42	3.833	7.14	6.900	2.94	9.97	0.42
0.783	0.42	3.850	7.14	6.917	2.94	9.98	0.42
0.800	0.42	3.867	7.14	6.933	2.94	10.00	0.42
0.817	0.42	3.883	7.14	6.950	2.94	10.02	0.42
0.833	0.42	3.900	7.14	6.967	2.94	10.03	0.42
0.850	0.42	3.917	7.14	6.983	2.94	10.05	0.42
0.867	0.42	3.933	7.14	7.000	2.94	10.07	0.42
0.883	0.42	3.950	7.14	7.017	2.94	10.08	0.42
0.900	0.42	3.967	7.14	7.033	2.94	10.10	0.42
0.917	0.42	3.983	7.14	7.050	2.94	10.12	0.42
0.933	0.42	4.000	7.14	7.067	2.94	10.13	0.42
0.950	0.42	4.017	7.14	7.083	2.94	10.15	0.42
0.967	0.42	4.033	7.14	7.100	2.94	10.17	0.42
0.983	0.42	4.050	7.14	7.117	2.94	10.18	0.42

1.000	0.42	4.067	7.14	7.133	2.94	10.20	0.42
1.017	0.42	4.083	7.14	7.150	2.94	10.22	0.42
1.033	0.42	4.100	7.14	7.167	2.94	10.23	0.42
1.050	0.42	4.117	7.14	7.183	2.94	10.25	0.42
1.067	0.42	4.133	7.14	7.200	2.94	10.27	0.42
1.083	0.42	4.150	7.14	7.217	2.94	10.28	0.42
1.100	0.42	4.167	7.14	7.233	2.94	10.30	0.42
1.117	0.42	4.183	7.14	7.250	2.94	10.32	0.42
1.133	0.42	4.200	7.14	7.267	1.68	10.33	0.42
1.150	0.42	4.217	7.14	7.283	1.68	10.35	0.42
1.167	0.42	4.233	7.14	7.300	1.68	10.37	0.42
1.183	0.42	4.250	7.14	7.317	1.68	10.38	0.42
1.200	0.42	4.267	19.32	7.333	1.68	10.40	0.42
1.217	0.42	4.283	19.32	7.350	1.68	10.42	0.42
1.233	0.42	4.300	19.32	7.367	1.68	10.43	0.42
1.250	0.42	4.317	19.32	7.383	1.68	10.45	0.42
1.267	0.42	4.333	19.32	7.400	1.68	10.47	0.42
1.283	0.42	4.350	19.32	7.417	1.68	10.48	0.42
1.300	0.42	4.367	19.32	7.433	1.68	10.50	0.42
1.317	0.42	4.383	19.32	7.450	1.68	10.52	0.42
1.333	0.42	4.400	19.32	7.467	1.68	10.53	0.42
1.350	0.42	4.417	19.32	7.483	1.68	10.55	0.42
1.367	0.42	4.433	19.32	7.500	1.68	10.57	0.42
1.383	0.42	4.450	19.32	7.517	1.68	10.58	0.42
1.400	0.42	4.467	19.32	7.533	1.68	10.60	0.42
1.417	0.42	4.483	19.32	7.550	1.68	10.62	0.42
1.433	0.42	4.500	19.32	7.567	1.68	10.63	0.42
1.450	0.42	4.517	19.32	7.583	1.68	10.65	0.42
1.467	0.42	4.533	19.32	7.600	1.68	10.67	0.42
1.483	0.42	4.550	19.32	7.617	1.68	10.68	0.42
1.500	0.42	4.567	19.32	7.633	1.68	10.70	0.42
1.517	0.42	4.583	19.32	7.650	1.68	10.72	0.42
1.533	0.42	4.600	19.32	7.667	1.68	10.73	0.42
1.550	0.42	4.617	19.32	7.683	1.68	10.75	0.42
1.567	0.42	4.633	19.32	7.700	1.68	10.77	0.42
1.583	0.42	4.650	19.32	7.717	1.68	10.78	0.42
1.600	0.42	4.667	19.32	7.733	1.68	10.80	0.42
1.617	0.42	4.683	19.32	7.750	1.68	10.82	0.42
1.633	0.42	4.700	19.32	7.767	1.68	10.83	0.42
1.650	0.42	4.717	19.32	7.783	1.68	10.85	0.42
1.667	0.42	4.733	19.32	7.800	1.68	10.87	0.42
1.683	0.42	4.750	19.32	7.817	1.68	10.88	0.42
1.700	0.42	4.767	19.32	7.833	1.68	10.90	0.42
1.717	0.42	4.783	19.32	7.850	1.68	10.92	0.42
1.733	0.42	4.800	19.32	7.867	1.68	10.93	0.42
1.750	0.42	4.817	19.32	7.883	1.68	10.95	0.42
1.767	0.42	4.833	19.32	7.900	1.68	10.97	0.42
1.783	0.42	4.850	19.32	7.917	1.68	10.98	0.42
1.800	0.42	4.867	19.32	7.933	1.68	11.00	0.42
1.817	0.42	4.883	19.32	7.950	1.68	11.02	0.42
1.833	0.42	4.900	19.32	7.967	1.68	11.03	0.42
1.850	0.42	4.917	19.32	7.983	1.68	11.05	0.42
1.867	0.42	4.933	19.32	8.000	1.68	11.07	0.42
1.883	0.42	4.950	19.32	8.017	1.68	11.08	0.42
1.900	0.42	4.967	19.32	8.033	1.68	11.10	0.42
1.917	0.42	4.983	19.32	8.050	1.68	11.12	0.42
1.933	0.42	5.000	19.32	8.067	1.68	11.13	0.42
1.950	0.42	5.017	19.32	8.083	1.68	11.15	0.42
1.967	0.42	5.033	19.32	8.100	1.68	11.17	0.42
1.983	0.42	5.050	19.32	8.117	1.68	11.18	0.42
2.000	0.42	5.067	19.32	8.133	1.68	11.20	0.42
2.017	0.42	5.083	19.32	8.150	1.68	11.22	0.42
2.033	0.42	5.100	19.32	8.167	1.68	11.23	0.42
2.050	0.42	5.117	19.32	8.183	1.68	11.25	0.42
2.067	0.42	5.133	19.32	8.200	1.68	11.27	0.42
2.083	0.42	5.150	19.32	8.217	1.68	11.28	0.42
2.100	0.42	5.167	19.32	8.233	1.68	11.30	0.42
2.117	0.42	5.183	19.32	8.250	1.68	11.32	0.42
2.133	0.42	5.200	19.32	8.267	0.84	11.33	0.42
2.150	0.42	5.217	19.32	8.283	0.84	11.35	0.42
2.167	0.42	5.233	19.32	8.300	0.84	11.37	0.42
2.183	0.42	5.250	19.31	8.317	0.84	11.38	0.42
2.200	0.42	5.267	5.46	8.333	0.84	11.40	0.42
2.217	0.42	5.283	5.46	8.350	0.84	11.42	0.42
2.233	0.42	5.300	5.46	8.367	0.84	11.43	0.42
2.250	0.42	5.317	5.46	8.383	0.84	11.45	0.42
2.267	2.52	5.333	5.46	8.400	0.84	11.47	0.42
2.283	2.52	5.350	5.46	8.417	0.84	11.48	0.42
2.300	2.52	5.367	5.46	8.433	0.84	11.50	0.42
2.317	2.52	5.383	5.46	8.450	0.84	11.52	0.42
2.333	2.52	5.400	5.46	8.467	0.84	11.53	0.42
2.350	2.52	5.417	5.46	8.483	0.84	11.55	0.42
2.367	2.52	5.433	5.46	8.500	0.84	11.57	0.42
2.383	2.52	5.450	5.46	8.517	0.84	11.58	0.42
2.400	2.52	5.467	5.46	8.533	0.84	11.60	0.42
2.417	2.52	5.483	5.46	8.550	0.84	11.62	0.42
2.433	2.52	5.500	5.46	8.567	0.84	11.63	0.42
2.450	2.52	5.517	5.46	8.583	0.84	11.65	0.42
2.467	2.52	5.533	5.46	8.600	0.84	11.67	0.42
2.483	2.52	5.550	5.46	8.617	0.84	11.68	0.42
2.500	2.52	5.567	5.46	8.633	0.84	11.70	0.42
2.517	2.52	5.583	5.46	8.650	0.84	11.72	0.42
2.533	2.52	5.600	5.46	8.667	0.84	11.73	0.42
2.550	2.52	5.617	5.46	8.683	0.84	11.75	0.42
2.567	2.52	5.633	5.46	8.700	0.84	11.77	0.42
2.583	2.52	5.650	5.46	8.717	0.84	11.78	0.42
2.600	2.52	5.667	5.46	8.733	0.84	11.80	0.42
2.617	2.52	5.683	5.46	8.750	0.84	11.82	0.42
2.633	2.52	5.700	5.46	8.767	0.84	11.83	0.42
2.650	2.52	5.717	5.46	8.783	0.84	11.85	0.42
2.667	2.52	5.733	5.46	8.800	0.84	11.87	0.42
2.683	2.52	5.750	5.46	8.817	0.84	11.88	0.42
2.700	2.52	5.767	5.46	8.833	0.84	11.90	0.42
2.717	2.52	5.783	5.46	8.850	0.84	11.92	0.42
2.733	2.52	5.800	5.46	8.867	0.84	11.93	0.42
2.750	2.52	5.817	5.46	8.883	0.84	11.95	0.42
2.767	2.52	5.833	5.46	8.900	0.84	11.97	0.42
2.783	2.52	5.850	5.46	8.917	0.84	11.98	0.42
2.800	2.52	5.867	5.46	8.933	0.84	12.00	0.42
2.817	2.52	5.883	5.46	8.950	0.84	12.02	0.42
2.833	2.52	5.900	5.46	8.967	0.84	12.03	0.42
2.850	2.52	5.917	5.46	8.983	0.84	12.05	0.42
2.867	2.52	5.933	5.46	9.000	0.84	12.07	0.42
2.883	2.52	5.950	5.46	9.017	0.84	12.08	0.42
2.900	2.52	5.967	5.46	9.033	0.84	12.10	0.42
2.917	2.52	5.983	5.46	9.050	0.84	12.12	0.42
2.933	2.52	6.000	5.46	9.067	0.84	12.13	0.42
2.950	2.52	6.017	5.46	9.083	0.84	12.15	0.42
2.967	2.52	6.033	5.46	9.100	0.84	12.17	0.42
2.983	2.52	6.050	5.46	9.117	0.84	12.18	0.42
3.000	2.52	6.067	5.46	9.133	0.84	12.20	0.42
3.017	2.52	6.083	5.46	9.150	0.84	12.22	0.42
3.033	2.52	6.100	5.46	9.167	0.84	12.23	0.42
3.050	2.52	6.117	5.46	9.183	0.84	12.25	0.42
3.067	2.52	6.133	5.46	9.200	0.84		

Max.Eff.Inten.(mm/hr)=		19.32	11.73
over (min)		5.00	9.00
Storage Coeff. (min)=		5.39 (ii)	8.68 (ii)
Unit Hyd. Tpeak (min)=		5.00	9.00
Unit Hyd. peak (cms)=		0.21	0.13
			TOTALS
PEAK FLOW	(cms)=	0.11	0.00	0.108 (iii)
TIME TO PEAK	(hrs)=	5.23	5.27	5.25
RUNOFF VOLUME	(mm)=	41.00	19.22	40.78
TOTAL RAINFALL	(mm)=	42.00	42.00	42.00
RUNOFF COEFFICIENT	=	0.98	0.46	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7644) IN= 2---> OUT= 1 DT= 1.0 min	OVERFLOW IS OFF		OUTFLOW	STORAGE
	OUTFLOW (cms)	STORAGE (ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	0.0433	0.1140

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                    0.0182     0.0580   |   0.0507      0.1280
                    0.0280     0.0775   |   0.0571      0.1440
                    0.0343     0.0930   |   0.0000      0.0000

                           AREA     QPEAK     TPEAK       R.V.
                           (ha)     (cms)     (hrs)       (mm)
  INFLOW : ID= 2 (  7643)      2.020     0.108      5.25      40.78
  OUTFLOW: ID= 1 (  7644)      2.020     0.018      6.50      39.04

               PEAK   FLOW   REDUCTION [Qout/Qin](%)= 16.59
               TIME SHIFT OF PEAK FLOW         (min)= 75.00
               MAXIMUM  STORAGE   USED       (ha.m.)=  0.0571

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================================================================================================================
======

      V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
      V    V   I    SS     U   U   A A   L
       V  V    I     SS    U   U  AAAAA  L
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
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               *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-
a4eb17eaad57\1a62be54-0421-4238-b63a-aece1f095407\s
  Summary filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-
a4eb17eaad57\1a62be54-0421-4238-b63a-aece1f095407\s


DATE: 06/14/2024                          TIME: 12:48:34

USER:


COMMENTS: _____

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  ***********************************************
  ** SIMULATION : 3. 2 Year 24 Hour AES (Bloor, **
  ***********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\ygollamudi\AppD
|                  |              ata\Local\Temp\
|                  |              3c3f87d5-a26e-4c6b-b2ae-56a7ba29ab7f\c70c9fdc
| Ptotal= 47.08 mm |    Comments: 2 Year 24 Hour AES (Bloor, TRCA)
--------------------
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.00    0.00 |  6.25    4.00 | 12.50    1.65 | 18.75    0.24
               0.25    0.24 |  6.50    4.00 | 12.75    1.65 | 19.00    0.24
               0.50    0.24 |  6.75    4.00 | 13.00    1.65 | 19.25    0.24
               0.75    0.24 |  7.00    4.00 | 13.25    1.65 | 19.50    0.24
               1.00    0.24 |  7.25    4.00 | 13.50    1.65 | 19.75    0.24
               1.25    0.24 |  7.50    4.00 | 13.75    1.65 | 20.00    0.24
               1.50    0.24 |  7.75    4.00 | 14.00    1.65 | 20.25    0.24
               1.75    0.24 |  8.00    4.00 | 14.25    0.94 | 20.50    0.24
               2.00    0.24 |  8.25   10.81 | 14.50    0.94 | 20.75    0.24
               2.25    0.24 |  8.50   10.81 | 14.75    0.94 | 21.00    0.24
               2.50    0.24 |  8.75   10.81 | 15.00    0.94 | 21.25    0.24
               2.75    0.24 |  9.00   10.81 | 15.25    0.94 | 21.50    0.24
               3.00    0.24 |  9.25   10.81 | 15.50    0.94 | 21.75    0.24
               3.25    0.24 |  9.50   10.81 | 15.75    0.94 | 22.00    0.24
               3.50    0.24 |  9.75   10.81 | 16.00    0.94 | 22.25    0.24
               3.75    0.24 | 10.00   10.81 | 16.25    0.47 | 22.50    0.24
               4.00    0.24 | 10.25    3.06 | 16.50    0.47 | 22.75    0.24
               4.25    1.41 | 10.50    3.06 | 16.75    0.47 | 23.00    0.24
               4.50    1.41 | 10.75    3.06 | 17.00    0.47 | 23.25    0.24
               4.75    1.41 | 11.00    3.06 | 17.25    0.47 | 23.50    0.24
               5.00    1.41 | 11.25    3.06 | 17.50    0.47 | 23.75    0.24
               5.25    1.41 | 11.50    3.06 | 17.75    0.47 | 24.00    0.24
               5.50    1.41 | 11.75    3.06 | 18.00    0.47 |
               5.75    1.41 | 12.00    3.06 | 18.25    0.24 |
               6.00    1.41 | 12.25    1.65 | 18.50    0.24 |

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| CALIB            |
| STANDHYD (  7567)|   Area    (ha)=   2.72
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------

                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.69          0.03
     Dep. Storage     (mm)=       1.00          1.50
     Average Slope     (%)=       1.00          0.50
     Length            (m)=     134.66         40.00
     Mannings n             =     0.013         0.250

     NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
0.017    0.00 | 6.083    1.41 |12.150    3.06 | 18.22    0.47
0.033    0.00 | 6.100    1.41 |12.167    3.06 | 18.23    0.47
0.050    0.00 | 6.117    1.41 |12.183    3.06 | 18.25    0.47
0.067    0.00 | 6.133    1.41 |12.200    3.06 | 18.27    0.24
0.083    0.00 | 6.150    1.41 |12.217    3.06 | 18.28    0.24
0.100    0.00 | 6.167    1.41 |12.233    3.06 | 18.30    0.24
0.117    0.00 | 6.183    1.41 |12.250    3.06 | 18.32    0.24
0.133    0.00 | 6.200    1.41 |12.267    1.65 | 18.33    0.24
0.150    0.00 | 6.217    1.41 |12.283    1.65 | 18.35    0.24
0.167    0.00 | 6.233    1.41 |12.300    1.65 | 18.37    0.24
0.183    0.00 | 6.250    1.41 |12.317    1.65 | 18.38    0.24
0.200    0.00 | 6.267    4.00 |12.333    1.65 | 18.40    0.24
0.217    0.00 | 6.283    4.00 |12.350    1.65 | 18.42    0.24
0.233    0.00 | 6.300    4.00 |12.367    1.65 | 18.43    0.24
0.250    0.00 | 6.317    4.00 |12.383    1.65 | 18.45    0.24
0.267    0.24 | 6.333    4.00 |12.400    1.65 | 18.47    0.24
0.283    0.24 | 6.350    4.00 |12.417    1.65 | 18.48    0.24
0.300    0.24 | 6.367    4.00 |12.433    1.65 | 18.50    0.24
0.317    0.24 | 6.383    4.00 |12.450    1.65 | 18.52    0.24
0.333    0.24 | 6.400    4.00 |12.467    1.65 | 18.53    0.24
0.350    0.24 | 6.417    4.00 |12.483    1.65 | 18.55    0.24
0.367    0.24 | 6.433    4.00 |12.500    1.65 | 18.57    0.24
0.383    0.24 | 6.450    4.00 |12.517    1.65 | 18.58    0.24
0.400    0.24 | 6.467    4.00 |12.533    1.65 | 18.60    0.24
0.417    0.24 | 6.483    4.00 |12.550    1.65 | 18.62    0.24
0.433    0.24 | 6.500    4.00 |12.567    1.65 | 18.63    0.24
0.450    0.24 | 6.517    4.00 |12.583    1.65 | 18.65    0.24
0.467    0.24 | 6.533    4.00 |12.600    1.65 | 18.67    0.24
0.483    0.24 | 6.550    4.00 |12.617    1.65 | 18.68    0.24
0.500    0.24 | 6.567    4.00 |12.633    1.65 | 18.70    0.24
0.517    0.24 | 6.583    4.00 |12.650    1.65 | 18.72    0.24
0.533    0.24 | 6.600    4.00 |12.667    1.65 | 18.73    0.24
0.550    0.24 | 6.617    4.00 |12.683    1.65 | 18.75    0.24
0.567    0.24 | 6.633    4.00 |12.700    1.65 | 18.77    0.24
0.583    0.24 | 6.650    4.00 |12.717    1.65 | 18.78    0.24
0.600    0.24 | 6.667    4.00 |12.733    1.65 | 18.80    0.24
0.617    0.24 | 6.683    4.00 |12.750    1.65 | 18.82    0.24
0.633    0.24 | 6.700    4.00 |12.767    1.65 | 18.83    0.24
0.650    0.24 | 6.717    4.00 |12.783    1.65 | 18.85    0.24
0.667    0.24 | 6.733    4.00 |12.800    1.65 | 18.87    0.24
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0.683	0.24	6.750	4.00	12.817	1.65	18.88	0.24
0.700	0.24	6.767	4.00	12.833	1.65	18.90	0.24
0.717	0.24	6.783	4.00	12.850	1.65	18.92	0.24
0.733	0.24	6.800	4.00	12.867	1.65	18.93	0.24
0.750	0.24	6.817	4.00	12.883	1.65	18.95	0.24
0.767	0.24	6.833	4.00	12.900	1.65	18.97	0.24
0.783	0.24	6.850	4.00	12.917	1.65	18.98	0.24
0.800	0.24	6.867	4.00	12.933	1.65	19.00	0.24
0.817	0.24	6.883	4.00	12.950	1.65	19.02	0.24
0.833	0.24	6.900	4.00	12.967	1.65	19.03	0.24
0.850	0.24	6.917	4.00	12.983	1.65	19.05	0.24
0.867	0.24	6.933	4.00	13.000	1.65	19.07	0.24
0.883	0.24	6.950	4.00	13.017	1.65	19.08	0.24
0.900	0.24	6.967	4.00	13.033	1.65	19.10	0.24
0.917	0.24	6.983	4.00	13.050	1.65	19.12	0.24
0.933	0.24	7.000	4.00	13.067	1.65	19.13	0.24
0.950	0.24	7.017	4.00	13.083	1.65	19.15	0.24
0.967	0.24	7.033	4.00	13.100	1.65	19.17	0.24
0.983	0.24	7.050	4.00	13.117	1.65	19.18	0.24
1.000	0.24	7.067	4.00	13.133	1.65	19.20	0.24
1.017	0.24	7.083	4.00	13.150	1.65	19.22	0.24
1.033	0.24	7.100	4.00	13.167	1.65	19.23	0.24
1.050	0.24	7.117	4.00	13.183	1.65	19.25	0.24
1.067	0.24	7.133	4.00	13.200	1.65	19.27	0.24
1.083	0.24	7.150	4.00	13.217	1.65	19.28	0.24
1.100	0.24	7.167	4.00	13.233	1.65	19.30	0.24
1.117	0.24	7.183	4.00	13.250	1.65	19.32	0.24
1.133	0.24	7.200	4.00	13.267	1.65	19.33	0.24
1.150	0.24	7.217	4.00	13.283	1.65	19.35	0.24
1.167	0.24	7.233	4.00	13.300	1.65	19.37	0.24
1.183	0.24	7.250	4.00	13.317	1.65	19.38	0.24
1.200	0.24	7.267	4.00	13.333	1.65	19.40	0.24
1.217	0.24	7.283	4.00	13.350	1.65	19.42	0.24
1.233	0.24	7.300	4.00	13.367	1.65	19.43	0.24
1.250	0.24	7.317	4.00	13.383	1.65	19.45	0.24
1.267	0.24	7.333	4.00	13.400	1.65	19.47	0.24
1.283	0.24	7.350	4.00	13.417	1.65	19.48	0.24
1.300	0.24	7.367	4.00	13.433	1.65	19.50	0.24
1.317	0.24	7.383	4.00	13.450	1.65	19.52	0.24
1.333	0.24	7.400	4.00	13.467	1.65	19.53	0.24
1.350	0.24	7.417	4.00	13.483	1.65	19.55	0.24
1.367	0.24	7.433	4.00	13.500	1.65	19.57	0.24
1.383	0.24	7.450	4.00	13.517	1.65	19.58	0.24
1.400	0.24	7.467	4.00	13.533	1.65	19.60	0.24
1.417	0.24	7.483	4.00	13.550	1.65	19.62	0.24
1.433	0.24	7.500	4.00	13.567	1.65	19.63	0.24
1.450	0.24	7.517	4.00	13.583	1.65	19.65	0.24
1.467	0.24	7.533	4.00	13.600	1.65	19.67	0.24
1.483	0.24	7.550	4.00	13.617	1.65	19.68	0.24
1.500	0.24	7.567	4.00	13.633	1.65	19.70	0.24
1.517	0.24	7.583	4.00	13.650	1.65	19.72	0.24
1.533	0.24	7.600	4.00	13.667	1.65	19.73	0.24
1.550	0.24	7.617	4.00	13.683	1.65	19.75	0.24
1.567	0.24	7.633	4.00	13.700	1.65	19.77	0.24
1.583	0.24	7.650	4.00	13.717	1.65	19.78	0.24
1.600	0.24	7.667	4.00	13.733	1.65	19.80	0.24
1.617	0.24	7.683	4.00	13.750	1.65	19.82	0.24
1.633	0.24	7.700	4.00	13.767	1.65	19.83	0.24
1.650	0.24	7.717	4.00	13.783	1.65	19.85	0.24
1.667	0.24	7.733	4.00	13.800	1.65	19.87	0.24
1.683	0.24	7.750	4.00	13.817	1.65	19.88	0.24
1.700	0.24	7.767	4.00	13.833	1.65	19.90	0.24
1.717	0.24	7.783	4.00	13.850	1.65	19.92	0.24
1.733	0.24	7.800	4.00	13.867	1.65	19.93	0.24
1.750	0.24	7.817	4.00	13.883	1.65	19.95	0.24
1.767	0.24	7.833	4.00	13.900	1.65	19.97	0.24
1.783	0.24	7.850	4.00	13.917	1.65	19.98	0.24
1.800	0.24	7.867	4.00	13.933	1.65	20.00	0.24
1.817	0.24	7.883	4.00	13.950	1.65	20.02	0.24
1.833	0.24	7.900	4.00	13.967	1.65	20.03	0.24
1.850	0.24	7.917	4.00	13.983	1.65	20.05	0.24
1.867	0.24	7.933	4.00	14.000	1.65	20.07	0.24
1.883	0.24	7.950	4.00	14.017	1.65	20.08	0.24
1.900	0.24	7.967	4.00	14.033	1.65	20.10	0.24
1.917	0.24	7.983	4.00	14.050	1.65	20.12	0.24
1.933	0.24	8.000	4.00	14.067	1.65	20.13	0.24
1.950	0.24	8.017	4.00	14.083	1.65	20.15	0.24
1.967	0.24	8.033	4.00	14.100	1.65	20.17	0.24
1.983	0.24	8.050	4.00	14.117	1.65	20.18	0.24
2.000	0.24	8.067	4.00	14.133	1.65	20.20	0.24
2.017	0.24	8.083	4.00	14.150	1.65	20.22	0.24
2.033	0.24	8.100	4.00	14.167	1.65	20.23	0.24
2.050	0.24	8.117	4.00	14.183	1.65	20.25	0.24
2.067	0.24	8.133	4.00	14.200	1.65	20.27	0.24
2.083	0.24	8.150	4.00	14.217	1.65	20.28	0.24
2.100	0.24	8.167	4.00	14.233	1.65	20.30	0.24
2.117	0.24	8.183	4.00	14.250	1.65	20.32	0.24
2.133	0.24	8.200	4.00	14.267	0.94	20.33	0.24
2.150	0.24	8.217	4.00	14.283	0.94	20.35	0.24
2.167	0.24	8.233	4.00	14.300	0.94	20.37	0.24
2.183	0.24	8.250	4.02	14.317	0.94	20.38	0.24
2.200	0.24	8.267	10.81	14.333	0.94	20.40	0.24
2.217	0.24	8.283	10.81	14.350	0.94	20.42	0.24
2.233	0.24	8.300	10.81	14.367	0.94	20.43	0.24
2.250	0.24	8.317	10.81	14.383	0.94	20.45	0.24
2.267	0.24	8.333	10.81	14.400	0.94	20.47	0.24
2.283	0.24	8.350	10.81	14.417	0.94	20.48	0.24
2.300	0.24	8.367	10.81	14.433	0.94	20.50	0.24
2.317	0.24	8.383	10.81	14.450	0.94	20.52	0.24
2.333	0.24	8.400	10.81	14.467	0.94	20.53	0.24
2.350	0.24	8.417	10.81	14.483	0.94	20.55	0.24
2.367	0.24	8.433	10.81	14.500	0.94	20.57	0.24
2.383	0.24	8.450	10.81	14.517	0.94	20.58	0.24
2.400	0.24	8.467	10.81	14.533	0.94	20.60	0.24
2.417	0.24	8.483	10.81	14.550	0.94	20.62	0.24
2.433	0.24	8.500	10.81	14.567	0.94	20.63	0.24
2.450	0.24	8.517	10.81	14.583	0.94	20.65	0.24
2.467	0.24	8.533	10.81	14.600	0.94	20.67	0.24
2.483	0.24	8.550	10.81	14.617	0.94	20.68	0.24
2.500	0.24	8.567	10.81	14.633	0.94	20.70	0.24
2.517	0.24	8.583	10.81	14.650	0.94	20.72	0.24
2.533	0.24	8.600	10.81	14.667	0.94	20.73	0.24
2.550	0.24	8.617	10.81	14.683	0.94	20.75	0.24
2.567	0.24	8.633	10.81	14.700	0.94	20.77	0.24
2.583	0.24	8.650	10.81	14.717	0.94	20.78	0.24
2.600	0.24	8.667	10.81	14.733	0.94	20.80	0.24
2.617	0.24	8.683	10.81	14.750	0.94	20.82	0.24
2.633	0.24	8.700	10.81	14.767	0.94	20.83	0.24
2.650	0.24	8.717	10.81	14.783	0.94	20.85	0.24
2.667	0.24	8.733	10.81	14.800	0.94	20.87	0.24
2.683	0.24	8.750	10.81	14.817	0.94	20.88	0.24
2.700	0.24	8.767	10.81	14.833	0.94	20.90	0.24
2.717	0.24	8.783	10.81	14.850	0.94	20.92	0.24
2.733	0.24	8.800	10.81	14.867	0.94	20.93	0.24
2.750	0.24	8.817	10.81	14.883	0.94	20.95	0.24
2.767	0.24	8.833	10.81	14.900	0.94	20.97	0.24
2.783	0.24	8.850	10.81	14.917	0.94	20.98	0.24
2.800	0.24	8.867	10.81	14.933	0.94	21.00	0.24
2.817	0.24	8.883	10.81	14.950	0.94	21.02	0.24
2.833	0.24	8.900	10.81	14.967	0.94	21.03	0.24
2.850	0.24	8.917	10.81	14.983	0.94	21.05	0.24
2.867	0.24	8.933	10.81	15.000	0.94	21.07	0.24
2.883	0.24	8.950	10.81	15.017	0.94	21.08	0.24
2.900	0.24	8.967	10.81	15.033	0.94	21.10	0.24
2.917	0.24	8.983	10.81	15.050	0.94	21.12	0.24
2.933	0.24	9.000	10.81	15.067	0.94	21.13	0.24
2.950	0.24	9.017	10.81	15.083	0.94	21.15	0.24
2.967	0.24	9.033	10.81	15.100	0.94	21.17	0.24
2.983	0.24	9.050	10.81	15.117	0.94	21.18	0.24
3.000	0.24	9.067	10.81	15.133	0.94	21.20	0.24
3.017	0.24	9.083	10.81	15.150	0.94	21.22	0.24
3.033	0.24	9.100	10.81	15.167	0.94	21.23	0.24
3.050	0.24	9.117	10.81	15.183	0.94	21.25	0.24
3.067	0.24	9.133	10.81	15.200	0.94	21.27	0.24
3.083	0.24	9.150	10.81	15.217	0.94	21.28	0.24
3.100	0.24	9.167	10.81	15.233	0.94	21.30	0.24
3.117	0.24	9.183	10.81	15.250	0.94	21.32	0.24
3.133	0.24	9.200	10.81	15.267	0.94	21.33	0.24
3.150	0.24	9.217	10.81	15.283	0.94	21.35	0.24
3.167	0.24	9.233	10.81	15.300	0.94	21.37	0.24
3.183	0.24	9.250	10.81	15.317	0.94	21.38	0.24
3.200	0.24	9.267	10.81	15.333	0.94	21.40	0.24

3.217	0.24	9.283	10.81	15.350	0.94	21.42	0.24	4.483	1.41	10.550	3.06	16.617	0.47	22.68	0.24
3.233	0.24	9.300	10.81	15.367	0.94	21.43	0.24	4.500	1.41	10.567	3.06	16.633	0.47	22.70	0.24
3.250	0.24	9.317	10.81	15.383	0.94	21.45	0.24	4.517	1.41	10.583	3.06	16.650	0.47	22.72	0.24
3.267	0.24	9.333	10.81	15.400	0.94	21.47	0.24	4.533	1.41	10.600	3.06	16.667	0.47	22.73	0.24
3.283	0.24	9.350	10.81	15.417	0.94	21.48	0.24	4.550	1.41	10.617	3.06	16.683	0.47	22.75	0.24
3.300	0.24	9.367	10.81	15.433	0.94	21.50	0.24	4.567	1.41	10.633	3.06	16.700	0.47	22.77	0.24
3.317	0.24	9.383	10.81	15.450	0.94	21.52	0.24	4.583	1.41	10.650	3.06	16.717	0.47	22.78	0.24
3.333	0.24	9.400	10.81	15.467	0.94	21.53	0.24	4.600	1.41	10.667	3.06	16.733	0.47	22.80	0.24
3.350	0.24	9.417	10.81	15.483	0.94	21.55	0.24	4.617	1.41	10.683	3.06	16.750	0.47	22.82	0.24
3.367	0.24	9.433	10.81	15.500	0.94	21.57	0.24	4.633	1.41	10.700	3.06	16.767	0.47	22.83	0.24
3.383	0.24	9.450	10.81	15.517	0.94	21.58	0.24	4.650	1.41	10.717	3.06	16.783	0.47	22.85	0.24
3.400	0.24	9.467	10.81	15.533	0.94	21.60	0.24	4.667	1.41	10.733	3.06	16.800	0.47	22.87	0.24
3.417	0.24	9.483	10.81	15.550	0.94	21.62	0.24	4.683	1.41	10.750	3.06	16.817	0.47	22.88	0.24
3.433	0.24	9.500	10.81	15.567	0.94	21.63	0.24	4.700	1.41	10.767	3.06	16.833	0.47	22.90	0.24
3.450	0.24	9.517	10.81	15.583	0.94	21.65	0.24	4.717	1.41	10.783	3.06	16.850	0.47	22.92	0.24
3.467	0.24	9.533	10.81	15.600	0.94	21.67	0.24	4.733	1.41	10.800	3.06	16.867	0.47	22.93	0.24
3.483	0.24	9.550	10.81	15.617	0.94	21.68	0.24	4.750	1.41	10.817	3.06	16.883	0.47	22.95	0.24
3.500	0.24	9.567	10.81	15.633	0.94	21.70	0.24	4.767	1.41	10.833	3.06	16.900	0.47	22.97	0.24
3.517	0.24	9.583	10.81	15.650	0.94	21.72	0.24	4.783	1.41	10.850	3.06	16.917	0.47	22.98	0.24
3.533	0.24	9.600	10.81	15.667	0.94	21.73	0.24	4.800	1.41	10.867	3.06	16.933	0.47	23.00	0.24
3.550	0.24	9.617	10.81	15.683	0.94	21.75	0.24	4.817	1.41	10.883	3.06	16.950	0.47	23.02	0.24
3.567	0.24	9.633	10.81	15.700	0.94	21.77	0.24	4.833	1.41	10.900	3.06	16.967	0.47	23.03	0.24
3.583	0.24	9.650	10.81	15.717	0.94	21.78	0.24	4.850	1.41	10.917	3.06	16.983	0.47	23.05	0.24
3.600	0.24	9.667	10.81	15.733	0.94	21.80	0.24	4.867	1.41	10.933	3.06	17.000	0.47	23.07	0.24
3.617	0.24	9.683	10.81	15.750	0.94	21.82	0.24	4.883	1.41	10.950	3.06	17.017	0.47	23.08	0.24
3.633	0.24	9.700	10.81	15.767	0.94	21.83	0.24	4.900	1.41	10.967	3.06	17.033	0.47	23.10	0.24
3.650	0.24	9.717	10.81	15.783	0.94	21.85	0.24	4.917	1.41	10.983	3.06	17.050	0.47	23.12	0.24
3.667	0.24	9.733	10.81	15.800	0.94	21.87	0.24	4.933	1.41	11.000	3.06	17.067	0.47	23.13	0.24
3.683	0.24	9.750	10.81	15.817	0.94	21.88	0.24	4.950	1.41	11.017	3.06	17.083	0.47	23.15	0.24
3.700	0.24	9.767	10.81	15.833	0.94	21.90	0.24	4.967	1.41	11.033	3.06	17.100	0.47	23.17	0.24
3.717	0.24	9.783	10.81	15.850	0.94	21.92	0.24	4.983	1.41	11.050	3.06	17.117	0.47	23.18	0.24
3.733	0.24	9.800	10.81	15.867	0.94	21.93	0.24	5.000	1.41	11.067	3.06	17.133	0.47	23.20	0.24
3.750	0.24	9.817	10.81	15.883	0.94	21.95	0.24	5.017	1.41	11.083	3.06	17.150	0.47	23.22	0.24
3.767	0.24	9.833	10.81	15.900	0.94	21.97	0.24	5.033	1.41	11.100	3.06	17.167	0.47	23.23	0.24
3.783	0.24	9.850	10.81	15.917	0.94	21.98	0.24	5.050	1.41	11.117	3.06	17.183	0.47	23.25	0.24
3.800	0.24	9.867	10.81	15.933	0.94	22.00	0.24	5.067	1.41	11.133	3.06	17.200	0.47	23.27	0.24
3.817	0.24	9.883	10.81	15.950	0.94	22.02	0.24	5.083	1.41	11.150	3.06	17.217	0.47	23.28	0.24
3.833	0.24	9.900	10.81	15.967	0.94	22.03	0.24	5.100	1.41	11.167	3.06	17.233	0.47	23.30	0.24
3.850	0.24	9.917	10.81	15.983	0.94	22.05	0.24	5.117	1.41	11.183	3.06	17.250	0.47	23.32	0.24
3.867	0.24	9.933	10.81	16.000	0.94	22.07	0.24	5.133	1.41	11.200	3.06	17.267	0.47	23.33	0.24
3.883	0.24	9.950	10.81	16.017	0.94	22.08	0.24	5.150	1.41	11.217	3.06	17.283	0.47	23.35	0.24
3.900	0.24	9.967	10.81	16.033	0.94	22.10	0.24	5.167	1.41	11.233	3.06	17.300	0.47	23.37	0.24
3.917	0.24	9.983	10.81	16.050	0.94	22.12	0.24	5.183	1.41	11.250	3.06	17.317	0.47	23.38	0.24
3.933	0.24	10.000	10.81	16.067	0.94	22.13	0.24	5.200	1.41	11.267	3.06	17.333	0.47	23.40	0.24
3.950	0.24	10.017	10.81	16.083	0.94	22.15	0.24	5.217	1.41	11.283	3.06	17.350	0.47	23.42	0.24
3.967	0.24	10.033	10.81	16.100	0.94	22.17	0.24	5.233	1.41	11.300	3.06	17.367	0.47	23.43	0.24
3.983	0.24	10.050	10.81	16.117	0.94	22.18	0.24	5.250	1.41	11.317	3.06	17.383	0.47	23.45	0.24
4.000	0.24	10.067	10.81	16.133	0.94	22.20	0.24	5.267	1.41	11.333	3.06	17.400	0.47	23.47	0.24
4.017	0.24	10.083	10.81	16.150	0.94	22.22	0.24	5.283	1.41	11.350	3.06	17.417	0.47	23.48	0.24
4.033	0.24	10.100	10.81	16.167	0.94	22.23	0.24	5.300	1.41	11.367	3.06	17.433	0.47	23.50	0.24
4.050	0.24	10.117	10.81	16.183	0.94	22.25	0.24	5.317	1.41	11.383	3.06	17.450	0.47	23.52	0.24
4.067	0.24	10.133	10.81	16.200	0.94	22.27	0.24	5.333	1.41	11.400	3.06	17.467	0.47	23.53	0.24
4.083	0.24	10.150	10.81	16.217	0.94	22.28	0.24	5.350	1.41	11.417	3.06	17.483	0.47	23.55	0.24
4.100	0.24	10.167	10.81	16.233	0.94	22.30	0.24	5.367	1.41	11.433	3.06	17.500	0.47	23.57	0.24
4.117	0.24	10.183	10.81	16.250	0.94	22.32	0.24	5.383	1.41	11.450	3.06	17.517	0.47	23.58	0.24
4.133	0.24	10.200	10.81	16.267	0.47	22.33	0.24	5.400	1.41	11.467	3.06	17.533	0.47	23.60	0.24
4.150	0.24	10.217	10.81	16.283	0.47	22.35	0.24	5.417	1.41	11.483	3.06	17.550	0.47	23.62	0.24
4.167	0.24	10.233	10.81	16.300	0.47	22.37	0.24	5.433	1.41	11.500	3.06	17.567	0.47	23.63	0.24
4.183	0.24	10.250	10.80	16.317	0.47	22.38	0.24	5.450	1.41	11.517	3.06	17.583	0.47	23.65	0.24
4.200	0.24	10.267	3.06	16.333	0.47	22.40	0.24	5.467	1.41	11.533	3.06	17.600	0.47	23.67	0.24
4.217	0.24	10.283	3.06	16.350	0.47	22.42	0.24	5.483	1.41	11.550	3.06	17.617	0.47	23.68	0.24
4.233	0.24	10.300	3.06	16.367	0.47	22.43	0.24	5.500	1.41	11.567	3.06	17.633	0.47	23.70	0.24
4.250	0.24	10.317	3.06	16.383	0.47	22.45	0.24	5.517	1.41	11.583	3.06	17.650	0.47	23.72	0.24
4.267	1.41	10.333	3.06	16.400	0.47	22.47	0.24	5.533	1.41	11.600	3.06	17.667	0.47	23.73	0.24
4.283	1.41	10.350	3.06	16.417	0.47	22.48	0.24	5.550	1.41	11.617	3.06	17.683	0.47	23.75	0.24
4.300	1.41	10.367	3.06	16.433	0.47	22.50	0.24	5.567	1.41	11.633	3.06	17.700	0.47	23.77	0.24
4.317	1.41	10.383	3.06	16.450	0.47	22.52	0.24	5.583	1.41	11.650	3.06	17.717	0.47	23.78	0.24
4.333	1.41	10.400	3.06	16.467	0.47	22.53	0.24	5.600	1.41	11.667	3.06	17.733	0.47	23.80	0.24
4.350	1.41	10.417	3.06	16.483	0.47	22.55	0.24	5.617	1.41	11.683	3.06	17.750	0.47	23.82	0.24
4.367	1.41	10.433	3.06	16.500	0.47	22.57	0.24	5.633	1.41	11.700	3.06	17.767	0.47	23.83	0.24
4.383	1.41	10.450	3.06	16.517	0.47	22.58	0.24	5.650	1.41	11.717	3.06	17.783	0.47	23.85	0.24
4.400	1.41	10.467	3.06	16.533	0.47	22.60	0.24	5.667	1.41	11.733	3.06	17.800	0.47	23.87	0.24
4.417	1.41	10.483	3.06	16.550	0.47	22.62	0.24	5.683	1.41	11.750	3.06	17.817	0.47	23.88	0.24
4.433	1.41	10.500	3.06	16.567	0.47	22.63	0.24	5.700	1.41	11.767	3.06	17.833	0.47	23.90	0.24
4.450	1.41	10.517	3.06	16.583	0.47	22.65	0.24	5.717	1.41	11.783	3.06	17.850	0.47	23.92	0.24
4.467	1.41	10.533	3.06	16.600	0.47	22.67	0.24	5.733	1.41	11.800	3.06	17.867	0.47	23.93	0.24

GEI Consultants

5.750	1.41	11.817	3.06	17.883	0.47	23.95	0.24
5.767	1.41	11.833	3.06	17.900	0.47	23.97	0.24
5.783	1.41	11.850	3.06	17.917	0.47	23.98	0.24
5.800	1.41	11.867	3.06	17.933	0.47	24.00	0.24
5.817	1.41	11.883	3.06	17.950	0.47	24.02	0.24
5.833	1.41	11.900	3.06	17.967	0.47	24.03	0.24
5.850	1.41	11.917	3.06	17.983	0.47	24.05	0.24
5.867	1.41	11.933	3.06	18.000	0.47	24.07	0.24
5.883	1.41	11.950	3.06	18.017	0.47	24.08	0.24
5.900	1.41	11.967	3.06	18.033	0.47	24.10	0.24
5.917	1.41	11.983	3.06	18.050	0.47	24.12	0.24
5.933	1.41	12.000	3.06	18.067	0.47	24.13	0.24
5.950	1.41	12.017	3.06	18.083	0.47	24.15	0.24
5.967	1.41	12.033	3.06	18.100	0.47	24.17	0.24
5.983	1.41	12.050	3.06	18.117	0.47	24.18	0.24
6.000	1.41	12.067	3.06	18.133	0.47	24.20	0.24
6.017	1.41	12.083	3.06	18.150	0.47	24.22	0.24
6.033	1.41	12.100	3.06	18.167	0.47	24.23	0.24
6.050	1.41	12.117	3.06	18.183	0.47	24.25	0.24
6.067	1.41	12.133	3.06	18.200	0.47		

Max.Eff.Inten.(mm/hr)=	10.81	7.03	
over (min)	7.00	12.00	
Storage Coeff. (min)=	7.44 (ii)	11.58 (ii)	
Unit Hyd. Tpeak (min)=	7.00	12.00	
Unit Hyd. peak (cms)=	0.16	0.10	
			TOTALS
PEAK FLOW (cms)=	0.08	0.00	0.081 (iii)
TIME TO PEAK (hrs)=	9.98	10.25	10.25
RUNOFF VOLUME (mm)=	46.07	22.98	45.85
TOTAL RAINFALL (mm)=	47.08	47.08	47.08
RUNOFF COEFFICIENT =	0.98	0.49	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7626)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0568	0.1530
	0.0239	0.0780	0.0660	0.1730
	0.0370	0.1040	0.0751	0.2000
	0.0451	0.1250	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7567)	2.720	0.081	10.25	45.85
OUTFLOW: ID= 1 (7626)	2.720	0.022	12.30	41.99

PEAK FLOW REDUCTION [Qout/Qin](%)= 27.46
TIME SHIFT OF PEAK FLOW (min)=123.00
MAXIMUM STORAGE USED (ha.m.)= 0.0729

CALIB		
STANDHYD (7624)	Area (ha)= 1.80	
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.78	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	109.54	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	1.41	12.150	3.06	18.22	0.47
0.033	0.00	6.100	1.41	12.167	3.06	18.23	0.47
0.050	0.00	6.117	1.41	12.183	3.06	18.25	0.47
0.067	0.00	6.133	1.41	12.200	3.06	18.27	0.24
0.083	0.00	6.150	1.41	12.217	3.06	18.28	0.24
0.100	0.00	6.167	1.41	12.233	3.06	18.30	0.24
0.117	0.00	6.183	1.41	12.250	3.06	18.32	0.24
0.133	0.00	6.200	1.41	12.267	1.65	18.33	0.24
0.150	0.00	6.217	1.41	12.283	1.65	18.35	0.24
0.167	0.00	6.233	1.41	12.300	1.65	18.37	0.24
0.183	0.00	6.250	1.41	12.317	1.65	18.38	0.24
0.200	0.00	6.267	4.00	12.333	1.65	18.40	0.24
0.217	0.00	6.283	4.00	12.350	1.65	18.42	0.24
0.233	0.00	6.300	4.00	12.367	1.65	18.43	0.24
0.250	0.00	6.317	4.00	12.383	1.65	18.45	0.24
0.267	0.24	6.333	4.00	12.400	1.65	18.47	0.24
0.283	0.24	6.350	4.00	12.417	1.65	18.48	0.24
0.300	0.24	6.367	4.00	12.433	1.65	18.50	0.24
0.317	0.24	6.383	4.00	12.450	1.65	18.52	0.24
0.333	0.24	6.400	4.00	12.467	1.65	18.53	0.24
0.350	0.24	6.417	4.00	12.483	1.65	18.55	0.24
0.367	0.24	6.433	4.00	12.500	1.65	18.57	0.24
0.383	0.24	6.450	4.00	12.517	1.65	18.58	0.24
0.400	0.24	6.467	4.00	12.533	1.65	18.60	0.24
0.417	0.24	6.483	4.00	12.550	1.65	18.62	0.24
0.433	0.24	6.500	4.00	12.567	1.65	18.63	0.24
0.450	0.24	6.517	4.00	12.583	1.65	18.65	0.24
0.467	0.24	6.533	4.00	12.600	1.65	18.67	0.24
0.483	0.24	6.550	4.00	12.617	1.65	18.68	0.24
0.500	0.24	6.567	4.00	12.633	1.65	18.70	0.24
0.517	0.24	6.583	4.00	12.650	1.65	18.72	0.24
0.533	0.24	6.600	4.00	12.667	1.65	18.73	0.24
0.550	0.24	6.617	4.00	12.683	1.65	18.75	0.24
0.567	0.24	6.633	4.00	12.700	1.65	18.77	0.24
0.583	0.24	6.650	4.00	12.717	1.65	18.78	0.24
0.600	0.24	6.667	4.00	12.733	1.65	18.80	0.24
0.617	0.24	6.683	4.00	12.750	1.65	18.82	0.24
0.633	0.24	6.700	4.00	12.767	1.65	18.83	0.24
0.650	0.24	6.717	4.00	12.783	1.65	18.85	0.24
0.667	0.24	6.733	4.00	12.800	1.65	18.87	0.24
0.683	0.24	6.750	4.00	12.817	1.65	18.88	0.24
0.700	0.24	6.767	4.00	12.833	1.65	18.90	0.24
0.717	0.24	6.783	4.00	12.850	1.65	18.92	0.24
0.733	0.24	6.800	4.00	12.867	1.65	18.93	0.24
0.750	0.24	6.817	4.00	12.883	1.65	18.95	0.24
0.767	0.24	6.833	4.00	12.900	1.65	18.97	0.24
0.783	0.24	6.850	4.00	12.917	1.65	18.98	0.24
0.800	0.24	6.867	4.00	12.933	1.65	19.00	0.24
0.817	0.24	6.883	4.00	12.950	1.65	19.02	0.24
0.833	0.24	6.900	4.00	12.967	1.65	19.03	0.24
0.850	0.24	6.917	4.00	12.983	1.65	19.05	0.24
0.867	0.24	6.933	4.00	13.000	1.65	19.07	0.24
0.883	0.24	6.950	4.00	13.017	1.65	19.08	0.24
0.900	0.24	6.967	4.00	13.033	1.65	19.10	0.24
0.917	0.24	6.983	4.00	13.050	1.65	19.12	0.24
0.933	0.24	7.000	4.00	13.067	1.65	19.13	0.24
0.950	0.24	7.017	4.00	13.083	1.65	19.15	0.24
0.967	0.24	7.033	4.00	13.100	1.65	19.17	0.24
0.983	0.24	7.050	4.00	13.117	1.65	19.18	0.24
1.000	0.24	7.067	4.00	13.133	1.65	19.20	0.24
1.017	0.24	7.083	4.00	13.150	1.65	19.22	0.24
1.033	0.24	7.100	4.00	13.167	1.65	19.23	0.24
1.050	0.24	7.117	4.00	13.183	1.65	19.25	0.24
1.067	0.24	7.133	4.00	13.200	1.65	19.27	0.24
1.083	0.24	7.150	4.00	13.217	1.65	19.28	0.24
1.100	0.24	7.167	4.00	13.233	1.65	19.30	0.24
1.117	0.24	7.183	4.00	13.250	1.65	19.32	0.24
1.133	0.24	7.200	4.00	13.267	1.65	19.33	0.24
1.150	0.24	7.217	4.00	13.283	1.65	19.35	0.24
1.167	0.24	7.233	4.00	13.300	1.65	19.37	0.24
1.183	0.24	7.250	4.00	13.317	1.65	19.38	0.24
1.200	0.24	7.267	4.00	13.333	1.65	19.40	0.24
1.217	0.24	7.283	4.00	13.350	1.65	19.42	0.24

1.233	0.24	7.300	4.00	13.367	1.65	19.43	0.24
1.250	0.24	7.317	4.00	13.383	1.65	19.45	0.24
1.267	0.24	7.333	4.00	13.400	1.65	19.47	0.24
1.283	0.24	7.350	4.00	13.417	1.65	19.48	0.24
1.300	0.24	7.367	4.00	13.433	1.65	19.50	0.24
1.317	0.24	7.383	4.00	13.450	1.65	19.52	0.24
1.333	0.24	7.400	4.00	13.467	1.65	19.53	0.24
1.350	0.24	7.417	4.00	13.483	1.65	19.55	0.24
1.367	0.24	7.433	4.00	13.500	1.65	19.57	0.24
1.383	0.24	7.450	4.00	13.517	1.65	19.58	0.24
1.400	0.24	7.467	4.00	13.533	1.65	19.60	0.24
1.417	0.24	7.483	4.00	13.550	1.65	19.62	0.24
1.433	0.24	7.500	4.00	13.567	1.65	19.63	0.24
1.450	0.24	7.517	4.00	13.583	1.65	19.65	0.24
1.467	0.24	7.533	4.00	13.600	1.65	19.67	0.24
1.483	0.24	7.550	4.00	13.617	1.65	19.68	0.24
1.500	0.24	7.567	4.00	13.633	1.65	19.70	0.24
1.517	0.24	7.583	4.00	13.650	1.65	19.72	0.24
1.533	0.24	7.600	4.00	13.667	1.65	19.73	0.24
1.550	0.24	7.617	4.00	13.683	1.65	19.75	0.24
1.567	0.24	7.633	4.00	13.700	1.65	19.77	0.24
1.583	0.24	7.650	4.00	13.717	1.65	19.78	0.24
1.600	0.24	7.667	4.00	13.733	1.65	19.80	0.24
1.617	0.24	7.683	4.00	13.750	1.65	19.82	0.24
1.633	0.24	7.700	4.00	13.767	1.65	19.83	0.24
1.650	0.24	7.717	4.00	13.783	1.65	19.85	0.24
1.667	0.24	7.733	4.00	13.800	1.65	19.87	0.24
1.683	0.24	7.750	4.00	13.817	1.65	19.88	0.24
1.700	0.24	7.767	4.00	13.833	1.65	19.90	0.24
1.717	0.24	7.783	4.00	13.850	1.65	19.92	0.24
1.733	0.24	7.800	4.00	13.867	1.65	19.93	0.24
1.750	0.24	7.817	4.00	13.883	1.65	19.95	0.24
1.767	0.24	7.833	4.00	13.900	1.65	19.97	0.24
1.783	0.24	7.850	4.00	13.917	1.65	19.98	0.24
1.800	0.24	7.867	4.00	13.933	1.65	20.00	0.24
1.817	0.24	7.883	4.00	13.950	1.65	20.02	0.24
1.833	0.24	7.900	4.00	13.967	1.65	20.03	0.24
1.850	0.24	7.917	4.00	13.983	1.65	20.05	0.24
1.867	0.24	7.933	4.00	14.000	1.65	20.07	0.24
1.883	0.24	7.950	4.00	14.017	1.65	20.08	0.24
1.900	0.24	7.967	4.00	14.033	1.65	20.10	0.24
1.917	0.24	7.983	4.00	14.050	1.65	20.12	0.24
1.933	0.24	8.000	4.00	14.067	1.65	20.13	0.24
1.950	0.24	8.017	4.00	14.083	1.65	20.15	0.24
1.967	0.24	8.033	4.00	14.100	1.65	20.17	0.24
1.983	0.24	8.050	4.00	14.117	1.65	20.18	0.24
2.000	0.24	8.067	4.00	14.133	1.65	20.20	0.24
2.017	0.24	8.083	4.00	14.150	1.65	20.22	0.24
2.033	0.24	8.100	4.00	14.167	1.65	20.23	0.24
2.050	0.24	8.117	4.00	14.183	1.65	20.25	0.24
2.067	0.24	8.133	4.00	14.200	1.65	20.27	0.24
2.083	0.24	8.150	4.00	14.217	1.65	20.28	0.24
2.100	0.24	8.167	4.00	14.233	1.65	20.30	0.24
2.117	0.24	8.183	4.00	14.250	1.65	20.32	0.24
2.133	0.24	8.200	4.00	14.267	0.94	20.33	0.24
2.150	0.24	8.217	4.00	14.283	0.94	20.35	0.24
2.167	0.24	8.233	4.00	14.300	0.94	20.37	0.24
2.183	0.24	8.250	4.02	14.317	0.94	20.38	0.24
2.200	0.24	8.267	10.81	14.333	0.94	20.40	0.24
2.217	0.24	8.283	10.81	14.350	0.94	20.42	0.24
2.233	0.24	8.300	10.81	14.367	0.94	20.43	0.24
2.250	0.24	8.317	10.81	14.383	0.94	20.45	0.24
2.267	0.24	8.333	10.81	14.400	0.94	20.47	0.24
2.283	0.24	8.350	10.81	14.417	0.94	20.48	0.24
2.300	0.24	8.367	10.81	14.433	0.94	20.50	0.24
2.317	0.24	8.383	10.81	14.450	0.94	20.52	0.24
2.333	0.24	8.400	10.81	14.467	0.94	20.53	0.24
2.350	0.24	8.417	10.81	14.483	0.94	20.55	0.24
2.367	0.24	8.433	10.81	14.500	0.94	20.57	0.24
2.383	0.24	8.450	10.81	14.517	0.94	20.58	0.24
2.400	0.24	8.467	10.81	14.533	0.94	20.60	0.24
2.417	0.24	8.483	10.81	14.550	0.94	20.62	0.24
2.433	0.24	8.500	10.81	14.567	0.94	20.63	0.24
2.450	0.24	8.517	10.81	14.583	0.94	20.65	0.24
2.467	0.24	8.533	10.81	14.600	0.94	20.67	0.24
2.483	0.24	8.550	10.81	14.617	0.94	20.68	0.24
2.500	0.24	8.567	10.81	14.633	0.94	20.70	0.24
2.517	0.24	8.583	10.81	14.650	0.94	20.72	0.24
2.533	0.24	8.600	10.81	14.667	0.94	20.73	0.24
2.550	0.24	8.617	10.81	14.683	0.94	20.75	0.24
2.567	0.24	8.633	10.81	14.700	0.94	20.77	0.24
2.583	0.24	8.650	10.81	14.717	0.94	20.78	0.24
2.600	0.24	8.667	10.81	14.733	0.94	20.80	0.24
2.617	0.24	8.683	10.81	14.750	0.94	20.82	0.24
2.633	0.24	8.700	10.81	14.767	0.94	20.83	0.24
2.650	0.24	8.717	10.81	14.783	0.94	20.85	0.24
2.667	0.24	8.733	10.81	14.800	0.94	20.87	0.24
2.683	0.24	8.750	10.81	14.817	0.94	20.88	0.24
2.700	0.24	8.767	10.81	14.833	0.94	20.90	0.24
2.717	0.24	8.783	10.81	14.850	0.94	20.92	0.24
2.733	0.24	8.800	10.81	14.867	0.94	20.93	0.24
2.750	0.24	8.817	10.81	14.883	0.94	20.95	0.24
2.767	0.24	8.833	10.81	14.900	0.94	20.97	0.24
2.783	0.24	8.850	10.81	14.917	0.94	20.98	0.24
2.800	0.24	8.867	10.81	14.933	0.94	21.00	0.24
2.817	0.24	8.883	10.81	14.950	0.94	21.02	0.24
2.833	0.24	8.900	10.81	14.967	0.94	21.03	0.24
2.850	0.24	8.917	10.81	14.983	0.94	21.05	0.24
2.867	0.24	8.933	10.81	15.000	0.94	21.07	0.24
2.883	0.24	8.950	10.81	15.017	0.94	21.08	0.24
2.900	0.24	8.967	10.81	15.033	0.94	21.10	0.24
2.917	0.24	8.983	10.81	15.050	0.94	21.12	0.24
2.933	0.24	9.000	10.81	15.067	0.94	21.13	0.24
2.950	0.24	9.017	10.81	15.083	0.94	21.15	0.24
2.967	0.24	9.033	10.81	15.100	0.94	21.17	0.24
2.983	0.24	9.050	10.81	15.117	0.94	21.18	0.24
3.000	0.24	9.067	10.81	15.133	0.94	21.20	0.24
3.017	0.24	9.083	10.81	15.150	0.94	21.22	0.24
3.033	0.24	9.100	10.81	15.167	0.94	21.23	0.24
3.050	0.24	9.117	10.81	15.183	0.94	21.25	0.24
3.067	0.24	9.133	10.81	15.200	0.94	21.27	0.24
3.083	0.24	9.150	10.81	15.217	0.94	21.28	0.24
3.100	0.24	9.167	10.81	15.233	0.94	21.30	0.24
3.117	0.24	9.183	10.81	15.250	0.94	21.32	0.24
3.133	0.24	9.200	10.81	15.267	0.94	21.33	0.24
3.150	0.24	9.217	10.81	15.283	0.94	21.35	0.24
3.167	0.24	9.233	10.81	15.300	0.94	21.37	0.24
3.183	0.24	9.250	10.81	15.317	0.94	21.38	0.24
3.200	0.24	9.267	10.81	15.333	0.94	21.40	0.24
3.217	0.24	9.283	10.81	15.350	0.94	21.42	0.24
3.233	0.24	9.300	10.81	15.367	0.94	21.43	0.24
3.250	0.24	9.317	10.81	15.383	0.94	21.45	0.24
3.267	0.24	9.333	10.81	15.400	0.94	21.47	0.24
3.283	0.24	9.350	10.81	15.417	0.94	21.48	0.24
3.300	0.24	9.367	10.81	15.433	0.94	21.50	0.24
3.317	0.24	9.383	10.81	15.450	0.94	21.52	0.24
3.333	0.24	9.400	10.81	15.467	0.94	21.53	0.24
3.350	0.24	9.417	10.81	15.483	0.94	21.55	0.24
3.367	0.24	9.433	10.81	15.500	0.94	21.57	0.24
3.383	0.24	9.450	10.81	15.517	0.94	21.58	0.24
3.400	0.24	9.467	10.81	15.533	0.94	21.60	0.24
3.417	0.24	9.483	10.81	15.550	0.94	21.62	0.24
3.433	0.24	9.500	10.81	15.567	0.94	21.63	0.24
3.450	0.24	9.517	10.81	15.583	0.94	21.65	0.24
3.467	0.24	9.533	10.81	15.600	0.94	21.67	0.24
3.483	0.24	9.550	10.81	15.617	0.94	21.68	0.24
3.500	0.24	9.567	10.81	15.633	0.94	21.70	0.24
3.517	0.24	9.583	10.81	15.650	0.94	21.72	0.24
3.533	0.24	9.600	10.81	15.667	0.94	21.73	0.24
3.550	0.24	9.617	10.81	15.683	0.94	21.75	0.24
3.567	0.24	9.633	10.81	15.700	0.94	21.77	0.24
3.583	0.24	9.650	10.81	15.717	0.94	21.78	0.24
3.600	0.24	9.667	10.81	15.733	0.94	21.80	0.24
3.617	0.24	9.683	10.81	15.750	0.94	21.82	0.24
3.633	0.24	9.700	10.81	15.767	0.94	21.83	0.24
3.650	0.24	9.717	10.81	15.783	0.94	21.85	0.24
3.667	0.24	9.733	10.81	15.800	0.94	21.87	0.24
3.683	0.24	9.750	10.81	15.817	0.94	21.88	0.24
3.700	0.24	9.767	10.81	15.833	0.94	21.90	0.24
3.717	0.24	9.783	10.81	15.850	0.94	21.92	0.24
3.733	0.24	9.800	10.81	15.867	0.94	21.93	0.24
3.750	0.24	9.817	10.81	15.883	0.94	21.95	0.24

3.767	0.24	9.833	10.81	15.900	0.94	21.97	0.24
3.783	0.24	9.850	10.81	15.917	0.94	21.98	0.24
3.800	0.24	9.867	10.81	15.933	0.94	22.00	0.24
3.817	0.24	9.883	10.81	15.950	0.94	22.02	0.24
3.833	0.24	9.900	10.81	15.967	0.94	22.03	0.24
3.850	0.24	9.917	10.81	15.983	0.94	22.05	0.24
3.867	0.24	9.933	10.81	16.000	0.94	22.07	0.24
3.883	0.24	9.950	10.81	16.017	0.94	22.08	0.24
3.900	0.24	9.967	10.81	16.033	0.94	22.10	0.24
3.917	0.24	9.983	10.81	16.050	0.94	22.12	0.24
3.933	0.24	10.000	10.81	16.067	0.94	22.13	0.24
3.950	0.24	10.017	10.81	16.083	0.94	22.15	0.24
3.967	0.24	10.033	10.81	16.100	0.94	22.17	0.24
3.983	0.24	10.050	10.81	16.117	0.94	22.18	0.24
4.000	0.24	10.067	10.81	16.133	0.94	22.20	0.24
4.017	0.24	10.083	10.81	16.150	0.94	22.22	0.24
4.033	0.24	10.100	10.81	16.167	0.94	22.23	0.24
4.050	0.24	10.117	10.81	16.183	0.94	22.25	0.24
4.067	0.24	10.133	10.81	16.200	0.94	22.27	0.24
4.083	0.24	10.150	10.81	16.217	0.94	22.28	0.24
4.100	0.24	10.167	10.81	16.233	0.94	22.30	0.24
4.117	0.24	10.183	10.81	16.250	0.94	22.32	0.24
4.133	0.24	10.200	10.81	16.267	0.47	22.33	0.24
4.150	0.24	10.217	10.81	16.283	0.47	22.35	0.24
4.167	0.24	10.233	10.81	16.300	0.47	22.37	0.24
4.183	0.24	10.250	10.80	16.317	0.47	22.38	0.24
4.200	0.24	10.267	3.06	16.333	0.47	22.40	0.24
4.217	0.24	10.283	3.06	16.350	0.47	22.42	0.24
4.233	0.24	10.300	3.06	16.367	0.47	22.43	0.24
4.250	0.24	10.317	3.06	16.383	0.47	22.45	0.24
4.267	1.41	10.333	3.06	16.400	0.47	22.47	0.24
4.283	1.41	10.350	3.06	16.417	0.47	22.48	0.24
4.300	1.41	10.367	3.06	16.433	0.47	22.50	0.24
4.317	1.41	10.383	3.06	16.450	0.47	22.52	0.24
4.333	1.41	10.400	3.06	16.467	0.47	22.53	0.24
4.350	1.41	10.417	3.06	16.483	0.47	22.55	0.24
4.367	1.41	10.433	3.06	16.500	0.47	22.57	0.24
4.383	1.41	10.450	3.06	16.517	0.47	22.58	0.24
4.400	1.41	10.467	3.06	16.533	0.47	22.60	0.24
4.417	1.41	10.483	3.06	16.550	0.47	22.62	0.24
4.433	1.41	10.500	3.06	16.567	0.47	22.63	0.24
4.450	1.41	10.517	3.06	16.583	0.47	22.65	0.24
4.467	1.41	10.533	3.06	16.600	0.47	22.67	0.24
4.483	1.41	10.550	3.06	16.617	0.47	22.68	0.24
4.500	1.41	10.567	3.06	16.633	0.47	22.70	0.24
4.517	1.41	10.583	3.06	16.650	0.47	22.72	0.24
4.533	1.41	10.600	3.06	16.667	0.47	22.73	0.24
4.550	1.41	10.617	3.06	16.683	0.47	22.75	0.24
4.567	1.41	10.633	3.06	16.700	0.47	22.77	0.24
4.583	1.41	10.650	3.06	16.717	0.47	22.78	0.24
4.600	1.41	10.667	3.06	16.733	0.47	22.80	0.24
4.617	1.41	10.683	3.06	16.750	0.47	22.82	0.24
4.633	1.41	10.700	3.06	16.767	0.47	22.83	0.24
4.650	1.41	10.717	3.06	16.783	0.47	22.85	0.24
4.667	1.41	10.733	3.06	16.800	0.47	22.87	0.24
4.683	1.41	10.750	3.06	16.817	0.47	22.88	0.24
4.700	1.41	10.767	3.06	16.833	0.47	22.90	0.24
4.717	1.41	10.783	3.06	16.850	0.47	22.92	0.24
4.733	1.41	10.800	3.06	16.867	0.47	22.93	0.24
4.750	1.41	10.817	3.06	16.883	0.47	22.95	0.24
4.767	1.41	10.833	3.06	16.900	0.47	22.97	0.24
4.783	1.41	10.850	3.06	16.917	0.47	22.98	0.24
4.800	1.41	10.867	3.06	16.933	0.47	23.00	0.24
4.817	1.41	10.883	3.06	16.950	0.47	23.02	0.24
4.833	1.41	10.900	3.06	16.967	0.47	23.03	0.24
4.850	1.41	10.917	3.06	16.983	0.47	23.05	0.24
4.867	1.41	10.933	3.06	17.000	0.47	23.07	0.24
4.883	1.41	10.950	3.06	17.017	0.47	23.08	0.24
4.900	1.41	10.967	3.06	17.033	0.47	23.10	0.24
4.917	1.41	10.983	3.06	17.050	0.47	23.12	0.24
4.933	1.41	11.000	3.06	17.067	0.47	23.13	0.24
4.950	1.41	11.017	3.06	17.083	0.47	23.15	0.24
4.967	1.41	11.033	3.06	17.100	0.47	23.17	0.24
4.983	1.41	11.050	3.06	17.117	0.47	23.18	0.24
5.000	1.41	11.067	3.06	17.133	0.47	23.20	0.24
5.017	1.41	11.083	3.06	17.150	0.47	23.22	0.24
5.033	1.41	11.100	3.06	17.167	0.47	23.23	0.24
5.050	1.41	11.117	3.06	17.183	0.47	23.25	0.24
5.067	1.41	11.133	3.06	17.200	0.47	23.27	0.24
5.083	1.41	11.150	3.06	17.217	0.47	23.28	0.24
5.100	1.41	11.167	3.06	17.233	0.47	23.30	0.24
5.117	1.41	11.183	3.06	17.250	0.47	23.32	0.24
5.133	1.41	11.200	3.06	17.267	0.47	23.33	0.24
5.150	1.41	11.217	3.06	17.283	0.47	23.35	0.24
5.167	1.41	11.233	3.06	17.300	0.47	23.37	0.24
5.183	1.41	11.250	3.06	17.317	0.47	23.38	0.24
5.200	1.41	11.267	3.06	17.333	0.47	23.40	0.24
5.217	1.41	11.283	3.06	17.350	0.47	23.42	0.24
5.233	1.41	11.300	3.06	17.367	0.47	23.43	0.24
5.250	1.41	11.317	3.06	17.383	0.47	23.45	0.24
5.267	1.41	11.333	3.06	17.400	0.47	23.47	0.24
5.283	1.41	11.350	3.06	17.417	0.47	23.48	0.24
5.300	1.41	11.367	3.06	17.433	0.47	23.50	0.24
5.317	1.41	11.383	3.06	17.450	0.47	23.52	0.24
5.333	1.41	11.400	3.06	17.467	0.47	23.53	0.24
5.350	1.41	11.417	3.06	17.483	0.47	23.55	0.24
5.367	1.41	11.433	3.06	17.500	0.47	23.57	0.24
5.383	1.41	11.450	3.06	17.517	0.47	23.58	0.24
5.400	1.41	11.467	3.06	17.533	0.47	23.60	0.24
5.417	1.41	11.483	3.06	17.550	0.47	23.62	0.24
5.433	1.41	11.500	3.06	17.567	0.47	23.63	0.24
5.450	1.41	11.517	3.06	17.583	0.47	23.65	0.24
5.467	1.41	11.533	3.06	17.600	0.47	23.67	0.24
5.483	1.41	11.550	3.06	17.617	0.47	23.68	0.24
5.500	1.41	11.567	3.06	17.633	0.47	23.70	0.24
5.517	1.41	11.583	3.06	17.650	0.47	23.72	0.24
5.533	1.41	11.600	3.06	17.667	0.47	23.73	0.24
5.550	1.41	11.617	3.06	17.683	0.47	23.75	0.24
5.567	1.41	11.633	3.06	17.700	0.47	23.77	0.24
5.583	1.41	11.650	3.06	17.717	0.47	23.78	0.24
5.600	1.41	11.667	3.06	17.733	0.47	23.80	0.24
5.617	1.41	11.683	3.06	17.750	0.47	23.82	0.24
5.633	1.41	11.700	3.06	17.767	0.47	23.83	0.24
5.650	1.41	11.717	3.06	17.783	0.47	23.85	0.24
5.667	1.41	11.733	3.06	17.800	0.47	23.87	0.24
5.683	1.41	11.750	3.06	17.817	0.47	23.88	0.24
5.700	1.41	11.767	3.06	17.833	0.47	23.90	0.24
5.717	1.41	11.783	3.06	17.850	0.47	23.92	0.24
5.733	1.41	11.800	3.06	17.867	0.47	23.93	0.24
5.750	1.41	11.817	3.06	17.883	0.47	23.95	0.24
5.767	1.41	11.833	3.06	17.900	0.47	23.97	0.24
5.783	1.41	11.850	3.06	17.917	0.47	23.98	0.24
5.800	1.41	11.867	3.06	17.933	0.47	24.00	0.24
5.817	1.41	11.883	3.06	17.950	0.47	24.02	0.24
5.833	1.41	11.900	3.06	17.967	0.47	24.03	0.24
5.850	1.41	11.917	3.06	17.983	0.47	24.05	0.24
5.867	1.41	11.933	3.06	18.000	0.47	24.07	0.24
5.883	1.41	11.950	3.06	18.017	0.47	24.08	0.24
5.900	1.41	11.967	3.06	18.033	0.47	24.10	0.24
5.917	1.41	11.983	3.06	18.050	0.47	24.12	0.24
5.933	1.41	12.000	3.06	18.067	0.47	24.13	0.24
5.950	1.41	12.017	3.06	18.083	0.47	24.15	0.24
5.967	1.41	12.033	3.06	18.100	0.47	24.17	0.24
5.983	1.41	12.050	3.06	18.117	0.47	24.18	0.24
6.000	1.41	12.067	3.06	18.133	0.47	24.20	0.24
6.017	1.41	12.083	3.06	18.150	0.47	24.22	0.24
6.033	1.41	12.100	3.06	18.167	0.47	24.23	0.24
6.050	1.41	12.117	3.06	18.183	0.47	24.25	0.24
6.067	1.41	12.133	3.06	18.200	0.47		

Max.Eff.Inten.(mm/hr)=	10.81	8.35	
over (min)	7.00	11.00	
Storage Coeff. (min)=	6.57 (ii)	10.71 (ii)	
Unit Hyd. Tpeak (min)=	7.00	11.00	
Unit Hyd. peak (cms)=	0.17	0.10	
			TOTALS
PEAK FLOW (cms)=	0.05	0.00	0.054 (iii)
TIME TO PEAK (hrs)=	9.73	10.25	10.25
RUNOFF VOLUME (mm)=	46.07	28.15	45.90
TOTAL RAINFALL (mm)=	47.08	47.08	47.08
RUNOFF COEFFICIENT =	0.98	0.60	0.97

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      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  90.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| RESERVOIR(  7625)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0389      0.1013
                         0.0164     0.0514   |   0.0456      0.1141
                         0.0252     0.0690   |   0.0514      0.1288
                         0.0309     0.0825   |   0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  7624)     1.800     0.054     10.25      45.90
   OUTFLOW: ID= 1 (  7625)     1.800     0.015     12.27      42.40

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 28.20
                  TIME SHIFT OF PEAK FLOW         (min)=121.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0477

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| CALIB           |
| STANDHYD (  7623)|   Area    (ha)=   1.15
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
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                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.14         0.01
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=      87.56        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.017    0.00 | 6.083    1.41 |12.150    3.06 | 18.22    0.47
 0.033    0.00 | 6.100    1.41 |12.167    3.06 | 18.23    0.47
 0.050    0.00 | 6.117    1.41 |12.183    3.06 | 18.25    0.47
 0.067    0.00 | 6.133    1.41 |12.200    3.06 | 18.27    0.24
 0.083    0.00 | 6.150    1.41 |12.217    3.06 | 18.28    0.24
 0.100    0.00 | 6.167    1.41 |12.233    3.06 | 18.30    0.24
 0.117    0.00 | 6.183    1.41 |12.250    3.06 | 18.32    0.24
 0.133    0.00 | 6.200    1.41 |12.267    1.65 | 18.33    0.24
 0.150    0.00 | 6.217    1.41 |12.283    1.65 | 18.35    0.24
 0.167    0.00 | 6.233    1.41 |12.300    1.65 | 18.37    0.24
 0.183    0.00 | 6.250    1.41 |12.317    1.65 | 18.38    0.24
 0.200    0.00 | 6.267    4.00 |12.333    1.65 | 18.40    0.24
 0.217    0.00 | 6.283    4.00 |12.350    1.65 | 18.42    0.24
 0.233    0.00 | 6.300    4.00 |12.367    1.65 | 18.43    0.24
 0.250    0.00 | 6.317    4.00 |12.383    1.65 | 18.45    0.24
 0.267    0.24 | 6.333    4.00 |12.400    1.65 | 18.47    0.24
 0.283    0.24 | 6.350    4.00 |12.417    1.65 | 18.48    0.24
 0.300    0.24 | 6.367    4.00 |12.433    1.65 | 18.50    0.24
 0.317    0.24 | 6.383    4.00 |12.450    1.65 | 18.52    0.24
 0.333    0.24 | 6.400    4.00 |12.467    1.65 | 18.53    0.24
 0.350    0.24 | 6.417    4.00 |12.483    1.65 | 18.55    0.24
 0.367    0.24 | 6.433    4.00 |12.500    1.65 | 18.57    0.24
 0.383    0.24 | 6.450    4.00 |12.517    1.65 | 18.58    0.24
 0.400    0.24 | 6.467    4.00 |12.533    1.65 | 18.60    0.24
 0.417    0.24 | 6.483    4.00 |12.550    1.65 | 18.62    0.24
 0.433    0.24 | 6.500    4.00 |12.567    1.65 | 18.63    0.24
 0.450    0.24 | 6.517    4.00 |12.583    1.65 | 18.65    0.24
 0.467    0.24 | 6.533    4.00 |12.600    1.65 | 18.67    0.24
 0.483    0.24 | 6.550    4.00 |12.617    1.65 | 18.68    0.24
 0.500    0.24 | 6.567    4.00 |12.633    1.65 | 18.70    0.24
 0.517    0.24 | 6.583    4.00 |12.650    1.65 | 18.72    0.24
 0.533    0.24 | 6.600    4.00 |12.667    1.65 | 18.73    0.24
 0.550    0.24 | 6.617    4.00 |12.683    1.65 | 18.75    0.24
 0.567    0.24 | 6.633    4.00 |12.700    1.65 | 18.77    0.24
 0.583    0.24 | 6.650    4.00 |12.717    1.65 | 18.78    0.24
 0.600    0.24 | 6.667    4.00 |12.733    1.65 | 18.80    0.24
 0.617    0.24 | 6.683    4.00 |12.750    1.65 | 18.82    0.24
 0.633    0.24 | 6.700    4.00 |12.767    1.65 | 18.83    0.24
 0.650    0.24 | 6.717    4.00 |12.783    1.65 | 18.85    0.24
 0.667    0.24 | 6.733    4.00 |12.800    1.65 | 18.87    0.24
 0.683    0.24 | 6.750    4.00 |12.817    1.65 | 18.88    0.24
 0.700    0.24 | 6.767    4.00 |12.833    1.65 | 18.90    0.24
 0.717    0.24 | 6.783    4.00 |12.850    1.65 | 18.92    0.24
 0.733    0.24 | 6.800    4.00 |12.867    1.65 | 18.93    0.24
 0.750    0.24 | 6.817    4.00 |12.883    1.65 | 18.95    0.24
 0.767    0.24 | 6.833    4.00 |12.900    1.65 | 18.97    0.24
 0.783    0.24 | 6.850    4.00 |12.917    1.65 | 18.98    0.24
 0.800    0.24 | 6.867    4.00 |12.933    1.65 | 19.00    0.24
 0.817    0.24 | 6.883    4.00 |12.950    1.65 | 19.02    0.24
 0.833    0.24 | 6.900    4.00 |12.967    1.65 | 19.03    0.24
 0.850    0.24 | 6.917    4.00 |12.983    1.65 | 19.05    0.24
 0.867    0.24 | 6.933    4.00 |13.000    1.65 | 19.07    0.24
 0.883    0.24 | 6.950    4.00 |13.017    1.65 | 19.08    0.24
 0.900    0.24 | 6.967    4.00 |13.033    1.65 | 19.10    0.24
 0.917    0.24 | 6.983    4.00 |13.050    1.65 | 19.12    0.24
 0.933    0.24 | 7.000    4.00 |13.067    1.65 | 19.13    0.24
 0.950    0.24 | 7.017    4.00 |13.083    1.65 | 19.15    0.24
 0.967    0.24 | 7.033    4.00 |13.100    1.65 | 19.17    0.24
 0.983    0.24 | 7.050    4.00 |13.117    1.65 | 19.18    0.24
 1.000    0.24 | 7.067    4.00 |13.133    1.65 | 19.20    0.24
 1.017    0.24 | 7.083    4.00 |13.150    1.65 | 19.22    0.24
 1.033    0.24 | 7.100    4.00 |13.167    1.65 | 19.23    0.24
 1.050    0.24 | 7.117    4.00 |13.183    1.65 | 19.25    0.24
 1.067    0.24 | 7.133    4.00 |13.200    1.65 | 19.27    0.24
 1.083    0.24 | 7.150    4.00 |13.217    1.65 | 19.28    0.24
 1.100    0.24 | 7.167    4.00 |13.233    1.65 | 19.30    0.24
 1.117    0.24 | 7.183    4.00 |13.250    1.65 | 19.32    0.24
 1.133    0.24 | 7.200    4.00 |13.267    1.65 | 19.33    0.24
 1.150    0.24 | 7.217    4.00 |13.283    1.65 | 19.35    0.24
 1.167    0.24 | 7.233    4.00 |13.300    1.65 | 19.37    0.24
 1.183    0.24 | 7.250    4.00 |13.317    1.65 | 19.38    0.24
 1.200    0.24 | 7.267    4.00 |13.333    1.65 | 19.40    0.24
 1.217    0.24 | 7.283    4.00 |13.350    1.65 | 19.42    0.24
 1.233    0.24 | 7.300    4.00 |13.367    1.65 | 19.43    0.24
 1.250    0.24 | 7.317    4.00 |13.383    1.65 | 19.45    0.24
 1.267    0.24 | 7.333    4.00 |13.400    1.65 | 19.47    0.24
 1.283    0.24 | 7.350    4.00 |13.417    1.65 | 19.48    0.24
 1.300    0.24 | 7.367    4.00 |13.433    1.65 | 19.50    0.24
 1.317    0.24 | 7.383    4.00 |13.450    1.65 | 19.52    0.24
 1.333    0.24 | 7.400    4.00 |13.467    1.65 | 19.53    0.24
 1.350    0.24 | 7.417    4.00 |13.483    1.65 | 19.55    0.24
 1.367    0.24 | 7.433    4.00 |13.500    1.65 | 19.57    0.24
 1.383    0.24 | 7.450    4.00 |13.517    1.65 | 19.58    0.24
 1.400    0.24 | 7.467    4.00 |13.533    1.65 | 19.60    0.24
 1.417    0.24 | 7.483    4.00 |13.550    1.65 | 19.62    0.24
 1.433    0.24 | 7.500    4.00 |13.567    1.65 | 19.63    0.24
 1.450    0.24 | 7.517    4.00 |13.583    1.65 | 19.65    0.24
 1.467    0.24 | 7.533    4.00 |13.600    1.65 | 19.67    0.24
 1.483    0.24 | 7.550    4.00 |13.617    1.65 | 19.68    0.24
 1.500    0.24 | 7.567    4.00 |13.633    1.65 | 19.70    0.24
 1.517    0.24 | 7.583    4.00 |13.650    1.65 | 19.72    0.24
 1.533    0.24 | 7.600    4.00 |13.667    1.65 | 19.73    0.24
 1.550    0.24 | 7.617    4.00 |13.683    1.65 | 19.75    0.24
 1.567    0.24 | 7.633    4.00 |13.700    1.65 | 19.77    0.24
 1.583    0.24 | 7.650    4.00 |13.717    1.65 | 19.78    0.24
 1.600    0.24 | 7.667    4.00 |13.733    1.65 | 19.80    0.24
 1.617    0.24 | 7.683    4.00 |13.750    1.65 | 19.82    0.24
 1.633    0.24 | 7.700    4.00 |13.767    1.65 | 19.83    0.24
 1.650    0.24 | 7.717    4.00 |13.783    1.65 | 19.85    0.24
 1.667    0.24 | 7.733    4.00 |13.800    1.65 | 19.87    0.24
 1.683    0.24 | 7.750    4.00 |13.817    1.65 | 19.88    0.24
 1.700    0.24 | 7.767    4.00 |13.833    1.65 | 19.90    0.24
 1.717    0.24 | 7.783    4.00 |13.850    1.65 | 19.92    0.24
 1.733    0.24 | 7.800    4.00 |13.867    1.65 | 19.93    0.24
 1.750    0.24 | 7.817    4.00 |13.883    1.65 | 19.95    0.24
 1.767    0.24 | 7.833    4.00 |13.900    1.65 | 19.97    0.24
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1.783	0.24	7.850	4.00	13.917	1.65	19.98	0.24
1.800	0.24	7.867	4.00	13.933	1.65	20.00	0.24
1.817	0.24	7.883	4.00	13.950	1.65	20.02	0.24
1.833	0.24	7.900	4.00	13.967	1.65	20.03	0.24
1.850	0.24	7.917	4.00	13.983	1.65	20.05	0.24
1.867	0.24	7.933	4.00	14.000	1.65	20.07	0.24
1.883	0.24	7.950	4.00	14.017	1.65	20.08	0.24
1.900	0.24	7.967	4.00	14.033	1.65	20.10	0.24
1.917	0.24	7.983	4.00	14.050	1.65	20.12	0.24
1.933	0.24	8.000	4.00	14.067	1.65	20.13	0.24
1.950	0.24	8.017	4.00	14.083	1.65	20.15	0.24
1.967	0.24	8.033	4.00	14.100	1.65	20.17	0.24
1.983	0.24	8.050	4.00	14.117	1.65	20.18	0.24
2.000	0.24	8.067	4.00	14.133	1.65	20.20	0.24
2.017	0.24	8.083	4.00	14.150	1.65	20.22	0.24
2.033	0.24	8.100	4.00	14.167	1.65	20.23	0.24
2.050	0.24	8.117	4.00	14.183	1.65	20.25	0.24
2.067	0.24	8.133	4.00	14.200	1.65	20.27	0.24
2.083	0.24	8.150	4.00	14.217	1.65	20.28	0.24
2.100	0.24	8.167	4.00	14.233	1.65	20.30	0.24
2.117	0.24	8.183	4.00	14.250	1.65	20.32	0.24
2.133	0.24	8.200	4.00	14.267	0.94	20.33	0.24
2.150	0.24	8.217	4.00	14.283	0.94	20.35	0.24
2.167	0.24	8.233	4.00	14.300	0.94	20.37	0.24
2.183	0.24	8.250	4.02	14.317	0.94	20.38	0.24
2.200	0.24	8.267	10.81	14.333	0.94	20.40	0.24
2.217	0.24	8.283	10.81	14.350	0.94	20.42	0.24
2.233	0.24	8.300	10.81	14.367	0.94	20.43	0.24
2.250	0.24	8.317	10.81	14.383	0.94	20.45	0.24
2.267	0.24	8.333	10.81	14.400	0.94	20.47	0.24
2.283	0.24	8.350	10.81	14.417	0.94	20.48	0.24
2.300	0.24	8.367	10.81	14.433	0.94	20.50	0.24
2.317	0.24	8.383	10.81	14.450	0.94	20.52	0.24
2.333	0.24	8.400	10.81	14.467	0.94	20.53	0.24
2.350	0.24	8.417	10.81	14.483	0.94	20.55	0.24
2.367	0.24	8.433	10.81	14.500	0.94	20.57	0.24
2.383	0.24	8.450	10.81	14.517	0.94	20.58	0.24
2.400	0.24	8.467	10.81	14.533	0.94	20.60	0.24
2.417	0.24	8.483	10.81	14.550	0.94	20.62	0.24
2.433	0.24	8.500	10.81	14.567	0.94	20.63	0.24
2.450	0.24	8.517	10.81	14.583	0.94	20.65	0.24
2.467	0.24	8.533	10.81	14.600	0.94	20.67	0.24
2.483	0.24	8.550	10.81	14.617	0.94	20.68	0.24
2.500	0.24	8.567	10.81	14.633	0.94	20.70	0.24
2.517	0.24	8.583	10.81	14.650	0.94	20.72	0.24
2.533	0.24	8.600	10.81	14.667	0.94	20.73	0.24
2.550	0.24	8.617	10.81	14.683	0.94	20.75	0.24
2.567	0.24	8.633	10.81	14.700	0.94	20.77	0.24
2.583	0.24	8.650	10.81	14.717	0.94	20.78	0.24
2.600	0.24	8.667	10.81	14.733	0.94	20.80	0.24
2.617	0.24	8.683	10.81	14.750	0.94	20.82	0.24
2.633	0.24	8.700	10.81	14.767	0.94	20.83	0.24
2.650	0.24	8.717	10.81	14.783	0.94	20.85	0.24
2.667	0.24	8.733	10.81	14.800	0.94	20.87	0.24
2.683	0.24	8.750	10.81	14.817	0.94	20.88	0.24
2.700	0.24	8.767	10.81	14.833	0.94	20.90	0.24
2.717	0.24	8.783	10.81	14.850	0.94	20.92	0.24
2.733	0.24	8.800	10.81	14.867	0.94	20.93	0.24
2.750	0.24	8.817	10.81	14.883	0.94	20.95	0.24
2.767	0.24	8.833	10.81	14.900	0.94	20.97	0.24
2.783	0.24	8.850	10.81	14.917	0.94	20.98	0.24
2.800	0.24	8.867	10.81	14.933	0.94	21.00	0.24
2.817	0.24	8.883	10.81	14.950	0.94	21.02	0.24
2.833	0.24	8.900	10.81	14.967	0.94	21.03	0.24
2.850	0.24	8.917	10.81	14.983	0.94	21.05	0.24
2.867	0.24	8.933	10.81	15.000	0.94	21.07	0.24
2.883	0.24	8.950	10.81	15.017	0.94	21.08	0.24
2.900	0.24	8.967	10.81	15.033	0.94	21.10	0.24
2.917	0.24	8.983	10.81	15.050	0.94	21.12	0.24
2.933	0.24	9.000	10.81	15.067	0.94	21.13	0.24
2.950	0.24	9.017	10.81	15.083	0.94	21.15	0.24
2.967	0.24	9.033	10.81	15.100	0.94	21.17	0.24
2.983	0.24	9.050	10.81	15.117	0.94	21.18	0.24
3.000	0.24	9.067	10.81	15.133	0.94	21.20	0.24
3.017	0.24	9.083	10.81	15.150	0.94	21.22	0.24
3.033	0.24	9.100	10.81	15.167	0.94	21.23	0.24
3.050	0.24	9.117	10.81	15.183	0.94	21.25	0.24
3.067	0.24	9.133	10.81	15.200	0.94	21.27	0.24
3.083	0.24	9.150	10.81	15.217	0.94	21.28	0.24
3.100	0.24	9.167	10.81	15.233	0.94	21.30	0.24
3.117	0.24	9.183	10.81	15.250	0.94	21.32	0.24
3.133	0.24	9.200	10.81	15.267	0.94	21.33	0.24
3.150	0.24	9.217	10.81	15.283	0.94	21.35	0.24
3.167	0.24	9.233	10.81	15.300	0.94	21.37	0.24
3.183	0.24	9.250	10.81	15.317	0.94	21.38	0.24
3.200	0.24	9.267	10.81	15.333	0.94	21.40	0.24
3.217	0.24	9.283	10.81	15.350	0.94	21.42	0.24
3.233	0.24	9.300	10.81	15.367	0.94	21.43	0.24
3.250	0.24	9.317	10.81	15.383	0.94	21.45	0.24
3.267	0.24	9.333	10.81	15.400	0.94	21.47	0.24
3.283	0.24	9.350	10.81	15.417	0.94	21.48	0.24
3.300	0.24	9.367	10.81	15.433	0.94	21.50	0.24
3.317	0.24	9.383	10.81	15.450	0.94	21.52	0.24
3.333	0.24	9.400	10.81	15.467	0.94	21.53	0.24
3.350	0.24	9.417	10.81	15.483	0.94	21.55	0.24
3.367	0.24	9.433	10.81	15.500	0.94	21.57	0.24
3.383	0.24	9.450	10.81	15.517	0.94	21.58	0.24
3.400	0.24	9.467	10.81	15.533	0.94	21.60	0.24
3.417	0.24	9.483	10.81	15.550	0.94	21.62	0.24
3.433	0.24	9.500	10.81	15.567	0.94	21.63	0.24
3.450	0.24	9.517	10.81	15.583	0.94	21.65	0.24
3.467	0.24	9.533	10.81	15.600	0.94	21.67	0.24
3.483	0.24	9.550	10.81	15.617	0.94	21.68	0.24
3.500	0.24	9.567	10.81	15.633	0.94	21.70	0.24
3.517	0.24	9.583	10.81	15.650	0.94	21.72	0.24
3.533	0.24	9.600	10.81	15.667	0.94	21.73	0.24
3.550	0.24	9.617	10.81	15.683	0.94	21.75	0.24
3.567	0.24	9.633	10.81	15.700	0.94	21.77	0.24
3.583	0.24	9.650	10.81	15.717	0.94	21.78	0.24
3.600	0.24	9.667	10.81	15.733	0.94	21.80	0.24
3.617	0.24	9.683	10.81	15.750	0.94	21.82	0.24
3.633	0.24	9.700	10.81	15.767	0.94	21.83	0.24
3.650	0.24	9.717	10.81	15.783	0.94	21.85	0.24
3.667	0.24	9.733	10.81	15.800	0.94	21.87	0.24
3.683	0.24	9.750	10.81	15.817	0.94	21.88	0.24
3.700	0.24	9.767	10.81	15.833	0.94	21.90	0.24
3.717	0.24	9.783	10.81	15.850	0.94	21.92	0.24
3.733	0.24	9.800	10.81	15.867	0.94	21.93	0.24
3.750	0.24	9.817	10.81	15.883	0.94	21.95	0.24
3.767	0.24	9.833	10.81	15.900	0.94	21.97	0.24
3.783	0.24	9.850	10.81	15.917	0.94	21.98	0.24
3.800	0.24	9.867	10.81	15.933	0.94	22.00	0.24
3.817	0.24	9.883	10.81	15.950	0.94	22.02	0.24
3.833	0.24	9.900	10.81	15.967	0.94	22.03	0.24
3.850	0.24	9.917	10.81	15.983	0.94	22.05	0.24
3.867	0.24	9.933	10.81	16.000	0.94	22.07	0.24
3.883	0.24	9.950	10.81	16.017	0.94	22.08	0.24
3.900	0.24	9.967	10.81	16.033	0.94	22.10	0.24
3.917	0.24	9.983	10.81	16.050	0.94	22.12	0.24
3.933	0.24	10.000	10.81	16.067	0.94	22.13	0.24
3.950	0.24	10.017	10.81	16.083	0.94	22.15	0.24
3.967	0.24	10.033	10.81	16.100	0.94	22.17	0.24
3.983	0.24	10.050	10.81	16.117	0.94	22.18	0.24
4.000	0.24	10.067	10.81	16.133	0.94	22.20	0.24
4.017	0.24	10.083	10.81	16.150	0.94	22.22	0.24
4.033	0.24	10.100	10.81	16.167	0.94	22.23	0.24
4.050	0.24	10.117	10.81	16.183	0.94	22.25	0.24
4.067	0.24	10.133	10.81	16.200	0.94	22.27	0.24
4.083	0.24	10.150	10.81	16.217	0.94	22.28	0.24
4.100	0.24	10.167	10.81	16.233	0.94	22.30	0.24
4.117	0.24	10.183	10.81	16.250	0.94	22.32	0.24
4.133	0.24	10.200	10.81	16.267	0.47	22.33	0.24
4.150	0.24	10.217	10.81	16.283	0.47	22.35	0.24
4.167	0.24	10.233	10.81	16.300	0.47	22.37	0.24
4.183	0.24	10.250	10.80	16.317	0.47	22.38	0.24
4.200	0.24	10.267	3.06	16.333	0.47	22.40	0.24
4.217	0.24	10.283	3.06	16.350	0.47	22.42	0.24
4.233	0.24	10.300	3.06	16.367	0.47	22.43	0.24
4.250	0.24	10.317	3.06	16.383	0.47	22.45	0.24
4.267	1.41	10.333	3.06	16.400	0.47	22.47	0.24
4.283	1.41	10.350	3.06	16.417	0.47	22.48	0.24
4.300	1.41	10.367	3.06	16.433	0.47	22.50	0.24

4.317	1.41	10.383	3.06	16.450	0.47	22.52	0.24
4.333	1.41	10.400	3.06	16.467	0.47	22.53	0.24
4.350	1.41	10.417	3.06	16.483	0.47	22.55	0.24
4.367	1.41	10.433	3.06	16.500	0.47	22.57	0.24
4.383	1.41	10.450	3.06	16.517	0.47	22.58	0.24
4.400	1.41	10.467	3.06	16.533	0.47	22.60	0.24
4.417	1.41	10.483	3.06	16.550	0.47	22.62	0.24
4.433	1.41	10.500	3.06	16.567	0.47	22.63	0.24
4.450	1.41	10.517	3.06	16.583	0.47	22.65	0.24
4.467	1.41	10.533	3.06	16.600	0.47	22.67	0.24
4.483	1.41	10.550	3.06	16.617	0.47	22.68	0.24
4.500	1.41	10.567	3.06	16.633	0.47	22.70	0.24
4.517	1.41	10.583	3.06	16.650	0.47	22.72	0.24
4.533	1.41	10.600	3.06	16.667	0.47	22.73	0.24
4.550	1.41	10.617	3.06	16.683	0.47	22.75	0.24
4.567	1.41	10.633	3.06	16.700	0.47	22.77	0.24
4.583	1.41	10.650	3.06	16.717	0.47	22.78	0.24
4.600	1.41	10.667	3.06	16.733	0.47	22.80	0.24
4.617	1.41	10.683	3.06	16.750	0.47	22.82	0.24
4.633	1.41	10.700	3.06	16.767	0.47	22.83	0.24
4.650	1.41	10.717	3.06	16.783	0.47	22.85	0.24
4.667	1.41	10.733	3.06	16.800	0.47	22.87	0.24
4.683	1.41	10.750	3.06	16.817	0.47	22.88	0.24
4.700	1.41	10.767	3.06	16.833	0.47	22.90	0.24
4.717	1.41	10.783	3.06	16.850	0.47	22.92	0.24
4.733	1.41	10.800	3.06	16.867	0.47	22.93	0.24
4.750	1.41	10.817	3.06	16.883	0.47	22.95	0.24
4.767	1.41	10.833	3.06	16.900	0.47	22.97	0.24
4.783	1.41	10.850	3.06	16.917	0.47	22.98	0.24
4.800	1.41	10.867	3.06	16.933	0.47	23.00	0.24
4.817	1.41	10.883	3.06	16.950	0.47	23.02	0.24
4.833	1.41	10.900	3.06	16.967	0.47	23.03	0.24
4.850	1.41	10.917	3.06	16.983	0.47	23.05	0.24
4.867	1.41	10.933	3.06	17.000	0.47	23.07	0.24
4.883	1.41	10.950	3.06	17.017	0.47	23.08	0.24
4.900	1.41	10.967	3.06	17.033	0.47	23.10	0.24
4.917	1.41	10.983	3.06	17.050	0.47	23.12	0.24
4.933	1.41	11.000	3.06	17.067	0.47	23.13	0.24
4.950	1.41	11.017	3.06	17.083	0.47	23.15	0.24
4.967	1.41	11.033	3.06	17.100	0.47	23.17	0.24
4.983	1.41	11.050	3.06	17.117	0.47	23.18	0.24
5.000	1.41	11.067	3.06	17.133	0.47	23.20	0.24
5.017	1.41	11.083	3.06	17.150	0.47	23.22	0.24
5.033	1.41	11.100	3.06	17.167	0.47	23.23	0.24
5.050	1.41	11.117	3.06	17.183	0.47	23.25	0.24
5.067	1.41	11.133	3.06	17.200	0.47	23.27	0.24
5.083	1.41	11.150	3.06	17.217	0.47	23.28	0.24
5.100	1.41	11.167	3.06	17.233	0.47	23.30	0.24
5.117	1.41	11.183	3.06	17.250	0.47	23.32	0.24
5.133	1.41	11.200	3.06	17.267	0.47	23.33	0.24
5.150	1.41	11.217	3.06	17.283	0.47	23.35	0.24
5.167	1.41	11.233	3.06	17.300	0.47	23.37	0.24
5.183	1.41	11.250	3.06	17.317	0.47	23.38	0.24
5.200	1.41	11.267	3.06	17.333	0.47	23.40	0.24
5.217	1.41	11.283	3.06	17.350	0.47	23.42	0.24
5.233	1.41	11.300	3.06	17.367	0.47	23.43	0.24
5.250	1.41	11.317	3.06	17.383	0.47	23.45	0.24
5.267	1.41	11.333	3.06	17.400	0.47	23.47	0.24
5.283	1.41	11.350	3.06	17.417	0.47	23.48	0.24
5.300	1.41	11.367	3.06	17.433	0.47	23.50	0.24
5.317	1.41	11.383	3.06	17.450	0.47	23.52	0.24
5.333	1.41	11.400	3.06	17.467	0.47	23.53	0.24
5.350	1.41	11.417	3.06	17.483	0.47	23.55	0.24
5.367	1.41	11.433	3.06	17.500	0.47	23.57	0.24
5.383	1.41	11.450	3.06	17.517	0.47	23.58	0.24
5.400	1.41	11.467	3.06	17.533	0.47	23.60	0.24
5.417	1.41	11.483	3.06	17.550	0.47	23.62	0.24
5.433	1.41	11.500	3.06	17.567	0.47	23.63	0.24
5.450	1.41	11.517	3.06	17.583	0.47	23.65	0.24
5.467	1.41	11.533	3.06	17.600	0.47	23.67	0.24
5.483	1.41	11.550	3.06	17.617	0.47	23.68	0.24
5.500	1.41	11.567	3.06	17.633	0.47	23.70	0.24
5.517	1.41	11.583	3.06	17.650	0.47	23.72	0.24
5.533	1.41	11.600	3.06	17.667	0.47	23.73	0.24
5.550	1.41	11.617	3.06	17.683	0.47	23.75	0.24
5.567	1.41	11.633	3.06	17.700	0.47	23.77	0.24
5.583	1.41	11.650	3.06	17.717	0.47	23.78	0.24
5.600	1.41	11.667	3.06	17.733	0.47	23.80	0.24
5.617	1.41	11.683	3.06	17.750	0.47	23.82	0.24
5.633	1.41	11.700	3.06	17.767	0.47	23.83	0.24
5.650	1.41	11.717	3.06	17.783	0.47	23.85	0.24
5.667	1.41	11.733	3.06	17.800	0.47	23.87	0.24
5.683	1.41	11.750	3.06	17.817	0.47	23.88	0.24
5.700	1.41	11.767	3.06	17.833	0.47	23.90	0.24
5.717	1.41	11.783	3.06	17.850	0.47	23.92	0.24
5.733	1.41	11.800	3.06	17.867	0.47	23.93	0.24
5.750	1.41	11.817	3.06	17.883	0.47	23.95	0.24
5.767	1.41	11.833	3.06	17.900	0.47	23.97	0.24
5.783	1.41	11.850	3.06	17.917	0.47	23.98	0.24
5.800	1.41	11.867	3.06	17.933	0.47	24.00	0.24
5.817	1.41	11.883	3.06	17.950	0.47	24.02	0.24
5.833	1.41	11.900	3.06	17.967	0.47	24.03	0.24
5.850	1.41	11.917	3.06	17.983	0.47	24.05	0.24
5.867	1.41	11.933	3.06	18.000	0.47	24.07	0.24
5.883	1.41	11.950	3.06	18.017	0.47	24.08	0.24
5.900	1.41	11.967	3.06	18.033	0.47	24.10	0.24
5.917	1.41	11.983	3.06	18.050	0.47	24.12	0.24
5.933	1.41	12.000	3.06	18.067	0.47	24.13	0.24
5.950	1.41	12.017	3.06	18.083	0.47	24.15	0.24
5.967	1.41	12.033	3.06	18.100	0.47	24.17	0.24
5.983	1.41	12.050	3.06	18.117	0.47	24.18	0.24
6.000	1.41	12.067	3.06	18.133	0.47	24.20	0.24
6.017	1.41	12.083	3.06	18.150	0.47	24.22	0.24
6.033	1.41	12.100	3.06	18.167	0.47	24.23	0.24
6.050	1.41	12.117	3.06	18.183	0.47	24.25	0.24
6.067	1.41	12.133	3.06	18.200	0.47		

Max.Eff.Inten.(mm/hr)=	10.81	7.03	
over (min)	6.00	10.00	
Storage Coeff. (min)=	5.74 (ii)	9.89 (ii)	
Unit Hyd. Tpeak (min)=	6.00	10.00	
Unit Hyd. peak (cms)=	0.19	0.11	
			TOTALS
PEAK FLOW (cms)=	0.03	0.00	0.034 (iii)
TIME TO PEAK (hrs)=	9.48	10.25	10.25
RUNOFF VOLUME (mm)=	46.07	22.98	45.85
TOTAL RAINFALL (mm)=	47.08	47.08	47.08
RUNOFF COEFFICIENT =	0.98	0.49	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7622)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0258	0.0650
	0.0108	0.0330	0.0302	0.0725
	0.0167	0.0440	0.0340	0.0820
	0.0204	0.0525	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7623)	1.150	0.034	10.25	45.85
OUTFLOW: ID= 1 (7622)	1.150	0.010	10.80	42.58

PEAK FLOW REDUCTION [Qout/Qin](%)= 28.74
TIME SHIFT OF PEAK FLOW (min)= 33.00
MAXIMUM STORAGE USED (ha.m.)= 0.0302

CALIB				
STANDHYD (7629)	Area (ha)= 4.09			
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00		

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		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	4.05	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	165.13	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	1.41	12.150	3.06	18.22	0.47
0.033	0.00	6.100	1.41	12.167	3.06	18.23	0.47
0.050	0.00	6.117	1.41	12.183	3.06	18.25	0.47
0.067	0.00	6.133	1.41	12.200	3.06	18.27	0.24
0.083	0.00	6.150	1.41	12.217	3.06	18.28	0.24
0.100	0.00	6.167	1.41	12.233	3.06	18.30	0.24
0.117	0.00	6.183	1.41	12.250	3.06	18.32	0.24
0.133	0.00	6.200	1.41	12.267	1.65	18.33	0.24
0.150	0.00	6.217	1.41	12.283	1.65	18.35	0.24
0.167	0.00	6.233	1.41	12.300	1.65	18.37	0.24
0.183	0.00	6.250	1.41	12.317	1.65	18.38	0.24
0.200	0.00	6.267	4.00	12.333	1.65	18.40	0.24
0.217	0.00	6.283	4.00	12.350	1.65	18.42	0.24
0.233	0.00	6.300	4.00	12.367	1.65	18.43	0.24
0.250	0.00	6.317	4.00	12.383	1.65	18.45	0.24
0.267	0.24	6.333	4.00	12.400	1.65	18.47	0.24
0.283	0.24	6.350	4.00	12.417	1.65	18.48	0.24
0.300	0.24	6.367	4.00	12.433	1.65	18.50	0.24
0.317	0.24	6.383	4.00	12.450	1.65	18.52	0.24
0.333	0.24	6.400	4.00	12.467	1.65	18.53	0.24
0.350	0.24	6.417	4.00	12.483	1.65	18.55	0.24
0.367	0.24	6.433	4.00	12.500	1.65	18.57	0.24
0.383	0.24	6.450	4.00	12.517	1.65	18.58	0.24
0.400	0.24	6.467	4.00	12.533	1.65	18.60	0.24
0.417	0.24	6.483	4.00	12.550	1.65	18.62	0.24
0.433	0.24	6.500	4.00	12.567	1.65	18.63	0.24
0.450	0.24	6.517	4.00	12.583	1.65	18.65	0.24
0.467	0.24	6.533	4.00	12.600	1.65	18.67	0.24
0.483	0.24	6.550	4.00	12.617	1.65	18.68	0.24
0.500	0.24	6.567	4.00	12.633	1.65	18.70	0.24
0.517	0.24	6.583	4.00	12.650	1.65	18.72	0.24
0.533	0.24	6.600	4.00	12.667	1.65	18.73	0.24
0.550	0.24	6.617	4.00	12.683	1.65	18.75	0.24
0.567	0.24	6.633	4.00	12.700	1.65	18.77	0.24
0.583	0.24	6.650	4.00	12.717	1.65	18.78	0.24
0.600	0.24	6.667	4.00	12.733	1.65	18.80	0.24
0.617	0.24	6.683	4.00	12.750	1.65	18.82	0.24
0.633	0.24	6.700	4.00	12.767	1.65	18.83	0.24
0.650	0.24	6.717	4.00	12.783	1.65	18.85	0.24
0.667	0.24	6.733	4.00	12.800	1.65	18.87	0.24
0.683	0.24	6.750	4.00	12.817	1.65	18.88	0.24
0.700	0.24	6.767	4.00	12.833	1.65	18.90	0.24
0.717	0.24	6.783	4.00	12.850	1.65	18.92	0.24
0.733	0.24	6.800	4.00	12.867	1.65	18.93	0.24
0.750	0.24	6.817	4.00	12.883	1.65	18.95	0.24
0.767	0.24	6.833	4.00	12.900	1.65	18.97	0.24
0.783	0.24	6.850	4.00	12.917	1.65	18.98	0.24
0.800	0.24	6.867	4.00	12.933	1.65	19.00	0.24
0.817	0.24	6.883	4.00	12.950	1.65	19.02	0.24
0.833	0.24	6.900	4.00	12.967	1.65	19.03	0.24
0.850	0.24	6.917	4.00	12.983	1.65	19.05	0.24
0.867	0.24	6.933	4.00	13.000	1.65	19.07	0.24
0.883	0.24	6.950	4.00	13.017	1.65	19.08	0.24
0.900	0.24	6.967	4.00	13.033	1.65	19.10	0.24
0.917	0.24	6.983	4.00	13.050	1.65	19.12	0.24
0.933	0.24	7.000	4.00	13.067	1.65	19.13	0.24
0.950	0.24	7.017	4.00	13.083	1.65	19.15	0.24
0.967	0.24	7.033	4.00	13.100	1.65	19.17	0.24
0.983	0.24	7.050	4.00	13.117	1.65	19.18	0.24
1.000	0.24	7.067	4.00	13.133	1.65	19.20	0.24
1.017	0.24	7.083	4.00	13.150	1.65	19.22	0.24
1.033	0.24	7.100	4.00	13.167	1.65	19.23	0.24
1.050	0.24	7.117	4.00	13.183	1.65	19.25	0.24
1.067	0.24	7.133	4.00	13.200	1.65	19.27	0.24
1.083	0.24	7.150	4.00	13.217	1.65	19.28	0.24
1.100	0.24	7.167	4.00	13.233	1.65	19.30	0.24
1.117	0.24	7.183	4.00	13.250	1.65	19.32	0.24
1.133	0.24	7.200	4.00	13.267	1.65	19.33	0.24
1.150	0.24	7.217	4.00	13.283	1.65	19.35	0.24
1.167	0.24	7.233	4.00	13.300	1.65	19.37	0.24
1.183	0.24	7.250	4.00	13.317	1.65	19.38	0.24
1.200	0.24	7.267	4.00	13.333	1.65	19.40	0.24
1.217	0.24	7.283	4.00	13.350	1.65	19.42	0.24
1.233	0.24	7.300	4.00	13.367	1.65	19.43	0.24
1.250	0.24	7.317	4.00	13.383	1.65	19.45	0.24
1.267	0.24	7.333	4.00	13.400	1.65	19.47	0.24
1.283	0.24	7.350	4.00	13.417	1.65	19.48	0.24
1.300	0.24	7.367	4.00	13.433	1.65	19.50	0.24
1.317	0.24	7.383	4.00	13.450	1.65	19.52	0.24
1.333	0.24	7.400	4.00	13.467	1.65	19.53	0.24
1.350	0.24	7.417	4.00	13.483	1.65	19.55	0.24
1.367	0.24	7.433	4.00	13.500	1.65	19.57	0.24
1.383	0.24	7.450	4.00	13.517	1.65	19.58	0.24
1.400	0.24	7.467	4.00	13.533	1.65	19.60	0.24
1.417	0.24	7.483	4.00	13.550	1.65	19.62	0.24
1.433	0.24	7.500	4.00	13.567	1.65	19.63	0.24
1.450	0.24	7.517	4.00	13.583	1.65	19.65	0.24
1.467	0.24	7.533	4.00	13.600	1.65	19.67	0.24
1.483	0.24	7.550	4.00	13.617	1.65	19.68	0.24
1.500	0.24	7.567	4.00	13.633	1.65	19.70	0.24
1.517	0.24	7.583	4.00	13.650	1.65	19.72	0.24
1.533	0.24	7.600	4.00	13.667	1.65	19.73	0.24
1.550	0.24	7.617	4.00	13.683	1.65	19.75	0.24
1.567	0.24	7.633	4.00	13.700	1.65	19.77	0.24
1.583	0.24	7.650	4.00	13.717	1.65	19.78	0.24
1.600	0.24	7.667	4.00	13.733	1.65	19.80	0.24
1.617	0.24	7.683	4.00	13.750	1.65	19.82	0.24
1.633	0.24	7.700	4.00	13.767	1.65	19.83	0.24
1.650	0.24	7.717	4.00	13.783	1.65	19.85	0.24
1.667	0.24	7.733	4.00	13.800	1.65	19.87	0.24
1.683	0.24	7.750	4.00	13.817	1.65	19.88	0.24
1.700	0.24	7.767	4.00	13.833	1.65	19.90	0.24
1.717	0.24	7.783	4.00	13.850	1.65	19.92	0.24
1.733	0.24	7.800	4.00	13.867	1.65	19.93	0.24
1.750	0.24	7.817	4.00	13.883	1.65	19.95	0.24
1.767	0.24	7.833	4.00	13.900	1.65	19.97	0.24
1.783	0.24	7.850	4.00	13.917	1.65	19.98	0.24
1.800	0.24	7.867	4.00	13.933	1.65	20.00	0.24
1.817	0.24	7.883	4.00	13.950	1.65	20.02	0.24
1.833	0.24	7.900	4.00	13.967	1.65	20.03	0.24
1.850	0.24	7.917	4.00	13.983	1.65	20.05	0.24
1.867	0.24	7.933	4.00	14.000	1.65	20.07	0.24
1.883	0.24	7.950	4.00	14.017	1.65	20.08	0.24
1.900	0.24	7.967	4.00	14.033	1.65	20.10	0.24
1.917	0.24	7.983	4.00	14.050	1.65	20.12	0.24
1.933	0.24	8.000	4.00	14.067	1.65	20.13	0.24
1.950	0.24	8.017	4.00	14.083	1.65	20.15	0.24
1.967	0.24	8.033	4.00	14.100	1.65	20.17	0.24
1.983	0.24	8.050	4.00	14.117	1.65	20.18	0.24
2.000	0.24	8.067	4.00	14.133	1.65	20.20	0.24
2.017	0.24	8.083	4.00	14.150	1.65	20.22	0.24
2.033	0.24	8.100	4.00	14.167	1.65	20.23	0.24
2.050	0.24	8.117	4.00	14.183	1.65	20.25	0.24
2.067	0.24	8.133	4.00	14.200	1.65	20.27	0.24
2.083	0.24	8.150	4.00	14.217	1.65	20.28	0.24
2.100	0.24	8.167	4.00	14.233	1.65	20.30	0.24
2.117	0.24	8.183	4.00	14.250	1.65	20.32	0.24
2.133	0.24	8.200	4.00	14.267	0.94	20.33	0.24
2.150	0.24	8.217	4.00	14.283	0.94	20.35	0.24
2.167	0.24	8.233	4.00	14.300	0.94	20.37	0.24
2.183	0.24	8.250	4.02	14.317	0.94	20.38	0.24
2.200	0.24	8.267	10.81	14.333	0.94	20.40	0.24
2.217	0.24	8.283	10.81	14.350	0.94	20.42	0.24
2.233	0.24	8.300	10.81	14.367	0.94	20.43	0.24
2.250	0.24	8.317	10.81	14.383	0.94	20.45	0.24
2.267	0.24	8.333	10.81	14.400	0.94	20.47	0.24
2.283	0.24	8.350	10.81	14.417	0.94	20.48	0.24
2.300	0.24	8.367	10.81	14.433	0.94	20.50	0.24
2.317	0.24	8.383	10.81	14.450	0.94	20.52	0.24

2.333	0.24	8.400	10.81	14.467	0.94	20.53	0.24
2.350	0.24	8.417	10.81	14.483	0.94	20.55	0.24
2.367	0.24	8.433	10.81	14.500	0.94	20.57	0.24
2.383	0.24	8.450	10.81	14.517	0.94	20.58	0.24
2.400	0.24	8.467	10.81	14.533	0.94	20.60	0.24
2.417	0.24	8.483	10.81	14.550	0.94	20.62	0.24
2.433	0.24	8.500	10.81	14.567	0.94	20.63	0.24
2.450	0.24	8.517	10.81	14.583	0.94	20.65	0.24
2.467	0.24	8.533	10.81	14.600	0.94	20.67	0.24
2.483	0.24	8.550	10.81	14.617	0.94	20.68	0.24
2.500	0.24	8.567	10.81	14.633	0.94	20.70	0.24
2.517	0.24	8.583	10.81	14.650	0.94	20.72	0.24
2.533	0.24	8.600	10.81	14.667	0.94	20.73	0.24
2.550	0.24	8.617	10.81	14.683	0.94	20.75	0.24
2.567	0.24	8.633	10.81	14.700	0.94	20.77	0.24
2.583	0.24	8.650	10.81	14.717	0.94	20.78	0.24
2.600	0.24	8.667	10.81	14.733	0.94	20.80	0.24
2.617	0.24	8.683	10.81	14.750	0.94	20.82	0.24
2.633	0.24	8.700	10.81	14.767	0.94	20.83	0.24
2.650	0.24	8.717	10.81	14.783	0.94	20.85	0.24
2.667	0.24	8.733	10.81	14.800	0.94	20.87	0.24
2.683	0.24	8.750	10.81	14.817	0.94	20.88	0.24
2.700	0.24	8.767	10.81	14.833	0.94	20.90	0.24
2.717	0.24	8.783	10.81	14.850	0.94	20.92	0.24
2.733	0.24	8.800	10.81	14.867	0.94	20.93	0.24
2.750	0.24	8.817	10.81	14.883	0.94	20.95	0.24
2.767	0.24	8.833	10.81	14.900	0.94	20.97	0.24
2.783	0.24	8.850	10.81	14.917	0.94	20.98	0.24
2.800	0.24	8.867	10.81	14.933	0.94	21.00	0.24
2.817	0.24	8.883	10.81	14.950	0.94	21.02	0.24
2.833	0.24	8.900	10.81	14.967	0.94	21.03	0.24
2.850	0.24	8.917	10.81	14.983	0.94	21.05	0.24
2.867	0.24	8.933	10.81	15.000	0.94	21.07	0.24
2.883	0.24	8.950	10.81	15.017	0.94	21.08	0.24
2.900	0.24	8.967	10.81	15.033	0.94	21.10	0.24
2.917	0.24	8.983	10.81	15.050	0.94	21.12	0.24
2.933	0.24	9.000	10.81	15.067	0.94	21.13	0.24
2.950	0.24	9.017	10.81	15.083	0.94	21.15	0.24
2.967	0.24	9.033	10.81	15.100	0.94	21.17	0.24
2.983	0.24	9.050	10.81	15.117	0.94	21.18	0.24
3.000	0.24	9.067	10.81	15.133	0.94	21.20	0.24
3.017	0.24	9.083	10.81	15.150	0.94	21.22	0.24
3.033	0.24	9.100	10.81	15.167	0.94	21.23	0.24
3.050	0.24	9.117	10.81	15.183	0.94	21.25	0.24
3.067	0.24	9.133	10.81	15.200	0.94	21.27	0.24
3.083	0.24	9.150	10.81	15.217	0.94	21.28	0.24
3.100	0.24	9.167	10.81	15.233	0.94	21.30	0.24
3.117	0.24	9.183	10.81	15.250	0.94	21.32	0.24
3.133	0.24	9.200	10.81	15.267	0.94	21.33	0.24
3.150	0.24	9.217	10.81	15.283	0.94	21.35	0.24
3.167	0.24	9.233	10.81	15.300	0.94	21.37	0.24
3.183	0.24	9.250	10.81	15.317	0.94	21.38	0.24
3.200	0.24	9.267	10.81	15.333	0.94	21.40	0.24
3.217	0.24	9.283	10.81	15.350	0.94	21.42	0.24
3.233	0.24	9.300	10.81	15.367	0.94	21.43	0.24
3.250	0.24	9.317	10.81	15.383	0.94	21.45	0.24
3.267	0.24	9.333	10.81	15.400	0.94	21.47	0.24
3.283	0.24	9.350	10.81	15.417	0.94	21.48	0.24
3.300	0.24	9.367	10.81	15.433	0.94	21.50	0.24
3.317	0.24	9.383	10.81	15.450	0.94	21.52	0.24
3.333	0.24	9.400	10.81	15.467	0.94	21.53	0.24
3.350	0.24	9.417	10.81	15.483	0.94	21.55	0.24
3.367	0.24	9.433	10.81	15.500	0.94	21.57	0.24
3.383	0.24	9.450	10.81	15.517	0.94	21.58	0.24
3.400	0.24	9.467	10.81	15.533	0.94	21.60	0.24
3.417	0.24	9.483	10.81	15.550	0.94	21.62	0.24
3.433	0.24	9.500	10.81	15.567	0.94	21.63	0.24
3.450	0.24	9.517	10.81	15.583	0.94	21.65	0.24
3.467	0.24	9.533	10.81	15.600	0.94	21.67	0.24
3.483	0.24	9.550	10.81	15.617	0.94	21.68	0.24
3.500	0.24	9.567	10.81	15.633	0.94	21.70	0.24
3.517	0.24	9.583	10.81	15.650	0.94	21.72	0.24
3.533	0.24	9.600	10.81	15.667	0.94	21.73	0.24
3.550	0.24	9.617	10.81	15.683	0.94	21.75	0.24
3.567	0.24	9.633	10.81	15.700	0.94	21.77	0.24
3.583	0.24	9.650	10.81	15.717	0.94	21.78	0.24
3.600	0.24	9.667	10.81	15.733	0.94	21.80	0.24
3.617	0.24	9.683	10.81	15.750	0.94	21.82	0.24
3.633	0.24	9.700	10.81	15.767	0.94	21.83	0.24
3.650	0.24	9.717	10.81	15.783	0.94	21.85	0.24
3.667	0.24	9.733	10.81	15.800	0.94	21.87	0.24
3.683	0.24	9.750	10.81	15.817	0.94	21.88	0.24
3.700	0.24	9.767	10.81	15.833	0.94	21.90	0.24
3.717	0.24	9.783	10.81	15.850	0.94	21.92	0.24
3.733	0.24	9.800	10.81	15.867	0.94	21.93	0.24
3.750	0.24	9.817	10.81	15.883	0.94	21.95	0.24
3.767	0.24	9.833	10.81	15.900	0.94	21.97	0.24
3.783	0.24	9.850	10.81	15.917	0.94	21.98	0.24
3.800	0.24	9.867	10.81	15.933	0.94	22.00	0.24
3.817	0.24	9.883	10.81	15.950	0.94	22.02	0.24
3.833	0.24	9.900	10.81	15.967	0.94	22.03	0.24
3.850	0.24	9.917	10.81	15.983	0.94	22.05	0.24
3.867	0.24	9.933	10.81	16.000	0.94	22.07	0.24
3.883	0.24	9.950	10.81	16.017	0.94	22.08	0.24
3.900	0.24	9.967	10.81	16.033	0.94	22.10	0.24
3.917	0.24	9.983	10.81	16.050	0.94	22.12	0.24
3.933	0.24	10.000	10.81	16.067	0.94	22.13	0.24
3.950	0.24	10.017	10.81	16.083	0.94	22.15	0.24
3.967	0.24	10.033	10.81	16.100	0.94	22.17	0.24
3.983	0.24	10.050	10.81	16.117	0.94	22.18	0.24
4.000	0.24	10.067	10.81	16.133	0.94	22.20	0.24
4.017	0.24	10.083	10.81	16.150	0.94	22.22	0.24
4.033	0.24	10.100	10.81	16.167	0.94	22.23	0.24
4.050	0.24	10.117	10.81	16.183	0.94	22.25	0.24
4.067	0.24	10.133	10.81	16.200	0.94	22.27	0.24
4.083	0.24	10.150	10.81	16.217	0.94	22.28	0.24
4.100	0.24	10.167	10.81	16.233	0.94	22.30	0.24
4.117	0.24	10.183	10.81	16.250	0.94	22.32	0.24
4.133	0.24	10.200	10.81	16.267	0.47	22.33	0.24
4.150	0.24	10.217	10.81	16.283	0.47	22.35	0.24
4.167	0.24	10.233	10.81	16.300	0.47	22.37	0.24
4.183	0.24	10.250	10.80	16.317	0.47	22.38	0.24
4.200	0.24	10.267	3.06	16.333	0.47	22.40	0.24
4.217	0.24	10.283	3.06	16.350	0.47	22.42	0.24
4.233	0.24	10.300	3.06	16.367	0.47	22.43	0.24
4.250	0.24	10.317	3.06	16.383	0.47	22.45	0.24
4.267	1.41	10.333	3.06	16.400	0.47	22.47	0.24
4.283	1.41	10.350	3.06	16.417	0.47	22.48	0.24
4.300	1.41	10.367	3.06	16.433	0.47	22.50	0.24
4.317	1.41	10.383	3.06	16.450	0.47	22.52	0.24
4.333	1.41	10.400	3.06	16.467	0.47	22.53	0.24
4.350	1.41	10.417	3.06	16.483	0.47	22.55	0.24
4.367	1.41	10.433	3.06	16.500	0.47	22.57	0.24
4.383	1.41	10.450	3.06	16.517	0.47	22.58	0.24
4.400	1.41	10.467	3.06	16.533	0.47	22.60	0.24
4.417	1.41	10.483	3.06	16.550	0.47	22.62	0.24
4.433	1.41	10.500	3.06	16.567	0.47	22.63	0.24
4.450	1.41	10.517	3.06	16.583	0.47	22.65	0.24
4.467	1.41	10.533	3.06	16.600	0.47	22.67	0.24
4.483	1.41	10.550	3.06	16.617	0.47	22.68	0.24
4.500	1.41	10.567	3.06	16.633	0.47	22.70	0.24
4.517	1.41	10.583	3.06	16.650	0.47	22.72	0.24
4.533	1.41	10.600	3.06	16.667	0.47	22.73	0.24
4.550	1.41	10.617	3.06	16.683	0.47	22.75	0.24
4.567	1.41	10.633	3.06	16.700	0.47	22.77	0.24
4.583	1.41	10.650	3.06	16.717	0.47	22.78	0.24
4.600	1.41	10.667	3.06	16.733	0.47	22.80	0.24
4.617	1.41	10.683	3.06	16.750	0.47	22.82	0.24
4.633	1.41	10.700	3.06	16.767	0.47	22.83	0.24
4.650	1.41	10.717	3.06	16.783	0.47	22.85	0.24
4.667	1.41	10.733	3.06	16.800	0.47	22.87	0.24
4.683	1.41	10.750	3.06	16.817	0.47	22.88	0.24
4.700	1.41	10.767	3.06	16.833	0.47	22.90	0.24
4.717	1.41	10.783	3.06	16.850	0.47	22.92	0.24
4.733	1.41	10.800	3.06	16.867	0.47	22.93	0.24
4.750	1.41	10.817	3.06	16.883	0.47	22.95	0.24
4.767	1.41	10.833	3.06	16.900	0.47	22.97	0.24
4.783	1.41	10.850	3.06	16.917	0.47	22.98	0.24
4.800	1.41	10.867	3.06	16.933	0.47	23.00	0.24
4.817	1.41	10.883	3.06	16.950	0.47	23.02	0.24
4.833	1.41	10.900	3.06	16.967	0.47	23.03	0.24
4.850	1.41	10.917	3.06	16.983	0.47	23.05	0.24

4.867	1.41	10.933	3.06	17.000	0.47	23.07	0.24
4.883	1.41	10.950	3.06	17.017	0.47	23.08	0.24
4.900	1.41	10.967	3.06	17.033	0.47	23.10	0.24
4.917	1.41	10.983	3.06	17.050	0.47	23.12	0.24
4.933	1.41	11.000	3.06	17.067	0.47	23.13	0.24
4.950	1.41	11.017	3.06	17.083	0.47	23.15	0.24
4.967	1.41	11.033	3.06	17.100	0.47	23.17	0.24
4.983	1.41	11.050	3.06	17.117	0.47	23.18	0.24
5.000	1.41	11.067	3.06	17.133	0.47	23.20	0.24
5.017	1.41	11.083	3.06	17.150	0.47	23.22	0.24
5.033	1.41	11.100	3.06	17.167	0.47	23.23	0.24
5.050	1.41	11.117	3.06	17.183	0.47	23.25	0.24
5.067	1.41	11.133	3.06	17.200	0.47	23.27	0.24
5.083	1.41	11.150	3.06	17.217	0.47	23.28	0.24
5.100	1.41	11.167	3.06	17.233	0.47	23.30	0.24
5.117	1.41	11.183	3.06	17.250	0.47	23.32	0.24
5.133	1.41	11.200	3.06	17.267	0.47	23.33	0.24
5.150	1.41	11.217	3.06	17.283	0.47	23.35	0.24
5.167	1.41	11.233	3.06	17.300	0.47	23.37	0.24
5.183	1.41	11.250	3.06	17.317	0.47	23.38	0.24
5.200	1.41	11.267	3.06	17.333	0.47	23.40	0.24
5.217	1.41	11.283	3.06	17.350	0.47	23.42	0.24
5.233	1.41	11.300	3.06	17.367	0.47	23.43	0.24
5.250	1.41	11.317	3.06	17.383	0.47	23.45	0.24
5.267	1.41	11.333	3.06	17.400	0.47	23.47	0.24
5.283	1.41	11.350	3.06	17.417	0.47	23.48	0.24
5.300	1.41	11.367	3.06	17.433	0.47	23.50	0.24
5.317	1.41	11.383	3.06	17.450	0.47	23.52	0.24
5.333	1.41	11.400	3.06	17.467	0.47	23.53	0.24
5.350	1.41	11.417	3.06	17.483	0.47	23.55	0.24
5.367	1.41	11.433	3.06	17.500	0.47	23.57	0.24
5.383	1.41	11.450	3.06	17.517	0.47	23.58	0.24
5.400	1.41	11.467	3.06	17.533	0.47	23.60	0.24
5.417	1.41	11.483	3.06	17.550	0.47	23.62	0.24
5.433	1.41	11.500	3.06	17.567	0.47	23.63	0.24
5.450	1.41	11.517	3.06	17.583	0.47	23.65	0.24
5.467	1.41	11.533	3.06	17.600	0.47	23.67	0.24
5.483	1.41	11.550	3.06	17.617	0.47	23.68	0.24
5.500	1.41	11.567	3.06	17.633	0.47	23.70	0.24
5.517	1.41	11.583	3.06	17.650	0.47	23.72	0.24
5.533	1.41	11.600	3.06	17.667	0.47	23.73	0.24
5.550	1.41	11.617	3.06	17.683	0.47	23.75	0.24
5.567	1.41	11.633	3.06	17.700	0.47	23.77	0.24
5.583	1.41	11.650	3.06	17.717	0.47	23.78	0.24
5.600	1.41	11.667	3.06	17.733	0.47	23.80	0.24
5.617	1.41	11.683	3.06	17.750	0.47	23.82	0.24
5.633	1.41	11.700	3.06	17.767	0.47	23.83	0.24
5.650	1.41	11.717	3.06	17.783	0.47	23.85	0.24
5.667	1.41	11.733	3.06	17.800	0.47	23.87	0.24
5.683	1.41	11.750	3.06	17.817	0.47	23.88	0.24
5.700	1.41	11.767	3.06	17.833	0.47	23.90	0.24
5.717	1.41	11.783	3.06	17.850	0.47	23.92	0.24
5.733	1.41	11.800	3.06	17.867	0.47	23.93	0.24
5.750	1.41	11.817	3.06	17.883	0.47	23.95	0.24
5.767	1.41	11.833	3.06	17.900	0.47	23.97	0.24
5.783	1.41	11.850	3.06	17.917	0.47	23.98	0.24
5.800	1.41	11.867	3.06	17.933	0.47	24.00	0.24
5.817	1.41	11.883	3.06	17.950	0.47	24.02	0.24
5.833	1.41	11.900	3.06	17.967	0.47	24.03	0.24
5.850	1.41	11.917	3.06	17.983	0.47	24.05	0.24
5.867	1.41	11.933	3.06	18.000	0.47	24.07	0.24
5.883	1.41	11.950	3.06	18.017	0.47	24.08	0.24
5.900	1.41	11.967	3.06	18.033	0.47	24.10	0.24
5.917	1.41	11.983	3.06	18.050	0.47	24.12	0.24
5.933	1.41	12.000	3.06	18.067	0.47	24.13	0.24
5.950	1.41	12.017	3.06	18.083	0.47	24.15	0.24
5.967	1.41	12.033	3.06	18.100	0.47	24.17	0.24
5.983	1.41	12.050	3.06	18.117	0.47	24.18	0.24
6.000	1.41	12.067	3.06	18.133	0.47	24.20	0.24
6.017	1.41	12.083	3.06	18.150	0.47	24.22	0.24
6.033	1.41	12.100	3.06	18.167	0.47	24.23	0.24
6.050	1.41	12.117	3.06	18.183	0.47	24.25	0.24
6.067	1.41	12.133	3.06	18.200	0.47		

Max.Eff.Inten.(mm/hr)=	10.81		7.03					
over (min)	8.00		13.00					

Storage Coeff. (min)=	8.40 (ii)	12.55 (ii)	
Unit Hyd. Tpeak (min)=	8.00	13.00	
Unit Hyd. peak (cms)=	0.14	0.09	
			TOTALS
PEAK FLOW (cms)=	0.12	0.00	0.122 (iii)
TIME TO PEAK (hrs)=	10.23	10.25	10.25
RUNOFF VOLUME (mm)=	46.07	22.98	45.85
TOTAL RAINFALL (mm)=	47.08	47.08	47.08
RUNOFF COEFFICIENT =	0.98	0.49	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7630) | OVERFLOW IS OFF
IN= 2---> OUT= 1
DT= 1.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0826	0.2320
0.0347	0.1170	0.0967	0.2609
0.0534	0.1580	0.1090	0.2940
0.0655	0.1890	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (	7629)	4.090	0.122	10.25	45.85
OUTFLOW: ID= 1 (	7630)	4.090	0.033	12.32	41.67

PEAK FLOW REDUCTION [Qout/Qin](%)= 26.86
TIME SHIFT OF PEAK FLOW (min)=124.00
MAXIMUM STORAGE USED (ha.m.)= 0.1108

CALIB
STANDHYD (7631) | Area (ha)= 3.91
ID= 1 DT= 1.0 min | Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.87	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	161.45	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	1.41	12.150	3.06	18.22	0.47
0.033	0.00	6.100	1.41	12.167	3.06	18.23	0.47
0.050	0.00	6.117	1.41	12.183	3.06	18.25	0.47
0.067	0.00	6.133	1.41	12.200	3.06	18.27	0.24
0.083	0.00	6.150	1.41	12.217	3.06	18.28	0.24
0.100	0.00	6.167	1.41	12.233	3.06	18.30	0.24
0.117	0.00	6.183	1.41	12.250	3.06	18.32	0.24
0.133	0.00	6.200	1.41	12.267	1.65	18.33	0.24
0.150	0.00	6.217	1.41	12.283	1.65	18.35	0.24
0.167	0.00	6.233	1.41	12.300	1.65	18.37	0.24
0.183	0.00	6.250	1.41	12.317	1.65	18.38	0.24
0.200	0.00	6.267	4.00	12.333	1.65	18.40	0.24
0.217	0.00	6.283	4.00	12.350	1.65	18.42	0.24
0.233	0.00	6.300	4.00	12.367	1.65	18.43	0.24
0.250	0.00	6.317	4.00	12.383	1.65	18.45	0.24
0.267	0.24	6.333	4.00	12.400	1.65	18.47	0.24
0.283	0.24	6.350	4.00	12.417	1.65	18.48	0.24
0.300	0.24	6.367	4.00	12.433	1.65	18.50	0.24
0.317	0.24	6.383	4.00	12.450	1.65	18.52	0.24
0.333	0.24	6.400	4.00	12.467	1.65	18.53	0.24

0.350	0.24	6.417	4.00	12.483	1.65	18.55	0.24
0.367	0.24	6.433	4.00	12.500	1.65	18.57	0.24
0.383	0.24	6.450	4.00	12.517	1.65	18.58	0.24
0.400	0.24	6.467	4.00	12.533	1.65	18.60	0.24
0.417	0.24	6.483	4.00	12.550	1.65	18.62	0.24
0.433	0.24	6.500	4.00	12.567	1.65	18.63	0.24
0.450	0.24	6.517	4.00	12.583	1.65	18.65	0.24
0.467	0.24	6.533	4.00	12.600	1.65	18.67	0.24
0.483	0.24	6.550	4.00	12.617	1.65	18.68	0.24
0.500	0.24	6.567	4.00	12.633	1.65	18.70	0.24
0.517	0.24	6.583	4.00	12.650	1.65	18.72	0.24
0.533	0.24	6.600	4.00	12.667	1.65	18.73	0.24
0.550	0.24	6.617	4.00	12.683	1.65	18.75	0.24
0.567	0.24	6.633	4.00	12.700	1.65	18.77	0.24
0.583	0.24	6.650	4.00	12.717	1.65	18.78	0.24
0.600	0.24	6.667	4.00	12.733	1.65	18.80	0.24
0.617	0.24	6.683	4.00	12.750	1.65	18.82	0.24
0.633	0.24	6.700	4.00	12.767	1.65	18.83	0.24
0.650	0.24	6.717	4.00	12.783	1.65	18.85	0.24
0.667	0.24	6.733	4.00	12.800	1.65	18.87	0.24
0.683	0.24	6.750	4.00	12.817	1.65	18.88	0.24
0.700	0.24	6.767	4.00	12.833	1.65	18.90	0.24
0.717	0.24	6.783	4.00	12.850	1.65	18.92	0.24
0.733	0.24	6.800	4.00	12.867	1.65	18.93	0.24
0.750	0.24	6.817	4.00	12.883	1.65	18.95	0.24
0.767	0.24	6.833	4.00	12.900	1.65	18.97	0.24
0.783	0.24	6.850	4.00	12.917	1.65	18.98	0.24
0.800	0.24	6.867	4.00	12.933	1.65	19.00	0.24
0.817	0.24	6.883	4.00	12.950	1.65	19.02	0.24
0.833	0.24	6.900	4.00	12.967	1.65	19.03	0.24
0.850	0.24	6.917	4.00	12.983	1.65	19.05	0.24
0.867	0.24	6.933	4.00	13.000	1.65	19.07	0.24
0.883	0.24	6.950	4.00	13.017	1.65	19.08	0.24
0.900	0.24	6.967	4.00	13.033	1.65	19.10	0.24
0.917	0.24	6.983	4.00	13.050	1.65	19.12	0.24
0.933	0.24	7.000	4.00	13.067	1.65	19.13	0.24
0.950	0.24	7.017	4.00	13.083	1.65	19.15	0.24
0.967	0.24	7.033	4.00	13.100	1.65	19.17	0.24
0.983	0.24	7.050	4.00	13.117	1.65	19.18	0.24
1.000	0.24	7.067	4.00	13.133	1.65	19.20	0.24
1.017	0.24	7.083	4.00	13.150	1.65	19.22	0.24
1.033	0.24	7.100	4.00	13.167	1.65	19.23	0.24
1.050	0.24	7.117	4.00	13.183	1.65	19.25	0.24
1.067	0.24	7.133	4.00	13.200	1.65	19.27	0.24
1.083	0.24	7.150	4.00	13.217	1.65	19.28	0.24
1.100	0.24	7.167	4.00	13.233	1.65	19.30	0.24
1.117	0.24	7.183	4.00	13.250	1.65	19.32	0.24
1.133	0.24	7.200	4.00	13.267	1.65	19.33	0.24
1.150	0.24	7.217	4.00	13.283	1.65	19.35	0.24
1.167	0.24	7.233	4.00	13.300	1.65	19.37	0.24
1.183	0.24	7.250	4.00	13.317	1.65	19.38	0.24
1.200	0.24	7.267	4.00	13.333	1.65	19.40	0.24
1.217	0.24	7.283	4.00	13.350	1.65	19.42	0.24
1.233	0.24	7.300	4.00	13.367	1.65	19.43	0.24
1.250	0.24	7.317	4.00	13.383	1.65	19.45	0.24
1.267	0.24	7.333	4.00	13.400	1.65	19.47	0.24
1.283	0.24	7.350	4.00	13.417	1.65	19.48	0.24
1.300	0.24	7.367	4.00	13.433	1.65	19.50	0.24
1.317	0.24	7.383	4.00	13.450	1.65	19.52	0.24
1.333	0.24	7.400	4.00	13.467	1.65	19.53	0.24
1.350	0.24	7.417	4.00	13.483	1.65	19.55	0.24
1.367	0.24	7.433	4.00	13.500	1.65	19.57	0.24
1.383	0.24	7.450	4.00	13.517	1.65	19.58	0.24
1.400	0.24	7.467	4.00	13.533	1.65	19.60	0.24
1.417	0.24	7.483	4.00	13.550	1.65	19.62	0.24
1.433	0.24	7.500	4.00	13.567	1.65	19.63	0.24
1.450	0.24	7.517	4.00	13.583	1.65	19.65	0.24
1.467	0.24	7.533	4.00	13.600	1.65	19.67	0.24
1.483	0.24	7.550	4.00	13.617	1.65	19.68	0.24
1.500	0.24	7.567	4.00	13.633	1.65	19.70	0.24
1.517	0.24	7.583	4.00	13.650	1.65	19.72	0.24
1.533	0.24	7.600	4.00	13.667	1.65	19.73	0.24
1.550	0.24	7.617	4.00	13.683	1.65	19.75	0.24
1.567	0.24	7.633	4.00	13.700	1.65	19.77	0.24
1.583	0.24	7.650	4.00	13.717	1.65	19.78	0.24
1.600	0.24	7.667	4.00	13.733	1.65	19.80	0.24
1.617	0.24	7.683	4.00	13.750	1.65	19.82	0.24
1.633	0.24	7.700	4.00	13.767	1.65	19.83	0.24
1.650	0.24	7.717	4.00	13.783	1.65	19.85	0.24
1.667	0.24	7.733	4.00	13.800	1.65	19.87	0.24
1.683	0.24	7.750	4.00	13.817	1.65	19.88	0.24
1.700	0.24	7.767	4.00	13.833	1.65	19.90	0.24
1.717	0.24	7.783	4.00	13.850	1.65	19.92	0.24
1.733	0.24	7.800	4.00	13.867	1.65	19.93	0.24
1.750	0.24	7.817	4.00	13.883	1.65	19.95	0.24
1.767	0.24	7.833	4.00	13.900	1.65	19.97	0.24
1.783	0.24	7.850	4.00	13.917	1.65	19.98	0.24
1.800	0.24	7.867	4.00	13.933	1.65	20.00	0.24
1.817	0.24	7.883	4.00	13.950	1.65	20.02	0.24
1.833	0.24	7.900	4.00	13.967	1.65	20.03	0.24
1.850	0.24	7.917	4.00	13.983	1.65	20.05	0.24
1.867	0.24	7.933	4.00	14.000	1.65	20.07	0.24
1.883	0.24	7.950	4.00	14.017	1.65	20.08	0.24
1.900	0.24	7.967	4.00	14.033	1.65	20.10	0.24
1.917	0.24	7.983	4.00	14.050	1.65	20.12	0.24
1.933	0.24	8.000	4.00	14.067	1.65	20.13	0.24
1.950	0.24	8.017	4.00	14.083	1.65	20.15	0.24
1.967	0.24	8.033	4.00	14.100	1.65	20.17	0.24
1.983	0.24	8.050	4.00	14.117	1.65	20.18	0.24
2.000	0.24	8.067	4.00	14.133	1.65	20.20	0.24
2.017	0.24	8.083	4.00	14.150	1.65	20.22	0.24
2.033	0.24	8.100	4.00	14.167	1.65	20.23	0.24
2.050	0.24	8.117	4.00	14.183	1.65	20.25	0.24
2.067	0.24	8.133	4.00	14.200	1.65	20.27	0.24
2.083	0.24	8.150	4.00	14.217	1.65	20.28	0.24
2.100	0.24	8.167	4.00	14.233	1.65	20.30	0.24
2.117	0.24	8.183	4.00	14.250	1.65	20.32	0.24
2.133	0.24	8.200	4.00	14.267	0.94	20.33	0.24
2.150	0.24	8.217	4.00	14.283	0.94	20.35	0.24
2.167	0.24	8.233	4.00	14.300	0.94	20.37	0.24
2.183	0.24	8.250	4.02	14.317	0.94	20.38	0.24
2.200	0.24	8.267	10.81	14.333	0.94	20.40	0.24
2.217	0.24	8.283	10.81	14.350	0.94	20.42	0.24
2.233	0.24	8.300	10.81	14.367	0.94	20.43	0.24
2.250	0.24	8.317	10.81	14.383	0.94	20.45	0.24
2.267	0.24	8.333	10.81	14.400	0.94	20.47	0.24
2.283	0.24	8.350	10.81	14.417	0.94	20.48	0.24
2.300	0.24	8.367	10.81	14.433	0.94	20.50	0.24
2.317	0.24	8.383	10.81	14.450	0.94	20.52	0.24
2.333	0.24	8.400	10.81	14.467	0.94	20.53	0.24
2.350	0.24	8.417	10.81	14.483	0.94	20.55	0.24
2.367	0.24	8.433	10.81	14.500	0.94	20.57	0.24
2.383	0.24	8.450	10.81	14.517	0.94	20.58	0.24
2.400	0.24	8.467	10.81	14.533	0.94	20.60	0.24
2.417	0.24	8.483	10.81	14.550	0.94	20.62	0.24
2.433	0.24	8.500	10.81	14.567	0.94	20.63	0.24
2.450	0.24	8.517	10.81	14.583	0.94	20.65	0.24
2.467	0.24	8.533	10.81	14.600	0.94	20.67	0.24
2.483	0.24	8.550	10.81	14.617	0.94	20.68	0.24
2.500	0.24	8.567	10.81	14.633	0.94	20.70	0.24
2.517	0.24	8.583	10.81	14.650	0.94	20.72	0.24
2.533	0.24	8.600	10.81	14.667	0.94	20.73	0.24
2.550	0.24	8.617	10.81	14.683	0.94	20.75	0.24
2.567	0.24	8.633	10.81	14.700	0.94	20.77	0.24
2.583	0.24	8.650	10.81	14.717	0.94	20.78	0.24
2.600	0.24	8.667	10.81	14.733	0.94	20.80	0.24
2.617	0.24	8.683	10.81	14.750	0.94	20.82	0.24
2.633	0.24	8.700	10.81	14.767	0.94	20.83	0.24
2.650	0.24	8.717	10.81	14.783	0.94	20.85	0.24
2.667	0.24	8.733	10.81	14.800	0.94	20.87	0.24
2.683	0.24	8.750	10.81	14.817	0.94	20.88	0.24
2.700	0.24	8.767	10.81	14.833	0.94	20.90	0.24
2.717	0.24	8.783	10.81	14.850	0.94	20.92	0.24
2.733	0.24	8.800	10.81	14.867	0.94	20.93	0.24
2.750	0.24	8.817	10.81	14.883	0.94	20.95	0.24
2.767	0.24	8.833	10.81	14.900	0.94	20.97	0.24
2.783	0.24	8.850	10.81	14.917	0.94	20.98	0.24
2.800	0.24	8.867	10.81	14.933	0.94	21.00	0.24
2.817	0.24	8.883	10.81	14.950	0.94	21.02	0.24
2.833	0.24	8.900	10.81	14.967	0.94	21.03	0.24
2.850	0.24	8.917	10.81	14.983	0.94	21.05	0.24
2.867	0.24	8.933	10.81	15.000	0.94	21.07	0.24

2.883	0.24	8.950	10.81	15.017	0.94	21.08	0.24
2.900	0.24	8.967	10.81	15.033	0.94	21.10	0.24
2.917	0.24	8.983	10.81	15.050	0.94	21.12	0.24
2.933	0.24	9.000	10.81	15.067	0.94	21.13	0.24
2.950	0.24	9.017	10.81	15.083	0.94	21.15	0.24
2.967	0.24	9.033	10.81	15.100	0.94	21.17	0.24
2.983	0.24	9.050	10.81	15.117	0.94	21.18	0.24
3.000	0.24	9.067	10.81	15.133	0.94	21.20	0.24
3.017	0.24	9.083	10.81	15.150	0.94	21.22	0.24
3.033	0.24	9.100	10.81	15.167	0.94	21.23	0.24
3.050	0.24	9.117	10.81	15.183	0.94	21.25	0.24
3.067	0.24	9.133	10.81	15.200	0.94	21.27	0.24
3.083	0.24	9.150	10.81	15.217	0.94	21.28	0.24
3.100	0.24	9.167	10.81	15.233	0.94	21.30	0.24
3.117	0.24	9.183	10.81	15.250	0.94	21.32	0.24
3.133	0.24	9.200	10.81	15.267	0.94	21.33	0.24
3.150	0.24	9.217	10.81	15.283	0.94	21.35	0.24
3.167	0.24	9.233	10.81	15.300	0.94	21.37	0.24
3.183	0.24	9.250	10.81	15.317	0.94	21.38	0.24
3.200	0.24	9.267	10.81	15.333	0.94	21.40	0.24
3.217	0.24	9.283	10.81	15.350	0.94	21.42	0.24
3.233	0.24	9.300	10.81	15.367	0.94	21.43	0.24
3.250	0.24	9.317	10.81	15.383	0.94	21.45	0.24
3.267	0.24	9.333	10.81	15.400	0.94	21.47	0.24
3.283	0.24	9.350	10.81	15.417	0.94	21.48	0.24
3.300	0.24	9.367	10.81	15.433	0.94	21.50	0.24
3.317	0.24	9.383	10.81	15.450	0.94	21.52	0.24
3.333	0.24	9.400	10.81	15.467	0.94	21.53	0.24
3.350	0.24	9.417	10.81	15.483	0.94	21.55	0.24
3.367	0.24	9.433	10.81	15.500	0.94	21.57	0.24
3.383	0.24	9.450	10.81	15.517	0.94	21.58	0.24
3.400	0.24	9.467	10.81	15.533	0.94	21.60	0.24
3.417	0.24	9.483	10.81	15.550	0.94	21.62	0.24
3.433	0.24	9.500	10.81	15.567	0.94	21.63	0.24
3.450	0.24	9.517	10.81	15.583	0.94	21.65	0.24
3.467	0.24	9.533	10.81	15.600	0.94	21.67	0.24
3.483	0.24	9.550	10.81	15.617	0.94	21.68	0.24
3.500	0.24	9.567	10.81	15.633	0.94	21.70	0.24
3.517	0.24	9.583	10.81	15.650	0.94	21.72	0.24
3.533	0.24	9.600	10.81	15.667	0.94	21.73	0.24
3.550	0.24	9.617	10.81	15.683	0.94	21.75	0.24
3.567	0.24	9.633	10.81	15.700	0.94	21.77	0.24
3.583	0.24	9.650	10.81	15.717	0.94	21.78	0.24
3.600	0.24	9.667	10.81	15.733	0.94	21.80	0.24
3.617	0.24	9.683	10.81	15.750	0.94	21.82	0.24
3.633	0.24	9.700	10.81	15.767	0.94	21.83	0.24
3.650	0.24	9.717	10.81	15.783	0.94	21.85	0.24
3.667	0.24	9.733	10.81	15.800	0.94	21.87	0.24
3.683	0.24	9.750	10.81	15.817	0.94	21.88	0.24
3.700	0.24	9.767	10.81	15.833	0.94	21.90	0.24
3.717	0.24	9.783	10.81	15.850	0.94	21.92	0.24
3.733	0.24	9.800	10.81	15.867	0.94	21.93	0.24
3.750	0.24	9.817	10.81	15.883	0.94	21.95	0.24
3.767	0.24	9.833	10.81	15.900	0.94	21.97	0.24
3.783	0.24	9.850	10.81	15.917	0.94	21.98	0.24
3.800	0.24	9.867	10.81	15.933	0.94	22.00	0.24
3.817	0.24	9.883	10.81	15.950	0.94	22.02	0.24
3.833	0.24	9.900	10.81	15.967	0.94	22.03	0.24
3.850	0.24	9.917	10.81	15.983	0.94	22.05	0.24
3.867	0.24	9.933	10.81	16.000	0.94	22.07	0.24
3.883	0.24	9.950	10.81	16.017	0.94	22.08	0.24
3.900	0.24	9.967	10.81	16.033	0.94	22.10	0.24
3.917	0.24	9.983	10.81	16.050	0.94	22.12	0.24
3.933	0.24	10.000	10.81	16.067	0.94	22.13	0.24
3.950	0.24	10.017	10.81	16.083	0.94	22.15	0.24
3.967	0.24	10.033	10.81	16.100	0.94	22.17	0.24
3.983	0.24	10.050	10.81	16.117	0.94	22.18	0.24
4.000	0.24	10.067	10.81	16.133	0.94	22.20	0.24
4.017	0.24	10.083	10.81	16.150	0.94	22.22	0.24
4.033	0.24	10.100	10.81	16.167	0.94	22.23	0.24
4.050	0.24	10.117	10.81	16.183	0.94	22.25	0.24
4.067	0.24	10.133	10.81	16.200	0.94	22.27	0.24
4.083	0.24	10.150	10.81	16.217	0.94	22.28	0.24
4.100	0.24	10.167	10.81	16.233	0.94	22.30	0.24
4.117	0.24	10.183	10.81	16.250	0.94	22.32	0.24
4.133	0.24	10.200	10.81	16.267	0.47	22.33	0.24
4.150	0.24	10.217	10.81	16.283	0.47	22.35	0.24
4.167	0.24	10.233	10.81	16.300	0.47	22.37	0.24
4.183	0.24	10.250	10.80	16.317	0.47	22.38	0.24
4.200	0.24	10.267	3.06	16.333	0.47	22.40	0.24
4.217	0.24	10.283	3.06	16.350	0.47	22.42	0.24
4.233	0.24	10.300	3.06	16.367	0.47	22.43	0.24
4.250	0.24	10.317	3.06	16.383	0.47	22.45	0.24
4.267	1.41	10.333	3.06	16.400	0.47	22.47	0.24
4.283	1.41	10.350	3.06	16.417	0.47	22.48	0.24
4.300	1.41	10.367	3.06	16.433	0.47	22.50	0.24
4.317	1.41	10.383	3.06	16.450	0.47	22.52	0.24
4.333	1.41	10.400	3.06	16.467	0.47	22.53	0.24
4.350	1.41	10.417	3.06	16.483	0.47	22.55	0.24
4.367	1.41	10.433	3.06	16.500	0.47	22.57	0.24
4.383	1.41	10.450	3.06	16.517	0.47	22.58	0.24
4.400	1.41	10.467	3.06	16.533	0.47	22.60	0.24
4.417	1.41	10.483	3.06	16.550	0.47	22.62	0.24
4.433	1.41	10.500	3.06	16.567	0.47	22.63	0.24
4.450	1.41	10.517	3.06	16.583	0.47	22.65	0.24
4.467	1.41	10.533	3.06	16.600	0.47	22.67	0.24
4.483	1.41	10.550	3.06	16.617	0.47	22.68	0.24
4.500	1.41	10.567	3.06	16.633	0.47	22.70	0.24
4.517	1.41	10.583	3.06	16.650	0.47	22.72	0.24
4.533	1.41	10.600	3.06	16.667	0.47	22.73	0.24
4.550	1.41	10.617	3.06	16.683	0.47	22.75	0.24
4.567	1.41	10.633	3.06	16.700	0.47	22.77	0.24
4.583	1.41	10.650	3.06	16.717	0.47	22.78	0.24
4.600	1.41	10.667	3.06	16.733	0.47	22.80	0.24
4.617	1.41	10.683	3.06	16.750	0.47	22.82	0.24
4.633	1.41	10.700	3.06	16.767	0.47	22.83	0.24
4.650	1.41	10.717	3.06	16.783	0.47	22.85	0.24
4.667	1.41	10.733	3.06	16.800	0.47	22.87	0.24
4.683	1.41	10.750	3.06	16.817	0.47	22.88	0.24
4.700	1.41	10.767	3.06	16.833	0.47	22.90	0.24
4.717	1.41	10.783	3.06	16.850	0.47	22.92	0.24
4.733	1.41	10.800	3.06	16.867	0.47	22.93	0.24
4.750	1.41	10.817	3.06	16.883	0.47	22.95	0.24
4.767	1.41	10.833	3.06	16.900	0.47	22.97	0.24
4.783	1.41	10.850	3.06	16.917	0.47	22.98	0.24
4.800	1.41	10.867	3.06	16.933	0.47	23.00	0.24
4.817	1.41	10.883	3.06	16.950	0.47	23.02	0.24
4.833	1.41	10.900	3.06	16.967	0.47	23.03	0.24
4.850	1.41	10.917	3.06	16.983	0.47	23.05	0.24
4.867	1.41	10.933	3.06	17.000	0.47	23.07	0.24
4.883	1.41	10.950	3.06	17.017	0.47	23.08	0.24
4.900	1.41	10.967	3.06	17.033	0.47	23.10	0.24
4.917	1.41	10.983	3.06	17.050	0.47	23.12	0.24
4.933	1.41	11.000	3.06	17.067	0.47	23.13	0.24
4.950	1.41	11.017	3.06	17.083	0.47	23.15	0.24
4.967	1.41	11.033	3.06	17.100	0.47	23.17	0.24
4.983	1.41	11.050	3.06	17.117	0.47	23.18	0.24
5.000	1.41	11.067	3.06	17.133	0.47	23.20	0.24
5.017	1.41	11.083	3.06	17.150	0.47	23.22	0.24
5.033	1.41	11.100	3.06	17.167	0.47	23.23	0.24
5.050	1.41	11.117	3.06	17.183	0.47	23.25	0.24
5.067	1.41	11.133	3.06	17.200	0.47	23.27	0.24
5.083	1.41	11.150	3.06	17.217	0.47	23.28	0.24
5.100	1.41	11.167	3.06	17.233	0.47	23.30	0.24
5.117	1.41	11.183	3.06	17.250	0.47	23.32	0.24
5.133	1.41	11.200	3.06	17.267	0.47	23.33	0.24
5.150	1.41	11.217	3.06	17.283	0.47	23.35	0.24
5.167	1.41	11.233	3.06	17.300	0.47	23.37	0.24
5.183	1.41	11.250	3.06	17.317	0.47	23.38	0.24
5.200	1.41	11.267	3.06	17.333	0.47	23.40	0.24
5.217	1.41	11.283	3.06	17.350	0.47	23.42	0.24
5.233	1.41	11.300	3.06	17.367	0.47	23.43	0.24
5.250	1.41	11.317	3.06	17.383	0.47	23.45	0.24
5.267	1.41	11.333	3.06	17.400	0.47	23.47	0.24
5.283	1.41	11.350	3.06	17.417	0.47	23.48	0.24
5.300	1.41	11.367	3.06	17.433	0.47	23.50	0.24
5.317	1.41	11.383	3.06	17.450	0.47	23.52	0.24
5.333	1.41	11.400	3.06	17.467	0.47	23.53	0.24
5.350	1.41	11.417	3.06	17.483	0.47	23.55	0.24
5.367	1.41	11.433	3.06	17.500	0.47	23.57	0.24
5.383	1.41	11.450	3.06	17.517	0.47	23.58	0.24
5.400	1.41	11.467	3.06	17.533	0.47	23.60	0.24

5.417	1.41	11.483	3.06	17.550	0.47	23.62	0.24
5.433	1.41	11.500	3.06	17.567	0.47	23.63	0.24
5.450	1.41	11.517	3.06	17.583	0.47	23.65	0.24
5.467	1.41	11.533	3.06	17.600	0.47	23.67	0.24
5.483	1.41	11.550	3.06	17.617	0.47	23.68	0.24
5.500	1.41	11.567	3.06	17.633	0.47	23.70	0.24
5.517	1.41	11.583	3.06	17.650	0.47	23.72	0.24
5.533	1.41	11.600	3.06	17.667	0.47	23.73	0.24
5.550	1.41	11.617	3.06	17.683	0.47	23.75	0.24
5.567	1.41	11.633	3.06	17.700	0.47	23.77	0.24
5.583	1.41	11.650	3.06	17.717	0.47	23.78	0.24
5.600	1.41	11.667	3.06	17.733	0.47	23.80	0.24
5.617	1.41	11.683	3.06	17.750	0.47	23.82	0.24
5.633	1.41	11.700	3.06	17.767	0.47	23.83	0.24
5.650	1.41	11.717	3.06	17.783	0.47	23.85	0.24
5.667	1.41	11.733	3.06	17.800	0.47	23.87	0.24
5.683	1.41	11.750	3.06	17.817	0.47	23.88	0.24
5.700	1.41	11.767	3.06	17.833	0.47	23.90	0.24
5.717	1.41	11.783	3.06	17.850	0.47	23.92	0.24
5.733	1.41	11.800	3.06	17.867	0.47	23.93	0.24
5.750	1.41	11.817	3.06	17.883	0.47	23.95	0.24
5.767	1.41	11.833	3.06	17.900	0.47	23.97	0.24
5.783	1.41	11.850	3.06	17.917	0.47	23.98	0.24
5.800	1.41	11.867	3.06	17.933	0.47	24.00	0.24
5.817	1.41	11.883	3.06	17.950	0.47	24.02	0.24
5.833	1.41	11.900	3.06	17.967	0.47	24.03	0.24
5.850	1.41	11.917	3.06	17.983	0.47	24.05	0.24
5.867	1.41	11.933	3.06	18.000	0.47	24.07	0.24
5.883	1.41	11.950	3.06	18.017	0.47	24.08	0.24
5.900	1.41	11.967	3.06	18.033	0.47	24.10	0.24
5.917	1.41	11.983	3.06	18.050	0.47	24.12	0.24
5.933	1.41	12.000	3.06	18.067	0.47	24.13	0.24
5.950	1.41	12.017	3.06	18.083	0.47	24.15	0.24
5.967	1.41	12.033	3.06	18.100	0.47	24.17	0.24
5.983	1.41	12.050	3.06	18.117	0.47	24.18	0.24
6.000	1.41	12.067	3.06	18.133	0.47	24.20	0.24
6.017	1.41	12.083	3.06	18.150	0.47	24.22	0.24
6.033	1.41	12.100	3.06	18.167	0.47	24.23	0.24
6.050	1.41	12.117	3.06	18.183	0.47	24.25	0.24
6.067	1.41	12.133	3.06	18.200	0.47		

Max.Eff.Inten.(mm/hr)=	10.81	7.03	
over (min)	8.00	13.00	
Storage Coeff. (min)=	8.29 (ii)	12.44 (ii)	
Unit Hyd. Tpeak (min)=	8.00	13.00	
Unit Hyd. peak (cms)=	0.14	0.09	
			TOTALS
PEAK FLOW (cms)=	0.12	0.00	0.117 (iii)
TIME TO PEAK (hrs)=	10.23	10.25	10.25
RUNOFF VOLUME (mm)=	46.07	22.97	45.85
TOTAL RAINFALL (mm)=	47.08	47.08	47.08
RUNOFF COEFFICIENT =	0.98	0.49	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7632)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0792	0.2220
	0.0333	0.1130	0.0928	0.2500
	0.0512	0.1510	0.1046	0.2810
	0.0629	0.1810	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7631)	3.910	0.117	10.25	45.85
OUTFLOW: ID= 1 (7632)	3.910	0.031	12.32	41.61

PEAK FLOW REDUCTION [Qout/Qin](%)= 26.74
TIME SHIFT OF PEAK FLOW (min)=124.00
MAXIMUM STORAGE USED (ha.m.)= 0.1061

CALIB			
STANDHYD (7641)	Area (ha)= 2.21		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)= 2.19	0.02	
Dep. Storage	(mm)= 1.00	1.50	
Average Slope	(%)= 1.00	0.50	
Length	(m)= 121.38	40.00	
Mannings n	= 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	1.41	12.150	3.06	18.22	0.47
0.033	0.00	6.100	1.41	12.167	3.06	18.23	0.47
0.050	0.00	6.117	1.41	12.183	3.06	18.25	0.47
0.067	0.00	6.133	1.41	12.200	3.06	18.27	0.24
0.083	0.00	6.150	1.41	12.217	3.06	18.28	0.24
0.100	0.00	6.167	1.41	12.233	3.06	18.30	0.24
0.117	0.00	6.183	1.41	12.250	3.06	18.32	0.24
0.133	0.00	6.200	1.41	12.267	1.65	18.33	0.24
0.150	0.00	6.217	1.41	12.283	1.65	18.35	0.24
0.167	0.00	6.233	1.41	12.300	1.65	18.37	0.24
0.183	0.00	6.250	1.41	12.317	1.65	18.38	0.24
0.200	0.00	6.267	4.00	12.333	1.65	18.40	0.24
0.217	0.00	6.283	4.00	12.350	1.65	18.42	0.24
0.233	0.00	6.300	4.00	12.367	1.65	18.43	0.24
0.250	0.00	6.317	4.00	12.383	1.65	18.45	0.24
0.267	0.24	6.333	4.00	12.400	1.65	18.47	0.24
0.283	0.24	6.350	4.00	12.417	1.65	18.48	0.24
0.300	0.24	6.367	4.00	12.433	1.65	18.50	0.24
0.317	0.24	6.383	4.00	12.450	1.65	18.52	0.24
0.333	0.24	6.400	4.00	12.467	1.65	18.53	0.24
0.350	0.24	6.417	4.00	12.483	1.65	18.55	0.24
0.367	0.24	6.433	4.00	12.500	1.65	18.57	0.24
0.383	0.24	6.450	4.00	12.517	1.65	18.58	0.24
0.400	0.24	6.467	4.00	12.533	1.65	18.60	0.24
0.417	0.24	6.483	4.00	12.550	1.65	18.62	0.24
0.433	0.24	6.500	4.00	12.567	1.65	18.63	0.24
0.450	0.24	6.517	4.00	12.583	1.65	18.65	0.24
0.467	0.24	6.533	4.00	12.600	1.65	18.67	0.24
0.483	0.24	6.550	4.00	12.617	1.65	18.68	0.24
0.500	0.24	6.567	4.00	12.633	1.65	18.70	0.24
0.517	0.24	6.583	4.00	12.650	1.65	18.72	0.24
0.533	0.24	6.600	4.00	12.667	1.65	18.73	0.24
0.550	0.24	6.617	4.00	12.683	1.65	18.75	0.24
0.567	0.24	6.633	4.00	12.700	1.65	18.77	0.24
0.583	0.24	6.650	4.00	12.717	1.65	18.78	0.24
0.600	0.24	6.667	4.00	12.733	1.65	18.80	0.24
0.617	0.24	6.683	4.00	12.750	1.65	18.82	0.24
0.633	0.24	6.700	4.00	12.767	1.65	18.83	0.24
0.650	0.24	6.717	4.00	12.783	1.65	18.85	0.24
0.667	0.24	6.733	4.00	12.800	1.65	18.87	0.24
0.683	0.24	6.750	4.00	12.817	1.65	18.88	0.24
0.700	0.24	6.767	4.00	12.833	1.65	18.90	0.24
0.717	0.24	6.783	4.00	12.850	1.65	18.92	0.24
0.733	0.24	6.800	4.00	12.867	1.65	18.93	0.24
0.750	0.24	6.817	4.00	12.883	1.65	18.95	0.24
0.767	0.24	6.833	4.00	12.900	1.65	18.97	0.24
0.783	0.24	6.850	4.00	12.917	1.65	18.98	0.24
0.800	0.24	6.867	4.00	12.933	1.65	19.00	0.24
0.817	0.24	6.883	4.00	12.950	1.65	19.02	0.24
0.833	0.24	6.900	4.00	12.967	1.65	19.03	0.24
0.850	0.24	6.917	4.00	12.983	1.65	19.05	0.24
0.867	0.24	6.933	4.00	13.000	1.65	19.07	0.24
0.883	0.24	6.950	4.00	13.017	1.65	19.08	0.24

0.900	0.24	6.967	4.00	13.033	1.65	19.10	0.24
0.917	0.24	6.983	4.00	13.050	1.65	19.12	0.24
0.933	0.24	7.000	4.00	13.067	1.65	19.13	0.24
0.950	0.24	7.017	4.00	13.083	1.65	19.15	0.24
0.967	0.24	7.033	4.00	13.100	1.65	19.17	0.24
0.983	0.24	7.050	4.00	13.117	1.65	19.18	0.24
1.000	0.24	7.067	4.00	13.133	1.65	19.20	0.24
1.017	0.24	7.083	4.00	13.150	1.65	19.22	0.24
1.033	0.24	7.100	4.00	13.167	1.65	19.23	0.24
1.050	0.24	7.117	4.00	13.183	1.65	19.25	0.24
1.067	0.24	7.133	4.00	13.200	1.65	19.27	0.24
1.083	0.24	7.150	4.00	13.217	1.65	19.28	0.24
1.100	0.24	7.167	4.00	13.233	1.65	19.30	0.24
1.117	0.24	7.183	4.00	13.250	1.65	19.32	0.24
1.133	0.24	7.200	4.00	13.267	1.65	19.33	0.24
1.150	0.24	7.217	4.00	13.283	1.65	19.35	0.24
1.167	0.24	7.233	4.00	13.300	1.65	19.37	0.24
1.183	0.24	7.250	4.00	13.317	1.65	19.38	0.24
1.200	0.24	7.267	4.00	13.333	1.65	19.40	0.24
1.217	0.24	7.283	4.00	13.350	1.65	19.42	0.24
1.233	0.24	7.300	4.00	13.367	1.65	19.43	0.24
1.250	0.24	7.317	4.00	13.383	1.65	19.45	0.24
1.267	0.24	7.333	4.00	13.400	1.65	19.47	0.24
1.283	0.24	7.350	4.00	13.417	1.65	19.48	0.24
1.300	0.24	7.367	4.00	13.433	1.65	19.50	0.24
1.317	0.24	7.383	4.00	13.450	1.65	19.52	0.24
1.333	0.24	7.400	4.00	13.467	1.65	19.53	0.24
1.350	0.24	7.417	4.00	13.483	1.65	19.55	0.24
1.367	0.24	7.433	4.00	13.500	1.65	19.57	0.24
1.383	0.24	7.450	4.00	13.517	1.65	19.58	0.24
1.400	0.24	7.467	4.00	13.533	1.65	19.60	0.24
1.417	0.24	7.483	4.00	13.550	1.65	19.62	0.24
1.433	0.24	7.500	4.00	13.567	1.65	19.63	0.24
1.450	0.24	7.517	4.00	13.583	1.65	19.65	0.24
1.467	0.24	7.533	4.00	13.600	1.65	19.67	0.24
1.483	0.24	7.550	4.00	13.617	1.65	19.68	0.24
1.500	0.24	7.567	4.00	13.633	1.65	19.70	0.24
1.517	0.24	7.583	4.00	13.650	1.65	19.72	0.24
1.533	0.24	7.600	4.00	13.667	1.65	19.73	0.24
1.550	0.24	7.617	4.00	13.683	1.65	19.75	0.24
1.567	0.24	7.633	4.00	13.700	1.65	19.77	0.24
1.583	0.24	7.650	4.00	13.717	1.65	19.78	0.24
1.600	0.24	7.667	4.00	13.733	1.65	19.80	0.24
1.617	0.24	7.683	4.00	13.750	1.65	19.82	0.24
1.633	0.24	7.700	4.00	13.767	1.65	19.83	0.24
1.650	0.24	7.717	4.00	13.783	1.65	19.85	0.24
1.667	0.24	7.733	4.00	13.800	1.65	19.87	0.24
1.683	0.24	7.750	4.00	13.817	1.65	19.88	0.24
1.700	0.24	7.767	4.00	13.833	1.65	19.90	0.24
1.717	0.24	7.783	4.00	13.850	1.65	19.92	0.24
1.733	0.24	7.800	4.00	13.867	1.65	19.93	0.24
1.750	0.24	7.817	4.00	13.883	1.65	19.95	0.24
1.767	0.24	7.833	4.00	13.900	1.65	19.97	0.24
1.783	0.24	7.850	4.00	13.917	1.65	19.98	0.24
1.800	0.24	7.867	4.00	13.933	1.65	20.00	0.24
1.817	0.24	7.883	4.00	13.950	1.65	20.02	0.24
1.833	0.24	7.900	4.00	13.967	1.65	20.03	0.24
1.850	0.24	7.917	4.00	13.983	1.65	20.05	0.24
1.867	0.24	7.933	4.00	14.000	1.65	20.07	0.24
1.883	0.24	7.950	4.00	14.017	1.65	20.08	0.24
1.900	0.24	7.967	4.00	14.033	1.65	20.10	0.24
1.917	0.24	7.983	4.00	14.050	1.65	20.12	0.24
1.933	0.24	8.000	4.00	14.067	1.65	20.13	0.24
1.950	0.24	8.017	4.00	14.083	1.65	20.15	0.24
1.967	0.24	8.033	4.00	14.100	1.65	20.17	0.24
1.983	0.24	8.050	4.00	14.117	1.65	20.18	0.24
2.000	0.24	8.067	4.00	14.133	1.65	20.20	0.24
2.017	0.24	8.083	4.00	14.150	1.65	20.22	0.24
2.033	0.24	8.100	4.00	14.167	1.65	20.23	0.24
2.050	0.24	8.117	4.00	14.183	1.65	20.25	0.24
2.067	0.24	8.133	4.00	14.200	1.65	20.27	0.24
2.083	0.24	8.150	4.00	14.217	1.65	20.28	0.24
2.100	0.24	8.167	4.00	14.233	1.65	20.30	0.24
2.117	0.24	8.183	4.00	14.250	1.65	20.32	0.24
2.133	0.24	8.200	4.00	14.267	0.94	20.33	0.24
2.150	0.24	8.217	4.00	14.283	0.94	20.35	0.24
2.167	0.24	8.233	4.00	14.300	0.94	20.37	0.24
2.183	0.24	8.250	4.02	14.317	0.94	20.38	0.24
2.200	0.24	8.267	10.81	14.333	0.94	20.40	0.24
2.217	0.24	8.283	10.81	14.350	0.94	20.42	0.24
2.233	0.24	8.300	10.81	14.367	0.94	20.43	0.24
2.250	0.24	8.317	10.81	14.383	0.94	20.45	0.24
2.267	0.24	8.333	10.81	14.400	0.94	20.47	0.24
2.283	0.24	8.350	10.81	14.417	0.94	20.48	0.24
2.300	0.24	8.367	10.81	14.433	0.94	20.50	0.24
2.317	0.24	8.383	10.81	14.450	0.94	20.52	0.24
2.333	0.24	8.400	10.81	14.467	0.94	20.53	0.24
2.350	0.24	8.417	10.81	14.483	0.94	20.55	0.24
2.367	0.24	8.433	10.81	14.500	0.94	20.57	0.24
2.383	0.24	8.450	10.81	14.517	0.94	20.58	0.24
2.400	0.24	8.467	10.81	14.533	0.94	20.60	0.24
2.417	0.24	8.483	10.81	14.550	0.94	20.62	0.24
2.433	0.24	8.500	10.81	14.567	0.94	20.63	0.24
2.450	0.24	8.517	10.81	14.583	0.94	20.65	0.24
2.467	0.24	8.533	10.81	14.600	0.94	20.67	0.24
2.483	0.24	8.550	10.81	14.617	0.94	20.68	0.24
2.500	0.24	8.567	10.81	14.633	0.94	20.70	0.24
2.517	0.24	8.583	10.81	14.650	0.94	20.72	0.24
2.533	0.24	8.600	10.81	14.667	0.94	20.73	0.24
2.550	0.24	8.617	10.81	14.683	0.94	20.75	0.24
2.567	0.24	8.633	10.81	14.700	0.94	20.77	0.24
2.583	0.24	8.650	10.81	14.717	0.94	20.78	0.24
2.600	0.24	8.667	10.81	14.733	0.94	20.80	0.24
2.617	0.24	8.683	10.81	14.750	0.94	20.82	0.24
2.633	0.24	8.700	10.81	14.767	0.94	20.83	0.24
2.650	0.24	8.717	10.81	14.783	0.94	20.85	0.24
2.667	0.24	8.733	10.81	14.800	0.94	20.87	0.24
2.683	0.24	8.750	10.81	14.817	0.94	20.88	0.24
2.700	0.24	8.767	10.81	14.833	0.94	20.90	0.24
2.717	0.24	8.783	10.81	14.850	0.94	20.92	0.24
2.733	0.24	8.800	10.81	14.867	0.94	20.93	0.24
2.750	0.24	8.817	10.81	14.883	0.94	20.95	0.24
2.767	0.24	8.833	10.81	14.900	0.94	20.97	0.24
2.783	0.24	8.850	10.81	14.917	0.94	20.98	0.24
2.800	0.24	8.867	10.81	14.933	0.94	21.00	0.24
2.817	0.24	8.883	10.81	14.950	0.94	21.02	0.24
2.833	0.24	8.900	10.81	14.967	0.94	21.03	0.24
2.850	0.24	8.917	10.81	14.983	0.94	21.05	0.24
2.867	0.24	8.933	10.81	15.000	0.94	21.07	0.24
2.883	0.24	8.950	10.81	15.017	0.94	21.08	0.24
2.900	0.24	8.967	10.81	15.033	0.94	21.10	0.24
2.917	0.24	8.983	10.81	15.050	0.94	21.12	0.24
2.933	0.24	9.000	10.81	15.067	0.94	21.13	0.24
2.950	0.24	9.017	10.81	15.083	0.94	21.15	0.24
2.967	0.24	9.033	10.81	15.100	0.94	21.17	0.24
2.983	0.24	9.050	10.81	15.117	0.94	21.18	0.24
3.000	0.24	9.067	10.81	15.133	0.94	21.20	0.24
3.017	0.24	9.083	10.81	15.150	0.94	21.22	0.24
3.033	0.24	9.100	10.81	15.167	0.94	21.23	0.24
3.050	0.24	9.117	10.81	15.183	0.94	21.25	0.24
3.067	0.24	9.133	10.81	15.200	0.94	21.27	0.24
3.083	0.24	9.150	10.81	15.217	0.94	21.28	0.24
3.100	0.24	9.167	10.81	15.233	0.94	21.30	0.24
3.117	0.24	9.183	10.81	15.250	0.94	21.32	0.24
3.133	0.24	9.200	10.81	15.267	0.94	21.33	0.24
3.150	0.24	9.217	10.81	15.283	0.94	21.35	0.24
3.167	0.24	9.233	10.81	15.300	0.94	21.37	0.24
3.183	0.24	9.250	10.81	15.317	0.94	21.38	0.24
3.200	0.24	9.267	10.81	15.333	0.94	21.40	0.24
3.217	0.24	9.283	10.81	15.350	0.94	21.42	0.24
3.233	0.24	9.300	10.81	15.367	0.94	21.43	0.24
3.250	0.24	9.317	10.81	15.383	0.94	21.45	0.24
3.267	0.24	9.333	10.81	15.400	0.94	21.47	0.24
3.283	0.24	9.350	10.81	15.417	0.94	21.48	0.24
3.300	0.24	9.367	10.81	15.433	0.94	21.50	0.24
3.317	0.24	9.383	10.81	15.450	0.94	21.52	0.24
3.333	0.24	9.400	10.81	15.467	0.94	21.53	0.24
3.350	0.24	9.417	10.81	15.483	0.94	21.55	0.24
3.367	0.24	9.433	10.81	15.500	0.94	21.57	0.24
3.383	0.24	9.450	10.81	15.517	0.94	21.58	0.24
3.400	0.24	9.467	10.81	15.533	0.94	21.60	0.24
3.417	0.24	9.483	10.81	15.550	0.94	21.62	0.24

3.433	0.24	9.500	10.81	15.567	0.94	21.63	0.24	4.700	1.41	10.767	3.06	16.833	0.47	22.90	0.24
3.450	0.24	9.517	10.81	15.583	0.94	21.65	0.24	4.717	1.41	10.783	3.06	16.850	0.47	22.92	0.24
3.467	0.24	9.533	10.81	15.600	0.94	21.67	0.24	4.733	1.41	10.800	3.06	16.867	0.47	22.93	0.24
3.483	0.24	9.550	10.81	15.617	0.94	21.68	0.24	4.750	1.41	10.817	3.06	16.883	0.47	22.95	0.24
3.500	0.24	9.567	10.81	15.633	0.94	21.70	0.24	4.767	1.41	10.833	3.06	16.900	0.47	22.97	0.24
3.517	0.24	9.583	10.81	15.650	0.94	21.72	0.24	4.783	1.41	10.850	3.06	16.917	0.47	22.98	0.24
3.533	0.24	9.600	10.81	15.667	0.94	21.73	0.24	4.800	1.41	10.867	3.06	16.933	0.47	23.00	0.24
3.550	0.24	9.617	10.81	15.683	0.94	21.75	0.24	4.817	1.41	10.883	3.06	16.950	0.47	23.02	0.24
3.567	0.24	9.633	10.81	15.700	0.94	21.77	0.24	4.833	1.41	10.900	3.06	16.967	0.47	23.03	0.24
3.583	0.24	9.650	10.81	15.717	0.94	21.78	0.24	4.850	1.41	10.917	3.06	16.983	0.47	23.05	0.24
3.600	0.24	9.667	10.81	15.733	0.94	21.80	0.24	4.867	1.41	10.933	3.06	17.000	0.47	23.07	0.24
3.617	0.24	9.683	10.81	15.750	0.94	21.82	0.24	4.883	1.41	10.950	3.06	17.017	0.47	23.08	0.24
3.633	0.24	9.700	10.81	15.767	0.94	21.83	0.24	4.900	1.41	10.967	3.06	17.033	0.47	23.10	0.24
3.650	0.24	9.717	10.81	15.783	0.94	21.85	0.24	4.917	1.41	10.983	3.06	17.050	0.47	23.12	0.24
3.667	0.24	9.733	10.81	15.800	0.94	21.87	0.24	4.933	1.41	11.000	3.06	17.067	0.47	23.13	0.24
3.683	0.24	9.750	10.81	15.817	0.94	21.88	0.24	4.950	1.41	11.017	3.06	17.083	0.47	23.15	0.24
3.700	0.24	9.767	10.81	15.833	0.94	21.90	0.24	4.967	1.41	11.033	3.06	17.100	0.47	23.17	0.24
3.717	0.24	9.783	10.81	15.850	0.94	21.92	0.24	4.983	1.41	11.050	3.06	17.117	0.47	23.18	0.24
3.733	0.24	9.800	10.81	15.867	0.94	21.93	0.24	5.000	1.41	11.067	3.06	17.133	0.47	23.20	0.24
3.750	0.24	9.817	10.81	15.883	0.94	21.95	0.24	5.017	1.41	11.083	3.06	17.150	0.47	23.22	0.24
3.767	0.24	9.833	10.81	15.900	0.94	21.97	0.24	5.033	1.41	11.100	3.06	17.167	0.47	23.23	0.24
3.783	0.24	9.850	10.81	15.917	0.94	21.98	0.24	5.050	1.41	11.117	3.06	17.183	0.47	23.25	0.24
3.800	0.24	9.867	10.81	15.933	0.94	22.00	0.24	5.067	1.41	11.133	3.06	17.200	0.47	23.27	0.24
3.817	0.24	9.883	10.81	15.950	0.94	22.02	0.24	5.083	1.41	11.150	3.06	17.217	0.47	23.28	0.24
3.833	0.24	9.900	10.81	15.967	0.94	22.03	0.24	5.100	1.41	11.167	3.06	17.233	0.47	23.30	0.24
3.850	0.24	9.917	10.81	15.983	0.94	22.05	0.24	5.117	1.41	11.183	3.06	17.250	0.47	23.32	0.24
3.867	0.24	9.933	10.81	16.000	0.94	22.07	0.24	5.133	1.41	11.200	3.06	17.267	0.47	23.33	0.24
3.883	0.24	9.950	10.81	16.017	0.94	22.08	0.24	5.150	1.41	11.217	3.06	17.283	0.47	23.35	0.24
3.900	0.24	9.967	10.81	16.033	0.94	22.10	0.24	5.167	1.41	11.233	3.06	17.300	0.47	23.37	0.24
3.917	0.24	9.983	10.81	16.050	0.94	22.12	0.24	5.183	1.41	11.250	3.06	17.317	0.47	23.38	0.24
3.933	0.24	10.000	10.81	16.067	0.94	22.13	0.24	5.200	1.41	11.267	3.06	17.333	0.47	23.40	0.24
3.950	0.24	10.017	10.81	16.083	0.94	22.15	0.24	5.217	1.41	11.283	3.06	17.350	0.47	23.42	0.24
3.967	0.24	10.033	10.81	16.100	0.94	22.17	0.24	5.233	1.41	11.300	3.06	17.367	0.47	23.43	0.24
3.983	0.24	10.050	10.81	16.117	0.94	22.18	0.24	5.250	1.41	11.317	3.06	17.383	0.47	23.45	0.24
4.000	0.24	10.067	10.81	16.133	0.94	22.20	0.24	5.267	1.41	11.333	3.06	17.400	0.47	23.47	0.24
4.017	0.24	10.083	10.81	16.150	0.94	22.22	0.24	5.283	1.41	11.350	3.06	17.417	0.47	23.48	0.24
4.033	0.24	10.100	10.81	16.167	0.94	22.23	0.24	5.300	1.41	11.367	3.06	17.433	0.47	23.50	0.24
4.050	0.24	10.117	10.81	16.183	0.94	22.25	0.24	5.317	1.41	11.383	3.06	17.450	0.47	23.52	0.24
4.067	0.24	10.133	10.81	16.200	0.94	22.27	0.24	5.333	1.41	11.400	3.06	17.467	0.47	23.53	0.24
4.083	0.24	10.150	10.81	16.217	0.94	22.28	0.24	5.350	1.41	11.417	3.06	17.483	0.47	23.55	0.24
4.100	0.24	10.167	10.81	16.233	0.94	22.30	0.24	5.367	1.41	11.433	3.06	17.500	0.47	23.57	0.24
4.117	0.24	10.183	10.81	16.250	0.94	22.32	0.24	5.383	1.41	11.450	3.06	17.517	0.47	23.58	0.24
4.133	0.24	10.200	10.81	16.267	0.47	22.33	0.24	5.400	1.41	11.467	3.06	17.533	0.47	23.60	0.24
4.150	0.24	10.217	10.81	16.283	0.47	22.35	0.24	5.417	1.41	11.483	3.06	17.550	0.47	23.62	0.24
4.167	0.24	10.233	10.81	16.300	0.47	22.37	0.24	5.433	1.41	11.500	3.06	17.567	0.47	23.63	0.24
4.183	0.24	10.250	10.80	16.317	0.47	22.38	0.24	5.450	1.41	11.517	3.06	17.583	0.47	23.65	0.24
4.200	0.24	10.267	3.06	16.333	0.47	22.40	0.24	5.467	1.41	11.533	3.06	17.600	0.47	23.67	0.24
4.217	0.24	10.283	3.06	16.350	0.47	22.42	0.24	5.483	1.41	11.550	3.06	17.617	0.47	23.68	0.24
4.233	0.24	10.300	3.06	16.367	0.47	22.43	0.24	5.500	1.41	11.567	3.06	17.633	0.47	23.70	0.24
4.250	0.24	10.317	3.06	16.383	0.47	22.45	0.24	5.517	1.41	11.583	3.06	17.650	0.47	23.72	0.24
4.267	1.41	10.333	3.06	16.400	0.47	22.47	0.24	5.533	1.41	11.600	3.06	17.667	0.47	23.73	0.24
4.283	1.41	10.350	3.06	16.417	0.47	22.48	0.24	5.550	1.41	11.617	3.06	17.683	0.47	23.75	0.24
4.300	1.41	10.367	3.06	16.433	0.47	22.50	0.24	5.567	1.41	11.633	3.06	17.700	0.47	23.77	0.24
4.317	1.41	10.383	3.06	16.450	0.47	22.52	0.24	5.583	1.41	11.650	3.06	17.717	0.47	23.78	0.24
4.333	1.41	10.400	3.06	16.467	0.47	22.53	0.24	5.600	1.41	11.667	3.06	17.733	0.47	23.80	0.24
4.350	1.41	10.417	3.06	16.483	0.47	22.55	0.24	5.617	1.41	11.683	3.06	17.750	0.47	23.82	0.24
4.367	1.41	10.433	3.06	16.500	0.47	22.57	0.24	5.633	1.41	11.700	3.06	17.767	0.47	23.83	0.24
4.383	1.41	10.450	3.06	16.517	0.47	22.58	0.24	5.650	1.41	11.717	3.06	17.783	0.47	23.85	0.24
4.400	1.41	10.467	3.06	16.533	0.47	22.60	0.24	5.667	1.41	11.733	3.06	17.800	0.47	23.87	0.24
4.417	1.41	10.483	3.06	16.550	0.47	22.62	0.24	5.683	1.41	11.750	3.06	17.817	0.47	23.88	0.24
4.433	1.41	10.500	3.06	16.567	0.47	22.63	0.24	5.700	1.41	11.767	3.06	17.833	0.47	23.90	0.24
4.450	1.41	10.517	3.06	16.583	0.47	22.65	0.24	5.717	1.41	11.783	3.06	17.850	0.47	23.92	0.24
4.467	1.41	10.533	3.06	16.600	0.47	22.67	0.24	5.733	1.41	11.800	3.06	17.867	0.47	23.93	0.24
4.483	1.41	10.550	3.06	16.617	0.47	22.68	0.24	5.750	1.41	11.817	3.06	17.883	0.47	23.95	0.24
4.500	1.41	10.567	3.06	16.633	0.47	22.70	0.24	5.767	1.41	11.833	3.06	17.900	0.47	23.97	0.24
4.517	1.41	10.583	3.06	16.650	0.47	22.72	0.24	5.783	1.41	11.850	3.06	17.917	0.47	23.98	0.24
4.533	1.41	10.600	3.06	16.667	0.47	22.73	0.24	5.800	1.41	11.867	3.06	17.933	0.47	24.00	0.24
4.550	1.41	10.617	3.06	16.683	0.47	22.75	0.24	5.817	1.41	11.883	3.06	17.950	0.47	24.02	0.24
4.567	1.41	10.633	3.06	16.700	0.47	22.77	0.24	5.833	1.41	11.900	3.06	17.967	0.47	24.03	0.24
4.583	1.41	10.650	3.06	16.717	0.47	22.78	0.24	5.850	1.41	11.917	3.06	17.983	0.47	24.05	0.24
4.600	1.41	10.667	3.06	16.733	0.47	22.80	0.24	5.867	1.41	11.933	3.06	18.000	0.47	24.07	0.24
4.617	1.41	10.683	3.06	16.750	0.47	22.82	0.24	5.883	1.41	11.950	3.06	18.017	0.47	24.08	0.24
4.633	1.41	10.700	3.06	16.767	0.47	22.83	0.24	5.900	1.41	11.967	3.06	18.033	0.47	24.10	0.24
4.650	1.41	10.717	3.06	16.783	0.47	22.85	0.24	5.917	1.41	11.983	3.06	18.050	0.47	24.12	0.24
4.667	1.41	10.733	3.06	16.800	0.47	22.87	0.24	5.933	1.41	12.000	3.06	18.067	0.47	24.13	0.24
4.683	1.41	10.750	3.06	16.817	0.47	22.88	0.24	5.950	1.41	12.017	3.06	18.083	0.47	24.15	0.24

5.967	1.41	12.033	3.06	18.100	0.47	24.17	0.24
5.983	1.41	12.050	3.06	18.117	0.47	24.18	0.24
6.000	1.41	12.067	3.06	18.133	0.47	24.20	0.24
6.017	1.41	12.083	3.06	18.150	0.47	24.22	0.24
6.033	1.41	12.100	3.06	18.167	0.47	24.23	0.24
6.050	1.41	12.117	3.06	18.183	0.47	24.25	0.24
6.067	1.41	12.133	3.06	18.200	0.47		

Max.Eff.Inten.(mm/hr)=	10.81	7.03	
over (min)	7.00	12.00	
Storage Coeff. (min)=	6.99 (ii)	11.13 (ii)	
Unit Hyd. Tpeak (min)=	7.00	12.00	
Unit Hyd. peak (cms)=	0.16	0.10	
			TOTALS
PEAK FLOW (cms)=	0.07	0.00	0.066 (iii)
TIME TO PEAK (hrs)=	9.98	10.25	10.25
RUNOFF VOLUME (mm)=	46.07	22.98	45.85
TOTAL RAINFALL (mm)=	47.08	47.08	47.08
RUNOFF COEFFICIENT =	0.98	0.49	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7642)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0470	0.1250
	0.0197	0.0630	0.0551	0.1410
	0.0304	0.0850	0.0620	0.1580
	0.0373	0.1020	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7641)	2.210	0.066	10.25	45.85
OUTFLOW: ID= 1 (7642)	2.210	0.018	12.28	42.17

PEAK FLOW REDUCTION [Qout/Qin](%)= 27.83
TIME SHIFT OF PEAK FLOW (min)=122.00
MAXIMUM STORAGE USED (ha.m.)= 0.0588

CALIB			
STANDHYD (7643)	Area (ha)= 2.02		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	2.00	0.02	
Dep. Storage (mm)=	1.00	1.50	
Average Slope (%)=	1.00	0.50	
Length (m)=	116.05	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	1.41	12.150	3.06	18.22	0.47
0.033	0.00	6.100	1.41	12.167	3.06	18.23	0.47
0.050	0.00	6.117	1.41	12.183	3.06	18.25	0.47
0.067	0.00	6.133	1.41	12.200	3.06	18.27	0.24
0.083	0.00	6.150	1.41	12.217	3.06	18.28	0.24
0.100	0.00	6.167	1.41	12.233	3.06	18.30	0.24
0.117	0.00	6.183	1.41	12.250	3.06	18.32	0.24
0.133	0.00	6.200	1.41	12.267	1.65	18.33	0.24
0.150	0.00	6.217	1.41	12.283	1.65	18.35	0.24
0.167	0.00	6.233	1.41	12.300	1.65	18.37	0.24
0.183	0.00	6.250	1.41	12.317	1.65	18.38	0.24
0.200	0.00	6.267	4.00	12.333	1.65	18.40	0.24
0.217	0.00	6.283	4.00	12.350	1.65	18.42	0.24
0.233	0.00	6.300	4.00	12.367	1.65	18.43	0.24
0.250	0.00	6.317	4.00	12.383	1.65	18.45	0.24
0.267	0.24	6.333	4.00	12.400	1.65	18.47	0.24
0.283	0.24	6.350	4.00	12.417	1.65	18.48	0.24
0.300	0.24	6.367	4.00	12.433	1.65	18.50	0.24
0.317	0.24	6.383	4.00	12.450	1.65	18.52	0.24
0.333	0.24	6.400	4.00	12.467	1.65	18.53	0.24
0.350	0.24	6.417	4.00	12.483	1.65	18.55	0.24
0.367	0.24	6.433	4.00	12.500	1.65	18.57	0.24
0.383	0.24	6.450	4.00	12.517	1.65	18.58	0.24
0.400	0.24	6.467	4.00	12.533	1.65	18.60	0.24
0.417	0.24	6.483	4.00	12.550	1.65	18.62	0.24
0.433	0.24	6.500	4.00	12.567	1.65	18.63	0.24
0.450	0.24	6.517	4.00	12.583	1.65	18.65	0.24
0.467	0.24	6.533	4.00	12.600	1.65	18.67	0.24
0.483	0.24	6.550	4.00	12.617	1.65	18.68	0.24
0.500	0.24	6.567	4.00	12.633	1.65	18.70	0.24
0.517	0.24	6.583	4.00	12.650	1.65	18.72	0.24
0.533	0.24	6.600	4.00	12.667	1.65	18.73	0.24
0.550	0.24	6.617	4.00	12.683	1.65	18.75	0.24
0.567	0.24	6.633	4.00	12.700	1.65	18.77	0.24
0.583	0.24	6.650	4.00	12.717	1.65	18.78	0.24
0.600	0.24	6.667	4.00	12.733	1.65	18.80	0.24
0.617	0.24	6.683	4.00	12.750	1.65	18.82	0.24
0.633	0.24	6.700	4.00	12.767	1.65	18.83	0.24
0.650	0.24	6.717	4.00	12.783	1.65	18.85	0.24
0.667	0.24	6.733	4.00	12.800	1.65	18.87	0.24
0.683	0.24	6.750	4.00	12.817	1.65	18.88	0.24
0.700	0.24	6.767	4.00	12.833	1.65	18.90	0.24
0.717	0.24	6.783	4.00	12.850	1.65	18.92	0.24
0.733	0.24	6.800	4.00	12.867	1.65	18.93	0.24
0.750	0.24	6.817	4.00	12.883	1.65	18.95	0.24
0.767	0.24	6.833	4.00	12.900	1.65	18.97	0.24
0.783	0.24	6.850	4.00	12.917	1.65	18.98	0.24
0.800	0.24	6.867	4.00	12.933	1.65	19.00	0.24
0.817	0.24	6.883	4.00	12.950	1.65	19.02	0.24
0.833	0.24	6.900	4.00	12.967	1.65	19.03	0.24
0.850	0.24	6.917	4.00	12.983	1.65	19.05	0.24
0.867	0.24	6.933	4.00	13.000	1.65	19.07	0.24
0.883	0.24	6.950	4.00	13.017	1.65	19.08	0.24
0.900	0.24	6.967	4.00	13.033	1.65	19.10	0.24
0.917	0.24	6.983	4.00	13.050	1.65	19.12	0.24
0.933	0.24	7.000	4.00	13.067	1.65	19.13	0.24
0.950	0.24	7.017	4.00	13.083	1.65	19.15	0.24
0.967	0.24	7.033	4.00	13.100	1.65	19.17	0.24
0.983	0.24	7.050	4.00	13.117	1.65	19.18	0.24
1.000	0.24	7.067	4.00	13.133	1.65	19.20	0.24
1.017	0.24	7.083	4.00	13.150	1.65	19.22	0.24
1.033	0.24	7.100	4.00	13.167	1.65	19.23	0.24
1.050	0.24	7.117	4.00	13.183	1.65	19.25	0.24
1.067	0.24	7.133	4.00	13.200	1.65	19.27	0.24
1.083	0.24	7.150	4.00	13.217	1.65	19.28	0.24
1.100	0.24	7.167	4.00	13.233	1.65	19.30	0.24
1.117	0.24	7.183	4.00	13.250	1.65	19.32	0.24
1.133	0.24	7.200	4.00	13.267	1.65	19.33	0.24
1.150	0.24	7.217	4.00	13.283	1.65	19.35	0.24
1.167	0.24	7.233	4.00	13.300	1.65	19.37	0.24
1.183	0.24	7.250	4.00	13.317	1.65	19.38	0.24
1.200	0.24	7.267	4.00	13.333	1.65	19.40	0.24
1.217	0.24	7.283	4.00	13.350	1.65	19.42	0.24
1.233	0.24	7.300	4.00	13.367	1.65	19.43	0.24
1.250	0.24	7.317	4.00	13.383	1.65	19.45	0.24
1.267	0.24	7.333	4.00	13.400	1.65	19.47	0.24
1.283	0.24	7.350	4.00	13.417	1.65	19.48	0.24
1.300	0.24	7.367	4.00	13.433	1.65	19.50	0.24
1.317	0.24	7.383	4.00	13.450	1.65	19.52	0.24
1.333	0.24	7.400	4.00	13.467	1.65	19.53	0.24
1.350	0.24	7.417	4.00	13.483	1.65	19.55	0.24
1.367	0.24	7.433	4.00	13.500	1.65	19.57	0.24
1.383	0.24	7.450	4.00	13.517	1.65	19.58	0.24
1.400	0.24	7.467	4.00	13.533	1.65	19.60	0.24
1.417	0.24	7.483	4.00	13.550	1.65	19.62	0.24
1.433	0.24	7.500	4.00	13.567	1.65	19.63	0.24

1.450	0.24	7.517	4.00	13.583	1.65	19.65	0.24
1.467	0.24	7.533	4.00	13.600	1.65	19.67	0.24
1.483	0.24	7.550	4.00	13.617	1.65	19.68	0.24
1.500	0.24	7.567	4.00	13.633	1.65	19.70	0.24
1.517	0.24	7.583	4.00	13.650	1.65	19.72	0.24
1.533	0.24	7.600	4.00	13.667	1.65	19.73	0.24
1.550	0.24	7.617	4.00	13.683	1.65	19.75	0.24
1.567	0.24	7.633	4.00	13.700	1.65	19.77	0.24
1.583	0.24	7.650	4.00	13.717	1.65	19.78	0.24
1.600	0.24	7.667	4.00	13.733	1.65	19.80	0.24
1.617	0.24	7.683	4.00	13.750	1.65	19.82	0.24
1.633	0.24	7.700	4.00	13.767	1.65	19.83	0.24
1.650	0.24	7.717	4.00	13.783	1.65	19.85	0.24
1.667	0.24	7.733	4.00	13.800	1.65	19.87	0.24
1.683	0.24	7.750	4.00	13.817	1.65	19.88	0.24
1.700	0.24	7.767	4.00	13.833	1.65	19.90	0.24
1.717	0.24	7.783	4.00	13.850	1.65	19.92	0.24
1.733	0.24	7.800	4.00	13.867	1.65	19.93	0.24
1.750	0.24	7.817	4.00	13.883	1.65	19.95	0.24
1.767	0.24	7.833	4.00	13.900	1.65	19.97	0.24
1.783	0.24	7.850	4.00	13.917	1.65	19.98	0.24
1.800	0.24	7.867	4.00	13.933	1.65	20.00	0.24
1.817	0.24	7.883	4.00	13.950	1.65	20.02	0.24
1.833	0.24	7.900	4.00	13.967	1.65	20.03	0.24
1.850	0.24	7.917	4.00	13.983	1.65	20.05	0.24
1.867	0.24	7.933	4.00	14.000	1.65	20.07	0.24
1.883	0.24	7.950	4.00	14.017	1.65	20.08	0.24
1.900	0.24	7.967	4.00	14.033	1.65	20.10	0.24
1.917	0.24	7.983	4.00	14.050	1.65	20.12	0.24
1.933	0.24	8.000	4.00	14.067	1.65	20.13	0.24
1.950	0.24	8.017	4.00	14.083	1.65	20.15	0.24
1.967	0.24	8.033	4.00	14.100	1.65	20.17	0.24
1.983	0.24	8.050	4.00	14.117	1.65	20.18	0.24
2.000	0.24	8.067	4.00	14.133	1.65	20.20	0.24
2.017	0.24	8.083	4.00	14.150	1.65	20.22	0.24
2.033	0.24	8.100	4.00	14.167	1.65	20.23	0.24
2.050	0.24	8.117	4.00	14.183	1.65	20.25	0.24
2.067	0.24	8.133	4.00	14.200	1.65	20.27	0.24
2.083	0.24	8.150	4.00	14.217	1.65	20.28	0.24
2.100	0.24	8.167	4.00	14.233	1.65	20.30	0.24
2.117	0.24	8.183	4.00	14.250	1.65	20.32	0.24
2.133	0.24	8.200	4.00	14.267	0.94	20.33	0.24
2.150	0.24	8.217	4.00	14.283	0.94	20.35	0.24
2.167	0.24	8.233	4.00	14.300	0.94	20.37	0.24
2.183	0.24	8.250	4.02	14.317	0.94	20.38	0.24
2.200	0.24	8.267	10.81	14.333	0.94	20.40	0.24
2.217	0.24	8.283	10.81	14.350	0.94	20.42	0.24
2.233	0.24	8.300	10.81	14.367	0.94	20.43	0.24
2.250	0.24	8.317	10.81	14.383	0.94	20.45	0.24
2.267	0.24	8.333	10.81	14.400	0.94	20.47	0.24
2.283	0.24	8.350	10.81	14.417	0.94	20.48	0.24
2.300	0.24	8.367	10.81	14.433	0.94	20.50	0.24
2.317	0.24	8.383	10.81	14.450	0.94	20.52	0.24
2.333	0.24	8.400	10.81	14.467	0.94	20.53	0.24
2.350	0.24	8.417	10.81	14.483	0.94	20.55	0.24
2.367	0.24	8.433	10.81	14.500	0.94	20.57	0.24
2.383	0.24	8.450	10.81	14.517	0.94	20.58	0.24
2.400	0.24	8.467	10.81	14.533	0.94	20.60	0.24
2.417	0.24	8.483	10.81	14.550	0.94	20.62	0.24
2.433	0.24	8.500	10.81	14.567	0.94	20.63	0.24
2.450	0.24	8.517	10.81	14.583	0.94	20.65	0.24
2.467	0.24	8.533	10.81	14.600	0.94	20.67	0.24
2.483	0.24	8.550	10.81	14.617	0.94	20.68	0.24
2.500	0.24	8.567	10.81	14.633	0.94	20.70	0.24
2.517	0.24	8.583	10.81	14.650	0.94	20.72	0.24
2.533	0.24	8.600	10.81	14.667	0.94	20.73	0.24
2.550	0.24	8.617	10.81	14.683	0.94	20.75	0.24
2.567	0.24	8.633	10.81	14.700	0.94	20.77	0.24
2.583	0.24	8.650	10.81	14.717	0.94	20.78	0.24
2.600	0.24	8.667	10.81	14.733	0.94	20.80	0.24
2.617	0.24	8.683	10.81	14.750	0.94	20.82	0.24
2.633	0.24	8.700	10.81	14.767	0.94	20.83	0.24
2.650	0.24	8.717	10.81	14.783	0.94	20.85	0.24
2.667	0.24	8.733	10.81	14.800	0.94	20.87	0.24
2.683	0.24	8.750	10.81	14.817	0.94	20.88	0.24
2.700	0.24	8.767	10.81	14.833	0.94	20.90	0.24
2.717	0.24	8.783	10.81	14.850	0.94	20.92	0.24
2.733	0.24	8.800	10.81	14.867	0.94	20.93	0.24
2.750	0.24	8.817	10.81	14.883	0.94	20.95	0.24
2.767	0.24	8.833	10.81	14.900	0.94	20.97	0.24
2.783	0.24	8.850	10.81	14.917	0.94	20.98	0.24
2.800	0.24	8.867	10.81	14.933	0.94	21.00	0.24
2.817	0.24	8.883	10.81	14.950	0.94	21.02	0.24
2.833	0.24	8.900	10.81	14.967	0.94	21.03	0.24
2.850	0.24	8.917	10.81	14.983	0.94	21.05	0.24
2.867	0.24	8.933	10.81	15.000	0.94	21.07	0.24
2.883	0.24	8.950	10.81	15.017	0.94	21.08	0.24
2.900	0.24	8.967	10.81	15.033	0.94	21.10	0.24
2.917	0.24	8.983	10.81	15.050	0.94	21.12	0.24
2.933	0.24	9.000	10.81	15.067	0.94	21.13	0.24
2.950	0.24	9.017	10.81	15.083	0.94	21.15	0.24
2.967	0.24	9.033	10.81	15.100	0.94	21.17	0.24
2.983	0.24	9.050	10.81	15.117	0.94	21.18	0.24
3.000	0.24	9.067	10.81	15.133	0.94	21.20	0.24
3.017	0.24	9.083	10.81	15.150	0.94	21.22	0.24
3.033	0.24	9.100	10.81	15.167	0.94	21.23	0.24
3.050	0.24	9.117	10.81	15.183	0.94	21.25	0.24
3.067	0.24	9.133	10.81	15.200	0.94	21.27	0.24
3.083	0.24	9.150	10.81	15.217	0.94	21.28	0.24
3.100	0.24	9.167	10.81	15.233	0.94	21.30	0.24
3.117	0.24	9.183	10.81	15.250	0.94	21.32	0.24
3.133	0.24	9.200	10.81	15.267	0.94	21.33	0.24
3.150	0.24	9.217	10.81	15.283	0.94	21.35	0.24
3.167	0.24	9.233	10.81	15.300	0.94	21.37	0.24
3.183	0.24	9.250	10.81	15.317	0.94	21.38	0.24
3.200	0.24	9.267	10.81	15.333	0.94	21.40	0.24
3.217	0.24	9.283	10.81	15.350	0.94	21.42	0.24
3.233	0.24	9.300	10.81	15.367	0.94	21.43	0.24
3.250	0.24	9.317	10.81	15.383	0.94	21.45	0.24
3.267	0.24	9.333	10.81	15.400	0.94	21.47	0.24
3.283	0.24	9.350	10.81	15.417	0.94	21.48	0.24
3.300	0.24	9.367	10.81	15.433	0.94	21.50	0.24
3.317	0.24	9.383	10.81	15.450	0.94	21.52	0.24
3.333	0.24	9.400	10.81	15.467	0.94	21.53	0.24
3.350	0.24	9.417	10.81	15.483	0.94	21.55	0.24
3.367	0.24	9.433	10.81	15.500	0.94	21.57	0.24
3.383	0.24	9.450	10.81	15.517	0.94	21.58	0.24
3.400	0.24	9.467	10.81	15.533	0.94	21.60	0.24
3.417	0.24	9.483	10.81	15.550	0.94	21.62	0.24
3.433	0.24	9.500	10.81	15.567	0.94	21.63	0.24
3.450	0.24	9.517	10.81	15.583	0.94	21.65	0.24
3.467	0.24	9.533	10.81	15.600	0.94	21.67	0.24
3.483	0.24	9.550	10.81	15.617	0.94	21.68	0.24
3.500	0.24	9.567	10.81	15.633	0.94	21.70	0.24
3.517	0.24	9.583	10.81	15.650	0.94	21.72	0.24
3.533	0.24	9.600	10.81	15.667	0.94	21.73	0.24
3.550	0.24	9.617	10.81	15.683	0.94	21.75	0.24
3.567	0.24	9.633	10.81	15.700	0.94	21.77	0.24
3.583	0.24	9.650	10.81	15.717	0.94	21.78	0.24
3.600	0.24	9.667	10.81	15.733	0.94	21.80	0.24
3.617	0.24	9.683	10.81	15.750	0.94	21.82	0.24
3.633	0.24	9.700	10.81	15.767	0.94	21.83	0.24
3.650	0.24	9.717	10.81	15.783	0.94	21.85	0.24
3.667	0.24	9.733	10.81	15.800	0.94	21.87	0.24
3.683	0.24	9.750	10.81	15.817	0.94	21.88	0.24
3.700	0.24	9.767	10.81	15.833	0.94	21.90	0.24
3.717	0.24	9.783	10.81	15.850	0.94	21.92	0.24
3.733	0.24	9.800	10.81	15.867	0.94	21.93	0.24
3.750	0.24	9.817	10.81	15.883	0.94	21.95	0.24
3.767	0.24	9.833	10.81	15.900	0.94	21.97	0.24
3.783	0.24	9.850	10.81	15.917	0.94	21.98	0.24
3.800	0.24	9.867	10.81	15.933	0.94	22.00	0.24
3.817	0.24	9.883	10.81	15.950	0.94	22.02	0.24
3.833	0.24	9.900	10.81	15.967	0.94	22.03	0.24
3.850	0.24	9.917	10.81	15.983	0.94	22.05	0.24
3.867	0.24	9.933	10.81	16.000	0.94	22.07	0.24
3.883	0.24	9.950	10.81	16.017	0.94	22.08	0.24
3.900	0.24	9.967	10.81	16.033	0.94	22.10	0.24
3.917	0.24	9.983	10.81	16.050	0.94	22.12	0.24
3.933	0.24	10.000	10.81	16.067	0.94	22.13	0.24
3.950	0.24	10.017	10.81	16.083	0.94	22.15	0.24
3.967	0.24	10.033	10.81	16.100	0.94	22.17	0.24

3.983	0.24	10.050	10.81	16.117	0.94	22.18	0.24
4.000	0.24	10.067	10.81	16.133	0.94	22.20	0.24
4.017	0.24	10.083	10.81	16.150	0.94	22.22	0.24
4.033	0.24	10.100	10.81	16.167	0.94	22.23	0.24
4.050	0.24	10.117	10.81	16.183	0.94	22.25	0.24
4.067	0.24	10.133	10.81	16.200	0.94	22.27	0.24
4.083	0.24	10.150	10.81	16.217	0.94	22.28	0.24
4.100	0.24	10.167	10.81	16.233	0.94	22.30	0.24
4.117	0.24	10.183	10.81	16.250	0.94	22.32	0.24
4.133	0.24	10.200	10.81	16.267	0.47	22.33	0.24
4.150	0.24	10.217	10.81	16.283	0.47	22.35	0.24
4.167	0.24	10.233	10.81	16.300	0.47	22.37	0.24
4.183	0.24	10.250	10.80	16.317	0.47	22.38	0.24
4.200	0.24	10.267	3.06	16.333	0.47	22.40	0.24
4.217	0.24	10.283	3.06	16.350	0.47	22.42	0.24
4.233	0.24	10.300	3.06	16.367	0.47	22.43	0.24
4.250	0.24	10.317	3.06	16.383	0.47	22.45	0.24
4.267	1.41	10.333	3.06	16.400	0.47	22.47	0.24
4.283	1.41	10.350	3.06	16.417	0.47	22.48	0.24
4.300	1.41	10.367	3.06	16.433	0.47	22.50	0.24
4.317	1.41	10.383	3.06	16.450	0.47	22.52	0.24
4.333	1.41	10.400	3.06	16.467	0.47	22.53	0.24
4.350	1.41	10.417	3.06	16.483	0.47	22.55	0.24
4.367	1.41	10.433	3.06	16.500	0.47	22.57	0.24
4.383	1.41	10.450	3.06	16.517	0.47	22.58	0.24
4.400	1.41	10.467	3.06	16.533	0.47	22.60	0.24
4.417	1.41	10.483	3.06	16.550	0.47	22.62	0.24
4.433	1.41	10.500	3.06	16.567	0.47	22.63	0.24
4.450	1.41	10.517	3.06	16.583	0.47	22.65	0.24
4.467	1.41	10.533	3.06	16.600	0.47	22.67	0.24
4.483	1.41	10.550	3.06	16.617	0.47	22.68	0.24
4.500	1.41	10.567	3.06	16.633	0.47	22.70	0.24
4.517	1.41	10.583	3.06	16.650	0.47	22.72	0.24
4.533	1.41	10.600	3.06	16.667	0.47	22.73	0.24
4.550	1.41	10.617	3.06	16.683	0.47	22.75	0.24
4.567	1.41	10.633	3.06	16.700	0.47	22.77	0.24
4.583	1.41	10.650	3.06	16.717	0.47	22.78	0.24
4.600	1.41	10.667	3.06	16.733	0.47	22.80	0.24
4.617	1.41	10.683	3.06	16.750	0.47	22.82	0.24
4.633	1.41	10.700	3.06	16.767	0.47	22.83	0.24
4.650	1.41	10.717	3.06	16.783	0.47	22.85	0.24
4.667	1.41	10.733	3.06	16.800	0.47	22.87	0.24
4.683	1.41	10.750	3.06	16.817	0.47	22.88	0.24
4.700	1.41	10.767	3.06	16.833	0.47	22.90	0.24
4.717	1.41	10.783	3.06	16.850	0.47	22.92	0.24
4.733	1.41	10.800	3.06	16.867	0.47	22.93	0.24
4.750	1.41	10.817	3.06	16.883	0.47	22.95	0.24
4.767	1.41	10.833	3.06	16.900	0.47	22.97	0.24
4.783	1.41	10.850	3.06	16.917	0.47	22.98	0.24
4.800	1.41	10.867	3.06	16.933	0.47	23.00	0.24
4.817	1.41	10.883	3.06	16.950	0.47	23.02	0.24
4.833	1.41	10.900	3.06	16.967	0.47	23.03	0.24
4.850	1.41	10.917	3.06	16.983	0.47	23.05	0.24
4.867	1.41	10.933	3.06	17.000	0.47	23.07	0.24
4.883	1.41	10.950	3.06	17.017	0.47	23.08	0.24
4.900	1.41	10.967	3.06	17.033	0.47	23.10	0.24
4.917	1.41	10.983	3.06	17.050	0.47	23.12	0.24
4.933	1.41	11.000	3.06	17.067	0.47	23.13	0.24
4.950	1.41	11.017	3.06	17.083	0.47	23.15	0.24
4.967	1.41	11.033	3.06	17.100	0.47	23.17	0.24
4.983	1.41	11.050	3.06	17.117	0.47	23.18	0.24
5.000	1.41	11.067	3.06	17.133	0.47	23.20	0.24
5.017	1.41	11.083	3.06	17.150	0.47	23.22	0.24
5.033	1.41	11.100	3.06	17.167	0.47	23.23	0.24
5.050	1.41	11.117	3.06	17.183	0.47	23.25	0.24
5.067	1.41	11.133	3.06	17.200	0.47	23.27	0.24
5.083	1.41	11.150	3.06	17.217	0.47	23.28	0.24
5.100	1.41	11.167	3.06	17.233	0.47	23.30	0.24
5.117	1.41	11.183	3.06	17.250	0.47	23.32	0.24
5.133	1.41	11.200	3.06	17.267	0.47	23.33	0.24
5.150	1.41	11.217	3.06	17.283	0.47	23.35	0.24
5.167	1.41	11.233	3.06	17.300	0.47	23.37	0.24
5.183	1.41	11.250	3.06	17.317	0.47	23.38	0.24
5.200	1.41	11.267	3.06	17.333	0.47	23.40	0.24
5.217	1.41	11.283	3.06	17.350	0.47	23.42	0.24
5.233	1.41	11.300	3.06	17.367	0.47	23.43	0.24
5.250	1.41	11.317	3.06	17.383	0.47	23.45	0.24
5.267	1.41	11.333	3.06	17.400	0.47	23.47	0.24
5.283	1.41	11.350	3.06	17.417	0.47	23.48	0.24
5.300	1.41	11.367	3.06	17.433	0.47	23.50	0.24
5.317	1.41	11.383	3.06	17.450	0.47	23.52	0.24
5.333	1.41	11.400	3.06	17.467	0.47	23.53	0.24
5.350	1.41	11.417	3.06	17.483	0.47	23.55	0.24
5.367	1.41	11.433	3.06	17.500	0.47	23.57	0.24
5.383	1.41	11.450	3.06	17.517	0.47	23.58	0.24
5.400	1.41	11.467	3.06	17.533	0.47	23.60	0.24
5.417	1.41	11.483	3.06	17.550	0.47	23.62	0.24
5.433	1.41	11.500	3.06	17.567	0.47	23.63	0.24
5.450	1.41	11.517	3.06	17.583	0.47	23.65	0.24
5.467	1.41	11.533	3.06	17.600	0.47	23.67	0.24
5.483	1.41	11.550	3.06	17.617	0.47	23.68	0.24
5.500	1.41	11.567	3.06	17.633	0.47	23.70	0.24
5.517	1.41	11.583	3.06	17.650	0.47	23.72	0.24
5.533	1.41	11.600	3.06	17.667	0.47	23.73	0.24
5.550	1.41	11.617	3.06	17.683	0.47	23.75	0.24
5.567	1.41	11.633	3.06	17.700	0.47	23.77	0.24
5.583	1.41	11.650	3.06	17.717	0.47	23.78	0.24
5.600	1.41	11.667	3.06	17.733	0.47	23.80	0.24
5.617	1.41	11.683	3.06	17.750	0.47	23.82	0.24
5.633	1.41	11.700	3.06	17.767	0.47	23.83	0.24
5.650	1.41	11.717	3.06	17.783	0.47	23.85	0.24
5.667	1.41	11.733	3.06	17.800	0.47	23.87	0.24
5.683	1.41	11.750	3.06	17.817	0.47	23.88	0.24
5.700	1.41	11.767	3.06	17.833	0.47	23.90	0.24
5.717	1.41	11.783	3.06	17.850	0.47	23.92	0.24
5.733	1.41	11.800	3.06	17.867	0.47	23.93	0.24
5.750	1.41	11.817	3.06	17.883	0.47	23.95	0.24
5.767	1.41	11.833	3.06	17.900	0.47	23.97	0.24
5.783	1.41	11.850	3.06	17.917	0.47	23.98	0.24
5.800	1.41	11.867	3.06	17.933	0.47	24.00	0.24
5.817	1.41	11.883	3.06	17.950	0.47	24.02	0.24
5.833	1.41	11.900	3.06	17.967	0.47	24.03	0.24
5.850	1.41	11.917	3.06	17.983	0.47	24.05	0.24
5.867	1.41	11.933	3.06	18.000	0.47	24.07	0.24
5.883	1.41	11.950	3.06	18.017	0.47	24.08	0.24
5.900	1.41	11.967	3.06	18.033	0.47	24.10	0.24
5.917	1.41	11.983	3.06	18.050	0.47	24.12	0.24
5.933	1.41	12.000	3.06	18.067	0.47	24.13	0.24
5.950	1.41	12.017	3.06	18.083	0.47	24.15	0.24
5.967	1.41	12.033	3.06	18.100	0.47	24.17	0.24
5.983	1.41	12.050	3.06	18.117	0.47	24.18	0.24
6.000	1.41	12.067	3.06	18.133	0.47	24.20	0.24
6.017	1.41	12.083	3.06	18.150	0.47	24.22	0.24
6.033	1.41	12.100	3.06	18.167	0.47	24.23	0.24
6.050	1.41	12.117	3.06	18.183	0.47	24.25	0.24
6.067	1.41	12.133	3.06	18.200	0.47		

Max.Eff.Inten.(mm/hr)=	10.81	7.03	
over (min)	7.00	11.00	
Storage Coeff. (min)=	6.80 (ii)	10.95 (ii)	
Unit Hyd. Tpeak (min)=	7.00	11.00	
Unit Hyd. peak (cms)=	0.16	0.10	
			TOTALS
PEAK FLOW (cms)=	0.06	0.00	0.060 (iii)
TIME TO PEAK (hrs)=	9.73	10.25	10.25
RUNOFF VOLUME (mm)=	46.07	22.98	45.85
TOTAL RAINFALL (mm)=	47.08	47.08	47.08
RUNOFF COEFFICIENT =	0.98	0.49	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7644)|	OVERFLOW IS OFF			
IN= 2---> OUT= 1 |				
DT= 1.0 min |	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)

	0.0000	0.0000	|	0.0433	0.1140
	0.0182	0.0580	|	0.0507	0.1280
	0.0280	0.0775	|	0.0571	0.1440
	0.0343	0.0930	|	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (	7643)	2.020	0.060	10.25	45.85
OUTFLOW: ID= 1 (	7644)	2.020	0.017	12.28	42.21

PEAK FLOW REDUCTION [Qout/Qin](%)= 27.89
TIME SHIFT OF PEAK FLOW (min)=122.00
MAXIMUM STORAGE USED (ha.m.)= 0.0537

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       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-a4eb17eaad57\ea64afc6-4c5c-47b8-8476-92ed2ef6cd52\s
Summary filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-a4eb17eaad57\ea64afc6-4c5c-47b8-8476-92ed2ef6cd52\s

DATE: 06/14/2024 TIME: 12:48:35

USER:

COMMENTS: _____

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  ************************************************
  ** SIMULATION : 4. 2yr 4hr 10min Chicago      **
  ************************************************
```

CHICAGO STORM	IDF curve parameters: A=1070.000
Ptotal= 34.22 mm	B= 7.850
	C= 0.876

used in: INTENSITY = A / (t + B)^C

Duration of storm = 4.00 hrs
Storm time step = 10.00 min
Time to peak ratio = 0.33

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	1.53	1.00	19.60	2.00	4.48	3.00	1.89
0.17	1.81	1.17	85.72	2.17	3.65	3.17	1.73
0.33	2.22	1.33	26.59	2.33	3.08	3.33	1.59
0.50	2.87	1.50	12.64	2.50	2.66	3.50	1.47
0.67	4.06	1.67	7.99	2.67	2.34	3.67	1.37
0.83	6.86	1.83	5.76	2.83	2.10	3.83	1.29

CALIB	
STANDHYD (7567)	Area (ha)= 2.72
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.69	0.03
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	134.66	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	1.53	1.017	19.60	2.017	4.48	3.02	1.89
0.033	1.53	1.033	19.60	2.033	4.48	3.03	1.89
0.050	1.53	1.050	19.60	2.050	4.48	3.05	1.89
0.067	1.53	1.067	19.60	2.067	4.48	3.07	1.89
0.083	1.53	1.083	19.60	2.083	4.48	3.08	1.89
0.100	1.53	1.100	19.60	2.100	4.48	3.10	1.89
0.117	1.53	1.117	19.60	2.117	4.48	3.12	1.89
0.133	1.53	1.133	19.60	2.133	4.48	3.13	1.89
0.150	1.53	1.150	19.60	2.150	4.48	3.15	1.89
0.167	1.53	1.167	19.60	2.167	4.48	3.17	1.89
0.183	1.81	1.183	85.72	2.183	3.65	3.18	1.73
0.200	1.81	1.200	85.72	2.200	3.65	3.20	1.73
0.217	1.81	1.217	85.72	2.217	3.65	3.22	1.73
0.233	1.81	1.233	85.72	2.233	3.65	3.23	1.73
0.250	1.81	1.250	85.72	2.250	3.65	3.25	1.73
0.267	1.81	1.267	85.72	2.267	3.65	3.27	1.73
0.283	1.81	1.283	85.72	2.283	3.65	3.28	1.73
0.300	1.81	1.300	85.72	2.300	3.65	3.30	1.73
0.317	1.81	1.317	85.72	2.317	3.65	3.32	1.73
0.333	1.81	1.333	85.72	2.333	3.65	3.33	1.73
0.350	2.22	1.350	26.59	2.350	3.08	3.35	1.59
0.367	2.22	1.367	26.59	2.367	3.08	3.37	1.59
0.383	2.22	1.383	26.59	2.383	3.08	3.38	1.59
0.400	2.22	1.400	26.59	2.400	3.08	3.40	1.59
0.417	2.22	1.417	26.59	2.417	3.08	3.42	1.59
0.433	2.22	1.433	26.59	2.433	3.08	3.43	1.59
0.450	2.22	1.450	26.59	2.450	3.08	3.45	1.59
0.467	2.22	1.467	26.59	2.467	3.08	3.47	1.59
0.483	2.22	1.483	26.59	2.483	3.08	3.48	1.59
0.500	2.22	1.500	26.59	2.500	3.08	3.50	1.59
0.517	2.87	1.517	12.64	2.517	2.66	3.52	1.47
0.533	2.87	1.533	12.64	2.533	2.66	3.53	1.47
0.550	2.87	1.550	12.64	2.550	2.66	3.55	1.47
0.567	2.87	1.567	12.64	2.567	2.66	3.57	1.47
0.583	2.87	1.583	12.64	2.583	2.66	3.58	1.47
0.600	2.87	1.600	12.64	2.600	2.66	3.60	1.47
0.617	2.87	1.617	12.64	2.617	2.66	3.62	1.47
0.633	2.87	1.633	12.64	2.633	2.66	3.63	1.47
0.650	2.87	1.650	12.64	2.650	2.66	3.65	1.47
0.667	2.87	1.667	12.64	2.667	2.66	3.67	1.47
0.683	4.06	1.683	7.99	2.683	2.34	3.68	1.37
0.700	4.06	1.700	7.99	2.700	2.34	3.70	1.37
0.717	4.06	1.717	7.99	2.717	2.34	3.72	1.37
0.733	4.06	1.733	7.99	2.733	2.34	3.73	1.37
0.750	4.06	1.750	7.99	2.750	2.34	3.75	1.37
0.767	4.06	1.767	7.99	2.767	2.34	3.77	1.37
0.783	4.06	1.783	7.99	2.783	2.34	3.78	1.37
0.800	4.06	1.800	7.99	2.800	2.34	3.80	1.37
0.817	4.06	1.817	7.99	2.817	2.34	3.82	1.37
0.833	4.06	1.833	7.99	2.833	2.34	3.83	1.37
0.850	6.86	1.850	5.76	2.850	2.10	3.85	1.29
0.867	6.86	1.867	5.76	2.867	2.10	3.87	1.29
0.883	6.86	1.883	5.76	2.883	2.10	3.88	1.29
0.900	6.86	1.900	5.76	2.900	2.10	3.90	1.29
0.917	6.86	1.917	5.76	2.917	2.10	3.92	1.29

0.933	6.86	1.933	5.76	2.933	2.10	3.93	1.29
0.950	6.86	1.950	5.76	2.950	2.10	3.95	1.29
0.967	6.86	1.967	5.76	2.967	2.10	3.97	1.29
0.983	6.86	1.983	5.76	2.983	2.10	3.98	1.29
1.000	6.86	2.000	5.76	3.000	2.10	4.00	1.29

Max.Eff.Inten.(mm/hr)=	85.72	31.78	
over (min)	5.00	6.00	
Storage Coeff. (min)=	3.25 (ii)	5.06 (ii)	
Unit Hyd. Tpeak (min)=	5.00	6.00	
Unit Hyd. peak (cms)=	0.29	0.21	
			TOTALS
PEAK FLOW (cms)=	0.59	0.00	0.592 (iii)
TIME TO PEAK (hrs)=	1.33	1.38	1.33
RUNOFF VOLUME (mm)=	33.22	13.81	33.02
TOTAL RAINFALL (mm)=	34.22	34.22	34.22
RUNOFF COEFFICIENT =	0.97	0.40	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7626)| IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0568	0.1530
	0.0239	0.0780	0.0660	0.1730
	0.0370	0.1040	0.0751	0.2000
	0.0451	0.1250	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7567)	2.720	0.592	1.33	33.02
OUTFLOW: ID= 1 (7626)	2.720	0.022	2.57	32.02

PEAK FLOW REDUCTION [Qout/Qin](%)= 3.76
TIME SHIFT OF PEAK FLOW (min)= 74.00
MAXIMUM STORAGE USED (ha.m.)= 0.0726

CALIB | STANDHYD (7624)| ID= 1 DT= 1.0 min	Area (ha)= 1.80 Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00		
		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.78	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	109.54	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	1.53	1.017	19.60	2.017	4.48	3.02	1.89
0.033	1.53	1.033	19.60	2.033	4.48	3.03	1.89
0.050	1.53	1.050	19.60	2.050	4.48	3.05	1.89
0.067	1.53	1.067	19.60	2.067	4.48	3.07	1.89
0.083	1.53	1.083	19.60	2.083	4.48	3.08	1.89
0.100	1.53	1.100	19.60	2.100	4.48	3.10	1.89
0.117	1.53	1.117	19.60	2.117	4.48	3.12	1.89
0.133	1.53	1.133	19.60	2.133	4.48	3.13	1.89
0.150	1.53	1.150	19.60	2.150	4.48	3.15	1.89
0.167	1.53	1.167	19.60	2.167	4.48	3.17	1.89
0.183	1.81	1.183	85.72	2.183	3.65	3.18	1.73
0.200	1.81	1.200	85.72	2.200	3.65	3.20	1.73
0.217	1.81	1.217	85.72	2.217	3.65	3.22	1.73
0.233	1.81	1.233	85.72	2.233	3.65	3.23	1.73
0.250	1.81	1.250	85.72	2.250	3.65	3.25	1.73
0.267	1.81	1.267	85.72	2.267	3.65	3.27	1.73
0.283	1.81	1.283	85.72	2.283	3.65	3.28	1.73
0.300	1.81	1.300	85.72	2.300	3.65	3.30	1.73
0.317	1.81	1.317	85.72	2.317	3.65	3.32	1.73
0.333	1.81	1.333	85.72	2.333	3.65	3.33	1.73
0.350	2.22	1.350	26.59	2.350	3.08	3.35	1.59
0.367	2.22	1.367	26.59	2.367	3.08	3.37	1.59
0.383	2.22	1.383	26.59	2.383	3.08	3.38	1.59
0.400	2.22	1.400	26.59	2.400	3.08	3.40	1.59
0.417	2.22	1.417	26.59	2.417	3.08	3.42	1.59
0.433	2.22	1.433	26.59	2.433	3.08	3.43	1.59
0.450	2.22	1.450	26.59	2.450	3.08	3.45	1.59
0.467	2.22	1.467	26.59	2.467	3.08	3.47	1.59
0.483	2.22	1.483	26.59	2.483	3.08	3.48	1.59
0.500	2.22	1.500	26.59	2.500	3.08	3.50	1.59
0.517	2.87	1.517	12.64	2.517	2.66	3.52	1.47
0.533	2.87	1.533	12.64	2.533	2.66	3.53	1.47
0.550	2.87	1.550	12.64	2.550	2.66	3.55	1.47
0.567	2.87	1.567	12.64	2.567	2.66	3.57	1.47
0.583	2.87	1.583	12.64	2.583	2.66	3.58	1.47
0.600	2.87	1.600	12.64	2.600	2.66	3.60	1.47
0.617	2.87	1.617	12.64	2.617	2.66	3.62	1.47
0.633	2.87	1.633	12.64	2.633	2.66	3.63	1.47
0.650	2.87	1.650	12.64	2.650	2.66	3.65	1.47
0.667	2.87	1.667	12.64	2.667	2.66	3.67	1.47
0.683	4.06	1.683	7.99	2.683	2.34	3.68	1.37
0.700	4.06	1.700	7.99	2.700	2.34	3.70	1.37
0.717	4.06	1.717	7.99	2.717	2.34	3.72	1.37
0.733	4.06	1.733	7.99	2.733	2.34	3.73	1.37
0.750	4.06	1.750	7.99	2.750	2.34	3.75	1.37
0.767	4.06	1.767	7.99	2.767	2.34	3.77	1.37
0.783	4.06	1.783	7.99	2.783	2.34	3.78	1.37
0.800	4.06	1.800	7.99	2.800	2.34	3.80	1.37
0.817	4.06	1.817	7.99	2.817	2.34	3.82	1.37
0.833	4.06	1.833	7.99	2.833	2.34	3.83	1.37
0.850	6.86	1.850	5.76	2.850	2.10	3.85	1.29
0.867	6.86	1.867	5.76	2.867	2.10	3.87	1.29
0.883	6.86	1.883	5.76	2.883	2.10	3.88	1.29
0.900	6.86	1.900	5.76	2.900	2.10	3.90	1.29
0.917	6.86	1.917	5.76	2.917	2.10	3.92	1.29
0.933	6.86	1.933	5.76	2.933	2.10	3.93	1.29
0.950	6.86	1.950	5.76	2.950	2.10	3.95	1.29
0.967	6.86	1.967	5.76	2.967	2.10	3.97	1.29
0.983	6.86	1.983	5.76	2.983	2.10	3.98	1.29
1.000	6.86	2.000	5.76	3.000	2.10	4.00	1.29

Max.Eff.Inten.(mm/hr)=	85.72	42.44	
over (min)	5.00	5.00	
Storage Coeff. (min)=	2.87 (ii)	4.68 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.31	0.24	
			TOTALS
PEAK FLOW (cms)=	0.40	0.00	0.400 (iii)
TIME TO PEAK (hrs)=	1.33	1.37	1.33
RUNOFF VOLUME (mm)=	33.22	17.57	33.06
TOTAL RAINFALL (mm)=	34.22	34.22	34.22
RUNOFF COEFFICIENT =	0.97	0.51	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 90.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7625)| IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0389	0.1013
	0.0164	0.0514	0.0456	0.1141

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                      0.0252     0.0690   |   0.0514      0.1288
                      0.0309     0.0825   |   0.0000      0.0000

                                 AREA      QPEAK     TPEAK       R.V.
                                 (ha)      (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  7624)       1.800      0.400      1.33      33.06
   OUTFLOW: ID= 1 (  7625)       1.800      0.015      2.53      32.20

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  3.81
                TIME SHIFT OF PEAK FLOW         (min)= 72.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.0479

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--------------------
| CALIB            |
| STANDHYD (  7623)|   Area    (ha)=   1.15
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.14         0.01
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=      87.56        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
 TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
  hrs   mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
0.017    1.53 | 1.017   19.60 | 2.017    4.48 |  3.02    1.89
0.033    1.53 | 1.033   19.60 | 2.033    4.48 |  3.03    1.89
0.050    1.53 | 1.050   19.60 | 2.050    4.48 |  3.05    1.89
0.067    1.53 | 1.067   19.60 | 2.067    4.48 |  3.07    1.89
0.083    1.53 | 1.083   19.60 | 2.083    4.48 |  3.08    1.89
0.100    1.53 | 1.100   19.60 | 2.100    4.48 |  3.10    1.89
0.117    1.53 | 1.117   19.60 | 2.117    4.48 |  3.12    1.89
0.133    1.53 | 1.133   19.60 | 2.133    4.48 |  3.13    1.89
0.150    1.53 | 1.150   19.60 | 2.150    4.48 |  3.15    1.89
0.167    1.53 | 1.167   19.60 | 2.167    4.48 |  3.17    1.89
0.183    1.81 | 1.183   85.72 | 2.183    3.65 |  3.18    1.73
0.200    1.81 | 1.200   85.72 | 2.200    3.65 |  3.20    1.73
0.217    1.81 | 1.217   85.72 | 2.217    3.65 |  3.22    1.73
0.233    1.81 | 1.233   85.72 | 2.233    3.65 |  3.23    1.73
0.250    1.81 | 1.250   85.72 | 2.250    3.65 |  3.25    1.73
0.267    1.81 | 1.267   85.72 | 2.267    3.65 |  3.27    1.73
0.283    1.81 | 1.283   85.72 | 2.283    3.65 |  3.28    1.73
0.300    1.81 | 1.300   85.72 | 2.300    3.65 |  3.30    1.73
0.317    1.81 | 1.317   85.72 | 2.317    3.65 |  3.32    1.73
0.333    1.81 | 1.333   85.72 | 2.333    3.65 |  3.33    1.73
0.350    2.22 | 1.350   26.59 | 2.350    3.08 |  3.35    1.59
0.367    2.22 | 1.367   26.59 | 2.367    3.08 |  3.37    1.59
0.383    2.22 | 1.383   26.59 | 2.383    3.08 |  3.38    1.59
0.400    2.22 | 1.400   26.59 | 2.400    3.08 |  3.40    1.59
0.417    2.22 | 1.417   26.59 | 2.417    3.08 |  3.42    1.59
0.433    2.22 | 1.433   26.59 | 2.433    3.08 |  3.43    1.59
0.450    2.22 | 1.450   26.59 | 2.450    3.08 |  3.45    1.59
0.467    2.22 | 1.467   26.59 | 2.467    3.08 |  3.47    1.59
0.483    2.22 | 1.483   26.59 | 2.483    3.08 |  3.48    1.59
0.500    2.22 | 1.500   26.59 | 2.500    3.08 |  3.50    1.59
0.517    2.87 | 1.517   12.64 | 2.517    2.66 |  3.52    1.47
0.533    2.87 | 1.533   12.64 | 2.533    2.66 |  3.53    1.47
0.550    2.87 | 1.550   12.64 | 2.550    2.66 |  3.55    1.47
0.567    2.87 | 1.567   12.64 | 2.567    2.66 |  3.57    1.47
0.583    2.87 | 1.583   12.64 | 2.583    2.66 |  3.58    1.47
0.600    2.87 | 1.600   12.64 | 2.600    2.66 |  3.60    1.47
0.617    2.87 | 1.617   12.64 | 2.617    2.66 |  3.62    1.47
0.633    2.87 | 1.633   12.64 | 2.633    2.66 |  3.63    1.47
0.650    2.87 | 1.650   12.64 | 2.650    2.66 |  3.65    1.47
0.667    2.87 | 1.667   12.64 | 2.667    2.66 |  3.67    1.47
0.683    4.06 | 1.683    7.99 | 2.683    2.34 |  3.68    1.37
0.700    4.06 | 1.700    7.99 | 2.700    2.34 |  3.70    1.37
0.717    4.06 | 1.717    7.99 | 2.717    2.34 |  3.72    1.37
0.733    4.06 | 1.733    7.99 | 2.733    2.34 |  3.73    1.37
0.750    4.06 | 1.750    7.99 | 2.750    2.34 |  3.75    1.37
0.767    4.06 | 1.767    7.99 | 2.767    2.34 |  3.77    1.37
0.783    4.06 | 1.783    7.99 | 2.783    2.34 |  3.78    1.37
0.800    4.06 | 1.800    7.99 | 2.800    2.34 |  3.80    1.37
0.817    4.06 | 1.817    7.99 | 2.817    2.34 |  3.82    1.37
0.833    4.06 | 1.833    7.99 | 2.833    2.34 |  3.83    1.37
0.850    6.86 | 1.850    5.76 | 2.850    2.10 |  3.85    1.29
0.867    6.86 | 1.867    5.76 | 2.867    2.10 |  3.87    1.29
0.883    6.86 | 1.883    5.76 | 2.883    2.10 |  3.88    1.29
0.900    6.86 | 1.900    5.76 | 2.900    2.10 |  3.90    1.29
0.917    6.86 | 1.917    5.76 | 2.917    2.10 |  3.92    1.29
0.933    6.86 | 1.933    5.76 | 2.933    2.10 |  3.93    1.29
0.950    6.86 | 1.950    5.76 | 2.950    2.10 |  3.95    1.29
0.967    6.86 | 1.967    5.76 | 2.967    2.10 |  3.97    1.29
0.983    6.86 | 1.983    5.76 | 2.983    2.10 |  3.98    1.29
1.000    6.86 | 2.000    5.76 | 3.000    2.10 |  4.00    1.29

     Max.Eff.Inten.(mm/hr)=      85.72        31.78
                   over (min)       5.00         5.00
     Storage Coeff.  (min)=      2.51 (ii)    4.32 (ii)
     Unit Hyd. Tpeak (min)=      5.00         5.00
     Unit Hyd. peak  (cms)=      0.34         0.25
                                                    *TOTALS*
     PEAK FLOW       (cms)=      0.26         0.00          0.260 (iii)
     TIME TO PEAK    (hrs)=      1.33         1.37           1.33
     RUNOFF VOLUME    (mm)=     33.22        13.81          33.02
     TOTAL RAINFALL   (mm)=     34.22        34.22          34.22
     RUNOFF COEFFICIENT   =      0.97         0.40           0.97

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  7622)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0258      0.0650
                          0.0108     0.0330   |   0.0302      0.0725
                          0.0167     0.0440   |   0.0340      0.0820
                          0.0204     0.0525   |   0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  7623)      1.150      0.260      1.33      33.02
   OUTFLOW: ID= 1 (  7622)      1.150      0.010      2.48      32.24

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  3.83
                TIME SHIFT OF PEAK FLOW         (min)= 69.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.0304

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--------------------
| CALIB            |
| STANDHYD (  7629)|   Area    (ha)=   4.09
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.05         0.04
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=     165.13        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
 TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
  hrs   mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
0.017    1.53 | 1.017   19.60 | 2.017    4.48 |  3.02    1.89
0.033    1.53 | 1.033   19.60 | 2.033    4.48 |  3.03    1.89
```

0.050	1.53	1.050	19.60	2.050	4.48	3.05	1.89
0.067	1.53	1.067	19.60	2.067	4.48	3.07	1.89
0.083	1.53	1.083	19.60	2.083	4.48	3.08	1.89
0.100	1.53	1.100	19.60	2.100	4.48	3.10	1.89
0.117	1.53	1.117	19.60	2.117	4.48	3.12	1.89
0.133	1.53	1.133	19.60	2.133	4.48	3.13	1.89
0.150	1.53	1.150	19.60	2.150	4.48	3.15	1.89
0.167	1.53	1.167	19.60	2.167	4.48	3.17	1.89
0.183	1.81	1.183	85.72	2.183	3.65	3.18	1.73
0.200	1.81	1.200	85.72	2.200	3.65	3.20	1.73
0.217	1.81	1.217	85.72	2.217	3.65	3.22	1.73
0.233	1.81	1.233	85.72	2.233	3.65	3.23	1.73
0.250	1.81	1.250	85.72	2.250	3.65	3.25	1.73
0.267	1.81	1.267	85.72	2.267	3.65	3.27	1.73
0.283	1.81	1.283	85.72	2.283	3.65	3.28	1.73
0.300	1.81	1.300	85.72	2.300	3.65	3.30	1.73
0.317	1.81	1.317	85.72	2.317	3.65	3.32	1.73
0.333	1.81	1.333	85.72	2.333	3.65	3.33	1.73
0.350	2.22	1.350	26.59	2.350	3.08	3.35	1.59
0.367	2.22	1.367	26.59	2.367	3.08	3.37	1.59
0.383	2.22	1.383	26.59	2.383	3.08	3.38	1.59
0.400	2.22	1.400	26.59	2.400	3.08	3.40	1.59
0.417	2.22	1.417	26.59	2.417	3.08	3.42	1.59
0.433	2.22	1.433	26.59	2.433	3.08	3.43	1.59
0.450	2.22	1.450	26.59	2.450	3.08	3.45	1.59
0.467	2.22	1.467	26.59	2.467	3.08	3.47	1.59
0.483	2.22	1.483	26.59	2.483	3.08	3.48	1.59
0.500	2.22	1.500	26.59	2.500	3.08	3.50	1.59
0.517	2.87	1.517	12.64	2.517	2.66	3.52	1.47
0.533	2.87	1.533	12.64	2.533	2.66	3.53	1.47
0.550	2.87	1.550	12.64	2.550	2.66	3.55	1.47
0.567	2.87	1.567	12.64	2.567	2.66	3.57	1.47
0.583	2.87	1.583	12.64	2.583	2.66	3.58	1.47
0.600	2.87	1.600	12.64	2.600	2.66	3.60	1.47
0.617	2.87	1.617	12.64	2.617	2.66	3.62	1.47
0.633	2.87	1.633	12.64	2.633	2.66	3.63	1.47
0.650	2.87	1.650	12.64	2.650	2.66	3.65	1.47
0.667	2.87	1.667	12.64	2.667	2.66	3.67	1.47
0.683	4.06	1.683	7.99	2.683	2.34	3.68	1.37
0.700	4.06	1.700	7.99	2.700	2.34	3.70	1.37
0.717	4.06	1.717	7.99	2.717	2.34	3.72	1.37
0.733	4.06	1.733	7.99	2.733	2.34	3.73	1.37
0.750	4.06	1.750	7.99	2.750	2.34	3.75	1.37
0.767	4.06	1.767	7.99	2.767	2.34	3.77	1.37
0.783	4.06	1.783	7.99	2.783	2.34	3.78	1.37
0.800	4.06	1.800	7.99	2.800	2.34	3.80	1.37
0.817	4.06	1.817	7.99	2.817	2.34	3.82	1.37
0.833	4.06	1.833	7.99	2.833	2.34	3.83	1.37
0.850	6.86	1.850	5.76	2.850	2.10	3.85	1.29
0.867	6.86	1.867	5.76	2.867	2.10	3.87	1.29
0.883	6.86	1.883	5.76	2.883	2.10	3.88	1.29
0.900	6.86	1.900	5.76	2.900	2.10	3.90	1.29
0.917	6.86	1.917	5.76	2.917	2.10	3.92	1.29
0.933	6.86	1.933	5.76	2.933	2.10	3.93	1.29
0.950	6.86	1.950	5.76	2.950	2.10	3.95	1.29
0.967	6.86	1.967	5.76	2.967	2.10	3.97	1.29
0.983	6.86	1.983	5.76	2.983	2.10	3.98	1.29
1.000	6.86	2.000	5.76	3.000	2.10	4.00	1.29

Max.Eff.Inten.(mm/hr)=	85.72	31.78	
over (min)	5.00	6.00	
Storage Coeff. (min)=	3.67 (ii)	5.48 (ii)	
Unit Hyd. Tpeak (min)=	5.00	6.00	
Unit Hyd. peak (cms)=	0.27	0.20	
			TOTALS
PEAK FLOW (cms)=	0.87	0.00	0.870 (iii)
TIME TO PEAK (hrs)=	1.35	1.38	1.35
RUNOFF VOLUME (mm)=	33.22	13.81	33.02
TOTAL RAINFALL (mm)=	34.22	34.22	34.22
RUNOFF COEFFICIENT =	0.97	0.40	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7630)	OVERFLOW IS OFF
IN= 2---> OUT= 1	
DT= 1.0 min	

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0826	0.2320
0.0347	0.1170	0.0967	0.2609
0.0534	0.1580	0.1090	0.2940
0.0655	0.1890	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7629)	4.090	0.870	1.35	33.02
OUTFLOW: ID= 1 (7630)	4.090	0.033	2.58	31.90

PEAK FLOW REDUCTION [Qout/Qin](%)= 3.74
TIME SHIFT OF PEAK FLOW (min)= 74.00
MAXIMUM STORAGE USED (ha.m.)= 0.1096

CALIB	
STANDHYD (7631)	Area (ha)= 3.91
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.87	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	161.45	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	1.53	1.017	19.60	2.017	4.48	3.02	1.89
0.033	1.53	1.033	19.60	2.033	4.48	3.03	1.89
0.050	1.53	1.050	19.60	2.050	4.48	3.05	1.89
0.067	1.53	1.067	19.60	2.067	4.48	3.07	1.89
0.083	1.53	1.083	19.60	2.083	4.48	3.08	1.89
0.100	1.53	1.100	19.60	2.100	4.48	3.10	1.89
0.117	1.53	1.117	19.60	2.117	4.48	3.12	1.89
0.133	1.53	1.133	19.60	2.133	4.48	3.13	1.89
0.150	1.53	1.150	19.60	2.150	4.48	3.15	1.89
0.167	1.53	1.167	19.60	2.167	4.48	3.17	1.89
0.183	1.81	1.183	85.72	2.183	3.65	3.18	1.73
0.200	1.81	1.200	85.72	2.200	3.65	3.20	1.73
0.217	1.81	1.217	85.72	2.217	3.65	3.22	1.73
0.233	1.81	1.233	85.72	2.233	3.65	3.23	1.73
0.250	1.81	1.250	85.72	2.250	3.65	3.25	1.73
0.267	1.81	1.267	85.72	2.267	3.65	3.27	1.73
0.283	1.81	1.283	85.72	2.283	3.65	3.28	1.73
0.300	1.81	1.300	85.72	2.300	3.65	3.30	1.73
0.317	1.81	1.317	85.72	2.317	3.65	3.32	1.73
0.333	1.81	1.333	85.72	2.333	3.65	3.33	1.73
0.350	2.22	1.350	26.59	2.350	3.08	3.35	1.59
0.367	2.22	1.367	26.59	2.367	3.08	3.37	1.59
0.383	2.22	1.383	26.59	2.383	3.08	3.38	1.59
0.400	2.22	1.400	26.59	2.400	3.08	3.40	1.59
0.417	2.22	1.417	26.59	2.417	3.08	3.42	1.59
0.433	2.22	1.433	26.59	2.433	3.08	3.43	1.59
0.450	2.22	1.450	26.59	2.450	3.08	3.45	1.59
0.467	2.22	1.467	26.59	2.467	3.08	3.47	1.59
0.483	2.22	1.483	26.59	2.483	3.08	3.48	1.59
0.500	2.22	1.500	26.59	2.500	3.08	3.50	1.59
0.517	2.87	1.517	12.64	2.517	2.66	3.52	1.47
0.533	2.87	1.533	12.64	2.533	2.66	3.53	1.47
0.550	2.87	1.550	12.64	2.550	2.66	3.55	1.47
0.567	2.87	1.567	12.64	2.567	2.66	3.57	1.47
0.583	2.87	1.583	12.64	2.583	2.66	3.58	1.47

0.600	2.87	1.600	12.64	2.600	2.66	3.60	1.47
0.617	2.87	1.617	12.64	2.617	2.66	3.62	1.47
0.633	2.87	1.633	12.64	2.633	2.66	3.63	1.47
0.650	2.87	1.650	12.64	2.650	2.66	3.65	1.47
0.667	2.87	1.667	12.64	2.667	2.66	3.67	1.47
0.683	4.06	1.683	7.99	2.683	2.34	3.68	1.37
0.700	4.06	1.700	7.99	2.700	2.34	3.70	1.37
0.717	4.06	1.717	7.99	2.717	2.34	3.72	1.37
0.733	4.06	1.733	7.99	2.733	2.34	3.73	1.37
0.750	4.06	1.750	7.99	2.750	2.34	3.75	1.37
0.767	4.06	1.767	7.99	2.767	2.34	3.77	1.37
0.783	4.06	1.783	7.99	2.783	2.34	3.78	1.37
0.800	4.06	1.800	7.99	2.800	2.34	3.80	1.37
0.817	4.06	1.817	7.99	2.817	2.34	3.82	1.37
0.833	4.06	1.833	7.99	2.833	2.34	3.83	1.37
0.850	6.86	1.850	5.76	2.850	2.10	3.85	1.29
0.867	6.86	1.867	5.76	2.867	2.10	3.87	1.29
0.883	6.86	1.883	5.76	2.883	2.10	3.88	1.29
0.900	6.86	1.900	5.76	2.900	2.10	3.90	1.29
0.917	6.86	1.917	5.76	2.917	2.10	3.92	1.29
0.933	6.86	1.933	5.76	2.933	2.10	3.93	1.29
0.950	6.86	1.950	5.76	2.950	2.10	3.95	1.29
0.967	6.86	1.967	5.76	2.967	2.10	3.97	1.29
0.983	6.86	1.983	5.76	2.983	2.10	3.98	1.29
1.000	6.86	2.000	5.76	3.000	2.10	4.00	1.29

Max.Eff.Inten.(mm/hr)=	85.72	31.78	
over (min)	5.00	6.00	
Storage Coeff. (min)=	3.62 (ii)	5.43 (ii)	
Unit Hyd. Tpeak (min)=	5.00	6.00	
Unit Hyd. peak (cms)=	0.28	0.20	
			TOTALS
PEAK FLOW (cms)=	0.83	0.00	0.833 (iii)
TIME TO PEAK (hrs)=	1.35	1.38	1.35
RUNOFF VOLUME (mm)=	33.22	13.81	33.02
TOTAL RAINFALL (mm)=	34.22	34.22	34.22
RUNOFF COEFFICIENT =	0.97	0.40	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7632) IN= 2---> OUT= 1 DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0792	0.2220
	0.0333	0.1130	0.0928	0.2500
	0.0512	0.1510	0.1046	0.2810
	0.0629	0.1810	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7631)	3.910	0.833	1.35	33.02
OUTFLOW: ID= 1 (7632)	3.910	0.031	2.60	31.88

PEAK FLOW REDUCTION [Qout/Qin](%)= 3.71
TIME SHIFT OF PEAK FLOW (min)= 75.00
MAXIMUM STORAGE USED (ha.m.)= 0.1049

CALIB STANDHYD (7641) ID= 1 DT= 1.0 min	Area (ha)= 2.21	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.19	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	121.38	40.00

Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	1.53	1.017	19.60	2.017	4.48	3.02	1.89
0.033	1.53	1.033	19.60	2.033	4.48	3.03	1.89
0.050	1.53	1.050	19.60	2.050	4.48	3.05	1.89
0.067	1.53	1.067	19.60	2.067	4.48	3.07	1.89
0.083	1.53	1.083	19.60	2.083	4.48	3.08	1.89
0.100	1.53	1.100	19.60	2.100	4.48	3.10	1.89
0.117	1.53	1.117	19.60	2.117	4.48	3.12	1.89
0.133	1.53	1.133	19.60	2.133	4.48	3.13	1.89
0.150	1.53	1.150	19.60	2.150	4.48	3.15	1.89
0.167	1.53	1.167	19.60	2.167	4.48	3.17	1.89
0.183	1.81	1.183	85.72	2.183	3.65	3.18	1.73
0.200	1.81	1.200	85.72	2.200	3.65	3.20	1.73
0.217	1.81	1.217	85.72	2.217	3.65	3.22	1.73
0.233	1.81	1.233	85.72	2.233	3.65	3.23	1.73
0.250	1.81	1.250	85.72	2.250	3.65	3.25	1.73
0.267	1.81	1.267	85.72	2.267	3.65	3.27	1.73
0.283	1.81	1.283	85.72	2.283	3.65	3.28	1.73
0.300	1.81	1.300	85.72	2.300	3.65	3.30	1.73
0.317	1.81	1.317	85.72	2.317	3.65	3.32	1.73
0.333	1.81	1.333	85.72	2.333	3.65	3.33	1.73
0.350	2.22	1.350	26.59	2.350	3.08	3.35	1.59
0.367	2.22	1.367	26.59	2.367	3.08	3.37	1.59
0.383	2.22	1.383	26.59	2.383	3.08	3.38	1.59
0.400	2.22	1.400	26.59	2.400	3.08	3.40	1.59
0.417	2.22	1.417	26.59	2.417	3.08	3.42	1.59
0.433	2.22	1.433	26.59	2.433	3.08	3.43	1.59
0.450	2.22	1.450	26.59	2.450	3.08	3.45	1.59
0.467	2.22	1.467	26.59	2.467	3.08	3.47	1.59
0.483	2.22	1.483	26.59	2.483	3.08	3.48	1.59
0.500	2.22	1.500	26.59	2.500	3.08	3.50	1.59
0.517	2.87	1.517	12.64	2.517	2.66	3.52	1.47
0.533	2.87	1.533	12.64	2.533	2.66	3.53	1.47
0.550	2.87	1.550	12.64	2.550	2.66	3.55	1.47
0.567	2.87	1.567	12.64	2.567	2.66	3.57	1.47
0.583	2.87	1.583	12.64	2.583	2.66	3.58	1.47
0.600	2.87	1.600	12.64	2.600	2.66	3.60	1.47
0.617	2.87	1.617	12.64	2.617	2.66	3.62	1.47
0.633	2.87	1.633	12.64	2.633	2.66	3.63	1.47
0.650	2.87	1.650	12.64	2.650	2.66	3.65	1.47
0.667	2.87	1.667	12.64	2.667	2.66	3.67	1.47
0.683	4.06	1.683	7.99	2.683	2.34	3.68	1.37
0.700	4.06	1.700	7.99	2.700	2.34	3.70	1.37
0.717	4.06	1.717	7.99	2.717	2.34	3.72	1.37
0.733	4.06	1.733	7.99	2.733	2.34	3.73	1.37
0.750	4.06	1.750	7.99	2.750	2.34	3.75	1.37
0.767	4.06	1.767	7.99	2.767	2.34	3.77	1.37
0.783	4.06	1.783	7.99	2.783	2.34	3.78	1.37
0.800	4.06	1.800	7.99	2.800	2.34	3.80	1.37
0.817	4.06	1.817	7.99	2.817	2.34	3.82	1.37
0.833	4.06	1.833	7.99	2.833	2.34	3.83	1.37
0.850	6.86	1.850	5.76	2.850	2.10	3.85	1.29
0.867	6.86	1.867	5.76	2.867	2.10	3.87	1.29
0.883	6.86	1.883	5.76	2.883	2.10	3.88	1.29
0.900	6.86	1.900	5.76	2.900	2.10	3.90	1.29
0.917	6.86	1.917	5.76	2.917	2.10	3.92	1.29
0.933	6.86	1.933	5.76	2.933	2.10	3.93	1.29
0.950	6.86	1.950	5.76	2.950	2.10	3.95	1.29
0.967	6.86	1.967	5.76	2.967	2.10	3.97	1.29
0.983	6.86	1.983	5.76	2.983	2.10	3.98	1.29
1.000	6.86	2.000	5.76	3.000	2.10	4.00	1.29

Max.Eff.Inten.(mm/hr)=	85.72	31.78	
over (min)	5.00	5.00	
Storage Coeff. (min)=	3.05 (ii)	4.86 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.30	0.23	
			TOTALS
PEAK FLOW (cms)=	0.48	0.00	0.486 (iii)

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    TIME TO PEAK    (hrs)=       1.33         1.37          1.33
    RUNOFF VOLUME    (mm)=      33.22        13.81         33.02
    TOTAL RAINFALL   (mm)=      34.22        34.22         34.22
    RUNOFF COEFFICIENT   =       0.97         0.40          0.97


      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN*  =  85.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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-------------------
| RESERVOIR(  7642)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0470     0.1250
                         0.0197     0.0630   |   0.0551     0.1410
                         0.0304     0.0850   |   0.0620     0.1580
                         0.0373     0.1020   |   0.0000     0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  7641)     2.210     0.486      1.33      33.02
   OUTFLOW: ID= 1 (  7642)     2.210     0.018      2.55      32.09

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  3.78
                TIME SHIFT OF PEAK FLOW          (min)= 73.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.0588

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-------------------
| CALIB            |
| STANDHYD (  7643)|   Area    (ha)=   2.02
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
-------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.00         0.02
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=     116.05        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |   hrs   mm/hr |   hrs   mm/hr
 0.017    1.53 | 1.017   19.60 | 2.017    4.48 |  3.02    1.89
 0.033    1.53 | 1.033   19.60 | 2.033    4.48 |  3.03    1.89
 0.050    1.53 | 1.050   19.60 | 2.050    4.48 |  3.05    1.89
 0.067    1.53 | 1.067   19.60 | 2.067    4.48 |  3.07    1.89
 0.083    1.53 | 1.083   19.60 | 2.083    4.48 |  3.08    1.89
 0.100    1.53 | 1.100   19.60 | 2.100    4.48 |  3.10    1.89
 0.117    1.53 | 1.117   19.60 | 2.117    4.48 |  3.12    1.89
 0.133    1.53 | 1.133   19.60 | 2.133    4.48 |  3.13    1.89
 0.150    1.53 | 1.150   19.60 | 2.150    4.48 |  3.15    1.89
 0.167    1.53 | 1.167   19.60 | 2.167    4.48 |  3.17    1.89
 0.183    1.81 | 1.183   85.72 | 2.183    3.65 |  3.18    1.73
 0.200    1.81 | 1.200   85.72 | 2.200    3.65 |  3.20    1.73
 0.217    1.81 | 1.217   85.72 | 2.217    3.65 |  3.22    1.73
 0.233    1.81 | 1.233   85.72 | 2.233    3.65 |  3.23    1.73
 0.250    1.81 | 1.250   85.72 | 2.250    3.65 |  3.25    1.73
 0.267    1.81 | 1.267   85.72 | 2.267    3.65 |  3.27    1.73
 0.283    1.81 | 1.283   85.72 | 2.283    3.65 |  3.28    1.73
 0.300    1.81 | 1.300   85.72 | 2.300    3.65 |  3.30    1.73
 0.317    1.81 | 1.317   85.72 | 2.317    3.65 |  3.32    1.73
 0.333    1.81 | 1.333   85.72 | 2.333    3.65 |  3.33    1.73
 0.350    2.22 | 1.350   26.59 | 2.350    3.08 |  3.35    1.59
 0.367    2.22 | 1.367   26.59 | 2.367    3.08 |  3.37    1.59
 0.383    2.22 | 1.383   26.59 | 2.383    3.08 |  3.38    1.59
 0.400    2.22 | 1.400   26.59 | 2.400    3.08 |  3.40    1.59
 0.417    2.22 | 1.417   26.59 | 2.417    3.08 |  3.42    1.59
 0.433    2.22 | 1.433   26.59 | 2.433    3.08 |  3.43    1.59
 0.450    2.22 | 1.450   26.59 | 2.450    3.08 |  3.45    1.59
 0.467    2.22 | 1.467   26.59 | 2.467    3.08 |  3.47    1.59
 0.483    2.22 | 1.483   26.59 | 2.483    3.08 |  3.48    1.59
 0.500    2.22 | 1.500   26.59 | 2.500    3.08 |  3.50    1.59
 0.517    2.87 | 1.517   12.64 | 2.517    2.66 |  3.52    1.47
 0.533    2.87 | 1.533   12.64 | 2.533    2.66 |  3.53    1.47
 0.550    2.87 | 1.550   12.64 | 2.550    2.66 |  3.55    1.47
 0.567    2.87 | 1.567   12.64 | 2.567    2.66 |  3.57    1.47
 0.583    2.87 | 1.583   12.64 | 2.583    2.66 |  3.58    1.47
 0.600    2.87 | 1.600   12.64 | 2.600    2.66 |  3.60    1.47
 0.617    2.87 | 1.617   12.64 | 2.617    2.66 |  3.62    1.47
 0.633    2.87 | 1.633   12.64 | 2.633    2.66 |  3.63    1.47
 0.650    2.87 | 1.650   12.64 | 2.650    2.66 |  3.65    1.47
 0.667    2.87 | 1.667   12.64 | 2.667    2.66 |  3.67    1.47
 0.683    4.06 | 1.683    7.99 | 2.683    2.34 |  3.68    1.37
 0.700    4.06 | 1.700    7.99 | 2.700    2.34 |  3.70    1.37
 0.717    4.06 | 1.717    7.99 | 2.717    2.34 |  3.72    1.37
 0.733    4.06 | 1.733    7.99 | 2.733    2.34 |  3.73    1.37
 0.750    4.06 | 1.750    7.99 | 2.750    2.34 |  3.75    1.37
 0.767    4.06 | 1.767    7.99 | 2.767    2.34 |  3.77    1.37
 0.783    4.06 | 1.783    7.99 | 2.783    2.34 |  3.78    1.37
 0.800    4.06 | 1.800    7.99 | 2.800    2.34 |  3.80    1.37
 0.817    4.06 | 1.817    7.99 | 2.817    2.34 |  3.82    1.37
 0.833    4.06 | 1.833    7.99 | 2.833    2.34 |  3.83    1.37
 0.850    6.86 | 1.850    5.76 | 2.850    2.10 |  3.85    1.29
 0.867    6.86 | 1.867    5.76 | 2.867    2.10 |  3.87    1.29
 0.883    6.86 | 1.883    5.76 | 2.883    2.10 |  3.88    1.29
 0.900    6.86 | 1.900    5.76 | 2.900    2.10 |  3.90    1.29
 0.917    6.86 | 1.917    5.76 | 2.917    2.10 |  3.92    1.29
 0.933    6.86 | 1.933    5.76 | 2.933    2.10 |  3.93    1.29
 0.950    6.86 | 1.950    5.76 | 2.950    2.10 |  3.95    1.29
 0.967    6.86 | 1.967    5.76 | 2.967    2.10 |  3.97    1.29
 0.983    6.86 | 1.983    5.76 | 2.983    2.10 |  3.98    1.29
 1.000    6.86 | 2.000    5.76 | 3.000    2.10 |  4.00    1.29

    Max.Eff.Inten.(mm/hr)=      85.72        31.78
              over (min)        5.00         5.00
    Storage Coeff.  (min)=      2.97 (ii)    4.78 (ii)
    Unit Hyd. Tpeak (min)=      5.00         5.00
    Unit Hyd. peak  (cms)=      0.31         0.23
                                                      *TOTALS*
    PEAK FLOW       (cms)=      0.44         0.00       0.446 (iii)
    TIME TO PEAK    (hrs)=      1.33         1.37        1.33
    RUNOFF VOLUME    (mm)=     33.22        13.81       33.02
    TOTAL RAINFALL   (mm)=     34.22        34.22       34.22
    RUNOFF COEFFICIENT   =      0.97         0.40        0.97


      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN*  =  85.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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-------------------
| RESERVOIR(  7644)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0433     0.1140
                         0.0182     0.0580   |   0.0507     0.1280
                         0.0280     0.0775   |   0.0571     0.1440
                         0.0343     0.0930   |   0.0000     0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  7643)     2.020     0.446      1.33      33.02
   OUTFLOW: ID= 1 (  7644)     2.020     0.017      2.55      32.10

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  3.78
                TIME SHIFT OF PEAK FLOW          (min)= 73.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.0538

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       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-
a4eb17eaad57\8669cb79-8029-4291-889c-3ae0ee8bfea2\s
  Summary filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-
a4eb17eaad57\8669cb79-8029-4291-889c-3ae0ee8bfea2\s


DATE: 06/14/2024                          TIME: 12:48:35

USER:


COMMENTS: _____________________________________________________


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  ***********************************************
  ** SIMULATION : 5. 5 Year 6 Hour AES (Bloor,  **
  ***********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\ygollamudi\AppD
|                  |              ata\Local\Temp\
|                  |              3c3f87d5-a26e-4c6b-b2ae-56a7ba29ab7f\37e32edb
| Ptotal= 47.81 mm |    Comments: 5 Year 6 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.00    0.00 |  1.75   16.25 |  3.50    6.69 |  5.25    0.96
                0.25    0.96 |  2.00   16.25 |  3.75    3.82 |  5.50    0.96
                0.50    0.96 |  2.25   43.98 |  4.00    3.82 |  5.75    0.96
                0.75    0.96 |  2.50   43.98 |  4.25    1.91 |  6.00    0.96
                1.00    0.96 |  2.75   12.43 |  4.50    1.91 |
                1.25    5.74 |  3.00   12.43 |  4.75    0.96 |
                1.50    5.74 |  3.25    6.69 |  5.00    0.96 |

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| CALIB            |
| STANDHYD (  7567)|   Area    (ha)=   2.72
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.69         0.03
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=     134.66        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.
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---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	5.74	3.150	12.43	4.72	1.91
0.033	0.00	1.600	5.74	3.167	12.43	4.73	1.91
0.050	0.00	1.617	5.74	3.183	12.43	4.75	1.91
0.067	0.00	1.633	5.74	3.200	12.43	4.77	0.96
0.083	0.00	1.650	5.74	3.217	12.43	4.78	0.96
0.100	0.00	1.667	5.74	3.233	12.43	4.80	0.96
0.117	0.00	1.683	5.74	3.250	12.43	4.82	0.96
0.133	0.00	1.700	5.74	3.267	6.69	4.83	0.96
0.150	0.00	1.717	5.74	3.283	6.69	4.85	0.96
0.167	0.00	1.733	5.74	3.300	6.69	4.87	0.96
0.183	0.00	1.750	5.74	3.317	6.69	4.88	0.96
0.200	0.00	1.767	16.25	3.333	6.69	4.90	0.96
0.217	0.00	1.783	16.25	3.350	6.69	4.92	0.96
0.233	0.00	1.800	16.25	3.367	6.69	4.93	0.96
0.250	0.00	1.817	16.25	3.383	6.69	4.95	0.96
0.267	0.96	1.833	16.25	3.400	6.69	4.97	0.96
0.283	0.96	1.850	16.25	3.417	6.69	4.98	0.96
0.300	0.96	1.867	16.25	3.433	6.69	5.00	0.96
0.317	0.96	1.883	16.25	3.450	6.69	5.02	0.96
0.333	0.96	1.900	16.25	3.467	6.69	5.03	0.96
0.350	0.96	1.917	16.25	3.483	6.69	5.05	0.96
0.367	0.96	1.933	16.25	3.500	6.69	5.07	0.96
0.383	0.96	1.950	16.25	3.517	6.69	5.08	0.96
0.400	0.96	1.967	16.25	3.533	6.69	5.10	0.96
0.417	0.96	1.983	16.25	3.550	6.69	5.12	0.96
0.433	0.96	2.000	16.25	3.567	6.69	5.13	0.96
0.450	0.96	2.017	16.25	3.583	6.69	5.15	0.96
0.467	0.96	2.033	16.25	3.600	6.69	5.17	0.96
0.483	0.96	2.050	16.25	3.617	6.69	5.18	0.96
0.500	0.96	2.067	16.25	3.633	6.69	5.20	0.96
0.517	0.96	2.083	16.25	3.650	6.69	5.22	0.96
0.533	0.96	2.100	16.25	3.667	6.69	5.23	0.96
0.550	0.96	2.117	16.25	3.683	6.69	5.25	0.96
0.567	0.96	2.133	16.25	3.700	6.69	5.27	0.96
0.583	0.96	2.150	16.25	3.717	6.69	5.28	0.96
0.600	0.96	2.167	16.25	3.733	6.69	5.30	0.96
0.617	0.96	2.183	16.25	3.750	6.69	5.32	0.96
0.633	0.96	2.200	16.25	3.767	3.82	5.33	0.96
0.650	0.96	2.217	16.25	3.783	3.82	5.35	0.96
0.667	0.96	2.233	16.25	3.800	3.82	5.37	0.96
0.683	0.96	2.250	16.25	3.817	3.82	5.38	0.96
0.700	0.96	2.267	43.98	3.833	3.82	5.40	0.96
0.717	0.96	2.283	43.98	3.850	3.82	5.42	0.96
0.733	0.96	2.300	43.98	3.867	3.82	5.43	0.96
0.750	0.96	2.317	43.98	3.883	3.82	5.45	0.96
0.767	0.96	2.333	43.98	3.900	3.82	5.47	0.96
0.783	0.96	2.350	43.98	3.917	3.82	5.48	0.96
0.800	0.96	2.367	43.98	3.933	3.82	5.50	0.96
0.817	0.96	2.383	43.98	3.950	3.82	5.52	0.96
0.833	0.96	2.400	43.98	3.967	3.82	5.53	0.96
0.850	0.96	2.417	43.98	3.983	3.82	5.55	0.96
0.867	0.96	2.433	43.98	4.000	3.82	5.57	0.96
0.883	0.96	2.450	43.98	4.017	3.82	5.58	0.96
0.900	0.96	2.467	43.98	4.033	3.82	5.60	0.96
0.917	0.96	2.483	43.98	4.050	3.82	5.62	0.96
0.933	0.96	2.500	43.98	4.067	3.82	5.63	0.96
0.950	0.96	2.517	43.98	4.083	3.82	5.65	0.96
0.967	0.96	2.533	43.98	4.100	3.82	5.67	0.96
0.983	0.96	2.550	43.98	4.117	3.82	5.68	0.96
1.000	0.96	2.567	43.98	4.133	3.82	5.70	0.96
1.017	0.96	2.583	43.98	4.150	3.82	5.72	0.96
1.033	0.96	2.600	43.98	4.167	3.82	5.73	0.96
1.050	0.96	2.617	43.98	4.183	3.82	5.75	0.96
1.067	0.96	2.633	43.98	4.200	3.82	5.77	0.96
1.083	0.96	2.650	43.98	4.217	3.82	5.78	0.96
1.100	0.96	2.667	43.98	4.233	3.82	5.80	0.96
1.117	0.96	2.683	43.98	4.250	3.82	5.82	0.96
1.133	0.96	2.700	43.98	4.267	1.91	5.83	0.96
1.150	0.96	2.717	43.98	4.283	1.91	5.85	0.96
1.167	0.96	2.733	43.98	4.300	1.91	5.87	0.96
1.183	0.96	2.750	43.98	4.317	1.91	5.88	0.96
1.200	0.96	2.767	12.43	4.333	1.91	5.90	0.96

1.217	0.96	2.783	12.43	4.350	1.91	5.92	0.96
1.233	0.96	2.800	12.43	4.367	1.91	5.93	0.96
1.250	0.96	2.817	12.43	4.383	1.91	5.95	0.96
1.267	5.74	2.833	12.43	4.400	1.91	5.97	0.96
1.283	5.74	2.850	12.43	4.417	1.91	5.98	0.96
1.300	5.74	2.867	12.43	4.433	1.91	6.00	0.96
1.317	5.74	2.883	12.43	4.450	1.91	6.02	0.96
1.333	5.74	2.900	12.43	4.467	1.91	6.03	0.96
1.350	5.74	2.917	12.43	4.483	1.91	6.05	0.96
1.367	5.74	2.933	12.43	4.500	1.91	6.07	0.96
1.383	5.74	2.950	12.43	4.517	1.91	6.08	0.96
1.400	5.74	2.967	12.43	4.533	1.91	6.10	0.96
1.417	5.74	2.983	12.43	4.550	1.91	6.12	0.96
1.433	5.74	3.000	12.43	4.567	1.91	6.13	0.96
1.450	5.74	3.017	12.43	4.583	1.91	6.15	0.96
1.467	5.74	3.033	12.43	4.600	1.91	6.17	0.96
1.483	5.74	3.050	12.43	4.617	1.91	6.18	0.96
1.500	5.74	3.067	12.43	4.633	1.91	6.20	0.96
1.517	5.74	3.083	12.43	4.650	1.91	6.22	0.96
1.533	5.74	3.100	12.43	4.667	1.91	6.23	0.96
1.550	5.74	3.117	12.43	4.683	1.91	6.25	0.96
1.567	5.74	3.133	12.43	4.700	1.91		

Max.Eff.Inten.(mm/hr)=	43.98	27.63	
over (min)	5.00	7.00	
Storage Coeff. (min)=	4.24 (ii)	6.61 (ii)	
Unit Hyd. Tpeak (min)=	5.00	7.00	
Unit Hyd. peak (cms)=	0.25	0.17	
			TOTALS
PEAK FLOW (cms)=	0.33	0.00	0.331 (iii)
TIME TO PEAK (hrs)=	2.75	2.77	2.75
RUNOFF VOLUME (mm)=	46.81	23.53	46.58
TOTAL RAINFALL (mm)=	47.81	47.81	47.81
RUNOFF COEFFICIENT =	0.98	0.49	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7626)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0568	0.1530
	0.0239	0.0780	0.0660	0.1730
	0.0370	0.1040	0.0751	0.2000
	0.0451	0.1250	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7567)	2.720	0.331	2.75	46.58
OUTFLOW: ID= 1 (7626)	2.720	0.034	3.88	45.02

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.42
TIME SHIFT OF PEAK FLOW (min)= 68.00
MAXIMUM STORAGE USED (ha.m.)= 0.0990

CALIB				
STANDHYD (7624)	Area (ha)= 1.80			
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00		

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.78	0.02
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.00	0.50
Length (m)=	109.54	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	5.74	3.150	12.43	4.72	1.91
0.033	0.00	1.600	5.74	3.167	12.43	4.73	1.91
0.050	0.00	1.617	5.74	3.183	12.43	4.75	1.91
0.067	0.00	1.633	5.74	3.200	12.43	4.77	0.96
0.083	0.00	1.650	5.74	3.217	12.43	4.78	0.96
0.100	0.00	1.667	5.74	3.233	12.43	4.80	0.96
0.117	0.00	1.683	5.74	3.250	12.43	4.82	0.96
0.133	0.00	1.700	5.74	3.267	6.69	4.83	0.96
0.150	0.00	1.717	5.74	3.283	6.69	4.85	0.96
0.167	0.00	1.733	5.74	3.300	6.69	4.87	0.96
0.183	0.00	1.750	5.74	3.317	6.69	4.88	0.96
0.200	0.00	1.767	16.25	3.333	6.69	4.90	0.96
0.217	0.00	1.783	16.25	3.350	6.69	4.92	0.96
0.233	0.00	1.800	16.25	3.367	6.69	4.93	0.96
0.250	0.00	1.817	16.25	3.383	6.69	4.95	0.96
0.267	0.96	1.833	16.25	3.400	6.69	4.97	0.96
0.283	0.96	1.850	16.25	3.417	6.69	4.98	0.96
0.300	0.96	1.867	16.25	3.433	6.69	5.00	0.96
0.317	0.96	1.883	16.25	3.450	6.69	5.02	0.96
0.333	0.96	1.900	16.25	3.467	6.69	5.03	0.96
0.350	0.96	1.917	16.25	3.483	6.69	5.05	0.96
0.367	0.96	1.933	16.25	3.500	6.69	5.07	0.96
0.383	0.96	1.950	16.25	3.517	6.69	5.08	0.96
0.400	0.96	1.967	16.25	3.533	6.69	5.10	0.96
0.417	0.96	1.983	16.25	3.550	6.69	5.12	0.96
0.433	0.96	2.000	16.25	3.567	6.69	5.13	0.96
0.450	0.96	2.017	16.25	3.583	6.69	5.15	0.96
0.467	0.96	2.033	16.25	3.600	6.69	5.17	0.96
0.483	0.96	2.050	16.25	3.617	6.69	5.18	0.96
0.500	0.96	2.067	16.25	3.633	6.69	5.20	0.96
0.517	0.96	2.083	16.25	3.650	6.69	5.22	0.96
0.533	0.96	2.100	16.25	3.667	6.69	5.23	0.96
0.550	0.96	2.117	16.25	3.683	6.69	5.25	0.96
0.567	0.96	2.133	16.25	3.700	6.69	5.27	0.96
0.583	0.96	2.150	16.25	3.717	6.69	5.28	0.96
0.600	0.96	2.167	16.25	3.733	6.69	5.30	0.96
0.617	0.96	2.183	16.25	3.750	6.69	5.32	0.96
0.633	0.96	2.200	16.25	3.767	3.82	5.33	0.96
0.650	0.96	2.217	16.25	3.783	3.82	5.35	0.96
0.667	0.96	2.233	16.25	3.800	3.82	5.37	0.96
0.683	0.96	2.250	16.25	3.817	3.82	5.38	0.96
0.700	0.96	2.267	43.98	3.833	3.82	5.40	0.96
0.717	0.96	2.283	43.98	3.850	3.82	5.42	0.96
0.733	0.96	2.300	43.98	3.867	3.82	5.43	0.96
0.750	0.96	2.317	43.98	3.883	3.82	5.45	0.96
0.767	0.96	2.333	43.98	3.900	3.82	5.47	0.96
0.783	0.96	2.350	43.98	3.917	3.82	5.48	0.96
0.800	0.96	2.367	43.98	3.933	3.82	5.50	0.96
0.817	0.96	2.383	43.98	3.950	3.82	5.52	0.96
0.833	0.96	2.400	43.98	3.967	3.82	5.53	0.96
0.850	0.96	2.417	43.98	3.983	3.82	5.55	0.96
0.867	0.96	2.433	43.98	4.000	3.82	5.57	0.96
0.883	0.96	2.450	43.98	4.017	3.82	5.58	0.96
0.900	0.96	2.467	43.98	4.033	3.82	5.60	0.96
0.917	0.96	2.483	43.98	4.050	3.82	5.62	0.96
0.933	0.96	2.500	43.98	4.067	3.82	5.63	0.96
0.950	0.96	2.517	43.98	4.083	3.82	5.65	0.96
0.967	0.96	2.533	43.98	4.100	3.82	5.67	0.96
0.983	0.96	2.550	43.98	4.117	3.82	5.68	0.96
1.000	0.96	2.567	43.98	4.133	3.82	5.70	0.96
1.017	0.96	2.583	43.98	4.150	3.82	5.72	0.96
1.033	0.96	2.600	43.98	4.167	3.82	5.73	0.96
1.050	0.96	2.617	43.98	4.183	3.82	5.75	0.96
1.067	0.96	2.633	43.98	4.200	3.82	5.77	0.96
1.083	0.96	2.650	43.98	4.217	3.82	5.78	0.96
1.100	0.96	2.667	43.98	4.233	3.82	5.80	0.96
1.117	0.96	2.683	43.98	4.250	3.82	5.82	0.96
1.133	0.96	2.700	43.98	4.267	1.91	5.83	0.96
1.150	0.96	2.717	43.98	4.283	1.91	5.85	0.96
1.167	0.96	2.733	43.98	4.300	1.91	5.87	0.96
1.183	0.96	2.750	43.98	4.317	1.91	5.88	0.96

1.200	0.96	2.767	12.43	4.333	1.91	5.90	0.96
1.217	0.96	2.783	12.43	4.350	1.91	5.92	0.96
1.233	0.96	2.800	12.43	4.367	1.91	5.93	0.96
1.250	0.96	2.817	12.43	4.383	1.91	5.95	0.96
1.267	5.74	2.833	12.43	4.400	1.91	5.97	0.96
1.283	5.74	2.850	12.43	4.417	1.91	5.98	0.96
1.300	5.74	2.867	12.43	4.433	1.91	6.00	0.96
1.317	5.74	2.883	12.43	4.450	1.91	6.02	0.96
1.333	5.74	2.900	12.43	4.467	1.91	6.03	0.96
1.350	5.74	2.917	12.43	4.483	1.91	6.05	0.96
1.367	5.74	2.933	12.43	4.500	1.91	6.07	0.96
1.383	5.74	2.950	12.43	4.517	1.91	6.08	0.96
1.400	5.74	2.967	12.43	4.533	1.91	6.10	0.96
1.417	5.74	2.983	12.43	4.550	1.91	6.12	0.96
1.433	5.74	3.000	12.43	4.567	1.91	6.13	0.96
1.450	5.74	3.017	12.43	4.583	1.91	6.15	0.96
1.467	5.74	3.033	12.43	4.600	1.91	6.17	0.96
1.483	5.74	3.050	12.43	4.617	1.91	6.18	0.96
1.500	5.74	3.067	12.43	4.633	1.91	6.20	0.96
1.517	5.74	3.083	12.43	4.650	1.91	6.22	0.96
1.533	5.74	3.100	12.43	4.667	1.91	6.23	0.96
1.550	5.74	3.117	12.43	4.683	1.91	6.25	0.96
1.567	5.74	3.133	12.43	4.700	1.91		

Max.Eff.Inten.(mm/hr)=	43.98	33.15	
over (min)	5.00	7.00	
Storage Coeff. (min)=	3.75 (ii)	6.11 (ii)	
Unit Hyd. Tpeak (min)=	5.00	7.00	
Unit Hyd. peak (cms)=	0.27	0.18	
			TOTALS
PEAK FLOW (cms)=	0.22	0.00	0.219 (iii)
TIME TO PEAK (hrs)=	2.75	2.75	2.75
RUNOFF VOLUME (mm)=	46.81	28.77	46.63
TOTAL RAINFALL (mm)=	47.81	47.81	47.81
RUNOFF COEFFICIENT =	0.98	0.60	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 90.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7625)	OVERFLOW IS OFF
IN= 2---> OUT= 1	
DT= 1.0 min	

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0389	0.1013
0.0164	0.0514	0.0456	0.1141
0.0252	0.0690	0.0514	0.1288
0.0309	0.0825	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (	7624)	1.800	0.219	2.75	46.63
OUTFLOW: ID= 1 (	7625)	1.800	0.023	3.87	45.27

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.64
TIME SHIFT OF PEAK FLOW (min)= 67.00
MAXIMUM STORAGE USED (ha.m.)= 0.0653

CALIB	
STANDHYD (7623)	Area (ha)= 1.15
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.14	0.01
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	87.56	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	5.74	3.150	12.43	4.72	1.91
0.033	0.00	1.600	5.74	3.167	12.43	4.73	1.91
0.050	0.00	1.617	5.74	3.183	12.43	4.75	1.91
0.067	0.00	1.633	5.74	3.200	12.43	4.77	0.96
0.083	0.00	1.650	5.74	3.217	12.43	4.78	0.96
0.100	0.00	1.667	5.74	3.233	12.43	4.80	0.96
0.117	0.00	1.683	5.74	3.250	12.43	4.82	0.96
0.133	0.00	1.700	5.74	3.267	6.69	4.83	0.96
0.150	0.00	1.717	5.74	3.283	6.69	4.85	0.96
0.167	0.00	1.733	5.74	3.300	6.69	4.87	0.96
0.183	0.00	1.750	5.74	3.317	6.69	4.88	0.96
0.200	0.00	1.767	16.25	3.333	6.69	4.90	0.96
0.217	0.00	1.783	16.25	3.350	6.69	4.92	0.96
0.233	0.00	1.800	16.25	3.367	6.69	4.93	0.96
0.250	0.00	1.817	16.25	3.383	6.69	4.95	0.96
0.267	0.96	1.833	16.25	3.400	6.69	4.97	0.96
0.283	0.96	1.850	16.25	3.417	6.69	4.98	0.96
0.300	0.96	1.867	16.25	3.433	6.69	5.00	0.96
0.317	0.96	1.883	16.25	3.450	6.69	5.02	0.96
0.333	0.96	1.900	16.25	3.467	6.69	5.03	0.96
0.350	0.96	1.917	16.25	3.483	6.69	5.05	0.96
0.367	0.96	1.933	16.25	3.500	6.69	5.07	0.96
0.383	0.96	1.950	16.25	3.517	6.69	5.08	0.96
0.400	0.96	1.967	16.25	3.533	6.69	5.10	0.96
0.417	0.96	1.983	16.25	3.550	6.69	5.12	0.96
0.433	0.96	2.000	16.25	3.567	6.69	5.13	0.96
0.450	0.96	2.017	16.25	3.583	6.69	5.15	0.96
0.467	0.96	2.033	16.25	3.600	6.69	5.17	0.96
0.483	0.96	2.050	16.25	3.617	6.69	5.18	0.96
0.500	0.96	2.067	16.25	3.633	6.69	5.20	0.96
0.517	0.96	2.083	16.25	3.650	6.69	5.22	0.96
0.533	0.96	2.100	16.25	3.667	6.69	5.23	0.96
0.550	0.96	2.117	16.25	3.683	6.69	5.25	0.96
0.567	0.96	2.133	16.25	3.700	6.69	5.27	0.96
0.583	0.96	2.150	16.25	3.717	6.69	5.28	0.96
0.600	0.96	2.167	16.25	3.733	6.69	5.30	0.96
0.617	0.96	2.183	16.25	3.750	6.69	5.32	0.96
0.633	0.96	2.200	16.25	3.767	3.82	5.33	0.96
0.650	0.96	2.217	16.25	3.783	3.82	5.35	0.96
0.667	0.96	2.233	16.25	3.800	3.82	5.37	0.96
0.683	0.96	2.250	16.25	3.817	3.82	5.38	0.96
0.700	0.96	2.267	43.98	3.833	3.82	5.40	0.96
0.717	0.96	2.283	43.98	3.850	3.82	5.42	0.96
0.733	0.96	2.300	43.98	3.867	3.82	5.43	0.96
0.750	0.96	2.317	43.98	3.883	3.82	5.45	0.96
0.767	0.96	2.333	43.98	3.900	3.82	5.47	0.96
0.783	0.96	2.350	43.98	3.917	3.82	5.48	0.96
0.800	0.96	2.367	43.98	3.933	3.82	5.50	0.96
0.817	0.96	2.383	43.98	3.950	3.82	5.52	0.96
0.833	0.96	2.400	43.98	3.967	3.82	5.53	0.96
0.850	0.96	2.417	43.98	3.983	3.82	5.55	0.96
0.867	0.96	2.433	43.98	4.000	3.82	5.57	0.96
0.883	0.96	2.450	43.98	4.017	3.82	5.58	0.96
0.900	0.96	2.467	43.98	4.033	3.82	5.60	0.96
0.917	0.96	2.483	43.98	4.050	3.82	5.62	0.96
0.933	0.96	2.500	43.98	4.067	3.82	5.63	0.96
0.950	0.96	2.517	43.98	4.083	3.82	5.65	0.96
0.967	0.96	2.533	43.98	4.100	3.82	5.67	0.96
0.983	0.96	2.550	43.98	4.117	3.82	5.68	0.96
1.000	0.96	2.567	43.98	4.133	3.82	5.70	0.96
1.017	0.96	2.583	43.98	4.150	3.82	5.72	0.96
1.033	0.96	2.600	43.98	4.167	3.82	5.73	0.96
1.050	0.96	2.617	43.98	4.183	3.82	5.75	0.96
1.067	0.96	2.633	43.98	4.200	3.82	5.77	0.96
1.083	0.96	2.650	43.98	4.217	3.82	5.78	0.96
1.100	0.96	2.667	43.98	4.233	3.82	5.80	0.96
1.117	0.96	2.683	43.98	4.250	3.82	5.82	0.96
1.133	0.96	2.700	43.98	4.267	1.91	5.83	0.96
1.150	0.96	2.717	43.98	4.283	1.91	5.85	0.96
1.167	0.96	2.733	43.98	4.300	1.91	5.87	0.96

1.183	0.96	2.750	43.98	4.317	1.91	5.88	0.96
1.200	0.96	2.767	12.43	4.333	1.91	5.90	0.96
1.217	0.96	2.783	12.43	4.350	1.91	5.92	0.96
1.233	0.96	2.800	12.43	4.367	1.91	5.93	0.96
1.250	0.96	2.817	12.43	4.383	1.91	5.95	0.96
1.267	5.74	2.833	12.43	4.400	1.91	5.97	0.96
1.283	5.74	2.850	12.43	4.417	1.91	5.98	0.96
1.300	5.74	2.867	12.43	4.433	1.91	6.00	0.96
1.317	5.74	2.883	12.43	4.450	1.91	6.02	0.96
1.333	5.74	2.900	12.43	4.467	1.91	6.03	0.96
1.350	5.74	2.917	12.43	4.483	1.91	6.05	0.96
1.367	5.74	2.933	12.43	4.500	1.91	6.07	0.96
1.383	5.74	2.950	12.43	4.517	1.91	6.08	0.96
1.400	5.74	2.967	12.43	4.533	1.91	6.10	0.96
1.417	5.74	2.983	12.43	4.550	1.91	6.12	0.96
1.433	5.74	3.000	12.43	4.567	1.91	6.13	0.96
1.450	5.74	3.017	12.43	4.583	1.91	6.15	0.96
1.467	5.74	3.033	12.43	4.600	1.91	6.17	0.96
1.483	5.74	3.050	12.43	4.617	1.91	6.18	0.96
1.500	5.74	3.067	12.43	4.633	1.91	6.20	0.96
1.517	5.74	3.083	12.43	4.650	1.91	6.22	0.96
1.533	5.74	3.100	12.43	4.667	1.91	6.23	0.96
1.550	5.74	3.117	12.43	4.683	1.91	6.25	0.96
1.567	5.74	3.133	12.43	4.700	1.91		

Max.Eff.Inten.(mm/hr)=	43.98	27.63	
over (min)	5.00	6.00	
Storage Coeff. (min)=	3.28 (ii)	5.64 (ii)	
Unit Hyd. Tpeak (min)=	5.00	6.00	
Unit Hyd. peak (cms)=	0.29	0.20	
			TOTALS
PEAK FLOW (cms)=	0.14	0.00	0.140 (iii)
TIME TO PEAK (hrs)=	2.75	2.75	2.75
RUNOFF VOLUME (mm)=	46.81	23.53	46.58
TOTAL RAINFALL (mm)=	47.81	47.81	47.81
RUNOFF COEFFICIENT =	0.98	0.49	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7622)	OVERFLOW IS OFF
IN= 2---> OUT= 1	
DT= 1.0 min	

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0258	0.0650
0.0108	0.0330	0.0302	0.0725
0.0167	0.0440	0.0340	0.0820
0.0204	0.0525	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (	7623)	1.150	0.140	2.75	46.58
OUTFLOW: ID= 1 (	7622)	1.150	0.015	3.85	45.34

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.96
TIME SHIFT OF PEAK FLOW (min)= 66.00
MAXIMUM STORAGE USED (ha.m.)= 0.0415

CALIB	
STANDHYD (7629)	Area (ha)= 4.09
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	4.05	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	165.13	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	5.74	3.150	12.43	4.72	1.91
0.033	0.00	1.600	5.74	3.167	12.43	4.73	1.91
0.050	0.00	1.617	5.74	3.183	12.43	4.75	1.91
0.067	0.00	1.633	5.74	3.200	12.43	4.77	0.96
0.083	0.00	1.650	5.74	3.217	12.43	4.78	0.96
0.100	0.00	1.667	5.74	3.233	12.43	4.80	0.96
0.117	0.00	1.683	5.74	3.250	12.43	4.82	0.96
0.133	0.00	1.700	5.74	3.267	6.69	4.83	0.96
0.150	0.00	1.717	5.74	3.283	6.69	4.85	0.96
0.167	0.00	1.733	5.74	3.300	6.69	4.87	0.96
0.183	0.00	1.750	5.74	3.317	6.69	4.88	0.96
0.200	0.00	1.767	16.25	3.333	6.69	4.90	0.96
0.217	0.00	1.783	16.25	3.350	6.69	4.92	0.96
0.233	0.00	1.800	16.25	3.367	6.69	4.93	0.96
0.250	0.00	1.817	16.25	3.383	6.69	4.95	0.96
0.267	0.96	1.833	16.25	3.400	6.69	4.97	0.96
0.283	0.96	1.850	16.25	3.417	6.69	4.98	0.96
0.300	0.96	1.867	16.25	3.433	6.69	5.00	0.96
0.317	0.96	1.883	16.25	3.450	6.69	5.02	0.96
0.333	0.96	1.900	16.25	3.467	6.69	5.03	0.96
0.350	0.96	1.917	16.25	3.483	6.69	5.05	0.96
0.367	0.96	1.933	16.25	3.500	6.69	5.07	0.96
0.383	0.96	1.950	16.25	3.517	6.69	5.08	0.96
0.400	0.96	1.967	16.25	3.533	6.69	5.10	0.96
0.417	0.96	1.983	16.25	3.550	6.69	5.12	0.96
0.433	0.96	2.000	16.25	3.567	6.69	5.13	0.96
0.450	0.96	2.017	16.25	3.583	6.69	5.15	0.96
0.467	0.96	2.033	16.25	3.600	6.69	5.17	0.96
0.483	0.96	2.050	16.25	3.617	6.69	5.18	0.96
0.500	0.96	2.067	16.25	3.633	6.69	5.20	0.96
0.517	0.96	2.083	16.25	3.650	6.69	5.22	0.96
0.533	0.96	2.100	16.25	3.667	6.69	5.23	0.96
0.550	0.96	2.117	16.25	3.683	6.69	5.25	0.96
0.567	0.96	2.133	16.25	3.700	6.69	5.27	0.96
0.583	0.96	2.150	16.25	3.717	6.69	5.28	0.96
0.600	0.96	2.167	16.25	3.733	6.69	5.30	0.96
0.617	0.96	2.183	16.25	3.750	6.69	5.32	0.96
0.633	0.96	2.200	16.25	3.767	3.82	5.33	0.96
0.650	0.96	2.217	16.25	3.783	3.82	5.35	0.96
0.667	0.96	2.233	16.25	3.800	3.82	5.37	0.96
0.683	0.96	2.250	16.25	3.817	3.82	5.38	0.96
0.700	0.96	2.267	43.98	3.833	3.82	5.40	0.96
0.717	0.96	2.283	43.98	3.850	3.82	5.42	0.96
0.733	0.96	2.300	43.98	3.867	3.82	5.43	0.96
0.750	0.96	2.317	43.98	3.883	3.82	5.45	0.96
0.767	0.96	2.333	43.98	3.900	3.82	5.47	0.96
0.783	0.96	2.350	43.98	3.917	3.82	5.48	0.96
0.800	0.96	2.367	43.98	3.933	3.82	5.50	0.96
0.817	0.96	2.383	43.98	3.950	3.82	5.52	0.96
0.833	0.96	2.400	43.98	3.967	3.82	5.53	0.96
0.850	0.96	2.417	43.98	3.983	3.82	5.55	0.96
0.867	0.96	2.433	43.98	4.000	3.82	5.57	0.96
0.883	0.96	2.450	43.98	4.017	3.82	5.58	0.96
0.900	0.96	2.467	43.98	4.033	3.82	5.60	0.96
0.917	0.96	2.483	43.98	4.050	3.82	5.62	0.96
0.933	0.96	2.500	43.98	4.067	3.82	5.63	0.96
0.950	0.96	2.517	43.98	4.083	3.82	5.65	0.96
0.967	0.96	2.533	43.98	4.100	3.82	5.67	0.96
0.983	0.96	2.550	43.98	4.117	3.82	5.68	0.96
1.000	0.96	2.567	43.98	4.133	3.82	5.70	0.96
1.017	0.96	2.583	43.98	4.150	3.82	5.72	0.96
1.033	0.96	2.600	43.98	4.167	3.82	5.73	0.96
1.050	0.96	2.617	43.98	4.183	3.82	5.75	0.96
1.067	0.96	2.633	43.98	4.200	3.82	5.77	0.96
1.083	0.96	2.650	43.98	4.217	3.82	5.78	0.96
1.100	0.96	2.667	43.98	4.233	3.82	5.80	0.96
1.117	0.96	2.683	43.98	4.250	3.82	5.82	0.96
1.133	0.96	2.700	43.98	4.267	1.91	5.83	0.96
1.150	0.96	2.717	43.98	4.283	1.91	5.85	0.96

1.167	0.96	2.733	43.98	4.300	1.91	5.87	0.96
1.183	0.96	2.750	43.98	4.317	1.91	5.88	0.96
1.200	0.96	2.767	12.43	4.333	1.91	5.90	0.96
1.217	0.96	2.783	12.43	4.350	1.91	5.92	0.96
1.233	0.96	2.800	12.43	4.367	1.91	5.93	0.96
1.250	0.96	2.817	12.43	4.383	1.91	5.95	0.96
1.267	5.74	2.833	12.43	4.400	1.91	5.97	0.96
1.283	5.74	2.850	12.43	4.417	1.91	5.98	0.96
1.300	5.74	2.867	12.43	4.433	1.91	6.00	0.96
1.317	5.74	2.883	12.43	4.450	1.91	6.02	0.96
1.333	5.74	2.900	12.43	4.467	1.91	6.03	0.96
1.350	5.74	2.917	12.43	4.483	1.91	6.05	0.96
1.367	5.74	2.933	12.43	4.500	1.91	6.07	0.96
1.383	5.74	2.950	12.43	4.517	1.91	6.08	0.96
1.400	5.74	2.967	12.43	4.533	1.91	6.10	0.96
1.417	5.74	2.983	12.43	4.550	1.91	6.12	0.96
1.433	5.74	3.000	12.43	4.567	1.91	6.13	0.96
1.450	5.74	3.017	12.43	4.583	1.91	6.15	0.96
1.467	5.74	3.033	12.43	4.600	1.91	6.17	0.96
1.483	5.74	3.050	12.43	4.617	1.91	6.18	0.96
1.500	5.74	3.067	12.43	4.633	1.91	6.20	0.96
1.517	5.74	3.083	12.43	4.650	1.91	6.22	0.96
1.533	5.74	3.100	12.43	4.667	1.91	6.23	0.96
1.550	5.74	3.117	12.43	4.683	1.91	6.25	0.96
1.567	5.74	3.133	12.43	4.700	1.91		

Max.Eff.Inten.(mm/hr)=	43.98	27.63	
over (min)	5.00	8.00	
Storage Coeff. (min)=	4.79 (ii)	7.16 (ii)	
Unit Hyd. Tpeak (min)=	5.00	8.00	
Unit Hyd. peak (cms)=	0.23	0.15	
			TOTALS
PEAK FLOW (cms)=	0.49	0.00	0.497 (iii)
TIME TO PEAK (hrs)=	2.75	2.77	2.75
RUNOFF VOLUME (mm)=	46.81	23.53	46.58
TOTAL RAINFALL (mm)=	47.81	47.81	47.81
RUNOFF COEFFICIENT =	0.98	0.49	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7630)| IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0826	0.2320
	0.0347	0.1170	0.0967	0.2609
	0.0534	0.1580	0.1090	0.2940
	0.0655	0.1890	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7629)	4.090	0.497	2.75	46.58
OUTFLOW: ID= 1 (7630)	4.090	0.050	3.92	44.84

PEAK FLOW REDUCTION [Qout/Qin](%)= 9.99
TIME SHIFT OF PEAK FLOW (min)= 70.00
MAXIMUM STORAGE USED (ha.m.)= 0.1497

CALIB STANDHYD (7631)| ID= 1 DT= 1.0 min |	Area (ha)= 3.91			
	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00		

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.87	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	161.45	40.00

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	5.74	3.150	12.43	4.72	1.91
0.033	0.00	1.600	5.74	3.167	12.43	4.73	1.91
0.050	0.00	1.617	5.74	3.183	12.43	4.75	1.91
0.067	0.00	1.633	5.74	3.200	12.43	4.77	0.96
0.083	0.00	1.650	5.74	3.217	12.43	4.78	0.96
0.100	0.00	1.667	5.74	3.233	12.43	4.80	0.96
0.117	0.00	1.683	5.74	3.250	12.43	4.82	0.96
0.133	0.00	1.700	5.74	3.267	6.69	4.83	0.96
0.150	0.00	1.717	5.74	3.283	6.69	4.85	0.96
0.167	0.00	1.733	5.74	3.300	6.69	4.87	0.96
0.183	0.00	1.750	5.74	3.317	6.69	4.88	0.96
0.200	0.00	1.767	16.25	3.333	6.69	4.90	0.96
0.217	0.00	1.783	16.25	3.350	6.69	4.92	0.96
0.233	0.00	1.800	16.25	3.367	6.69	4.93	0.96
0.250	0.00	1.817	16.25	3.383	6.69	4.95	0.96
0.267	0.96	1.833	16.25	3.400	6.69	4.97	0.96
0.283	0.96	1.850	16.25	3.417	6.69	4.98	0.96
0.300	0.96	1.867	16.25	3.433	6.69	5.00	0.96
0.317	0.96	1.883	16.25	3.450	6.69	5.02	0.96
0.333	0.96	1.900	16.25	3.467	6.69	5.03	0.96
0.350	0.96	1.917	16.25	3.483	6.69	5.05	0.96
0.367	0.96	1.933	16.25	3.500	6.69	5.07	0.96
0.383	0.96	1.950	16.25	3.517	6.69	5.08	0.96
0.400	0.96	1.967	16.25	3.533	6.69	5.10	0.96
0.417	0.96	1.983	16.25	3.550	6.69	5.12	0.96
0.433	0.96	2.000	16.25	3.567	6.69	5.13	0.96
0.450	0.96	2.017	16.25	3.583	6.69	5.15	0.96
0.467	0.96	2.033	16.25	3.600	6.69	5.17	0.96
0.483	0.96	2.050	16.25	3.617	6.69	5.18	0.96
0.500	0.96	2.067	16.25	3.633	6.69	5.20	0.96
0.517	0.96	2.083	16.25	3.650	6.69	5.22	0.96
0.533	0.96	2.100	16.25	3.667	6.69	5.23	0.96
0.550	0.96	2.117	16.25	3.683	6.69	5.25	0.96
0.567	0.96	2.133	16.25	3.700	6.69	5.27	0.96
0.583	0.96	2.150	16.25	3.717	6.69	5.28	0.96
0.600	0.96	2.167	16.25	3.733	6.69	5.30	0.96
0.617	0.96	2.183	16.25	3.750	6.69	5.32	0.96
0.633	0.96	2.200	16.25	3.767	3.82	5.33	0.96
0.650	0.96	2.217	16.25	3.783	3.82	5.35	0.96
0.667	0.96	2.233	16.25	3.800	3.82	5.37	0.96
0.683	0.96	2.250	16.25	3.817	3.82	5.38	0.96
0.700	0.96	2.267	43.98	3.833	3.82	5.40	0.96
0.717	0.96	2.283	43.98	3.850	3.82	5.42	0.96
0.733	0.96	2.300	43.98	3.867	3.82	5.43	0.96
0.750	0.96	2.317	43.98	3.883	3.82	5.45	0.96
0.767	0.96	2.333	43.98	3.900	3.82	5.47	0.96
0.783	0.96	2.350	43.98	3.917	3.82	5.48	0.96
0.800	0.96	2.367	43.98	3.933	3.82	5.50	0.96
0.817	0.96	2.383	43.98	3.950	3.82	5.52	0.96
0.833	0.96	2.400	43.98	3.967	3.82	5.53	0.96
0.850	0.96	2.417	43.98	3.983	3.82	5.55	0.96
0.867	0.96	2.433	43.98	4.000	3.82	5.57	0.96
0.883	0.96	2.450	43.98	4.017	3.82	5.58	0.96
0.900	0.96	2.467	43.98	4.033	3.82	5.60	0.96
0.917	0.96	2.483	43.98	4.050	3.82	5.62	0.96
0.933	0.96	2.500	43.98	4.067	3.82	5.63	0.96
0.950	0.96	2.517	43.98	4.083	3.82	5.65	0.96
0.967	0.96	2.533	43.98	4.100	3.82	5.67	0.96
0.983	0.96	2.550	43.98	4.117	3.82	5.68	0.96
1.000	0.96	2.567	43.98	4.133	3.82	5.70	0.96
1.017	0.96	2.583	43.98	4.150	3.82	5.72	0.96
1.033	0.96	2.600	43.98	4.167	3.82	5.73	0.96
1.050	0.96	2.617	43.98	4.183	3.82	5.75	0.96
1.067	0.96	2.633	43.98	4.200	3.82	5.77	0.96
1.083	0.96	2.650	43.98	4.217	3.82	5.78	0.96
1.100	0.96	2.667	43.98	4.233	3.82	5.80	0.96
1.117	0.96	2.683	43.98	4.250	3.82	5.82	0.96
1.133	0.96	2.700	43.98	4.267	1.91	5.83	0.96

1.150	0.96	2.717	43.98	4.283	1.91	5.85	0.96
1.167	0.96	2.733	43.98	4.300	1.91	5.87	0.96
1.183	0.96	2.750	43.98	4.317	1.91	5.88	0.96
1.200	0.96	2.767	12.43	4.333	1.91	5.90	0.96
1.217	0.96	2.783	12.43	4.350	1.91	5.92	0.96
1.233	0.96	2.800	12.43	4.367	1.91	5.93	0.96
1.250	0.96	2.817	12.43	4.383	1.91	5.95	0.96
1.267	5.74	2.833	12.43	4.400	1.91	5.97	0.96
1.283	5.74	2.850	12.43	4.417	1.91	5.98	0.96
1.300	5.74	2.867	12.43	4.433	1.91	6.00	0.96
1.317	5.74	2.883	12.43	4.450	1.91	6.02	0.96
1.333	5.74	2.900	12.43	4.467	1.91	6.03	0.96
1.350	5.74	2.917	12.43	4.483	1.91	6.05	0.96
1.367	5.74	2.933	12.43	4.500	1.91	6.07	0.96
1.383	5.74	2.950	12.43	4.517	1.91	6.08	0.96
1.400	5.74	2.967	12.43	4.533	1.91	6.10	0.96
1.417	5.74	2.983	12.43	4.550	1.91	6.12	0.96
1.433	5.74	3.000	12.43	4.567	1.91	6.13	0.96
1.450	5.74	3.017	12.43	4.583	1.91	6.15	0.96
1.467	5.74	3.033	12.43	4.600	1.91	6.17	0.96
1.483	5.74	3.050	12.43	4.617	1.91	6.18	0.96
1.500	5.74	3.067	12.43	4.633	1.91	6.20	0.96
1.517	5.74	3.083	12.43	4.650	1.91	6.22	0.96
1.533	5.74	3.100	12.43	4.667	1.91	6.23	0.96
1.550	5.74	3.117	12.43	4.683	1.91	6.25	0.96
1.567	5.74	3.133	12.43	4.700	1.91		

Max.Eff.Inten.(mm/hr)=		43.98	27.63	
over (min)		5.00	8.00	
Storage Coeff. (min)=		4.73 (ii)	7.09 (ii)	
Unit Hyd. Tpeak (min)=		5.00	8.00	
Unit Hyd. peak (cms)=		0.23	0.15	
				TOTALS
PEAK FLOW	(cms)=	0.47	0.00	0.475 (iii)
TIME TO PEAK	(hrs)=	2.75	2.77	2.75
RUNOFF VOLUME	(mm)=	46.81	23.53	46.58
TOTAL RAINFALL	(mm)=	47.81	47.81	47.81
RUNOFF COEFFICIENT	=	0.98	0.49	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7632)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0792	0.2220
	0.0333	0.1130	0.0928	0.2500
	0.0512	0.1510	0.1046	0.2810
	0.0629	0.1810	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (	7631)	3.910	0.475	2.75	46.58
OUTFLOW: ID= 1 (	7632)	3.910	0.048	3.92	44.80

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.01
TIME SHIFT OF PEAK FLOW (min)= 70.00
MAXIMUM STORAGE USED (ha.m.)= 0.1432

CALIB				
STANDHYD (7641)	Area (ha)= 2.21			
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00		
	IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)= 2.19	0.02		
Dep. Storage	(mm)= 1.00	1.50		
Average Slope	(%)= 1.00	0.50		

Length	(m)= 121.38	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	5.74	3.150	12.43	4.72	1.91
0.033	0.00	1.600	5.74	3.167	12.43	4.73	1.91
0.050	0.00	1.617	5.74	3.183	12.43	4.75	1.91
0.067	0.00	1.633	5.74	3.200	12.43	4.77	0.96
0.083	0.00	1.650	5.74	3.217	12.43	4.78	0.96
0.100	0.00	1.667	5.74	3.233	12.43	4.80	0.96
0.117	0.00	1.683	5.74	3.250	12.43	4.82	0.96
0.133	0.00	1.700	5.74	3.267	6.69	4.83	0.96
0.150	0.00	1.717	5.74	3.283	6.69	4.85	0.96
0.167	0.00	1.733	5.74	3.300	6.69	4.87	0.96
0.183	0.00	1.750	5.74	3.317	6.69	4.88	0.96
0.200	0.00	1.767	16.25	3.333	6.69	4.90	0.96
0.217	0.00	1.783	16.25	3.350	6.69	4.92	0.96
0.233	0.00	1.800	16.25	3.367	6.69	4.93	0.96
0.250	0.00	1.817	16.25	3.383	6.69	4.95	0.96
0.267	0.96	1.833	16.25	3.400	6.69	4.97	0.96
0.283	0.96	1.850	16.25	3.417	6.69	4.98	0.96
0.300	0.96	1.867	16.25	3.433	6.69	5.00	0.96
0.317	0.96	1.883	16.25	3.450	6.69	5.02	0.96
0.333	0.96	1.900	16.25	3.467	6.69	5.03	0.96
0.350	0.96	1.917	16.25	3.483	6.69	5.05	0.96
0.367	0.96	1.933	16.25	3.500	6.69	5.07	0.96
0.383	0.96	1.950	16.25	3.517	6.69	5.08	0.96
0.400	0.96	1.967	16.25	3.533	6.69	5.10	0.96
0.417	0.96	1.983	16.25	3.550	6.69	5.12	0.96
0.433	0.96	2.000	16.25	3.567	6.69	5.13	0.96
0.450	0.96	2.017	16.25	3.583	6.69	5.15	0.96
0.467	0.96	2.033	16.25	3.600	6.69	5.17	0.96
0.483	0.96	2.050	16.25	3.617	6.69	5.18	0.96
0.500	0.96	2.067	16.25	3.633	6.69	5.20	0.96
0.517	0.96	2.083	16.25	3.650	6.69	5.22	0.96
0.533	0.96	2.100	16.25	3.667	6.69	5.23	0.96
0.550	0.96	2.117	16.25	3.683	6.69	5.25	0.96
0.567	0.96	2.133	16.25	3.700	6.69	5.27	0.96
0.583	0.96	2.150	16.25	3.717	6.69	5.28	0.96
0.600	0.96	2.167	16.25	3.733	6.69	5.30	0.96
0.617	0.96	2.183	16.25	3.750	6.69	5.32	0.96
0.633	0.96	2.200	16.25	3.767	3.82	5.33	0.96
0.650	0.96	2.217	16.25	3.783	3.82	5.35	0.96
0.667	0.96	2.233	16.25	3.800	3.82	5.37	0.96
0.683	0.96	2.250	16.25	3.817	3.82	5.38	0.96
0.700	0.96	2.267	43.98	3.833	3.82	5.40	0.96
0.717	0.96	2.283	43.98	3.850	3.82	5.42	0.96
0.733	0.96	2.300	43.98	3.867	3.82	5.43	0.96
0.750	0.96	2.317	43.98	3.883	3.82	5.45	0.96
0.767	0.96	2.333	43.98	3.900	3.82	5.47	0.96
0.783	0.96	2.350	43.98	3.917	3.82	5.48	0.96
0.800	0.96	2.367	43.98	3.933	3.82	5.50	0.96
0.817	0.96	2.383	43.98	3.950	3.82	5.52	0.96
0.833	0.96	2.400	43.98	3.967	3.82	5.53	0.96
0.850	0.96	2.417	43.98	3.983	3.82	5.55	0.96
0.867	0.96	2.433	43.98	4.000	3.82	5.57	0.96
0.883	0.96	2.450	43.98	4.017	3.82	5.58	0.96
0.900	0.96	2.467	43.98	4.033	3.82	5.60	0.96
0.917	0.96	2.483	43.98	4.050	3.82	5.62	0.96
0.933	0.96	2.500	43.98	4.067	3.82	5.63	0.96
0.950	0.96	2.517	43.98	4.083	3.82	5.65	0.96
0.967	0.96	2.533	43.98	4.100	3.82	5.67	0.96
0.983	0.96	2.550	43.98	4.117	3.82	5.68	0.96
1.000	0.96	2.567	43.98	4.133	3.82	5.70	0.96
1.017	0.96	2.583	43.98	4.150	3.82	5.72	0.96
1.033	0.96	2.600	43.98	4.167	3.82	5.73	0.96
1.050	0.96	2.617	43.98	4.183	3.82	5.75	0.96
1.067	0.96	2.633	43.98	4.200	3.82	5.77	0.96
1.083	0.96	2.650	43.98	4.217	3.82	5.78	0.96
1.100	0.96	2.667	43.98	4.233	3.82	5.80	0.96
1.117	0.96	2.683	43.98	4.250	3.82	5.82	0.96

1.133	0.96	2.700	43.98	4.267	1.91	5.83	0.96
1.150	0.96	2.717	43.98	4.283	1.91	5.85	0.96
1.167	0.96	2.733	43.98	4.300	1.91	5.87	0.96
1.183	0.96	2.750	43.98	4.317	1.91	5.88	0.96
1.200	0.96	2.767	12.43	4.333	1.91	5.90	0.96
1.217	0.96	2.783	12.43	4.350	1.91	5.92	0.96
1.233	0.96	2.800	12.43	4.367	1.91	5.93	0.96
1.250	0.96	2.817	12.43	4.383	1.91	5.95	0.96
1.267	5.74	2.833	12.43	4.400	1.91	5.97	0.96
1.283	5.74	2.850	12.43	4.417	1.91	5.98	0.96
1.300	5.74	2.867	12.43	4.433	1.91	6.00	0.96
1.317	5.74	2.883	12.43	4.450	1.91	6.02	0.96
1.333	5.74	2.900	12.43	4.467	1.91	6.03	0.96
1.350	5.74	2.917	12.43	4.483	1.91	6.05	0.96
1.367	5.74	2.933	12.43	4.500	1.91	6.07	0.96
1.383	5.74	2.950	12.43	4.517	1.91	6.08	0.96
1.400	5.74	2.967	12.43	4.533	1.91	6.10	0.96
1.417	5.74	2.983	12.43	4.550	1.91	6.12	0.96
1.433	5.74	3.000	12.43	4.567	1.91	6.13	0.96
1.450	5.74	3.017	12.43	4.583	1.91	6.15	0.96
1.467	5.74	3.033	12.43	4.600	1.91	6.17	0.96
1.483	5.74	3.050	12.43	4.617	1.91	6.18	0.96
1.500	5.74	3.067	12.43	4.633	1.91	6.20	0.96
1.517	5.74	3.083	12.43	4.650	1.91	6.22	0.96
1.533	5.74	3.100	12.43	4.667	1.91	6.23	0.96
1.550	5.74	3.117	12.43	4.683	1.91	6.25	0.96
1.567	5.74	3.133	12.43	4.700	1.91		

Max.Eff.Inten.(mm/hr)=	43.98	27.63	
over (min)	5.00	7.00	
Storage Coeff. (min)=	3.99 (ii)	6.35 (ii)	
Unit Hyd. Tpeak (min)=	5.00	7.00	
Unit Hyd. peak (cms)=	0.26	0.17	
			TOTALS
PEAK FLOW (cms)=	0.27	0.00	0.269 (iii)
TIME TO PEAK (hrs)=	2.75	2.77	2.75
RUNOFF VOLUME (mm)=	46.81	23.53	46.58
TOTAL RAINFALL (mm)=	47.81	47.81	47.81
RUNOFF COEFFICIENT =	0.98	0.49	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7642)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0470	0.1250
	0.0197	0.0630	0.0551	0.1410
	0.0304	0.0850	0.0620	0.1580
	0.0373	0.1020	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7641)	2.210	0.269	2.75	46.58
OUTFLOW: ID= 1 (7642)	2.210	0.028	3.88	45.12

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.46
TIME SHIFT OF PEAK FLOW (min)= 68.00
MAXIMUM STORAGE USED (ha.m.)= 0.0803

CALIB			
STANDHYD (7643)	Area (ha)= 2.02		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	2.00	0.02	
Dep. Storage (mm)=	1.00	1.50	

Average Slope (%)=	1.00	0.50
Length (m)=	116.05	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	5.74	3.150	12.43	4.72	1.91
0.033	0.00	1.600	5.74	3.167	12.43	4.73	1.91
0.050	0.00	1.617	5.74	3.183	12.43	4.75	1.91
0.067	0.00	1.633	5.74	3.200	12.43	4.77	0.96
0.083	0.00	1.650	5.74	3.217	12.43	4.78	0.96
0.100	0.00	1.667	5.74	3.233	12.43	4.80	0.96
0.117	0.00	1.683	5.74	3.250	12.43	4.82	0.96
0.133	0.00	1.700	5.74	3.267	6.69	4.83	0.96
0.150	0.00	1.717	5.74	3.283	6.69	4.85	0.96
0.167	0.00	1.733	5.74	3.300	6.69	4.87	0.96
0.183	0.00	1.750	5.74	3.317	6.69	4.88	0.96
0.200	0.00	1.767	16.25	3.333	6.69	4.90	0.96
0.217	0.00	1.783	16.25	3.350	6.69	4.92	0.96
0.233	0.00	1.800	16.25	3.367	6.69	4.93	0.96
0.250	0.00	1.817	16.25	3.383	6.69	4.95	0.96
0.267	0.96	1.833	16.25	3.400	6.69	4.97	0.96
0.283	0.96	1.850	16.25	3.417	6.69	4.98	0.96
0.300	0.96	1.867	16.25	3.433	6.69	5.00	0.96
0.317	0.96	1.883	16.25	3.450	6.69	5.02	0.96
0.333	0.96	1.900	16.25	3.467	6.69	5.03	0.96
0.350	0.96	1.917	16.25	3.483	6.69	5.05	0.96
0.367	0.96	1.933	16.25	3.500	6.69	5.07	0.96
0.383	0.96	1.950	16.25	3.517	6.69	5.08	0.96
0.400	0.96	1.967	16.25	3.533	6.69	5.10	0.96
0.417	0.96	1.983	16.25	3.550	6.69	5.12	0.96
0.433	0.96	2.000	16.25	3.567	6.69	5.13	0.96
0.450	0.96	2.017	16.25	3.583	6.69	5.15	0.96
0.467	0.96	2.033	16.25	3.600	6.69	5.17	0.96
0.483	0.96	2.050	16.25	3.617	6.69	5.18	0.96
0.500	0.96	2.067	16.25	3.633	6.69	5.20	0.96
0.517	0.96	2.083	16.25	3.650	6.69	5.22	0.96
0.533	0.96	2.100	16.25	3.667	6.69	5.23	0.96
0.550	0.96	2.117	16.25	3.683	6.69	5.25	0.96
0.567	0.96	2.133	16.25	3.700	6.69	5.27	0.96
0.583	0.96	2.150	16.25	3.717	6.69	5.28	0.96
0.600	0.96	2.167	16.25	3.733	6.69	5.30	0.96
0.617	0.96	2.183	16.25	3.750	6.69	5.32	0.96
0.633	0.96	2.200	16.25	3.767	3.82	5.33	0.96
0.650	0.96	2.217	16.25	3.783	3.82	5.35	0.96
0.667	0.96	2.233	16.25	3.800	3.82	5.37	0.96
0.683	0.96	2.250	16.25	3.817	3.82	5.38	0.96
0.700	0.96	2.267	43.98	3.833	3.82	5.40	0.96
0.717	0.96	2.283	43.98	3.850	3.82	5.42	0.96
0.733	0.96	2.300	43.98	3.867	3.82	5.43	0.96
0.750	0.96	2.317	43.98	3.883	3.82	5.45	0.96
0.767	0.96	2.333	43.98	3.900	3.82	5.47	0.96
0.783	0.96	2.350	43.98	3.917	3.82	5.48	0.96
0.800	0.96	2.367	43.98	3.933	3.82	5.50	0.96
0.817	0.96	2.383	43.98	3.950	3.82	5.52	0.96
0.833	0.96	2.400	43.98	3.967	3.82	5.53	0.96
0.850	0.96	2.417	43.98	3.983	3.82	5.55	0.96
0.867	0.96	2.433	43.98	4.000	3.82	5.57	0.96
0.883	0.96	2.450	43.98	4.017	3.82	5.58	0.96
0.900	0.96	2.467	43.98	4.033	3.82	5.60	0.96
0.917	0.96	2.483	43.98	4.050	3.82	5.62	0.96
0.933	0.96	2.500	43.98	4.067	3.82	5.63	0.96
0.950	0.96	2.517	43.98	4.083	3.82	5.65	0.96
0.967	0.96	2.533	43.98	4.100	3.82	5.67	0.96
0.983	0.96	2.550	43.98	4.117	3.82	5.68	0.96
1.000	0.96	2.567	43.98	4.133	3.82	5.70	0.96
1.017	0.96	2.583	43.98	4.150	3.82	5.72	0.96
1.033	0.96	2.600	43.98	4.167	3.82	5.73	0.96
1.050	0.96	2.617	43.98	4.183	3.82	5.75	0.96
1.067	0.96	2.633	43.98	4.200	3.82	5.77	0.96
1.083	0.96	2.650	43.98	4.217	3.82	5.78	0.96
1.100	0.96	2.667	43.98	4.233	3.82	5.80	0.96

1.117	0.96	2.683	43.98	4.250	3.82	5.82	0.96
1.133	0.96	2.700	43.98	4.267	1.91	5.83	0.96
1.150	0.96	2.717	43.98	4.283	1.91	5.85	0.96
1.167	0.96	2.733	43.98	4.300	1.91	5.87	0.96
1.183	0.96	2.750	43.98	4.317	1.91	5.88	0.96
1.200	0.96	2.767	12.43	4.333	1.91	5.90	0.96
1.217	0.96	2.783	12.43	4.350	1.91	5.92	0.96
1.233	0.96	2.800	12.43	4.367	1.91	5.93	0.96
1.250	0.96	2.817	12.43	4.383	1.91	5.95	0.96
1.267	5.74	2.833	12.43	4.400	1.91	5.97	0.96
1.283	5.74	2.850	12.43	4.417	1.91	5.98	0.96
1.300	5.74	2.867	12.43	4.433	1.91	6.00	0.96
1.317	5.74	2.883	12.43	4.450	1.91	6.02	0.96
1.333	5.74	2.900	12.43	4.467	1.91	6.03	0.96
1.350	5.74	2.917	12.43	4.483	1.91	6.05	0.96
1.367	5.74	2.933	12.43	4.500	1.91	6.07	0.96
1.383	5.74	2.950	12.43	4.517	1.91	6.08	0.96
1.400	5.74	2.967	12.43	4.533	1.91	6.10	0.96
1.417	5.74	2.983	12.43	4.550	1.91	6.12	0.96
1.433	5.74	3.000	12.43	4.567	1.91	6.13	0.96
1.450	5.74	3.017	12.43	4.583	1.91	6.15	0.96
1.467	5.74	3.033	12.43	4.600	1.91	6.17	0.96
1.483	5.74	3.050	12.43	4.617	1.91	6.18	0.96
1.500	5.74	3.067	12.43	4.633	1.91	6.20	0.96
1.517	5.74	3.083	12.43	4.650	1.91	6.22	0.96
1.533	5.74	3.100	12.43	4.667	1.91	6.23	0.96
1.550	5.74	3.117	12.43	4.683	1.91	6.25	0.96
1.567	5.74	3.133	12.43	4.700	1.91		

Max.Eff.Inten.(mm/hr)=	43.98	27.63	
over (min)	5.00	7.00	
Storage Coeff. (min)=	3.88 (ii)	6.24 (ii)	
Unit Hyd. Tpeak (min)=	5.00	7.00	
Unit Hyd. peak (cms)=	0.27	0.17	
			TOTALS
PEAK FLOW (cms)=	0.24	0.00	0.246 (iii)
TIME TO PEAK (hrs)=	2.75	2.77	2.75
RUNOFF VOLUME (mm)=	46.81	23.53	46.58
TOTAL RAINFALL (mm)=	47.81	47.81	47.81
RUNOFF COEFFICIENT =	0.98	0.49	0.97

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7644)| IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0433	0.1140
	0.0182	0.0580	0.0507	0.1280
	0.0280	0.0775	0.0571	0.1440
	0.0343	0.0930	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7643)	2.020	0.246	2.75	46.58
OUTFLOW: ID= 1 (7644)	2.020	0.026	3.88	45.14

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.54
TIME SHIFT OF PEAK FLOW (min)= 68.00
MAXIMUM STORAGE USED (ha.m.)= 0.0733

```
      V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
      V    V   I    SS     U   U   A A   L
       V  V    I      SS   U   U  AAAAA  L
        V V    I       SS  U   U  A   A  L
```

```
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
```

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-a4eb17eaad57\1f313dd2-5b7d-4c8c-b096-e1828094c71b\s
Summary filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-a4eb17eaad57\1f313dd2-5b7d-4c8c-b096-e1828094c71b\s

DATE: 06/14/2024 TIME: 12:48:35

USER:

COMMENTS: _____

****
** SIMULATION : 6. 5 Year 12 Hour AES (Bloor, **
****

READ STORM | Ptotal= 54.38 mm	Filename: C:\Users\ygollamudi\AppData\Local\Temp\3c3f87d5-a26e-4c6b-b2ae-56a7ba29ab7f\7480bb22 Comments: 5 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	3.25	9.25	6.50	3.81	9.75	0.54
0.25	0.54	3.50	9.25	6.75	3.81	10.00	0.54
0.50	0.54	3.75	9.25	7.00	3.81	10.25	0.54
0.75	0.54	4.00	9.25	7.25	2.18	10.50	0.54
1.00	0.54	4.25	25.02	7.50	2.18	10.75	0.54
1.25	0.54	4.50	25.02	7.75	2.18	11.00	0.54
1.50	0.54	4.75	25.02	8.00	2.18	11.25	0.54
1.75	0.54	5.00	25.02	8.25	1.09	11.50	0.54
2.00	0.54	5.25	7.07	8.50	1.09	11.75	0.54
2.25	3.26	5.50	7.07	8.75	1.09	12.00	0.54
2.50	3.26	5.75	7.07	9.00	1.09		
2.75	3.26	6.00	7.07	9.25	0.54		
3.00	3.26	6.25	3.81	9.50	0.54		

CALIB | STANDHYD (7567)| ID= 1 DT= 1.0 min |	Area (ha)= 2.72 Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.69	0.03
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	134.66	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

GEI Consultants

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	3.26	6.150	7.07	9.22	1.09
0.033	0.00	3.100	3.26	6.167	7.07	9.23	1.09
0.050	0.00	3.117	3.26	6.183	7.07	9.25	1.09
0.067	0.00	3.133	3.26	6.200	7.07	9.27	0.54
0.083	0.00	3.150	3.26	6.217	7.07	9.28	0.54
0.100	0.00	3.167	3.26	6.233	7.07	9.30	0.54
0.117	0.00	3.183	3.26	6.250	7.06	9.32	0.54
0.133	0.00	3.200	3.26	6.267	3.81	9.33	0.54
0.150	0.00	3.217	3.26	6.283	3.81	9.35	0.54
0.167	0.00	3.233	3.26	6.300	3.81	9.37	0.54
0.183	0.00	3.250	3.26	6.317	3.81	9.38	0.54
0.200	0.00	3.267	9.25	6.333	3.81	9.40	0.54
0.217	0.00	3.283	9.25	6.350	3.81	9.42	0.54
0.233	0.00	3.300	9.25	6.367	3.81	9.43	0.54
0.250	0.00	3.317	9.25	6.383	3.81	9.45	0.54
0.267	0.54	3.333	9.25	6.400	3.81	9.47	0.54
0.283	0.54	3.350	9.25	6.417	3.81	9.48	0.54
0.300	0.54	3.367	9.25	6.433	3.81	9.50	0.54
0.317	0.54	3.383	9.25	6.450	3.81	9.52	0.54
0.333	0.54	3.400	9.25	6.467	3.81	9.53	0.54
0.350	0.54	3.417	9.25	6.483	3.81	9.55	0.54
0.367	0.54	3.433	9.25	6.500	3.81	9.57	0.54
0.383	0.54	3.450	9.25	6.517	3.81	9.58	0.54
0.400	0.54	3.467	9.25	6.533	3.81	9.60	0.54
0.417	0.54	3.483	9.25	6.550	3.81	9.62	0.54
0.433	0.54	3.500	9.25	6.567	3.81	9.63	0.54
0.450	0.54	3.517	9.25	6.583	3.81	9.65	0.54
0.467	0.54	3.533	9.25	6.600	3.81	9.67	0.54
0.483	0.54	3.550	9.25	6.617	3.81	9.68	0.54
0.500	0.54	3.567	9.25	6.633	3.81	9.70	0.54
0.517	0.54	3.583	9.25	6.650	3.81	9.72	0.54
0.533	0.54	3.600	9.25	6.667	3.81	9.73	0.54
0.550	0.54	3.617	9.25	6.683	3.81	9.75	0.54
0.567	0.54	3.633	9.25	6.700	3.81	9.77	0.54
0.583	0.54	3.650	9.25	6.717	3.81	9.78	0.54
0.600	0.54	3.667	9.25	6.733	3.81	9.80	0.54
0.617	0.54	3.683	9.25	6.750	3.81	9.82	0.54
0.633	0.54	3.700	9.25	6.767	3.81	9.83	0.54
0.650	0.54	3.717	9.25	6.783	3.81	9.85	0.54
0.667	0.54	3.733	9.25	6.800	3.81	9.87	0.54
0.683	0.54	3.750	9.25	6.817	3.81	9.88	0.54
0.700	0.54	3.767	9.25	6.833	3.81	9.90	0.54
0.717	0.54	3.783	9.25	6.850	3.81	9.92	0.54
0.733	0.54	3.800	9.25	6.867	3.81	9.93	0.54
0.750	0.54	3.817	9.25	6.883	3.81	9.95	0.54
0.767	0.54	3.833	9.25	6.900	3.81	9.97	0.54
0.783	0.54	3.850	9.25	6.917	3.81	9.98	0.54
0.800	0.54	3.867	9.25	6.933	3.81	10.00	0.54
0.817	0.54	3.883	9.25	6.950	3.81	10.02	0.54
0.833	0.54	3.900	9.25	6.967	3.81	10.03	0.54
0.850	0.54	3.917	9.25	6.983	3.81	10.05	0.54
0.867	0.54	3.933	9.25	7.000	3.81	10.07	0.54
0.883	0.54	3.950	9.25	7.017	3.81	10.08	0.54
0.900	0.54	3.967	9.25	7.033	3.81	10.10	0.54
0.917	0.54	3.983	9.25	7.050	3.81	10.12	0.54
0.933	0.54	4.000	9.25	7.067	3.81	10.13	0.54
0.950	0.54	4.017	9.25	7.083	3.81	10.15	0.54
0.967	0.54	4.033	9.25	7.100	3.81	10.17	0.54
0.983	0.54	4.050	9.25	7.117	3.81	10.18	0.54
1.000	0.54	4.067	9.25	7.133	3.81	10.20	0.54
1.017	0.54	4.083	9.25	7.150	3.81	10.22	0.54
1.033	0.54	4.100	9.25	7.167	3.81	10.23	0.54
1.050	0.54	4.117	9.25	7.183	3.81	10.25	0.54
1.067	0.54	4.133	9.25	7.200	3.81	10.27	0.54
1.083	0.54	4.150	9.25	7.217	3.81	10.28	0.54
1.100	0.54	4.167	9.25	7.233	3.81	10.30	0.54
1.117	0.54	4.183	9.25	7.250	3.81	10.32	0.54
1.133	0.54	4.200	9.25	7.267	2.18	10.33	0.54
1.150	0.54	4.217	9.25	7.283	2.18	10.35	0.54
1.167	0.54	4.233	9.25	7.300	2.18	10.37	0.54
1.183	0.54	4.250	9.25	7.317	2.18	10.38	0.54
1.200	0.54	4.267	25.02	7.333	2.18	10.40	0.54
1.217	0.54	4.283	25.02	7.350	2.18	10.42	0.54
1.233	0.54	4.300	25.02	7.367	2.18	10.43	0.54
1.250	0.54	4.317	25.02	7.383	2.18	10.45	0.54
1.267	0.54	4.333	25.02	7.400	2.18	10.47	0.54
1.283	0.54	4.350	25.02	7.417	2.18	10.48	0.54
1.300	0.54	4.367	25.02	7.433	2.18	10.50	0.54
1.317	0.54	4.383	25.02	7.450	2.18	10.52	0.54
1.333	0.54	4.400	25.02	7.467	2.18	10.53	0.54
1.350	0.54	4.417	25.02	7.483	2.18	10.55	0.54
1.367	0.54	4.433	25.02	7.500	2.18	10.57	0.54
1.383	0.54	4.450	25.02	7.517	2.18	10.58	0.54
1.400	0.54	4.467	25.02	7.533	2.18	10.60	0.54
1.417	0.54	4.483	25.02	7.550	2.18	10.62	0.54
1.433	0.54	4.500	25.02	7.567	2.18	10.63	0.54
1.450	0.54	4.517	25.02	7.583	2.18	10.65	0.54
1.467	0.54	4.533	25.02	7.600	2.18	10.67	0.54
1.483	0.54	4.550	25.02	7.617	2.18	10.68	0.54
1.500	0.54	4.567	25.02	7.633	2.18	10.70	0.54
1.517	0.54	4.583	25.02	7.650	2.18	10.72	0.54
1.533	0.54	4.600	25.02	7.667	2.18	10.73	0.54
1.550	0.54	4.617	25.02	7.683	2.18	10.75	0.54
1.567	0.54	4.633	25.02	7.700	2.18	10.77	0.54
1.583	0.54	4.650	25.02	7.717	2.18	10.78	0.54
1.600	0.54	4.667	25.02	7.733	2.18	10.80	0.54
1.617	0.54	4.683	25.02	7.750	2.18	10.82	0.54
1.633	0.54	4.700	25.02	7.767	2.18	10.83	0.54
1.650	0.54	4.717	25.02	7.783	2.18	10.85	0.54
1.667	0.54	4.733	25.02	7.800	2.18	10.87	0.54
1.683	0.54	4.750	25.02	7.817	2.18	10.88	0.54
1.700	0.54	4.767	25.02	7.833	2.18	10.90	0.54
1.717	0.54	4.783	25.02	7.850	2.18	10.92	0.54
1.733	0.54	4.800	25.02	7.867	2.18	10.93	0.54
1.750	0.54	4.817	25.02	7.883	2.18	10.95	0.54
1.767	0.54	4.833	25.02	7.900	2.18	10.97	0.54
1.783	0.54	4.850	25.02	7.917	2.18	10.98	0.54
1.800	0.54	4.867	25.02	7.933	2.18	11.00	0.54
1.817	0.54	4.883	25.02	7.950	2.18	11.02	0.54
1.833	0.54	4.900	25.02	7.967	2.18	11.03	0.54
1.850	0.54	4.917	25.02	7.983	2.18	11.05	0.54
1.867	0.54	4.933	25.02	8.000	2.18	11.07	0.54
1.883	0.54	4.950	25.02	8.017	2.18	11.08	0.54
1.900	0.54	4.967	25.02	8.033	2.18	11.10	0.54
1.917	0.54	4.983	25.02	8.050	2.18	11.12	0.54
1.933	0.54	5.000	25.02	8.067	2.18	11.13	0.54
1.950	0.54	5.017	25.02	8.083	2.18	11.15	0.54
1.967	0.54	5.033	25.02	8.100	2.18	11.17	0.54
1.983	0.54	5.050	25.02	8.117	2.18	11.18	0.54
2.000	0.54	5.067	25.02	8.133	2.18	11.20	0.54
2.017	0.54	5.083	25.02	8.150	2.18	11.22	0.54
2.033	0.54	5.100	25.02	8.167	2.18	11.23	0.54
2.050	0.54	5.117	25.02	8.183	2.18	11.25	0.54
2.067	0.54	5.133	25.02	8.200	2.18	11.27	0.54
2.083	0.54	5.150	25.02	8.217	2.18	11.28	0.54
2.100	0.54	5.167	25.02	8.233	2.18	11.30	0.54
2.117	0.54	5.183	25.02	8.250	2.18	11.32	0.54
2.133	0.54	5.200	25.02	8.267	1.09	11.33	0.54
2.150	0.54	5.217	25.02	8.283	1.09	11.35	0.54
2.167	0.54	5.233	25.02	8.300	1.09	11.37	0.54
2.183	0.54	5.250	25.01	8.317	1.09	11.38	0.54
2.200	0.54	5.267	7.07	8.333	1.09	11.40	0.54
2.217	0.54	5.283	7.07	8.350	1.09	11.42	0.54
2.233	0.54	5.300	7.07	8.367	1.09	11.43	0.54
2.250	0.54	5.317	7.07	8.383	1.09	11.45	0.54
2.267	3.26	5.333	7.07	8.400	1.09	11.47	0.54
2.283	3.26	5.350	7.07	8.417	1.09	11.48	0.54
2.300	3.26	5.367	7.07	8.433	1.09	11.50	0.54
2.317	3.26	5.383	7.07	8.450	1.09	11.52	0.54
2.333	3.26	5.400	7.07	8.467	1.09	11.53	0.54
2.350	3.26	5.417	7.07	8.483	1.09	11.55	0.54
2.367	3.26	5.433	7.07	8.500	1.09	11.57	0.54
2.383	3.26	5.450	7.07	8.517	1.09	11.58	0.54
2.400	3.26	5.467	7.07	8.533	1.09	11.60	0.54
2.417	3.26	5.483	7.07	8.550	1.09	11.62	0.54
2.433	3.26	5.500	7.07	8.567	1.09	11.63	0.54
2.450	3.26	5.517	7.07	8.583	1.09	11.65	0.54
2.467	3.26	5.533	7.07	8.600	1.09	11.67	0.54
2.483	3.26	5.550	7.07	8.617	1.09	11.68	0.54

2.500	3.26	5.567	7.07	8.633	1.09	11.70	0.54
2.517	3.26	5.583	7.07	8.650	1.09	11.72	0.54
2.533	3.26	5.600	7.07	8.667	1.09	11.73	0.54
2.550	3.26	5.617	7.07	8.683	1.09	11.75	0.54
2.567	3.26	5.633	7.07	8.700	1.09	11.77	0.54
2.583	3.26	5.650	7.07	8.717	1.09	11.78	0.54
2.600	3.26	5.667	7.07	8.733	1.09	11.80	0.54
2.617	3.26	5.683	7.07	8.750	1.09	11.82	0.54
2.633	3.26	5.700	7.07	8.767	1.09	11.83	0.54
2.650	3.26	5.717	7.07	8.783	1.09	11.85	0.54
2.667	3.26	5.733	7.07	8.800	1.09	11.87	0.54
2.683	3.26	5.750	7.07	8.817	1.09	11.88	0.54
2.700	3.26	5.767	7.07	8.833	1.09	11.90	0.54
2.717	3.26	5.783	7.07	8.850	1.09	11.92	0.54
2.733	3.26	5.800	7.07	8.867	1.09	11.93	0.54
2.750	3.26	5.817	7.07	8.883	1.09	11.95	0.54
2.767	3.26	5.833	7.07	8.900	1.09	11.97	0.54
2.783	3.26	5.850	7.07	8.917	1.09	11.98	0.54
2.800	3.26	5.867	7.07	8.933	1.09	12.00	0.54
2.817	3.26	5.883	7.07	8.950	1.09	12.02	0.54
2.833	3.26	5.900	7.07	8.967	1.09	12.03	0.54
2.850	3.26	5.917	7.07	8.983	1.09	12.05	0.54
2.867	3.26	5.933	7.07	9.000	1.09	12.07	0.54
2.883	3.26	5.950	7.07	9.017	1.09	12.08	0.54
2.900	3.26	5.967	7.07	9.033	1.09	12.10	0.54
2.917	3.26	5.983	7.07	9.050	1.09	12.12	0.54
2.933	3.26	6.000	7.07	9.067	1.09	12.13	0.54
2.950	3.26	6.017	7.07	9.083	1.09	12.15	0.54
2.967	3.26	6.033	7.07	9.100	1.09	12.17	0.54
2.983	3.26	6.050	7.07	9.117	1.09	12.18	0.54
3.000	3.26	6.067	7.07	9.133	1.09	12.20	0.54
3.017	3.26	6.083	7.07	9.150	1.09	12.22	0.54
3.033	3.26	6.100	7.07	9.167	1.09	12.23	0.54
3.050	3.26	6.117	7.07	9.183	1.09	12.25	0.54
3.067	3.26	6.133	7.07	9.200	1.09		

Max.Eff.Inten.(mm/hr)=	25.02	17.13	
over (min)	5.00	9.00	
Storage Coeff. (min)=	5.32 (ii)	8.28 (ii)	
Unit Hyd. Tpeak (min)=	5.00	9.00	
Unit Hyd. peak (cms)=	0.22	0.13	
			TOTALS
PEAK FLOW (cms)=	0.19	0.00	0.188 (iii)
TIME TO PEAK (hrs)=	5.23	5.25	5.25
RUNOFF VOLUME (mm)=	53.38	28.62	53.13
TOTAL RAINFALL (mm)=	54.38	54.38	54.38
RUNOFF COEFFICIENT =	0.98	0.53	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7626)	OVERFLOW IS OFF				
IN= 2---> OUT= 1					
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)	
	0.0000	0.0000	0.0568	0.1530	
	0.0239	0.0780	0.0660	0.1730	
	0.0370	0.1040	0.0751	0.2000	
	0.0451	0.1250	0.0000	0.0000	

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7567)	2.720	0.188	5.25	53.13
OUTFLOW: ID= 1 (7626)	2.720	0.035	6.42	50.79

PEAK FLOW REDUCTION [Qout/Qin](%)= 18.33
TIME SHIFT OF PEAK FLOW (min)= 70.00
MAXIMUM STORAGE USED (ha.m.)= 0.0991

CALIB	Area (ha)= 1.80
STANDHYD (7624)	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00
ID= 1 DT= 1.0 min	

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.78	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	109.54	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	3.26	6.150	7.07	9.22	1.09
0.033	0.00	3.100	3.26	6.167	7.07	9.23	1.09
0.050	0.00	3.117	3.26	6.183	7.07	9.25	1.09
0.067	0.00	3.133	3.26	6.200	7.07	9.27	0.54
0.083	0.00	3.150	3.26	6.217	7.07	9.28	0.54
0.100	0.00	3.167	3.26	6.233	7.07	9.30	0.54
0.117	0.00	3.183	3.26	6.250	7.06	9.32	0.54
0.133	0.00	3.200	3.26	6.267	3.81	9.33	0.54
0.150	0.00	3.217	3.26	6.283	3.81	9.35	0.54
0.167	0.00	3.233	3.26	6.300	3.81	9.37	0.54
0.183	0.00	3.250	3.26	6.317	3.81	9.38	0.54
0.200	0.00	3.267	9.25	6.333	3.81	9.40	0.54
0.217	0.00	3.283	9.25	6.350	3.81	9.42	0.54
0.233	0.00	3.300	9.25	6.367	3.81	9.43	0.54
0.250	0.00	3.317	9.25	6.383	3.81	9.45	0.54
0.267	0.54	3.333	9.25	6.400	3.81	9.47	0.54
0.283	0.54	3.350	9.25	6.417	3.81	9.48	0.54
0.300	0.54	3.367	9.25	6.433	3.81	9.50	0.54
0.317	0.54	3.383	9.25	6.450	3.81	9.52	0.54
0.333	0.54	3.400	9.25	6.467	3.81	9.53	0.54
0.350	0.54	3.417	9.25	6.483	3.81	9.55	0.54
0.367	0.54	3.433	9.25	6.500	3.81	9.57	0.54
0.383	0.54	3.450	9.25	6.517	3.81	9.58	0.54
0.400	0.54	3.467	9.25	6.533	3.81	9.60	0.54
0.417	0.54	3.483	9.25	6.550	3.81	9.62	0.54
0.433	0.54	3.500	9.25	6.567	3.81	9.63	0.54
0.450	0.54	3.517	9.25	6.583	3.81	9.65	0.54
0.467	0.54	3.533	9.25	6.600	3.81	9.67	0.54
0.483	0.54	3.550	9.25	6.617	3.81	9.68	0.54
0.500	0.54	3.567	9.25	6.633	3.81	9.70	0.54
0.517	0.54	3.583	9.25	6.650	3.81	9.72	0.54
0.533	0.54	3.600	9.25	6.667	3.81	9.73	0.54
0.550	0.54	3.617	9.25	6.683	3.81	9.75	0.54
0.567	0.54	3.633	9.25	6.700	3.81	9.77	0.54
0.583	0.54	3.650	9.25	6.717	3.81	9.78	0.54
0.600	0.54	3.667	9.25	6.733	3.81	9.80	0.54
0.617	0.54	3.683	9.25	6.750	3.81	9.82	0.54
0.633	0.54	3.700	9.25	6.767	3.81	9.83	0.54
0.650	0.54	3.717	9.25	6.783	3.81	9.85	0.54
0.667	0.54	3.733	9.25	6.800	3.81	9.87	0.54
0.683	0.54	3.750	9.25	6.817	3.81	9.88	0.54
0.700	0.54	3.767	9.25	6.833	3.81	9.90	0.54
0.717	0.54	3.783	9.25	6.850	3.81	9.92	0.54
0.733	0.54	3.800	9.25	6.867	3.81	9.93	0.54
0.750	0.54	3.817	9.25	6.883	3.81	9.95	0.54
0.767	0.54	3.833	9.25	6.900	3.81	9.97	0.54
0.783	0.54	3.850	9.25	6.917	3.81	9.98	0.54
0.800	0.54	3.867	9.25	6.933	3.81	10.00	0.54
0.817	0.54	3.883	9.25	6.950	3.81	10.02	0.54
0.833	0.54	3.900	9.25	6.967	3.81	10.03	0.54
0.850	0.54	3.917	9.25	6.983	3.81	10.05	0.54
0.867	0.54	3.933	9.25	7.000	3.81	10.07	0.54
0.883	0.54	3.950	9.25	7.017	3.81	10.08	0.54
0.900	0.54	3.967	9.25	7.033	3.81	10.10	0.54
0.917	0.54	3.983	9.25	7.050	3.81	10.12	0.54
0.933	0.54	4.000	9.25	7.067	3.81	10.13	0.54
0.950	0.54	4.017	9.25	7.083	3.81	10.15	0.54
0.967	0.54	4.033	9.25	7.100	3.81	10.17	0.54

0.983	0.54	4.050	9.25	7.117	3.81	10.18	0.54
1.000	0.54	4.067	9.25	7.133	3.81	10.20	0.54
1.017	0.54	4.083	9.25	7.150	3.81	10.22	0.54
1.033	0.54	4.100	9.25	7.167	3.81	10.23	0.54
1.050	0.54	4.117	9.25	7.183	3.81	10.25	0.54
1.067	0.54	4.133	9.25	7.200	3.81	10.27	0.54
1.083	0.54	4.150	9.25	7.217	3.81	10.28	0.54
1.100	0.54	4.167	9.25	7.233	3.81	10.30	0.54
1.117	0.54	4.183	9.25	7.250	3.81	10.32	0.54
1.133	0.54	4.200	9.25	7.267	2.18	10.33	0.54
1.150	0.54	4.217	9.25	7.283	2.18	10.35	0.54
1.167	0.54	4.233	9.25	7.300	2.18	10.37	0.54
1.183	0.54	4.250	9.25	7.317	2.18	10.38	0.54
1.200	0.54	4.267	25.02	7.333	2.18	10.40	0.54
1.217	0.54	4.283	25.02	7.350	2.18	10.42	0.54
1.233	0.54	4.300	25.02	7.367	2.18	10.43	0.54
1.250	0.54	4.317	25.02	7.383	2.18	10.45	0.54
1.267	0.54	4.333	25.02	7.400	2.18	10.47	0.54
1.283	0.54	4.350	25.02	7.417	2.18	10.48	0.54
1.300	0.54	4.367	25.02	7.433	2.18	10.50	0.54
1.317	0.54	4.383	25.02	7.450	2.18	10.52	0.54
1.333	0.54	4.400	25.02	7.467	2.18	10.53	0.54
1.350	0.54	4.417	25.02	7.483	2.18	10.55	0.54
1.367	0.54	4.433	25.02	7.500	2.18	10.57	0.54
1.383	0.54	4.450	25.02	7.517	2.18	10.58	0.54
1.400	0.54	4.467	25.02	7.533	2.18	10.60	0.54
1.417	0.54	4.483	25.02	7.550	2.18	10.62	0.54
1.433	0.54	4.500	25.02	7.567	2.18	10.63	0.54
1.450	0.54	4.517	25.02	7.583	2.18	10.65	0.54
1.467	0.54	4.533	25.02	7.600	2.18	10.67	0.54
1.483	0.54	4.550	25.02	7.617	2.18	10.68	0.54
1.500	0.54	4.567	25.02	7.633	2.18	10.70	0.54
1.517	0.54	4.583	25.02	7.650	2.18	10.72	0.54
1.533	0.54	4.600	25.02	7.667	2.18	10.73	0.54
1.550	0.54	4.617	25.02	7.683	2.18	10.75	0.54
1.567	0.54	4.633	25.02	7.700	2.18	10.77	0.54
1.583	0.54	4.650	25.02	7.717	2.18	10.78	0.54
1.600	0.54	4.667	25.02	7.733	2.18	10.80	0.54
1.617	0.54	4.683	25.02	7.750	2.18	10.82	0.54
1.633	0.54	4.700	25.02	7.767	2.18	10.83	0.54
1.650	0.54	4.717	25.02	7.783	2.18	10.85	0.54
1.667	0.54	4.733	25.02	7.800	2.18	10.87	0.54
1.683	0.54	4.750	25.02	7.817	2.18	10.88	0.54
1.700	0.54	4.767	25.02	7.833	2.18	10.90	0.54
1.717	0.54	4.783	25.02	7.850	2.18	10.92	0.54
1.733	0.54	4.800	25.02	7.867	2.18	10.93	0.54
1.750	0.54	4.817	25.02	7.883	2.18	10.95	0.54
1.767	0.54	4.833	25.02	7.900	2.18	10.97	0.54
1.783	0.54	4.850	25.02	7.917	2.18	10.98	0.54
1.800	0.54	4.867	25.02	7.933	2.18	11.00	0.54
1.817	0.54	4.883	25.02	7.950	2.18	11.02	0.54
1.833	0.54	4.900	25.02	7.967	2.18	11.03	0.54
1.850	0.54	4.917	25.02	7.983	2.18	11.05	0.54
1.867	0.54	4.933	25.02	8.000	2.18	11.07	0.54
1.883	0.54	4.950	25.02	8.017	2.18	11.08	0.54
1.900	0.54	4.967	25.02	8.033	2.18	11.10	0.54
1.917	0.54	4.983	25.02	8.050	2.18	11.12	0.54
1.933	0.54	5.000	25.02	8.067	2.18	11.13	0.54
1.950	0.54	5.017	25.02	8.083	2.18	11.15	0.54
1.967	0.54	5.033	25.02	8.100	2.18	11.17	0.54
1.983	0.54	5.050	25.02	8.117	2.18	11.18	0.54
2.000	0.54	5.067	25.02	8.133	2.18	11.20	0.54
2.017	0.54	5.083	25.02	8.150	2.18	11.22	0.54
2.033	0.54	5.100	25.02	8.167	2.18	11.23	0.54
2.050	0.54	5.117	25.02	8.183	2.18	11.25	0.54
2.067	0.54	5.133	25.02	8.200	2.18	11.27	0.54
2.083	0.54	5.150	25.02	8.217	2.18	11.28	0.54
2.100	0.54	5.167	25.02	8.233	2.18	11.30	0.54
2.117	0.54	5.183	25.02	8.250	2.18	11.32	0.54
2.133	0.54	5.200	25.02	8.267	1.09	11.33	0.54
2.150	0.54	5.217	25.02	8.283	1.09	11.35	0.54
2.167	0.54	5.233	25.02	8.300	1.09	11.37	0.54
2.183	0.54	5.250	25.01	8.317	1.09	11.38	0.54
2.200	0.54	5.267	7.07	8.333	1.09	11.40	0.54
2.217	0.54	5.283	7.07	8.350	1.09	11.42	0.54
2.233	0.54	5.300	7.07	8.367	1.09	11.43	0.54
2.250	0.54	5.317	7.07	8.383	1.09	11.45	0.54
2.267	3.26	5.333	7.07	8.400	1.09	11.47	0.54
2.283	3.26	5.350	7.07	8.417	1.09	11.48	0.54
2.300	3.26	5.367	7.07	8.433	1.09	11.50	0.54
2.317	3.26	5.383	7.07	8.450	1.09	11.52	0.54
2.333	3.26	5.400	7.07	8.467	1.09	11.53	0.54
2.350	3.26	5.417	7.07	8.483	1.09	11.55	0.54
2.367	3.26	5.433	7.07	8.500	1.09	11.57	0.54
2.383	3.26	5.450	7.07	8.517	1.09	11.58	0.54
2.400	3.26	5.467	7.07	8.533	1.09	11.60	0.54
2.417	3.26	5.483	7.07	8.550	1.09	11.62	0.54
2.433	3.26	5.500	7.07	8.567	1.09	11.63	0.54
2.450	3.26	5.517	7.07	8.583	1.09	11.65	0.54
2.467	3.26	5.533	7.07	8.600	1.09	11.67	0.54
2.483	3.26	5.550	7.07	8.617	1.09	11.68	0.54
2.500	3.26	5.567	7.07	8.633	1.09	11.70	0.54
2.517	3.26	5.583	7.07	8.650	1.09	11.72	0.54
2.533	3.26	5.600	7.07	8.667	1.09	11.73	0.54
2.550	3.26	5.617	7.07	8.683	1.09	11.75	0.54
2.567	3.26	5.633	7.07	8.700	1.09	11.77	0.54
2.583	3.26	5.650	7.07	8.717	1.09	11.78	0.54
2.600	3.26	5.667	7.07	8.733	1.09	11.80	0.54
2.617	3.26	5.683	7.07	8.750	1.09	11.82	0.54
2.633	3.26	5.700	7.07	8.767	1.09	11.83	0.54
2.650	3.26	5.717	7.07	8.783	1.09	11.85	0.54
2.667	3.26	5.733	7.07	8.800	1.09	11.87	0.54
2.683	3.26	5.750	7.07	8.817	1.09	11.88	0.54
2.700	3.26	5.767	7.07	8.833	1.09	11.90	0.54
2.717	3.26	5.783	7.07	8.850	1.09	11.92	0.54
2.733	3.26	5.800	7.07	8.867	1.09	11.93	0.54
2.750	3.26	5.817	7.07	8.883	1.09	11.95	0.54
2.767	3.26	5.833	7.07	8.900	1.09	11.97	0.54
2.783	3.26	5.850	7.07	8.917	1.09	11.98	0.54
2.800	3.26	5.867	7.07	8.933	1.09	12.00	0.54
2.817	3.26	5.883	7.07	8.950	1.09	12.02	0.54
2.833	3.26	5.900	7.07	8.967	1.09	12.03	0.54
2.850	3.26	5.917	7.07	8.983	1.09	12.05	0.54
2.867	3.26	5.933	7.07	9.000	1.09	12.07	0.54
2.883	3.26	5.950	7.07	9.017	1.09	12.08	0.54
2.900	3.26	5.967	7.07	9.033	1.09	12.10	0.54
2.917	3.26	5.983	7.07	9.050	1.09	12.12	0.54
2.933	3.26	6.000	7.07	9.067	1.09	12.13	0.54
2.950	3.26	6.017	7.07	9.083	1.09	12.15	0.54
2.967	3.26	6.033	7.07	9.100	1.09	12.17	0.54
2.983	3.26	6.050	7.07	9.117	1.09	12.18	0.54
3.000	3.26	6.067	7.07	9.133	1.09	12.20	0.54
3.017	3.26	6.083	7.07	9.150	1.09	12.22	0.54
3.033	3.26	6.100	7.07	9.167	1.09	12.23	0.54
3.050	3.26	6.117	7.07	9.183	1.09	12.25	0.54
3.067	3.26	6.133	7.07	9.200	1.09		

Max.Eff.Inten.(mm/hr)=	25.02	20.03	
over (min)	5.00	8.00	
Storage Coeff. (min)=	4.70 (ii)	7.66 (ii)	
Unit Hyd. Tpeak (min)=	5.00	8.00	
Unit Hyd. peak (cms)=	0.24	0.15	
			TOTALS
PEAK FLOW (cms)=	0.12	0.00	0.125 (iii)
TIME TO PEAK (hrs)=	5.23	5.25	5.25
RUNOFF VOLUME (mm)=	53.38	34.48	53.19
TOTAL RAINFALL (mm)=	54.38	54.38	54.38
RUNOFF COEFFICIENT =	0.98	0.63	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 90.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7625)|	OVERFLOW IS OFF			
IN= 2---> OUT= 1 |				
DT= 1.0 min |	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)

0.0000	0.0000	0.0389	0.1013
0.0164	0.0514	0.0456	0.1141
0.0252	0.0690	0.0514	0.1288
0.0309	0.0825	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7624)	1.800	0.125	5.25	53.19
OUTFLOW: ID= 1 (7625)	1.800	0.023	6.40	51.12

PEAK FLOW REDUCTION [Qout/Qin](%)= 18.69
TIME SHIFT OF PEAK FLOW (min)= 69.00
MAXIMUM STORAGE USED (ha.m.)= 0.0653

CALIB	
STANDHYD (7623)	Area (ha)= 1.15
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.14	0.01
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	87.56	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	3.26	6.150	7.07	9.22	1.09
0.033	0.00	3.100	3.26	6.167	7.07	9.23	1.09
0.050	0.00	3.117	3.26	6.183	7.07	9.25	1.09
0.067	0.00	3.133	3.26	6.200	7.07	9.27	0.54
0.083	0.00	3.150	3.26	6.217	7.07	9.28	0.54
0.100	0.00	3.167	3.26	6.233	7.07	9.30	0.54
0.117	0.00	3.183	3.26	6.250	7.06	9.32	0.54
0.133	0.00	3.200	3.26	6.267	3.81	9.33	0.54
0.150	0.00	3.217	3.26	6.283	3.81	9.35	0.54
0.167	0.00	3.233	3.26	6.300	3.81	9.37	0.54
0.183	0.00	3.250	3.26	6.317	3.81	9.38	0.54
0.200	0.00	3.267	9.25	6.333	3.81	9.40	0.54
0.217	0.00	3.283	9.25	6.350	3.81	9.42	0.54
0.233	0.00	3.300	9.25	6.367	3.81	9.43	0.54
0.250	0.00	3.317	9.25	6.383	3.81	9.45	0.54
0.267	0.54	3.333	9.25	6.400	3.81	9.47	0.54
0.283	0.54	3.350	9.25	6.417	3.81	9.48	0.54
0.300	0.54	3.367	9.25	6.433	3.81	9.50	0.54
0.317	0.54	3.383	9.25	6.450	3.81	9.52	0.54
0.333	0.54	3.400	9.25	6.467	3.81	9.53	0.54
0.350	0.54	3.417	9.25	6.483	3.81	9.55	0.54
0.367	0.54	3.433	9.25	6.500	3.81	9.57	0.54
0.383	0.54	3.450	9.25	6.517	3.81	9.58	0.54
0.400	0.54	3.467	9.25	6.533	3.81	9.60	0.54
0.417	0.54	3.483	9.25	6.550	3.81	9.62	0.54
0.433	0.54	3.500	9.25	6.567	3.81	9.63	0.54
0.450	0.54	3.517	9.25	6.583	3.81	9.65	0.54
0.467	0.54	3.533	9.25	6.600	3.81	9.67	0.54
0.483	0.54	3.550	9.25	6.617	3.81	9.68	0.54
0.500	0.54	3.567	9.25	6.633	3.81	9.70	0.54
0.517	0.54	3.583	9.25	6.650	3.81	9.72	0.54
0.533	0.54	3.600	9.25	6.667	3.81	9.73	0.54
0.550	0.54	3.617	9.25	6.683	3.81	9.75	0.54
0.567	0.54	3.633	9.25	6.700	3.81	9.77	0.54
0.583	0.54	3.650	9.25	6.717	3.81	9.78	0.54
0.600	0.54	3.667	9.25	6.733	3.81	9.80	0.54
0.617	0.54	3.683	9.25	6.750	3.81	9.82	0.54
0.633	0.54	3.700	9.25	6.767	3.81	9.83	0.54
0.650	0.54	3.717	9.25	6.783	3.81	9.85	0.54
0.667	0.54	3.733	9.25	6.800	3.81	9.87	0.54
0.683	0.54	3.750	9.25	6.817	3.81	9.88	0.54
0.700	0.54	3.767	9.25	6.833	3.81	9.90	0.54
0.717	0.54	3.783	9.25	6.850	3.81	9.92	0.54
0.733	0.54	3.800	9.25	6.867	3.81	9.93	0.54
0.750	0.54	3.817	9.25	6.883	3.81	9.95	0.54
0.767	0.54	3.833	9.25	6.900	3.81	9.97	0.54
0.783	0.54	3.850	9.25	6.917	3.81	9.98	0.54
0.800	0.54	3.867	9.25	6.933	3.81	10.00	0.54
0.817	0.54	3.883	9.25	6.950	3.81	10.02	0.54
0.833	0.54	3.900	9.25	6.967	3.81	10.03	0.54
0.850	0.54	3.917	9.25	6.983	3.81	10.05	0.54
0.867	0.54	3.933	9.25	7.000	3.81	10.07	0.54
0.883	0.54	3.950	9.25	7.017	3.81	10.08	0.54
0.900	0.54	3.967	9.25	7.033	3.81	10.10	0.54
0.917	0.54	3.983	9.25	7.050	3.81	10.12	0.54
0.933	0.54	4.000	9.25	7.067	3.81	10.13	0.54
0.950	0.54	4.017	9.25	7.083	3.81	10.15	0.54
0.967	0.54	4.033	9.25	7.100	3.81	10.17	0.54
0.983	0.54	4.050	9.25	7.117	3.81	10.18	0.54
1.000	0.54	4.067	9.25	7.133	3.81	10.20	0.54
1.017	0.54	4.083	9.25	7.150	3.81	10.22	0.54
1.033	0.54	4.100	9.25	7.167	3.81	10.23	0.54
1.050	0.54	4.117	9.25	7.183	3.81	10.25	0.54
1.067	0.54	4.133	9.25	7.200	3.81	10.27	0.54
1.083	0.54	4.150	9.25	7.217	3.81	10.28	0.54
1.100	0.54	4.167	9.25	7.233	3.81	10.30	0.54
1.117	0.54	4.183	9.25	7.250	3.81	10.32	0.54
1.133	0.54	4.200	9.25	7.267	2.18	10.33	0.54
1.150	0.54	4.217	9.25	7.283	2.18	10.35	0.54
1.167	0.54	4.233	9.25	7.300	2.18	10.37	0.54
1.183	0.54	4.250	9.25	7.317	2.18	10.38	0.54
1.200	0.54	4.267	25.02	7.333	2.18	10.40	0.54
1.217	0.54	4.283	25.02	7.350	2.18	10.42	0.54
1.233	0.54	4.300	25.02	7.367	2.18	10.43	0.54
1.250	0.54	4.317	25.02	7.383	2.18	10.45	0.54
1.267	0.54	4.333	25.02	7.400	2.18	10.47	0.54
1.283	0.54	4.350	25.02	7.417	2.18	10.48	0.54
1.300	0.54	4.367	25.02	7.433	2.18	10.50	0.54
1.317	0.54	4.383	25.02	7.450	2.18	10.52	0.54
1.333	0.54	4.400	25.02	7.467	2.18	10.53	0.54
1.350	0.54	4.417	25.02	7.483	2.18	10.55	0.54
1.367	0.54	4.433	25.02	7.500	2.18	10.57	0.54
1.383	0.54	4.450	25.02	7.517	2.18	10.58	0.54
1.400	0.54	4.467	25.02	7.533	2.18	10.60	0.54
1.417	0.54	4.483	25.02	7.550	2.18	10.62	0.54
1.433	0.54	4.500	25.02	7.567	2.18	10.63	0.54
1.450	0.54	4.517	25.02	7.583	2.18	10.65	0.54
1.467	0.54	4.533	25.02	7.600	2.18	10.67	0.54
1.483	0.54	4.550	25.02	7.617	2.18	10.68	0.54
1.500	0.54	4.567	25.02	7.633	2.18	10.70	0.54
1.517	0.54	4.583	25.02	7.650	2.18	10.72	0.54
1.533	0.54	4.600	25.02	7.667	2.18	10.73	0.54
1.550	0.54	4.617	25.02	7.683	2.18	10.75	0.54
1.567	0.54	4.633	25.02	7.700	2.18	10.77	0.54
1.583	0.54	4.650	25.02	7.717	2.18	10.78	0.54
1.600	0.54	4.667	25.02	7.733	2.18	10.80	0.54
1.617	0.54	4.683	25.02	7.750	2.18	10.82	0.54
1.633	0.54	4.700	25.02	7.767	2.18	10.83	0.54
1.650	0.54	4.717	25.02	7.783	2.18	10.85	0.54
1.667	0.54	4.733	25.02	7.800	2.18	10.87	0.54
1.683	0.54	4.750	25.02	7.817	2.18	10.88	0.54
1.700	0.54	4.767	25.02	7.833	2.18	10.90	0.54
1.717	0.54	4.783	25.02	7.850	2.18	10.92	0.54
1.733	0.54	4.800	25.02	7.867	2.18	10.93	0.54
1.750	0.54	4.817	25.02	7.883	2.18	10.95	0.54
1.767	0.54	4.833	25.02	7.900	2.18	10.97	0.54
1.783	0.54	4.850	25.02	7.917	2.18	10.98	0.54
1.800	0.54	4.867	25.02	7.933	2.18	11.00	0.54
1.817	0.54	4.883	25.02	7.950	2.18	11.02	0.54
1.833	0.54	4.900	25.02	7.967	2.18	11.03	0.54
1.850	0.54	4.917	25.02	7.983	2.18	11.05	0.54
1.867	0.54	4.933	25.02	8.000	2.18	11.07	0.54
1.883	0.54	4.950	25.02	8.017	2.18	11.08	0.54
1.900	0.54	4.967	25.02	8.033	2.18	11.10	0.54
1.917	0.54	4.983	25.02	8.050	2.18	11.12	0.54
1.933	0.54	5.000	25.02	8.067	2.18	11.13	0.54
1.950	0.54	5.017	25.02	8.083	2.18	11.15	0.54
1.967	0.54	5.033	25.02	8.100	2.18	11.17	0.54
1.983	0.54	5.050	25.02	8.117	2.18	11.18	0.54

2.000	0.54	5.067	25.02	8.133	2.18	11.20	0.54
2.017	0.54	5.083	25.02	8.150	2.18	11.22	0.54
2.033	0.54	5.100	25.02	8.167	2.18	11.23	0.54
2.050	0.54	5.117	25.02	8.183	2.18	11.25	0.54
2.067	0.54	5.133	25.02	8.200	2.18	11.27	0.54
2.083	0.54	5.150	25.02	8.217	2.18	11.28	0.54
2.100	0.54	5.167	25.02	8.233	2.18	11.30	0.54
2.117	0.54	5.183	25.02	8.250	2.18	11.32	0.54
2.133	0.54	5.200	25.02	8.267	1.09	11.33	0.54
2.150	0.54	5.217	25.02	8.283	1.09	11.35	0.54
2.167	0.54	5.233	25.02	8.300	1.09	11.37	0.54
2.183	0.54	5.250	25.01	8.317	1.09	11.38	0.54
2.200	0.54	5.267	7.07	8.333	1.09	11.40	0.54
2.217	0.54	5.283	7.07	8.350	1.09	11.42	0.54
2.233	0.54	5.300	7.07	8.367	1.09	11.43	0.54
2.250	0.54	5.317	7.07	8.383	1.09	11.45	0.54
2.267	3.26	5.333	7.07	8.400	1.09	11.47	0.54
2.283	3.26	5.350	7.07	8.417	1.09	11.48	0.54
2.300	3.26	5.367	7.07	8.433	1.09	11.50	0.54
2.317	3.26	5.383	7.07	8.450	1.09	11.52	0.54
2.333	3.26	5.400	7.07	8.467	1.09	11.53	0.54
2.350	3.26	5.417	7.07	8.483	1.09	11.55	0.54
2.367	3.26	5.433	7.07	8.500	1.09	11.57	0.54
2.383	3.26	5.450	7.07	8.517	1.09	11.58	0.54
2.400	3.26	5.467	7.07	8.533	1.09	11.60	0.54
2.417	3.26	5.483	7.07	8.550	1.09	11.62	0.54
2.433	3.26	5.500	7.07	8.567	1.09	11.63	0.54
2.450	3.26	5.517	7.07	8.583	1.09	11.65	0.54
2.467	3.26	5.533	7.07	8.600	1.09	11.67	0.54
2.483	3.26	5.550	7.07	8.617	1.09	11.68	0.54
2.500	3.26	5.567	7.07	8.633	1.09	11.70	0.54
2.517	3.26	5.583	7.07	8.650	1.09	11.72	0.54
2.533	3.26	5.600	7.07	8.667	1.09	11.73	0.54
2.550	3.26	5.617	7.07	8.683	1.09	11.75	0.54
2.567	3.26	5.633	7.07	8.700	1.09	11.77	0.54
2.583	3.26	5.650	7.07	8.717	1.09	11.78	0.54
2.600	3.26	5.667	7.07	8.733	1.09	11.80	0.54
2.617	3.26	5.683	7.07	8.750	1.09	11.82	0.54
2.633	3.26	5.700	7.07	8.767	1.09	11.83	0.54
2.650	3.26	5.717	7.07	8.783	1.09	11.85	0.54
2.667	3.26	5.733	7.07	8.800	1.09	11.87	0.54
2.683	3.26	5.750	7.07	8.817	1.09	11.88	0.54
2.700	3.26	5.767	7.07	8.833	1.09	11.90	0.54
2.717	3.26	5.783	7.07	8.850	1.09	11.92	0.54
2.733	3.26	5.800	7.07	8.867	1.09	11.93	0.54
2.750	3.26	5.817	7.07	8.883	1.09	11.95	0.54
2.767	3.26	5.833	7.07	8.900	1.09	11.97	0.54
2.783	3.26	5.850	7.07	8.917	1.09	11.98	0.54
2.800	3.26	5.867	7.07	8.933	1.09	12.00	0.54
2.817	3.26	5.883	7.07	8.950	1.09	12.02	0.54
2.833	3.26	5.900	7.07	8.967	1.09	12.03	0.54
2.850	3.26	5.917	7.07	8.983	1.09	12.05	0.54
2.867	3.26	5.933	7.07	9.000	1.09	12.07	0.54
2.883	3.26	5.950	7.07	9.017	1.09	12.08	0.54
2.900	3.26	5.967	7.07	9.033	1.09	12.10	0.54
2.917	3.26	5.983	7.07	9.050	1.09	12.12	0.54
2.933	3.26	6.000	7.07	9.067	1.09	12.13	0.54
2.950	3.26	6.017	7.07	9.083	1.09	12.15	0.54
2.967	3.26	6.033	7.07	9.100	1.09	12.17	0.54
2.983	3.26	6.050	7.07	9.117	1.09	12.18	0.54
3.000	3.26	6.067	7.07	9.133	1.09	12.20	0.54
3.017	3.26	6.083	7.07	9.150	1.09	12.22	0.54
3.033	3.26	6.100	7.07	9.167	1.09	12.23	0.54
3.050	3.26	6.117	7.07	9.183	1.09	12.25	0.54
3.067	3.26	6.133	7.07	9.200	1.09		

Max.Eff.Inten.(mm/hr)=	25.02	17.13	
over (min)	5.00	8.00	
Storage Coeff. (min)=	4.11 (ii)	7.07 (ii)	
Unit Hyd. Tpeak (min)=	5.00	8.00	
Unit Hyd. peak (cms)=	0.26	0.15	
			TOTALS
PEAK FLOW (cms)=	0.08	0.00	0.080 (iii)
TIME TO PEAK (hrs)=	5.15	5.25	5.25
RUNOFF VOLUME (mm)=	53.38	28.62	53.13
TOTAL RAINFALL (mm)=	54.38	54.38	54.38
RUNOFF COEFFICIENT =	0.98	0.53	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7622)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0258	0.0650
	0.0108	0.0330	0.0302	0.0725
	0.0167	0.0440	0.0340	0.0820
	0.0204	0.0525	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7623)	1.150	0.080	5.25	53.13
OUTFLOW: ID= 1 (7622)	1.150	0.015	6.37	51.23

PEAK FLOW REDUCTION [Qout/Qin](%)= 19.22
TIME SHIFT OF PEAK FLOW (min)= 67.00
MAXIMUM STORAGE USED (ha.m.)= 0.0414

CALIB			
STANDHYD (7629)	Area (ha)= 4.09		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	4.05	0.04	
Dep. Storage (mm)=	1.00	1.50	
Average Slope (%)=	1.00	0.50	
Length (m)=	165.13	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	3.26	6.150	7.07	9.22	1.09
0.033	0.00	3.100	3.26	6.167	7.07	9.23	1.09
0.050	0.00	3.117	3.26	6.183	7.07	9.25	1.09
0.067	0.00	3.133	3.26	6.200	7.07	9.27	0.54
0.083	0.00	3.150	3.26	6.217	7.07	9.28	0.54
0.100	0.00	3.167	3.26	6.233	7.07	9.30	0.54
0.117	0.00	3.183	3.26	6.250	7.06	9.32	0.54
0.133	0.00	3.200	3.26	6.267	3.81	9.33	0.54
0.150	0.00	3.217	3.26	6.283	3.81	9.35	0.54
0.167	0.00	3.233	3.26	6.300	3.81	9.37	0.54
0.183	0.00	3.250	3.26	6.317	3.81	9.38	0.54
0.200	0.00	3.267	9.25	6.333	3.81	9.40	0.54
0.217	0.00	3.283	9.25	6.350	3.81	9.42	0.54
0.233	0.00	3.300	9.25	6.367	3.81	9.43	0.54
0.250	0.00	3.317	9.25	6.383	3.81	9.45	0.54
0.267	0.54	3.333	9.25	6.400	3.81	9.47	0.54
0.283	0.54	3.350	9.25	6.417	3.81	9.48	0.54
0.300	0.54	3.367	9.25	6.433	3.81	9.50	0.54
0.317	0.54	3.383	9.25	6.450	3.81	9.52	0.54
0.333	0.54	3.400	9.25	6.467	3.81	9.53	0.54
0.350	0.54	3.417	9.25	6.483	3.81	9.55	0.54
0.367	0.54	3.433	9.25	6.500	3.81	9.57	0.54
0.383	0.54	3.450	9.25	6.517	3.81	9.58	0.54
0.400	0.54	3.467	9.25	6.533	3.81	9.60	0.54
0.417	0.54	3.483	9.25	6.550	3.81	9.62	0.54
0.433	0.54	3.500	9.25	6.567	3.81	9.63	0.54
0.450	0.54	3.517	9.25	6.583	3.81	9.65	0.54
0.467	0.54	3.533	9.25	6.600	3.81	9.67	0.54

0.483	0.54	3.550	9.25	6.617	3.81	9.68	0.54
0.500	0.54	3.567	9.25	6.633	3.81	9.70	0.54
0.517	0.54	3.583	9.25	6.650	3.81	9.72	0.54
0.533	0.54	3.600	9.25	6.667	3.81	9.73	0.54
0.550	0.54	3.617	9.25	6.683	3.81	9.75	0.54
0.567	0.54	3.633	9.25	6.700	3.81	9.77	0.54
0.583	0.54	3.650	9.25	6.717	3.81	9.78	0.54
0.600	0.54	3.667	9.25	6.733	3.81	9.80	0.54
0.617	0.54	3.683	9.25	6.750	3.81	9.82	0.54
0.633	0.54	3.700	9.25	6.767	3.81	9.83	0.54
0.650	0.54	3.717	9.25	6.783	3.81	9.85	0.54
0.667	0.54	3.733	9.25	6.800	3.81	9.87	0.54
0.683	0.54	3.750	9.25	6.817	3.81	9.88	0.54
0.700	0.54	3.767	9.25	6.833	3.81	9.90	0.54
0.717	0.54	3.783	9.25	6.850	3.81	9.92	0.54
0.733	0.54	3.800	9.25	6.867	3.81	9.93	0.54
0.750	0.54	3.817	9.25	6.883	3.81	9.95	0.54
0.767	0.54	3.833	9.25	6.900	3.81	9.97	0.54
0.783	0.54	3.850	9.25	6.917	3.81	9.98	0.54
0.800	0.54	3.867	9.25	6.933	3.81	10.00	0.54
0.817	0.54	3.883	9.25	6.950	3.81	10.02	0.54
0.833	0.54	3.900	9.25	6.967	3.81	10.03	0.54
0.850	0.54	3.917	9.25	6.983	3.81	10.05	0.54
0.867	0.54	3.933	9.25	7.000	3.81	10.07	0.54
0.883	0.54	3.950	9.25	7.017	3.81	10.08	0.54
0.900	0.54	3.967	9.25	7.033	3.81	10.10	0.54
0.917	0.54	3.983	9.25	7.050	3.81	10.12	0.54
0.933	0.54	4.000	9.25	7.067	3.81	10.13	0.54
0.950	0.54	4.017	9.25	7.083	3.81	10.15	0.54
0.967	0.54	4.033	9.25	7.100	3.81	10.17	0.54
0.983	0.54	4.050	9.25	7.117	3.81	10.18	0.54
1.000	0.54	4.067	9.25	7.133	3.81	10.20	0.54
1.017	0.54	4.083	9.25	7.150	3.81	10.22	0.54
1.033	0.54	4.100	9.25	7.167	3.81	10.23	0.54
1.050	0.54	4.117	9.25	7.183	3.81	10.25	0.54
1.067	0.54	4.133	9.25	7.200	3.81	10.27	0.54
1.083	0.54	4.150	9.25	7.217	3.81	10.28	0.54
1.100	0.54	4.167	9.25	7.233	3.81	10.30	0.54
1.117	0.54	4.183	9.25	7.250	3.81	10.32	0.54
1.133	0.54	4.200	9.25	7.267	2.18	10.33	0.54
1.150	0.54	4.217	9.25	7.283	2.18	10.35	0.54
1.167	0.54	4.233	9.25	7.300	2.18	10.37	0.54
1.183	0.54	4.250	9.25	7.317	2.18	10.38	0.54
1.200	0.54	4.267	25.02	7.333	2.18	10.40	0.54
1.217	0.54	4.283	25.02	7.350	2.18	10.42	0.54
1.233	0.54	4.300	25.02	7.367	2.18	10.43	0.54
1.250	0.54	4.317	25.02	7.383	2.18	10.45	0.54
1.267	0.54	4.333	25.02	7.400	2.18	10.47	0.54
1.283	0.54	4.350	25.02	7.417	2.18	10.48	0.54
1.300	0.54	4.367	25.02	7.433	2.18	10.50	0.54
1.317	0.54	4.383	25.02	7.450	2.18	10.52	0.54
1.333	0.54	4.400	25.02	7.467	2.18	10.53	0.54
1.350	0.54	4.417	25.02	7.483	2.18	10.55	0.54
1.367	0.54	4.433	25.02	7.500	2.18	10.57	0.54
1.383	0.54	4.450	25.02	7.517	2.18	10.58	0.54
1.400	0.54	4.467	25.02	7.533	2.18	10.60	0.54
1.417	0.54	4.483	25.02	7.550	2.18	10.62	0.54
1.433	0.54	4.500	25.02	7.567	2.18	10.63	0.54
1.450	0.54	4.517	25.02	7.583	2.18	10.65	0.54
1.467	0.54	4.533	25.02	7.600	2.18	10.67	0.54
1.483	0.54	4.550	25.02	7.617	2.18	10.68	0.54
1.500	0.54	4.567	25.02	7.633	2.18	10.70	0.54
1.517	0.54	4.583	25.02	7.650	2.18	10.72	0.54
1.533	0.54	4.600	25.02	7.667	2.18	10.73	0.54
1.550	0.54	4.617	25.02	7.683	2.18	10.75	0.54
1.567	0.54	4.633	25.02	7.700	2.18	10.77	0.54
1.583	0.54	4.650	25.02	7.717	2.18	10.78	0.54
1.600	0.54	4.667	25.02	7.733	2.18	10.80	0.54
1.617	0.54	4.683	25.02	7.750	2.18	10.82	0.54
1.633	0.54	4.700	25.02	7.767	2.18	10.83	0.54
1.650	0.54	4.717	25.02	7.783	2.18	10.85	0.54
1.667	0.54	4.733	25.02	7.800	2.18	10.87	0.54
1.683	0.54	4.750	25.02	7.817	2.18	10.88	0.54
1.700	0.54	4.767	25.02	7.833	2.18	10.90	0.54
1.717	0.54	4.783	25.02	7.850	2.18	10.92	0.54
1.733	0.54	4.800	25.02	7.867	2.18	10.93	0.54
1.750	0.54	4.817	25.02	7.883	2.18	10.95	0.54
1.767	0.54	4.833	25.02	7.900	2.18	10.97	0.54
1.783	0.54	4.850	25.02	7.917	2.18	10.98	0.54
1.800	0.54	4.867	25.02	7.933	2.18	11.00	0.54
1.817	0.54	4.883	25.02	7.950	2.18	11.02	0.54
1.833	0.54	4.900	25.02	7.967	2.18	11.03	0.54
1.850	0.54	4.917	25.02	7.983	2.18	11.05	0.54
1.867	0.54	4.933	25.02	8.000	2.18	11.07	0.54
1.883	0.54	4.950	25.02	8.017	2.18	11.08	0.54
1.900	0.54	4.967	25.02	8.033	2.18	11.10	0.54
1.917	0.54	4.983	25.02	8.050	2.18	11.12	0.54
1.933	0.54	5.000	25.02	8.067	2.18	11.13	0.54
1.950	0.54	5.017	25.02	8.083	2.18	11.15	0.54
1.967	0.54	5.033	25.02	8.100	2.18	11.17	0.54
1.983	0.54	5.050	25.02	8.117	2.18	11.18	0.54
2.000	0.54	5.067	25.02	8.133	2.18	11.20	0.54
2.017	0.54	5.083	25.02	8.150	2.18	11.22	0.54
2.033	0.54	5.100	25.02	8.167	2.18	11.23	0.54
2.050	0.54	5.117	25.02	8.183	2.18	11.25	0.54
2.067	0.54	5.133	25.02	8.200	2.18	11.27	0.54
2.083	0.54	5.150	25.02	8.217	2.18	11.28	0.54
2.100	0.54	5.167	25.02	8.233	2.18	11.30	0.54
2.117	0.54	5.183	25.02	8.250	2.18	11.32	0.54
2.133	0.54	5.200	25.02	8.267	1.09	11.33	0.54
2.150	0.54	5.217	25.02	8.283	1.09	11.35	0.54
2.167	0.54	5.233	25.02	8.300	1.09	11.37	0.54
2.183	0.54	5.250	25.01	8.317	1.09	11.38	0.54
2.200	0.54	5.267	7.07	8.333	1.09	11.40	0.54
2.217	0.54	5.283	7.07	8.350	1.09	11.42	0.54
2.233	0.54	5.300	7.07	8.367	1.09	11.43	0.54
2.250	0.54	5.317	7.07	8.383	1.09	11.45	0.54
2.267	3.26	5.333	7.07	8.400	1.09	11.47	0.54
2.283	3.26	5.350	7.07	8.417	1.09	11.48	0.54
2.300	3.26	5.367	7.07	8.433	1.09	11.50	0.54
2.317	3.26	5.383	7.07	8.450	1.09	11.52	0.54
2.333	3.26	5.400	7.07	8.467	1.09	11.53	0.54
2.350	3.26	5.417	7.07	8.483	1.09	11.55	0.54
2.367	3.26	5.433	7.07	8.500	1.09	11.57	0.54
2.383	3.26	5.450	7.07	8.517	1.09	11.58	0.54
2.400	3.26	5.467	7.07	8.533	1.09	11.60	0.54
2.417	3.26	5.483	7.07	8.550	1.09	11.62	0.54
2.433	3.26	5.500	7.07	8.567	1.09	11.63	0.54
2.450	3.26	5.517	7.07	8.583	1.09	11.65	0.54
2.467	3.26	5.533	7.07	8.600	1.09	11.67	0.54
2.483	3.26	5.550	7.07	8.617	1.09	11.68	0.54
2.500	3.26	5.567	7.07	8.633	1.09	11.70	0.54
2.517	3.26	5.583	7.07	8.650	1.09	11.72	0.54
2.533	3.26	5.600	7.07	8.667	1.09	11.73	0.54
2.550	3.26	5.617	7.07	8.683	1.09	11.75	0.54
2.567	3.26	5.633	7.07	8.700	1.09	11.77	0.54
2.583	3.26	5.650	7.07	8.717	1.09	11.78	0.54
2.600	3.26	5.667	7.07	8.733	1.09	11.80	0.54
2.617	3.26	5.683	7.07	8.750	1.09	11.82	0.54
2.633	3.26	5.700	7.07	8.767	1.09	11.83	0.54
2.650	3.26	5.717	7.07	8.783	1.09	11.85	0.54
2.667	3.26	5.733	7.07	8.800	1.09	11.87	0.54
2.683	3.26	5.750	7.07	8.817	1.09	11.88	0.54
2.700	3.26	5.767	7.07	8.833	1.09	11.90	0.54
2.717	3.26	5.783	7.07	8.850	1.09	11.92	0.54
2.733	3.26	5.800	7.07	8.867	1.09	11.93	0.54
2.750	3.26	5.817	7.07	8.883	1.09	11.95	0.54
2.767	3.26	5.833	7.07	8.900	1.09	11.97	0.54
2.783	3.26	5.850	7.07	8.917	1.09	11.98	0.54
2.800	3.26	5.867	7.07	8.933	1.09	12.00	0.54
2.817	3.26	5.883	7.07	8.950	1.09	12.02	0.54
2.833	3.26	5.900	7.07	8.967	1.09	12.03	0.54
2.850	3.26	5.917	7.07	8.983	1.09	12.05	0.54
2.867	3.26	5.933	7.07	9.000	1.09	12.07	0.54
2.883	3.26	5.950	7.07	9.017	1.09	12.08	0.54
2.900	3.26	5.967	7.07	9.033	1.09	12.10	0.54
2.917	3.26	5.983	7.07	9.050	1.09	12.12	0.54
2.933	3.26	6.000	7.07	9.067	1.09	12.13	0.54
2.950	3.26	6.017	7.07	9.083	1.09	12.15	0.54
2.967	3.26	6.033	7.07	9.100	1.09	12.17	0.54
2.983	3.26	6.050	7.07	9.117	1.09	12.18	0.54
3.000	3.26	6.067	7.07	9.133	1.09	12.20	0.54

3.017	3.26	6.083	7.07	9.150	1.09	12.22	0.54
3.033	3.26	6.100	7.07	9.167	1.09	12.23	0.54
3.050	3.26	6.117	7.07	9.183	1.09	12.25	0.54
3.067	3.26	6.133	7.07	9.200	1.09		

Max.Eff.Inten.(mm/hr)=	25.02	17.13	
over (min)	6.00	9.00	
Storage Coeff. (min)=	6.01 (ii)	8.97 (ii)	
Unit Hyd. Tpeak (min)=	6.00	9.00	
Unit Hyd. peak (cms)=	0.19	0.13	
			TOTALS
PEAK FLOW (cms)=	0.28	0.00	0.283 (iii)
TIME TO PEAK (hrs)=	5.23	5.25	5.25
RUNOFF VOLUME (mm)=	53.37	28.62	53.13
TOTAL RAINFALL (mm)=	54.38	54.38	54.38
RUNOFF COEFFICIENT =	0.98	0.53	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7630)	OVERFLOW IS OFF
IN= 2---> OUT= 1	
DT= 1.0 min	

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0826	0.2320
0.0347	0.1170	0.0967	0.2609
0.0534	0.1580	0.1090	0.2940
0.0655	0.1890	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7629)	4.090	0.283	5.25	53.13
OUTFLOW: ID= 1 (7630)	4.090	0.050	6.47	50.53

PEAK FLOW REDUCTION [Qout/Qin](%)= 17.60
TIME SHIFT OF PEAK FLOW (min)= 73.00
MAXIMUM STORAGE USED (ha.m.)= 0.1502

CALIB	
STANDHYD (7631)	Area (ha)= 3.91
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.87	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	161.45	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	3.26	6.150	7.07	9.22	1.09
0.033	0.00	3.100	3.26	6.167	7.07	9.23	1.09
0.050	0.00	3.117	3.26	6.183	7.07	9.25	1.09
0.067	0.00	3.133	3.26	6.200	7.07	9.27	0.54
0.083	0.00	3.150	3.26	6.217	7.07	9.28	0.54
0.100	0.00	3.167	3.26	6.233	7.07	9.30	0.54
0.117	0.00	3.183	3.26	6.250	7.06	9.32	0.54
0.133	0.00	3.200	3.26	6.267	3.81	9.33	0.54
0.150	0.00	3.217	3.26	6.283	3.81	9.35	0.54
0.167	0.00	3.233	3.26	6.300	3.81	9.37	0.54
0.183	0.00	3.250	3.26	6.317	3.81	9.38	0.54
0.200	0.00	3.267	9.25	6.333	3.81	9.40	0.54
0.217	0.00	3.283	9.25	6.350	3.81	9.42	0.54
0.233	0.00	3.300	9.25	6.367	3.81	9.43	0.54
0.250	0.00	3.317	9.25	6.383	3.81	9.45	0.54
0.267	0.54	3.333	9.25	6.400	3.81	9.47	0.54
0.283	0.54	3.350	9.25	6.417	3.81	9.48	0.54
0.300	0.54	3.367	9.25	6.433	3.81	9.50	0.54
0.317	0.54	3.383	9.25	6.450	3.81	9.52	0.54
0.333	0.54	3.400	9.25	6.467	3.81	9.53	0.54
0.350	0.54	3.417	9.25	6.483	3.81	9.55	0.54
0.367	0.54	3.433	9.25	6.500	3.81	9.57	0.54
0.383	0.54	3.450	9.25	6.517	3.81	9.58	0.54
0.400	0.54	3.467	9.25	6.533	3.81	9.60	0.54
0.417	0.54	3.483	9.25	6.550	3.81	9.62	0.54
0.433	0.54	3.500	9.25	6.567	3.81	9.63	0.54
0.450	0.54	3.517	9.25	6.583	3.81	9.65	0.54
0.467	0.54	3.533	9.25	6.600	3.81	9.67	0.54
0.483	0.54	3.550	9.25	6.617	3.81	9.68	0.54
0.500	0.54	3.567	9.25	6.633	3.81	9.70	0.54
0.517	0.54	3.583	9.25	6.650	3.81	9.72	0.54
0.533	0.54	3.600	9.25	6.667	3.81	9.73	0.54
0.550	0.54	3.617	9.25	6.683	3.81	9.75	0.54
0.567	0.54	3.633	9.25	6.700	3.81	9.77	0.54
0.583	0.54	3.650	9.25	6.717	3.81	9.78	0.54
0.600	0.54	3.667	9.25	6.733	3.81	9.80	0.54
0.617	0.54	3.683	9.25	6.750	3.81	9.82	0.54
0.633	0.54	3.700	9.25	6.767	3.81	9.83	0.54
0.650	0.54	3.717	9.25	6.783	3.81	9.85	0.54
0.667	0.54	3.733	9.25	6.800	3.81	9.87	0.54
0.683	0.54	3.750	9.25	6.817	3.81	9.88	0.54
0.700	0.54	3.767	9.25	6.833	3.81	9.90	0.54
0.717	0.54	3.783	9.25	6.850	3.81	9.92	0.54
0.733	0.54	3.800	9.25	6.867	3.81	9.93	0.54
0.750	0.54	3.817	9.25	6.883	3.81	9.95	0.54
0.767	0.54	3.833	9.25	6.900	3.81	9.97	0.54
0.783	0.54	3.850	9.25	6.917	3.81	9.98	0.54
0.800	0.54	3.867	9.25	6.933	3.81	10.00	0.54
0.817	0.54	3.883	9.25	6.950	3.81	10.02	0.54
0.833	0.54	3.900	9.25	6.967	3.81	10.03	0.54
0.850	0.54	3.917	9.25	6.983	3.81	10.05	0.54
0.867	0.54	3.933	9.25	7.000	3.81	10.07	0.54
0.883	0.54	3.950	9.25	7.017	3.81	10.08	0.54
0.900	0.54	3.967	9.25	7.033	3.81	10.10	0.54
0.917	0.54	3.983	9.25	7.050	3.81	10.12	0.54
0.933	0.54	4.000	9.25	7.067	3.81	10.13	0.54
0.950	0.54	4.017	9.25	7.083	3.81	10.15	0.54
0.967	0.54	4.033	9.25	7.100	3.81	10.17	0.54
0.983	0.54	4.050	9.25	7.117	3.81	10.18	0.54
1.000	0.54	4.067	9.25	7.133	3.81	10.20	0.54
1.017	0.54	4.083	9.25	7.150	3.81	10.22	0.54
1.033	0.54	4.100	9.25	7.167	3.81	10.23	0.54
1.050	0.54	4.117	9.25	7.183	3.81	10.25	0.54
1.067	0.54	4.133	9.25	7.200	3.81	10.27	0.54
1.083	0.54	4.150	9.25	7.217	3.81	10.28	0.54
1.100	0.54	4.167	9.25	7.233	3.81	10.30	0.54
1.117	0.54	4.183	9.25	7.250	3.81	10.32	0.54
1.133	0.54	4.200	9.25	7.267	2.18	10.33	0.54
1.150	0.54	4.217	9.25	7.283	2.18	10.35	0.54
1.167	0.54	4.233	9.25	7.300	2.18	10.37	0.54
1.183	0.54	4.250	9.25	7.317	2.18	10.38	0.54
1.200	0.54	4.267	25.02	7.333	2.18	10.40	0.54
1.217	0.54	4.283	25.02	7.350	2.18	10.42	0.54
1.233	0.54	4.300	25.02	7.367	2.18	10.43	0.54
1.250	0.54	4.317	25.02	7.383	2.18	10.45	0.54
1.267	0.54	4.333	25.02	7.400	2.18	10.47	0.54
1.283	0.54	4.350	25.02	7.417	2.18	10.48	0.54
1.300	0.54	4.367	25.02	7.433	2.18	10.50	0.54
1.317	0.54	4.383	25.02	7.450	2.18	10.52	0.54
1.333	0.54	4.400	25.02	7.467	2.18	10.53	0.54
1.350	0.54	4.417	25.02	7.483	2.18	10.55	0.54
1.367	0.54	4.433	25.02	7.500	2.18	10.57	0.54
1.383	0.54	4.450	25.02	7.517	2.18	10.58	0.54
1.400	0.54	4.467	25.02	7.533	2.18	10.60	0.54
1.417	0.54	4.483	25.02	7.550	2.18	10.62	0.54
1.433	0.54	4.500	25.02	7.567	2.18	10.63	0.54
1.450	0.54	4.517	25.02	7.583	2.18	10.65	0.54
1.467	0.54	4.533	25.02	7.600	2.18	10.67	0.54
1.483	0.54	4.550	25.02	7.617	2.18	10.68	0.54

1.500	0.54	4.567	25.02	7.633	2.18	10.70	0.54
1.517	0.54	4.583	25.02	7.650	2.18	10.72	0.54
1.533	0.54	4.600	25.02	7.667	2.18	10.73	0.54
1.550	0.54	4.617	25.02	7.683	2.18	10.75	0.54
1.567	0.54	4.633	25.02	7.700	2.18	10.77	0.54
1.583	0.54	4.650	25.02	7.717	2.18	10.78	0.54
1.600	0.54	4.667	25.02	7.733	2.18	10.80	0.54
1.617	0.54	4.683	25.02	7.750	2.18	10.82	0.54
1.633	0.54	4.700	25.02	7.767	2.18	10.83	0.54
1.650	0.54	4.717	25.02	7.783	2.18	10.85	0.54
1.667	0.54	4.733	25.02	7.800	2.18	10.87	0.54
1.683	0.54	4.750	25.02	7.817	2.18	10.88	0.54
1.700	0.54	4.767	25.02	7.833	2.18	10.90	0.54
1.717	0.54	4.783	25.02	7.850	2.18	10.92	0.54
1.733	0.54	4.800	25.02	7.867	2.18	10.93	0.54
1.750	0.54	4.817	25.02	7.883	2.18	10.95	0.54
1.767	0.54	4.833	25.02	7.900	2.18	10.97	0.54
1.783	0.54	4.850	25.02	7.917	2.18	10.98	0.54
1.800	0.54	4.867	25.02	7.933	2.18	11.00	0.54
1.817	0.54	4.883	25.02	7.950	2.18	11.02	0.54
1.833	0.54	4.900	25.02	7.967	2.18	11.03	0.54
1.850	0.54	4.917	25.02	7.983	2.18	11.05	0.54
1.867	0.54	4.933	25.02	8.000	2.18	11.07	0.54
1.883	0.54	4.950	25.02	8.017	2.18	11.08	0.54
1.900	0.54	4.967	25.02	8.033	2.18	11.10	0.54
1.917	0.54	4.983	25.02	8.050	2.18	11.12	0.54
1.933	0.54	5.000	25.02	8.067	2.18	11.13	0.54
1.950	0.54	5.017	25.02	8.083	2.18	11.15	0.54
1.967	0.54	5.033	25.02	8.100	2.18	11.17	0.54
1.983	0.54	5.050	25.02	8.117	2.18	11.18	0.54
2.000	0.54	5.067	25.02	8.133	2.18	11.20	0.54
2.017	0.54	5.083	25.02	8.150	2.18	11.22	0.54
2.033	0.54	5.100	25.02	8.167	2.18	11.23	0.54
2.050	0.54	5.117	25.02	8.183	2.18	11.25	0.54
2.067	0.54	5.133	25.02	8.200	2.18	11.27	0.54
2.083	0.54	5.150	25.02	8.217	2.18	11.28	0.54
2.100	0.54	5.167	25.02	8.233	2.18	11.30	0.54
2.117	0.54	5.183	25.02	8.250	2.18	11.32	0.54
2.133	0.54	5.200	25.02	8.267	1.09	11.33	0.54
2.150	0.54	5.217	25.02	8.283	1.09	11.35	0.54
2.167	0.54	5.233	25.02	8.300	1.09	11.37	0.54
2.183	0.54	5.250	25.01	8.317	1.09	11.38	0.54
2.200	0.54	5.267	7.07	8.333	1.09	11.40	0.54
2.217	0.54	5.283	7.07	8.350	1.09	11.42	0.54
2.233	0.54	5.300	7.07	8.367	1.09	11.43	0.54
2.250	0.54	5.317	7.07	8.383	1.09	11.45	0.54
2.267	3.26	5.333	7.07	8.400	1.09	11.47	0.54
2.283	3.26	5.350	7.07	8.417	1.09	11.48	0.54
2.300	3.26	5.367	7.07	8.433	1.09	11.50	0.54
2.317	3.26	5.383	7.07	8.450	1.09	11.52	0.54
2.333	3.26	5.400	7.07	8.467	1.09	11.53	0.54
2.350	3.26	5.417	7.07	8.483	1.09	11.55	0.54
2.367	3.26	5.433	7.07	8.500	1.09	11.57	0.54
2.383	3.26	5.450	7.07	8.517	1.09	11.58	0.54
2.400	3.26	5.467	7.07	8.533	1.09	11.60	0.54
2.417	3.26	5.483	7.07	8.550	1.09	11.62	0.54
2.433	3.26	5.500	7.07	8.567	1.09	11.63	0.54
2.450	3.26	5.517	7.07	8.583	1.09	11.65	0.54
2.467	3.26	5.533	7.07	8.600	1.09	11.67	0.54
2.483	3.26	5.550	7.07	8.617	1.09	11.68	0.54
2.500	3.26	5.567	7.07	8.633	1.09	11.70	0.54
2.517	3.26	5.583	7.07	8.650	1.09	11.72	0.54
2.533	3.26	5.600	7.07	8.667	1.09	11.73	0.54
2.550	3.26	5.617	7.07	8.683	1.09	11.75	0.54
2.567	3.26	5.633	7.07	8.700	1.09	11.77	0.54
2.583	3.26	5.650	7.07	8.717	1.09	11.78	0.54
2.600	3.26	5.667	7.07	8.733	1.09	11.80	0.54
2.617	3.26	5.683	7.07	8.750	1.09	11.82	0.54
2.633	3.26	5.700	7.07	8.767	1.09	11.83	0.54
2.650	3.26	5.717	7.07	8.783	1.09	11.85	0.54
2.667	3.26	5.733	7.07	8.800	1.09	11.87	0.54
2.683	3.26	5.750	7.07	8.817	1.09	11.88	0.54
2.700	3.26	5.767	7.07	8.833	1.09	11.90	0.54
2.717	3.26	5.783	7.07	8.850	1.09	11.92	0.54
2.733	3.26	5.800	7.07	8.867	1.09	11.93	0.54
2.750	3.26	5.817	7.07	8.883	1.09	11.95	0.54
2.767	3.26	5.833	7.07	8.900	1.09	11.97	0.54
2.783	3.26	5.850	7.07	8.917	1.09	11.98	0.54
2.800	3.26	5.867	7.07	8.933	1.09	12.00	0.54
2.817	3.26	5.883	7.07	8.950	1.09	12.02	0.54
2.833	3.26	5.900	7.07	8.967	1.09	12.03	0.54
2.850	3.26	5.917	7.07	8.983	1.09	12.05	0.54
2.867	3.26	5.933	7.07	9.000	1.09	12.07	0.54
2.883	3.26	5.950	7.07	9.017	1.09	12.08	0.54
2.900	3.26	5.967	7.07	9.033	1.09	12.10	0.54
2.917	3.26	5.983	7.07	9.050	1.09	12.12	0.54
2.933	3.26	6.000	7.07	9.067	1.09	12.13	0.54
2.950	3.26	6.017	7.07	9.083	1.09	12.15	0.54
2.967	3.26	6.033	7.07	9.100	1.09	12.17	0.54
2.983	3.26	6.050	7.07	9.117	1.09	12.18	0.54
3.000	3.26	6.067	7.07	9.133	1.09	12.20	0.54
3.017	3.26	6.083	7.07	9.150	1.09	12.22	0.54
3.033	3.26	6.100	7.07	9.167	1.09	12.23	0.54
3.050	3.26	6.117	7.07	9.183	1.09	12.25	0.54
3.067	3.26	6.133	7.07	9.200	1.09		

Max.Eff.Inten.(mm/hr)=	25.02	17.13	
over (min)	6.00	9.00	
Storage Coeff. (min)=	5.93 (ii)	8.89 (ii)	
Unit Hyd. Tpeak (min)=	6.00	9.00	
Unit Hyd. peak (cms)=	0.19	0.13	
			TOTALS
PEAK FLOW (cms)=	0.27	0.00	0.271 (iii)
TIME TO PEAK (hrs)=	5.23	5.25	5.25
RUNOFF VOLUME (mm)=	53.38	28.62	53.13
TOTAL RAINFALL (mm)=	54.38	54.38	54.38
RUNOFF COEFFICIENT =	0.98	0.53	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7632)| IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0792	0.2220
	0.0333	0.1130	0.0928	0.2500
	0.0512	0.1510	0.1046	0.2810
	0.0629	0.1810	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7631)	3.910	0.271	5.25	53.13
OUTFLOW: ID= 1 (7632)	3.910	0.048	6.47	50.49

PEAK FLOW REDUCTION [Qout/Qin](%)= 17.63
TIME SHIFT OF PEAK FLOW (min)= 73.00
MAXIMUM STORAGE USED (ha.m.)= 0.1437

CALIB | STANDHYD (7641)| ID= 1 DT= 1.0 min |	Area (ha)= 2.21 Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00		
		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.19	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	121.38	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

GEI Consultants

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	3.26	6.150	7.07	9.22	1.09
0.033	0.00	3.100	3.26	6.167	7.07	9.23	1.09
0.050	0.00	3.117	3.26	6.183	7.07	9.25	1.09
0.067	0.00	3.133	3.26	6.200	7.07	9.27	0.54
0.083	0.00	3.150	3.26	6.217	7.07	9.28	0.54
0.100	0.00	3.167	3.26	6.233	7.07	9.30	0.54
0.117	0.00	3.183	3.26	6.250	7.06	9.32	0.54
0.133	0.00	3.200	3.26	6.267	3.81	9.33	0.54
0.150	0.00	3.217	3.26	6.283	3.81	9.35	0.54
0.167	0.00	3.233	3.26	6.300	3.81	9.37	0.54
0.183	0.00	3.250	3.26	6.317	3.81	9.38	0.54
0.200	0.00	3.267	9.25	6.333	3.81	9.40	0.54
0.217	0.00	3.283	9.25	6.350	3.81	9.42	0.54
0.233	0.00	3.300	9.25	6.367	3.81	9.43	0.54
0.250	0.00	3.317	9.25	6.383	3.81	9.45	0.54
0.267	0.54	3.333	9.25	6.400	3.81	9.47	0.54
0.283	0.54	3.350	9.25	6.417	3.81	9.48	0.54
0.300	0.54	3.367	9.25	6.433	3.81	9.50	0.54
0.317	0.54	3.383	9.25	6.450	3.81	9.52	0.54
0.333	0.54	3.400	9.25	6.467	3.81	9.53	0.54
0.350	0.54	3.417	9.25	6.483	3.81	9.55	0.54
0.367	0.54	3.433	9.25	6.500	3.81	9.57	0.54
0.383	0.54	3.450	9.25	6.517	3.81	9.58	0.54
0.400	0.54	3.467	9.25	6.533	3.81	9.60	0.54
0.417	0.54	3.483	9.25	6.550	3.81	9.62	0.54
0.433	0.54	3.500	9.25	6.567	3.81	9.63	0.54
0.450	0.54	3.517	9.25	6.583	3.81	9.65	0.54
0.467	0.54	3.533	9.25	6.600	3.81	9.67	0.54
0.483	0.54	3.550	9.25	6.617	3.81	9.68	0.54
0.500	0.54	3.567	9.25	6.633	3.81	9.70	0.54
0.517	0.54	3.583	9.25	6.650	3.81	9.72	0.54
0.533	0.54	3.600	9.25	6.667	3.81	9.73	0.54
0.550	0.54	3.617	9.25	6.683	3.81	9.75	0.54
0.567	0.54	3.633	9.25	6.700	3.81	9.77	0.54
0.583	0.54	3.650	9.25	6.717	3.81	9.78	0.54
0.600	0.54	3.667	9.25	6.733	3.81	9.80	0.54
0.617	0.54	3.683	9.25	6.750	3.81	9.82	0.54
0.633	0.54	3.700	9.25	6.767	3.81	9.83	0.54
0.650	0.54	3.717	9.25	6.783	3.81	9.85	0.54
0.667	0.54	3.733	9.25	6.800	3.81	9.87	0.54
0.683	0.54	3.750	9.25	6.817	3.81	9.88	0.54
0.700	0.54	3.767	9.25	6.833	3.81	9.90	0.54
0.717	0.54	3.783	9.25	6.850	3.81	9.92	0.54
0.733	0.54	3.800	9.25	6.867	3.81	9.93	0.54
0.750	0.54	3.817	9.25	6.883	3.81	9.95	0.54
0.767	0.54	3.833	9.25	6.900	3.81	9.97	0.54
0.783	0.54	3.850	9.25	6.917	3.81	9.98	0.54
0.800	0.54	3.867	9.25	6.933	3.81	10.00	0.54
0.817	0.54	3.883	9.25	6.950	3.81	10.02	0.54
0.833	0.54	3.900	9.25	6.967	3.81	10.03	0.54
0.850	0.54	3.917	9.25	6.983	3.81	10.05	0.54
0.867	0.54	3.933	9.25	7.000	3.81	10.07	0.54
0.883	0.54	3.950	9.25	7.017	3.81	10.08	0.54
0.900	0.54	3.967	9.25	7.033	3.81	10.10	0.54
0.917	0.54	3.983	9.25	7.050	3.81	10.12	0.54
0.933	0.54	4.000	9.25	7.067	3.81	10.13	0.54
0.950	0.54	4.017	9.25	7.083	3.81	10.15	0.54
0.967	0.54	4.033	9.25	7.100	3.81	10.17	0.54
0.983	0.54	4.050	9.25	7.117	3.81	10.18	0.54
1.000	0.54	4.067	9.25	7.133	3.81	10.20	0.54
1.017	0.54	4.083	9.25	7.150	3.81	10.22	0.54
1.033	0.54	4.100	9.25	7.167	3.81	10.23	0.54
1.050	0.54	4.117	9.25	7.183	3.81	10.25	0.54
1.067	0.54	4.133	9.25	7.200	3.81	10.27	0.54
1.083	0.54	4.150	9.25	7.217	3.81	10.28	0.54
1.100	0.54	4.167	9.25	7.233	3.81	10.30	0.54
1.117	0.54	4.183	9.25	7.250	3.81	10.32	0.54
1.133	0.54	4.200	9.25	7.267	2.18	10.33	0.54
1.150	0.54	4.217	9.25	7.283	2.18	10.35	0.54
1.167	0.54	4.233	9.25	7.300	2.18	10.37	0.54
1.183	0.54	4.250	9.25	7.317	2.18	10.38	0.54
1.200	0.54	4.267	25.02	7.333	2.18	10.40	0.54
1.217	0.54	4.283	25.02	7.350	2.18	10.42	0.54
1.233	0.54	4.300	25.02	7.367	2.18	10.43	0.54
1.250	0.54	4.317	25.02	7.383	2.18	10.45	0.54
1.267	0.54	4.333	25.02	7.400	2.18	10.47	0.54
1.283	0.54	4.350	25.02	7.417	2.18	10.48	0.54
1.300	0.54	4.367	25.02	7.433	2.18	10.50	0.54
1.317	0.54	4.383	25.02	7.450	2.18	10.52	0.54
1.333	0.54	4.400	25.02	7.467	2.18	10.53	0.54
1.350	0.54	4.417	25.02	7.483	2.18	10.55	0.54
1.367	0.54	4.433	25.02	7.500	2.18	10.57	0.54
1.383	0.54	4.450	25.02	7.517	2.18	10.58	0.54
1.400	0.54	4.467	25.02	7.533	2.18	10.60	0.54
1.417	0.54	4.483	25.02	7.550	2.18	10.62	0.54
1.433	0.54	4.500	25.02	7.567	2.18	10.63	0.54
1.450	0.54	4.517	25.02	7.583	2.18	10.65	0.54
1.467	0.54	4.533	25.02	7.600	2.18	10.67	0.54
1.483	0.54	4.550	25.02	7.617	2.18	10.68	0.54
1.500	0.54	4.567	25.02	7.633	2.18	10.70	0.54
1.517	0.54	4.583	25.02	7.650	2.18	10.72	0.54
1.533	0.54	4.600	25.02	7.667	2.18	10.73	0.54
1.550	0.54	4.617	25.02	7.683	2.18	10.75	0.54
1.567	0.54	4.633	25.02	7.700	2.18	10.77	0.54
1.583	0.54	4.650	25.02	7.717	2.18	10.78	0.54
1.600	0.54	4.667	25.02	7.733	2.18	10.80	0.54
1.617	0.54	4.683	25.02	7.750	2.18	10.82	0.54
1.633	0.54	4.700	25.02	7.767	2.18	10.83	0.54
1.650	0.54	4.717	25.02	7.783	2.18	10.85	0.54
1.667	0.54	4.733	25.02	7.800	2.18	10.87	0.54
1.683	0.54	4.750	25.02	7.817	2.18	10.88	0.54
1.700	0.54	4.767	25.02	7.833	2.18	10.90	0.54
1.717	0.54	4.783	25.02	7.850	2.18	10.92	0.54
1.733	0.54	4.800	25.02	7.867	2.18	10.93	0.54
1.750	0.54	4.817	25.02	7.883	2.18	10.95	0.54
1.767	0.54	4.833	25.02	7.900	2.18	10.97	0.54
1.783	0.54	4.850	25.02	7.917	2.18	10.98	0.54
1.800	0.54	4.867	25.02	7.933	2.18	11.00	0.54
1.817	0.54	4.883	25.02	7.950	2.18	11.02	0.54
1.833	0.54	4.900	25.02	7.967	2.18	11.03	0.54
1.850	0.54	4.917	25.02	7.983	2.18	11.05	0.54
1.867	0.54	4.933	25.02	8.000	2.18	11.07	0.54
1.883	0.54	4.950	25.02	8.017	2.18	11.08	0.54
1.900	0.54	4.967	25.02	8.033	2.18	11.10	0.54
1.917	0.54	4.983	25.02	8.050	2.18	11.12	0.54
1.933	0.54	5.000	25.02	8.067	2.18	11.13	0.54
1.950	0.54	5.017	25.02	8.083	2.18	11.15	0.54
1.967	0.54	5.033	25.02	8.100	2.18	11.17	0.54
1.983	0.54	5.050	25.02	8.117	2.18	11.18	0.54
2.000	0.54	5.067	25.02	8.133	2.18	11.20	0.54
2.017	0.54	5.083	25.02	8.150	2.18	11.22	0.54
2.033	0.54	5.100	25.02	8.167	2.18	11.23	0.54
2.050	0.54	5.117	25.02	8.183	2.18	11.25	0.54
2.067	0.54	5.133	25.02	8.200	2.18	11.27	0.54
2.083	0.54	5.150	25.02	8.217	2.18	11.28	0.54
2.100	0.54	5.167	25.02	8.233	2.18	11.30	0.54
2.117	0.54	5.183	25.02	8.250	2.18	11.32	0.54
2.133	0.54	5.200	25.02	8.267	1.09	11.33	0.54
2.150	0.54	5.217	25.02	8.283	1.09	11.35	0.54
2.167	0.54	5.233	25.02	8.300	1.09	11.37	0.54
2.183	0.54	5.250	25.01	8.317	1.09	11.38	0.54
2.200	0.54	5.267	7.07	8.333	1.09	11.40	0.54
2.217	0.54	5.283	7.07	8.350	1.09	11.42	0.54
2.233	0.54	5.300	7.07	8.367	1.09	11.43	0.54
2.250	0.54	5.317	7.07	8.383	1.09	11.45	0.54
2.267	3.26	5.333	7.07	8.400	1.09	11.47	0.54
2.283	3.26	5.350	7.07	8.417	1.09	11.48	0.54
2.300	3.26	5.367	7.07	8.433	1.09	11.50	0.54
2.317	3.26	5.383	7.07	8.450	1.09	11.52	0.54
2.333	3.26	5.400	7.07	8.467	1.09	11.53	0.54
2.350	3.26	5.417	7.07	8.483	1.09	11.55	0.54
2.367	3.26	5.433	7.07	8.500	1.09	11.57	0.54
2.383	3.26	5.450	7.07	8.517	1.09	11.58	0.54
2.400	3.26	5.467	7.07	8.533	1.09	11.60	0.54
2.417	3.26	5.483	7.07	8.550	1.09	11.62	0.54
2.433	3.26	5.500	7.07	8.567	1.09	11.63	0.54
2.450	3.26	5.517	7.07	8.583	1.09	11.65	0.54
2.467	3.26	5.533	7.07	8.600	1.09	11.67	0.54
2.483	3.26	5.550	7.07	8.617	1.09	11.68	0.54
2.500	3.26	5.567	7.07	8.633	1.09	11.70	0.54

2.517	3.26	5.583	7.07	8.650	1.09	11.72	0.54
2.533	3.26	5.600	7.07	8.667	1.09	11.73	0.54
2.550	3.26	5.617	7.07	8.683	1.09	11.75	0.54
2.567	3.26	5.633	7.07	8.700	1.09	11.77	0.54
2.583	3.26	5.650	7.07	8.717	1.09	11.78	0.54
2.600	3.26	5.667	7.07	8.733	1.09	11.80	0.54
2.617	3.26	5.683	7.07	8.750	1.09	11.82	0.54
2.633	3.26	5.700	7.07	8.767	1.09	11.83	0.54
2.650	3.26	5.717	7.07	8.783	1.09	11.85	0.54
2.667	3.26	5.733	7.07	8.800	1.09	11.87	0.54
2.683	3.26	5.750	7.07	8.817	1.09	11.88	0.54
2.700	3.26	5.767	7.07	8.833	1.09	11.90	0.54
2.717	3.26	5.783	7.07	8.850	1.09	11.92	0.54
2.733	3.26	5.800	7.07	8.867	1.09	11.93	0.54
2.750	3.26	5.817	7.07	8.883	1.09	11.95	0.54
2.767	3.26	5.833	7.07	8.900	1.09	11.97	0.54
2.783	3.26	5.850	7.07	8.917	1.09	11.98	0.54
2.800	3.26	5.867	7.07	8.933	1.09	12.00	0.54
2.817	3.26	5.883	7.07	8.950	1.09	12.02	0.54
2.833	3.26	5.900	7.07	8.967	1.09	12.03	0.54
2.850	3.26	5.917	7.07	8.983	1.09	12.05	0.54
2.867	3.26	5.933	7.07	9.000	1.09	12.07	0.54
2.883	3.26	5.950	7.07	9.017	1.09	12.08	0.54
2.900	3.26	5.967	7.07	9.033	1.09	12.10	0.54
2.917	3.26	5.983	7.07	9.050	1.09	12.12	0.54
2.933	3.26	6.000	7.07	9.067	1.09	12.13	0.54
2.950	3.26	6.017	7.07	9.083	1.09	12.15	0.54
2.967	3.26	6.033	7.07	9.100	1.09	12.17	0.54
2.983	3.26	6.050	7.07	9.117	1.09	12.18	0.54
3.000	3.26	6.067	7.07	9.133	1.09	12.20	0.54
3.017	3.26	6.083	7.07	9.150	1.09	12.22	0.54
3.033	3.26	6.100	7.07	9.167	1.09	12.23	0.54
3.050	3.26	6.117	7.07	9.183	1.09	12.25	0.54
3.067	3.26	6.133	7.07	9.200	1.09		

Max.Eff.Inten.(mm/hr)=		25.02	17.13	
over (min)		5.00	8.00	
Storage Coeff. (min)=		4.99 (ii)	7.96 (ii)	
Unit Hyd. Tpeak (min)=		5.00	8.00	
Unit Hyd. peak (cms)=		0.23	0.14	
				TOTALS
PEAK FLOW	(cms)=	0.15	0.00	0.153 (iii)
TIME TO PEAK	(hrs)=	5.23	5.25	5.25
RUNOFF VOLUME	(mm)=	53.38	28.62	53.13
TOTAL RAINFALL	(mm)=	54.38	54.38	54.38
RUNOFF COEFFICIENT	=	0.98	0.53	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7642)	OVERFLOW IS OFF
IN= 2---> OUT= 1	
DT= 1.0 min	

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0470	0.1250
0.0197	0.0630	0.0551	0.1410
0.0304	0.0850	0.0620	0.1580
0.0373	0.1020	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2	(7641)	2.210	0.153	5.25	53.13
OUTFLOW: ID= 1	(7642)	2.210	0.028	6.42	50.92

PEAK FLOW REDUCTION [Qout/Qin](%)= 18.38
TIME SHIFT OF PEAK FLOW (min)= 70.00
MAXIMUM STORAGE USED (ha.m.)= 0.0804

CALIB	
STANDHYD (7643)	Area (ha)= 2.02
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.00	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	116.05	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	3.26	6.150	7.07	9.22	1.09
0.033	0.00	3.100	3.26	6.167	7.07	9.23	1.09
0.050	0.00	3.117	3.26	6.183	7.07	9.25	1.09
0.067	0.00	3.133	3.26	6.200	7.07	9.27	0.54
0.083	0.00	3.150	3.26	6.217	7.07	9.28	0.54
0.100	0.00	3.167	3.26	6.233	7.07	9.30	0.54
0.117	0.00	3.183	3.26	6.250	7.06	9.32	0.54
0.133	0.00	3.200	3.26	6.267	3.81	9.33	0.54
0.150	0.00	3.217	3.26	6.283	3.81	9.35	0.54
0.167	0.00	3.233	3.26	6.300	3.81	9.37	0.54
0.183	0.00	3.250	3.26	6.317	3.81	9.38	0.54
0.200	0.00	3.267	9.25	6.333	3.81	9.40	0.54
0.217	0.00	3.283	9.25	6.350	3.81	9.42	0.54
0.233	0.00	3.300	9.25	6.367	3.81	9.43	0.54
0.250	0.00	3.317	9.25	6.383	3.81	9.45	0.54
0.267	0.54	3.333	9.25	6.400	3.81	9.47	0.54
0.283	0.54	3.350	9.25	6.417	3.81	9.48	0.54
0.300	0.54	3.367	9.25	6.433	3.81	9.50	0.54
0.317	0.54	3.383	9.25	6.450	3.81	9.52	0.54
0.333	0.54	3.400	9.25	6.467	3.81	9.53	0.54
0.350	0.54	3.417	9.25	6.483	3.81	9.55	0.54
0.367	0.54	3.433	9.25	6.500	3.81	9.57	0.54
0.383	0.54	3.450	9.25	6.517	3.81	9.58	0.54
0.400	0.54	3.467	9.25	6.533	3.81	9.60	0.54
0.417	0.54	3.483	9.25	6.550	3.81	9.62	0.54
0.433	0.54	3.500	9.25	6.567	3.81	9.63	0.54
0.450	0.54	3.517	9.25	6.583	3.81	9.65	0.54
0.467	0.54	3.533	9.25	6.600	3.81	9.67	0.54
0.483	0.54	3.550	9.25	6.617	3.81	9.68	0.54
0.500	0.54	3.567	9.25	6.633	3.81	9.70	0.54
0.517	0.54	3.583	9.25	6.650	3.81	9.72	0.54
0.533	0.54	3.600	9.25	6.667	3.81	9.73	0.54
0.550	0.54	3.617	9.25	6.683	3.81	9.75	0.54
0.567	0.54	3.633	9.25	6.700	3.81	9.77	0.54
0.583	0.54	3.650	9.25	6.717	3.81	9.78	0.54
0.600	0.54	3.667	9.25	6.733	3.81	9.80	0.54
0.617	0.54	3.683	9.25	6.750	3.81	9.82	0.54
0.633	0.54	3.700	9.25	6.767	3.81	9.83	0.54
0.650	0.54	3.717	9.25	6.783	3.81	9.85	0.54
0.667	0.54	3.733	9.25	6.800	3.81	9.87	0.54
0.683	0.54	3.750	9.25	6.817	3.81	9.88	0.54
0.700	0.54	3.767	9.25	6.833	3.81	9.90	0.54
0.717	0.54	3.783	9.25	6.850	3.81	9.92	0.54
0.733	0.54	3.800	9.25	6.867	3.81	9.93	0.54
0.750	0.54	3.817	9.25	6.883	3.81	9.95	0.54
0.767	0.54	3.833	9.25	6.900	3.81	9.97	0.54
0.783	0.54	3.850	9.25	6.917	3.81	9.98	0.54
0.800	0.54	3.867	9.25	6.933	3.81	10.00	0.54
0.817	0.54	3.883	9.25	6.950	3.81	10.02	0.54
0.833	0.54	3.900	9.25	6.967	3.81	10.03	0.54
0.850	0.54	3.917	9.25	6.983	3.81	10.05	0.54
0.867	0.54	3.933	9.25	7.000	3.81	10.07	0.54
0.883	0.54	3.950	9.25	7.017	3.81	10.08	0.54
0.900	0.54	3.967	9.25	7.033	3.81	10.10	0.54
0.917	0.54	3.983	9.25	7.050	3.81	10.12	0.54
0.933	0.54	4.000	9.25	7.067	3.81	10.13	0.54
0.950	0.54	4.017	9.25	7.083	3.81	10.15	0.54
0.967	0.54	4.033	9.25	7.100	3.81	10.17	0.54
0.983	0.54	4.050	9.25	7.117	3.81	10.18	0.54

1.000	0.54	4.067	9.25	7.133	3.81	10.20	0.54
1.017	0.54	4.083	9.25	7.150	3.81	10.22	0.54
1.033	0.54	4.100	9.25	7.167	3.81	10.23	0.54
1.050	0.54	4.117	9.25	7.183	3.81	10.25	0.54
1.067	0.54	4.133	9.25	7.200	3.81	10.27	0.54
1.083	0.54	4.150	9.25	7.217	3.81	10.28	0.54
1.100	0.54	4.167	9.25	7.233	3.81	10.30	0.54
1.117	0.54	4.183	9.25	7.250	3.81	10.32	0.54
1.133	0.54	4.200	9.25	7.267	2.18	10.33	0.54
1.150	0.54	4.217	9.25	7.283	2.18	10.35	0.54
1.167	0.54	4.233	9.25	7.300	2.18	10.37	0.54
1.183	0.54	4.250	9.25	7.317	2.18	10.38	0.54
1.200	0.54	4.267	25.02	7.333	2.18	10.40	0.54
1.217	0.54	4.283	25.02	7.350	2.18	10.42	0.54
1.233	0.54	4.300	25.02	7.367	2.18	10.43	0.54
1.250	0.54	4.317	25.02	7.383	2.18	10.45	0.54
1.267	0.54	4.333	25.02	7.400	2.18	10.47	0.54
1.283	0.54	4.350	25.02	7.417	2.18	10.48	0.54
1.300	0.54	4.367	25.02	7.433	2.18	10.50	0.54
1.317	0.54	4.383	25.02	7.450	2.18	10.52	0.54
1.333	0.54	4.400	25.02	7.467	2.18	10.53	0.54
1.350	0.54	4.417	25.02	7.483	2.18	10.55	0.54
1.367	0.54	4.433	25.02	7.500	2.18	10.57	0.54
1.383	0.54	4.450	25.02	7.517	2.18	10.58	0.54
1.400	0.54	4.467	25.02	7.533	2.18	10.60	0.54
1.417	0.54	4.483	25.02	7.550	2.18	10.62	0.54
1.433	0.54	4.500	25.02	7.567	2.18	10.63	0.54
1.450	0.54	4.517	25.02	7.583	2.18	10.65	0.54
1.467	0.54	4.533	25.02	7.600	2.18	10.67	0.54
1.483	0.54	4.550	25.02	7.617	2.18	10.68	0.54
1.500	0.54	4.567	25.02	7.633	2.18	10.70	0.54
1.517	0.54	4.583	25.02	7.650	2.18	10.72	0.54
1.533	0.54	4.600	25.02	7.667	2.18	10.73	0.54
1.550	0.54	4.617	25.02	7.683	2.18	10.75	0.54
1.567	0.54	4.633	25.02	7.700	2.18	10.77	0.54
1.583	0.54	4.650	25.02	7.717	2.18	10.78	0.54
1.600	0.54	4.667	25.02	7.733	2.18	10.80	0.54
1.617	0.54	4.683	25.02	7.750	2.18	10.82	0.54
1.633	0.54	4.700	25.02	7.767	2.18	10.83	0.54
1.650	0.54	4.717	25.02	7.783	2.18	10.85	0.54
1.667	0.54	4.733	25.02	7.800	2.18	10.87	0.54
1.683	0.54	4.750	25.02	7.817	2.18	10.88	0.54
1.700	0.54	4.767	25.02	7.833	2.18	10.90	0.54
1.717	0.54	4.783	25.02	7.850	2.18	10.92	0.54
1.733	0.54	4.800	25.02	7.867	2.18	10.93	0.54
1.750	0.54	4.817	25.02	7.883	2.18	10.95	0.54
1.767	0.54	4.833	25.02	7.900	2.18	10.97	0.54
1.783	0.54	4.850	25.02	7.917	2.18	10.98	0.54
1.800	0.54	4.867	25.02	7.933	2.18	11.00	0.54
1.817	0.54	4.883	25.02	7.950	2.18	11.02	0.54
1.833	0.54	4.900	25.02	7.967	2.18	11.03	0.54
1.850	0.54	4.917	25.02	7.983	2.18	11.05	0.54
1.867	0.54	4.933	25.02	8.000	2.18	11.07	0.54
1.883	0.54	4.950	25.02	8.017	2.18	11.08	0.54
1.900	0.54	4.967	25.02	8.033	2.18	11.10	0.54
1.917	0.54	4.983	25.02	8.050	2.18	11.12	0.54
1.933	0.54	5.000	25.02	8.067	2.18	11.13	0.54
1.950	0.54	5.017	25.02	8.083	2.18	11.15	0.54
1.967	0.54	5.033	25.02	8.100	2.18	11.17	0.54
1.983	0.54	5.050	25.02	8.117	2.18	11.18	0.54
2.000	0.54	5.067	25.02	8.133	2.18	11.20	0.54
2.017	0.54	5.083	25.02	8.150	2.18	11.22	0.54
2.033	0.54	5.100	25.02	8.167	2.18	11.23	0.54
2.050	0.54	5.117	25.02	8.183	2.18	11.25	0.54
2.067	0.54	5.133	25.02	8.200	2.18	11.27	0.54
2.083	0.54	5.150	25.02	8.217	2.18	11.28	0.54
2.100	0.54	5.167	25.02	8.233	2.18	11.30	0.54
2.117	0.54	5.183	25.02	8.250	2.18	11.32	0.54
2.133	0.54	5.200	25.02	8.267	1.09	11.33	0.54
2.150	0.54	5.217	25.02	8.283	1.09	11.35	0.54
2.167	0.54	5.233	25.02	8.300	1.09	11.37	0.54
2.183	0.54	5.250	25.01	8.317	1.09	11.38	0.54
2.200	0.54	5.267	7.07	8.333	1.09	11.40	0.54
2.217	0.54	5.283	7.07	8.350	1.09	11.42	0.54
2.233	0.54	5.300	7.07	8.367	1.09	11.43	0.54
2.250	0.54	5.317	7.07	8.383	1.09	11.45	0.54
2.267	3.26	5.333	7.07	8.400	1.09	11.47	0.54
2.283	3.26	5.350	7.07	8.417	1.09	11.48	0.54
2.300	3.26	5.367	7.07	8.433	1.09	11.50	0.54
2.317	3.26	5.383	7.07	8.450	1.09	11.52	0.54
2.333	3.26	5.400	7.07	8.467	1.09	11.53	0.54
2.350	3.26	5.417	7.07	8.483	1.09	11.55	0.54
2.367	3.26	5.433	7.07	8.500	1.09	11.57	0.54
2.383	3.26	5.450	7.07	8.517	1.09	11.58	0.54
2.400	3.26	5.467	7.07	8.533	1.09	11.60	0.54
2.417	3.26	5.483	7.07	8.550	1.09	11.62	0.54
2.433	3.26	5.500	7.07	8.567	1.09	11.63	0.54
2.450	3.26	5.517	7.07	8.583	1.09	11.65	0.54
2.467	3.26	5.533	7.07	8.600	1.09	11.67	0.54
2.483	3.26	5.550	7.07	8.617	1.09	11.68	0.54
2.500	3.26	5.567	7.07	8.633	1.09	11.70	0.54
2.517	3.26	5.583	7.07	8.650	1.09	11.72	0.54
2.533	3.26	5.600	7.07	8.667	1.09	11.73	0.54
2.550	3.26	5.617	7.07	8.683	1.09	11.75	0.54
2.567	3.26	5.633	7.07	8.700	1.09	11.77	0.54
2.583	3.26	5.650	7.07	8.717	1.09	11.78	0.54
2.600	3.26	5.667	7.07	8.733	1.09	11.80	0.54
2.617	3.26	5.683	7.07	8.750	1.09	11.82	0.54
2.633	3.26	5.700	7.07	8.767	1.09	11.83	0.54
2.650	3.26	5.717	7.07	8.783	1.09	11.85	0.54
2.667	3.26	5.733	7.07	8.800	1.09	11.87	0.54
2.683	3.26	5.750	7.07	8.817	1.09	11.88	0.54
2.700	3.26	5.767	7.07	8.833	1.09	11.90	0.54
2.717	3.26	5.783	7.07	8.850	1.09	11.92	0.54
2.733	3.26	5.800	7.07	8.867	1.09	11.93	0.54
2.750	3.26	5.817	7.07	8.883	1.09	11.95	0.54
2.767	3.26	5.833	7.07	8.900	1.09	11.97	0.54
2.783	3.26	5.850	7.07	8.917	1.09	11.98	0.54
2.800	3.26	5.867	7.07	8.933	1.09	12.00	0.54
2.817	3.26	5.883	7.07	8.950	1.09	12.02	0.54
2.833	3.26	5.900	7.07	8.967	1.09	12.03	0.54
2.850	3.26	5.917	7.07	8.983	1.09	12.05	0.54
2.867	3.26	5.933	7.07	9.000	1.09	12.07	0.54
2.883	3.26	5.950	7.07	9.017	1.09	12.08	0.54
2.900	3.26	5.967	7.07	9.033	1.09	12.10	0.54
2.917	3.26	5.983	7.07	9.050	1.09	12.12	0.54
2.933	3.26	6.000	7.07	9.067	1.09	12.13	0.54
2.950	3.26	6.017	7.07	9.083	1.09	12.15	0.54
2.967	3.26	6.033	7.07	9.100	1.09	12.17	0.54
2.983	3.26	6.050	7.07	9.117	1.09	12.18	0.54
3.000	3.26	6.067	7.07	9.133	1.09	12.20	0.54
3.017	3.26	6.083	7.07	9.150	1.09	12.22	0.54
3.033	3.26	6.100	7.07	9.167	1.09	12.23	0.54
3.050	3.26	6.117	7.07	9.183	1.09	12.25	0.54
3.067	3.26	6.133	7.07	9.200	1.09		

Max.Eff.Inten.(mm/hr)=	25.02	17.13	
over (min)	5.00	8.00	
Storage Coeff. (min)=	4.86 (ii)	7.82 (ii)	
Unit Hyd. Tpeak (min)=	5.00	8.00	
Unit Hyd. peak (cms)=	0.23	0.14	
			TOTALS
PEAK FLOW (cms)=	0.14	0.00	0.140 (iii)
TIME TO PEAK (hrs)=	5.23	5.25	5.25
RUNOFF VOLUME (mm)=	53.37	28.62	53.13
TOTAL RAINFALL (mm)=	54.38	54.38	54.38
RUNOFF COEFFICIENT =	0.98	0.53	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7644) IN= 2---> OUT= 1 DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0433	0.1140

```
                      0.0182     0.0580   |   0.0507      0.1280
                      0.0280     0.0775   |   0.0571      0.1440
                      0.0343     0.0930   |   0.0000      0.0000

                           AREA     QPEAK     TPEAK       R.V.
                           (ha)     (cms)     (hrs)       (mm)
  INFLOW : ID= 2 (  7643)      2.020     0.140      5.25      53.13
  OUTFLOW: ID= 1 (  7644)      2.020     0.026      6.40      50.95

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 18.53
                  TIME SHIFT OF PEAK FLOW         (min)= 69.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0734

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================================================================================
======

       V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-
a4eb17eaad57\a72689d4-e249-4736-b0ed-cac584a30ea5\s
  Summary filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-
a4eb17eaad57\a72689d4-e249-4736-b0ed-cac584a30ea5\s


DATE: 06/14/2024                          TIME: 12:48:36

USER:


COMMENTS: _____

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  ************************************************
  ** SIMULATION : 7. 5 Year 24 Hour AES (Bloor, **
  ************************************************


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|    READ STORM    |    Filename: C:\Users\ygollamudi\AppD
|                  |              ata\Local\Temp\
|                  |              3c3f87d5-a26e-4c6b-b2ae-56a7ba29ab7f\e61e69ae
| Ptotal= 60.08 mm |    Comments: 5 Year 24 Hour AES (Bloor, TRCA)
-------------------
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.00    0.00 |  6.25    5.11 | 12.50    2.10 | 18.75    0.30
               0.25    0.30 |  6.50    5.11 | 12.75    2.10 | 19.00    0.30
               0.50    0.30 |  6.75    5.11 | 13.00    2.10 | 19.25    0.30
               0.75    0.30 |  7.00    5.11 | 13.25    2.10 | 19.50    0.30
               1.00    0.30 |  7.25    5.11 | 13.50    2.10 | 19.75    0.30
               1.25    0.30 |  7.50    5.11 | 13.75    2.10 | 20.00    0.30
               1.50    0.30 |  7.75    5.11 | 14.00    2.10 | 20.25    0.30
               1.75    0.30 |  8.00    5.11 | 14.25    1.20 | 20.50    0.30
               2.00    0.30 |  8.25   13.82 | 14.50    1.20 | 20.75    0.30
               2.25    0.30 |  8.50   13.82 | 14.75    1.20 | 21.00    0.30
               2.50    0.30 |  8.75   13.82 | 15.00    1.20 | 21.25    0.30
               2.75    0.30 |  9.00   13.82 | 15.25    1.20 | 21.50    0.30
               3.00    0.30 |  9.25   13.82 | 15.50    1.20 | 21.75    0.30
               3.25    0.30 |  9.50   13.82 | 15.75    1.20 | 22.00    0.30
               3.50    0.30 |  9.75   13.82 | 16.00    1.20 | 22.25    0.30
               3.75    0.30 | 10.00   13.82 | 16.25    0.60 | 22.50    0.30
               4.00    0.30 | 10.25    3.91 | 16.50    0.60 | 22.75    0.30
               4.25    1.80 | 10.50    3.91 | 16.75    0.60 | 23.00    0.30
               4.50    1.80 | 10.75    3.91 | 17.00    0.60 | 23.25    0.30
               4.75    1.80 | 11.00    3.91 | 17.25    0.60 | 23.50    0.30
               5.00    1.80 | 11.25    3.91 | 17.50    0.60 | 23.75    0.30
               5.25    1.80 | 11.50    3.91 | 17.75    0.60 | 24.00    0.30
               5.50    1.80 | 11.75    3.91 | 18.00    0.60 |
               5.75    1.80 | 12.00    3.91 | 18.25    0.30 |
               6.00    1.80 | 12.25    2.10 | 18.50    0.30 |

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| CALIB            |
| STANDHYD (  7567)|   Area    (ha)=   2.72
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
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                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.69          0.03
     Dep. Storage     (mm)=       1.00          1.50
     Average Slope     (%)=       1.00          0.50
     Length            (m)=     134.66         40.00
     Mannings n           =      0.013         0.250

     NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
0.017    0.00 | 6.083    1.80 |12.150    3.91 | 18.22    0.60
0.033    0.00 | 6.100    1.80 |12.167    3.91 | 18.23    0.60
0.050    0.00 | 6.117    1.80 |12.183    3.91 | 18.25    0.60
0.067    0.00 | 6.133    1.80 |12.200    3.91 | 18.27    0.30
0.083    0.00 | 6.150    1.80 |12.217    3.91 | 18.28    0.30
0.100    0.00 | 6.167    1.80 |12.233    3.91 | 18.30    0.30
0.117    0.00 | 6.183    1.80 |12.250    3.91 | 18.32    0.30
0.133    0.00 | 6.200    1.80 |12.267    2.10 | 18.33    0.30
0.150    0.00 | 6.217    1.80 |12.283    2.10 | 18.35    0.30
0.167    0.00 | 6.233    1.80 |12.300    2.10 | 18.37    0.30
0.183    0.00 | 6.250    1.81 |12.317    2.10 | 18.38    0.30
0.200    0.00 | 6.267    5.11 |12.333    2.10 | 18.40    0.30
0.217    0.00 | 6.283    5.11 |12.350    2.10 | 18.42    0.30
0.233    0.00 | 6.300    5.11 |12.367    2.10 | 18.43    0.30
0.250    0.00 | 6.317    5.11 |12.383    2.10 | 18.45    0.30
0.267    0.30 | 6.333    5.11 |12.400    2.10 | 18.47    0.30
0.283    0.30 | 6.350    5.11 |12.417    2.10 | 18.48    0.30
0.300    0.30 | 6.367    5.11 |12.433    2.10 | 18.50    0.30
0.317    0.30 | 6.383    5.11 |12.450    2.10 | 18.52    0.30
0.333    0.30 | 6.400    5.11 |12.467    2.10 | 18.53    0.30
0.350    0.30 | 6.417    5.11 |12.483    2.10 | 18.55    0.30
0.367    0.30 | 6.433    5.11 |12.500    2.10 | 18.57    0.30
0.383    0.30 | 6.450    5.11 |12.517    2.10 | 18.58    0.30
0.400    0.30 | 6.467    5.11 |12.533    2.10 | 18.60    0.30
0.417    0.30 | 6.483    5.11 |12.550    2.10 | 18.62    0.30
0.433    0.30 | 6.500    5.11 |12.567    2.10 | 18.63    0.30
0.450    0.30 | 6.517    5.11 |12.583    2.10 | 18.65    0.30
0.467    0.30 | 6.533    5.11 |12.600    2.10 | 18.67    0.30
0.483    0.30 | 6.550    5.11 |12.617    2.10 | 18.68    0.30
0.500    0.30 | 6.567    5.11 |12.633    2.10 | 18.70    0.30
0.517    0.30 | 6.583    5.11 |12.650    2.10 | 18.72    0.30
0.533    0.30 | 6.600    5.11 |12.667    2.10 | 18.73    0.30
0.550    0.30 | 6.617    5.11 |12.683    2.10 | 18.75    0.30
0.567    0.30 | 6.633    5.11 |12.700    2.10 | 18.77    0.30
0.583    0.30 | 6.650    5.11 |12.717    2.10 | 18.78    0.30
0.600    0.30 | 6.667    5.11 |12.733    2.10 | 18.80    0.30
0.617    0.30 | 6.683    5.11 |12.750    2.10 | 18.82    0.30
0.633    0.30 | 6.700    5.11 |12.767    2.10 | 18.83    0.30
0.650    0.30 | 6.717    5.11 |12.783    2.10 | 18.85    0.30
0.667    0.30 | 6.733    5.11 |12.800    2.10 | 18.87    0.30
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0.683	0.30	6.750	5.11	12.817	2.10	18.88	0.30
0.700	0.30	6.767	5.11	12.833	2.10	18.90	0.30
0.717	0.30	6.783	5.11	12.850	2.10	18.92	0.30
0.733	0.30	6.800	5.11	12.867	2.10	18.93	0.30
0.750	0.30	6.817	5.11	12.883	2.10	18.95	0.30
0.767	0.30	6.833	5.11	12.900	2.10	18.97	0.30
0.783	0.30	6.850	5.11	12.917	2.10	18.98	0.30
0.800	0.30	6.867	5.11	12.933	2.10	19.00	0.30
0.817	0.30	6.883	5.11	12.950	2.10	19.02	0.30
0.833	0.30	6.900	5.11	12.967	2.10	19.03	0.30
0.850	0.30	6.917	5.11	12.983	2.10	19.05	0.30
0.867	0.30	6.933	5.11	13.000	2.10	19.07	0.30
0.883	0.30	6.950	5.11	13.017	2.10	19.08	0.30
0.900	0.30	6.967	5.11	13.033	2.10	19.10	0.30
0.917	0.30	6.983	5.11	13.050	2.10	19.12	0.30
0.933	0.30	7.000	5.11	13.067	2.10	19.13	0.30
0.950	0.30	7.017	5.11	13.083	2.10	19.15	0.30
0.967	0.30	7.033	5.11	13.100	2.10	19.17	0.30
0.983	0.30	7.050	5.11	13.117	2.10	19.18	0.30
1.000	0.30	7.067	5.11	13.133	2.10	19.20	0.30
1.017	0.30	7.083	5.11	13.150	2.10	19.22	0.30
1.033	0.30	7.100	5.11	13.167	2.10	19.23	0.30
1.050	0.30	7.117	5.11	13.183	2.10	19.25	0.30
1.067	0.30	7.133	5.11	13.200	2.10	19.27	0.30
1.083	0.30	7.150	5.11	13.217	2.10	19.28	0.30
1.100	0.30	7.167	5.11	13.233	2.10	19.30	0.30
1.117	0.30	7.183	5.11	13.250	2.10	19.32	0.30
1.133	0.30	7.200	5.11	13.267	2.10	19.33	0.30
1.150	0.30	7.217	5.11	13.283	2.10	19.35	0.30
1.167	0.30	7.233	5.11	13.300	2.10	19.37	0.30
1.183	0.30	7.250	5.11	13.317	2.10	19.38	0.30
1.200	0.30	7.267	5.11	13.333	2.10	19.40	0.30
1.217	0.30	7.283	5.11	13.350	2.10	19.42	0.30
1.233	0.30	7.300	5.11	13.367	2.10	19.43	0.30
1.250	0.30	7.317	5.11	13.383	2.10	19.45	0.30
1.267	0.30	7.333	5.11	13.400	2.10	19.47	0.30
1.283	0.30	7.350	5.11	13.417	2.10	19.48	0.30
1.300	0.30	7.367	5.11	13.433	2.10	19.50	0.30
1.317	0.30	7.383	5.11	13.450	2.10	19.52	0.30
1.333	0.30	7.400	5.11	13.467	2.10	19.53	0.30
1.350	0.30	7.417	5.11	13.483	2.10	19.55	0.30
1.367	0.30	7.433	5.11	13.500	2.10	19.57	0.30
1.383	0.30	7.450	5.11	13.517	2.10	19.58	0.30
1.400	0.30	7.467	5.11	13.533	2.10	19.60	0.30
1.417	0.30	7.483	5.11	13.550	2.10	19.62	0.30
1.433	0.30	7.500	5.11	13.567	2.10	19.63	0.30
1.450	0.30	7.517	5.11	13.583	2.10	19.65	0.30
1.467	0.30	7.533	5.11	13.600	2.10	19.67	0.30
1.483	0.30	7.550	5.11	13.617	2.10	19.68	0.30
1.500	0.30	7.567	5.11	13.633	2.10	19.70	0.30
1.517	0.30	7.583	5.11	13.650	2.10	19.72	0.30
1.533	0.30	7.600	5.11	13.667	2.10	19.73	0.30
1.550	0.30	7.617	5.11	13.683	2.10	19.75	0.30
1.567	0.30	7.633	5.11	13.700	2.10	19.77	0.30
1.583	0.30	7.650	5.11	13.717	2.10	19.78	0.30
1.600	0.30	7.667	5.11	13.733	2.10	19.80	0.30
1.617	0.30	7.683	5.11	13.750	2.10	19.82	0.30
1.633	0.30	7.700	5.11	13.767	2.10	19.83	0.30
1.650	0.30	7.717	5.11	13.783	2.10	19.85	0.30
1.667	0.30	7.733	5.11	13.800	2.10	19.87	0.30
1.683	0.30	7.750	5.11	13.817	2.10	19.88	0.30
1.700	0.30	7.767	5.11	13.833	2.10	19.90	0.30
1.717	0.30	7.783	5.11	13.850	2.10	19.92	0.30
1.733	0.30	7.800	5.11	13.867	2.10	19.93	0.30
1.750	0.30	7.817	5.11	13.883	2.10	19.95	0.30
1.767	0.30	7.833	5.11	13.900	2.10	19.97	0.30
1.783	0.30	7.850	5.11	13.917	2.10	19.98	0.30
1.800	0.30	7.867	5.11	13.933	2.10	20.00	0.30
1.817	0.30	7.883	5.11	13.950	2.10	20.02	0.30
1.833	0.30	7.900	5.11	13.967	2.10	20.03	0.30
1.850	0.30	7.917	5.11	13.983	2.10	20.05	0.30
1.867	0.30	7.933	5.11	14.000	2.10	20.07	0.30
1.883	0.30	7.950	5.11	14.017	2.10	20.08	0.30
1.900	0.30	7.967	5.11	14.033	2.10	20.10	0.30
1.917	0.30	7.983	5.11	14.050	2.10	20.12	0.30
1.933	0.30	8.000	5.11	14.067	2.10	20.13	0.30
1.950	0.30	8.017	5.11	14.083	2.10	20.15	0.30
1.967	0.30	8.033	5.11	14.100	2.10	20.17	0.30
1.983	0.30	8.050	5.11	14.117	2.10	20.18	0.30
2.000	0.30	8.067	5.11	14.133	2.10	20.20	0.30
2.017	0.30	8.083	5.11	14.150	2.10	20.22	0.30
2.033	0.30	8.100	5.11	14.167	2.10	20.23	0.30
2.050	0.30	8.117	5.11	14.183	2.10	20.25	0.30
2.067	0.30	8.133	5.11	14.200	2.10	20.27	0.30
2.083	0.30	8.150	5.11	14.217	2.10	20.28	0.30
2.100	0.30	8.167	5.11	14.233	2.10	20.30	0.30
2.117	0.30	8.183	5.11	14.250	2.10	20.32	0.30
2.133	0.30	8.200	5.11	14.267	1.20	20.33	0.30
2.150	0.30	8.217	5.11	14.283	1.20	20.35	0.30
2.167	0.30	8.233	5.11	14.300	1.20	20.37	0.30
2.183	0.30	8.250	5.13	14.317	1.20	20.38	0.30
2.200	0.30	8.267	13.82	14.333	1.20	20.40	0.30
2.217	0.30	8.283	13.82	14.350	1.20	20.42	0.30
2.233	0.30	8.300	13.82	14.367	1.20	20.43	0.30
2.250	0.30	8.317	13.82	14.383	1.20	20.45	0.30
2.267	0.30	8.333	13.82	14.400	1.20	20.47	0.30
2.283	0.30	8.350	13.82	14.417	1.20	20.48	0.30
2.300	0.30	8.367	13.82	14.433	1.20	20.50	0.30
2.317	0.30	8.383	13.82	14.450	1.20	20.52	0.30
2.333	0.30	8.400	13.82	14.467	1.20	20.53	0.30
2.350	0.30	8.417	13.82	14.483	1.20	20.55	0.30
2.367	0.30	8.433	13.82	14.500	1.20	20.57	0.30
2.383	0.30	8.450	13.82	14.517	1.20	20.58	0.30
2.400	0.30	8.467	13.82	14.533	1.20	20.60	0.30
2.417	0.30	8.483	13.82	14.550	1.20	20.62	0.30
2.433	0.30	8.500	13.82	14.567	1.20	20.63	0.30
2.450	0.30	8.517	13.82	14.583	1.20	20.65	0.30
2.467	0.30	8.533	13.82	14.600	1.20	20.67	0.30
2.483	0.30	8.550	13.82	14.617	1.20	20.68	0.30
2.500	0.30	8.567	13.82	14.633	1.20	20.70	0.30
2.517	0.30	8.583	13.82	14.650	1.20	20.72	0.30
2.533	0.30	8.600	13.82	14.667	1.20	20.73	0.30
2.550	0.30	8.617	13.82	14.683	1.20	20.75	0.30
2.567	0.30	8.633	13.82	14.700	1.20	20.77	0.30
2.583	0.30	8.650	13.82	14.717	1.20	20.78	0.30
2.600	0.30	8.667	13.82	14.733	1.20	20.80	0.30
2.617	0.30	8.683	13.82	14.750	1.20	20.82	0.30
2.633	0.30	8.700	13.82	14.767	1.20	20.83	0.30
2.650	0.30	8.717	13.82	14.783	1.20	20.85	0.30
2.667	0.30	8.733	13.82	14.800	1.20	20.87	0.30
2.683	0.30	8.750	13.82	14.817	1.20	20.88	0.30
2.700	0.30	8.767	13.82	14.833	1.20	20.90	0.30
2.717	0.30	8.783	13.82	14.850	1.20	20.92	0.30
2.733	0.30	8.800	13.82	14.867	1.20	20.93	0.30
2.750	0.30	8.817	13.82	14.883	1.20	20.95	0.30
2.767	0.30	8.833	13.82	14.900	1.20	20.97	0.30
2.783	0.30	8.850	13.82	14.917	1.20	20.98	0.30
2.800	0.30	8.867	13.82	14.933	1.20	21.00	0.30
2.817	0.30	8.883	13.82	14.950	1.20	21.02	0.30
2.833	0.30	8.900	13.82	14.967	1.20	21.03	0.30
2.850	0.30	8.917	13.82	14.983	1.20	21.05	0.30
2.867	0.30	8.933	13.82	15.000	1.20	21.07	0.30
2.883	0.30	8.950	13.82	15.017	1.20	21.08	0.30
2.900	0.30	8.967	13.82	15.033	1.20	21.10	0.30
2.917	0.30	8.983	13.82	15.050	1.20	21.12	0.30
2.933	0.30	9.000	13.82	15.067	1.20	21.13	0.30
2.950	0.30	9.017	13.82	15.083	1.20	21.15	0.30
2.967	0.30	9.033	13.82	15.100	1.20	21.17	0.30
2.983	0.30	9.050	13.82	15.117	1.20	21.18	0.30
3.000	0.30	9.067	13.82	15.133	1.20	21.20	0.30
3.017	0.30	9.083	13.82	15.150	1.20	21.22	0.30
3.033	0.30	9.100	13.82	15.167	1.20	21.23	0.30
3.050	0.30	9.117	13.82	15.183	1.20	21.25	0.30
3.067	0.30	9.133	13.82	15.200	1.20	21.27	0.30
3.083	0.30	9.150	13.82	15.217	1.20	21.28	0.30
3.100	0.30	9.167	13.82	15.233	1.20	21.30	0.30
3.117	0.30	9.183	13.82	15.250	1.20	21.32	0.30
3.133	0.30	9.200	13.82	15.267	1.20	21.33	0.30
3.150	0.30	9.217	13.82	15.283	1.20	21.35	0.30
3.167	0.30	9.233	13.82	15.300	1.20	21.37	0.30
3.183	0.30	9.250	13.82	15.317	1.20	21.38	0.30
3.200	0.30	9.267	13.82	15.333	1.20	21.40	0.30

3.217	0.30	9.283	13.82	15.350	1.20	21.42	0.30		4.483	1.80	10.550	3.91	16.617	0.60	22.68	0.30
3.233	0.30	9.300	13.82	15.367	1.20	21.43	0.30		4.500	1.80	10.567	3.91	16.633	0.60	22.70	0.30
3.250	0.30	9.317	13.82	15.383	1.20	21.45	0.30		4.517	1.80	10.583	3.91	16.650	0.60	22.72	0.30
3.267	0.30	9.333	13.82	15.400	1.20	21.47	0.30		4.533	1.80	10.600	3.91	16.667	0.60	22.73	0.30
3.283	0.30	9.350	13.82	15.417	1.20	21.48	0.30		4.550	1.80	10.617	3.91	16.683	0.60	22.75	0.30
3.300	0.30	9.367	13.82	15.433	1.20	21.50	0.30		4.567	1.80	10.633	3.91	16.700	0.60	22.77	0.30
3.317	0.30	9.383	13.82	15.450	1.20	21.52	0.30		4.583	1.80	10.650	3.91	16.717	0.60	22.78	0.30
3.333	0.30	9.400	13.82	15.467	1.20	21.53	0.30		4.600	1.80	10.667	3.91	16.733	0.60	22.80	0.30
3.350	0.30	9.417	13.82	15.483	1.20	21.55	0.30		4.617	1.80	10.683	3.91	16.750	0.60	22.82	0.30
3.367	0.30	9.433	13.82	15.500	1.20	21.57	0.30		4.633	1.80	10.700	3.91	16.767	0.60	22.83	0.30
3.383	0.30	9.450	13.82	15.517	1.20	21.58	0.30		4.650	1.80	10.717	3.91	16.783	0.60	22.85	0.30
3.400	0.30	9.467	13.82	15.533	1.20	21.60	0.30		4.667	1.80	10.733	3.91	16.800	0.60	22.87	0.30
3.417	0.30	9.483	13.82	15.550	1.20	21.62	0.30		4.683	1.80	10.750	3.91	16.817	0.60	22.88	0.30
3.433	0.30	9.500	13.82	15.567	1.20	21.63	0.30		4.700	1.80	10.767	3.91	16.833	0.60	22.90	0.30
3.450	0.30	9.517	13.82	15.583	1.20	21.65	0.30		4.717	1.80	10.783	3.91	16.850	0.60	22.92	0.30
3.467	0.30	9.533	13.82	15.600	1.20	21.67	0.30		4.733	1.80	10.800	3.91	16.867	0.60	22.93	0.30
3.483	0.30	9.550	13.82	15.617	1.20	21.68	0.30		4.750	1.80	10.817	3.91	16.883	0.60	22.95	0.30
3.500	0.30	9.567	13.82	15.633	1.20	21.70	0.30		4.767	1.80	10.833	3.91	16.900	0.60	22.97	0.30
3.517	0.30	9.583	13.82	15.650	1.20	21.72	0.30		4.783	1.80	10.850	3.91	16.917	0.60	22.98	0.30
3.533	0.30	9.600	13.82	15.667	1.20	21.73	0.30		4.800	1.80	10.867	3.91	16.933	0.60	23.00	0.30
3.550	0.30	9.617	13.82	15.683	1.20	21.75	0.30		4.817	1.80	10.883	3.91	16.950	0.60	23.02	0.30
3.567	0.30	9.633	13.82	15.700	1.20	21.77	0.30		4.833	1.80	10.900	3.91	16.967	0.60	23.03	0.30
3.583	0.30	9.650	13.82	15.717	1.20	21.78	0.30		4.850	1.80	10.917	3.91	16.983	0.60	23.05	0.30
3.600	0.30	9.667	13.82	15.733	1.20	21.80	0.30		4.867	1.80	10.933	3.91	17.000	0.60	23.07	0.30
3.617	0.30	9.683	13.82	15.750	1.20	21.82	0.30		4.883	1.80	10.950	3.91	17.017	0.60	23.08	0.30
3.633	0.30	9.700	13.82	15.767	1.20	21.83	0.30		4.900	1.80	10.967	3.91	17.033	0.60	23.10	0.30
3.650	0.30	9.717	13.82	15.783	1.20	21.85	0.30		4.917	1.80	10.983	3.91	17.050	0.60	23.12	0.30
3.667	0.30	9.733	13.82	15.800	1.20	21.87	0.30		4.933	1.80	11.000	3.91	17.067	0.60	23.13	0.30
3.683	0.30	9.750	13.82	15.817	1.20	21.88	0.30		4.950	1.80	11.017	3.91	17.083	0.60	23.15	0.30
3.700	0.30	9.767	13.82	15.833	1.20	21.90	0.30		4.967	1.80	11.033	3.91	17.100	0.60	23.17	0.30
3.717	0.30	9.783	13.82	15.850	1.20	21.92	0.30		4.983	1.80	11.050	3.91	17.117	0.60	23.18	0.30
3.733	0.30	9.800	13.82	15.867	1.20	21.93	0.30		5.000	1.80	11.067	3.91	17.133	0.60	23.20	0.30
3.750	0.30	9.817	13.82	15.883	1.20	21.95	0.30		5.017	1.80	11.083	3.91	17.150	0.60	23.22	0.30
3.767	0.30	9.833	13.82	15.900	1.20	21.97	0.30		5.033	1.80	11.100	3.91	17.167	0.60	23.23	0.30
3.783	0.30	9.850	13.82	15.917	1.20	21.98	0.30		5.050	1.80	11.117	3.91	17.183	0.60	23.25	0.30
3.800	0.30	9.867	13.82	15.933	1.20	22.00	0.30		5.067	1.80	11.133	3.91	17.200	0.60	23.27	0.30
3.817	0.30	9.883	13.82	15.950	1.20	22.02	0.30		5.083	1.80	11.150	3.91	17.217	0.60	23.28	0.30
3.833	0.30	9.900	13.82	15.967	1.20	22.03	0.30		5.100	1.80	11.167	3.91	17.233	0.60	23.30	0.30
3.850	0.30	9.917	13.82	15.983	1.20	22.05	0.30		5.117	1.80	11.183	3.91	17.250	0.60	23.32	0.30
3.867	0.30	9.933	13.82	16.000	1.20	22.07	0.30		5.133	1.80	11.200	3.91	17.267	0.60	23.33	0.30
3.883	0.30	9.950	13.82	16.017	1.20	22.08	0.30		5.150	1.80	11.217	3.91	17.283	0.60	23.35	0.30
3.900	0.30	9.967	13.82	16.033	1.20	22.10	0.30		5.167	1.80	11.233	3.91	17.300	0.60	23.37	0.30
3.917	0.30	9.983	13.82	16.050	1.20	22.12	0.30		5.183	1.80	11.250	3.91	17.317	0.60	23.38	0.30
3.933	0.30	10.000	13.82	16.067	1.20	22.13	0.30		5.200	1.80	11.267	3.91	17.333	0.60	23.40	0.30
3.950	0.30	10.017	13.82	16.083	1.20	22.15	0.30		5.217	1.80	11.283	3.91	17.350	0.60	23.42	0.30
3.967	0.30	10.033	13.82	16.100	1.20	22.17	0.30		5.233	1.80	11.300	3.91	17.367	0.60	23.43	0.30
3.983	0.30	10.050	13.82	16.117	1.20	22.18	0.30		5.250	1.80	11.317	3.91	17.383	0.60	23.45	0.30
4.000	0.30	10.067	13.82	16.133	1.20	22.20	0.30		5.267	1.80	11.333	3.91	17.400	0.60	23.47	0.30
4.017	0.30	10.083	13.82	16.150	1.20	22.22	0.30		5.283	1.80	11.350	3.91	17.417	0.60	23.48	0.30
4.033	0.30	10.100	13.82	16.167	1.20	22.23	0.30		5.300	1.80	11.367	3.91	17.433	0.60	23.50	0.30
4.050	0.30	10.117	13.82	16.183	1.20	22.25	0.30		5.317	1.80	11.383	3.91	17.450	0.60	23.52	0.30
4.067	0.30	10.133	13.82	16.200	1.20	22.27	0.30		5.333	1.80	11.400	3.91	17.467	0.60	23.53	0.30
4.083	0.30	10.150	13.82	16.217	1.20	22.28	0.30		5.350	1.80	11.417	3.91	17.483	0.60	23.55	0.30
4.100	0.30	10.167	13.82	16.233	1.20	22.30	0.30		5.367	1.80	11.433	3.91	17.500	0.60	23.57	0.30
4.117	0.30	10.183	13.82	16.250	1.20	22.32	0.30		5.383	1.80	11.450	3.91	17.517	0.60	23.58	0.30
4.133	0.30	10.200	13.82	16.267	0.60	22.33	0.30		5.400	1.80	11.467	3.91	17.533	0.60	23.60	0.30
4.150	0.30	10.217	13.82	16.283	0.60	22.35	0.30		5.417	1.80	11.483	3.91	17.550	0.60	23.62	0.30
4.167	0.30	10.233	13.82	16.300	0.60	22.37	0.30		5.433	1.80	11.500	3.91	17.567	0.60	23.63	0.30
4.183	0.30	10.250	13.81	16.317	0.60	22.38	0.30		5.450	1.80	11.517	3.91	17.583	0.60	23.65	0.30
4.200	0.30	10.267	3.91	16.333	0.60	22.40	0.30		5.467	1.80	11.533	3.91	17.600	0.60	23.67	0.30
4.217	0.30	10.283	3.91	16.350	0.60	22.42	0.30		5.483	1.80	11.550	3.91	17.617	0.60	23.68	0.30
4.233	0.30	10.300	3.91	16.367	0.60	22.43	0.30		5.500	1.80	11.567	3.91	17.633	0.60	23.70	0.30
4.250	0.30	10.317	3.91	16.383	0.60	22.45	0.30		5.517	1.80	11.583	3.91	17.650	0.60	23.72	0.30
4.267	1.80	10.333	3.91	16.400	0.60	22.47	0.30		5.533	1.80	11.600	3.91	17.667	0.60	23.73	0.30
4.283	1.80	10.350	3.91	16.417	0.60	22.48	0.30		5.550	1.80	11.617	3.91	17.683	0.60	23.75	0.30
4.300	1.80	10.367	3.91	16.433	0.60	22.50	0.30		5.567	1.80	11.633	3.91	17.700	0.60	23.77	0.30
4.317	1.80	10.383	3.91	16.450	0.60	22.52	0.30		5.583	1.80	11.650	3.91	17.717	0.60	23.78	0.30
4.333	1.80	10.400	3.91	16.467	0.60	22.53	0.30		5.600	1.80	11.667	3.91	17.733	0.60	23.80	0.30
4.350	1.80	10.417	3.91	16.483	0.60	22.55	0.30		5.617	1.80	11.683	3.91	17.750	0.60	23.82	0.30
4.367	1.80	10.433	3.91	16.500	0.60	22.57	0.30		5.633	1.80	11.700	3.91	17.767	0.60	23.83	0.30
4.383	1.80	10.450	3.91	16.517	0.60	22.58	0.30		5.650	1.80	11.717	3.91	17.783	0.60	23.85	0.30
4.400	1.80	10.467	3.91	16.533	0.60	22.60	0.30		5.667	1.80	11.733	3.91	17.800	0.60	23.87	0.30
4.417	1.80	10.483	3.91	16.550	0.60	22.62	0.30		5.683	1.80	11.750	3.91	17.817	0.60	23.88	0.30
4.433	1.80	10.500	3.91	16.567	0.60	22.63	0.30		5.700	1.80	11.767	3.91	17.833	0.60	23.90	0.30
4.450	1.80	10.517	3.91	16.583	0.60	22.65	0.30		5.717	1.80	11.783	3.91	17.850	0.60	23.92	0.30
4.467	1.80	10.533	3.91	16.600	0.60	22.67	0.30		5.733	1.80	11.800	3.91	17.867	0.60	23.93	0.30

5.750	1.80	11.817	3.91	17.883	0.60	23.95	0.30
5.767	1.80	11.833	3.91	17.900	0.60	23.97	0.30
5.783	1.80	11.850	3.91	17.917	0.60	23.98	0.30
5.800	1.80	11.867	3.91	17.933	0.60	24.00	0.30
5.817	1.80	11.883	3.91	17.950	0.60	24.02	0.30
5.833	1.80	11.900	3.91	17.967	0.60	24.03	0.30
5.850	1.80	11.917	3.91	17.983	0.60	24.05	0.30
5.867	1.80	11.933	3.91	18.000	0.60	24.07	0.30
5.883	1.80	11.950	3.91	18.017	0.60	24.08	0.30
5.900	1.80	11.967	3.91	18.033	0.60	24.10	0.30
5.917	1.80	11.983	3.91	18.050	0.60	24.12	0.30
5.933	1.80	12.000	3.91	18.067	0.60	24.13	0.30
5.950	1.80	12.017	3.91	18.083	0.60	24.15	0.30
5.967	1.80	12.033	3.91	18.100	0.60	24.17	0.30
5.983	1.80	12.050	3.91	18.117	0.60	24.18	0.30
6.000	1.80	12.067	3.91	18.133	0.60	24.20	0.30
6.017	1.80	12.083	3.91	18.150	0.60	24.22	0.30
6.033	1.80	12.100	3.91	18.167	0.60	24.23	0.30
6.050	1.80	12.117	3.91	18.183	0.60	24.25	0.30
6.067	1.80	12.133	3.91	18.200	0.60		

				TOTALS
Max.Eff.Inten.(mm/hr)=	13.82	9.96		
over (min)	7.00	11.00		
Storage Coeff. (min)=	6.74 (ii)	10.50 (ii)		
Unit Hyd. Tpeak (min)=	7.00	11.00		
Unit Hyd. peak (cms)=	0.17	0.11		
PEAK FLOW (cms)=	0.10	0.00	0.104 (iii)	
TIME TO PEAK (hrs)=	9.98	10.25	10.25	
RUNOFF VOLUME (mm)=	59.07	33.18	58.82	
TOTAL RAINFALL (mm)=	60.08	60.08	60.08	
RUNOFF COEFFICIENT =	0.98	0.55	0.98	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7626)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0568	0.1530
	0.0239	0.0780	0.0660	0.1730
	0.0370	0.1040	0.0751	0.2000
	0.0451	0.1250	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7567)	2.720	0.104	10.25	58.82
OUTFLOW: ID= 1 (7626)	2.720	0.031	10.73	54.02

PEAK FLOW REDUCTION [Qout/Qin](%)= 29.92
TIME SHIFT OF PEAK FLOW (min)= 29.00
MAXIMUM STORAGE USED (ha.m.)= 0.0924

CALIB			
STANDHYD (7624)	Area (ha)= 1.80		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	1.78	0.02	
Dep. Storage (mm)=	1.00	1.50	
Average Slope (%)=	1.00	0.50	
Length (m)=	109.54	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	1.80	12.150	3.91	18.22	0.60
0.033	0.00	6.100	1.80	12.167	3.91	18.23	0.60
0.050	0.00	6.117	1.80	12.183	3.91	18.25	0.60
0.067	0.00	6.133	1.80	12.200	3.91	18.27	0.30
0.083	0.00	6.150	1.80	12.217	3.91	18.28	0.30
0.100	0.00	6.167	1.80	12.233	3.91	18.30	0.30
0.117	0.00	6.183	1.80	12.250	3.91	18.32	0.30
0.133	0.00	6.200	1.80	12.267	2.10	18.33	0.30
0.150	0.00	6.217	1.80	12.283	2.10	18.35	0.30
0.167	0.00	6.233	1.80	12.300	2.10	18.37	0.30
0.183	0.00	6.250	1.81	12.317	2.10	18.38	0.30
0.200	0.00	6.267	5.11	12.333	2.10	18.40	0.30
0.217	0.00	6.283	5.11	12.350	2.10	18.42	0.30
0.233	0.00	6.300	5.11	12.367	2.10	18.43	0.30
0.250	0.00	6.317	5.11	12.383	2.10	18.45	0.30
0.267	0.30	6.333	5.11	12.400	2.10	18.47	0.30
0.283	0.30	6.350	5.11	12.417	2.10	18.48	0.30
0.300	0.30	6.367	5.11	12.433	2.10	18.50	0.30
0.317	0.30	6.383	5.11	12.450	2.10	18.52	0.30
0.333	0.30	6.400	5.11	12.467	2.10	18.53	0.30
0.350	0.30	6.417	5.11	12.483	2.10	18.55	0.30
0.367	0.30	6.433	5.11	12.500	2.10	18.57	0.30
0.383	0.30	6.450	5.11	12.517	2.10	18.58	0.30
0.400	0.30	6.467	5.11	12.533	2.10	18.60	0.30
0.417	0.30	6.483	5.11	12.550	2.10	18.62	0.30
0.433	0.30	6.500	5.11	12.567	2.10	18.63	0.30
0.450	0.30	6.517	5.11	12.583	2.10	18.65	0.30
0.467	0.30	6.533	5.11	12.600	2.10	18.67	0.30
0.483	0.30	6.550	5.11	12.617	2.10	18.68	0.30
0.500	0.30	6.567	5.11	12.633	2.10	18.70	0.30
0.517	0.30	6.583	5.11	12.650	2.10	18.72	0.30
0.533	0.30	6.600	5.11	12.667	2.10	18.73	0.30
0.550	0.30	6.617	5.11	12.683	2.10	18.75	0.30
0.567	0.30	6.633	5.11	12.700	2.10	18.77	0.30
0.583	0.30	6.650	5.11	12.717	2.10	18.78	0.30
0.600	0.30	6.667	5.11	12.733	2.10	18.80	0.30
0.617	0.30	6.683	5.11	12.750	2.10	18.82	0.30
0.633	0.30	6.700	5.11	12.767	2.10	18.83	0.30
0.650	0.30	6.717	5.11	12.783	2.10	18.85	0.30
0.667	0.30	6.733	5.11	12.800	2.10	18.87	0.30
0.683	0.30	6.750	5.11	12.817	2.10	18.88	0.30
0.700	0.30	6.767	5.11	12.833	2.10	18.90	0.30
0.717	0.30	6.783	5.11	12.850	2.10	18.92	0.30
0.733	0.30	6.800	5.11	12.867	2.10	18.93	0.30
0.750	0.30	6.817	5.11	12.883	2.10	18.95	0.30
0.767	0.30	6.833	5.11	12.900	2.10	18.97	0.30
0.783	0.30	6.850	5.11	12.917	2.10	18.98	0.30
0.800	0.30	6.867	5.11	12.933	2.10	19.00	0.30
0.817	0.30	6.883	5.11	12.950	2.10	19.02	0.30
0.833	0.30	6.900	5.11	12.967	2.10	19.03	0.30
0.850	0.30	6.917	5.11	12.983	2.10	19.05	0.30
0.867	0.30	6.933	5.11	13.000	2.10	19.07	0.30
0.883	0.30	6.950	5.11	13.017	2.10	19.08	0.30
0.900	0.30	6.967	5.11	13.033	2.10	19.10	0.30
0.917	0.30	6.983	5.11	13.050	2.10	19.12	0.30
0.933	0.30	7.000	5.11	13.067	2.10	19.13	0.30
0.950	0.30	7.017	5.11	13.083	2.10	19.15	0.30
0.967	0.30	7.033	5.11	13.100	2.10	19.17	0.30
0.983	0.30	7.050	5.11	13.117	2.10	19.18	0.30
1.000	0.30	7.067	5.11	13.133	2.10	19.20	0.30
1.017	0.30	7.083	5.11	13.150	2.10	19.22	0.30
1.033	0.30	7.100	5.11	13.167	2.10	19.23	0.30
1.050	0.30	7.117	5.11	13.183	2.10	19.25	0.30
1.067	0.30	7.133	5.11	13.200	2.10	19.27	0.30
1.083	0.30	7.150	5.11	13.217	2.10	19.28	0.30
1.100	0.30	7.167	5.11	13.233	2.10	19.30	0.30
1.117	0.30	7.183	5.11	13.250	2.10	19.32	0.30
1.133	0.30	7.200	5.11	13.267	2.10	19.33	0.30
1.150	0.30	7.217	5.11	13.283	2.10	19.35	0.30
1.167	0.30	7.233	5.11	13.300	2.10	19.37	0.30
1.183	0.30	7.250	5.11	13.317	2.10	19.38	0.30
1.200	0.30	7.267	5.11	13.333	2.10	19.40	0.30
1.217	0.30	7.283	5.11	13.350	2.10	19.42	0.30

1.233	0.30	7.300	5.11	13.367	2.10	19.43	0.30	2.500	0.30	8.567	13.82	14.633	1.20	20.70	0.30
1.250	0.30	7.317	5.11	13.383	2.10	19.45	0.30	2.517	0.30	8.583	13.82	14.650	1.20	20.72	0.30
1.267	0.30	7.333	5.11	13.400	2.10	19.47	0.30	2.533	0.30	8.600	13.82	14.667	1.20	20.73	0.30
1.283	0.30	7.350	5.11	13.417	2.10	19.48	0.30	2.550	0.30	8.617	13.82	14.683	1.20	20.75	0.30
1.300	0.30	7.367	5.11	13.433	2.10	19.50	0.30	2.567	0.30	8.633	13.82	14.700	1.20	20.77	0.30
1.317	0.30	7.383	5.11	13.450	2.10	19.52	0.30	2.583	0.30	8.650	13.82	14.717	1.20	20.78	0.30
1.333	0.30	7.400	5.11	13.467	2.10	19.53	0.30	2.600	0.30	8.667	13.82	14.733	1.20	20.80	0.30
1.350	0.30	7.417	5.11	13.483	2.10	19.55	0.30	2.617	0.30	8.683	13.82	14.750	1.20	20.82	0.30
1.367	0.30	7.433	5.11	13.500	2.10	19.57	0.30	2.633	0.30	8.700	13.82	14.767	1.20	20.83	0.30
1.383	0.30	7.450	5.11	13.517	2.10	19.58	0.30	2.650	0.30	8.717	13.82	14.783	1.20	20.85	0.30
1.400	0.30	7.467	5.11	13.533	2.10	19.60	0.30	2.667	0.30	8.733	13.82	14.800	1.20	20.87	0.30
1.417	0.30	7.483	5.11	13.550	2.10	19.62	0.30	2.683	0.30	8.750	13.82	14.817	1.20	20.88	0.30
1.433	0.30	7.500	5.11	13.567	2.10	19.63	0.30	2.700	0.30	8.767	13.82	14.833	1.20	20.90	0.30
1.450	0.30	7.517	5.11	13.583	2.10	19.65	0.30	2.717	0.30	8.783	13.82	14.850	1.20	20.92	0.30
1.467	0.30	7.533	5.11	13.600	2.10	19.67	0.30	2.733	0.30	8.800	13.82	14.867	1.20	20.93	0.30
1.483	0.30	7.550	5.11	13.617	2.10	19.68	0.30	2.750	0.30	8.817	13.82	14.883	1.20	20.95	0.30
1.500	0.30	7.567	5.11	13.633	2.10	19.70	0.30	2.767	0.30	8.833	13.82	14.900	1.20	20.97	0.30
1.517	0.30	7.583	5.11	13.650	2.10	19.72	0.30	2.783	0.30	8.850	13.82	14.917	1.20	20.98	0.30
1.533	0.30	7.600	5.11	13.667	2.10	19.73	0.30	2.800	0.30	8.867	13.82	14.933	1.20	21.00	0.30
1.550	0.30	7.617	5.11	13.683	2.10	19.75	0.30	2.817	0.30	8.883	13.82	14.950	1.20	21.02	0.30
1.567	0.30	7.633	5.11	13.700	2.10	19.77	0.30	2.833	0.30	8.900	13.82	14.967	1.20	21.03	0.30
1.583	0.30	7.650	5.11	13.717	2.10	19.78	0.30	2.850	0.30	8.917	13.82	14.983	1.20	21.05	0.30
1.600	0.30	7.667	5.11	13.733	2.10	19.80	0.30	2.867	0.30	8.933	13.82	15.000	1.20	21.07	0.30
1.617	0.30	7.683	5.11	13.750	2.10	19.82	0.30	2.883	0.30	8.950	13.82	15.017	1.20	21.08	0.30
1.633	0.30	7.700	5.11	13.767	2.10	19.83	0.30	2.900	0.30	8.967	13.82	15.033	1.20	21.10	0.30
1.650	0.30	7.717	5.11	13.783	2.10	19.85	0.30	2.917	0.30	8.983	13.82	15.050	1.20	21.12	0.30
1.667	0.30	7.733	5.11	13.800	2.10	19.87	0.30	2.933	0.30	9.000	13.82	15.067	1.20	21.13	0.30
1.683	0.30	7.750	5.11	13.817	2.10	19.88	0.30	2.950	0.30	9.017	13.82	15.083	1.20	21.15	0.30
1.700	0.30	7.767	5.11	13.833	2.10	19.90	0.30	2.967	0.30	9.033	13.82	15.100	1.20	21.17	0.30
1.717	0.30	7.783	5.11	13.850	2.10	19.92	0.30	2.983	0.30	9.050	13.82	15.117	1.20	21.18	0.30
1.733	0.30	7.800	5.11	13.867	2.10	19.93	0.30	3.000	0.30	9.067	13.82	15.133	1.20	21.20	0.30
1.750	0.30	7.817	5.11	13.883	2.10	19.95	0.30	3.017	0.30	9.083	13.82	15.150	1.20	21.22	0.30
1.767	0.30	7.833	5.11	13.900	2.10	19.97	0.30	3.033	0.30	9.100	13.82	15.167	1.20	21.23	0.30
1.783	0.30	7.850	5.11	13.917	2.10	19.98	0.30	3.050	0.30	9.117	13.82	15.183	1.20	21.25	0.30
1.800	0.30	7.867	5.11	13.933	2.10	20.00	0.30	3.067	0.30	9.133	13.82	15.200	1.20	21.27	0.30
1.817	0.30	7.883	5.11	13.950	2.10	20.02	0.30	3.083	0.30	9.150	13.82	15.217	1.20	21.28	0.30
1.833	0.30	7.900	5.11	13.967	2.10	20.03	0.30	3.100	0.30	9.167	13.82	15.233	1.20	21.30	0.30
1.850	0.30	7.917	5.11	13.983	2.10	20.05	0.30	3.117	0.30	9.183	13.82	15.250	1.20	21.32	0.30
1.867	0.30	7.933	5.11	14.000	2.10	20.07	0.30	3.133	0.30	9.200	13.82	15.267	1.20	21.33	0.30
1.883	0.30	7.950	5.11	14.017	2.10	20.08	0.30	3.150	0.30	9.217	13.82	15.283	1.20	21.35	0.30
1.900	0.30	7.967	5.11	14.033	2.10	20.10	0.30	3.167	0.30	9.233	13.82	15.300	1.20	21.37	0.30
1.917	0.30	7.983	5.11	14.050	2.10	20.12	0.30	3.183	0.30	9.250	13.82	15.317	1.20	21.38	0.30
1.933	0.30	8.000	5.11	14.067	2.10	20.13	0.30	3.200	0.30	9.267	13.82	15.333	1.20	21.40	0.30
1.950	0.30	8.017	5.11	14.083	2.10	20.15	0.30	3.217	0.30	9.283	13.82	15.350	1.20	21.42	0.30
1.967	0.30	8.033	5.11	14.100	2.10	20.17	0.30	3.233	0.30	9.300	13.82	15.367	1.20	21.43	0.30
1.983	0.30	8.050	5.11	14.117	2.10	20.18	0.30	3.250	0.30	9.317	13.82	15.383	1.20	21.45	0.30
2.000	0.30	8.067	5.11	14.133	2.10	20.20	0.30	3.267	0.30	9.333	13.82	15.400	1.20	21.47	0.30
2.017	0.30	8.083	5.11	14.150	2.10	20.22	0.30	3.283	0.30	9.350	13.82	15.417	1.20	21.48	0.30
2.033	0.30	8.100	5.11	14.167	2.10	20.23	0.30	3.300	0.30	9.367	13.82	15.433	1.20	21.50	0.30
2.050	0.30	8.117	5.11	14.183	2.10	20.25	0.30	3.317	0.30	9.383	13.82	15.450	1.20	21.52	0.30
2.067	0.30	8.133	5.11	14.200	2.10	20.27	0.30	3.333	0.30	9.400	13.82	15.467	1.20	21.53	0.30
2.083	0.30	8.150	5.11	14.217	2.10	20.28	0.30	3.350	0.30	9.417	13.82	15.483	1.20	21.55	0.30
2.100	0.30	8.167	5.11	14.233	2.10	20.30	0.30	3.367	0.30	9.433	13.82	15.500	1.20	21.57	0.30
2.117	0.30	8.183	5.11	14.250	2.10	20.32	0.30	3.383	0.30	9.450	13.82	15.517	1.20	21.58	0.30
2.133	0.30	8.200	5.11	14.267	1.20	20.33	0.30	3.400	0.30	9.467	13.82	15.533	1.20	21.60	0.30
2.150	0.30	8.217	5.11	14.283	1.20	20.35	0.30	3.417	0.30	9.483	13.82	15.550	1.20	21.62	0.30
2.167	0.30	8.233	5.11	14.300	1.20	20.37	0.30	3.433	0.30	9.500	13.82	15.567	1.20	21.63	0.30
2.183	0.30	8.250	5.13	14.317	1.20	20.38	0.30	3.450	0.30	9.517	13.82	15.583	1.20	21.65	0.30
2.200	0.30	8.267	13.82	14.333	1.20	20.40	0.30	3.467	0.30	9.533	13.82	15.600	1.20	21.67	0.30
2.217	0.30	8.283	13.82	14.350	1.20	20.42	0.30	3.483	0.30	9.550	13.82	15.617	1.20	21.68	0.30
2.233	0.30	8.300	13.82	14.367	1.20	20.43	0.30	3.500	0.30	9.567	13.82	15.633	1.20	21.70	0.30
2.250	0.30	8.317	13.82	14.383	1.20	20.45	0.30	3.517	0.30	9.583	13.82	15.650	1.20	21.72	0.30
2.267	0.30	8.333	13.82	14.400	1.20	20.47	0.30	3.533	0.30	9.600	13.82	15.667	1.20	21.73	0.30
2.283	0.30	8.350	13.82	14.417	1.20	20.48	0.30	3.550	0.30	9.617	13.82	15.683	1.20	21.75	0.30
2.300	0.30	8.367	13.82	14.433	1.20	20.50	0.30	3.567	0.30	9.633	13.82	15.700	1.20	21.77	0.30
2.317	0.30	8.383	13.82	14.450	1.20	20.52	0.30	3.583	0.30	9.650	13.82	15.717	1.20	21.78	0.30
2.333	0.30	8.400	13.82	14.467	1.20	20.53	0.30	3.600	0.30	9.667	13.82	15.733	1.20	21.80	0.30
2.350	0.30	8.417	13.82	14.483	1.20	20.55	0.30	3.617	0.30	9.683	13.82	15.750	1.20	21.82	0.30
2.367	0.30	8.433	13.82	14.500	1.20	20.57	0.30	3.633	0.30	9.700	13.82	15.767	1.20	21.83	0.30
2.383	0.30	8.450	13.82	14.517	1.20	20.58	0.30	3.650	0.30	9.717	13.82	15.783	1.20	21.85	0.30
2.400	0.30	8.467	13.82	14.533	1.20	20.60	0.30	3.667	0.30	9.733	13.82	15.800	1.20	21.87	0.30
2.417	0.30	8.483	13.82	14.550	1.20	20.62	0.30	3.683	0.30	9.750	13.82	15.817	1.20	21.88	0.30
2.433	0.30	8.500	13.82	14.567	1.20	20.63	0.30	3.700	0.30	9.767	13.82	15.833	1.20	21.90	0.30
2.450	0.30	8.517	13.82	14.583	1.20	20.65	0.30	3.717	0.30	9.783	13.82	15.850	1.20	21.92	0.30
2.467	0.30	8.533	13.82	14.600	1.20	20.67	0.30	3.733	0.30	9.800	13.82	15.867	1.20	21.93	0.30
2.483	0.30	8.550	13.82	14.617	1.20	20.68	0.30	3.750	0.30	9.817	13.82	15.883	1.20	21.95	0.30

3.767	0.30	9.833	13.82	15.900	1.20	21.97	0.30
3.783	0.30	9.850	13.82	15.917	1.20	21.98	0.30
3.800	0.30	9.867	13.82	15.933	1.20	22.00	0.30
3.817	0.30	9.883	13.82	15.950	1.20	22.02	0.30
3.833	0.30	9.900	13.82	15.967	1.20	22.03	0.30
3.850	0.30	9.917	13.82	15.983	1.20	22.05	0.30
3.867	0.30	9.933	13.82	16.000	1.20	22.07	0.30
3.883	0.30	9.950	13.82	16.017	1.20	22.08	0.30
3.900	0.30	9.967	13.82	16.033	1.20	22.10	0.30
3.917	0.30	9.983	13.82	16.050	1.20	22.12	0.30
3.933	0.30	10.000	13.82	16.067	1.20	22.13	0.30
3.950	0.30	10.017	13.82	16.083	1.20	22.15	0.30
3.967	0.30	10.033	13.82	16.100	1.20	22.17	0.30
3.983	0.30	10.050	13.82	16.117	1.20	22.18	0.30
4.000	0.30	10.067	13.82	16.133	1.20	22.20	0.30
4.017	0.30	10.083	13.82	16.150	1.20	22.22	0.30
4.033	0.30	10.100	13.82	16.167	1.20	22.23	0.30
4.050	0.30	10.117	13.82	16.183	1.20	22.25	0.30
4.067	0.30	10.133	13.82	16.200	1.20	22.27	0.30
4.083	0.30	10.150	13.82	16.217	1.20	22.28	0.30
4.100	0.30	10.167	13.82	16.233	1.20	22.30	0.30
4.117	0.30	10.183	13.82	16.250	1.20	22.32	0.30
4.133	0.30	10.200	13.82	16.267	0.60	22.33	0.30
4.150	0.30	10.217	13.82	16.283	0.60	22.35	0.30
4.167	0.30	10.233	13.82	16.300	0.60	22.37	0.30
4.183	0.30	10.250	13.81	16.317	0.60	22.38	0.30
4.200	0.30	10.267	3.91	16.333	0.60	22.40	0.30
4.217	0.30	10.283	3.91	16.350	0.60	22.42	0.30
4.233	0.30	10.300	3.91	16.367	0.60	22.43	0.30
4.250	0.30	10.317	3.91	16.383	0.60	22.45	0.30
4.267	1.80	10.333	3.91	16.400	0.60	22.47	0.30
4.283	1.80	10.350	3.91	16.417	0.60	22.48	0.30
4.300	1.80	10.367	3.91	16.433	0.60	22.50	0.30
4.317	1.80	10.383	3.91	16.450	0.60	22.52	0.30
4.333	1.80	10.400	3.91	16.467	0.60	22.53	0.30
4.350	1.80	10.417	3.91	16.483	0.60	22.55	0.30
4.367	1.80	10.433	3.91	16.500	0.60	22.57	0.30
4.383	1.80	10.450	3.91	16.517	0.60	22.58	0.30
4.400	1.80	10.467	3.91	16.533	0.60	22.60	0.30
4.417	1.80	10.483	3.91	16.550	0.60	22.62	0.30
4.433	1.80	10.500	3.91	16.567	0.60	22.63	0.30
4.450	1.80	10.517	3.91	16.583	0.60	22.65	0.30
4.467	1.80	10.533	3.91	16.600	0.60	22.67	0.30
4.483	1.80	10.550	3.91	16.617	0.60	22.68	0.30
4.500	1.80	10.567	3.91	16.633	0.60	22.70	0.30
4.517	1.80	10.583	3.91	16.650	0.60	22.72	0.30
4.533	1.80	10.600	3.91	16.667	0.60	22.73	0.30
4.550	1.80	10.617	3.91	16.683	0.60	22.75	0.30
4.567	1.80	10.633	3.91	16.700	0.60	22.77	0.30
4.583	1.80	10.650	3.91	16.717	0.60	22.78	0.30
4.600	1.80	10.667	3.91	16.733	0.60	22.80	0.30
4.617	1.80	10.683	3.91	16.750	0.60	22.82	0.30
4.633	1.80	10.700	3.91	16.767	0.60	22.83	0.30
4.650	1.80	10.717	3.91	16.783	0.60	22.85	0.30
4.667	1.80	10.733	3.91	16.800	0.60	22.87	0.30
4.683	1.80	10.750	3.91	16.817	0.60	22.88	0.30
4.700	1.80	10.767	3.91	16.833	0.60	22.90	0.30
4.717	1.80	10.783	3.91	16.850	0.60	22.92	0.30
4.733	1.80	10.800	3.91	16.867	0.60	22.93	0.30
4.750	1.80	10.817	3.91	16.883	0.60	22.95	0.30
4.767	1.80	10.833	3.91	16.900	0.60	22.97	0.30
4.783	1.80	10.850	3.91	16.917	0.60	22.98	0.30
4.800	1.80	10.867	3.91	16.933	0.60	23.00	0.30
4.817	1.80	10.883	3.91	16.950	0.60	23.02	0.30
4.833	1.80	10.900	3.91	16.967	0.60	23.03	0.30
4.850	1.80	10.917	3.91	16.983	0.60	23.05	0.30
4.867	1.80	10.933	3.91	17.000	0.60	23.07	0.30
4.883	1.80	10.950	3.91	17.017	0.60	23.08	0.30
4.900	1.80	10.967	3.91	17.033	0.60	23.10	0.30
4.917	1.80	10.983	3.91	17.050	0.60	23.12	0.30
4.933	1.80	11.000	3.91	17.067	0.60	23.13	0.30
4.950	1.80	11.017	3.91	17.083	0.60	23.15	0.30
4.967	1.80	11.033	3.91	17.100	0.60	23.17	0.30
4.983	1.80	11.050	3.91	17.117	0.60	23.18	0.30
5.000	1.80	11.067	3.91	17.133	0.60	23.20	0.30
5.017	1.80	11.083	3.91	17.150	0.60	23.22	0.30
5.033	1.80	11.100	3.91	17.167	0.60	23.23	0.30
5.050	1.80	11.117	3.91	17.183	0.60	23.25	0.30
5.067	1.80	11.133	3.91	17.200	0.60	23.27	0.30
5.083	1.80	11.150	3.91	17.217	0.60	23.28	0.30
5.100	1.80	11.167	3.91	17.233	0.60	23.30	0.30
5.117	1.80	11.183	3.91	17.250	0.60	23.32	0.30
5.133	1.80	11.200	3.91	17.267	0.60	23.33	0.30
5.150	1.80	11.217	3.91	17.283	0.60	23.35	0.30
5.167	1.80	11.233	3.91	17.300	0.60	23.37	0.30
5.183	1.80	11.250	3.91	17.317	0.60	23.38	0.30
5.200	1.80	11.267	3.91	17.333	0.60	23.40	0.30
5.217	1.80	11.283	3.91	17.350	0.60	23.42	0.30
5.233	1.80	11.300	3.91	17.367	0.60	23.43	0.30
5.250	1.80	11.317	3.91	17.383	0.60	23.45	0.30
5.267	1.80	11.333	3.91	17.400	0.60	23.47	0.30
5.283	1.80	11.350	3.91	17.417	0.60	23.48	0.30
5.300	1.80	11.367	3.91	17.433	0.60	23.50	0.30
5.317	1.80	11.383	3.91	17.450	0.60	23.52	0.30
5.333	1.80	11.400	3.91	17.467	0.60	23.53	0.30
5.350	1.80	11.417	3.91	17.483	0.60	23.55	0.30
5.367	1.80	11.433	3.91	17.500	0.60	23.57	0.30
5.383	1.80	11.450	3.91	17.517	0.60	23.58	0.30
5.400	1.80	11.467	3.91	17.533	0.60	23.60	0.30
5.417	1.80	11.483	3.91	17.550	0.60	23.62	0.30
5.433	1.80	11.500	3.91	17.567	0.60	23.63	0.30
5.450	1.80	11.517	3.91	17.583	0.60	23.65	0.30
5.467	1.80	11.533	3.91	17.600	0.60	23.67	0.30
5.483	1.80	11.550	3.91	17.617	0.60	23.68	0.30
5.500	1.80	11.567	3.91	17.633	0.60	23.70	0.30
5.517	1.80	11.583	3.91	17.650	0.60	23.72	0.30
5.533	1.80	11.600	3.91	17.667	0.60	23.73	0.30
5.550	1.80	11.617	3.91	17.683	0.60	23.75	0.30
5.567	1.80	11.633	3.91	17.700	0.60	23.77	0.30
5.583	1.80	11.650	3.91	17.717	0.60	23.78	0.30
5.600	1.80	11.667	3.91	17.733	0.60	23.80	0.30
5.617	1.80	11.683	3.91	17.750	0.60	23.82	0.30
5.633	1.80	11.700	3.91	17.767	0.60	23.83	0.30
5.650	1.80	11.717	3.91	17.783	0.60	23.85	0.30
5.667	1.80	11.733	3.91	17.800	0.60	23.87	0.30
5.683	1.80	11.750	3.91	17.817	0.60	23.88	0.30
5.700	1.80	11.767	3.91	17.833	0.60	23.90	0.30
5.717	1.80	11.783	3.91	17.850	0.60	23.92	0.30
5.733	1.80	11.800	3.91	17.867	0.60	23.93	0.30
5.750	1.80	11.817	3.91	17.883	0.60	23.95	0.30
5.767	1.80	11.833	3.91	17.900	0.60	23.97	0.30
5.783	1.80	11.850	3.91	17.917	0.60	23.98	0.30
5.800	1.80	11.867	3.91	17.933	0.60	24.00	0.30
5.817	1.80	11.883	3.91	17.950	0.60	24.02	0.30
5.833	1.80	11.900	3.91	17.967	0.60	24.03	0.30
5.850	1.80	11.917	3.91	17.983	0.60	24.05	0.30
5.867	1.80	11.933	3.91	18.000	0.60	24.07	0.30
5.883	1.80	11.950	3.91	18.017	0.60	24.08	0.30
5.900	1.80	11.967	3.91	18.033	0.60	24.10	0.30
5.917	1.80	11.983	3.91	18.050	0.60	24.12	0.30
5.933	1.80	12.000	3.91	18.067	0.60	24.13	0.30
5.950	1.80	12.017	3.91	18.083	0.60	24.15	0.30
5.967	1.80	12.033	3.91	18.100	0.60	24.17	0.30
5.983	1.80	12.050	3.91	18.117	0.60	24.18	0.30
6.000	1.80	12.067	3.91	18.133	0.60	24.20	0.30
6.017	1.80	12.083	3.91	18.150	0.60	24.22	0.30
6.033	1.80	12.100	3.91	18.167	0.60	24.23	0.30
6.050	1.80	12.117	3.91	18.183	0.60	24.25	0.30
6.067	1.80	12.133	3.91	18.200	0.60		

Max.Eff.Inten.(mm/hr)=	13.82	11.45	
over (min)	6.00	10.00	
Storage Coeff. (min)=	5.95 (ii)	9.71 (ii)	
Unit Hyd. Tpeak (min)=	6.00	10.00	
Unit Hyd. peak (cms)=	0.19	0.12	
			TOTALS
PEAK FLOW (cms)=	0.07	0.00	0.069 (iii)
TIME TO PEAK (hrs)=	9.72	10.25	10.25
RUNOFF VOLUME (mm)=	59.08	39.54	58.88
TOTAL RAINFALL (mm)=	60.08	60.08	60.08
RUNOFF COEFFICIENT =	0.98	0.66	0.98

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      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  90.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| RESERVOIR(  7625)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0389      0.1013
                          0.0164     0.0514   |   0.0456      0.1141
                          0.0252     0.0690   |   0.0514      0.1288
                          0.0309     0.0825   |   0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  7624)      1.800     0.069     10.25      58.88
   OUTFLOW: ID= 1 (  7625)      1.800     0.021     10.65      54.52

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 30.56
                  TIME SHIFT OF PEAK FLOW         (min)= 24.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0607

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| CALIB           |
| STANDHYD (  7623)|   Area    (ha)=   1.15
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
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                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.14         0.01
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=      87.56        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.017    0.00 | 6.083    1.80 |12.150    3.91 | 18.22    0.60
               0.033    0.00 | 6.100    1.80 |12.167    3.91 | 18.23    0.60
               0.050    0.00 | 6.117    1.80 |12.183    3.91 | 18.25    0.60
               0.067    0.00 | 6.133    1.80 |12.200    3.91 | 18.27    0.30
               0.083    0.00 | 6.150    1.80 |12.217    3.91 | 18.28    0.30
               0.100    0.00 | 6.167    1.80 |12.233    3.91 | 18.30    0.30
               0.117    0.00 | 6.183    1.80 |12.250    3.91 | 18.32    0.30
               0.133    0.00 | 6.200    1.80 |12.267    2.10 | 18.33    0.30
               0.150    0.00 | 6.217    1.80 |12.283    2.10 | 18.35    0.30
               0.167    0.00 | 6.233    1.80 |12.300    2.10 | 18.37    0.30
               0.183    0.00 | 6.250    1.81 |12.317    2.10 | 18.38    0.30
               0.200    0.00 | 6.267    5.11 |12.333    2.10 | 18.40    0.30
               0.217    0.00 | 6.283    5.11 |12.350    2.10 | 18.42    0.30
               0.233    0.00 | 6.300    5.11 |12.367    2.10 | 18.43    0.30
               0.250    0.00 | 6.317    5.11 |12.383    2.10 | 18.45    0.30
               0.267    0.30 | 6.333    5.11 |12.400    2.10 | 18.47    0.30
               0.283    0.30 | 6.350    5.11 |12.417    2.10 | 18.48    0.30
               0.300    0.30 | 6.367    5.11 |12.433    2.10 | 18.50    0.30
               0.317    0.30 | 6.383    5.11 |12.450    2.10 | 18.52    0.30
               0.333    0.30 | 6.400    5.11 |12.467    2.10 | 18.53    0.30
               0.350    0.30 | 6.417    5.11 |12.483    2.10 | 18.55    0.30
               0.367    0.30 | 6.433    5.11 |12.500    2.10 | 18.57    0.30
               0.383    0.30 | 6.450    5.11 |12.517    2.10 | 18.58    0.30
               0.400    0.30 | 6.467    5.11 |12.533    2.10 | 18.60    0.30
               0.417    0.30 | 6.483    5.11 |12.550    2.10 | 18.62    0.30
               0.433    0.30 | 6.500    5.11 |12.567    2.10 | 18.63    0.30
               0.450    0.30 | 6.517    5.11 |12.583    2.10 | 18.65    0.30
               0.467    0.30 | 6.533    5.11 |12.600    2.10 | 18.67    0.30
               0.483    0.30 | 6.550    5.11 |12.617    2.10 | 18.68    0.30
               0.500    0.30 | 6.567    5.11 |12.633    2.10 | 18.70    0.30
               0.517    0.30 | 6.583    5.11 |12.650    2.10 | 18.72    0.30
               0.533    0.30 | 6.600    5.11 |12.667    2.10 | 18.73    0.30
               0.550    0.30 | 6.617    5.11 |12.683    2.10 | 18.75    0.30
               0.567    0.30 | 6.633    5.11 |12.700    2.10 | 18.77    0.30
               0.583    0.30 | 6.650    5.11 |12.717    2.10 | 18.78    0.30
               0.600    0.30 | 6.667    5.11 |12.733    2.10 | 18.80    0.30
               0.617    0.30 | 6.683    5.11 |12.750    2.10 | 18.82    0.30
               0.633    0.30 | 6.700    5.11 |12.767    2.10 | 18.83    0.30
               0.650    0.30 | 6.717    5.11 |12.783    2.10 | 18.85    0.30
               0.667    0.30 | 6.733    5.11 |12.800    2.10 | 18.87    0.30
               0.683    0.30 | 6.750    5.11 |12.817    2.10 | 18.88    0.30
               0.700    0.30 | 6.767    5.11 |12.833    2.10 | 18.90    0.30
               0.717    0.30 | 6.783    5.11 |12.850    2.10 | 18.92    0.30
               0.733    0.30 | 6.800    5.11 |12.867    2.10 | 18.93    0.30
               0.750    0.30 | 6.817    5.11 |12.883    2.10 | 18.95    0.30
               0.767    0.30 | 6.833    5.11 |12.900    2.10 | 18.97    0.30
               0.783    0.30 | 6.850    5.11 |12.917    2.10 | 18.98    0.30
               0.800    0.30 | 6.867    5.11 |12.933    2.10 | 19.00    0.30
               0.817    0.30 | 6.883    5.11 |12.950    2.10 | 19.02    0.30
               0.833    0.30 | 6.900    5.11 |12.967    2.10 | 19.03    0.30
               0.850    0.30 | 6.917    5.11 |12.983    2.10 | 19.05    0.30
               0.867    0.30 | 6.933    5.11 |13.000    2.10 | 19.07    0.30
               0.883    0.30 | 6.950    5.11 |13.017    2.10 | 19.08    0.30
               0.900    0.30 | 6.967    5.11 |13.033    2.10 | 19.10    0.30
               0.917    0.30 | 6.983    5.11 |13.050    2.10 | 19.12    0.30
               0.933    0.30 | 7.000    5.11 |13.067    2.10 | 19.13    0.30
               0.950    0.30 | 7.017    5.11 |13.083    2.10 | 19.15    0.30
               0.967    0.30 | 7.033    5.11 |13.100    2.10 | 19.17    0.30
               0.983    0.30 | 7.050    5.11 |13.117    2.10 | 19.18    0.30
               1.000    0.30 | 7.067    5.11 |13.133    2.10 | 19.20    0.30
               1.017    0.30 | 7.083    5.11 |13.150    2.10 | 19.22    0.30
               1.033    0.30 | 7.100    5.11 |13.167    2.10 | 19.23    0.30
               1.050    0.30 | 7.117    5.11 |13.183    2.10 | 19.25    0.30
               1.067    0.30 | 7.133    5.11 |13.200    2.10 | 19.27    0.30
               1.083    0.30 | 7.150    5.11 |13.217    2.10 | 19.28    0.30
               1.100    0.30 | 7.167    5.11 |13.233    2.10 | 19.30    0.30
               1.117    0.30 | 7.183    5.11 |13.250    2.10 | 19.32    0.30
               1.133    0.30 | 7.200    5.11 |13.267    2.10 | 19.33    0.30
               1.150    0.30 | 7.217    5.11 |13.283    2.10 | 19.35    0.30
               1.167    0.30 | 7.233    5.11 |13.300    2.10 | 19.37    0.30
               1.183    0.30 | 7.250    5.11 |13.317    2.10 | 19.38    0.30
               1.200    0.30 | 7.267    5.11 |13.333    2.10 | 19.40    0.30
               1.217    0.30 | 7.283    5.11 |13.350    2.10 | 19.42    0.30
               1.233    0.30 | 7.300    5.11 |13.367    2.10 | 19.43    0.30
               1.250    0.30 | 7.317    5.11 |13.383    2.10 | 19.45    0.30
               1.267    0.30 | 7.333    5.11 |13.400    2.10 | 19.47    0.30
               1.283    0.30 | 7.350    5.11 |13.417    2.10 | 19.48    0.30
               1.300    0.30 | 7.367    5.11 |13.433    2.10 | 19.50    0.30
               1.317    0.30 | 7.383    5.11 |13.450    2.10 | 19.52    0.30
               1.333    0.30 | 7.400    5.11 |13.467    2.10 | 19.53    0.30
               1.350    0.30 | 7.417    5.11 |13.483    2.10 | 19.55    0.30
               1.367    0.30 | 7.433    5.11 |13.500    2.10 | 19.57    0.30
               1.383    0.30 | 7.450    5.11 |13.517    2.10 | 19.58    0.30
               1.400    0.30 | 7.467    5.11 |13.533    2.10 | 19.60    0.30
               1.417    0.30 | 7.483    5.11 |13.550    2.10 | 19.62    0.30
               1.433    0.30 | 7.500    5.11 |13.567    2.10 | 19.63    0.30
               1.450    0.30 | 7.517    5.11 |13.583    2.10 | 19.65    0.30
               1.467    0.30 | 7.533    5.11 |13.600    2.10 | 19.67    0.30
               1.483    0.30 | 7.550    5.11 |13.617    2.10 | 19.68    0.30
               1.500    0.30 | 7.567    5.11 |13.633    2.10 | 19.70    0.30
               1.517    0.30 | 7.583    5.11 |13.650    2.10 | 19.72    0.30
               1.533    0.30 | 7.600    5.11 |13.667    2.10 | 19.73    0.30
               1.550    0.30 | 7.617    5.11 |13.683    2.10 | 19.75    0.30
               1.567    0.30 | 7.633    5.11 |13.700    2.10 | 19.77    0.30
               1.583    0.30 | 7.650    5.11 |13.717    2.10 | 19.78    0.30
               1.600    0.30 | 7.667    5.11 |13.733    2.10 | 19.80    0.30
               1.617    0.30 | 7.683    5.11 |13.750    2.10 | 19.82    0.30
               1.633    0.30 | 7.700    5.11 |13.767    2.10 | 19.83    0.30
               1.650    0.30 | 7.717    5.11 |13.783    2.10 | 19.85    0.30
               1.667    0.30 | 7.733    5.11 |13.800    2.10 | 19.87    0.30
               1.683    0.30 | 7.750    5.11 |13.817    2.10 | 19.88    0.30
               1.700    0.30 | 7.767    5.11 |13.833    2.10 | 19.90    0.30
               1.717    0.30 | 7.783    5.11 |13.850    2.10 | 19.92    0.30
               1.733    0.30 | 7.800    5.11 |13.867    2.10 | 19.93    0.30
               1.750    0.30 | 7.817    5.11 |13.883    2.10 | 19.95    0.30
               1.767    0.30 | 7.833    5.11 |13.900    2.10 | 19.97    0.30
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1.783	0.30	7.850	5.11	13.917	2.10	19.98	0.30	3.050	0.30	9.117	13.82	15.183	1.20	21.25	0.30
1.800	0.30	7.867	5.11	13.933	2.10	20.00	0.30	3.067	0.30	9.133	13.82	15.200	1.20	21.27	0.30
1.817	0.30	7.883	5.11	13.950	2.10	20.02	0.30	3.083	0.30	9.150	13.82	15.217	1.20	21.28	0.30
1.833	0.30	7.900	5.11	13.967	2.10	20.03	0.30	3.100	0.30	9.167	13.82	15.233	1.20	21.30	0.30
1.850	0.30	7.917	5.11	13.983	2.10	20.05	0.30	3.117	0.30	9.183	13.82	15.250	1.20	21.32	0.30
1.867	0.30	7.933	5.11	14.000	2.10	20.07	0.30	3.133	0.30	9.200	13.82	15.267	1.20	21.33	0.30
1.883	0.30	7.950	5.11	14.017	2.10	20.08	0.30	3.150	0.30	9.217	13.82	15.283	1.20	21.35	0.30
1.900	0.30	7.967	5.11	14.033	2.10	20.10	0.30	3.167	0.30	9.233	13.82	15.300	1.20	21.37	0.30
1.917	0.30	7.983	5.11	14.050	2.10	20.12	0.30	3.183	0.30	9.250	13.82	15.317	1.20	21.38	0.30
1.933	0.30	8.000	5.11	14.067	2.10	20.13	0.30	3.200	0.30	9.267	13.82	15.333	1.20	21.40	0.30
1.950	0.30	8.017	5.11	14.083	2.10	20.15	0.30	3.217	0.30	9.283	13.82	15.350	1.20	21.42	0.30
1.967	0.30	8.033	5.11	14.100	2.10	20.17	0.30	3.233	0.30	9.300	13.82	15.367	1.20	21.43	0.30
1.983	0.30	8.050	5.11	14.117	2.10	20.18	0.30	3.250	0.30	9.317	13.82	15.383	1.20	21.45	0.30
2.000	0.30	8.067	5.11	14.133	2.10	20.20	0.30	3.267	0.30	9.333	13.82	15.400	1.20	21.47	0.30
2.017	0.30	8.083	5.11	14.150	2.10	20.22	0.30	3.283	0.30	9.350	13.82	15.417	1.20	21.48	0.30
2.033	0.30	8.100	5.11	14.167	2.10	20.23	0.30	3.300	0.30	9.367	13.82	15.433	1.20	21.50	0.30
2.050	0.30	8.117	5.11	14.183	2.10	20.25	0.30	3.317	0.30	9.383	13.82	15.450	1.20	21.52	0.30
2.067	0.30	8.133	5.11	14.200	2.10	20.27	0.30	3.333	0.30	9.400	13.82	15.467	1.20	21.53	0.30
2.083	0.30	8.150	5.11	14.217	2.10	20.28	0.30	3.350	0.30	9.417	13.82	15.483	1.20	21.55	0.30
2.100	0.30	8.167	5.11	14.233	2.10	20.30	0.30	3.367	0.30	9.433	13.82	15.500	1.20	21.57	0.30
2.117	0.30	8.183	5.11	14.250	2.10	20.32	0.30	3.383	0.30	9.450	13.82	15.517	1.20	21.58	0.30
2.133	0.30	8.200	5.11	14.267	1.20	20.33	0.30	3.400	0.30	9.467	13.82	15.533	1.20	21.60	0.30
2.150	0.30	8.217	5.11	14.283	1.20	20.35	0.30	3.417	0.30	9.483	13.82	15.550	1.20	21.62	0.30
2.167	0.30	8.233	5.11	14.300	1.20	20.37	0.30	3.433	0.30	9.500	13.82	15.567	1.20	21.63	0.30
2.183	0.30	8.250	5.13	14.317	1.20	20.38	0.30	3.450	0.30	9.517	13.82	15.583	1.20	21.65	0.30
2.200	0.30	8.267	13.82	14.333	1.20	20.40	0.30	3.467	0.30	9.533	13.82	15.600	1.20	21.67	0.30
2.217	0.30	8.283	13.82	14.350	1.20	20.42	0.30	3.483	0.30	9.550	13.82	15.617	1.20	21.68	0.30
2.233	0.30	8.300	13.82	14.367	1.20	20.43	0.30	3.500	0.30	9.567	13.82	15.633	1.20	21.70	0.30
2.250	0.30	8.317	13.82	14.383	1.20	20.45	0.30	3.517	0.30	9.583	13.82	15.650	1.20	21.72	0.30
2.267	0.30	8.333	13.82	14.400	1.20	20.47	0.30	3.533	0.30	9.600	13.82	15.667	1.20	21.73	0.30
2.283	0.30	8.350	13.82	14.417	1.20	20.48	0.30	3.550	0.30	9.617	13.82	15.683	1.20	21.75	0.30
2.300	0.30	8.367	13.82	14.433	1.20	20.50	0.30	3.567	0.30	9.633	13.82	15.700	1.20	21.77	0.30
2.317	0.30	8.383	13.82	14.450	1.20	20.52	0.30	3.583	0.30	9.650	13.82	15.717	1.20	21.78	0.30
2.333	0.30	8.400	13.82	14.467	1.20	20.53	0.30	3.600	0.30	9.667	13.82	15.733	1.20	21.80	0.30
2.350	0.30	8.417	13.82	14.483	1.20	20.55	0.30	3.617	0.30	9.683	13.82	15.750	1.20	21.82	0.30
2.367	0.30	8.433	13.82	14.500	1.20	20.57	0.30	3.633	0.30	9.700	13.82	15.767	1.20	21.83	0.30
2.383	0.30	8.450	13.82	14.517	1.20	20.58	0.30	3.650	0.30	9.717	13.82	15.783	1.20	21.85	0.30
2.400	0.30	8.467	13.82	14.533	1.20	20.60	0.30	3.667	0.30	9.733	13.82	15.800	1.20	21.87	0.30
2.417	0.30	8.483	13.82	14.550	1.20	20.62	0.30	3.683	0.30	9.750	13.82	15.817	1.20	21.88	0.30
2.433	0.30	8.500	13.82	14.567	1.20	20.63	0.30	3.700	0.30	9.767	13.82	15.833	1.20	21.90	0.30
2.450	0.30	8.517	13.82	14.583	1.20	20.65	0.30	3.717	0.30	9.783	13.82	15.850	1.20	21.92	0.30
2.467	0.30	8.533	13.82	14.600	1.20	20.67	0.30	3.733	0.30	9.800	13.82	15.867	1.20	21.93	0.30
2.483	0.30	8.550	13.82	14.617	1.20	20.68	0.30	3.750	0.30	9.817	13.82	15.883	1.20	21.95	0.30
2.500	0.30	8.567	13.82	14.633	1.20	20.70	0.30	3.767	0.30	9.833	13.82	15.900	1.20	21.97	0.30
2.517	0.30	8.583	13.82	14.650	1.20	20.72	0.30	3.783	0.30	9.850	13.82	15.917	1.20	21.98	0.30
2.533	0.30	8.600	13.82	14.667	1.20	20.73	0.30	3.800	0.30	9.867	13.82	15.933	1.20	22.00	0.30
2.550	0.30	8.617	13.82	14.683	1.20	20.75	0.30	3.817	0.30	9.883	13.82	15.950	1.20	22.02	0.30
2.567	0.30	8.633	13.82	14.700	1.20	20.77	0.30	3.833	0.30	9.900	13.82	15.967	1.20	22.03	0.30
2.583	0.30	8.650	13.82	14.717	1.20	20.78	0.30	3.850	0.30	9.917	13.82	15.983	1.20	22.05	0.30
2.600	0.30	8.667	13.82	14.733	1.20	20.80	0.30	3.867	0.30	9.933	13.82	16.000	1.20	22.07	0.30
2.617	0.30	8.683	13.82	14.750	1.20	20.82	0.30	3.883	0.30	9.950	13.82	16.017	1.20	22.08	0.30
2.633	0.30	8.700	13.82	14.767	1.20	20.83	0.30	3.900	0.30	9.967	13.82	16.033	1.20	22.10	0.30
2.650	0.30	8.717	13.82	14.783	1.20	20.85	0.30	3.917	0.30	9.983	13.82	16.050	1.20	22.12	0.30
2.667	0.30	8.733	13.82	14.800	1.20	20.87	0.30	3.933	0.30	10.000	13.82	16.067	1.20	22.13	0.30
2.683	0.30	8.750	13.82	14.817	1.20	20.88	0.30	3.950	0.30	10.017	13.82	16.083	1.20	22.15	0.30
2.700	0.30	8.767	13.82	14.833	1.20	20.90	0.30	3.967	0.30	10.033	13.82	16.100	1.20	22.17	0.30
2.717	0.30	8.783	13.82	14.850	1.20	20.92	0.30	3.983	0.30	10.050	13.82	16.117	1.20	22.18	0.30
2.733	0.30	8.800	13.82	14.867	1.20	20.93	0.30	4.000	0.30	10.067	13.82	16.133	1.20	22.20	0.30
2.750	0.30	8.817	13.82	14.883	1.20	20.95	0.30	4.017	0.30	10.083	13.82	16.150	1.20	22.22	0.30
2.767	0.30	8.833	13.82	14.900	1.20	20.97	0.30	4.033	0.30	10.100	13.82	16.167	1.20	22.23	0.30
2.783	0.30	8.850	13.82	14.917	1.20	20.98	0.30	4.050	0.30	10.117	13.82	16.183	1.20	22.25	0.30
2.800	0.30	8.867	13.82	14.933	1.20	21.00	0.30	4.067	0.30	10.133	13.82	16.200	1.20	22.27	0.30
2.817	0.30	8.883	13.82	14.950	1.20	21.02	0.30	4.083	0.30	10.150	13.82	16.217	1.20	22.28	0.30
2.833	0.30	8.900	13.82	14.967	1.20	21.03	0.30	4.100	0.30	10.167	13.82	16.233	1.20	22.30	0.30
2.850	0.30	8.917	13.82	14.983	1.20	21.05	0.30	4.117	0.30	10.183	13.82	16.250	1.20	22.32	0.30
2.867	0.30	8.933	13.82	15.000	1.20	21.07	0.30	4.133	0.30	10.200	13.82	16.267	0.60	22.33	0.30
2.883	0.30	8.950	13.82	15.017	1.20	21.08	0.30	4.150	0.30	10.217	13.82	16.283	0.60	22.35	0.30
2.900	0.30	8.967	13.82	15.033	1.20	21.10	0.30	4.167	0.30	10.233	13.82	16.300	0.60	22.37	0.30
2.917	0.30	8.983	13.82	15.050	1.20	21.12	0.30	4.183	0.30	10.250	13.81	16.317	0.60	22.38	0.30
2.933	0.30	9.000	13.82	15.067	1.20	21.13	0.30	4.200	0.30	10.267	3.91	16.333	0.60	22.40	0.30
2.950	0.30	9.017	13.82	15.083	1.20	21.15	0.30	4.217	0.30	10.283	3.91	16.350	0.60	22.42	0.30
2.967	0.30	9.033	13.82	15.100	1.20	21.17	0.30	4.233	0.30	10.300	3.91	16.367	0.60	22.43	0.30
2.983	0.30	9.050	13.82	15.117	1.20	21.18	0.30	4.250	0.30	10.317	3.91	16.383	0.60	22.45	0.30
3.000	0.30	9.067	13.82	15.133	1.20	21.20	0.30	4.267	1.80	10.333	3.91	16.400	0.60	22.47	0.30
3.017	0.30	9.083	13.82	15.150	1.20	21.22	0.30	4.283	1.80	10.350	3.91	16.417	0.60	22.48	0.30
3.033	0.30	9.100	13.82	15.167	1.20	21.23	0.30	4.300	1.80	10.367	3.91	16.433	0.60	22.50	0.30

4.317	1.80	10.383	3.91	16.450	0.60	22.52	0.30
4.333	1.80	10.400	3.91	16.467	0.60	22.53	0.30
4.350	1.80	10.417	3.91	16.483	0.60	22.55	0.30
4.367	1.80	10.433	3.91	16.500	0.60	22.57	0.30
4.383	1.80	10.450	3.91	16.517	0.60	22.58	0.30
4.400	1.80	10.467	3.91	16.533	0.60	22.60	0.30
4.417	1.80	10.483	3.91	16.550	0.60	22.62	0.30
4.433	1.80	10.500	3.91	16.567	0.60	22.63	0.30
4.450	1.80	10.517	3.91	16.583	0.60	22.65	0.30
4.467	1.80	10.533	3.91	16.600	0.60	22.67	0.30
4.483	1.80	10.550	3.91	16.617	0.60	22.68	0.30
4.500	1.80	10.567	3.91	16.633	0.60	22.70	0.30
4.517	1.80	10.583	3.91	16.650	0.60	22.72	0.30
4.533	1.80	10.600	3.91	16.667	0.60	22.73	0.30
4.550	1.80	10.617	3.91	16.683	0.60	22.75	0.30
4.567	1.80	10.633	3.91	16.700	0.60	22.77	0.30
4.583	1.80	10.650	3.91	16.717	0.60	22.78	0.30
4.600	1.80	10.667	3.91	16.733	0.60	22.80	0.30
4.617	1.80	10.683	3.91	16.750	0.60	22.82	0.30
4.633	1.80	10.700	3.91	16.767	0.60	22.83	0.30
4.650	1.80	10.717	3.91	16.783	0.60	22.85	0.30
4.667	1.80	10.733	3.91	16.800	0.60	22.87	0.30
4.683	1.80	10.750	3.91	16.817	0.60	22.88	0.30
4.700	1.80	10.767	3.91	16.833	0.60	22.90	0.30
4.717	1.80	10.783	3.91	16.850	0.60	22.92	0.30
4.733	1.80	10.800	3.91	16.867	0.60	22.93	0.30
4.750	1.80	10.817	3.91	16.883	0.60	22.95	0.30
4.767	1.80	10.833	3.91	16.900	0.60	22.97	0.30
4.783	1.80	10.850	3.91	16.917	0.60	22.98	0.30
4.800	1.80	10.867	3.91	16.933	0.60	23.00	0.30
4.817	1.80	10.883	3.91	16.950	0.60	23.02	0.30
4.833	1.80	10.900	3.91	16.967	0.60	23.03	0.30
4.850	1.80	10.917	3.91	16.983	0.60	23.05	0.30
4.867	1.80	10.933	3.91	17.000	0.60	23.07	0.30
4.883	1.80	10.950	3.91	17.017	0.60	23.08	0.30
4.900	1.80	10.967	3.91	17.033	0.60	23.10	0.30
4.917	1.80	10.983	3.91	17.050	0.60	23.12	0.30
4.933	1.80	11.000	3.91	17.067	0.60	23.13	0.30
4.950	1.80	11.017	3.91	17.083	0.60	23.15	0.30
4.967	1.80	11.033	3.91	17.100	0.60	23.17	0.30
4.983	1.80	11.050	3.91	17.117	0.60	23.18	0.30
5.000	1.80	11.067	3.91	17.133	0.60	23.20	0.30
5.017	1.80	11.083	3.91	17.150	0.60	23.22	0.30
5.033	1.80	11.100	3.91	17.167	0.60	23.23	0.30
5.050	1.80	11.117	3.91	17.183	0.60	23.25	0.30
5.067	1.80	11.133	3.91	17.200	0.60	23.27	0.30
5.083	1.80	11.150	3.91	17.217	0.60	23.28	0.30
5.100	1.80	11.167	3.91	17.233	0.60	23.30	0.30
5.117	1.80	11.183	3.91	17.250	0.60	23.32	0.30
5.133	1.80	11.200	3.91	17.267	0.60	23.33	0.30
5.150	1.80	11.217	3.91	17.283	0.60	23.35	0.30
5.167	1.80	11.233	3.91	17.300	0.60	23.37	0.30
5.183	1.80	11.250	3.91	17.317	0.60	23.38	0.30
5.200	1.80	11.267	3.91	17.333	0.60	23.40	0.30
5.217	1.80	11.283	3.91	17.350	0.60	23.42	0.30
5.233	1.80	11.300	3.91	17.367	0.60	23.43	0.30
5.250	1.80	11.317	3.91	17.383	0.60	23.45	0.30
5.267	1.80	11.333	3.91	17.400	0.60	23.47	0.30
5.283	1.80	11.350	3.91	17.417	0.60	23.48	0.30
5.300	1.80	11.367	3.91	17.433	0.60	23.50	0.30
5.317	1.80	11.383	3.91	17.450	0.60	23.52	0.30
5.333	1.80	11.400	3.91	17.467	0.60	23.53	0.30
5.350	1.80	11.417	3.91	17.483	0.60	23.55	0.30
5.367	1.80	11.433	3.91	17.500	0.60	23.57	0.30
5.383	1.80	11.450	3.91	17.517	0.60	23.58	0.30
5.400	1.80	11.467	3.91	17.533	0.60	23.60	0.30
5.417	1.80	11.483	3.91	17.550	0.60	23.62	0.30
5.433	1.80	11.500	3.91	17.567	0.60	23.63	0.30
5.450	1.80	11.517	3.91	17.583	0.60	23.65	0.30
5.467	1.80	11.533	3.91	17.600	0.60	23.67	0.30
5.483	1.80	11.550	3.91	17.617	0.60	23.68	0.30
5.500	1.80	11.567	3.91	17.633	0.60	23.70	0.30
5.517	1.80	11.583	3.91	17.650	0.60	23.72	0.30
5.533	1.80	11.600	3.91	17.667	0.60	23.73	0.30
5.550	1.80	11.617	3.91	17.683	0.60	23.75	0.30
5.567	1.80	11.633	3.91	17.700	0.60	23.77	0.30
5.583	1.80	11.650	3.91	17.717	0.60	23.78	0.30
5.600	1.80	11.667	3.91	17.733	0.60	23.80	0.30
5.617	1.80	11.683	3.91	17.750	0.60	23.82	0.30
5.633	1.80	11.700	3.91	17.767	0.60	23.83	0.30
5.650	1.80	11.717	3.91	17.783	0.60	23.85	0.30
5.667	1.80	11.733	3.91	17.800	0.60	23.87	0.30
5.683	1.80	11.750	3.91	17.817	0.60	23.88	0.30
5.700	1.80	11.767	3.91	17.833	0.60	23.90	0.30
5.717	1.80	11.783	3.91	17.850	0.60	23.92	0.30
5.733	1.80	11.800	3.91	17.867	0.60	23.93	0.30
5.750	1.80	11.817	3.91	17.883	0.60	23.95	0.30
5.767	1.80	11.833	3.91	17.900	0.60	23.97	0.30
5.783	1.80	11.850	3.91	17.917	0.60	23.98	0.30
5.800	1.80	11.867	3.91	17.933	0.60	24.00	0.30
5.817	1.80	11.883	3.91	17.950	0.60	24.02	0.30
5.833	1.80	11.900	3.91	17.967	0.60	24.03	0.30
5.850	1.80	11.917	3.91	17.983	0.60	24.05	0.30
5.867	1.80	11.933	3.91	18.000	0.60	24.07	0.30
5.883	1.80	11.950	3.91	18.017	0.60	24.08	0.30
5.900	1.80	11.967	3.91	18.033	0.60	24.10	0.30
5.917	1.80	11.983	3.91	18.050	0.60	24.12	0.30
5.933	1.80	12.000	3.91	18.067	0.60	24.13	0.30
5.950	1.80	12.017	3.91	18.083	0.60	24.15	0.30
5.967	1.80	12.033	3.91	18.100	0.60	24.17	0.30
5.983	1.80	12.050	3.91	18.117	0.60	24.18	0.30
6.000	1.80	12.067	3.91	18.133	0.60	24.20	0.30
6.017	1.80	12.083	3.91	18.150	0.60	24.22	0.30
6.033	1.80	12.100	3.91	18.167	0.60	24.23	0.30
6.050	1.80	12.117	3.91	18.183	0.60	24.25	0.30
6.067	1.80	12.133	3.91	18.200	0.60		

Max.Eff.Inten.(mm/hr)=	13.82	9.96	
over (min)	5.00	9.00	
Storage Coeff. (min)=	5.21 (ii)	8.96 (ii)	
Unit Hyd. Tpeak (min)=	5.00	9.00	
Unit Hyd. peak (cms)=	0.22	0.13	
			TOTALS
PEAK FLOW (cms)=	0.04	0.00	0.044 (iii)
TIME TO PEAK (hrs)=	9.47	10.25	10.23
RUNOFF VOLUME (mm)=	59.07	33.18	58.82
TOTAL RAINFALL (mm)=	60.08	60.08	60.08
RUNOFF COEFFICIENT =	0.98	0.55	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7622)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0258	0.0650
	0.0108	0.0330	0.0302	0.0725
	0.0167	0.0440	0.0340	0.0820
	0.0204	0.0525	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7623)	1.150	0.044	10.23	58.82
OUTFLOW: ID= 1 (7622)	1.150	0.014	10.57	54.74

PEAK FLOW REDUCTION [Qout/Qin](%)= 31.32
TIME SHIFT OF PEAK FLOW (min)= 20.00
MAXIMUM STORAGE USED (ha.m.)= 0.0386

CALIB			
STANDHYD (7629)	Area (ha)= 4.09		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	4.05	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	165.13	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	1.80	12.150	3.91	18.22	0.60
0.033	0.00	6.100	1.80	12.167	3.91	18.23	0.60
0.050	0.00	6.117	1.80	12.183	3.91	18.25	0.60
0.067	0.00	6.133	1.80	12.200	3.91	18.27	0.30
0.083	0.00	6.150	1.80	12.217	3.91	18.28	0.30
0.100	0.00	6.167	1.80	12.233	3.91	18.30	0.30
0.117	0.00	6.183	1.80	12.250	3.91	18.32	0.30
0.133	0.00	6.200	1.80	12.267	2.10	18.33	0.30
0.150	0.00	6.217	1.80	12.283	2.10	18.35	0.30
0.167	0.00	6.233	1.80	12.300	2.10	18.37	0.30
0.183	0.00	6.250	1.81	12.317	2.10	18.38	0.30
0.200	0.00	6.267	5.11	12.333	2.10	18.40	0.30
0.217	0.00	6.283	5.11	12.350	2.10	18.42	0.30
0.233	0.00	6.300	5.11	12.367	2.10	18.43	0.30
0.250	0.00	6.317	5.11	12.383	2.10	18.45	0.30
0.267	0.30	6.333	5.11	12.400	2.10	18.47	0.30
0.283	0.30	6.350	5.11	12.417	2.10	18.48	0.30
0.300	0.30	6.367	5.11	12.433	2.10	18.50	0.30
0.317	0.30	6.383	5.11	12.450	2.10	18.52	0.30
0.333	0.30	6.400	5.11	12.467	2.10	18.53	0.30
0.350	0.30	6.417	5.11	12.483	2.10	18.55	0.30
0.367	0.30	6.433	5.11	12.500	2.10	18.57	0.30
0.383	0.30	6.450	5.11	12.517	2.10	18.58	0.30
0.400	0.30	6.467	5.11	12.533	2.10	18.60	0.30
0.417	0.30	6.483	5.11	12.550	2.10	18.62	0.30
0.433	0.30	6.500	5.11	12.567	2.10	18.63	0.30
0.450	0.30	6.517	5.11	12.583	2.10	18.65	0.30
0.467	0.30	6.533	5.11	12.600	2.10	18.67	0.30
0.483	0.30	6.550	5.11	12.617	2.10	18.68	0.30
0.500	0.30	6.567	5.11	12.633	2.10	18.70	0.30
0.517	0.30	6.583	5.11	12.650	2.10	18.72	0.30
0.533	0.30	6.600	5.11	12.667	2.10	18.73	0.30
0.550	0.30	6.617	5.11	12.683	2.10	18.75	0.30
0.567	0.30	6.633	5.11	12.700	2.10	18.77	0.30
0.583	0.30	6.650	5.11	12.717	2.10	18.78	0.30
0.600	0.30	6.667	5.11	12.733	2.10	18.80	0.30
0.617	0.30	6.683	5.11	12.750	2.10	18.82	0.30
0.633	0.30	6.700	5.11	12.767	2.10	18.83	0.30
0.650	0.30	6.717	5.11	12.783	2.10	18.85	0.30
0.667	0.30	6.733	5.11	12.800	2.10	18.87	0.30
0.683	0.30	6.750	5.11	12.817	2.10	18.88	0.30
0.700	0.30	6.767	5.11	12.833	2.10	18.90	0.30
0.717	0.30	6.783	5.11	12.850	2.10	18.92	0.30
0.733	0.30	6.800	5.11	12.867	2.10	18.93	0.30
0.750	0.30	6.817	5.11	12.883	2.10	18.95	0.30
0.767	0.30	6.833	5.11	12.900	2.10	18.97	0.30
0.783	0.30	6.850	5.11	12.917	2.10	18.98	0.30
0.800	0.30	6.867	5.11	12.933	2.10	19.00	0.30
0.817	0.30	6.883	5.11	12.950	2.10	19.02	0.30
0.833	0.30	6.900	5.11	12.967	2.10	19.03	0.30
0.850	0.30	6.917	5.11	12.983	2.10	19.05	0.30
0.867	0.30	6.933	5.11	13.000	2.10	19.07	0.30
0.883	0.30	6.950	5.11	13.017	2.10	19.08	0.30
0.900	0.30	6.967	5.11	13.033	2.10	19.10	0.30
0.917	0.30	6.983	5.11	13.050	2.10	19.12	0.30
0.933	0.30	7.000	5.11	13.067	2.10	19.13	0.30
0.950	0.30	7.017	5.11	13.083	2.10	19.15	0.30
0.967	0.30	7.033	5.11	13.100	2.10	19.17	0.30
0.983	0.30	7.050	5.11	13.117	2.10	19.18	0.30
1.000	0.30	7.067	5.11	13.133	2.10	19.20	0.30
1.017	0.30	7.083	5.11	13.150	2.10	19.22	0.30
1.033	0.30	7.100	5.11	13.167	2.10	19.23	0.30
1.050	0.30	7.117	5.11	13.183	2.10	19.25	0.30
1.067	0.30	7.133	5.11	13.200	2.10	19.27	0.30
1.083	0.30	7.150	5.11	13.217	2.10	19.28	0.30
1.100	0.30	7.167	5.11	13.233	2.10	19.30	0.30
1.117	0.30	7.183	5.11	13.250	2.10	19.32	0.30
1.133	0.30	7.200	5.11	13.267	2.10	19.33	0.30
1.150	0.30	7.217	5.11	13.283	2.10	19.35	0.30
1.167	0.30	7.233	5.11	13.300	2.10	19.37	0.30
1.183	0.30	7.250	5.11	13.317	2.10	19.38	0.30
1.200	0.30	7.267	5.11	13.333	2.10	19.40	0.30
1.217	0.30	7.283	5.11	13.350	2.10	19.42	0.30
1.233	0.30	7.300	5.11	13.367	2.10	19.43	0.30
1.250	0.30	7.317	5.11	13.383	2.10	19.45	0.30
1.267	0.30	7.333	5.11	13.400	2.10	19.47	0.30
1.283	0.30	7.350	5.11	13.417	2.10	19.48	0.30
1.300	0.30	7.367	5.11	13.433	2.10	19.50	0.30
1.317	0.30	7.383	5.11	13.450	2.10	19.52	0.30
1.333	0.30	7.400	5.11	13.467	2.10	19.53	0.30
1.350	0.30	7.417	5.11	13.483	2.10	19.55	0.30
1.367	0.30	7.433	5.11	13.500	2.10	19.57	0.30
1.383	0.30	7.450	5.11	13.517	2.10	19.58	0.30
1.400	0.30	7.467	5.11	13.533	2.10	19.60	0.30
1.417	0.30	7.483	5.11	13.550	2.10	19.62	0.30
1.433	0.30	7.500	5.11	13.567	2.10	19.63	0.30
1.450	0.30	7.517	5.11	13.583	2.10	19.65	0.30
1.467	0.30	7.533	5.11	13.600	2.10	19.67	0.30
1.483	0.30	7.550	5.11	13.617	2.10	19.68	0.30
1.500	0.30	7.567	5.11	13.633	2.10	19.70	0.30
1.517	0.30	7.583	5.11	13.650	2.10	19.72	0.30
1.533	0.30	7.600	5.11	13.667	2.10	19.73	0.30
1.550	0.30	7.617	5.11	13.683	2.10	19.75	0.30
1.567	0.30	7.633	5.11	13.700	2.10	19.77	0.30
1.583	0.30	7.650	5.11	13.717	2.10	19.78	0.30
1.600	0.30	7.667	5.11	13.733	2.10	19.80	0.30
1.617	0.30	7.683	5.11	13.750	2.10	19.82	0.30
1.633	0.30	7.700	5.11	13.767	2.10	19.83	0.30
1.650	0.30	7.717	5.11	13.783	2.10	19.85	0.30
1.667	0.30	7.733	5.11	13.800	2.10	19.87	0.30
1.683	0.30	7.750	5.11	13.817	2.10	19.88	0.30
1.700	0.30	7.767	5.11	13.833	2.10	19.90	0.30
1.717	0.30	7.783	5.11	13.850	2.10	19.92	0.30
1.733	0.30	7.800	5.11	13.867	2.10	19.93	0.30
1.750	0.30	7.817	5.11	13.883	2.10	19.95	0.30
1.767	0.30	7.833	5.11	13.900	2.10	19.97	0.30
1.783	0.30	7.850	5.11	13.917	2.10	19.98	0.30
1.800	0.30	7.867	5.11	13.933	2.10	20.00	0.30
1.817	0.30	7.883	5.11	13.950	2.10	20.02	0.30
1.833	0.30	7.900	5.11	13.967	2.10	20.03	0.30
1.850	0.30	7.917	5.11	13.983	2.10	20.05	0.30
1.867	0.30	7.933	5.11	14.000	2.10	20.07	0.30
1.883	0.30	7.950	5.11	14.017	2.10	20.08	0.30
1.900	0.30	7.967	5.11	14.033	2.10	20.10	0.30
1.917	0.30	7.983	5.11	14.050	2.10	20.12	0.30
1.933	0.30	8.000	5.11	14.067	2.10	20.13	0.30
1.950	0.30	8.017	5.11	14.083	2.10	20.15	0.30
1.967	0.30	8.033	5.11	14.100	2.10	20.17	0.30
1.983	0.30	8.050	5.11	14.117	2.10	20.18	0.30
2.000	0.30	8.067	5.11	14.133	2.10	20.20	0.30
2.017	0.30	8.083	5.11	14.150	2.10	20.22	0.30
2.033	0.30	8.100	5.11	14.167	2.10	20.23	0.30
2.050	0.30	8.117	5.11	14.183	2.10	20.25	0.30
2.067	0.30	8.133	5.11	14.200	2.10	20.27	0.30
2.083	0.30	8.150	5.11	14.217	2.10	20.28	0.30
2.100	0.30	8.167	5.11	14.233	2.10	20.30	0.30
2.117	0.30	8.183	5.11	14.250	2.10	20.32	0.30
2.133	0.30	8.200	5.11	14.267	1.20	20.33	0.30
2.150	0.30	8.217	5.11	14.283	1.20	20.35	0.30
2.167	0.30	8.233	5.11	14.300	1.20	20.37	0.30
2.183	0.30	8.250	5.13	14.317	1.20	20.38	0.30
2.200	0.30	8.267	13.82	14.333	1.20	20.40	0.30
2.217	0.30	8.283	13.82	14.350	1.20	20.42	0.30
2.233	0.30	8.300	13.82	14.367	1.20	20.43	0.30
2.250	0.30	8.317	13.82	14.383	1.20	20.45	0.30
2.267	0.30	8.333	13.82	14.400	1.20	20.47	0.30
2.283	0.30	8.350	13.82	14.417	1.20	20.48	0.30
2.300	0.30	8.367	13.82	14.433	1.20	20.50	0.30
2.317	0.30	8.383	13.82	14.450	1.20	20.52	0.30

2.333	0.30	8.400	13.82	14.467	1.20	20.53	0.30	3.600	0.30	9.667	13.82	15.733	1.20	21.80	0.30
2.350	0.30	8.417	13.82	14.483	1.20	20.55	0.30	3.617	0.30	9.683	13.82	15.750	1.20	21.82	0.30
2.367	0.30	8.433	13.82	14.500	1.20	20.57	0.30	3.633	0.30	9.700	13.82	15.767	1.20	21.83	0.30
2.383	0.30	8.450	13.82	14.517	1.20	20.58	0.30	3.650	0.30	9.717	13.82	15.783	1.20	21.85	0.30
2.400	0.30	8.467	13.82	14.533	1.20	20.60	0.30	3.667	0.30	9.733	13.82	15.800	1.20	21.87	0.30
2.417	0.30	8.483	13.82	14.550	1.20	20.62	0.30	3.683	0.30	9.750	13.82	15.817	1.20	21.88	0.30
2.433	0.30	8.500	13.82	14.567	1.20	20.63	0.30	3.700	0.30	9.767	13.82	15.833	1.20	21.90	0.30
2.450	0.30	8.517	13.82	14.583	1.20	20.65	0.30	3.717	0.30	9.783	13.82	15.850	1.20	21.92	0.30
2.467	0.30	8.533	13.82	14.600	1.20	20.67	0.30	3.733	0.30	9.800	13.82	15.867	1.20	21.93	0.30
2.483	0.30	8.550	13.82	14.617	1.20	20.68	0.30	3.750	0.30	9.817	13.82	15.883	1.20	21.95	0.30
2.500	0.30	8.567	13.82	14.633	1.20	20.70	0.30	3.767	0.30	9.833	13.82	15.900	1.20	21.97	0.30
2.517	0.30	8.583	13.82	14.650	1.20	20.72	0.30	3.783	0.30	9.850	13.82	15.917	1.20	21.98	0.30
2.533	0.30	8.600	13.82	14.667	1.20	20.73	0.30	3.800	0.30	9.867	13.82	15.933	1.20	22.00	0.30
2.550	0.30	8.617	13.82	14.683	1.20	20.75	0.30	3.817	0.30	9.883	13.82	15.950	1.20	22.02	0.30
2.567	0.30	8.633	13.82	14.700	1.20	20.77	0.30	3.833	0.30	9.900	13.82	15.967	1.20	22.03	0.30
2.583	0.30	8.650	13.82	14.717	1.20	20.78	0.30	3.850	0.30	9.917	13.82	15.983	1.20	22.05	0.30
2.600	0.30	8.667	13.82	14.733	1.20	20.80	0.30	3.867	0.30	9.933	13.82	16.000	1.20	22.07	0.30
2.617	0.30	8.683	13.82	14.750	1.20	20.82	0.30	3.883	0.30	9.950	13.82	16.017	1.20	22.08	0.30
2.633	0.30	8.700	13.82	14.767	1.20	20.83	0.30	3.900	0.30	9.967	13.82	16.033	1.20	22.10	0.30
2.650	0.30	8.717	13.82	14.783	1.20	20.85	0.30	3.917	0.30	9.983	13.82	16.050	1.20	22.12	0.30
2.667	0.30	8.733	13.82	14.800	1.20	20.87	0.30	3.933	0.30	10.000	13.82	16.067	1.20	22.13	0.30
2.683	0.30	8.750	13.82	14.817	1.20	20.88	0.30	3.950	0.30	10.017	13.82	16.083	1.20	22.15	0.30
2.700	0.30	8.767	13.82	14.833	1.20	20.90	0.30	3.967	0.30	10.033	13.82	16.100	1.20	22.17	0.30
2.717	0.30	8.783	13.82	14.850	1.20	20.92	0.30	3.983	0.30	10.050	13.82	16.117	1.20	22.18	0.30
2.733	0.30	8.800	13.82	14.867	1.20	20.93	0.30	4.000	0.30	10.067	13.82	16.133	1.20	22.20	0.30
2.750	0.30	8.817	13.82	14.883	1.20	20.95	0.30	4.017	0.30	10.083	13.82	16.150	1.20	22.22	0.30
2.767	0.30	8.833	13.82	14.900	1.20	20.97	0.30	4.033	0.30	10.100	13.82	16.167	1.20	22.23	0.30
2.783	0.30	8.850	13.82	14.917	1.20	20.98	0.30	4.050	0.30	10.117	13.82	16.183	1.20	22.25	0.30
2.800	0.30	8.867	13.82	14.933	1.20	21.00	0.30	4.067	0.30	10.133	13.82	16.200	1.20	22.27	0.30
2.817	0.30	8.883	13.82	14.950	1.20	21.02	0.30	4.083	0.30	10.150	13.82	16.217	1.20	22.28	0.30
2.833	0.30	8.900	13.82	14.967	1.20	21.03	0.30	4.100	0.30	10.167	13.82	16.233	1.20	22.30	0.30
2.850	0.30	8.917	13.82	14.983	1.20	21.05	0.30	4.117	0.30	10.183	13.82	16.250	1.20	22.32	0.30
2.867	0.30	8.933	13.82	15.000	1.20	21.07	0.30	4.133	0.30	10.200	13.82	16.267	0.60	22.33	0.30
2.883	0.30	8.950	13.82	15.017	1.20	21.08	0.30	4.150	0.30	10.217	13.82	16.283	0.60	22.35	0.30
2.900	0.30	8.967	13.82	15.033	1.20	21.10	0.30	4.167	0.30	10.233	13.82	16.300	0.60	22.37	0.30
2.917	0.30	8.983	13.82	15.050	1.20	21.12	0.30	4.183	0.30	10.250	13.81	16.317	0.60	22.38	0.30
2.933	0.30	9.000	13.82	15.067	1.20	21.13	0.30	4.200	0.30	10.267	3.91	16.333	0.60	22.40	0.30
2.950	0.30	9.017	13.82	15.083	1.20	21.15	0.30	4.217	0.30	10.283	3.91	16.350	0.60	22.42	0.30
2.967	0.30	9.033	13.82	15.100	1.20	21.17	0.30	4.233	0.30	10.300	3.91	16.367	0.60	22.43	0.30
2.983	0.30	9.050	13.82	15.117	1.20	21.18	0.30	4.250	0.30	10.317	3.91	16.383	0.60	22.45	0.30
3.000	0.30	9.067	13.82	15.133	1.20	21.20	0.30	4.267	1.80	10.333	3.91	16.400	0.60	22.47	0.30
3.017	0.30	9.083	13.82	15.150	1.20	21.22	0.30	4.283	1.80	10.350	3.91	16.417	0.60	22.48	0.30
3.033	0.30	9.100	13.82	15.167	1.20	21.23	0.30	4.300	1.80	10.367	3.91	16.433	0.60	22.50	0.30
3.050	0.30	9.117	13.82	15.183	1.20	21.25	0.30	4.317	1.80	10.383	3.91	16.450	0.60	22.52	0.30
3.067	0.30	9.133	13.82	15.200	1.20	21.27	0.30	4.333	1.80	10.400	3.91	16.467	0.60	22.53	0.30
3.083	0.30	9.150	13.82	15.217	1.20	21.28	0.30	4.350	1.80	10.417	3.91	16.483	0.60	22.55	0.30
3.100	0.30	9.167	13.82	15.233	1.20	21.30	0.30	4.367	1.80	10.433	3.91	16.500	0.60	22.57	0.30
3.117	0.30	9.183	13.82	15.250	1.20	21.32	0.30	4.383	1.80	10.450	3.91	16.517	0.60	22.58	0.30
3.133	0.30	9.200	13.82	15.267	1.20	21.33	0.30	4.400	1.80	10.467	3.91	16.533	0.60	22.60	0.30
3.150	0.30	9.217	13.82	15.283	1.20	21.35	0.30	4.417	1.80	10.483	3.91	16.550	0.60	22.62	0.30
3.167	0.30	9.233	13.82	15.300	1.20	21.37	0.30	4.433	1.80	10.500	3.91	16.567	0.60	22.63	0.30
3.183	0.30	9.250	13.82	15.317	1.20	21.38	0.30	4.450	1.80	10.517	3.91	16.583	0.60	22.65	0.30
3.200	0.30	9.267	13.82	15.333	1.20	21.40	0.30	4.467	1.80	10.533	3.91	16.600	0.60	22.67	0.30
3.217	0.30	9.283	13.82	15.350	1.20	21.42	0.30	4.483	1.80	10.550	3.91	16.617	0.60	22.68	0.30
3.233	0.30	9.300	13.82	15.367	1.20	21.43	0.30	4.500	1.80	10.567	3.91	16.633	0.60	22.70	0.30
3.250	0.30	9.317	13.82	15.383	1.20	21.45	0.30	4.517	1.80	10.583	3.91	16.650	0.60	22.72	0.30
3.267	0.30	9.333	13.82	15.400	1.20	21.47	0.30	4.533	1.80	10.600	3.91	16.667	0.60	22.73	0.30
3.283	0.30	9.350	13.82	15.417	1.20	21.48	0.30	4.550	1.80	10.617	3.91	16.683	0.60	22.75	0.30
3.300	0.30	9.367	13.82	15.433	1.20	21.50	0.30	4.567	1.80	10.633	3.91	16.700	0.60	22.77	0.30
3.317	0.30	9.383	13.82	15.450	1.20	21.52	0.30	4.583	1.80	10.650	3.91	16.717	0.60	22.78	0.30
3.333	0.30	9.400	13.82	15.467	1.20	21.53	0.30	4.600	1.80	10.667	3.91	16.733	0.60	22.80	0.30
3.350	0.30	9.417	13.82	15.483	1.20	21.55	0.30	4.617	1.80	10.683	3.91	16.750	0.60	22.82	0.30
3.367	0.30	9.433	13.82	15.500	1.20	21.57	0.30	4.633	1.80	10.700	3.91	16.767	0.60	22.83	0.30
3.383	0.30	9.450	13.82	15.517	1.20	21.58	0.30	4.650	1.80	10.717	3.91	16.783	0.60	22.85	0.30
3.400	0.30	9.467	13.82	15.533	1.20	21.60	0.30	4.667	1.80	10.733	3.91	16.800	0.60	22.87	0.30
3.417	0.30	9.483	13.82	15.550	1.20	21.62	0.30	4.683	1.80	10.750	3.91	16.817	0.60	22.88	0.30
3.433	0.30	9.500	13.82	15.567	1.20	21.63	0.30	4.700	1.80	10.767	3.91	16.833	0.60	22.90	0.30
3.450	0.30	9.517	13.82	15.583	1.20	21.65	0.30	4.717	1.80	10.783	3.91	16.850	0.60	22.92	0.30
3.467	0.30	9.533	13.82	15.600	1.20	21.67	0.30	4.733	1.80	10.800	3.91	16.867	0.60	22.93	0.30
3.483	0.30	9.550	13.82	15.617	1.20	21.68	0.30	4.750	1.80	10.817	3.91	16.883	0.60	22.95	0.30
3.500	0.30	9.567	13.82	15.633	1.20	21.70	0.30	4.767	1.80	10.833	3.91	16.900	0.60	22.97	0.30
3.517	0.30	9.583	13.82	15.650	1.20	21.72	0.30	4.783	1.80	10.850	3.91	16.917	0.60	22.98	0.30
3.533	0.30	9.600	13.82	15.667	1.20	21.73	0.30	4.800	1.80	10.867	3.91	16.933	0.60	23.00	0.30
3.550	0.30	9.617	13.82	15.683	1.20	21.75	0.30	4.817	1.80	10.883	3.91	16.950	0.60	23.02	0.30
3.567	0.30	9.633	13.82	15.700	1.20	21.77	0.30	4.833	1.80	10.900	3.91	16.967	0.60	23.03	0.30
3.583	0.30	9.650	13.82	15.717	1.20	21.78	0.30	4.850	1.80	10.917	3.91	16.983	0.60	23.05	0.30

4.867	1.80	10.933	3.91	17.000	0.60	23.07	0.30
4.883	1.80	10.950	3.91	17.017	0.60	23.08	0.30
4.900	1.80	10.967	3.91	17.033	0.60	23.10	0.30
4.917	1.80	10.983	3.91	17.050	0.60	23.12	0.30
4.933	1.80	11.000	3.91	17.067	0.60	23.13	0.30
4.950	1.80	11.017	3.91	17.083	0.60	23.15	0.30
4.967	1.80	11.033	3.91	17.100	0.60	23.17	0.30
4.983	1.80	11.050	3.91	17.117	0.60	23.18	0.30
5.000	1.80	11.067	3.91	17.133	0.60	23.20	0.30
5.017	1.80	11.083	3.91	17.150	0.60	23.22	0.30
5.033	1.80	11.100	3.91	17.167	0.60	23.23	0.30
5.050	1.80	11.117	3.91	17.183	0.60	23.25	0.30
5.067	1.80	11.133	3.91	17.200	0.60	23.27	0.30
5.083	1.80	11.150	3.91	17.217	0.60	23.28	0.30
5.100	1.80	11.167	3.91	17.233	0.60	23.30	0.30
5.117	1.80	11.183	3.91	17.250	0.60	23.32	0.30
5.133	1.80	11.200	3.91	17.267	0.60	23.33	0.30
5.150	1.80	11.217	3.91	17.283	0.60	23.35	0.30
5.167	1.80	11.233	3.91	17.300	0.60	23.37	0.30
5.183	1.80	11.250	3.91	17.317	0.60	23.38	0.30
5.200	1.80	11.267	3.91	17.333	0.60	23.40	0.30
5.217	1.80	11.283	3.91	17.350	0.60	23.42	0.30
5.233	1.80	11.300	3.91	17.367	0.60	23.43	0.30
5.250	1.80	11.317	3.91	17.383	0.60	23.45	0.30
5.267	1.80	11.333	3.91	17.400	0.60	23.47	0.30
5.283	1.80	11.350	3.91	17.417	0.60	23.48	0.30
5.300	1.80	11.367	3.91	17.433	0.60	23.50	0.30
5.317	1.80	11.383	3.91	17.450	0.60	23.52	0.30
5.333	1.80	11.400	3.91	17.467	0.60	23.53	0.30
5.350	1.80	11.417	3.91	17.483	0.60	23.55	0.30
5.367	1.80	11.433	3.91	17.500	0.60	23.57	0.30
5.383	1.80	11.450	3.91	17.517	0.60	23.58	0.30
5.400	1.80	11.467	3.91	17.533	0.60	23.60	0.30
5.417	1.80	11.483	3.91	17.550	0.60	23.62	0.30
5.433	1.80	11.500	3.91	17.567	0.60	23.63	0.30
5.450	1.80	11.517	3.91	17.583	0.60	23.65	0.30
5.467	1.80	11.533	3.91	17.600	0.60	23.67	0.30
5.483	1.80	11.550	3.91	17.617	0.60	23.68	0.30
5.500	1.80	11.567	3.91	17.633	0.60	23.70	0.30
5.517	1.80	11.583	3.91	17.650	0.60	23.72	0.30
5.533	1.80	11.600	3.91	17.667	0.60	23.73	0.30
5.550	1.80	11.617	3.91	17.683	0.60	23.75	0.30
5.567	1.80	11.633	3.91	17.700	0.60	23.77	0.30
5.583	1.80	11.650	3.91	17.717	0.60	23.78	0.30
5.600	1.80	11.667	3.91	17.733	0.60	23.80	0.30
5.617	1.80	11.683	3.91	17.750	0.60	23.82	0.30
5.633	1.80	11.700	3.91	17.767	0.60	23.83	0.30
5.650	1.80	11.717	3.91	17.783	0.60	23.85	0.30
5.667	1.80	11.733	3.91	17.800	0.60	23.87	0.30
5.683	1.80	11.750	3.91	17.817	0.60	23.88	0.30
5.700	1.80	11.767	3.91	17.833	0.60	23.90	0.30
5.717	1.80	11.783	3.91	17.850	0.60	23.92	0.30
5.733	1.80	11.800	3.91	17.867	0.60	23.93	0.30
5.750	1.80	11.817	3.91	17.883	0.60	23.95	0.30
5.767	1.80	11.833	3.91	17.900	0.60	23.97	0.30
5.783	1.80	11.850	3.91	17.917	0.60	23.98	0.30
5.800	1.80	11.867	3.91	17.933	0.60	24.00	0.30
5.817	1.80	11.883	3.91	17.950	0.60	24.02	0.30
5.833	1.80	11.900	3.91	17.967	0.60	24.03	0.30
5.850	1.80	11.917	3.91	17.983	0.60	24.05	0.30
5.867	1.80	11.933	3.91	18.000	0.60	24.07	0.30
5.883	1.80	11.950	3.91	18.017	0.60	24.08	0.30
5.900	1.80	11.967	3.91	18.033	0.60	24.10	0.30
5.917	1.80	11.983	3.91	18.050	0.60	24.12	0.30
5.933	1.80	12.000	3.91	18.067	0.60	24.13	0.30
5.950	1.80	12.017	3.91	18.083	0.60	24.15	0.30
5.967	1.80	12.033	3.91	18.100	0.60	24.17	0.30
5.983	1.80	12.050	3.91	18.117	0.60	24.18	0.30
6.000	1.80	12.067	3.91	18.133	0.60	24.20	0.30
6.017	1.80	12.083	3.91	18.150	0.60	24.22	0.30
6.033	1.80	12.100	3.91	18.167	0.60	24.23	0.30
6.050	1.80	12.117	3.91	18.183	0.60	24.25	0.30
6.067	1.80	12.133	3.91	18.200	0.60		

Max.Eff.Inten.(mm/hr)=	13.82	9.96
over (min)	8.00	12.00

Storage Coeff. (min)=	7.62 (ii)	11.37 (ii)	
Unit Hyd. Tpeak (min)=	8.00	12.00	
Unit Hyd. peak (cms)=	0.15	0.10	
			TOTALS
PEAK FLOW (cms)=	0.16	0.00	0.157 (iii)
TIME TO PEAK (hrs)=	10.23	10.25	10.25
RUNOFF VOLUME (mm)=	59.07	33.18	58.82
TOTAL RAINFALL (mm)=	60.08	60.08	60.08
RUNOFF COEFFICIENT =	0.98	0.55	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7630)| OVERFLOW IS OFF
IN= 2---> OUT= 1
DT= 1.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0826	0.2320
0.0347	0.1170	0.0967	0.2609
0.0534	0.1580	0.1090	0.2940
0.0655	0.1890	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (	7629)	4.090	0.157	10.25	58.82
OUTFLOW: ID= 1 (	7630)	4.090	0.045	10.93	53.62

PEAK FLOW REDUCTION [Qout/Qin](%)= 28.87
TIME SHIFT OF PEAK FLOW (min)= 41.00
MAXIMUM STORAGE USED (ha.m.)= 0.1400

CALIB
STANDHYD (7631)| Area (ha)= 3.91
ID= 1 DT= 1.0 min | Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.87	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	161.45	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	1.80	12.150	3.91	18.22	0.60
0.033	0.00	6.100	1.80	12.167	3.91	18.23	0.60
0.050	0.00	6.117	1.80	12.183	3.91	18.25	0.60
0.067	0.00	6.133	1.80	12.200	3.91	18.27	0.30
0.083	0.00	6.150	1.80	12.217	3.91	18.28	0.30
0.100	0.00	6.167	1.80	12.233	3.91	18.30	0.30
0.117	0.00	6.183	1.80	12.250	3.91	18.32	0.30
0.133	0.00	6.200	1.80	12.267	2.10	18.33	0.30
0.150	0.00	6.217	1.80	12.283	2.10	18.35	0.30
0.167	0.00	6.233	1.80	12.300	2.10	18.37	0.30
0.183	0.00	6.250	1.81	12.317	2.10	18.38	0.30
0.200	0.00	6.267	5.11	12.333	2.10	18.40	0.30
0.217	0.00	6.283	5.11	12.350	2.10	18.42	0.30
0.233	0.00	6.300	5.11	12.367	2.10	18.43	0.30
0.250	0.00	6.317	5.11	12.383	2.10	18.45	0.30
0.267	0.30	6.333	5.11	12.400	2.10	18.47	0.30
0.283	0.30	6.350	5.11	12.417	2.10	18.48	0.30
0.300	0.30	6.367	5.11	12.433	2.10	18.50	0.30
0.317	0.30	6.383	5.11	12.450	2.10	18.52	0.30
0.333	0.30	6.400	5.11	12.467	2.10	18.53	0.30

0.350	0.30	6.417	5.11	12.483	2.10	18.55	0.30	1.617	0.30	7.683	5.11	13.750	2.10	19.82	0.30
0.367	0.30	6.433	5.11	12.500	2.10	18.57	0.30	1.633	0.30	7.700	5.11	13.767	2.10	19.83	0.30
0.383	0.30	6.450	5.11	12.517	2.10	18.58	0.30	1.650	0.30	7.717	5.11	13.783	2.10	19.85	0.30
0.400	0.30	6.467	5.11	12.533	2.10	18.60	0.30	1.667	0.30	7.733	5.11	13.800	2.10	19.87	0.30
0.417	0.30	6.483	5.11	12.550	2.10	18.62	0.30	1.683	0.30	7.750	5.11	13.817	2.10	19.88	0.30
0.433	0.30	6.500	5.11	12.567	2.10	18.63	0.30	1.700	0.30	7.767	5.11	13.833	2.10	19.90	0.30
0.450	0.30	6.517	5.11	12.583	2.10	18.65	0.30	1.717	0.30	7.783	5.11	13.850	2.10	19.92	0.30
0.467	0.30	6.533	5.11	12.600	2.10	18.67	0.30	1.733	0.30	7.800	5.11	13.867	2.10	19.93	0.30
0.483	0.30	6.550	5.11	12.617	2.10	18.68	0.30	1.750	0.30	7.817	5.11	13.883	2.10	19.95	0.30
0.500	0.30	6.567	5.11	12.633	2.10	18.70	0.30	1.767	0.30	7.833	5.11	13.900	2.10	19.97	0.30
0.517	0.30	6.583	5.11	12.650	2.10	18.72	0.30	1.783	0.30	7.850	5.11	13.917	2.10	19.98	0.30
0.533	0.30	6.600	5.11	12.667	2.10	18.73	0.30	1.800	0.30	7.867	5.11	13.933	2.10	20.00	0.30
0.550	0.30	6.617	5.11	12.683	2.10	18.75	0.30	1.817	0.30	7.883	5.11	13.950	2.10	20.02	0.30
0.567	0.30	6.633	5.11	12.700	2.10	18.77	0.30	1.833	0.30	7.900	5.11	13.967	2.10	20.03	0.30
0.583	0.30	6.650	5.11	12.717	2.10	18.78	0.30	1.850	0.30	7.917	5.11	13.983	2.10	20.05	0.30
0.600	0.30	6.667	5.11	12.733	2.10	18.80	0.30	1.867	0.30	7.933	5.11	14.000	2.10	20.07	0.30
0.617	0.30	6.683	5.11	12.750	2.10	18.82	0.30	1.883	0.30	7.950	5.11	14.017	2.10	20.08	0.30
0.633	0.30	6.700	5.11	12.767	2.10	18.83	0.30	1.900	0.30	7.967	5.11	14.033	2.10	20.10	0.30
0.650	0.30	6.717	5.11	12.783	2.10	18.85	0.30	1.917	0.30	7.983	5.11	14.050	2.10	20.12	0.30
0.667	0.30	6.733	5.11	12.800	2.10	18.87	0.30	1.933	0.30	8.000	5.11	14.067	2.10	20.13	0.30
0.683	0.30	6.750	5.11	12.817	2.10	18.88	0.30	1.950	0.30	8.017	5.11	14.083	2.10	20.15	0.30
0.700	0.30	6.767	5.11	12.833	2.10	18.90	0.30	1.967	0.30	8.033	5.11	14.100	2.10	20.17	0.30
0.717	0.30	6.783	5.11	12.850	2.10	18.92	0.30	1.983	0.30	8.050	5.11	14.117	2.10	20.18	0.30
0.733	0.30	6.800	5.11	12.867	2.10	18.93	0.30	2.000	0.30	8.067	5.11	14.133	2.10	20.20	0.30
0.750	0.30	6.817	5.11	12.883	2.10	18.95	0.30	2.017	0.30	8.083	5.11	14.150	2.10	20.22	0.30
0.767	0.30	6.833	5.11	12.900	2.10	18.97	0.30	2.033	0.30	8.100	5.11	14.167	2.10	20.23	0.30
0.783	0.30	6.850	5.11	12.917	2.10	18.98	0.30	2.050	0.30	8.117	5.11	14.183	2.10	20.25	0.30
0.800	0.30	6.867	5.11	12.933	2.10	19.00	0.30	2.067	0.30	8.133	5.11	14.200	2.10	20.27	0.30
0.817	0.30	6.883	5.11	12.950	2.10	19.02	0.30	2.083	0.30	8.150	5.11	14.217	2.10	20.28	0.30
0.833	0.30	6.900	5.11	12.967	2.10	19.03	0.30	2.100	0.30	8.167	5.11	14.233	2.10	20.30	0.30
0.850	0.30	6.917	5.11	12.983	2.10	19.05	0.30	2.117	0.30	8.183	5.11	14.250	2.10	20.32	0.30
0.867	0.30	6.933	5.11	13.000	2.10	19.07	0.30	2.133	0.30	8.200	5.11	14.267	1.20	20.33	0.30
0.883	0.30	6.950	5.11	13.017	2.10	19.08	0.30	2.150	0.30	8.217	5.11	14.283	1.20	20.35	0.30
0.900	0.30	6.967	5.11	13.033	2.10	19.10	0.30	2.167	0.30	8.233	5.11	14.300	1.20	20.37	0.30
0.917	0.30	6.983	5.11	13.050	2.10	19.12	0.30	2.183	0.30	8.250	5.13	14.317	1.20	20.38	0.30
0.933	0.30	7.000	5.11	13.067	2.10	19.13	0.30	2.200	0.30	8.267	13.82	14.333	1.20	20.40	0.30
0.950	0.30	7.017	5.11	13.083	2.10	19.15	0.30	2.217	0.30	8.283	13.82	14.350	1.20	20.42	0.30
0.967	0.30	7.033	5.11	13.100	2.10	19.17	0.30	2.233	0.30	8.300	13.82	14.367	1.20	20.43	0.30
0.983	0.30	7.050	5.11	13.117	2.10	19.18	0.30	2.250	0.30	8.317	13.82	14.383	1.20	20.45	0.30
1.000	0.30	7.067	5.11	13.133	2.10	19.20	0.30	2.267	0.30	8.333	13.82	14.400	1.20	20.47	0.30
1.017	0.30	7.083	5.11	13.150	2.10	19.22	0.30	2.283	0.30	8.350	13.82	14.417	1.20	20.48	0.30
1.033	0.30	7.100	5.11	13.167	2.10	19.23	0.30	2.300	0.30	8.367	13.82	14.433	1.20	20.50	0.30
1.050	0.30	7.117	5.11	13.183	2.10	19.25	0.30	2.317	0.30	8.383	13.82	14.450	1.20	20.52	0.30
1.067	0.30	7.133	5.11	13.200	2.10	19.27	0.30	2.333	0.30	8.400	13.82	14.467	1.20	20.53	0.30
1.083	0.30	7.150	5.11	13.217	2.10	19.28	0.30	2.350	0.30	8.417	13.82	14.483	1.20	20.55	0.30
1.100	0.30	7.167	5.11	13.233	2.10	19.30	0.30	2.367	0.30	8.433	13.82	14.500	1.20	20.57	0.30
1.117	0.30	7.183	5.11	13.250	2.10	19.32	0.30	2.383	0.30	8.450	13.82	14.517	1.20	20.58	0.30
1.133	0.30	7.200	5.11	13.267	2.10	19.33	0.30	2.400	0.30	8.467	13.82	14.533	1.20	20.60	0.30
1.150	0.30	7.217	5.11	13.283	2.10	19.35	0.30	2.417	0.30	8.483	13.82	14.550	1.20	20.62	0.30
1.167	0.30	7.233	5.11	13.300	2.10	19.37	0.30	2.433	0.30	8.500	13.82	14.567	1.20	20.63	0.30
1.183	0.30	7.250	5.11	13.317	2.10	19.38	0.30	2.450	0.30	8.517	13.82	14.583	1.20	20.65	0.30
1.200	0.30	7.267	5.11	13.333	2.10	19.40	0.30	2.467	0.30	8.533	13.82	14.600	1.20	20.67	0.30
1.217	0.30	7.283	5.11	13.350	2.10	19.42	0.30	2.483	0.30	8.550	13.82	14.617	1.20	20.68	0.30
1.233	0.30	7.300	5.11	13.367	2.10	19.43	0.30	2.500	0.30	8.567	13.82	14.633	1.20	20.70	0.30
1.250	0.30	7.317	5.11	13.383	2.10	19.45	0.30	2.517	0.30	8.583	13.82	14.650	1.20	20.72	0.30
1.267	0.30	7.333	5.11	13.400	2.10	19.47	0.30	2.533	0.30	8.600	13.82	14.667	1.20	20.73	0.30
1.283	0.30	7.350	5.11	13.417	2.10	19.48	0.30	2.550	0.30	8.617	13.82	14.683	1.20	20.75	0.30
1.300	0.30	7.367	5.11	13.433	2.10	19.50	0.30	2.567	0.30	8.633	13.82	14.700	1.20	20.77	0.30
1.317	0.30	7.383	5.11	13.450	2.10	19.52	0.30	2.583	0.30	8.650	13.82	14.717	1.20	20.78	0.30
1.333	0.30	7.400	5.11	13.467	2.10	19.53	0.30	2.600	0.30	8.667	13.82	14.733	1.20	20.80	0.30
1.350	0.30	7.417	5.11	13.483	2.10	19.55	0.30	2.617	0.30	8.683	13.82	14.750	1.20	20.82	0.30
1.367	0.30	7.433	5.11	13.500	2.10	19.57	0.30	2.633	0.30	8.700	13.82	14.767	1.20	20.83	0.30
1.383	0.30	7.450	5.11	13.517	2.10	19.58	0.30	2.650	0.30	8.717	13.82	14.783	1.20	20.85	0.30
1.400	0.30	7.467	5.11	13.533	2.10	19.60	0.30	2.667	0.30	8.733	13.82	14.800	1.20	20.87	0.30
1.417	0.30	7.483	5.11	13.550	2.10	19.62	0.30	2.683	0.30	8.750	13.82	14.817	1.20	20.88	0.30
1.433	0.30	7.500	5.11	13.567	2.10	19.63	0.30	2.700	0.30	8.767	13.82	14.833	1.20	20.90	0.30
1.450	0.30	7.517	5.11	13.583	2.10	19.65	0.30	2.717	0.30	8.783	13.82	14.850	1.20	20.92	0.30
1.467	0.30	7.533	5.11	13.600	2.10	19.67	0.30	2.733	0.30	8.800	13.82	14.867	1.20	20.93	0.30
1.483	0.30	7.550	5.11	13.617	2.10	19.68	0.30	2.750	0.30	8.817	13.82	14.883	1.20	20.95	0.30
1.500	0.30	7.567	5.11	13.633	2.10	19.70	0.30	2.767	0.30	8.833	13.82	14.900	1.20	20.97	0.30
1.517	0.30	7.583	5.11	13.650	2.10	19.72	0.30	2.783	0.30	8.850	13.82	14.917	1.20	20.98	0.30
1.533	0.30	7.600	5.11	13.667	2.10	19.73	0.30	2.800	0.30	8.867	13.82	14.933	1.20	21.00	0.30
1.550	0.30	7.617	5.11	13.683	2.10	19.75	0.30	2.817	0.30	8.883	13.82	14.950	1.20	21.02	0.30
1.567	0.30	7.633	5.11	13.700	2.10	19.77	0.30	2.833	0.30	8.900	13.82	14.967	1.20	21.03	0.30
1.583	0.30	7.650	5.11	13.717	2.10	19.78	0.30	2.850	0.30	8.917	13.82	14.983	1.20	21.05	0.30
1.600	0.30	7.667	5.11	13.733	2.10	19.80	0.30	2.867	0.30	8.933	13.82	15.000	1.20	21.07	0.30

2.883	0.30	8.950	13.82	15.017	1.20	21.08	0.30	4.150	0.30	10.217	13.82	16.283	0.60	22.35	0.30
2.900	0.30	8.967	13.82	15.033	1.20	21.10	0.30	4.167	0.30	10.233	13.82	16.300	0.60	22.37	0.30
2.917	0.30	8.983	13.82	15.050	1.20	21.12	0.30	4.183	0.30	10.250	13.81	16.317	0.60	22.38	0.30
2.933	0.30	9.000	13.82	15.067	1.20	21.13	0.30	4.200	0.30	10.267	3.91	16.333	0.60	22.40	0.30
2.950	0.30	9.017	13.82	15.083	1.20	21.15	0.30	4.217	0.30	10.283	3.91	16.350	0.60	22.42	0.30
2.967	0.30	9.033	13.82	15.100	1.20	21.17	0.30	4.233	0.30	10.300	3.91	16.367	0.60	22.43	0.30
2.983	0.30	9.050	13.82	15.117	1.20	21.18	0.30	4.250	0.30	10.317	3.91	16.383	0.60	22.45	0.30
3.000	0.30	9.067	13.82	15.133	1.20	21.20	0.30	4.267	1.80	10.333	3.91	16.400	0.60	22.47	0.30
3.017	0.30	9.083	13.82	15.150	1.20	21.22	0.30	4.283	1.80	10.350	3.91	16.417	0.60	22.48	0.30
3.033	0.30	9.100	13.82	15.167	1.20	21.23	0.30	4.300	1.80	10.367	3.91	16.433	0.60	22.50	0.30
3.050	0.30	9.117	13.82	15.183	1.20	21.25	0.30	4.317	1.80	10.383	3.91	16.450	0.60	22.52	0.30
3.067	0.30	9.133	13.82	15.200	1.20	21.27	0.30	4.333	1.80	10.400	3.91	16.467	0.60	22.53	0.30
3.083	0.30	9.150	13.82	15.217	1.20	21.28	0.30	4.350	1.80	10.417	3.91	16.483	0.60	22.55	0.30
3.100	0.30	9.167	13.82	15.233	1.20	21.30	0.30	4.367	1.80	10.433	3.91	16.500	0.60	22.57	0.30
3.117	0.30	9.183	13.82	15.250	1.20	21.32	0.30	4.383	1.80	10.450	3.91	16.517	0.60	22.58	0.30
3.133	0.30	9.200	13.82	15.267	1.20	21.33	0.30	4.400	1.80	10.467	3.91	16.533	0.60	22.60	0.30
3.150	0.30	9.217	13.82	15.283	1.20	21.35	0.30	4.417	1.80	10.483	3.91	16.550	0.60	22.62	0.30
3.167	0.30	9.233	13.82	15.300	1.20	21.37	0.30	4.433	1.80	10.500	3.91	16.567	0.60	22.63	0.30
3.183	0.30	9.250	13.82	15.317	1.20	21.38	0.30	4.450	1.80	10.517	3.91	16.583	0.60	22.65	0.30
3.200	0.30	9.267	13.82	15.333	1.20	21.40	0.30	4.467	1.80	10.533	3.91	16.600	0.60	22.67	0.30
3.217	0.30	9.283	13.82	15.350	1.20	21.42	0.30	4.483	1.80	10.550	3.91	16.617	0.60	22.68	0.30
3.233	0.30	9.300	13.82	15.367	1.20	21.43	0.30	4.500	1.80	10.567	3.91	16.633	0.60	22.70	0.30
3.250	0.30	9.317	13.82	15.383	1.20	21.45	0.30	4.517	1.80	10.583	3.91	16.650	0.60	22.72	0.30
3.267	0.30	9.333	13.82	15.400	1.20	21.47	0.30	4.533	1.80	10.600	3.91	16.667	0.60	22.73	0.30
3.283	0.30	9.350	13.82	15.417	1.20	21.48	0.30	4.550	1.80	10.617	3.91	16.683	0.60	22.75	0.30
3.300	0.30	9.367	13.82	15.433	1.20	21.50	0.30	4.567	1.80	10.633	3.91	16.700	0.60	22.77	0.30
3.317	0.30	9.383	13.82	15.450	1.20	21.52	0.30	4.583	1.80	10.650	3.91	16.717	0.60	22.78	0.30
3.333	0.30	9.400	13.82	15.467	1.20	21.53	0.30	4.600	1.80	10.667	3.91	16.733	0.60	22.80	0.30
3.350	0.30	9.417	13.82	15.483	1.20	21.55	0.30	4.617	1.80	10.683	3.91	16.750	0.60	22.82	0.30
3.367	0.30	9.433	13.82	15.500	1.20	21.57	0.30	4.633	1.80	10.700	3.91	16.767	0.60	22.83	0.30
3.383	0.30	9.450	13.82	15.517	1.20	21.58	0.30	4.650	1.80	10.717	3.91	16.783	0.60	22.85	0.30
3.400	0.30	9.467	13.82	15.533	1.20	21.60	0.30	4.667	1.80	10.733	3.91	16.800	0.60	22.87	0.30
3.417	0.30	9.483	13.82	15.550	1.20	21.62	0.30	4.683	1.80	10.750	3.91	16.817	0.60	22.88	0.30
3.433	0.30	9.500	13.82	15.567	1.20	21.63	0.30	4.700	1.80	10.767	3.91	16.833	0.60	22.90	0.30
3.450	0.30	9.517	13.82	15.583	1.20	21.65	0.30	4.717	1.80	10.783	3.91	16.850	0.60	22.92	0.30
3.467	0.30	9.533	13.82	15.600	1.20	21.67	0.30	4.733	1.80	10.800	3.91	16.867	0.60	22.93	0.30
3.483	0.30	9.550	13.82	15.617	1.20	21.68	0.30	4.750	1.80	10.817	3.91	16.883	0.60	22.95	0.30
3.500	0.30	9.567	13.82	15.633	1.20	21.70	0.30	4.767	1.80	10.833	3.91	16.900	0.60	22.97	0.30
3.517	0.30	9.583	13.82	15.650	1.20	21.72	0.30	4.783	1.80	10.850	3.91	16.917	0.60	22.98	0.30
3.533	0.30	9.600	13.82	15.667	1.20	21.73	0.30	4.800	1.80	10.867	3.91	16.933	0.60	23.00	0.30
3.550	0.30	9.617	13.82	15.683	1.20	21.75	0.30	4.817	1.80	10.883	3.91	16.950	0.60	23.02	0.30
3.567	0.30	9.633	13.82	15.700	1.20	21.77	0.30	4.833	1.80	10.900	3.91	16.967	0.60	23.03	0.30
3.583	0.30	9.650	13.82	15.717	1.20	21.78	0.30	4.850	1.80	10.917	3.91	16.983	0.60	23.05	0.30
3.600	0.30	9.667	13.82	15.733	1.20	21.80	0.30	4.867	1.80	10.933	3.91	17.000	0.60	23.07	0.30
3.617	0.30	9.683	13.82	15.750	1.20	21.82	0.30	4.883	1.80	10.950	3.91	17.017	0.60	23.08	0.30
3.633	0.30	9.700	13.82	15.767	1.20	21.83	0.30	4.900	1.80	10.967	3.91	17.033	0.60	23.10	0.30
3.650	0.30	9.717	13.82	15.783	1.20	21.85	0.30	4.917	1.80	10.983	3.91	17.050	0.60	23.12	0.30
3.667	0.30	9.733	13.82	15.800	1.20	21.87	0.30	4.933	1.80	11.000	3.91	17.067	0.60	23.13	0.30
3.683	0.30	9.750	13.82	15.817	1.20	21.88	0.30	4.950	1.80	11.017	3.91	17.083	0.60	23.15	0.30
3.700	0.30	9.767	13.82	15.833	1.20	21.90	0.30	4.967	1.80	11.033	3.91	17.100	0.60	23.17	0.30
3.717	0.30	9.783	13.82	15.850	1.20	21.92	0.30	4.983	1.80	11.050	3.91	17.117	0.60	23.18	0.30
3.733	0.30	9.800	13.82	15.867	1.20	21.93	0.30	5.000	1.80	11.067	3.91	17.133	0.60	23.20	0.30
3.750	0.30	9.817	13.82	15.883	1.20	21.95	0.30	5.017	1.80	11.083	3.91	17.150	0.60	23.22	0.30
3.767	0.30	9.833	13.82	15.900	1.20	21.97	0.30	5.033	1.80	11.100	3.91	17.167	0.60	23.23	0.30
3.783	0.30	9.850	13.82	15.917	1.20	21.98	0.30	5.050	1.80	11.117	3.91	17.183	0.60	23.25	0.30
3.800	0.30	9.867	13.82	15.933	1.20	22.00	0.30	5.067	1.80	11.133	3.91	17.200	0.60	23.27	0.30
3.817	0.30	9.883	13.82	15.950	1.20	22.02	0.30	5.083	1.80	11.150	3.91	17.217	0.60	23.28	0.30
3.833	0.30	9.900	13.82	15.967	1.20	22.03	0.30	5.100	1.80	11.167	3.91	17.233	0.60	23.30	0.30
3.850	0.30	9.917	13.82	15.983	1.20	22.05	0.30	5.117	1.80	11.183	3.91	17.250	0.60	23.32	0.30
3.867	0.30	9.933	13.82	16.000	1.20	22.07	0.30	5.133	1.80	11.200	3.91	17.267	0.60	23.33	0.30
3.883	0.30	9.950	13.82	16.017	1.20	22.08	0.30	5.150	1.80	11.217	3.91	17.283	0.60	23.35	0.30
3.900	0.30	9.967	13.82	16.033	1.20	22.10	0.30	5.167	1.80	11.233	3.91	17.300	0.60	23.37	0.30
3.917	0.30	9.983	13.82	16.050	1.20	22.12	0.30	5.183	1.80	11.250	3.91	17.317	0.60	23.38	0.30
3.933	0.30	10.000	13.82	16.067	1.20	22.13	0.30	5.200	1.80	11.267	3.91	17.333	0.60	23.40	0.30
3.950	0.30	10.017	13.82	16.083	1.20	22.15	0.30	5.217	1.80	11.283	3.91	17.350	0.60	23.42	0.30
3.967	0.30	10.033	13.82	16.100	1.20	22.17	0.30	5.233	1.80	11.300	3.91	17.367	0.60	23.43	0.30
3.983	0.30	10.050	13.82	16.117	1.20	22.18	0.30	5.250	1.80	11.317	3.91	17.383	0.60	23.45	0.30
4.000	0.30	10.067	13.82	16.133	1.20	22.20	0.30	5.267	1.80	11.333	3.91	17.400	0.60	23.47	0.30
4.017	0.30	10.083	13.82	16.150	1.20	22.22	0.30	5.283	1.80	11.350	3.91	17.417	0.60	23.48	0.30
4.033	0.30	10.100	13.82	16.167	1.20	22.23	0.30	5.300	1.80	11.367	3.91	17.433	0.60	23.50	0.30
4.050	0.30	10.117	13.82	16.183	1.20	22.25	0.30	5.317	1.80	11.383	3.91	17.450	0.60	23.52	0.30
4.067	0.30	10.133	13.82	16.200	1.20	22.27	0.30	5.333	1.80	11.400	3.91	17.467	0.60	23.53	0.30
4.083	0.30	10.150	13.82	16.217	1.20	22.28	0.30	5.350	1.80	11.417	3.91	17.483	0.60	23.55	0.30
4.100	0.30	10.167	13.82	16.233	1.20	22.30	0.30	5.367	1.80	11.433	3.91	17.500	0.60	23.57	0.30
4.117	0.30	10.183	13.82	16.250	1.20	22.32	0.30	5.383	1.80	11.450	3.91	17.517	0.60	23.58	0.30
4.133	0.30	10.200	13.82	16.267	0.60	22.33	0.30	5.400	1.80	11.467	3.91	17.533	0.60	23.60	0.30

5.417	1.80	11.483	3.91	17.550	0.60	23.62	0.30
5.433	1.80	11.500	3.91	17.567	0.60	23.63	0.30
5.450	1.80	11.517	3.91	17.583	0.60	23.65	0.30
5.467	1.80	11.533	3.91	17.600	0.60	23.67	0.30
5.483	1.80	11.550	3.91	17.617	0.60	23.68	0.30
5.500	1.80	11.567	3.91	17.633	0.60	23.70	0.30
5.517	1.80	11.583	3.91	17.650	0.60	23.72	0.30
5.533	1.80	11.600	3.91	17.667	0.60	23.73	0.30
5.550	1.80	11.617	3.91	17.683	0.60	23.75	0.30
5.567	1.80	11.633	3.91	17.700	0.60	23.77	0.30
5.583	1.80	11.650	3.91	17.717	0.60	23.78	0.30
5.600	1.80	11.667	3.91	17.733	0.60	23.80	0.30
5.617	1.80	11.683	3.91	17.750	0.60	23.82	0.30
5.633	1.80	11.700	3.91	17.767	0.60	23.83	0.30
5.650	1.80	11.717	3.91	17.783	0.60	23.85	0.30
5.667	1.80	11.733	3.91	17.800	0.60	23.87	0.30
5.683	1.80	11.750	3.91	17.817	0.60	23.88	0.30
5.700	1.80	11.767	3.91	17.833	0.60	23.90	0.30
5.717	1.80	11.783	3.91	17.850	0.60	23.92	0.30
5.733	1.80	11.800	3.91	17.867	0.60	23.93	0.30
5.750	1.80	11.817	3.91	17.883	0.60	23.95	0.30
5.767	1.80	11.833	3.91	17.900	0.60	23.97	0.30
5.783	1.80	11.850	3.91	17.917	0.60	23.98	0.30
5.800	1.80	11.867	3.91	17.933	0.60	24.00	0.30
5.817	1.80	11.883	3.91	17.950	0.60	24.02	0.30
5.833	1.80	11.900	3.91	17.967	0.60	24.03	0.30
5.850	1.80	11.917	3.91	17.983	0.60	24.05	0.30
5.867	1.80	11.933	3.91	18.000	0.60	24.07	0.30
5.883	1.80	11.950	3.91	18.017	0.60	24.08	0.30
5.900	1.80	11.967	3.91	18.033	0.60	24.10	0.30
5.917	1.80	11.983	3.91	18.050	0.60	24.12	0.30
5.933	1.80	12.000	3.91	18.067	0.60	24.13	0.30
5.950	1.80	12.017	3.91	18.083	0.60	24.15	0.30
5.967	1.80	12.033	3.91	18.100	0.60	24.17	0.30
5.983	1.80	12.050	3.91	18.117	0.60	24.18	0.30
6.000	1.80	12.067	3.91	18.133	0.60	24.20	0.30
6.017	1.80	12.083	3.91	18.150	0.60	24.22	0.30
6.033	1.80	12.100	3.91	18.167	0.60	24.23	0.30
6.050	1.80	12.117	3.91	18.183	0.60	24.25	0.30
6.067	1.80	12.133	3.91	18.200	0.60		

Max.Eff.Inten.(mm/hr)=	13.82	9.96	
over (min)	8.00	12.00	
Storage Coeff. (min)=	7.52 (ii)	11.27 (ii)	
Unit Hyd. Tpeak (min)=	8.00	12.00	
Unit Hyd. peak (cms)=	0.15	0.10	
			TOTALS
PEAK FLOW (cms)=	0.15	0.00	0.150 (iii)
TIME TO PEAK (hrs)=	9.98	10.25	10.25
RUNOFF VOLUME (mm)=	59.07	33.18	58.82
TOTAL RAINFALL (mm)=	60.08	60.08	60.08
RUNOFF COEFFICIENT =	0.98	0.55	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7632) / IN= 2---> OUT= 1 / DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0792	0.2220
	0.0333	0.1130	0.0928	0.2500
	0.0512	0.1510	0.1046	0.2810
	0.0629	0.1810	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7631)	3.910	0.150	10.25	58.82
OUTFLOW: ID= 1 (7632)	3.910	0.043	10.93	53.55

PEAK FLOW REDUCTION [Qout/Qin](%)= 28.86
TIME SHIFT OF PEAK FLOW (min)= 41.00
MAXIMUM STORAGE USED (ha.m.)= 0.1340

CALIB / STANDHYD (7641) / ID= 1 DT= 1.0 min	Area (ha)= 2.21	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.19	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	121.38	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	1.80	12.150	3.91	18.22	0.60
0.033	0.00	6.100	1.80	12.167	3.91	18.23	0.60
0.050	0.00	6.117	1.80	12.183	3.91	18.25	0.60
0.067	0.00	6.133	1.80	12.200	3.91	18.27	0.30
0.083	0.00	6.150	1.80	12.217	3.91	18.28	0.30
0.100	0.00	6.167	1.80	12.233	3.91	18.30	0.30
0.117	0.00	6.183	1.80	12.250	3.91	18.32	0.30
0.133	0.00	6.200	1.80	12.267	2.10	18.33	0.30
0.150	0.00	6.217	1.80	12.283	2.10	18.35	0.30
0.167	0.00	6.233	1.80	12.300	2.10	18.37	0.30
0.183	0.00	6.250	1.81	12.317	2.10	18.38	0.30
0.200	0.00	6.267	5.11	12.333	2.10	18.40	0.30
0.217	0.00	6.283	5.11	12.350	2.10	18.42	0.30
0.233	0.00	6.300	5.11	12.367	2.10	18.43	0.30
0.250	0.00	6.317	5.11	12.383	2.10	18.45	0.30
0.267	0.30	6.333	5.11	12.400	2.10	18.47	0.30
0.283	0.30	6.350	5.11	12.417	2.10	18.48	0.30
0.300	0.30	6.367	5.11	12.433	2.10	18.50	0.30
0.317	0.30	6.383	5.11	12.450	2.10	18.52	0.30
0.333	0.30	6.400	5.11	12.467	2.10	18.53	0.30
0.350	0.30	6.417	5.11	12.483	2.10	18.55	0.30
0.367	0.30	6.433	5.11	12.500	2.10	18.57	0.30
0.383	0.30	6.450	5.11	12.517	2.10	18.58	0.30
0.400	0.30	6.467	5.11	12.533	2.10	18.60	0.30
0.417	0.30	6.483	5.11	12.550	2.10	18.62	0.30
0.433	0.30	6.500	5.11	12.567	2.10	18.63	0.30
0.450	0.30	6.517	5.11	12.583	2.10	18.65	0.30
0.467	0.30	6.533	5.11	12.600	2.10	18.67	0.30
0.483	0.30	6.550	5.11	12.617	2.10	18.68	0.30
0.500	0.30	6.567	5.11	12.633	2.10	18.70	0.30
0.517	0.30	6.583	5.11	12.650	2.10	18.72	0.30
0.533	0.30	6.600	5.11	12.667	2.10	18.73	0.30
0.550	0.30	6.617	5.11	12.683	2.10	18.75	0.30
0.567	0.30	6.633	5.11	12.700	2.10	18.77	0.30
0.583	0.30	6.650	5.11	12.717	2.10	18.78	0.30
0.600	0.30	6.667	5.11	12.733	2.10	18.80	0.30
0.617	0.30	6.683	5.11	12.750	2.10	18.82	0.30
0.633	0.30	6.700	5.11	12.767	2.10	18.83	0.30
0.650	0.30	6.717	5.11	12.783	2.10	18.85	0.30
0.667	0.30	6.733	5.11	12.800	2.10	18.87	0.30
0.683	0.30	6.750	5.11	12.817	2.10	18.88	0.30
0.700	0.30	6.767	5.11	12.833	2.10	18.90	0.30
0.717	0.30	6.783	5.11	12.850	2.10	18.92	0.30
0.733	0.30	6.800	5.11	12.867	2.10	18.93	0.30
0.750	0.30	6.817	5.11	12.883	2.10	18.95	0.30
0.767	0.30	6.833	5.11	12.900	2.10	18.97	0.30
0.783	0.30	6.850	5.11	12.917	2.10	18.98	0.30
0.800	0.30	6.867	5.11	12.933	2.10	19.00	0.30
0.817	0.30	6.883	5.11	12.950	2.10	19.02	0.30
0.833	0.30	6.900	5.11	12.967	2.10	19.03	0.30
0.850	0.30	6.917	5.11	12.983	2.10	19.05	0.30
0.867	0.30	6.933	5.11	13.000	2.10	19.07	0.30
0.883	0.30	6.950	5.11	13.017	2.10	19.08	0.30

0.900	0.30	6.967	5.11	13.033	2.10	19.10	0.30
0.917	0.30	6.983	5.11	13.050	2.10	19.12	0.30
0.933	0.30	7.000	5.11	13.067	2.10	19.13	0.30
0.950	0.30	7.017	5.11	13.083	2.10	19.15	0.30
0.967	0.30	7.033	5.11	13.100	2.10	19.17	0.30
0.983	0.30	7.050	5.11	13.117	2.10	19.18	0.30
1.000	0.30	7.067	5.11	13.133	2.10	19.20	0.30
1.017	0.30	7.083	5.11	13.150	2.10	19.22	0.30
1.033	0.30	7.100	5.11	13.167	2.10	19.23	0.30
1.050	0.30	7.117	5.11	13.183	2.10	19.25	0.30
1.067	0.30	7.133	5.11	13.200	2.10	19.27	0.30
1.083	0.30	7.150	5.11	13.217	2.10	19.28	0.30
1.100	0.30	7.167	5.11	13.233	2.10	19.30	0.30
1.117	0.30	7.183	5.11	13.250	2.10	19.32	0.30
1.133	0.30	7.200	5.11	13.267	2.10	19.33	0.30
1.150	0.30	7.217	5.11	13.283	2.10	19.35	0.30
1.167	0.30	7.233	5.11	13.300	2.10	19.37	0.30
1.183	0.30	7.250	5.11	13.317	2.10	19.38	0.30
1.200	0.30	7.267	5.11	13.333	2.10	19.40	0.30
1.217	0.30	7.283	5.11	13.350	2.10	19.42	0.30
1.233	0.30	7.300	5.11	13.367	2.10	19.43	0.30
1.250	0.30	7.317	5.11	13.383	2.10	19.45	0.30
1.267	0.30	7.333	5.11	13.400	2.10	19.47	0.30
1.283	0.30	7.350	5.11	13.417	2.10	19.48	0.30
1.300	0.30	7.367	5.11	13.433	2.10	19.50	0.30
1.317	0.30	7.383	5.11	13.450	2.10	19.52	0.30
1.333	0.30	7.400	5.11	13.467	2.10	19.53	0.30
1.350	0.30	7.417	5.11	13.483	2.10	19.55	0.30
1.367	0.30	7.433	5.11	13.500	2.10	19.57	0.30
1.383	0.30	7.450	5.11	13.517	2.10	19.58	0.30
1.400	0.30	7.467	5.11	13.533	2.10	19.60	0.30
1.417	0.30	7.483	5.11	13.550	2.10	19.62	0.30
1.433	0.30	7.500	5.11	13.567	2.10	19.63	0.30
1.450	0.30	7.517	5.11	13.583	2.10	19.65	0.30
1.467	0.30	7.533	5.11	13.600	2.10	19.67	0.30
1.483	0.30	7.550	5.11	13.617	2.10	19.68	0.30
1.500	0.30	7.567	5.11	13.633	2.10	19.70	0.30
1.517	0.30	7.583	5.11	13.650	2.10	19.72	0.30
1.533	0.30	7.600	5.11	13.667	2.10	19.73	0.30
1.550	0.30	7.617	5.11	13.683	2.10	19.75	0.30
1.567	0.30	7.633	5.11	13.700	2.10	19.77	0.30
1.583	0.30	7.650	5.11	13.717	2.10	19.78	0.30
1.600	0.30	7.667	5.11	13.733	2.10	19.80	0.30
1.617	0.30	7.683	5.11	13.750	2.10	19.82	0.30
1.633	0.30	7.700	5.11	13.767	2.10	19.83	0.30
1.650	0.30	7.717	5.11	13.783	2.10	19.85	0.30
1.667	0.30	7.733	5.11	13.800	2.10	19.87	0.30
1.683	0.30	7.750	5.11	13.817	2.10	19.88	0.30
1.700	0.30	7.767	5.11	13.833	2.10	19.90	0.30
1.717	0.30	7.783	5.11	13.850	2.10	19.92	0.30
1.733	0.30	7.800	5.11	13.867	2.10	19.93	0.30
1.750	0.30	7.817	5.11	13.883	2.10	19.95	0.30
1.767	0.30	7.833	5.11	13.900	2.10	19.97	0.30
1.783	0.30	7.850	5.11	13.917	2.10	19.98	0.30
1.800	0.30	7.867	5.11	13.933	2.10	20.00	0.30
1.817	0.30	7.883	5.11	13.950	2.10	20.02	0.30
1.833	0.30	7.900	5.11	13.967	2.10	20.03	0.30
1.850	0.30	7.917	5.11	13.983	2.10	20.05	0.30
1.867	0.30	7.933	5.11	14.000	2.10	20.07	0.30
1.883	0.30	7.950	5.11	14.017	2.10	20.08	0.30
1.900	0.30	7.967	5.11	14.033	2.10	20.10	0.30
1.917	0.30	7.983	5.11	14.050	2.10	20.12	0.30
1.933	0.30	8.000	5.11	14.067	2.10	20.13	0.30
1.950	0.30	8.017	5.11	14.083	2.10	20.15	0.30
1.967	0.30	8.033	5.11	14.100	2.10	20.17	0.30
1.983	0.30	8.050	5.11	14.117	2.10	20.18	0.30
2.000	0.30	8.067	5.11	14.133	2.10	20.20	0.30
2.017	0.30	8.083	5.11	14.150	2.10	20.22	0.30
2.033	0.30	8.100	5.11	14.167	2.10	20.23	0.30
2.050	0.30	8.117	5.11	14.183	2.10	20.25	0.30
2.067	0.30	8.133	5.11	14.200	2.10	20.27	0.30
2.083	0.30	8.150	5.11	14.217	2.10	20.28	0.30
2.100	0.30	8.167	5.11	14.233	2.10	20.30	0.30
2.117	0.30	8.183	5.11	14.250	2.10	20.32	0.30
2.133	0.30	8.200	5.11	14.267	1.20	20.33	0.30
2.150	0.30	8.217	5.11	14.283	1.20	20.35	0.30
2.167	0.30	8.233	5.11	14.300	1.20	20.37	0.30
2.183	0.30	8.250	5.13	14.317	1.20	20.38	0.30
2.200	0.30	8.267	13.82	14.333	1.20	20.40	0.30
2.217	0.30	8.283	13.82	14.350	1.20	20.42	0.30
2.233	0.30	8.300	13.82	14.367	1.20	20.43	0.30
2.250	0.30	8.317	13.82	14.383	1.20	20.45	0.30
2.267	0.30	8.333	13.82	14.400	1.20	20.47	0.30
2.283	0.30	8.350	13.82	14.417	1.20	20.48	0.30
2.300	0.30	8.367	13.82	14.433	1.20	20.50	0.30
2.317	0.30	8.383	13.82	14.450	1.20	20.52	0.30
2.333	0.30	8.400	13.82	14.467	1.20	20.53	0.30
2.350	0.30	8.417	13.82	14.483	1.20	20.55	0.30
2.367	0.30	8.433	13.82	14.500	1.20	20.57	0.30
2.383	0.30	8.450	13.82	14.517	1.20	20.58	0.30
2.400	0.30	8.467	13.82	14.533	1.20	20.60	0.30
2.417	0.30	8.483	13.82	14.550	1.20	20.62	0.30
2.433	0.30	8.500	13.82	14.567	1.20	20.63	0.30
2.450	0.30	8.517	13.82	14.583	1.20	20.65	0.30
2.467	0.30	8.533	13.82	14.600	1.20	20.67	0.30
2.483	0.30	8.550	13.82	14.617	1.20	20.68	0.30
2.500	0.30	8.567	13.82	14.633	1.20	20.70	0.30
2.517	0.30	8.583	13.82	14.650	1.20	20.72	0.30
2.533	0.30	8.600	13.82	14.667	1.20	20.73	0.30
2.550	0.30	8.617	13.82	14.683	1.20	20.75	0.30
2.567	0.30	8.633	13.82	14.700	1.20	20.77	0.30
2.583	0.30	8.650	13.82	14.717	1.20	20.78	0.30
2.600	0.30	8.667	13.82	14.733	1.20	20.80	0.30
2.617	0.30	8.683	13.82	14.750	1.20	20.82	0.30
2.633	0.30	8.700	13.82	14.767	1.20	20.83	0.30
2.650	0.30	8.717	13.82	14.783	1.20	20.85	0.30
2.667	0.30	8.733	13.82	14.800	1.20	20.87	0.30
2.683	0.30	8.750	13.82	14.817	1.20	20.88	0.30
2.700	0.30	8.767	13.82	14.833	1.20	20.90	0.30
2.717	0.30	8.783	13.82	14.850	1.20	20.92	0.30
2.733	0.30	8.800	13.82	14.867	1.20	20.93	0.30
2.750	0.30	8.817	13.82	14.883	1.20	20.95	0.30
2.767	0.30	8.833	13.82	14.900	1.20	20.97	0.30
2.783	0.30	8.850	13.82	14.917	1.20	20.98	0.30
2.800	0.30	8.867	13.82	14.933	1.20	21.00	0.30
2.817	0.30	8.883	13.82	14.950	1.20	21.02	0.30
2.833	0.30	8.900	13.82	14.967	1.20	21.03	0.30
2.850	0.30	8.917	13.82	14.983	1.20	21.05	0.30
2.867	0.30	8.933	13.82	15.000	1.20	21.07	0.30
2.883	0.30	8.950	13.82	15.017	1.20	21.08	0.30
2.900	0.30	8.967	13.82	15.033	1.20	21.10	0.30
2.917	0.30	8.983	13.82	15.050	1.20	21.12	0.30
2.933	0.30	9.000	13.82	15.067	1.20	21.13	0.30
2.950	0.30	9.017	13.82	15.083	1.20	21.15	0.30
2.967	0.30	9.033	13.82	15.100	1.20	21.17	0.30
2.983	0.30	9.050	13.82	15.117	1.20	21.18	0.30
3.000	0.30	9.067	13.82	15.133	1.20	21.20	0.30
3.017	0.30	9.083	13.82	15.150	1.20	21.22	0.30
3.033	0.30	9.100	13.82	15.167	1.20	21.23	0.30
3.050	0.30	9.117	13.82	15.183	1.20	21.25	0.30
3.067	0.30	9.133	13.82	15.200	1.20	21.27	0.30
3.083	0.30	9.150	13.82	15.217	1.20	21.28	0.30
3.100	0.30	9.167	13.82	15.233	1.20	21.30	0.30
3.117	0.30	9.183	13.82	15.250	1.20	21.32	0.30
3.133	0.30	9.200	13.82	15.267	1.20	21.33	0.30
3.150	0.30	9.217	13.82	15.283	1.20	21.35	0.30
3.167	0.30	9.233	13.82	15.300	1.20	21.37	0.30
3.183	0.30	9.250	13.82	15.317	1.20	21.38	0.30
3.200	0.30	9.267	13.82	15.333	1.20	21.40	0.30
3.217	0.30	9.283	13.82	15.350	1.20	21.42	0.30
3.233	0.30	9.300	13.82	15.367	1.20	21.43	0.30
3.250	0.30	9.317	13.82	15.383	1.20	21.45	0.30
3.267	0.30	9.333	13.82	15.400	1.20	21.47	0.30
3.283	0.30	9.350	13.82	15.417	1.20	21.48	0.30
3.300	0.30	9.367	13.82	15.433	1.20	21.50	0.30
3.317	0.30	9.383	13.82	15.450	1.20	21.52	0.30
3.333	0.30	9.400	13.82	15.467	1.20	21.53	0.30
3.350	0.30	9.417	13.82	15.483	1.20	21.55	0.30
3.367	0.30	9.433	13.82	15.500	1.20	21.57	0.30
3.383	0.30	9.450	13.82	15.517	1.20	21.58	0.30
3.400	0.30	9.467	13.82	15.533	1.20	21.60	0.30
3.417	0.30	9.483	13.82	15.550	1.20	21.62	0.30

3.433	0.30	9.500	13.82	15.567	1.20	21.63	0.30
3.450	0.30	9.517	13.82	15.583	1.20	21.65	0.30
3.467	0.30	9.533	13.82	15.600	1.20	21.67	0.30
3.483	0.30	9.550	13.82	15.617	1.20	21.68	0.30
3.500	0.30	9.567	13.82	15.633	1.20	21.70	0.30
3.517	0.30	9.583	13.82	15.650	1.20	21.72	0.30
3.533	0.30	9.600	13.82	15.667	1.20	21.73	0.30
3.550	0.30	9.617	13.82	15.683	1.20	21.75	0.30
3.567	0.30	9.633	13.82	15.700	1.20	21.77	0.30
3.583	0.30	9.650	13.82	15.717	1.20	21.78	0.30
3.600	0.30	9.667	13.82	15.733	1.20	21.80	0.30
3.617	0.30	9.683	13.82	15.750	1.20	21.82	0.30
3.633	0.30	9.700	13.82	15.767	1.20	21.83	0.30
3.650	0.30	9.717	13.82	15.783	1.20	21.85	0.30
3.667	0.30	9.733	13.82	15.800	1.20	21.87	0.30
3.683	0.30	9.750	13.82	15.817	1.20	21.88	0.30
3.700	0.30	9.767	13.82	15.833	1.20	21.90	0.30
3.717	0.30	9.783	13.82	15.850	1.20	21.92	0.30
3.733	0.30	9.800	13.82	15.867	1.20	21.93	0.30
3.750	0.30	9.817	13.82	15.883	1.20	21.95	0.30
3.767	0.30	9.833	13.82	15.900	1.20	21.97	0.30
3.783	0.30	9.850	13.82	15.917	1.20	21.98	0.30
3.800	0.30	9.867	13.82	15.933	1.20	22.00	0.30
3.817	0.30	9.883	13.82	15.950	1.20	22.02	0.30
3.833	0.30	9.900	13.82	15.967	1.20	22.03	0.30
3.850	0.30	9.917	13.82	15.983	1.20	22.05	0.30
3.867	0.30	9.933	13.82	16.000	1.20	22.07	0.30
3.883	0.30	9.950	13.82	16.017	1.20	22.08	0.30
3.900	0.30	9.967	13.82	16.033	1.20	22.10	0.30
3.917	0.30	9.983	13.82	16.050	1.20	22.12	0.30
3.933	0.30	10.000	13.82	16.067	1.20	22.13	0.30
3.950	0.30	10.017	13.82	16.083	1.20	22.15	0.30
3.967	0.30	10.033	13.82	16.100	1.20	22.17	0.30
3.983	0.30	10.050	13.82	16.117	1.20	22.18	0.30
4.000	0.30	10.067	13.82	16.133	1.20	22.20	0.30
4.017	0.30	10.083	13.82	16.150	1.20	22.22	0.30
4.033	0.30	10.100	13.82	16.167	1.20	22.23	0.30
4.050	0.30	10.117	13.82	16.183	1.20	22.25	0.30
4.067	0.30	10.133	13.82	16.200	1.20	22.27	0.30
4.083	0.30	10.150	13.82	16.217	1.20	22.28	0.30
4.100	0.30	10.167	13.82	16.233	1.20	22.30	0.30
4.117	0.30	10.183	13.82	16.250	1.20	22.32	0.30
4.133	0.30	10.200	13.82	16.267	0.60	22.33	0.30
4.150	0.30	10.217	13.82	16.283	0.60	22.35	0.30
4.167	0.30	10.233	13.82	16.300	0.60	22.37	0.30
4.183	0.30	10.250	13.81	16.317	0.60	22.38	0.30
4.200	0.30	10.267	3.91	16.333	0.60	22.40	0.30
4.217	0.30	10.283	3.91	16.350	0.60	22.42	0.30
4.233	0.30	10.300	3.91	16.367	0.60	22.43	0.30
4.250	0.30	10.317	3.91	16.383	0.60	22.45	0.30
4.267	1.80	10.333	3.91	16.400	0.60	22.47	0.30
4.283	1.80	10.350	3.91	16.417	0.60	22.48	0.30
4.300	1.80	10.367	3.91	16.433	0.60	22.50	0.30
4.317	1.80	10.383	3.91	16.450	0.60	22.52	0.30
4.333	1.80	10.400	3.91	16.467	0.60	22.53	0.30
4.350	1.80	10.417	3.91	16.483	0.60	22.55	0.30
4.367	1.80	10.433	3.91	16.500	0.60	22.57	0.30
4.383	1.80	10.450	3.91	16.517	0.60	22.58	0.30
4.400	1.80	10.467	3.91	16.533	0.60	22.60	0.30
4.417	1.80	10.483	3.91	16.550	0.60	22.62	0.30
4.433	1.80	10.500	3.91	16.567	0.60	22.63	0.30
4.450	1.80	10.517	3.91	16.583	0.60	22.65	0.30
4.467	1.80	10.533	3.91	16.600	0.60	22.67	0.30
4.483	1.80	10.550	3.91	16.617	0.60	22.68	0.30
4.500	1.80	10.567	3.91	16.633	0.60	22.70	0.30
4.517	1.80	10.583	3.91	16.650	0.60	22.72	0.30
4.533	1.80	10.600	3.91	16.667	0.60	22.73	0.30
4.550	1.80	10.617	3.91	16.683	0.60	22.75	0.30
4.567	1.80	10.633	3.91	16.700	0.60	22.77	0.30
4.583	1.80	10.650	3.91	16.717	0.60	22.78	0.30
4.600	1.80	10.667	3.91	16.733	0.60	22.80	0.30
4.617	1.80	10.683	3.91	16.750	0.60	22.82	0.30
4.633	1.80	10.700	3.91	16.767	0.60	22.83	0.30
4.650	1.80	10.717	3.91	16.783	0.60	22.85	0.30
4.667	1.80	10.733	3.91	16.800	0.60	22.87	0.30
4.683	1.80	10.750	3.91	16.817	0.60	22.88	0.30
4.700	1.80	10.767	3.91	16.833	0.60	22.90	0.30
4.717	1.80	10.783	3.91	16.850	0.60	22.92	0.30
4.733	1.80	10.800	3.91	16.867	0.60	22.93	0.30
4.750	1.80	10.817	3.91	16.883	0.60	22.95	0.30
4.767	1.80	10.833	3.91	16.900	0.60	22.97	0.30
4.783	1.80	10.850	3.91	16.917	0.60	22.98	0.30
4.800	1.80	10.867	3.91	16.933	0.60	23.00	0.30
4.817	1.80	10.883	3.91	16.950	0.60	23.02	0.30
4.833	1.80	10.900	3.91	16.967	0.60	23.03	0.30
4.850	1.80	10.917	3.91	16.983	0.60	23.05	0.30
4.867	1.80	10.933	3.91	17.000	0.60	23.07	0.30
4.883	1.80	10.950	3.91	17.017	0.60	23.08	0.30
4.900	1.80	10.967	3.91	17.033	0.60	23.10	0.30
4.917	1.80	10.983	3.91	17.050	0.60	23.12	0.30
4.933	1.80	11.000	3.91	17.067	0.60	23.13	0.30
4.950	1.80	11.017	3.91	17.083	0.60	23.15	0.30
4.967	1.80	11.033	3.91	17.100	0.60	23.17	0.30
4.983	1.80	11.050	3.91	17.117	0.60	23.18	0.30
5.000	1.80	11.067	3.91	17.133	0.60	23.20	0.30
5.017	1.80	11.083	3.91	17.150	0.60	23.22	0.30
5.033	1.80	11.100	3.91	17.167	0.60	23.23	0.30
5.050	1.80	11.117	3.91	17.183	0.60	23.25	0.30
5.067	1.80	11.133	3.91	17.200	0.60	23.27	0.30
5.083	1.80	11.150	3.91	17.217	0.60	23.28	0.30
5.100	1.80	11.167	3.91	17.233	0.60	23.30	0.30
5.117	1.80	11.183	3.91	17.250	0.60	23.32	0.30
5.133	1.80	11.200	3.91	17.267	0.60	23.33	0.30
5.150	1.80	11.217	3.91	17.283	0.60	23.35	0.30
5.167	1.80	11.233	3.91	17.300	0.60	23.37	0.30
5.183	1.80	11.250	3.91	17.317	0.60	23.38	0.30
5.200	1.80	11.267	3.91	17.333	0.60	23.40	0.30
5.217	1.80	11.283	3.91	17.350	0.60	23.42	0.30
5.233	1.80	11.300	3.91	17.367	0.60	23.43	0.30
5.250	1.80	11.317	3.91	17.383	0.60	23.45	0.30
5.267	1.80	11.333	3.91	17.400	0.60	23.47	0.30
5.283	1.80	11.350	3.91	17.417	0.60	23.48	0.30
5.300	1.80	11.367	3.91	17.433	0.60	23.50	0.30
5.317	1.80	11.383	3.91	17.450	0.60	23.52	0.30
5.333	1.80	11.400	3.91	17.467	0.60	23.53	0.30
5.350	1.80	11.417	3.91	17.483	0.60	23.55	0.30
5.367	1.80	11.433	3.91	17.500	0.60	23.57	0.30
5.383	1.80	11.450	3.91	17.517	0.60	23.58	0.30
5.400	1.80	11.467	3.91	17.533	0.60	23.60	0.30
5.417	1.80	11.483	3.91	17.550	0.60	23.62	0.30
5.433	1.80	11.500	3.91	17.567	0.60	23.63	0.30
5.450	1.80	11.517	3.91	17.583	0.60	23.65	0.30
5.467	1.80	11.533	3.91	17.600	0.60	23.67	0.30
5.483	1.80	11.550	3.91	17.617	0.60	23.68	0.30
5.500	1.80	11.567	3.91	17.633	0.60	23.70	0.30
5.517	1.80	11.583	3.91	17.650	0.60	23.72	0.30
5.533	1.80	11.600	3.91	17.667	0.60	23.73	0.30
5.550	1.80	11.617	3.91	17.683	0.60	23.75	0.30
5.567	1.80	11.633	3.91	17.700	0.60	23.77	0.30
5.583	1.80	11.650	3.91	17.717	0.60	23.78	0.30
5.600	1.80	11.667	3.91	17.733	0.60	23.80	0.30
5.617	1.80	11.683	3.91	17.750	0.60	23.82	0.30
5.633	1.80	11.700	3.91	17.767	0.60	23.83	0.30
5.650	1.80	11.717	3.91	17.783	0.60	23.85	0.30
5.667	1.80	11.733	3.91	17.800	0.60	23.87	0.30
5.683	1.80	11.750	3.91	17.817	0.60	23.88	0.30
5.700	1.80	11.767	3.91	17.833	0.60	23.90	0.30
5.717	1.80	11.783	3.91	17.850	0.60	23.92	0.30
5.733	1.80	11.800	3.91	17.867	0.60	23.93	0.30
5.750	1.80	11.817	3.91	17.883	0.60	23.95	0.30
5.767	1.80	11.833	3.91	17.900	0.60	23.97	0.30
5.783	1.80	11.850	3.91	17.917	0.60	23.98	0.30
5.800	1.80	11.867	3.91	17.933	0.60	24.00	0.30
5.817	1.80	11.883	3.91	17.950	0.60	24.02	0.30
5.833	1.80	11.900	3.91	17.967	0.60	24.03	0.30
5.850	1.80	11.917	3.91	17.983	0.60	24.05	0.30
5.867	1.80	11.933	3.91	18.000	0.60	24.07	0.30
5.883	1.80	11.950	3.91	18.017	0.60	24.08	0.30
5.900	1.80	11.967	3.91	18.033	0.60	24.10	0.30
5.917	1.80	11.983	3.91	18.050	0.60	24.12	0.30
5.933	1.80	12.000	3.91	18.067	0.60	24.13	0.30
5.950	1.80	12.017	3.91	18.083	0.60	24.15	0.30

5.967	1.80	12.033	3.91	18.100	0.60	24.17	0.30
5.983	1.80	12.050	3.91	18.117	0.60	24.18	0.30
6.000	1.80	12.067	3.91	18.133	0.60	24.20	0.30
6.017	1.80	12.083	3.91	18.150	0.60	24.22	0.30
6.033	1.80	12.100	3.91	18.167	0.60	24.23	0.30
6.050	1.80	12.117	3.91	18.183	0.60	24.25	0.30
6.067	1.80	12.133	3.91	18.200	0.60		

Max.Eff.Inten.(mm/hr)=	13.82	9.96	
over (min)	6.00	11.00	
Storage Coeff. (min)=	6.33 (ii)	10.09 (ii)	
Unit Hyd. Tpeak (min)=	6.00	11.00	
Unit Hyd. peak (cms)=	0.18	0.11	
			TOTALS
PEAK FLOW (cms)=	0.08	0.00	0.085 (iii)
TIME TO PEAK (hrs)=	9.73	10.25	10.25
RUNOFF VOLUME (mm)=	59.07	33.18	58.82
TOTAL RAINFALL (mm)=	60.08	60.08	60.08
RUNOFF COEFFICIENT =	0.98	0.55	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7642)| IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0470	0.1250
	0.0197	0.0630	0.0551	0.1410
	0.0304	0.0850	0.0620	0.1580
	0.0373	0.1020	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7641)	2.210	0.085	10.25	58.82
OUTFLOW: ID= 1 (7642)	2.210	0.025	10.70	54.24

PEAK FLOW REDUCTION [Qout/Qin](%)= 30.08
TIME SHIFT OF PEAK FLOW (min)= 27.00
MAXIMUM STORAGE USED (ha.m.)= 0.0748

CALIB | STANDHYD (7643)| ID= 1 DT= 1.0 min	Area (ha)= 2.02 Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00		
		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.00	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	116.05	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	1.80	12.150	3.91	18.22	0.60
0.033	0.00	6.100	1.80	12.167	3.91	18.23	0.60
0.050	0.00	6.117	1.80	12.183	3.91	18.25	0.60
0.067	0.00	6.133	1.80	12.200	3.91	18.27	0.30
0.083	0.00	6.150	1.80	12.217	3.91	18.28	0.30
0.100	0.00	6.167	1.80	12.233	3.91	18.30	0.30
0.117	0.00	6.183	1.80	12.250	3.91	18.32	0.30
0.133	0.00	6.200	1.80	12.267	2.10	18.33	0.30
0.150	0.00	6.217	1.80	12.283	2.10	18.35	0.30
0.167	0.00	6.233	1.80	12.300	2.10	18.37	0.30
0.183	0.00	6.250	1.81	12.317	2.10	18.38	0.30
0.200	0.00	6.267	5.11	12.333	2.10	18.40	0.30
0.217	0.00	6.283	5.11	12.350	2.10	18.42	0.30
0.233	0.00	6.300	5.11	12.367	2.10	18.43	0.30
0.250	0.00	6.317	5.11	12.383	2.10	18.45	0.30
0.267	0.30	6.333	5.11	12.400	2.10	18.47	0.30
0.283	0.30	6.350	5.11	12.417	2.10	18.48	0.30
0.300	0.30	6.367	5.11	12.433	2.10	18.50	0.30
0.317	0.30	6.383	5.11	12.450	2.10	18.52	0.30
0.333	0.30	6.400	5.11	12.467	2.10	18.53	0.30
0.350	0.30	6.417	5.11	12.483	2.10	18.55	0.30
0.367	0.30	6.433	5.11	12.500	2.10	18.57	0.30
0.383	0.30	6.450	5.11	12.517	2.10	18.58	0.30
0.400	0.30	6.467	5.11	12.533	2.10	18.60	0.30
0.417	0.30	6.483	5.11	12.550	2.10	18.62	0.30
0.433	0.30	6.500	5.11	12.567	2.10	18.63	0.30
0.450	0.30	6.517	5.11	12.583	2.10	18.65	0.30
0.467	0.30	6.533	5.11	12.600	2.10	18.67	0.30
0.483	0.30	6.550	5.11	12.617	2.10	18.68	0.30
0.500	0.30	6.567	5.11	12.633	2.10	18.70	0.30
0.517	0.30	6.583	5.11	12.650	2.10	18.72	0.30
0.533	0.30	6.600	5.11	12.667	2.10	18.73	0.30
0.550	0.30	6.617	5.11	12.683	2.10	18.75	0.30
0.567	0.30	6.633	5.11	12.700	2.10	18.77	0.30
0.583	0.30	6.650	5.11	12.717	2.10	18.78	0.30
0.600	0.30	6.667	5.11	12.733	2.10	18.80	0.30
0.617	0.30	6.683	5.11	12.750	2.10	18.82	0.30
0.633	0.30	6.700	5.11	12.767	2.10	18.83	0.30
0.650	0.30	6.717	5.11	12.783	2.10	18.85	0.30
0.667	0.30	6.733	5.11	12.800	2.10	18.87	0.30
0.683	0.30	6.750	5.11	12.817	2.10	18.88	0.30
0.700	0.30	6.767	5.11	12.833	2.10	18.90	0.30
0.717	0.30	6.783	5.11	12.850	2.10	18.92	0.30
0.733	0.30	6.800	5.11	12.867	2.10	18.93	0.30
0.750	0.30	6.817	5.11	12.883	2.10	18.95	0.30
0.767	0.30	6.833	5.11	12.900	2.10	18.97	0.30
0.783	0.30	6.850	5.11	12.917	2.10	18.98	0.30
0.800	0.30	6.867	5.11	12.933	2.10	19.00	0.30
0.817	0.30	6.883	5.11	12.950	2.10	19.02	0.30
0.833	0.30	6.900	5.11	12.967	2.10	19.03	0.30
0.850	0.30	6.917	5.11	12.983	2.10	19.05	0.30
0.867	0.30	6.933	5.11	13.000	2.10	19.07	0.30
0.883	0.30	6.950	5.11	13.017	2.10	19.08	0.30
0.900	0.30	6.967	5.11	13.033	2.10	19.10	0.30
0.917	0.30	6.983	5.11	13.050	2.10	19.12	0.30
0.933	0.30	7.000	5.11	13.067	2.10	19.13	0.30
0.950	0.30	7.017	5.11	13.083	2.10	19.15	0.30
0.967	0.30	7.033	5.11	13.100	2.10	19.17	0.30
0.983	0.30	7.050	5.11	13.117	2.10	19.18	0.30
1.000	0.30	7.067	5.11	13.133	2.10	19.20	0.30
1.017	0.30	7.083	5.11	13.150	2.10	19.22	0.30
1.033	0.30	7.100	5.11	13.167	2.10	19.23	0.30
1.050	0.30	7.117	5.11	13.183	2.10	19.25	0.30
1.067	0.30	7.133	5.11	13.200	2.10	19.27	0.30
1.083	0.30	7.150	5.11	13.217	2.10	19.28	0.30
1.100	0.30	7.167	5.11	13.233	2.10	19.30	0.30
1.117	0.30	7.183	5.11	13.250	2.10	19.32	0.30
1.133	0.30	7.200	5.11	13.267	2.10	19.33	0.30
1.150	0.30	7.217	5.11	13.283	2.10	19.35	0.30
1.167	0.30	7.233	5.11	13.300	2.10	19.37	0.30
1.183	0.30	7.250	5.11	13.317	2.10	19.38	0.30
1.200	0.30	7.267	5.11	13.333	2.10	19.40	0.30
1.217	0.30	7.283	5.11	13.350	2.10	19.42	0.30
1.233	0.30	7.300	5.11	13.367	2.10	19.43	0.30
1.250	0.30	7.317	5.11	13.383	2.10	19.45	0.30
1.267	0.30	7.333	5.11	13.400	2.10	19.47	0.30
1.283	0.30	7.350	5.11	13.417	2.10	19.48	0.30
1.300	0.30	7.367	5.11	13.433	2.10	19.50	0.30
1.317	0.30	7.383	5.11	13.450	2.10	19.52	0.30
1.333	0.30	7.400	5.11	13.467	2.10	19.53	0.30
1.350	0.30	7.417	5.11	13.483	2.10	19.55	0.30
1.367	0.30	7.433	5.11	13.500	2.10	19.57	0.30
1.383	0.30	7.450	5.11	13.517	2.10	19.58	0.30
1.400	0.30	7.467	5.11	13.533	2.10	19.60	0.30
1.417	0.30	7.483	5.11	13.550	2.10	19.62	0.30
1.433	0.30	7.500	5.11	13.567	2.10	19.63	0.30

1.450	0.30	7.517	5.11	13.583	2.10	19.65	0.30		2.717	0.30	8.783	13.82	14.850	1.20	20.92	0.30
1.467	0.30	7.533	5.11	13.600	2.10	19.67	0.30		2.733	0.30	8.800	13.82	14.867	1.20	20.93	0.30
1.483	0.30	7.550	5.11	13.617	2.10	19.68	0.30		2.750	0.30	8.817	13.82	14.883	1.20	20.95	0.30
1.500	0.30	7.567	5.11	13.633	2.10	19.70	0.30		2.767	0.30	8.833	13.82	14.900	1.20	20.97	0.30
1.517	0.30	7.583	5.11	13.650	2.10	19.72	0.30		2.783	0.30	8.850	13.82	14.917	1.20	20.98	0.30
1.533	0.30	7.600	5.11	13.667	2.10	19.73	0.30		2.800	0.30	8.867	13.82	14.933	1.20	21.00	0.30
1.550	0.30	7.617	5.11	13.683	2.10	19.75	0.30		2.817	0.30	8.883	13.82	14.950	1.20	21.02	0.30
1.567	0.30	7.633	5.11	13.700	2.10	19.77	0.30		2.833	0.30	8.900	13.82	14.967	1.20	21.03	0.30
1.583	0.30	7.650	5.11	13.717	2.10	19.78	0.30		2.850	0.30	8.917	13.82	14.983	1.20	21.05	0.30
1.600	0.30	7.667	5.11	13.733	2.10	19.80	0.30		2.867	0.30	8.933	13.82	15.000	1.20	21.07	0.30
1.617	0.30	7.683	5.11	13.750	2.10	19.82	0.30		2.883	0.30	8.950	13.82	15.017	1.20	21.08	0.30
1.633	0.30	7.700	5.11	13.767	2.10	19.83	0.30		2.900	0.30	8.967	13.82	15.033	1.20	21.10	0.30
1.650	0.30	7.717	5.11	13.783	2.10	19.85	0.30		2.917	0.30	8.983	13.82	15.050	1.20	21.12	0.30
1.667	0.30	7.733	5.11	13.800	2.10	19.87	0.30		2.933	0.30	9.000	13.82	15.067	1.20	21.13	0.30
1.683	0.30	7.750	5.11	13.817	2.10	19.88	0.30		2.950	0.30	9.017	13.82	15.083	1.20	21.15	0.30
1.700	0.30	7.767	5.11	13.833	2.10	19.90	0.30		2.967	0.30	9.033	13.82	15.100	1.20	21.17	0.30
1.717	0.30	7.783	5.11	13.850	2.10	19.92	0.30		2.983	0.30	9.050	13.82	15.117	1.20	21.18	0.30
1.733	0.30	7.800	5.11	13.867	2.10	19.93	0.30		3.000	0.30	9.067	13.82	15.133	1.20	21.20	0.30
1.750	0.30	7.817	5.11	13.883	2.10	19.95	0.30		3.017	0.30	9.083	13.82	15.150	1.20	21.22	0.30
1.767	0.30	7.833	5.11	13.900	2.10	19.97	0.30		3.033	0.30	9.100	13.82	15.167	1.20	21.23	0.30
1.783	0.30	7.850	5.11	13.917	2.10	19.98	0.30		3.050	0.30	9.117	13.82	15.183	1.20	21.25	0.30
1.800	0.30	7.867	5.11	13.933	2.10	20.00	0.30		3.067	0.30	9.133	13.82	15.200	1.20	21.27	0.30
1.817	0.30	7.883	5.11	13.950	2.10	20.02	0.30		3.083	0.30	9.150	13.82	15.217	1.20	21.28	0.30
1.833	0.30	7.900	5.11	13.967	2.10	20.03	0.30		3.100	0.30	9.167	13.82	15.233	1.20	21.30	0.30
1.850	0.30	7.917	5.11	13.983	2.10	20.05	0.30		3.117	0.30	9.183	13.82	15.250	1.20	21.32	0.30
1.867	0.30	7.933	5.11	14.000	2.10	20.07	0.30		3.133	0.30	9.200	13.82	15.267	1.20	21.33	0.30
1.883	0.30	7.950	5.11	14.017	2.10	20.08	0.30		3.150	0.30	9.217	13.82	15.283	1.20	21.35	0.30
1.900	0.30	7.967	5.11	14.033	2.10	20.10	0.30		3.167	0.30	9.233	13.82	15.300	1.20	21.37	0.30
1.917	0.30	7.983	5.11	14.050	2.10	20.12	0.30		3.183	0.30	9.250	13.82	15.317	1.20	21.38	0.30
1.933	0.30	8.000	5.11	14.067	2.10	20.13	0.30		3.200	0.30	9.267	13.82	15.333	1.20	21.40	0.30
1.950	0.30	8.017	5.11	14.083	2.10	20.15	0.30		3.217	0.30	9.283	13.82	15.350	1.20	21.42	0.30
1.967	0.30	8.033	5.11	14.100	2.10	20.17	0.30		3.233	0.30	9.300	13.82	15.367	1.20	21.43	0.30
1.983	0.30	8.050	5.11	14.117	2.10	20.18	0.30		3.250	0.30	9.317	13.82	15.383	1.20	21.45	0.30
2.000	0.30	8.067	5.11	14.133	2.10	20.20	0.30		3.267	0.30	9.333	13.82	15.400	1.20	21.47	0.30
2.017	0.30	8.083	5.11	14.150	2.10	20.22	0.30		3.283	0.30	9.350	13.82	15.417	1.20	21.48	0.30
2.033	0.30	8.100	5.11	14.167	2.10	20.23	0.30		3.300	0.30	9.367	13.82	15.433	1.20	21.50	0.30
2.050	0.30	8.117	5.11	14.183	2.10	20.25	0.30		3.317	0.30	9.383	13.82	15.450	1.20	21.52	0.30
2.067	0.30	8.133	5.11	14.200	2.10	20.27	0.30		3.333	0.30	9.400	13.82	15.467	1.20	21.53	0.30
2.083	0.30	8.150	5.11	14.217	2.10	20.28	0.30		3.350	0.30	9.417	13.82	15.483	1.20	21.55	0.30
2.100	0.30	8.167	5.11	14.233	2.10	20.30	0.30		3.367	0.30	9.433	13.82	15.500	1.20	21.57	0.30
2.117	0.30	8.183	5.11	14.250	2.10	20.32	0.30		3.383	0.30	9.450	13.82	15.517	1.20	21.58	0.30
2.133	0.30	8.200	5.11	14.267	1.20	20.33	0.30		3.400	0.30	9.467	13.82	15.533	1.20	21.60	0.30
2.150	0.30	8.217	5.11	14.283	1.20	20.35	0.30		3.417	0.30	9.483	13.82	15.550	1.20	21.62	0.30
2.167	0.30	8.233	5.11	14.300	1.20	20.37	0.30		3.433	0.30	9.500	13.82	15.567	1.20	21.63	0.30
2.183	0.30	8.250	5.13	14.317	1.20	20.38	0.30		3.450	0.30	9.517	13.82	15.583	1.20	21.65	0.30
2.200	0.30	8.267	13.82	14.333	1.20	20.40	0.30		3.467	0.30	9.533	13.82	15.600	1.20	21.67	0.30
2.217	0.30	8.283	13.82	14.350	1.20	20.42	0.30		3.483	0.30	9.550	13.82	15.617	1.20	21.68	0.30
2.233	0.30	8.300	13.82	14.367	1.20	20.43	0.30		3.500	0.30	9.567	13.82	15.633	1.20	21.70	0.30
2.250	0.30	8.317	13.82	14.383	1.20	20.45	0.30		3.517	0.30	9.583	13.82	15.650	1.20	21.72	0.30
2.267	0.30	8.333	13.82	14.400	1.20	20.47	0.30		3.533	0.30	9.600	13.82	15.667	1.20	21.73	0.30
2.283	0.30	8.350	13.82	14.417	1.20	20.48	0.30		3.550	0.30	9.617	13.82	15.683	1.20	21.75	0.30
2.300	0.30	8.367	13.82	14.433	1.20	20.50	0.30		3.567	0.30	9.633	13.82	15.700	1.20	21.77	0.30
2.317	0.30	8.383	13.82	14.450	1.20	20.52	0.30		3.583	0.30	9.650	13.82	15.717	1.20	21.78	0.30
2.333	0.30	8.400	13.82	14.467	1.20	20.53	0.30		3.600	0.30	9.667	13.82	15.733	1.20	21.80	0.30
2.350	0.30	8.417	13.82	14.483	1.20	20.55	0.30		3.617	0.30	9.683	13.82	15.750	1.20	21.82	0.30
2.367	0.30	8.433	13.82	14.500	1.20	20.57	0.30		3.633	0.30	9.700	13.82	15.767	1.20	21.83	0.30
2.383	0.30	8.450	13.82	14.517	1.20	20.58	0.30		3.650	0.30	9.717	13.82	15.783	1.20	21.85	0.30
2.400	0.30	8.467	13.82	14.533	1.20	20.60	0.30		3.667	0.30	9.733	13.82	15.800	1.20	21.87	0.30
2.417	0.30	8.483	13.82	14.550	1.20	20.62	0.30		3.683	0.30	9.750	13.82	15.817	1.20	21.88	0.30
2.433	0.30	8.500	13.82	14.567	1.20	20.63	0.30		3.700	0.30	9.767	13.82	15.833	1.20	21.90	0.30
2.450	0.30	8.517	13.82	14.583	1.20	20.65	0.30		3.717	0.30	9.783	13.82	15.850	1.20	21.92	0.30
2.467	0.30	8.533	13.82	14.600	1.20	20.67	0.30		3.733	0.30	9.800	13.82	15.867	1.20	21.93	0.30
2.483	0.30	8.550	13.82	14.617	1.20	20.68	0.30		3.750	0.30	9.817	13.82	15.883	1.20	21.95	0.30
2.500	0.30	8.567	13.82	14.633	1.20	20.70	0.30		3.767	0.30	9.833	13.82	15.900	1.20	21.97	0.30
2.517	0.30	8.583	13.82	14.650	1.20	20.72	0.30		3.783	0.30	9.850	13.82	15.917	1.20	21.98	0.30
2.533	0.30	8.600	13.82	14.667	1.20	20.73	0.30		3.800	0.30	9.867	13.82	15.933	1.20	22.00	0.30
2.550	0.30	8.617	13.82	14.683	1.20	20.75	0.30		3.817	0.30	9.883	13.82	15.950	1.20	22.02	0.30
2.567	0.30	8.633	13.82	14.700	1.20	20.77	0.30		3.833	0.30	9.900	13.82	15.967	1.20	22.03	0.30
2.583	0.30	8.650	13.82	14.717	1.20	20.78	0.30		3.850	0.30	9.917	13.82	15.983	1.20	22.05	0.30
2.600	0.30	8.667	13.82	14.733	1.20	20.80	0.30		3.867	0.30	9.933	13.82	16.000	1.20	22.07	0.30
2.617	0.30	8.683	13.82	14.750	1.20	20.82	0.30		3.883	0.30	9.950	13.82	16.017	1.20	22.08	0.30
2.633	0.30	8.700	13.82	14.767	1.20	20.83	0.30		3.900	0.30	9.967	13.82	16.033	1.20	22.10	0.30
2.650	0.30	8.717	13.82	14.783	1.20	20.85	0.30		3.917	0.30	9.983	13.82	16.050	1.20	22.12	0.30
2.667	0.30	8.733	13.82	14.800	1.20	20.87	0.30		3.933	0.30	10.000	13.82	16.067	1.20	22.13	0.30
2.683	0.30	8.750	13.82	14.817	1.20	20.88	0.30		3.950	0.30	10.017	13.82	16.083	1.20	22.15	0.30
2.700	0.30	8.767	13.82	14.833	1.20	20.90	0.30		3.967	0.30	10.033	13.82	16.100	1.20	22.17	0.30

3.983	0.30	10.050	13.82	16.117	1.20	22.18	0.30
4.000	0.30	10.067	13.82	16.133	1.20	22.20	0.30
4.017	0.30	10.083	13.82	16.150	1.20	22.22	0.30
4.033	0.30	10.100	13.82	16.167	1.20	22.23	0.30
4.050	0.30	10.117	13.82	16.183	1.20	22.25	0.30
4.067	0.30	10.133	13.82	16.200	1.20	22.27	0.30
4.083	0.30	10.150	13.82	16.217	1.20	22.28	0.30
4.100	0.30	10.167	13.82	16.233	1.20	22.30	0.30
4.117	0.30	10.183	13.82	16.250	1.20	22.32	0.30
4.133	0.30	10.200	13.82	16.267	0.60	22.33	0.30
4.150	0.30	10.217	13.82	16.283	0.60	22.35	0.30
4.167	0.30	10.233	13.82	16.300	0.60	22.37	0.30
4.183	0.30	10.250	13.81	16.317	0.60	22.38	0.30
4.200	0.30	10.267	3.91	16.333	0.60	22.40	0.30
4.217	0.30	10.283	3.91	16.350	0.60	22.42	0.30
4.233	0.30	10.300	3.91	16.367	0.60	22.43	0.30
4.250	0.30	10.317	3.91	16.383	0.60	22.45	0.30
4.267	1.80	10.333	3.91	16.400	0.60	22.47	0.30
4.283	1.80	10.350	3.91	16.417	0.60	22.48	0.30
4.300	1.80	10.367	3.91	16.433	0.60	22.50	0.30
4.317	1.80	10.383	3.91	16.450	0.60	22.52	0.30
4.333	1.80	10.400	3.91	16.467	0.60	22.53	0.30
4.350	1.80	10.417	3.91	16.483	0.60	22.55	0.30
4.367	1.80	10.433	3.91	16.500	0.60	22.57	0.30
4.383	1.80	10.450	3.91	16.517	0.60	22.58	0.30
4.400	1.80	10.467	3.91	16.533	0.60	22.60	0.30
4.417	1.80	10.483	3.91	16.550	0.60	22.62	0.30
4.433	1.80	10.500	3.91	16.567	0.60	22.63	0.30
4.450	1.80	10.517	3.91	16.583	0.60	22.65	0.30
4.467	1.80	10.533	3.91	16.600	0.60	22.67	0.30
4.483	1.80	10.550	3.91	16.617	0.60	22.68	0.30
4.500	1.80	10.567	3.91	16.633	0.60	22.70	0.30
4.517	1.80	10.583	3.91	16.650	0.60	22.72	0.30
4.533	1.80	10.600	3.91	16.667	0.60	22.73	0.30
4.550	1.80	10.617	3.91	16.683	0.60	22.75	0.30
4.567	1.80	10.633	3.91	16.700	0.60	22.77	0.30
4.583	1.80	10.650	3.91	16.717	0.60	22.78	0.30
4.600	1.80	10.667	3.91	16.733	0.60	22.80	0.30
4.617	1.80	10.683	3.91	16.750	0.60	22.82	0.30
4.633	1.80	10.700	3.91	16.767	0.60	22.83	0.30
4.650	1.80	10.717	3.91	16.783	0.60	22.85	0.30
4.667	1.80	10.733	3.91	16.800	0.60	22.87	0.30
4.683	1.80	10.750	3.91	16.817	0.60	22.88	0.30
4.700	1.80	10.767	3.91	16.833	0.60	22.90	0.30
4.717	1.80	10.783	3.91	16.850	0.60	22.92	0.30
4.733	1.80	10.800	3.91	16.867	0.60	22.93	0.30
4.750	1.80	10.817	3.91	16.883	0.60	22.95	0.30
4.767	1.80	10.833	3.91	16.900	0.60	22.97	0.30
4.783	1.80	10.850	3.91	16.917	0.60	22.98	0.30
4.800	1.80	10.867	3.91	16.933	0.60	23.00	0.30
4.817	1.80	10.883	3.91	16.950	0.60	23.02	0.30
4.833	1.80	10.900	3.91	16.967	0.60	23.03	0.30
4.850	1.80	10.917	3.91	16.983	0.60	23.05	0.30
4.867	1.80	10.933	3.91	17.000	0.60	23.07	0.30
4.883	1.80	10.950	3.91	17.017	0.60	23.08	0.30
4.900	1.80	10.967	3.91	17.033	0.60	23.10	0.30
4.917	1.80	10.983	3.91	17.050	0.60	23.12	0.30
4.933	1.80	11.000	3.91	17.067	0.60	23.13	0.30
4.950	1.80	11.017	3.91	17.083	0.60	23.15	0.30
4.967	1.80	11.033	3.91	17.100	0.60	23.17	0.30
4.983	1.80	11.050	3.91	17.117	0.60	23.18	0.30
5.000	1.80	11.067	3.91	17.133	0.60	23.20	0.30
5.017	1.80	11.083	3.91	17.150	0.60	23.22	0.30
5.033	1.80	11.100	3.91	17.167	0.60	23.23	0.30
5.050	1.80	11.117	3.91	17.183	0.60	23.25	0.30
5.067	1.80	11.133	3.91	17.200	0.60	23.27	0.30
5.083	1.80	11.150	3.91	17.217	0.60	23.28	0.30
5.100	1.80	11.167	3.91	17.233	0.60	23.30	0.30
5.117	1.80	11.183	3.91	17.250	0.60	23.32	0.30
5.133	1.80	11.200	3.91	17.267	0.60	23.33	0.30
5.150	1.80	11.217	3.91	17.283	0.60	23.35	0.30
5.167	1.80	11.233	3.91	17.300	0.60	23.37	0.30
5.183	1.80	11.250	3.91	17.317	0.60	23.38	0.30
5.200	1.80	11.267	3.91	17.333	0.60	23.40	0.30
5.217	1.80	11.283	3.91	17.350	0.60	23.42	0.30
5.233	1.80	11.300	3.91	17.367	0.60	23.43	0.30
5.250	1.80	11.317	3.91	17.383	0.60	23.45	0.30
5.267	1.80	11.333	3.91	17.400	0.60	23.47	0.30
5.283	1.80	11.350	3.91	17.417	0.60	23.48	0.30
5.300	1.80	11.367	3.91	17.433	0.60	23.50	0.30
5.317	1.80	11.383	3.91	17.450	0.60	23.52	0.30
5.333	1.80	11.400	3.91	17.467	0.60	23.53	0.30
5.350	1.80	11.417	3.91	17.483	0.60	23.55	0.30
5.367	1.80	11.433	3.91	17.500	0.60	23.57	0.30
5.383	1.80	11.450	3.91	17.517	0.60	23.58	0.30
5.400	1.80	11.467	3.91	17.533	0.60	23.60	0.30
5.417	1.80	11.483	3.91	17.550	0.60	23.62	0.30
5.433	1.80	11.500	3.91	17.567	0.60	23.63	0.30
5.450	1.80	11.517	3.91	17.583	0.60	23.65	0.30
5.467	1.80	11.533	3.91	17.600	0.60	23.67	0.30
5.483	1.80	11.550	3.91	17.617	0.60	23.68	0.30
5.500	1.80	11.567	3.91	17.633	0.60	23.70	0.30
5.517	1.80	11.583	3.91	17.650	0.60	23.72	0.30
5.533	1.80	11.600	3.91	17.667	0.60	23.73	0.30
5.550	1.80	11.617	3.91	17.683	0.60	23.75	0.30
5.567	1.80	11.633	3.91	17.700	0.60	23.77	0.30
5.583	1.80	11.650	3.91	17.717	0.60	23.78	0.30
5.600	1.80	11.667	3.91	17.733	0.60	23.80	0.30
5.617	1.80	11.683	3.91	17.750	0.60	23.82	0.30
5.633	1.80	11.700	3.91	17.767	0.60	23.83	0.30
5.650	1.80	11.717	3.91	17.783	0.60	23.85	0.30
5.667	1.80	11.733	3.91	17.800	0.60	23.87	0.30
5.683	1.80	11.750	3.91	17.817	0.60	23.88	0.30
5.700	1.80	11.767	3.91	17.833	0.60	23.90	0.30
5.717	1.80	11.783	3.91	17.850	0.60	23.92	0.30
5.733	1.80	11.800	3.91	17.867	0.60	23.93	0.30
5.750	1.80	11.817	3.91	17.883	0.60	23.95	0.30
5.767	1.80	11.833	3.91	17.900	0.60	23.97	0.30
5.783	1.80	11.850	3.91	17.917	0.60	23.98	0.30
5.800	1.80	11.867	3.91	17.933	0.60	24.00	0.30
5.817	1.80	11.883	3.91	17.950	0.60	24.02	0.30
5.833	1.80	11.900	3.91	17.967	0.60	24.03	0.30
5.850	1.80	11.917	3.91	17.983	0.60	24.05	0.30
5.867	1.80	11.933	3.91	18.000	0.60	24.07	0.30
5.883	1.80	11.950	3.91	18.017	0.60	24.08	0.30
5.900	1.80	11.967	3.91	18.033	0.60	24.10	0.30
5.917	1.80	11.983	3.91	18.050	0.60	24.12	0.30
5.933	1.80	12.000	3.91	18.067	0.60	24.13	0.30
5.950	1.80	12.017	3.91	18.083	0.60	24.15	0.30
5.967	1.80	12.033	3.91	18.100	0.60	24.17	0.30
5.983	1.80	12.050	3.91	18.117	0.60	24.18	0.30
6.000	1.80	12.067	3.91	18.133	0.60	24.20	0.30
6.017	1.80	12.083	3.91	18.150	0.60	24.22	0.30
6.033	1.80	12.100	3.91	18.167	0.60	24.23	0.30
6.050	1.80	12.117	3.91	18.183	0.60	24.25	0.30
6.067	1.80	12.133	3.91	18.200	0.60		

Max.Eff.Inten.(mm/hr)=	13.82	9.96	
over (min)	6.00	10.00	
Storage Coeff. (min)=	6.16 (ii)	9.92 (ii)	
Unit Hyd. Tpeak (min)=	6.00	10.00	
Unit Hyd. peak (cms)=	0.19	0.11	
			TOTALS
PEAK FLOW (cms)=	0.08	0.00	0.077 (iii)
TIME TO PEAK (hrs)=	9.73	10.25	10.25
RUNOFF VOLUME (mm)=	59.08	33.19	58.82
TOTAL RAINFALL (mm)=	60.08	60.08	60.08
RUNOFF COEFFICIENT =	0.98	0.55	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7644)|	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min |	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)

	0.0000	0.0000	|	0.0433	0.1140
	0.0182	0.0580	|	0.0507	0.1280
	0.0280	0.0775	|	0.0571	0.1440
	0.0343	0.0930	|	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (	7643)	2.020	0.077	10.25	58.82
OUTFLOW: ID= 1 (	7644)	2.020	0.023	10.67	54.28

PEAK FLOW REDUCTION [Qout/Qin](%)= 30.25
TIME SHIFT OF PEAK FLOW (min)= 25.00
MAXIMUM STORAGE USED (ha.m.)= 0.0683

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      V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
      V    V   I    SS     U   U   A A   L
       V  V    I     SS    U   U  AAAAA  L
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-a4eb17eaad57\7d21e3ec-5ce0-4b0c-99d1-2681182aacb3\s
Summary filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-a4eb17eaad57\7d21e3ec-5ce0-4b0c-99d1-2681182aacb3\s

DATE: 06/14/2024 TIME: 12:48:36

USER:

COMMENTS: _____

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  ************************************************
  ** SIMULATION : 8. 5yr 4hr 10min Chicago      **
  ************************************************
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CHICAGO STORM
Ptotal= 49.55 mm

IDF curve parameters: A=1593.000
B= 11.000
C= 0.879
used in: INTENSITY = A / (t + B)^C

Duration of storm = 4.00 hrs
Storm time step = 10.00 min
Time to peak ratio = 0.33

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	2.35	1.00	30.47	2.00	7.17	3.00	2.93
0.17	2.80	1.17	109.68	2.17	5.81	3.17	2.67
0.33	3.46	1.33	40.71	2.33	4.87	3.33	2.45
0.50	4.52	1.50	20.28	2.50	4.19	3.50	2.26
0.67	6.48	1.67	12.91	2.67	3.67	3.67	2.10
0.83	11.07	1.83	9.28	2.83	3.26	3.83	1.96

CALIB
STANDHYD (7567)
ID= 1 DT= 1.0 min

Area (ha)= 2.72
Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.69	0.03
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	134.66	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.35	1.017	30.47	2.017	7.17	3.02	2.93
0.033	2.35	1.033	30.47	2.033	7.17	3.03	2.93
0.050	2.35	1.050	30.47	2.050	7.17	3.05	2.93
0.067	2.35	1.067	30.47	2.067	7.17	3.07	2.93
0.083	2.35	1.083	30.47	2.083	7.17	3.08	2.93
0.100	2.35	1.100	30.47	2.100	7.17	3.10	2.93
0.117	2.35	1.117	30.47	2.117	7.17	3.12	2.93
0.133	2.35	1.133	30.47	2.133	7.17	3.13	2.93
0.150	2.35	1.150	30.47	2.150	7.17	3.15	2.93
0.167	2.35	1.167	30.47	2.167	7.17	3.17	2.93
0.183	2.80	1.183	109.68	2.183	5.81	3.18	2.67
0.200	2.80	1.200	109.68	2.200	5.81	3.20	2.67
0.217	2.80	1.217	109.68	2.217	5.81	3.22	2.67
0.233	2.80	1.233	109.68	2.233	5.81	3.23	2.67
0.250	2.80	1.250	109.68	2.250	5.81	3.25	2.67
0.267	2.80	1.267	109.68	2.267	5.81	3.27	2.67
0.283	2.80	1.283	109.68	2.283	5.81	3.28	2.67
0.300	2.80	1.300	109.68	2.300	5.81	3.30	2.67
0.317	2.80	1.317	109.68	2.317	5.81	3.32	2.67
0.333	2.80	1.333	109.68	2.333	5.81	3.33	2.67
0.350	3.46	1.350	40.71	2.350	4.87	3.35	2.45
0.367	3.46	1.367	40.71	2.367	4.87	3.37	2.45
0.383	3.46	1.383	40.71	2.383	4.87	3.38	2.45
0.400	3.46	1.400	40.71	2.400	4.87	3.40	2.45
0.417	3.46	1.417	40.71	2.417	4.87	3.42	2.45
0.433	3.46	1.433	40.71	2.433	4.87	3.43	2.45
0.450	3.46	1.450	40.71	2.450	4.87	3.45	2.45
0.467	3.46	1.467	40.71	2.467	4.87	3.47	2.45
0.483	3.46	1.483	40.71	2.483	4.87	3.48	2.45
0.500	3.46	1.500	40.71	2.500	4.87	3.50	2.45
0.517	4.52	1.517	20.28	2.517	4.19	3.52	2.26
0.533	4.52	1.533	20.28	2.533	4.19	3.53	2.26
0.550	4.52	1.550	20.28	2.550	4.19	3.55	2.26
0.567	4.52	1.567	20.28	2.567	4.19	3.57	2.26
0.583	4.52	1.583	20.28	2.583	4.19	3.58	2.26
0.600	4.52	1.600	20.28	2.600	4.19	3.60	2.26
0.617	4.52	1.617	20.28	2.617	4.19	3.62	2.26
0.633	4.52	1.633	20.28	2.633	4.19	3.63	2.26
0.650	4.52	1.650	20.28	2.650	4.19	3.65	2.26
0.667	4.52	1.667	20.28	2.667	4.19	3.67	2.26
0.683	6.48	1.683	12.91	2.683	3.67	3.68	2.10
0.700	6.48	1.700	12.91	2.700	3.67	3.70	2.10
0.717	6.48	1.717	12.91	2.717	3.67	3.72	2.10
0.733	6.48	1.733	12.91	2.733	3.67	3.73	2.10
0.750	6.48	1.750	12.91	2.750	3.67	3.75	2.10
0.767	6.48	1.767	12.91	2.767	3.67	3.77	2.10
0.783	6.48	1.783	12.91	2.783	3.67	3.78	2.10
0.800	6.48	1.800	12.91	2.800	3.67	3.80	2.10
0.817	6.48	1.817	12.91	2.817	3.67	3.82	2.10
0.833	6.48	1.833	12.91	2.833	3.67	3.83	2.10
0.850	11.07	1.850	9.28	2.850	3.26	3.85	1.96
0.867	11.07	1.867	9.28	2.867	3.26	3.87	1.96
0.883	11.07	1.883	9.28	2.883	3.26	3.88	1.96
0.900	11.07	1.900	9.28	2.900	3.26	3.90	1.96
0.917	11.07	1.917	9.28	2.917	3.26	3.92	1.96

0.933	11.07	1.933	9.28	2.933	3.26	3.93	1.96
0.950	11.07	1.950	9.28	2.950	3.26	3.95	1.96
0.967	11.07	1.967	9.28	2.967	3.26	3.97	1.96
0.983	11.07	1.983	9.28	2.983	3.26	3.98	1.96
1.000	11.07	2.000	9.28	3.000	3.26	4.00	1.96

Max.Eff.Inten.(mm/hr)=	109.68	52.32	
over (min)	5.00	5.00	
Storage Coeff. (min)=	2.94 (ii)	4.58 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.31	0.24	
			TOTALS
PEAK FLOW (cms)=	0.77	0.00	0.774 (iii)
TIME TO PEAK (hrs)=	1.33	1.37	1.33
RUNOFF VOLUME (mm)=	48.55	24.86	48.32
TOTAL RAINFALL (mm)=	49.55	49.55	49.55
RUNOFF COEFFICIENT =	0.98	0.50	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7626)| IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0568	0.1530
	0.0239	0.0780	0.0660	0.1730
	0.0370	0.1040	0.0751	0.2000
	0.0451	0.1250	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7567)	2.720	0.774	1.33	48.32
OUTFLOW: ID= 1 (7626)	2.720	0.037	2.52	46.92

PEAK FLOW REDUCTION [Qout/Qin](%)= 4.78
TIME SHIFT OF PEAK FLOW (min)= 71.00
MAXIMUM STORAGE USED (ha.m.)= 0.1041

CALIB | STANDHYD (7624)| ID= 1 DT= 1.0 min |	Area (ha)= 1.80 Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00	
	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.78	0.02
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.00	0.50
Length (m)=	109.54	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.35	1.017	30.47	2.017	7.17	3.02	2.93
0.033	2.35	1.033	30.47	2.033	7.17	3.03	2.93
0.050	2.35	1.050	30.47	2.050	7.17	3.05	2.93
0.067	2.35	1.067	30.47	2.067	7.17	3.07	2.93
0.083	2.35	1.083	30.47	2.083	7.17	3.08	2.93
0.100	2.35	1.100	30.47	2.100	7.17	3.10	2.93
0.117	2.35	1.117	30.47	2.117	7.17	3.12	2.93
0.133	2.35	1.133	30.47	2.133	7.17	3.13	2.93
0.150	2.35	1.150	30.47	2.150	7.17	3.15	2.93
0.167	2.35	1.167	30.47	2.167	7.17	3.17	2.93
0.183	2.80	1.183	109.68	2.183	5.81	3.18	2.67
0.200	2.80	1.200	109.68	2.200	5.81	3.20	2.67
0.217	2.80	1.217	109.68	2.217	5.81	3.22	2.67
0.233	2.80	1.233	109.68	2.233	5.81	3.23	2.67
0.250	2.80	1.250	109.68	2.250	5.81	3.25	2.67
0.267	2.80	1.267	109.68	2.267	5.81	3.27	2.67
0.283	2.80	1.283	109.68	2.283	5.81	3.28	2.67
0.300	2.80	1.300	109.68	2.300	5.81	3.30	2.67
0.317	2.80	1.317	109.68	2.317	5.81	3.32	2.67
0.333	2.80	1.333	109.68	2.333	5.81	3.33	2.67
0.350	3.46	1.350	40.71	2.350	4.87	3.35	2.45
0.367	3.46	1.367	40.71	2.367	4.87	3.37	2.45
0.383	3.46	1.383	40.71	2.383	4.87	3.38	2.45
0.400	3.46	1.400	40.71	2.400	4.87	3.40	2.45
0.417	3.46	1.417	40.71	2.417	4.87	3.42	2.45
0.433	3.46	1.433	40.71	2.433	4.87	3.43	2.45
0.450	3.46	1.450	40.71	2.450	4.87	3.45	2.45
0.467	3.46	1.467	40.71	2.467	4.87	3.47	2.45
0.483	3.46	1.483	40.71	2.483	4.87	3.48	2.45
0.500	3.46	1.500	40.71	2.500	4.87	3.50	2.45
0.517	4.52	1.517	20.28	2.517	4.19	3.52	2.26
0.533	4.52	1.533	20.28	2.533	4.19	3.53	2.26
0.550	4.52	1.550	20.28	2.550	4.19	3.55	2.26
0.567	4.52	1.567	20.28	2.567	4.19	3.57	2.26
0.583	4.52	1.583	20.28	2.583	4.19	3.58	2.26
0.600	4.52	1.600	20.28	2.600	4.19	3.60	2.26
0.617	4.52	1.617	20.28	2.617	4.19	3.62	2.26
0.633	4.52	1.633	20.28	2.633	4.19	3.63	2.26
0.650	4.52	1.650	20.28	2.650	4.19	3.65	2.26
0.667	4.52	1.667	20.28	2.667	4.19	3.67	2.26
0.683	6.48	1.683	12.91	2.683	3.67	3.68	2.10
0.700	6.48	1.700	12.91	2.700	3.67	3.70	2.10
0.717	6.48	1.717	12.91	2.717	3.67	3.72	2.10
0.733	6.48	1.733	12.91	2.733	3.67	3.73	2.10
0.750	6.48	1.750	12.91	2.750	3.67	3.75	2.10
0.767	6.48	1.767	12.91	2.767	3.67	3.77	2.10
0.783	6.48	1.783	12.91	2.783	3.67	3.78	2.10
0.800	6.48	1.800	12.91	2.800	3.67	3.80	2.10
0.817	6.48	1.817	12.91	2.817	3.67	3.82	2.10
0.833	6.48	1.833	12.91	2.833	3.67	3.83	2.10
0.850	11.07	1.850	9.28	2.850	3.26	3.85	1.96
0.867	11.07	1.867	9.28	2.867	3.26	3.87	1.96
0.883	11.07	1.883	9.28	2.883	3.26	3.88	1.96
0.900	11.07	1.900	9.28	2.900	3.26	3.90	1.96
0.917	11.07	1.917	9.28	2.917	3.26	3.92	1.96
0.933	11.07	1.933	9.28	2.933	3.26	3.93	1.96
0.950	11.07	1.950	9.28	2.950	3.26	3.95	1.96
0.967	11.07	1.967	9.28	2.967	3.26	3.97	1.96
0.983	11.07	1.983	9.28	2.983	3.26	3.98	1.96
1.000	11.07	2.000	9.28	3.000	3.26	4.00	1.96

Max.Eff.Inten.(mm/hr)=	109.68	66.80	
over (min)	5.00	5.00	
Storage Coeff. (min)=	2.60 (ii)	4.24 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.33	0.25	
			TOTALS
PEAK FLOW (cms)=	0.52	0.00	0.522 (iii)
TIME TO PEAK (hrs)=	1.33	1.37	1.33
RUNOFF VOLUME (mm)=	48.55	30.27	48.37
TOTAL RAINFALL (mm)=	49.55	49.55	49.55
RUNOFF COEFFICIENT =	0.98	0.61	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 90.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7625)| IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0389	0.1013
	0.0164	0.0514	0.0456	0.1141

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                      0.0252     0.0690   |   0.0514      0.1288
                      0.0309     0.0825   |   0.0000      0.0000

                                 AREA      QPEAK     TPEAK       R.V.
                                 (ha)      (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (   7624)      1.800      0.522      1.33      48.37
   OUTFLOW: ID= 1 (   7625)      1.800      0.025      2.47      47.16

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  4.80
                TIME SHIFT OF PEAK FLOW         (min)= 68.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.0687

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| CALIB           |
| STANDHYD (  7623)|   Area    (ha)=   1.15
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
-------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.14         0.01
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=      87.56        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.


                    ---- TRANSFORMED HYETOGRAPH ----
 TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
  hrs   mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
0.017    2.35 | 1.017   30.47 | 2.017    7.17 |  3.02    2.93
0.033    2.35 | 1.033   30.47 | 2.033    7.17 |  3.03    2.93
0.050    2.35 | 1.050   30.47 | 2.050    7.17 |  3.05    2.93
0.067    2.35 | 1.067   30.47 | 2.067    7.17 |  3.07    2.93
0.083    2.35 | 1.083   30.47 | 2.083    7.17 |  3.08    2.93
0.100    2.35 | 1.100   30.47 | 2.100    7.17 |  3.10    2.93
0.117    2.35 | 1.117   30.47 | 2.117    7.17 |  3.12    2.93
0.133    2.35 | 1.133   30.47 | 2.133    7.17 |  3.13    2.93
0.150    2.35 | 1.150   30.47 | 2.150    7.17 |  3.15    2.93
0.167    2.35 | 1.167   30.47 | 2.167    7.17 |  3.17    2.93
0.183    2.80 | 1.183  109.68 | 2.183    5.81 |  3.18    2.67
0.200    2.80 | 1.200  109.68 | 2.200    5.81 |  3.20    2.67
0.217    2.80 | 1.217  109.68 | 2.217    5.81 |  3.22    2.67
0.233    2.80 | 1.233  109.68 | 2.233    5.81 |  3.23    2.67
0.250    2.80 | 1.250  109.68 | 2.250    5.81 |  3.25    2.67
0.267    2.80 | 1.267  109.68 | 2.267    5.81 |  3.27    2.67
0.283    2.80 | 1.283  109.68 | 2.283    5.81 |  3.28    2.67
0.300    2.80 | 1.300  109.68 | 2.300    5.81 |  3.30    2.67
0.317    2.80 | 1.317  109.68 | 2.317    5.81 |  3.32    2.67
0.333    2.80 | 1.333  109.68 | 2.333    5.81 |  3.33    2.67
0.350    3.46 | 1.350   40.71 | 2.350    4.87 |  3.35    2.45
0.367    3.46 | 1.367   40.71 | 2.367    4.87 |  3.37    2.45
0.383    3.46 | 1.383   40.71 | 2.383    4.87 |  3.38    2.45
0.400    3.46 | 1.400   40.71 | 2.400    4.87 |  3.40    2.45
0.417    3.46 | 1.417   40.71 | 2.417    4.87 |  3.42    2.45
0.433    3.46 | 1.433   40.71 | 2.433    4.87 |  3.43    2.45
0.450    3.46 | 1.450   40.71 | 2.450    4.87 |  3.45    2.45
0.467    3.46 | 1.467   40.71 | 2.467    4.87 |  3.47    2.45
0.483    3.46 | 1.483   40.71 | 2.483    4.87 |  3.48    2.45
0.500    3.46 | 1.500   40.71 | 2.500    4.87 |  3.50    2.45
0.517    4.52 | 1.517   20.28 | 2.517    4.19 |  3.52    2.26
0.533    4.52 | 1.533   20.28 | 2.533    4.19 |  3.53    2.26
0.550    4.52 | 1.550   20.28 | 2.550    4.19 |  3.55    2.26
0.567    4.52 | 1.567   20.28 | 2.567    4.19 |  3.57    2.26
0.583    4.52 | 1.583   20.28 | 2.583    4.19 |  3.58    2.26
0.600    4.52 | 1.600   20.28 | 2.600    4.19 |  3.60    2.26
0.617    4.52 | 1.617   20.28 | 2.617    4.19 |  3.62    2.26
0.633    4.52 | 1.633   20.28 | 2.633    4.19 |  3.63    2.26
0.650    4.52 | 1.650   20.28 | 2.650    4.19 |  3.65    2.26
0.667    4.52 | 1.667   20.28 | 2.667    4.19 |  3.67    2.26
0.683    6.48 | 1.683   12.91 | 2.683    3.67 |  3.68    2.10
0.700    6.48 | 1.700   12.91 | 2.700    3.67 |  3.70    2.10
0.717    6.48 | 1.717   12.91 | 2.717    3.67 |  3.72    2.10
0.733    6.48 | 1.733   12.91 | 2.733    3.67 |  3.73    2.10
0.750    6.48 | 1.750   12.91 | 2.750    3.67 |  3.75    2.10
0.767    6.48 | 1.767   12.91 | 2.767    3.67 |  3.77    2.10
0.783    6.48 | 1.783   12.91 | 2.783    3.67 |  3.78    2.10
0.800    6.48 | 1.800   12.91 | 2.800    3.67 |  3.80    2.10
0.817    6.48 | 1.817   12.91 | 2.817    3.67 |  3.82    2.10
0.833    6.48 | 1.833   12.91 | 2.833    3.67 |  3.83    2.10
0.850   11.07 | 1.850    9.28 | 2.850    3.26 |  3.85    1.96
0.867   11.07 | 1.867    9.28 | 2.867    3.26 |  3.87    1.96
0.883   11.07 | 1.883    9.28 | 2.883    3.26 |  3.88    1.96
0.900   11.07 | 1.900    9.28 | 2.900    3.26 |  3.90    1.96
0.917   11.07 | 1.917    9.28 | 2.917    3.26 |  3.92    1.96
0.933   11.07 | 1.933    9.28 | 2.933    3.26 |  3.93    1.96
0.950   11.07 | 1.950    9.28 | 2.950    3.26 |  3.95    1.96
0.967   11.07 | 1.967    9.28 | 2.967    3.26 |  3.97    1.96
0.983   11.07 | 1.983    9.28 | 2.983    3.26 |  3.98    1.96
1.000   11.07 | 2.000    9.28 | 3.000    3.26 |  4.00    1.96

     Max.Eff.Inten.(mm/hr)=     109.68        52.32
                   over (min)        5.00         4.00
     Storage Coeff.  (min)=       2.27 (ii)    3.91 (ii)
     Unit Hyd. Tpeak (min)=       5.00         4.00
     Unit Hyd. peak  (cms)=       0.35         0.29
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.34         0.00          0.338 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.35           1.33
     RUNOFF VOLUME    (mm)=      48.55        24.86          48.32
     TOTAL RAINFALL   (mm)=      49.55        49.55          49.55
     RUNOFF COEFFICIENT   =       0.98         0.50           0.98

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| RESERVOIR(  7622)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0258      0.0650
                         0.0108     0.0330   |   0.0302      0.0725
                         0.0167     0.0440   |   0.0340      0.0820
                         0.0204     0.0525   |   0.0000      0.0000

                                 AREA      QPEAK     TPEAK       R.V.
                                 (ha)      (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (   7623)      1.150      0.338      1.33      48.32
   OUTFLOW: ID= 1 (   7622)      1.150      0.017      2.42      47.22

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  4.89
                TIME SHIFT OF PEAK FLOW         (min)= 65.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.0437

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| CALIB           |
| STANDHYD (  7629)|   Area    (ha)=   4.09
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
-------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.05         0.04
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=     165.13        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.


                    ---- TRANSFORMED HYETOGRAPH ----
 TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
  hrs   mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
0.017    2.35 | 1.017   30.47 | 2.017    7.17 |  3.02    2.93
0.033    2.35 | 1.033   30.47 | 2.033    7.17 |  3.03    2.93
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0.050	2.35	1.050	30.47	2.050	7.17	3.05	2.93
0.067	2.35	1.067	30.47	2.067	7.17	3.07	2.93
0.083	2.35	1.083	30.47	2.083	7.17	3.08	2.93
0.100	2.35	1.100	30.47	2.100	7.17	3.10	2.93
0.117	2.35	1.117	30.47	2.117	7.17	3.12	2.93
0.133	2.35	1.133	30.47	2.133	7.17	3.13	2.93
0.150	2.35	1.150	30.47	2.150	7.17	3.15	2.93
0.167	2.35	1.167	30.47	2.167	7.17	3.17	2.93
0.183	2.80	1.183	109.68	2.183	5.81	3.18	2.67
0.200	2.80	1.200	109.68	2.200	5.81	3.20	2.67
0.217	2.80	1.217	109.68	2.217	5.81	3.22	2.67
0.233	2.80	1.233	109.68	2.233	5.81	3.23	2.67
0.250	2.80	1.250	109.68	2.250	5.81	3.25	2.67
0.267	2.80	1.267	109.68	2.267	5.81	3.27	2.67
0.283	2.80	1.283	109.68	2.283	5.81	3.28	2.67
0.300	2.80	1.300	109.68	2.300	5.81	3.30	2.67
0.317	2.80	1.317	109.68	2.317	5.81	3.32	2.67
0.333	2.80	1.333	109.68	2.333	5.81	3.33	2.67
0.350	3.46	1.350	40.71	2.350	4.87	3.35	2.45
0.367	3.46	1.367	40.71	2.367	4.87	3.37	2.45
0.383	3.46	1.383	40.71	2.383	4.87	3.38	2.45
0.400	3.46	1.400	40.71	2.400	4.87	3.40	2.45
0.417	3.46	1.417	40.71	2.417	4.87	3.42	2.45
0.433	3.46	1.433	40.71	2.433	4.87	3.43	2.45
0.450	3.46	1.450	40.71	2.450	4.87	3.45	2.45
0.467	3.46	1.467	40.71	2.467	4.87	3.47	2.45
0.483	3.46	1.483	40.71	2.483	4.87	3.48	2.45
0.500	3.46	1.500	40.71	2.500	4.87	3.50	2.45
0.517	4.52	1.517	20.28	2.517	4.19	3.52	2.26
0.533	4.52	1.533	20.28	2.533	4.19	3.53	2.26
0.550	4.52	1.550	20.28	2.550	4.19	3.55	2.26
0.567	4.52	1.567	20.28	2.567	4.19	3.57	2.26
0.583	4.52	1.583	20.28	2.583	4.19	3.58	2.26
0.600	4.52	1.600	20.28	2.600	4.19	3.60	2.26
0.617	4.52	1.617	20.28	2.617	4.19	3.62	2.26
0.633	4.52	1.633	20.28	2.633	4.19	3.63	2.26
0.650	4.52	1.650	20.28	2.650	4.19	3.65	2.26
0.667	4.52	1.667	20.28	2.667	4.19	3.67	2.26
0.683	6.48	1.683	12.91	2.683	3.67	3.68	2.10
0.700	6.48	1.700	12.91	2.700	3.67	3.70	2.10
0.717	6.48	1.717	12.91	2.717	3.67	3.72	2.10
0.733	6.48	1.733	12.91	2.733	3.67	3.73	2.10
0.750	6.48	1.750	12.91	2.750	3.67	3.75	2.10
0.767	6.48	1.767	12.91	2.767	3.67	3.77	2.10
0.783	6.48	1.783	12.91	2.783	3.67	3.78	2.10
0.800	6.48	1.800	12.91	2.800	3.67	3.80	2.10
0.817	6.48	1.817	12.91	2.817	3.67	3.82	2.10
0.833	6.48	1.833	12.91	2.833	3.67	3.83	2.10
0.850	11.07	1.850	9.28	2.850	3.26	3.85	1.96
0.867	11.07	1.867	9.28	2.867	3.26	3.87	1.96
0.883	11.07	1.883	9.28	2.883	3.26	3.88	1.96
0.900	11.07	1.900	9.28	2.900	3.26	3.90	1.96
0.917	11.07	1.917	9.28	2.917	3.26	3.92	1.96
0.933	11.07	1.933	9.28	2.933	3.26	3.93	1.96
0.950	11.07	1.950	9.28	2.950	3.26	3.95	1.96
0.967	11.07	1.967	9.28	2.967	3.26	3.97	1.96
0.983	11.07	1.983	9.28	2.983	3.26	3.98	1.96
1.000	11.07	2.000	9.28	3.000	3.26	4.00	1.96

Max.Eff.Inten.(mm/hr)=	109.68	52.32	
over (min)	5.00	5.00	
Storage Coeff. (min)=	3.33 (ii)	4.97 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.29	0.23	
			TOTALS
PEAK FLOW (cms)=	1.14	0.01	1.141 (iii)
TIME TO PEAK (hrs)=	1.33	1.37	1.33
RUNOFF VOLUME (mm)=	48.55	24.86	48.32
TOTAL RAINFALL (mm)=	49.55	49.55	49.55
RUNOFF COEFFICIENT =	0.98	0.50	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7630)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0826	0.2320
	0.0347	0.1170	0.0967	0.2609
	0.0534	0.1580	0.1090	0.2940
	0.0655	0.1890	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7629)	4.090	1.141	1.33	48.32
OUTFLOW: ID= 1 (7630)	4.090	0.053	2.57	46.75

PEAK FLOW REDUCTION [Qout/Qin](%)= 4.66
TIME SHIFT OF PEAK FLOW (min)= 74.00
MAXIMUM STORAGE USED (ha.m.)= 0.1576

CALIB			
STANDHYD (7631)	Area (ha)= 3.91		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)= 3.87	0.04	
Dep. Storage	(mm)= 1.00	1.50	
Average Slope	(%)= 1.00	0.50	
Length	(m)= 161.45	40.00	
Mannings n	= 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.35	1.017	30.47	2.017	7.17	3.02	2.93
0.033	2.35	1.033	30.47	2.033	7.17	3.03	2.93
0.050	2.35	1.050	30.47	2.050	7.17	3.05	2.93
0.067	2.35	1.067	30.47	2.067	7.17	3.07	2.93
0.083	2.35	1.083	30.47	2.083	7.17	3.08	2.93
0.100	2.35	1.100	30.47	2.100	7.17	3.10	2.93
0.117	2.35	1.117	30.47	2.117	7.17	3.12	2.93
0.133	2.35	1.133	30.47	2.133	7.17	3.13	2.93
0.150	2.35	1.150	30.47	2.150	7.17	3.15	2.93
0.167	2.35	1.167	30.47	2.167	7.17	3.17	2.93
0.183	2.80	1.183	109.68	2.183	5.81	3.18	2.67
0.200	2.80	1.200	109.68	2.200	5.81	3.20	2.67
0.217	2.80	1.217	109.68	2.217	5.81	3.22	2.67
0.233	2.80	1.233	109.68	2.233	5.81	3.23	2.67
0.250	2.80	1.250	109.68	2.250	5.81	3.25	2.67
0.267	2.80	1.267	109.68	2.267	5.81	3.27	2.67
0.283	2.80	1.283	109.68	2.283	5.81	3.28	2.67
0.300	2.80	1.300	109.68	2.300	5.81	3.30	2.67
0.317	2.80	1.317	109.68	2.317	5.81	3.32	2.67
0.333	2.80	1.333	109.68	2.333	5.81	3.33	2.67
0.350	3.46	1.350	40.71	2.350	4.87	3.35	2.45
0.367	3.46	1.367	40.71	2.367	4.87	3.37	2.45
0.383	3.46	1.383	40.71	2.383	4.87	3.38	2.45
0.400	3.46	1.400	40.71	2.400	4.87	3.40	2.45
0.417	3.46	1.417	40.71	2.417	4.87	3.42	2.45
0.433	3.46	1.433	40.71	2.433	4.87	3.43	2.45
0.450	3.46	1.450	40.71	2.450	4.87	3.45	2.45
0.467	3.46	1.467	40.71	2.467	4.87	3.47	2.45
0.483	3.46	1.483	40.71	2.483	4.87	3.48	2.45
0.500	3.46	1.500	40.71	2.500	4.87	3.50	2.45
0.517	4.52	1.517	20.28	2.517	4.19	3.52	2.26
0.533	4.52	1.533	20.28	2.533	4.19	3.53	2.26
0.550	4.52	1.550	20.28	2.550	4.19	3.55	2.26
0.567	4.52	1.567	20.28	2.567	4.19	3.57	2.26
0.583	4.52	1.583	20.28	2.583	4.19	3.58	2.26

0.600	4.52	1.600	20.28	2.600	4.19	3.60	2.26
0.617	4.52	1.617	20.28	2.617	4.19	3.62	2.26
0.633	4.52	1.633	20.28	2.633	4.19	3.63	2.26
0.650	4.52	1.650	20.28	2.650	4.19	3.65	2.26
0.667	4.52	1.667	20.28	2.667	4.19	3.67	2.26
0.683	6.48	1.683	12.91	2.683	3.67	3.68	2.10
0.700	6.48	1.700	12.91	2.700	3.67	3.70	2.10
0.717	6.48	1.717	12.91	2.717	3.67	3.72	2.10
0.733	6.48	1.733	12.91	2.733	3.67	3.73	2.10
0.750	6.48	1.750	12.91	2.750	3.67	3.75	2.10
0.767	6.48	1.767	12.91	2.767	3.67	3.77	2.10
0.783	6.48	1.783	12.91	2.783	3.67	3.78	2.10
0.800	6.48	1.800	12.91	2.800	3.67	3.80	2.10
0.817	6.48	1.817	12.91	2.817	3.67	3.82	2.10
0.833	6.48	1.833	12.91	2.833	3.67	3.83	2.10
0.850	11.07	1.850	9.28	2.850	3.26	3.85	1.96
0.867	11.07	1.867	9.28	2.867	3.26	3.87	1.96
0.883	11.07	1.883	9.28	2.883	3.26	3.88	1.96
0.900	11.07	1.900	9.28	2.900	3.26	3.90	1.96
0.917	11.07	1.917	9.28	2.917	3.26	3.92	1.96
0.933	11.07	1.933	9.28	2.933	3.26	3.93	1.96
0.950	11.07	1.950	9.28	2.950	3.26	3.95	1.96
0.967	11.07	1.967	9.28	2.967	3.26	3.97	1.96
0.983	11.07	1.983	9.28	2.983	3.26	3.98	1.96
1.000	11.07	2.000	9.28	3.000	3.26	4.00	1.96

			TOTALS
Max.Eff.Inten.(mm/hr)=	109.68	52.32	
over (min)	5.00	5.00	
Storage Coeff. (min)=	3.28 (ii)	4.92 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.29	0.23	
PEAK FLOW (cms)=	1.09	0.01	1.093 (iii)
TIME TO PEAK (hrs)=	1.33	1.37	1.33
RUNOFF VOLUME (mm)=	48.55	24.86	48.32
TOTAL RAINFALL (mm)=	49.55	49.55	49.55
RUNOFF COEFFICIENT =	0.98	0.50	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7632) IN= 2---> OUT= 1 DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0792	0.2220
	0.0333	0.1130	0.0928	0.2500
	0.0512	0.1510	0.1046	0.2810
	0.0629	0.1810	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (	7631)	3.910	1.093	1.33	48.32
OUTFLOW: ID= 1 (	7632)	3.910	0.051	2.57	46.72

PEAK FLOW REDUCTION [Qout/Qin](%)= 4.67
TIME SHIFT OF PEAK FLOW (min)= 74.00
MAXIMUM STORAGE USED (ha.m.)= 0.1506

CALIB STANDHYD (7641) ID= 1 DT= 1.0 min	Area (ha)= 2.21 Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00		
		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.19	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	121.38	40.00

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.35	1.017	30.47	2.017	7.17	3.02	2.93
0.033	2.35	1.033	30.47	2.033	7.17	3.03	2.93
0.050	2.35	1.050	30.47	2.050	7.17	3.05	2.93
0.067	2.35	1.067	30.47	2.067	7.17	3.07	2.93
0.083	2.35	1.083	30.47	2.083	7.17	3.08	2.93
0.100	2.35	1.100	30.47	2.100	7.17	3.10	2.93
0.117	2.35	1.117	30.47	2.117	7.17	3.12	2.93
0.133	2.35	1.133	30.47	2.133	7.17	3.13	2.93
0.150	2.35	1.150	30.47	2.150	7.17	3.15	2.93
0.167	2.35	1.167	30.47	2.167	7.17	3.17	2.93
0.183	2.80	1.183	109.68	2.183	5.81	3.18	2.67
0.200	2.80	1.200	109.68	2.200	5.81	3.20	2.67
0.217	2.80	1.217	109.68	2.217	5.81	3.22	2.67
0.233	2.80	1.233	109.68	2.233	5.81	3.23	2.67
0.250	2.80	1.250	109.68	2.250	5.81	3.25	2.67
0.267	2.80	1.267	109.68	2.267	5.81	3.27	2.67
0.283	2.80	1.283	109.68	2.283	5.81	3.28	2.67
0.300	2.80	1.300	109.68	2.300	5.81	3.30	2.67
0.317	2.80	1.317	109.68	2.317	5.81	3.32	2.67
0.333	2.80	1.333	109.68	2.333	5.81	3.33	2.67
0.350	3.46	1.350	40.71	2.350	4.87	3.35	2.45
0.367	3.46	1.367	40.71	2.367	4.87	3.37	2.45
0.383	3.46	1.383	40.71	2.383	4.87	3.38	2.45
0.400	3.46	1.400	40.71	2.400	4.87	3.40	2.45
0.417	3.46	1.417	40.71	2.417	4.87	3.42	2.45
0.433	3.46	1.433	40.71	2.433	4.87	3.43	2.45
0.450	3.46	1.450	40.71	2.450	4.87	3.45	2.45
0.467	3.46	1.467	40.71	2.467	4.87	3.47	2.45
0.483	3.46	1.483	40.71	2.483	4.87	3.48	2.45
0.500	3.46	1.500	40.71	2.500	4.87	3.50	2.45
0.517	4.52	1.517	20.28	2.517	4.19	3.52	2.26
0.533	4.52	1.533	20.28	2.533	4.19	3.53	2.26
0.550	4.52	1.550	20.28	2.550	4.19	3.55	2.26
0.567	4.52	1.567	20.28	2.567	4.19	3.57	2.26
0.583	4.52	1.583	20.28	2.583	4.19	3.58	2.26
0.600	4.52	1.600	20.28	2.600	4.19	3.60	2.26
0.617	4.52	1.617	20.28	2.617	4.19	3.62	2.26
0.633	4.52	1.633	20.28	2.633	4.19	3.63	2.26
0.650	4.52	1.650	20.28	2.650	4.19	3.65	2.26
0.667	4.52	1.667	20.28	2.667	4.19	3.67	2.26
0.683	6.48	1.683	12.91	2.683	3.67	3.68	2.10
0.700	6.48	1.700	12.91	2.700	3.67	3.70	2.10
0.717	6.48	1.717	12.91	2.717	3.67	3.72	2.10
0.733	6.48	1.733	12.91	2.733	3.67	3.73	2.10
0.750	6.48	1.750	12.91	2.750	3.67	3.75	2.10
0.767	6.48	1.767	12.91	2.767	3.67	3.77	2.10
0.783	6.48	1.783	12.91	2.783	3.67	3.78	2.10
0.800	6.48	1.800	12.91	2.800	3.67	3.80	2.10
0.817	6.48	1.817	12.91	2.817	3.67	3.82	2.10
0.833	6.48	1.833	12.91	2.833	3.67	3.83	2.10
0.850	11.07	1.850	9.28	2.850	3.26	3.85	1.96
0.867	11.07	1.867	9.28	2.867	3.26	3.87	1.96
0.883	11.07	1.883	9.28	2.883	3.26	3.88	1.96
0.900	11.07	1.900	9.28	2.900	3.26	3.90	1.96
0.917	11.07	1.917	9.28	2.917	3.26	3.92	1.96
0.933	11.07	1.933	9.28	2.933	3.26	3.93	1.96
0.950	11.07	1.950	9.28	2.950	3.26	3.95	1.96
0.967	11.07	1.967	9.28	2.967	3.26	3.97	1.96
0.983	11.07	1.983	9.28	2.983	3.26	3.98	1.96
1.000	11.07	2.000	9.28	3.000	3.26	4.00	1.96

			TOTALS
Max.Eff.Inten.(mm/hr)=	109.68	52.32	
over (min)	5.00	5.00	
Storage Coeff. (min)=	2.77 (ii)	4.41 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.32	0.25	
PEAK FLOW (cms)=	0.63	0.00	0.635 (iii)

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    TIME TO PEAK    (hrs)=       1.33         1.37          1.33
    RUNOFF VOLUME    (mm)=      48.55        24.86         48.32
    TOTAL RAINFALL   (mm)=      49.55        49.55         49.55
    RUNOFF COEFFICIENT   =       0.98         0.50          0.98


      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  85.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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-------------------
| RESERVOIR(  7642)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0470     0.1250
                         0.0197     0.0630   |   0.0551     0.1410
                         0.0304     0.0850   |   0.0620     0.1580
                         0.0373     0.1020   |   0.0000     0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  7641)     2.210     0.635      1.33      48.32
   OUTFLOW: ID= 1 (  7642)     2.210     0.030      2.50      47.01

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  4.75
                TIME SHIFT OF PEAK FLOW          (min)= 70.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.0845

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-------------------
| CALIB            |
| STANDHYD (  7643)|   Area    (ha)=   2.02
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
-------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.00         0.02
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=     116.05        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |   hrs   mm/hr |   hrs   mm/hr
 0.017    2.35 | 1.017   30.47 | 2.017    7.17 |  3.02    2.93
 0.033    2.35 | 1.033   30.47 | 2.033    7.17 |  3.03    2.93
 0.050    2.35 | 1.050   30.47 | 2.050    7.17 |  3.05    2.93
 0.067    2.35 | 1.067   30.47 | 2.067    7.17 |  3.07    2.93
 0.083    2.35 | 1.083   30.47 | 2.083    7.17 |  3.08    2.93
 0.100    2.35 | 1.100   30.47 | 2.100    7.17 |  3.10    2.93
 0.117    2.35 | 1.117   30.47 | 2.117    7.17 |  3.12    2.93
 0.133    2.35 | 1.133   30.47 | 2.133    7.17 |  3.13    2.93
 0.150    2.35 | 1.150   30.47 | 2.150    7.17 |  3.15    2.93
 0.167    2.35 | 1.167   30.47 | 2.167    7.17 |  3.17    2.93
 0.183    2.80 | 1.183  109.68 | 2.183    5.81 |  3.18    2.67
 0.200    2.80 | 1.200  109.68 | 2.200    5.81 |  3.20    2.67
 0.217    2.80 | 1.217  109.68 | 2.217    5.81 |  3.22    2.67
 0.233    2.80 | 1.233  109.68 | 2.233    5.81 |  3.23    2.67
 0.250    2.80 | 1.250  109.68 | 2.250    5.81 |  3.25    2.67
 0.267    2.80 | 1.267  109.68 | 2.267    5.81 |  3.27    2.67
 0.283    2.80 | 1.283  109.68 | 2.283    5.81 |  3.28    2.67
 0.300    2.80 | 1.300  109.68 | 2.300    5.81 |  3.30    2.67
 0.317    2.80 | 1.317  109.68 | 2.317    5.81 |  3.32    2.67
 0.333    2.80 | 1.333  109.68 | 2.333    5.81 |  3.33    2.67
 0.350    3.46 | 1.350   40.71 | 2.350    4.87 |  3.35    2.45
 0.367    3.46 | 1.367   40.71 | 2.367    4.87 |  3.37    2.45
 0.383    3.46 | 1.383   40.71 | 2.383    4.87 |  3.38    2.45
 0.400    3.46 | 1.400   40.71 | 2.400    4.87 |  3.40    2.45
 0.417    3.46 | 1.417   40.71 | 2.417    4.87 |  3.42    2.45
 0.433    3.46 | 1.433   40.71 | 2.433    4.87 |  3.43    2.45
 0.450    3.46 | 1.450   40.71 | 2.450    4.87 |  3.45    2.45
 0.467    3.46 | 1.467   40.71 | 2.467    4.87 |  3.47    2.45
 0.483    3.46 | 1.483   40.71 | 2.483    4.87 |  3.48    2.45
 0.500    3.46 | 1.500   40.71 | 2.500    4.87 |  3.50    2.45
 0.517    4.52 | 1.517   20.28 | 2.517    4.19 |  3.52    2.26
 0.533    4.52 | 1.533   20.28 | 2.533    4.19 |  3.53    2.26
 0.550    4.52 | 1.550   20.28 | 2.550    4.19 |  3.55    2.26
 0.567    4.52 | 1.567   20.28 | 2.567    4.19 |  3.57    2.26
 0.583    4.52 | 1.583   20.28 | 2.583    4.19 |  3.58    2.26
 0.600    4.52 | 1.600   20.28 | 2.600    4.19 |  3.60    2.26
 0.617    4.52 | 1.617   20.28 | 2.617    4.19 |  3.62    2.26
 0.633    4.52 | 1.633   20.28 | 2.633    4.19 |  3.63    2.26
 0.650    4.52 | 1.650   20.28 | 2.650    4.19 |  3.65    2.26
 0.667    4.52 | 1.667   20.28 | 2.667    4.19 |  3.67    2.26
 0.683    6.48 | 1.683   12.91 | 2.683    3.67 |  3.68    2.10
 0.700    6.48 | 1.700   12.91 | 2.700    3.67 |  3.70    2.10
 0.717    6.48 | 1.717   12.91 | 2.717    3.67 |  3.72    2.10
 0.733    6.48 | 1.733   12.91 | 2.733    3.67 |  3.73    2.10
 0.750    6.48 | 1.750   12.91 | 2.750    3.67 |  3.75    2.10
 0.767    6.48 | 1.767   12.91 | 2.767    3.67 |  3.77    2.10
 0.783    6.48 | 1.783   12.91 | 2.783    3.67 |  3.78    2.10
 0.800    6.48 | 1.800   12.91 | 2.800    3.67 |  3.80    2.10
 0.817    6.48 | 1.817   12.91 | 2.817    3.67 |  3.82    2.10
 0.833    6.48 | 1.833   12.91 | 2.833    3.67 |  3.83    2.10
 0.850   11.07 | 1.850    9.28 | 2.850    3.26 |  3.85    1.96
 0.867   11.07 | 1.867    9.28 | 2.867    3.26 |  3.87    1.96
 0.883   11.07 | 1.883    9.28 | 2.883    3.26 |  3.88    1.96
 0.900   11.07 | 1.900    9.28 | 2.900    3.26 |  3.90    1.96
 0.917   11.07 | 1.917    9.28 | 2.917    3.26 |  3.92    1.96
 0.933   11.07 | 1.933    9.28 | 2.933    3.26 |  3.93    1.96
 0.950   11.07 | 1.950    9.28 | 2.950    3.26 |  3.95    1.96
 0.967   11.07 | 1.967    9.28 | 2.967    3.26 |  3.97    1.96
 0.983   11.07 | 1.983    9.28 | 2.983    3.26 |  3.98    1.96
 1.000   11.07 | 2.000    9.28 | 3.000    3.26 |  4.00    1.96

     Max.Eff.Inten.(mm/hr)=     109.68        52.32
               over (min)          5.00         5.00
     Storage Coeff.  (min)=       2.69 (ii)    4.33 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.25
                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.58         0.00          0.582 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.37          1.33
     RUNOFF VOLUME    (mm)=      48.55        24.86         48.32
     TOTAL RAINFALL   (mm)=      49.55        49.55         49.55
     RUNOFF COEFFICIENT   =       0.98         0.50          0.98


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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-------------------
| RESERVOIR(  7644)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0433     0.1140
                         0.0182     0.0580   |   0.0507     0.1280
                         0.0280     0.0775   |   0.0571     0.1440
                         0.0343     0.0930   |   0.0000     0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  7643)     2.020     0.582      1.33      48.32
   OUTFLOW: ID= 1 (  7644)     2.020     0.028      2.48      47.03

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  4.78
                TIME SHIFT OF PEAK FLOW          (min)= 69.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.0772

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GEI Consultants

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       V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-
a4eb17eaad57\484a47be-49ca-4ec3-b5e7-7e2fab18799a\s
  Summary filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-
a4eb17eaad57\484a47be-49ca-4ec3-b5e7-7e2fab18799a\s


DATE: 06/14/2024                          TIME: 12:48:36

USER:


COMMENTS: _____________________________________________________


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  ***********************************************
  ** SIMULATION : 9. 10 Year 6 Hour AES (Bloor, **
  ***********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\ygollamudi\AppD
|                  |              ata\Local\Temp\
|                  |              3c3f87d5-a26e-4c6b-b2ae-56a7ba29ab7f\5388d806
| Ptotal= 55.69 mm |    Comments: 10 Year 6 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.00    0.00 |  1.75   18.94 |  3.50    7.80 |  5.25    1.11
                0.25    1.11 |  2.00   18.94 |  3.75    4.46 |  5.50    1.11
                0.50    1.11 |  2.25   51.24 |  4.00    4.46 |  5.75    1.11
                0.75    1.11 |  2.50   51.24 |  4.25    2.23 |  6.00    1.11
                1.00    1.11 |  2.75   14.48 |  4.50    2.23 |
                1.25    6.68 |  3.00   14.48 |  4.75    1.11 |
                1.50    6.68 |  3.25    7.80 |  5.00    1.11 |

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| CALIB            |
| STANDHYD (  7567)|   Area    (ha)=   2.72
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.69         0.03
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=     134.66        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	6.68	3.150	14.48	4.72	2.23
0.033	0.00	1.600	6.68	3.167	14.48	4.73	2.23
0.050	0.00	1.617	6.68	3.183	14.48	4.75	2.23
0.067	0.00	1.633	6.68	3.200	14.48	4.77	1.11
0.083	0.00	1.650	6.68	3.217	14.48	4.78	1.11
0.100	0.00	1.667	6.68	3.233	14.48	4.80	1.11
0.117	0.00	1.683	6.68	3.250	14.48	4.82	1.11
0.133	0.00	1.700	6.68	3.267	7.80	4.83	1.11
0.150	0.00	1.717	6.68	3.283	7.80	4.85	1.11
0.167	0.00	1.733	6.68	3.300	7.80	4.87	1.11
0.183	0.00	1.750	6.68	3.317	7.80	4.88	1.11
0.200	0.00	1.767	18.94	3.333	7.80	4.90	1.11
0.217	0.00	1.783	18.94	3.350	7.80	4.92	1.11
0.233	0.00	1.800	18.94	3.367	7.80	4.93	1.11
0.250	0.00	1.817	18.94	3.383	7.80	4.95	1.11
0.267	1.11	1.833	18.94	3.400	7.80	4.97	1.11
0.283	1.11	1.850	18.94	3.417	7.80	4.98	1.11
0.300	1.11	1.867	18.94	3.433	7.80	5.00	1.11
0.317	1.11	1.883	18.94	3.450	7.80	5.02	1.11
0.333	1.11	1.900	18.94	3.467	7.80	5.03	1.11
0.350	1.11	1.917	18.94	3.483	7.80	5.05	1.11
0.367	1.11	1.933	18.94	3.500	7.80	5.07	1.11
0.383	1.11	1.950	18.94	3.517	7.80	5.08	1.11
0.400	1.11	1.967	18.94	3.533	7.80	5.10	1.11
0.417	1.11	1.983	18.94	3.550	7.80	5.12	1.11
0.433	1.11	2.000	18.94	3.567	7.80	5.13	1.11
0.450	1.11	2.017	18.94	3.583	7.80	5.15	1.11
0.467	1.11	2.033	18.94	3.600	7.80	5.17	1.11
0.483	1.11	2.050	18.94	3.617	7.80	5.18	1.11
0.500	1.11	2.067	18.94	3.633	7.80	5.20	1.11
0.517	1.11	2.083	18.94	3.650	7.80	5.22	1.11
0.533	1.11	2.100	18.94	3.667	7.80	5.23	1.11
0.550	1.11	2.117	18.94	3.683	7.80	5.25	1.11
0.567	1.11	2.133	18.94	3.700	7.80	5.27	1.11
0.583	1.11	2.150	18.94	3.717	7.80	5.28	1.11
0.600	1.11	2.167	18.94	3.733	7.80	5.30	1.11
0.617	1.11	2.183	18.94	3.750	7.80	5.32	1.11
0.633	1.11	2.200	18.94	3.767	4.46	5.33	1.11
0.650	1.11	2.217	18.94	3.783	4.46	5.35	1.11
0.667	1.11	2.233	18.94	3.800	4.46	5.37	1.11
0.683	1.11	2.250	18.94	3.817	4.46	5.38	1.11
0.700	1.11	2.267	51.24	3.833	4.46	5.40	1.11
0.717	1.11	2.283	51.24	3.850	4.46	5.42	1.11
0.733	1.11	2.300	51.24	3.867	4.46	5.43	1.11
0.750	1.11	2.317	51.24	3.883	4.46	5.45	1.11
0.767	1.11	2.333	51.24	3.900	4.46	5.47	1.11
0.783	1.11	2.350	51.24	3.917	4.46	5.48	1.11
0.800	1.11	2.367	51.24	3.933	4.46	5.50	1.11
0.817	1.11	2.383	51.24	3.950	4.46	5.52	1.11
0.833	1.11	2.400	51.24	3.967	4.46	5.53	1.11
0.850	1.11	2.417	51.24	3.983	4.46	5.55	1.11
0.867	1.11	2.433	51.24	4.000	4.46	5.57	1.11
0.883	1.11	2.450	51.24	4.017	4.46	5.58	1.11
0.900	1.11	2.467	51.24	4.033	4.46	5.60	1.11
0.917	1.11	2.483	51.24	4.050	4.46	5.62	1.11
0.933	1.11	2.500	51.24	4.067	4.46	5.63	1.11
0.950	1.11	2.517	51.24	4.083	4.46	5.65	1.11
0.967	1.11	2.533	51.24	4.100	4.46	5.67	1.11
0.983	1.11	2.550	51.24	4.117	4.46	5.68	1.11
1.000	1.11	2.567	51.24	4.133	4.46	5.70	1.11
1.017	1.11	2.583	51.24	4.150	4.46	5.72	1.11
1.033	1.11	2.600	51.24	4.167	4.46	5.73	1.11
1.050	1.11	2.617	51.24	4.183	4.46	5.75	1.11
1.067	1.11	2.633	51.24	4.200	4.46	5.77	1.11
1.083	1.11	2.650	51.24	4.217	4.46	5.78	1.11
1.100	1.11	2.667	51.24	4.233	4.46	5.80	1.11
1.117	1.11	2.683	51.24	4.250	4.46	5.82	1.11
1.133	1.11	2.700	51.24	4.267	2.23	5.83	1.11
1.150	1.11	2.717	51.24	4.283	2.23	5.85	1.11
1.167	1.11	2.733	51.24	4.300	2.23	5.87	1.11
1.183	1.11	2.750	51.24	4.317	2.23	5.88	1.11
1.200	1.11	2.767	14.48	4.333	2.23	5.90	1.11

1.217	1.11	2.783	14.48	4.350	2.23	5.92	1.11
1.233	1.11	2.800	14.48	4.367	2.23	5.93	1.11
1.250	1.11	2.817	14.48	4.383	2.23	5.95	1.11
1.267	6.68	2.833	14.48	4.400	2.23	5.97	1.11
1.283	6.68	2.850	14.48	4.417	2.23	5.98	1.11
1.300	6.68	2.867	14.48	4.433	2.23	6.00	1.11
1.317	6.68	2.883	14.48	4.450	2.23	6.02	1.11
1.333	6.68	2.900	14.48	4.467	2.23	6.03	1.11
1.350	6.68	2.917	14.48	4.483	2.23	6.05	1.11
1.367	6.68	2.933	14.48	4.500	2.23	6.07	1.11
1.383	6.68	2.950	14.48	4.517	2.23	6.08	1.11
1.400	6.68	2.967	14.48	4.533	2.23	6.10	1.11
1.417	6.68	2.983	14.48	4.550	2.23	6.12	1.11
1.433	6.68	3.000	14.48	4.567	2.23	6.13	1.11
1.450	6.68	3.017	14.48	4.583	2.23	6.15	1.11
1.467	6.68	3.033	14.48	4.600	2.23	6.17	1.11
1.483	6.68	3.050	14.48	4.617	2.23	6.18	1.11
1.500	6.68	3.067	14.48	4.633	2.23	6.20	1.11
1.517	6.68	3.083	14.48	4.650	2.23	6.22	1.11
1.533	6.68	3.100	14.48	4.667	2.23	6.23	1.11
1.550	6.68	3.117	14.48	4.683	2.23	6.25	1.11
1.567	6.68	3.133	14.48	4.700	2.23		

Max.Eff.Inten.(mm/hr)=	51.24	34.52	
over (min)	5.00	7.00	
Storage Coeff. (min)=	3.99 (ii)	6.21 (ii)	
Unit Hyd. Tpeak (min)=	5.00	7.00	
Unit Hyd. peak (cms)=	0.26	0.17	
			TOTALS
PEAK FLOW (cms)=	0.38	0.00	0.385 (iii)
TIME TO PEAK (hrs)=	2.75	2.77	2.75
RUNOFF VOLUME (mm)=	54.69	29.66	54.44
TOTAL RAINFALL (mm)=	55.69	55.69	55.69
RUNOFF COEFFICIENT =	0.98	0.53	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7626)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0568	0.1530
	0.0239	0.0780	0.0660	0.1730
	0.0370	0.1040	0.0751	0.2000
	0.0451	0.1250	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7567)	2.720	0.385	2.75	54.44
OUTFLOW: ID= 1 (7626)	2.720	0.041	3.87	52.68

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.70
TIME SHIFT OF PEAK FLOW (min)= 67.00
MAXIMUM STORAGE USED (ha.m.)= 0.1150

CALIB				
STANDHYD (7624)	Area (ha)= 1.80			
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00		

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.78	0.02
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.00	0.50
Length (m)=	109.54	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	6.68	3.150	14.48	4.72	2.23
0.033	0.00	1.600	6.68	3.167	14.48	4.73	2.23
0.050	0.00	1.617	6.68	3.183	14.48	4.75	2.23
0.067	0.00	1.633	6.68	3.200	14.48	4.77	1.11
0.083	0.00	1.650	6.68	3.217	14.48	4.78	1.11
0.100	0.00	1.667	6.68	3.233	14.48	4.80	1.11
0.117	0.00	1.683	6.68	3.250	14.48	4.82	1.11
0.133	0.00	1.700	6.68	3.267	7.80	4.83	1.11
0.150	0.00	1.717	6.68	3.283	7.80	4.85	1.11
0.167	0.00	1.733	6.68	3.300	7.80	4.87	1.11
0.183	0.00	1.750	6.68	3.317	7.80	4.88	1.11
0.200	0.00	1.767	18.94	3.333	7.80	4.90	1.11
0.217	0.00	1.783	18.94	3.350	7.80	4.92	1.11
0.233	0.00	1.800	18.94	3.367	7.80	4.93	1.11
0.250	0.00	1.817	18.94	3.383	7.80	4.95	1.11
0.267	1.11	1.833	18.94	3.400	7.80	4.97	1.11
0.283	1.11	1.850	18.94	3.417	7.80	4.98	1.11
0.300	1.11	1.867	18.94	3.433	7.80	5.00	1.11
0.317	1.11	1.883	18.94	3.450	7.80	5.02	1.11
0.333	1.11	1.900	18.94	3.467	7.80	5.03	1.11
0.350	1.11	1.917	18.94	3.483	7.80	5.05	1.11
0.367	1.11	1.933	18.94	3.500	7.80	5.07	1.11
0.383	1.11	1.950	18.94	3.517	7.80	5.08	1.11
0.400	1.11	1.967	18.94	3.533	7.80	5.10	1.11
0.417	1.11	1.983	18.94	3.550	7.80	5.12	1.11
0.433	1.11	2.000	18.94	3.567	7.80	5.13	1.11
0.450	1.11	2.017	18.94	3.583	7.80	5.15	1.11
0.467	1.11	2.033	18.94	3.600	7.80	5.17	1.11
0.483	1.11	2.050	18.94	3.617	7.80	5.18	1.11
0.500	1.11	2.067	18.94	3.633	7.80	5.20	1.11
0.517	1.11	2.083	18.94	3.650	7.80	5.22	1.11
0.533	1.11	2.100	18.94	3.667	7.80	5.23	1.11
0.550	1.11	2.117	18.94	3.683	7.80	5.25	1.11
0.567	1.11	2.133	18.94	3.700	7.80	5.27	1.11
0.583	1.11	2.150	18.94	3.717	7.80	5.28	1.11
0.600	1.11	2.167	18.94	3.733	7.80	5.30	1.11
0.617	1.11	2.183	18.94	3.750	7.80	5.32	1.11
0.633	1.11	2.200	18.94	3.767	4.46	5.33	1.11
0.650	1.11	2.217	18.94	3.783	4.46	5.35	1.11
0.667	1.11	2.233	18.94	3.800	4.46	5.37	1.11
0.683	1.11	2.250	18.94	3.817	4.46	5.38	1.11
0.700	1.11	2.267	51.24	3.833	4.46	5.40	1.11
0.717	1.11	2.283	51.24	3.850	4.46	5.42	1.11
0.733	1.11	2.300	51.24	3.867	4.46	5.43	1.11
0.750	1.11	2.317	51.24	3.883	4.46	5.45	1.11
0.767	1.11	2.333	51.24	3.900	4.46	5.47	1.11
0.783	1.11	2.350	51.24	3.917	4.46	5.48	1.11
0.800	1.11	2.367	51.24	3.933	4.46	5.50	1.11
0.817	1.11	2.383	51.24	3.950	4.46	5.52	1.11
0.833	1.11	2.400	51.24	3.967	4.46	5.53	1.11
0.850	1.11	2.417	51.24	3.983	4.46	5.55	1.11
0.867	1.11	2.433	51.24	4.000	4.46	5.57	1.11
0.883	1.11	2.450	51.24	4.017	4.46	5.58	1.11
0.900	1.11	2.467	51.24	4.033	4.46	5.60	1.11
0.917	1.11	2.483	51.24	4.050	4.46	5.62	1.11
0.933	1.11	2.500	51.24	4.067	4.46	5.63	1.11
0.950	1.11	2.517	51.24	4.083	4.46	5.65	1.11
0.967	1.11	2.533	51.24	4.100	4.46	5.67	1.11
0.983	1.11	2.550	51.24	4.117	4.46	5.68	1.11
1.000	1.11	2.567	51.24	4.133	4.46	5.70	1.11
1.017	1.11	2.583	51.24	4.150	4.46	5.72	1.11
1.033	1.11	2.600	51.24	4.167	4.46	5.73	1.11
1.050	1.11	2.617	51.24	4.183	4.46	5.75	1.11
1.067	1.11	2.633	51.24	4.200	4.46	5.77	1.11
1.083	1.11	2.650	51.24	4.217	4.46	5.78	1.11
1.100	1.11	2.667	51.24	4.233	4.46	5.80	1.11
1.117	1.11	2.683	51.24	4.250	4.46	5.82	1.11
1.133	1.11	2.700	51.24	4.267	2.23	5.83	1.11
1.150	1.11	2.717	51.24	4.283	2.23	5.85	1.11
1.167	1.11	2.733	51.24	4.300	2.23	5.87	1.11
1.183	1.11	2.750	51.24	4.317	2.23	5.88	1.11

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1.200	1.11	2.767	14.48	4.333	2.23	5.90	1.11
1.217	1.11	2.783	14.48	4.350	2.23	5.92	1.11
1.233	1.11	2.800	14.48	4.367	2.23	5.93	1.11
1.250	1.11	2.817	14.48	4.383	2.23	5.95	1.11
1.267	6.68	2.833	14.48	4.400	2.23	5.97	1.11
1.283	6.68	2.850	14.48	4.417	2.23	5.98	1.11
1.300	6.68	2.867	14.48	4.433	2.23	6.00	1.11
1.317	6.68	2.883	14.48	4.450	2.23	6.02	1.11
1.333	6.68	2.900	14.48	4.467	2.23	6.03	1.11
1.350	6.68	2.917	14.48	4.483	2.23	6.05	1.11
1.367	6.68	2.933	14.48	4.500	2.23	6.07	1.11
1.383	6.68	2.950	14.48	4.517	2.23	6.08	1.11
1.400	6.68	2.967	14.48	4.533	2.23	6.10	1.11
1.417	6.68	2.983	14.48	4.550	2.23	6.12	1.11
1.433	6.68	3.000	14.48	4.567	2.23	6.13	1.11
1.450	6.68	3.017	14.48	4.583	2.23	6.15	1.11
1.467	6.68	3.033	14.48	4.600	2.23	6.17	1.11
1.483	6.68	3.050	14.48	4.617	2.23	6.18	1.11
1.500	6.68	3.067	14.48	4.633	2.23	6.20	1.11
1.517	6.68	3.083	14.48	4.650	2.23	6.22	1.11
1.533	6.68	3.100	14.48	4.667	2.23	6.23	1.11
1.550	6.68	3.117	14.48	4.683	2.23	6.25	1.11
1.567	6.68	3.133	14.48	4.700	2.23		

Max.Eff.Inten.(mm/hr)=	51.24	40.57	
over (min)	5.00	6.00	
Storage Coeff. (min)=	3.53 (ii)	5.75 (ii)	
Unit Hyd. Tpeak (min)=	5.00	6.00	
Unit Hyd. peak (cms)=	0.28	0.19	
			TOTALS
PEAK FLOW (cms)=	0.25	0.00	0.256 (iii)
TIME TO PEAK (hrs)=	2.75	2.75	2.75
RUNOFF VOLUME (mm)=	54.69	35.63	54.50
TOTAL RAINFALL (mm)=	55.69	55.69	55.69
RUNOFF COEFFICIENT =	0.98	0.64	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 90.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7625)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0389	0.1013
	0.0164	0.0514	0.0456	0.1141
	0.0252	0.0690	0.0514	0.1288
	0.0309	0.0825	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7624)		1.800	0.256	2.75	54.50
OUTFLOW: ID= 1 (7625)		1.800	0.028	3.85	52.96

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.98
TIME SHIFT OF PEAK FLOW (min)= 66.00
MAXIMUM STORAGE USED (ha.m.)= 0.0758

CALIB		
STANDHYD (7623)	Area (ha)= 1.15	
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.14	0.01
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	87.56	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	6.68	3.150	14.48	4.72	2.23
0.033	0.00	1.600	6.68	3.167	14.48	4.73	2.23
0.050	0.00	1.617	6.68	3.183	14.48	4.75	2.23
0.067	0.00	1.633	6.68	3.200	14.48	4.77	1.11
0.083	0.00	1.650	6.68	3.217	14.48	4.78	1.11
0.100	0.00	1.667	6.68	3.233	14.48	4.80	1.11
0.117	0.00	1.683	6.68	3.250	14.48	4.82	1.11
0.133	0.00	1.700	6.68	3.267	7.80	4.83	1.11
0.150	0.00	1.717	6.68	3.283	7.80	4.85	1.11
0.167	0.00	1.733	6.68	3.300	7.80	4.87	1.11
0.183	0.00	1.750	6.68	3.317	7.80	4.88	1.11
0.200	0.00	1.767	18.94	3.333	7.80	4.90	1.11
0.217	0.00	1.783	18.94	3.350	7.80	4.92	1.11
0.233	0.00	1.800	18.94	3.367	7.80	4.93	1.11
0.250	0.00	1.817	18.94	3.383	7.80	4.95	1.11
0.267	1.11	1.833	18.94	3.400	7.80	4.97	1.11
0.283	1.11	1.850	18.94	3.417	7.80	4.98	1.11
0.300	1.11	1.867	18.94	3.433	7.80	5.00	1.11
0.317	1.11	1.883	18.94	3.450	7.80	5.02	1.11
0.333	1.11	1.900	18.94	3.467	7.80	5.03	1.11
0.350	1.11	1.917	18.94	3.483	7.80	5.05	1.11
0.367	1.11	1.933	18.94	3.500	7.80	5.07	1.11
0.383	1.11	1.950	18.94	3.517	7.80	5.08	1.11
0.400	1.11	1.967	18.94	3.533	7.80	5.10	1.11
0.417	1.11	1.983	18.94	3.550	7.80	5.12	1.11
0.433	1.11	2.000	18.94	3.567	7.80	5.13	1.11
0.450	1.11	2.017	18.94	3.583	7.80	5.15	1.11
0.467	1.11	2.033	18.94	3.600	7.80	5.17	1.11
0.483	1.11	2.050	18.94	3.617	7.80	5.18	1.11
0.500	1.11	2.067	18.94	3.633	7.80	5.20	1.11
0.517	1.11	2.083	18.94	3.650	7.80	5.22	1.11
0.533	1.11	2.100	18.94	3.667	7.80	5.23	1.11
0.550	1.11	2.117	18.94	3.683	7.80	5.25	1.11
0.567	1.11	2.133	18.94	3.700	7.80	5.27	1.11
0.583	1.11	2.150	18.94	3.717	7.80	5.28	1.11
0.600	1.11	2.167	18.94	3.733	7.80	5.30	1.11
0.617	1.11	2.183	18.94	3.750	7.80	5.32	1.11
0.633	1.11	2.200	18.94	3.767	4.46	5.33	1.11
0.650	1.11	2.217	18.94	3.783	4.46	5.35	1.11
0.667	1.11	2.233	18.94	3.800	4.46	5.37	1.11
0.683	1.11	2.250	18.94	3.817	4.46	5.38	1.11
0.700	1.11	2.267	51.24	3.833	4.46	5.40	1.11
0.717	1.11	2.283	51.24	3.850	4.46	5.42	1.11
0.733	1.11	2.300	51.24	3.867	4.46	5.43	1.11
0.750	1.11	2.317	51.24	3.883	4.46	5.45	1.11
0.767	1.11	2.333	51.24	3.900	4.46	5.47	1.11
0.783	1.11	2.350	51.24	3.917	4.46	5.48	1.11
0.800	1.11	2.367	51.24	3.933	4.46	5.50	1.11
0.817	1.11	2.383	51.24	3.950	4.46	5.52	1.11
0.833	1.11	2.400	51.24	3.967	4.46	5.53	1.11
0.850	1.11	2.417	51.24	3.983	4.46	5.55	1.11
0.867	1.11	2.433	51.24	4.000	4.46	5.57	1.11
0.883	1.11	2.450	51.24	4.017	4.46	5.58	1.11
0.900	1.11	2.467	51.24	4.033	4.46	5.60	1.11
0.917	1.11	2.483	51.24	4.050	4.46	5.62	1.11
0.933	1.11	2.500	51.24	4.067	4.46	5.63	1.11
0.950	1.11	2.517	51.24	4.083	4.46	5.65	1.11
0.967	1.11	2.533	51.24	4.100	4.46	5.67	1.11
0.983	1.11	2.550	51.24	4.117	4.46	5.68	1.11
1.000	1.11	2.567	51.24	4.133	4.46	5.70	1.11
1.017	1.11	2.583	51.24	4.150	4.46	5.72	1.11
1.033	1.11	2.600	51.24	4.167	4.46	5.73	1.11
1.050	1.11	2.617	51.24	4.183	4.46	5.75	1.11
1.067	1.11	2.633	51.24	4.200	4.46	5.77	1.11
1.083	1.11	2.650	51.24	4.217	4.46	5.78	1.11
1.100	1.11	2.667	51.24	4.233	4.46	5.80	1.11
1.117	1.11	2.683	51.24	4.250	4.46	5.82	1.11
1.133	1.11	2.700	51.24	4.267	2.23	5.83	1.11
1.150	1.11	2.717	51.24	4.283	2.23	5.85	1.11
1.167	1.11	2.733	51.24	4.300	2.23	5.87	1.11

1.183	1.11	2.750	51.24	4.317	2.23	5.88	1.11
1.200	1.11	2.767	14.48	4.333	2.23	5.90	1.11
1.217	1.11	2.783	14.48	4.350	2.23	5.92	1.11
1.233	1.11	2.800	14.48	4.367	2.23	5.93	1.11
1.250	1.11	2.817	14.48	4.383	2.23	5.95	1.11
1.267	6.68	2.833	14.48	4.400	2.23	5.97	1.11
1.283	6.68	2.850	14.48	4.417	2.23	5.98	1.11
1.300	6.68	2.867	14.48	4.433	2.23	6.00	1.11
1.317	6.68	2.883	14.48	4.450	2.23	6.02	1.11
1.333	6.68	2.900	14.48	4.467	2.23	6.03	1.11
1.350	6.68	2.917	14.48	4.483	2.23	6.05	1.11
1.367	6.68	2.933	14.48	4.500	2.23	6.07	1.11
1.383	6.68	2.950	14.48	4.517	2.23	6.08	1.11
1.400	6.68	2.967	14.48	4.533	2.23	6.10	1.11
1.417	6.68	2.983	14.48	4.550	2.23	6.12	1.11
1.433	6.68	3.000	14.48	4.567	2.23	6.13	1.11
1.450	6.68	3.017	14.48	4.583	2.23	6.15	1.11
1.467	6.68	3.033	14.48	4.600	2.23	6.17	1.11
1.483	6.68	3.050	14.48	4.617	2.23	6.18	1.11
1.500	6.68	3.067	14.48	4.633	2.23	6.20	1.11
1.517	6.68	3.083	14.48	4.650	2.23	6.22	1.11
1.533	6.68	3.100	14.48	4.667	2.23	6.23	1.11
1.550	6.68	3.117	14.48	4.683	2.23	6.25	1.11
1.567	6.68	3.133	14.48	4.700	2.23		

Max.Eff.Inten.(mm/hr)=	51.24	34.52	
over (min)	5.00	6.00	
Storage Coeff. (min)=	3.08 (ii)	5.31 (ii)	
Unit Hyd. Tpeak (min)=	5.00	6.00	
Unit Hyd. peak (cms)=	0.30	0.20	
			TOTALS
PEAK FLOW (cms)=	0.16	0.00	0.163 (iii)
TIME TO PEAK (hrs)=	2.75	2.75	2.75
RUNOFF VOLUME (mm)=	54.69	29.66	54.44
TOTAL RAINFALL (mm)=	55.69	55.69	55.69
RUNOFF COEFFICIENT =	0.98	0.53	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7622)	OVERFLOW IS OFF
IN= 2---> OUT= 1	
DT= 1.0 min	

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0258	0.0650
0.0108	0.0330	0.0302	0.0725
0.0167	0.0440	0.0340	0.0820
0.0204	0.0525	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2	(7623)	1.150	0.163	2.75	54.44
OUTFLOW: ID= 1	(7622)	1.150	0.018	3.85	53.04

PEAK FLOW REDUCTION [Qout/Qin](%)= 11.34
TIME SHIFT OF PEAK FLOW (min)= 66.00
MAXIMUM STORAGE USED (ha.m.)= 0.0481

CALIB	
STANDHYD (7629)	Area (ha)= 4.09
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	4.05	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	165.13	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	6.68	3.150	14.48	4.72	2.23
0.033	0.00	1.600	6.68	3.167	14.48	4.73	2.23
0.050	0.00	1.617	6.68	3.183	14.48	4.75	2.23
0.067	0.00	1.633	6.68	3.200	14.48	4.77	1.11
0.083	0.00	1.650	6.68	3.217	14.48	4.78	1.11
0.100	0.00	1.667	6.68	3.233	14.48	4.80	1.11
0.117	0.00	1.683	6.68	3.250	14.48	4.82	1.11
0.133	0.00	1.700	6.68	3.267	7.80	4.83	1.11
0.150	0.00	1.717	6.68	3.283	7.80	4.85	1.11
0.167	0.00	1.733	6.68	3.300	7.80	4.87	1.11
0.183	0.00	1.750	6.68	3.317	7.80	4.88	1.11
0.200	0.00	1.767	18.94	3.333	7.80	4.90	1.11
0.217	0.00	1.783	18.94	3.350	7.80	4.92	1.11
0.233	0.00	1.800	18.94	3.367	7.80	4.93	1.11
0.250	0.00	1.817	18.94	3.383	7.80	4.95	1.11
0.267	1.11	1.833	18.94	3.400	7.80	4.97	1.11
0.283	1.11	1.850	18.94	3.417	7.80	4.98	1.11
0.300	1.11	1.867	18.94	3.433	7.80	5.00	1.11
0.317	1.11	1.883	18.94	3.450	7.80	5.02	1.11
0.333	1.11	1.900	18.94	3.467	7.80	5.03	1.11
0.350	1.11	1.917	18.94	3.483	7.80	5.05	1.11
0.367	1.11	1.933	18.94	3.500	7.80	5.07	1.11
0.383	1.11	1.950	18.94	3.517	7.80	5.08	1.11
0.400	1.11	1.967	18.94	3.533	7.80	5.10	1.11
0.417	1.11	1.983	18.94	3.550	7.80	5.12	1.11
0.433	1.11	2.000	18.94	3.567	7.80	5.13	1.11
0.450	1.11	2.017	18.94	3.583	7.80	5.15	1.11
0.467	1.11	2.033	18.94	3.600	7.80	5.17	1.11
0.483	1.11	2.050	18.94	3.617	7.80	5.18	1.11
0.500	1.11	2.067	18.94	3.633	7.80	5.20	1.11
0.517	1.11	2.083	18.94	3.650	7.80	5.22	1.11
0.533	1.11	2.100	18.94	3.667	7.80	5.23	1.11
0.550	1.11	2.117	18.94	3.683	7.80	5.25	1.11
0.567	1.11	2.133	18.94	3.700	7.80	5.27	1.11
0.583	1.11	2.150	18.94	3.717	7.80	5.28	1.11
0.600	1.11	2.167	18.94	3.733	7.80	5.30	1.11
0.617	1.11	2.183	18.94	3.750	7.80	5.32	1.11
0.633	1.11	2.200	18.94	3.767	4.46	5.33	1.11
0.650	1.11	2.217	18.94	3.783	4.46	5.35	1.11
0.667	1.11	2.233	18.94	3.800	4.46	5.37	1.11
0.683	1.11	2.250	18.94	3.817	4.46	5.38	1.11
0.700	1.11	2.267	51.24	3.833	4.46	5.40	1.11
0.717	1.11	2.283	51.24	3.850	4.46	5.42	1.11
0.733	1.11	2.300	51.24	3.867	4.46	5.43	1.11
0.750	1.11	2.317	51.24	3.883	4.46	5.45	1.11
0.767	1.11	2.333	51.24	3.900	4.46	5.47	1.11
0.783	1.11	2.350	51.24	3.917	4.46	5.48	1.11
0.800	1.11	2.367	51.24	3.933	4.46	5.50	1.11
0.817	1.11	2.383	51.24	3.950	4.46	5.52	1.11
0.833	1.11	2.400	51.24	3.967	4.46	5.53	1.11
0.850	1.11	2.417	51.24	3.983	4.46	5.55	1.11
0.867	1.11	2.433	51.24	4.000	4.46	5.57	1.11
0.883	1.11	2.450	51.24	4.017	4.46	5.58	1.11
0.900	1.11	2.467	51.24	4.033	4.46	5.60	1.11
0.917	1.11	2.483	51.24	4.050	4.46	5.62	1.11
0.933	1.11	2.500	51.24	4.067	4.46	5.63	1.11
0.950	1.11	2.517	51.24	4.083	4.46	5.65	1.11
0.967	1.11	2.533	51.24	4.100	4.46	5.67	1.11
0.983	1.11	2.550	51.24	4.117	4.46	5.68	1.11
1.000	1.11	2.567	51.24	4.133	4.46	5.70	1.11
1.017	1.11	2.583	51.24	4.150	4.46	5.72	1.11
1.033	1.11	2.600	51.24	4.167	4.46	5.73	1.11
1.050	1.11	2.617	51.24	4.183	4.46	5.75	1.11
1.067	1.11	2.633	51.24	4.200	4.46	5.77	1.11
1.083	1.11	2.650	51.24	4.217	4.46	5.78	1.11
1.100	1.11	2.667	51.24	4.233	4.46	5.80	1.11
1.117	1.11	2.683	51.24	4.250	4.46	5.82	1.11
1.133	1.11	2.700	51.24	4.267	2.23	5.83	1.11
1.150	1.11	2.717	51.24	4.283	2.23	5.85	1.11

1.167	1.11	2.733	51.24	4.300	2.23	5.87	1.11
1.183	1.11	2.750	51.24	4.317	2.23	5.88	1.11
1.200	1.11	2.767	14.48	4.333	2.23	5.90	1.11
1.217	1.11	2.783	14.48	4.350	2.23	5.92	1.11
1.233	1.11	2.800	14.48	4.367	2.23	5.93	1.11
1.250	1.11	2.817	14.48	4.383	2.23	5.95	1.11
1.267	6.68	2.833	14.48	4.400	2.23	5.97	1.11
1.283	6.68	2.850	14.48	4.417	2.23	5.98	1.11
1.300	6.68	2.867	14.48	4.433	2.23	6.00	1.11
1.317	6.68	2.883	14.48	4.450	2.23	6.02	1.11
1.333	6.68	2.900	14.48	4.467	2.23	6.03	1.11
1.350	6.68	2.917	14.48	4.483	2.23	6.05	1.11
1.367	6.68	2.933	14.48	4.500	2.23	6.07	1.11
1.383	6.68	2.950	14.48	4.517	2.23	6.08	1.11
1.400	6.68	2.967	14.48	4.533	2.23	6.10	1.11
1.417	6.68	2.983	14.48	4.550	2.23	6.12	1.11
1.433	6.68	3.000	14.48	4.567	2.23	6.13	1.11
1.450	6.68	3.017	14.48	4.583	2.23	6.15	1.11
1.467	6.68	3.033	14.48	4.600	2.23	6.17	1.11
1.483	6.68	3.050	14.48	4.617	2.23	6.18	1.11
1.500	6.68	3.067	14.48	4.633	2.23	6.20	1.11
1.517	6.68	3.083	14.48	4.650	2.23	6.22	1.11
1.533	6.68	3.100	14.48	4.667	2.23	6.23	1.11
1.550	6.68	3.117	14.48	4.683	2.23	6.25	1.11
1.567	6.68	3.133	14.48	4.700	2.23		

Max.Eff.Inten.(mm/hr)=	51.24	34.52	
over (min)	5.00	7.00	
Storage Coeff. (min)=	4.51 (ii)	6.73 (ii)	
Unit Hyd. Tpeak (min)=	5.00	7.00	
Unit Hyd. peak (cms)=	0.24	0.17	
			TOTALS
PEAK FLOW (cms)=	0.58	0.00	0.579 (iii)
TIME TO PEAK (hrs)=	2.75	2.77	2.75
RUNOFF VOLUME (mm)=	54.69	29.66	54.44
TOTAL RAINFALL (mm)=	55.69	55.69	55.69
RUNOFF COEFFICIENT =	0.98	0.53	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7630) | OVERFLOW IS OFF
IN= 2---> OUT= 1
DT= 1.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0826	0.2320
0.0347	0.1170	0.0967	0.2609
0.0534	0.1580	0.1090	0.2940
0.0655	0.1890	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7629)	4.090	0.579	2.75	54.44
OUTFLOW: ID= 1 (7630)	4.090	0.060	3.90	52.46

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.30
TIME SHIFT OF PEAK FLOW (min)= 69.00
MAXIMUM STORAGE USED (ha.m.)= 0.1740

CALIB
STANDHYD (7631) | Area (ha)= 3.91
ID= 1 DT= 1.0 min | Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.87	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	161.45	40.00

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	6.68	3.150	14.48	4.72	2.23
0.033	0.00	1.600	6.68	3.167	14.48	4.73	2.23
0.050	0.00	1.617	6.68	3.183	14.48	4.75	2.23
0.067	0.00	1.633	6.68	3.200	14.48	4.77	1.11
0.083	0.00	1.650	6.68	3.217	14.48	4.78	1.11
0.100	0.00	1.667	6.68	3.233	14.48	4.80	1.11
0.117	0.00	1.683	6.68	3.250	14.48	4.82	1.11
0.133	0.00	1.700	6.68	3.267	7.80	4.83	1.11
0.150	0.00	1.717	6.68	3.283	7.80	4.85	1.11
0.167	0.00	1.733	6.68	3.300	7.80	4.87	1.11
0.183	0.00	1.750	6.68	3.317	7.80	4.88	1.11
0.200	0.00	1.767	18.94	3.333	7.80	4.90	1.11
0.217	0.00	1.783	18.94	3.350	7.80	4.92	1.11
0.233	0.00	1.800	18.94	3.367	7.80	4.93	1.11
0.250	0.00	1.817	18.94	3.383	7.80	4.95	1.11
0.267	1.11	1.833	18.94	3.400	7.80	4.97	1.11
0.283	1.11	1.850	18.94	3.417	7.80	4.98	1.11
0.300	1.11	1.867	18.94	3.433	7.80	5.00	1.11
0.317	1.11	1.883	18.94	3.450	7.80	5.02	1.11
0.333	1.11	1.900	18.94	3.467	7.80	5.03	1.11
0.350	1.11	1.917	18.94	3.483	7.80	5.05	1.11
0.367	1.11	1.933	18.94	3.500	7.80	5.07	1.11
0.383	1.11	1.950	18.94	3.517	7.80	5.08	1.11
0.400	1.11	1.967	18.94	3.533	7.80	5.10	1.11
0.417	1.11	1.983	18.94	3.550	7.80	5.12	1.11
0.433	1.11	2.000	18.94	3.567	7.80	5.13	1.11
0.450	1.11	2.017	18.94	3.583	7.80	5.15	1.11
0.467	1.11	2.033	18.94	3.600	7.80	5.17	1.11
0.483	1.11	2.050	18.94	3.617	7.80	5.18	1.11
0.500	1.11	2.067	18.94	3.633	7.80	5.20	1.11
0.517	1.11	2.083	18.94	3.650	7.80	5.22	1.11
0.533	1.11	2.100	18.94	3.667	7.80	5.23	1.11
0.550	1.11	2.117	18.94	3.683	7.80	5.25	1.11
0.567	1.11	2.133	18.94	3.700	7.80	5.27	1.11
0.583	1.11	2.150	18.94	3.717	7.80	5.28	1.11
0.600	1.11	2.167	18.94	3.733	7.80	5.30	1.11
0.617	1.11	2.183	18.94	3.750	7.80	5.32	1.11
0.633	1.11	2.200	18.94	3.767	4.46	5.33	1.11
0.650	1.11	2.217	18.94	3.783	4.46	5.35	1.11
0.667	1.11	2.233	18.94	3.800	4.46	5.37	1.11
0.683	1.11	2.250	18.94	3.817	4.46	5.38	1.11
0.700	1.11	2.267	51.24	3.833	4.46	5.40	1.11
0.717	1.11	2.283	51.24	3.850	4.46	5.42	1.11
0.733	1.11	2.300	51.24	3.867	4.46	5.43	1.11
0.750	1.11	2.317	51.24	3.883	4.46	5.45	1.11
0.767	1.11	2.333	51.24	3.900	4.46	5.47	1.11
0.783	1.11	2.350	51.24	3.917	4.46	5.48	1.11
0.800	1.11	2.367	51.24	3.933	4.46	5.50	1.11
0.817	1.11	2.383	51.24	3.950	4.46	5.52	1.11
0.833	1.11	2.400	51.24	3.967	4.46	5.53	1.11
0.850	1.11	2.417	51.24	3.983	4.46	5.55	1.11
0.867	1.11	2.433	51.24	4.000	4.46	5.57	1.11
0.883	1.11	2.450	51.24	4.017	4.46	5.58	1.11
0.900	1.11	2.467	51.24	4.033	4.46	5.60	1.11
0.917	1.11	2.483	51.24	4.050	4.46	5.62	1.11
0.933	1.11	2.500	51.24	4.067	4.46	5.63	1.11
0.950	1.11	2.517	51.24	4.083	4.46	5.65	1.11
0.967	1.11	2.533	51.24	4.100	4.46	5.67	1.11
0.983	1.11	2.550	51.24	4.117	4.46	5.68	1.11
1.000	1.11	2.567	51.24	4.133	4.46	5.70	1.11
1.017	1.11	2.583	51.24	4.150	4.46	5.72	1.11
1.033	1.11	2.600	51.24	4.167	4.46	5.73	1.11
1.050	1.11	2.617	51.24	4.183	4.46	5.75	1.11
1.067	1.11	2.633	51.24	4.200	4.46	5.77	1.11
1.083	1.11	2.650	51.24	4.217	4.46	5.78	1.11
1.100	1.11	2.667	51.24	4.233	4.46	5.80	1.11
1.117	1.11	2.683	51.24	4.250	4.46	5.82	1.11
1.133	1.11	2.700	51.24	4.267	2.23	5.83	1.11

1.150	1.11	2.717	51.24	4.283	2.23	5.85	1.11
1.167	1.11	2.733	51.24	4.300	2.23	5.87	1.11
1.183	1.11	2.750	51.24	4.317	2.23	5.88	1.11
1.200	1.11	2.767	14.48	4.333	2.23	5.90	1.11
1.217	1.11	2.783	14.48	4.350	2.23	5.92	1.11
1.233	1.11	2.800	14.48	4.367	2.23	5.93	1.11
1.250	1.11	2.817	14.48	4.383	2.23	5.95	1.11
1.267	6.68	2.833	14.48	4.400	2.23	5.97	1.11
1.283	6.68	2.850	14.48	4.417	2.23	5.98	1.11
1.300	6.68	2.867	14.48	4.433	2.23	6.00	1.11
1.317	6.68	2.883	14.48	4.450	2.23	6.02	1.11
1.333	6.68	2.900	14.48	4.467	2.23	6.03	1.11
1.350	6.68	2.917	14.48	4.483	2.23	6.05	1.11
1.367	6.68	2.933	14.48	4.500	2.23	6.07	1.11
1.383	6.68	2.950	14.48	4.517	2.23	6.08	1.11
1.400	6.68	2.967	14.48	4.533	2.23	6.10	1.11
1.417	6.68	2.983	14.48	4.550	2.23	6.12	1.11
1.433	6.68	3.000	14.48	4.567	2.23	6.13	1.11
1.450	6.68	3.017	14.48	4.583	2.23	6.15	1.11
1.467	6.68	3.033	14.48	4.600	2.23	6.17	1.11
1.483	6.68	3.050	14.48	4.617	2.23	6.18	1.11
1.500	6.68	3.067	14.48	4.633	2.23	6.20	1.11
1.517	6.68	3.083	14.48	4.650	2.23	6.22	1.11
1.533	6.68	3.100	14.48	4.667	2.23	6.23	1.11
1.550	6.68	3.117	14.48	4.683	2.23	6.25	1.11
1.567	6.68	3.133	14.48	4.700	2.23		

Max.Eff.Inten.(mm/hr)=		51.24	34.52	
over (min)		5.00	7.00	
Storage Coeff. (min)=		4.45 (ii)	6.67 (ii)	
Unit Hyd. Tpeak (min)=		5.00	7.00	
Unit Hyd. peak (cms)=		0.24	0.17	
				TOTALS
PEAK FLOW	(cms)=	0.55	0.00	0.554 (iii)
TIME TO PEAK	(hrs)=	2.75	2.77	2.75
RUNOFF VOLUME	(mm)=	54.69	29.66	54.44
TOTAL RAINFALL	(mm)=	55.69	55.69	55.69
RUNOFF COEFFICIENT	=	0.98	0.53	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7632)	IN= 2---> OUT= 1	DT= 1.0 min	OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0792	0.2220
0.0333	0.1130	0.0928	0.2500
0.0512	0.1510	0.1046	0.2810
0.0629	0.1810	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (	7631)	3.910	0.554	2.75	54.44
OUTFLOW: ID= 1 (	7632)	3.910	0.057	3.90	52.43

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.33
TIME SHIFT OF PEAK FLOW (min)= 69.00
MAXIMUM STORAGE USED (ha.m.)= 0.1663

CALIB	STANDHYD (7641)	ID= 1 DT= 1.0 min	Area (ha)= 2.21	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.19	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50

Length	(m)=	121.38	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	6.68	3.150	14.48	4.72	2.23
0.033	0.00	1.600	6.68	3.167	14.48	4.73	2.23
0.050	0.00	1.617	6.68	3.183	14.48	4.75	2.23
0.067	0.00	1.633	6.68	3.200	14.48	4.77	1.11
0.083	0.00	1.650	6.68	3.217	14.48	4.78	1.11
0.100	0.00	1.667	6.68	3.233	14.48	4.80	1.11
0.117	0.00	1.683	6.68	3.250	14.48	4.82	1.11
0.133	0.00	1.700	6.68	3.267	7.80	4.83	1.11
0.150	0.00	1.717	6.68	3.283	7.80	4.85	1.11
0.167	0.00	1.733	6.68	3.300	7.80	4.87	1.11
0.183	0.00	1.750	6.68	3.317	7.80	4.88	1.11
0.200	0.00	1.767	18.94	3.333	7.80	4.90	1.11
0.217	0.00	1.783	18.94	3.350	7.80	4.92	1.11
0.233	0.00	1.800	18.94	3.367	7.80	4.93	1.11
0.250	0.00	1.817	18.94	3.383	7.80	4.95	1.11
0.267	1.11	1.833	18.94	3.400	7.80	4.97	1.11
0.283	1.11	1.850	18.94	3.417	7.80	4.98	1.11
0.300	1.11	1.867	18.94	3.433	7.80	5.00	1.11
0.317	1.11	1.883	18.94	3.450	7.80	5.02	1.11
0.333	1.11	1.900	18.94	3.467	7.80	5.03	1.11
0.350	1.11	1.917	18.94	3.483	7.80	5.05	1.11
0.367	1.11	1.933	18.94	3.500	7.80	5.07	1.11
0.383	1.11	1.950	18.94	3.517	7.80	5.08	1.11
0.400	1.11	1.967	18.94	3.533	7.80	5.10	1.11
0.417	1.11	1.983	18.94	3.550	7.80	5.12	1.11
0.433	1.11	2.000	18.94	3.567	7.80	5.13	1.11
0.450	1.11	2.017	18.94	3.583	7.80	5.15	1.11
0.467	1.11	2.033	18.94	3.600	7.80	5.17	1.11
0.483	1.11	2.050	18.94	3.617	7.80	5.18	1.11
0.500	1.11	2.067	18.94	3.633	7.80	5.20	1.11
0.517	1.11	2.083	18.94	3.650	7.80	5.22	1.11
0.533	1.11	2.100	18.94	3.667	7.80	5.23	1.11
0.550	1.11	2.117	18.94	3.683	7.80	5.25	1.11
0.567	1.11	2.133	18.94	3.700	7.80	5.27	1.11
0.583	1.11	2.150	18.94	3.717	7.80	5.28	1.11
0.600	1.11	2.167	18.94	3.733	7.80	5.30	1.11
0.617	1.11	2.183	18.94	3.750	7.80	5.32	1.11
0.633	1.11	2.200	18.94	3.767	4.46	5.33	1.11
0.650	1.11	2.217	18.94	3.783	4.46	5.35	1.11
0.667	1.11	2.233	18.94	3.800	4.46	5.37	1.11
0.683	1.11	2.250	18.94	3.817	4.46	5.38	1.11
0.700	1.11	2.267	51.24	3.833	4.46	5.40	1.11
0.717	1.11	2.283	51.24	3.850	4.46	5.42	1.11
0.733	1.11	2.300	51.24	3.867	4.46	5.43	1.11
0.750	1.11	2.317	51.24	3.883	4.46	5.45	1.11
0.767	1.11	2.333	51.24	3.900	4.46	5.47	1.11
0.783	1.11	2.350	51.24	3.917	4.46	5.48	1.11
0.800	1.11	2.367	51.24	3.933	4.46	5.50	1.11
0.817	1.11	2.383	51.24	3.950	4.46	5.52	1.11
0.833	1.11	2.400	51.24	3.967	4.46	5.53	1.11
0.850	1.11	2.417	51.24	3.983	4.46	5.55	1.11
0.867	1.11	2.433	51.24	4.000	4.46	5.57	1.11
0.883	1.11	2.450	51.24	4.017	4.46	5.58	1.11
0.900	1.11	2.467	51.24	4.033	4.46	5.60	1.11
0.917	1.11	2.483	51.24	4.050	4.46	5.62	1.11
0.933	1.11	2.500	51.24	4.067	4.46	5.63	1.11
0.950	1.11	2.517	51.24	4.083	4.46	5.65	1.11
0.967	1.11	2.533	51.24	4.100	4.46	5.67	1.11
0.983	1.11	2.550	51.24	4.117	4.46	5.68	1.11
1.000	1.11	2.567	51.24	4.133	4.46	5.70	1.11
1.017	1.11	2.583	51.24	4.150	4.46	5.72	1.11
1.033	1.11	2.600	51.24	4.167	4.46	5.73	1.11
1.050	1.11	2.617	51.24	4.183	4.46	5.75	1.11
1.067	1.11	2.633	51.24	4.200	4.46	5.77	1.11
1.083	1.11	2.650	51.24	4.217	4.46	5.78	1.11
1.100	1.11	2.667	51.24	4.233	4.46	5.80	1.11
1.117	1.11	2.683	51.24	4.250	4.46	5.82	1.11

1.133	1.11	2.700	51.24	4.267	2.23	5.83	1.11
1.150	1.11	2.717	51.24	4.283	2.23	5.85	1.11
1.167	1.11	2.733	51.24	4.300	2.23	5.87	1.11
1.183	1.11	2.750	51.24	4.317	2.23	5.88	1.11
1.200	1.11	2.767	14.48	4.333	2.23	5.90	1.11
1.217	1.11	2.783	14.48	4.350	2.23	5.92	1.11
1.233	1.11	2.800	14.48	4.367	2.23	5.93	1.11
1.250	1.11	2.817	14.48	4.383	2.23	5.95	1.11
1.267	6.68	2.833	14.48	4.400	2.23	5.97	1.11
1.283	6.68	2.850	14.48	4.417	2.23	5.98	1.11
1.300	6.68	2.867	14.48	4.433	2.23	6.00	1.11
1.317	6.68	2.883	14.48	4.450	2.23	6.02	1.11
1.333	6.68	2.900	14.48	4.467	2.23	6.03	1.11
1.350	6.68	2.917	14.48	4.483	2.23	6.05	1.11
1.367	6.68	2.933	14.48	4.500	2.23	6.07	1.11
1.383	6.68	2.950	14.48	4.517	2.23	6.08	1.11
1.400	6.68	2.967	14.48	4.533	2.23	6.10	1.11
1.417	6.68	2.983	14.48	4.550	2.23	6.12	1.11
1.433	6.68	3.000	14.48	4.567	2.23	6.13	1.11
1.450	6.68	3.017	14.48	4.583	2.23	6.15	1.11
1.467	6.68	3.033	14.48	4.600	2.23	6.17	1.11
1.483	6.68	3.050	14.48	4.617	2.23	6.18	1.11
1.500	6.68	3.067	14.48	4.633	2.23	6.20	1.11
1.517	6.68	3.083	14.48	4.650	2.23	6.22	1.11
1.533	6.68	3.100	14.48	4.667	2.23	6.23	1.11
1.550	6.68	3.117	14.48	4.683	2.23	6.25	1.11
1.567	6.68	3.133	14.48	4.700	2.23		

Max.Eff.Inten.(mm/hr)=	51.24	34.52	
over (min)	5.00	6.00	
Storage Coeff. (min)=	3.75 (ii)	5.97 (ii)	
Unit Hyd. Tpeak (min)=	5.00	6.00	
Unit Hyd. peak (cms)=	0.27	0.19	
			TOTALS
PEAK FLOW (cms)=	0.31	0.00	0.313 (iii)
TIME TO PEAK (hrs)=	2.75	2.75	2.75
RUNOFF VOLUME (mm)=	54.69	29.66	54.44
TOTAL RAINFALL (mm)=	55.69	55.69	55.69
RUNOFF COEFFICIENT =	0.98	0.53	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7642) IN= 2---> OUT= 1 DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0470	0.1250
	0.0197	0.0630	0.0551	0.1410
	0.0304	0.0850	0.0620	0.1580
	0.0373	0.1020	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7641)	2.210	0.313	2.75	54.44
OUTFLOW: ID= 1 (7642)	2.210	0.034	3.87	52.79

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.77
TIME SHIFT OF PEAK FLOW (min)= 67.00
MAXIMUM STORAGE USED (ha.m.)= 0.0933

CALIB STANDHYD (7643) ID= 1 DT= 1.0 min	Area (ha)= 2.02 Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00		
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	2.00	0.02	
Dep. Storage (mm)=	1.00	1.50	

Average Slope (%)=	1.00	0.50
Length (m)=	116.05	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	6.68	3.150	14.48	4.72	2.23
0.033	0.00	1.600	6.68	3.167	14.48	4.73	2.23
0.050	0.00	1.617	6.68	3.183	14.48	4.75	2.23
0.067	0.00	1.633	6.68	3.200	14.48	4.77	1.11
0.083	0.00	1.650	6.68	3.217	14.48	4.78	1.11
0.100	0.00	1.667	6.68	3.233	14.48	4.80	1.11
0.117	0.00	1.683	6.68	3.250	14.48	4.82	1.11
0.133	0.00	1.700	6.68	3.267	7.80	4.83	1.11
0.150	0.00	1.717	6.68	3.283	7.80	4.85	1.11
0.167	0.00	1.733	6.68	3.300	7.80	4.87	1.11
0.183	0.00	1.750	6.68	3.317	7.80	4.88	1.11
0.200	0.00	1.767	18.94	3.333	7.80	4.90	1.11
0.217	0.00	1.783	18.94	3.350	7.80	4.92	1.11
0.233	0.00	1.800	18.94	3.367	7.80	4.93	1.11
0.250	0.00	1.817	18.94	3.383	7.80	4.95	1.11
0.267	1.11	1.833	18.94	3.400	7.80	4.97	1.11
0.283	1.11	1.850	18.94	3.417	7.80	4.98	1.11
0.300	1.11	1.867	18.94	3.433	7.80	5.00	1.11
0.317	1.11	1.883	18.94	3.450	7.80	5.02	1.11
0.333	1.11	1.900	18.94	3.467	7.80	5.03	1.11
0.350	1.11	1.917	18.94	3.483	7.80	5.05	1.11
0.367	1.11	1.933	18.94	3.500	7.80	5.07	1.11
0.383	1.11	1.950	18.94	3.517	7.80	5.08	1.11
0.400	1.11	1.967	18.94	3.533	7.80	5.10	1.11
0.417	1.11	1.983	18.94	3.550	7.80	5.12	1.11
0.433	1.11	2.000	18.94	3.567	7.80	5.13	1.11
0.450	1.11	2.017	18.94	3.583	7.80	5.15	1.11
0.467	1.11	2.033	18.94	3.600	7.80	5.17	1.11
0.483	1.11	2.050	18.94	3.617	7.80	5.18	1.11
0.500	1.11	2.067	18.94	3.633	7.80	5.20	1.11
0.517	1.11	2.083	18.94	3.650	7.80	5.22	1.11
0.533	1.11	2.100	18.94	3.667	7.80	5.23	1.11
0.550	1.11	2.117	18.94	3.683	7.80	5.25	1.11
0.567	1.11	2.133	18.94	3.700	7.80	5.27	1.11
0.583	1.11	2.150	18.94	3.717	7.80	5.28	1.11
0.600	1.11	2.167	18.94	3.733	7.80	5.30	1.11
0.617	1.11	2.183	18.94	3.750	7.80	5.32	1.11
0.633	1.11	2.200	18.94	3.767	4.46	5.33	1.11
0.650	1.11	2.217	18.94	3.783	4.46	5.35	1.11
0.667	1.11	2.233	18.94	3.800	4.46	5.37	1.11
0.683	1.11	2.250	18.94	3.817	4.46	5.38	1.11
0.700	1.11	2.267	51.24	3.833	4.46	5.40	1.11
0.717	1.11	2.283	51.24	3.850	4.46	5.42	1.11
0.733	1.11	2.300	51.24	3.867	4.46	5.43	1.11
0.750	1.11	2.317	51.24	3.883	4.46	5.45	1.11
0.767	1.11	2.333	51.24	3.900	4.46	5.47	1.11
0.783	1.11	2.350	51.24	3.917	4.46	5.48	1.11
0.800	1.11	2.367	51.24	3.933	4.46	5.50	1.11
0.817	1.11	2.383	51.24	3.950	4.46	5.52	1.11
0.833	1.11	2.400	51.24	3.967	4.46	5.53	1.11
0.850	1.11	2.417	51.24	3.983	4.46	5.55	1.11
0.867	1.11	2.433	51.24	4.000	4.46	5.57	1.11
0.883	1.11	2.450	51.24	4.017	4.46	5.58	1.11
0.900	1.11	2.467	51.24	4.033	4.46	5.60	1.11
0.917	1.11	2.483	51.24	4.050	4.46	5.62	1.11
0.933	1.11	2.500	51.24	4.067	4.46	5.63	1.11
0.950	1.11	2.517	51.24	4.083	4.46	5.65	1.11
0.967	1.11	2.533	51.24	4.100	4.46	5.67	1.11
0.983	1.11	2.550	51.24	4.117	4.46	5.68	1.11
1.000	1.11	2.567	51.24	4.133	4.46	5.70	1.11
1.017	1.11	2.583	51.24	4.150	4.46	5.72	1.11
1.033	1.11	2.600	51.24	4.167	4.46	5.73	1.11
1.050	1.11	2.617	51.24	4.183	4.46	5.75	1.11
1.067	1.11	2.633	51.24	4.200	4.46	5.77	1.11
1.083	1.11	2.650	51.24	4.217	4.46	5.78	1.11
1.100	1.11	2.667	51.24	4.233	4.46	5.80	1.11

1.117	1.11	2.683	51.24	4.250	4.46	5.82	1.11
1.133	1.11	2.700	51.24	4.267	2.23	5.83	1.11
1.150	1.11	2.717	51.24	4.283	2.23	5.85	1.11
1.167	1.11	2.733	51.24	4.300	2.23	5.87	1.11
1.183	1.11	2.750	51.24	4.317	2.23	5.88	1.11
1.200	1.11	2.767	14.48	4.333	2.23	5.90	1.11
1.217	1.11	2.783	14.48	4.350	2.23	5.92	1.11
1.233	1.11	2.800	14.48	4.367	2.23	5.93	1.11
1.250	1.11	2.817	14.48	4.383	2.23	5.95	1.11
1.267	6.68	2.833	14.48	4.400	2.23	5.97	1.11
1.283	6.68	2.850	14.48	4.417	2.23	5.98	1.11
1.300	6.68	2.867	14.48	4.433	2.23	6.00	1.11
1.317	6.68	2.883	14.48	4.450	2.23	6.02	1.11
1.333	6.68	2.900	14.48	4.467	2.23	6.03	1.11
1.350	6.68	2.917	14.48	4.483	2.23	6.05	1.11
1.367	6.68	2.933	14.48	4.500	2.23	6.07	1.11
1.383	6.68	2.950	14.48	4.517	2.23	6.08	1.11
1.400	6.68	2.967	14.48	4.533	2.23	6.10	1.11
1.417	6.68	2.983	14.48	4.550	2.23	6.12	1.11
1.433	6.68	3.000	14.48	4.567	2.23	6.13	1.11
1.450	6.68	3.017	14.48	4.583	2.23	6.15	1.11
1.467	6.68	3.033	14.48	4.600	2.23	6.17	1.11
1.483	6.68	3.050	14.48	4.617	2.23	6.18	1.11
1.500	6.68	3.067	14.48	4.633	2.23	6.20	1.11
1.517	6.68	3.083	14.48	4.650	2.23	6.22	1.11
1.533	6.68	3.100	14.48	4.667	2.23	6.23	1.11
1.550	6.68	3.117	14.48	4.683	2.23	6.25	1.11
1.567	6.68	3.133	14.48	4.700	2.23		

Max.Eff.Inten.(mm/hr)=	51.24	34.52	
over (min)	5.00	6.00	
Storage Coeff. (min)=	3.65 (ii)	5.87 (ii)	
Unit Hyd. Tpeak (min)=	5.00	6.00	
Unit Hyd. peak (cms)=	0.28	0.19	
			TOTALS
PEAK FLOW (cms)=	0.28	0.00	0.286 (iii)
TIME TO PEAK (hrs)=	2.75	2.75	2.75
RUNOFF VOLUME (mm)=	54.69	29.66	54.44
TOTAL RAINFALL (mm)=	55.69	55.69	55.69
RUNOFF COEFFICIENT =	0.98	0.53	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7644)| IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0433	0.1140
	0.0182	0.0580	0.0507	0.1280
	0.0280	0.0775	0.0571	0.1440
	0.0343	0.0930	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7643)	2.020	0.286	2.75	54.44
OUTFLOW: ID= 1 (7644)	2.020	0.031	3.87	52.81

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.86
TIME SHIFT OF PEAK FLOW (min)= 67.00
MAXIMUM STORAGE USED (ha.m.)= 0.0851

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      V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
      V    V   I    SS     U   U   A A   L
       V  V    I      SS   U   U  AAAAA  L
        V V    I       SS  U   U  A   A  L
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        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
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***** D E T A I L E D O U T P U T *****

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DATE: 06/14/2024                          TIME: 12:48:37

USER:


COMMENTS: _____
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  ************************************************
  ** SIMULATION : 91. 10 Year 12 Hour AES (Bloo **
  ************************************************
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READ STORM | Ptotal= 62.71 mm	Filename: C:\Users\ygollamudi\AppData\Local\Temp\3c3f87d5-a26e-4c6b-b2ae-56a7ba29ab7f\8ddbc7c5 Comments: 10 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	3.25	10.66	6.50	4.39	9.75	0.63
0.25	0.63	3.50	10.66	6.75	4.39	10.00	0.63
0.50	0.63	3.75	10.66	7.00	4.39	10.25	0.63
0.75	0.63	4.00	10.66	7.25	2.51	10.50	0.63
1.00	0.63	4.25	28.84	7.50	2.51	10.75	0.63
1.25	0.63	4.50	28.84	7.75	2.51	11.00	0.63
1.50	0.63	4.75	28.84	8.00	2.51	11.25	0.63
1.75	0.63	5.00	28.84	8.25	1.25	11.50	0.63
2.00	0.63	5.25	8.15	8.50	1.25	11.75	0.63
2.25	3.76	5.50	8.15	8.75	1.25	12.00	0.63
2.50	3.76	5.75	8.15	9.00	1.25		
2.75	3.76	6.00	8.15	9.25	0.63		
3.00	3.76	6.25	4.39	9.50	0.63		

CALIB | STANDHYD (7567)| ID= 1 DT= 1.0 min	Area (ha)= 2.72 Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.69	0.03
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	134.66	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

GEI Consultants

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	3.76	6.150	8.15	9.22	1.25
0.033	0.00	3.100	3.76	6.167	8.15	9.23	1.25
0.050	0.00	3.117	3.76	6.183	8.15	9.25	1.25
0.067	0.00	3.133	3.76	6.200	8.15	9.27	0.63
0.083	0.00	3.150	3.76	6.217	8.15	9.28	0.63
0.100	0.00	3.167	3.76	6.233	8.15	9.30	0.63
0.117	0.00	3.183	3.76	6.250	8.14	9.32	0.63
0.133	0.00	3.200	3.76	6.267	4.39	9.33	0.63
0.150	0.00	3.217	3.76	6.283	4.39	9.35	0.63
0.167	0.00	3.233	3.76	6.300	4.39	9.37	0.63
0.183	0.00	3.250	3.76	6.317	4.39	9.38	0.63
0.200	0.00	3.267	10.66	6.333	4.39	9.40	0.63
0.217	0.00	3.283	10.66	6.350	4.39	9.42	0.63
0.233	0.00	3.300	10.66	6.367	4.39	9.43	0.63
0.250	0.00	3.317	10.66	6.383	4.39	9.45	0.63
0.267	0.63	3.333	10.66	6.400	4.39	9.47	0.63
0.283	0.63	3.350	10.66	6.417	4.39	9.48	0.63
0.300	0.63	3.367	10.66	6.433	4.39	9.50	0.63
0.317	0.63	3.383	10.66	6.450	4.39	9.52	0.63
0.333	0.63	3.400	10.66	6.467	4.39	9.53	0.63
0.350	0.63	3.417	10.66	6.483	4.39	9.55	0.63
0.367	0.63	3.433	10.66	6.500	4.39	9.57	0.63
0.383	0.63	3.450	10.66	6.517	4.39	9.58	0.63
0.400	0.63	3.467	10.66	6.533	4.39	9.60	0.63
0.417	0.63	3.483	10.66	6.550	4.39	9.62	0.63
0.433	0.63	3.500	10.66	6.567	4.39	9.63	0.63
0.450	0.63	3.517	10.66	6.583	4.39	9.65	0.63
0.467	0.63	3.533	10.66	6.600	4.39	9.67	0.63
0.483	0.63	3.550	10.66	6.617	4.39	9.68	0.63
0.500	0.63	3.567	10.66	6.633	4.39	9.70	0.63
0.517	0.63	3.583	10.66	6.650	4.39	9.72	0.63
0.533	0.63	3.600	10.66	6.667	4.39	9.73	0.63
0.550	0.63	3.617	10.66	6.683	4.39	9.75	0.63
0.567	0.63	3.633	10.66	6.700	4.39	9.77	0.63
0.583	0.63	3.650	10.66	6.717	4.39	9.78	0.63
0.600	0.63	3.667	10.66	6.733	4.39	9.80	0.63
0.617	0.63	3.683	10.66	6.750	4.39	9.82	0.63
0.633	0.63	3.700	10.66	6.767	4.39	9.83	0.63
0.650	0.63	3.717	10.66	6.783	4.39	9.85	0.63
0.667	0.63	3.733	10.66	6.800	4.39	9.87	0.63
0.683	0.63	3.750	10.66	6.817	4.39	9.88	0.63
0.700	0.63	3.767	10.66	6.833	4.39	9.90	0.63
0.717	0.63	3.783	10.66	6.850	4.39	9.92	0.63
0.733	0.63	3.800	10.66	6.867	4.39	9.93	0.63
0.750	0.63	3.817	10.66	6.883	4.39	9.95	0.63
0.767	0.63	3.833	10.66	6.900	4.39	9.97	0.63
0.783	0.63	3.850	10.66	6.917	4.39	9.98	0.63
0.800	0.63	3.867	10.66	6.933	4.39	10.00	0.63
0.817	0.63	3.883	10.66	6.950	4.39	10.02	0.63
0.833	0.63	3.900	10.66	6.967	4.39	10.03	0.63
0.850	0.63	3.917	10.66	6.983	4.39	10.05	0.63
0.867	0.63	3.933	10.66	7.000	4.39	10.07	0.63
0.883	0.63	3.950	10.66	7.017	4.39	10.08	0.63
0.900	0.63	3.967	10.66	7.033	4.39	10.10	0.63
0.917	0.63	3.983	10.66	7.050	4.39	10.12	0.63
0.933	0.63	4.000	10.66	7.067	4.39	10.13	0.63
0.950	0.63	4.017	10.66	7.083	4.39	10.15	0.63
0.967	0.63	4.033	10.66	7.100	4.39	10.17	0.63
0.983	0.63	4.050	10.66	7.117	4.39	10.18	0.63
1.000	0.63	4.067	10.66	7.133	4.39	10.20	0.63
1.017	0.63	4.083	10.66	7.150	4.39	10.22	0.63
1.033	0.63	4.100	10.66	7.167	4.39	10.23	0.63
1.050	0.63	4.117	10.66	7.183	4.39	10.25	0.63
1.067	0.63	4.133	10.66	7.200	4.39	10.27	0.63
1.083	0.63	4.150	10.66	7.217	4.39	10.28	0.63
1.100	0.63	4.167	10.66	7.233	4.39	10.30	0.63
1.117	0.63	4.183	10.66	7.250	4.39	10.32	0.63
1.133	0.63	4.200	10.66	7.267	2.51	10.33	0.63
1.150	0.63	4.217	10.66	7.283	2.51	10.35	0.63
1.167	0.63	4.233	10.66	7.300	2.51	10.37	0.63
1.183	0.63	4.250	10.66	7.317	2.51	10.38	0.63
1.200	0.63	4.267	28.84	7.333	2.51	10.40	0.63
1.217	0.63	4.283	28.84	7.350	2.51	10.42	0.63
1.233	0.63	4.300	28.84	7.367	2.51	10.43	0.63
1.250	0.63	4.317	28.84	7.383	2.51	10.45	0.63
1.267	0.63	4.333	28.84	7.400	2.51	10.47	0.63
1.283	0.63	4.350	28.84	7.417	2.51	10.48	0.63
1.300	0.63	4.367	28.84	7.433	2.51	10.50	0.63
1.317	0.63	4.383	28.84	7.450	2.51	10.52	0.63
1.333	0.63	4.400	28.84	7.467	2.51	10.53	0.63
1.350	0.63	4.417	28.84	7.483	2.51	10.55	0.63
1.367	0.63	4.433	28.84	7.500	2.51	10.57	0.63
1.383	0.63	4.450	28.84	7.517	2.51	10.58	0.63
1.400	0.63	4.467	28.84	7.533	2.51	10.60	0.63
1.417	0.63	4.483	28.84	7.550	2.51	10.62	0.63
1.433	0.63	4.500	28.84	7.567	2.51	10.63	0.63
1.450	0.63	4.517	28.84	7.583	2.51	10.65	0.63
1.467	0.63	4.533	28.84	7.600	2.51	10.67	0.63
1.483	0.63	4.550	28.84	7.617	2.51	10.68	0.63
1.500	0.63	4.567	28.84	7.633	2.51	10.70	0.63
1.517	0.63	4.583	28.84	7.650	2.51	10.72	0.63
1.533	0.63	4.600	28.84	7.667	2.51	10.73	0.63
1.550	0.63	4.617	28.84	7.683	2.51	10.75	0.63
1.567	0.63	4.633	28.84	7.700	2.51	10.77	0.63
1.583	0.63	4.650	28.84	7.717	2.51	10.78	0.63
1.600	0.63	4.667	28.84	7.733	2.51	10.80	0.63
1.617	0.63	4.683	28.84	7.750	2.51	10.82	0.63
1.633	0.63	4.700	28.84	7.767	2.51	10.83	0.63
1.650	0.63	4.717	28.84	7.783	2.51	10.85	0.63
1.667	0.63	4.733	28.84	7.800	2.51	10.87	0.63
1.683	0.63	4.750	28.84	7.817	2.51	10.88	0.63
1.700	0.63	4.767	28.84	7.833	2.51	10.90	0.63
1.717	0.63	4.783	28.84	7.850	2.51	10.92	0.63
1.733	0.63	4.800	28.84	7.867	2.51	10.93	0.63
1.750	0.63	4.817	28.84	7.883	2.51	10.95	0.63
1.767	0.63	4.833	28.84	7.900	2.51	10.97	0.63
1.783	0.63	4.850	28.84	7.917	2.51	10.98	0.63
1.800	0.63	4.867	28.84	7.933	2.51	11.00	0.63
1.817	0.63	4.883	28.84	7.950	2.51	11.02	0.63
1.833	0.63	4.900	28.84	7.967	2.51	11.03	0.63
1.850	0.63	4.917	28.84	7.983	2.51	11.05	0.63
1.867	0.63	4.933	28.84	8.000	2.51	11.07	0.63
1.883	0.63	4.950	28.84	8.017	2.51	11.08	0.63
1.900	0.63	4.967	28.84	8.033	2.51	11.10	0.63
1.917	0.63	4.983	28.84	8.050	2.51	11.12	0.63
1.933	0.63	5.000	28.84	8.067	2.51	11.13	0.63
1.950	0.63	5.017	28.84	8.083	2.51	11.15	0.63
1.967	0.63	5.033	28.84	8.100	2.51	11.17	0.63
1.983	0.63	5.050	28.84	8.117	2.51	11.18	0.63
2.000	0.63	5.067	28.84	8.133	2.51	11.20	0.63
2.017	0.63	5.083	28.84	8.150	2.51	11.22	0.63
2.033	0.63	5.100	28.84	8.167	2.51	11.23	0.63
2.050	0.63	5.117	28.84	8.183	2.51	11.25	0.63
2.067	0.63	5.133	28.84	8.200	2.51	11.27	0.63
2.083	0.63	5.150	28.84	8.217	2.51	11.28	0.63
2.100	0.63	5.167	28.84	8.233	2.51	11.30	0.63
2.117	0.63	5.183	28.84	8.250	2.51	11.32	0.63
2.133	0.63	5.200	28.84	8.267	1.25	11.33	0.63
2.150	0.63	5.217	28.84	8.283	1.25	11.35	0.63
2.167	0.63	5.233	28.84	8.300	1.25	11.37	0.63
2.183	0.63	5.250	28.82	8.317	1.25	11.38	0.63
2.200	0.63	5.267	8.15	8.333	1.25	11.40	0.63
2.217	0.63	5.283	8.15	8.350	1.25	11.42	0.63
2.233	0.63	5.300	8.15	8.367	1.25	11.43	0.63
2.250	0.63	5.317	8.15	8.383	1.25	11.45	0.63
2.267	3.76	5.333	8.15	8.400	1.25	11.47	0.63
2.283	3.76	5.350	8.15	8.417	1.25	11.48	0.63
2.300	3.76	5.367	8.15	8.433	1.25	11.50	0.63
2.317	3.76	5.383	8.15	8.450	1.25	11.52	0.63
2.333	3.76	5.400	8.15	8.467	1.25	11.53	0.63
2.350	3.76	5.417	8.15	8.483	1.25	11.55	0.63
2.367	3.76	5.433	8.15	8.500	1.25	11.57	0.63
2.383	3.76	5.450	8.15	8.517	1.25	11.58	0.63
2.400	3.76	5.467	8.15	8.533	1.25	11.60	0.63
2.417	3.76	5.483	8.15	8.550	1.25	11.62	0.63
2.433	3.76	5.500	8.15	8.567	1.25	11.63	0.63
2.450	3.76	5.517	8.15	8.583	1.25	11.65	0.63
2.467	3.76	5.533	8.15	8.600	1.25	11.67	0.63
2.483	3.76	5.550	8.15	8.617	1.25	11.68	0.63

2.500	3.76	5.567	8.15	8.633	1.25	11.70	0.63
2.517	3.76	5.583	8.15	8.650	1.25	11.72	0.63
2.533	3.76	5.600	8.15	8.667	1.25	11.73	0.63
2.550	3.76	5.617	8.15	8.683	1.25	11.75	0.63
2.567	3.76	5.633	8.15	8.700	1.25	11.77	0.63
2.583	3.76	5.650	8.15	8.717	1.25	11.78	0.63
2.600	3.76	5.667	8.15	8.733	1.25	11.80	0.63
2.617	3.76	5.683	8.15	8.750	1.25	11.82	0.63
2.633	3.76	5.700	8.15	8.767	1.25	11.83	0.63
2.650	3.76	5.717	8.15	8.783	1.25	11.85	0.63
2.667	3.76	5.733	8.15	8.800	1.25	11.87	0.63
2.683	3.76	5.750	8.15	8.817	1.25	11.88	0.63
2.700	3.76	5.767	8.15	8.833	1.25	11.90	0.63
2.717	3.76	5.783	8.15	8.850	1.25	11.92	0.63
2.733	3.76	5.800	8.15	8.867	1.25	11.93	0.63
2.750	3.76	5.817	8.15	8.883	1.25	11.95	0.63
2.767	3.76	5.833	8.15	8.900	1.25	11.97	0.63
2.783	3.76	5.850	8.15	8.917	1.25	11.98	0.63
2.800	3.76	5.867	8.15	8.933	1.25	12.00	0.63
2.817	3.76	5.883	8.15	8.950	1.25	12.02	0.63
2.833	3.76	5.900	8.15	8.967	1.25	12.03	0.63
2.850	3.76	5.917	8.15	8.983	1.25	12.05	0.63
2.867	3.76	5.933	8.15	9.000	1.25	12.07	0.63
2.883	3.76	5.950	8.15	9.017	1.25	12.08	0.63
2.900	3.76	5.967	8.15	9.033	1.25	12.10	0.63
2.917	3.76	5.983	8.15	9.050	1.25	12.12	0.63
2.933	3.76	6.000	8.15	9.067	1.25	12.13	0.63
2.950	3.76	6.017	8.15	9.083	1.25	12.15	0.63
2.967	3.76	6.033	8.15	9.100	1.25	12.17	0.63
2.983	3.76	6.050	8.15	9.117	1.25	12.18	0.63
3.000	3.76	6.067	8.15	9.133	1.25	12.20	0.63
3.017	3.76	6.083	8.15	9.150	1.25	12.22	0.63
3.033	3.76	6.100	8.15	9.167	1.25	12.23	0.63
3.050	3.76	6.117	8.15	9.183	1.25	12.25	0.63
3.067	3.76	6.133	8.15	9.200	1.25		

Max.Eff.Inten.(mm/hr)=	28.84	20.90	
over (min)	5.00	8.00	
Storage Coeff. (min)=	5.02 (ii)	7.82 (ii)	
Unit Hyd. Tpeak (min)=	5.00	8.00	
Unit Hyd. peak (cms)=	0.23	0.14	
			TOTALS
PEAK FLOW (cms)=	0.22	0.00	0.217 (iii)
TIME TO PEAK (hrs)=	5.23	5.25	5.25
RUNOFF VOLUME (mm)=	61.71	35.33	61.44
TOTAL RAINFALL (mm)=	62.71	62.71	62.71
RUNOFF COEFFICIENT =	0.98	0.56	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7626)|	OVERFLOW IS OFF				
IN= 2---> OUT= 1					
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)	
	0.0000	0.0000	0.0568	0.1530	
	0.0239	0.0780	0.0660	0.1730	
	0.0370	0.1040	0.0751	0.2000	
	0.0451	0.1250	0.0000	0.0000	

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7567)	2.720	0.217	5.25	61.44
OUTFLOW: ID= 1 (7626)	2.720	0.041	6.40	58.82

PEAK FLOW REDUCTION [Qout/Qin](%)= 18.77
TIME SHIFT OF PEAK FLOW (min)= 69.00
MAXIMUM STORAGE USED (ha.m.)= 0.1138

CALIB | STANDHYD (7624)| ID= 1 DT= 1.0 min	Area (ha)= 1.80 Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.78	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	109.54	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	3.76	6.150	8.15	9.22	1.25
0.033	0.00	3.100	3.76	6.167	8.15	9.23	1.25
0.050	0.00	3.117	3.76	6.183	8.15	9.25	1.25
0.067	0.00	3.133	3.76	6.200	8.15	9.27	0.63
0.083	0.00	3.150	3.76	6.217	8.15	9.28	0.63
0.100	0.00	3.167	3.76	6.233	8.15	9.30	0.63
0.117	0.00	3.183	3.76	6.250	8.14	9.32	0.63
0.133	0.00	3.200	3.76	6.267	4.39	9.33	0.63
0.150	0.00	3.217	3.76	6.283	4.39	9.35	0.63
0.167	0.00	3.233	3.76	6.300	4.39	9.37	0.63
0.183	0.00	3.250	3.76	6.317	4.39	9.38	0.63
0.200	0.00	3.267	10.66	6.333	4.39	9.40	0.63
0.217	0.00	3.283	10.66	6.350	4.39	9.42	0.63
0.233	0.00	3.300	10.66	6.367	4.39	9.43	0.63
0.250	0.00	3.317	10.66	6.383	4.39	9.45	0.63
0.267	0.63	3.333	10.66	6.400	4.39	9.47	0.63
0.283	0.63	3.350	10.66	6.417	4.39	9.48	0.63
0.300	0.63	3.367	10.66	6.433	4.39	9.50	0.63
0.317	0.63	3.383	10.66	6.450	4.39	9.52	0.63
0.333	0.63	3.400	10.66	6.467	4.39	9.53	0.63
0.350	0.63	3.417	10.66	6.483	4.39	9.55	0.63
0.367	0.63	3.433	10.66	6.500	4.39	9.57	0.63
0.383	0.63	3.450	10.66	6.517	4.39	9.58	0.63
0.400	0.63	3.467	10.66	6.533	4.39	9.60	0.63
0.417	0.63	3.483	10.66	6.550	4.39	9.62	0.63
0.433	0.63	3.500	10.66	6.567	4.39	9.63	0.63
0.450	0.63	3.517	10.66	6.583	4.39	9.65	0.63
0.467	0.63	3.533	10.66	6.600	4.39	9.67	0.63
0.483	0.63	3.550	10.66	6.617	4.39	9.68	0.63
0.500	0.63	3.567	10.66	6.633	4.39	9.70	0.63
0.517	0.63	3.583	10.66	6.650	4.39	9.72	0.63
0.533	0.63	3.600	10.66	6.667	4.39	9.73	0.63
0.550	0.63	3.617	10.66	6.683	4.39	9.75	0.63
0.567	0.63	3.633	10.66	6.700	4.39	9.77	0.63
0.583	0.63	3.650	10.66	6.717	4.39	9.78	0.63
0.600	0.63	3.667	10.66	6.733	4.39	9.80	0.63
0.617	0.63	3.683	10.66	6.750	4.39	9.82	0.63
0.633	0.63	3.700	10.66	6.767	4.39	9.83	0.63
0.650	0.63	3.717	10.66	6.783	4.39	9.85	0.63
0.667	0.63	3.733	10.66	6.800	4.39	9.87	0.63
0.683	0.63	3.750	10.66	6.817	4.39	9.88	0.63
0.700	0.63	3.767	10.66	6.833	4.39	9.90	0.63
0.717	0.63	3.783	10.66	6.850	4.39	9.92	0.63
0.733	0.63	3.800	10.66	6.867	4.39	9.93	0.63
0.750	0.63	3.817	10.66	6.883	4.39	9.95	0.63
0.767	0.63	3.833	10.66	6.900	4.39	9.97	0.63
0.783	0.63	3.850	10.66	6.917	4.39	9.98	0.63
0.800	0.63	3.867	10.66	6.933	4.39	10.00	0.63
0.817	0.63	3.883	10.66	6.950	4.39	10.02	0.63
0.833	0.63	3.900	10.66	6.967	4.39	10.03	0.63
0.850	0.63	3.917	10.66	6.983	4.39	10.05	0.63
0.867	0.63	3.933	10.66	7.000	4.39	10.07	0.63
0.883	0.63	3.950	10.66	7.017	4.39	10.08	0.63
0.900	0.63	3.967	10.66	7.033	4.39	10.10	0.63
0.917	0.63	3.983	10.66	7.050	4.39	10.12	0.63
0.933	0.63	4.000	10.66	7.067	4.39	10.13	0.63
0.950	0.63	4.017	10.66	7.083	4.39	10.15	0.63
0.967	0.63	4.033	10.66	7.100	4.39	10.17	0.63

0.983	0.63	4.050	10.66	7.117	4.39	10.18	0.63
1.000	0.63	4.067	10.66	7.133	4.39	10.20	0.63
1.017	0.63	4.083	10.66	7.150	4.39	10.22	0.63
1.033	0.63	4.100	10.66	7.167	4.39	10.23	0.63
1.050	0.63	4.117	10.66	7.183	4.39	10.25	0.63
1.067	0.63	4.133	10.66	7.200	4.39	10.27	0.63
1.083	0.63	4.150	10.66	7.217	4.39	10.28	0.63
1.100	0.63	4.167	10.66	7.233	4.39	10.30	0.63
1.117	0.63	4.183	10.66	7.250	4.39	10.32	0.63
1.133	0.63	4.200	10.66	7.267	2.51	10.33	0.63
1.150	0.63	4.217	10.66	7.283	2.51	10.35	0.63
1.167	0.63	4.233	10.66	7.300	2.51	10.37	0.63
1.183	0.63	4.250	10.66	7.317	2.51	10.38	0.63
1.200	0.63	4.267	28.84	7.333	2.51	10.40	0.63
1.217	0.63	4.283	28.84	7.350	2.51	10.42	0.63
1.233	0.63	4.300	28.84	7.367	2.51	10.43	0.63
1.250	0.63	4.317	28.84	7.383	2.51	10.45	0.63
1.267	0.63	4.333	28.84	7.400	2.51	10.47	0.63
1.283	0.63	4.350	28.84	7.417	2.51	10.48	0.63
1.300	0.63	4.367	28.84	7.433	2.51	10.50	0.63
1.317	0.63	4.383	28.84	7.450	2.51	10.52	0.63
1.333	0.63	4.400	28.84	7.467	2.51	10.53	0.63
1.350	0.63	4.417	28.84	7.483	2.51	10.55	0.63
1.367	0.63	4.433	28.84	7.500	2.51	10.57	0.63
1.383	0.63	4.450	28.84	7.517	2.51	10.58	0.63
1.400	0.63	4.467	28.84	7.533	2.51	10.60	0.63
1.417	0.63	4.483	28.84	7.550	2.51	10.62	0.63
1.433	0.63	4.500	28.84	7.567	2.51	10.63	0.63
1.450	0.63	4.517	28.84	7.583	2.51	10.65	0.63
1.467	0.63	4.533	28.84	7.600	2.51	10.67	0.63
1.483	0.63	4.550	28.84	7.617	2.51	10.68	0.63
1.500	0.63	4.567	28.84	7.633	2.51	10.70	0.63
1.517	0.63	4.583	28.84	7.650	2.51	10.72	0.63
1.533	0.63	4.600	28.84	7.667	2.51	10.73	0.63
1.550	0.63	4.617	28.84	7.683	2.51	10.75	0.63
1.567	0.63	4.633	28.84	7.700	2.51	10.77	0.63
1.583	0.63	4.650	28.84	7.717	2.51	10.78	0.63
1.600	0.63	4.667	28.84	7.733	2.51	10.80	0.63
1.617	0.63	4.683	28.84	7.750	2.51	10.82	0.63
1.633	0.63	4.700	28.84	7.767	2.51	10.83	0.63
1.650	0.63	4.717	28.84	7.783	2.51	10.85	0.63
1.667	0.63	4.733	28.84	7.800	2.51	10.87	0.63
1.683	0.63	4.750	28.84	7.817	2.51	10.88	0.63
1.700	0.63	4.767	28.84	7.833	2.51	10.90	0.63
1.717	0.63	4.783	28.84	7.850	2.51	10.92	0.63
1.733	0.63	4.800	28.84	7.867	2.51	10.93	0.63
1.750	0.63	4.817	28.84	7.883	2.51	10.95	0.63
1.767	0.63	4.833	28.84	7.900	2.51	10.97	0.63
1.783	0.63	4.850	28.84	7.917	2.51	10.98	0.63
1.800	0.63	4.867	28.84	7.933	2.51	11.00	0.63
1.817	0.63	4.883	28.84	7.950	2.51	11.02	0.63
1.833	0.63	4.900	28.84	7.967	2.51	11.03	0.63
1.850	0.63	4.917	28.84	7.983	2.51	11.05	0.63
1.867	0.63	4.933	28.84	8.000	2.51	11.07	0.63
1.883	0.63	4.950	28.84	8.017	2.51	11.08	0.63
1.900	0.63	4.967	28.84	8.033	2.51	11.10	0.63
1.917	0.63	4.983	28.84	8.050	2.51	11.12	0.63
1.933	0.63	5.000	28.84	8.067	2.51	11.13	0.63
1.950	0.63	5.017	28.84	8.083	2.51	11.15	0.63
1.967	0.63	5.033	28.84	8.100	2.51	11.17	0.63
1.983	0.63	5.050	28.84	8.117	2.51	11.18	0.63
2.000	0.63	5.067	28.84	8.133	2.51	11.20	0.63
2.017	0.63	5.083	28.84	8.150	2.51	11.22	0.63
2.033	0.63	5.100	28.84	8.167	2.51	11.23	0.63
2.050	0.63	5.117	28.84	8.183	2.51	11.25	0.63
2.067	0.63	5.133	28.84	8.200	2.51	11.27	0.63
2.083	0.63	5.150	28.84	8.217	2.51	11.28	0.63
2.100	0.63	5.167	28.84	8.233	2.51	11.30	0.63
2.117	0.63	5.183	28.84	8.250	2.51	11.32	0.63
2.133	0.63	5.200	28.84	8.267	1.25	11.33	0.63
2.150	0.63	5.217	28.84	8.283	1.25	11.35	0.63
2.167	0.63	5.233	28.84	8.300	1.25	11.37	0.63
2.183	0.63	5.250	28.82	8.317	1.25	11.38	0.63
2.200	0.63	5.267	8.15	8.333	1.25	11.40	0.63
2.217	0.63	5.283	8.15	8.350	1.25	11.42	0.63
2.233	0.63	5.300	8.15	8.367	1.25	11.43	0.63
2.250	0.63	5.317	8.15	8.383	1.25	11.45	0.63
2.267	3.76	5.333	8.15	8.400	1.25	11.47	0.63
2.283	3.76	5.350	8.15	8.417	1.25	11.48	0.63
2.300	3.76	5.367	8.15	8.433	1.25	11.50	0.63
2.317	3.76	5.383	8.15	8.450	1.25	11.52	0.63
2.333	3.76	5.400	8.15	8.467	1.25	11.53	0.63
2.350	3.76	5.417	8.15	8.483	1.25	11.55	0.63
2.367	3.76	5.433	8.15	8.500	1.25	11.57	0.63
2.383	3.76	5.450	8.15	8.517	1.25	11.58	0.63
2.400	3.76	5.467	8.15	8.533	1.25	11.60	0.63
2.417	3.76	5.483	8.15	8.550	1.25	11.62	0.63
2.433	3.76	5.500	8.15	8.567	1.25	11.63	0.63
2.450	3.76	5.517	8.15	8.583	1.25	11.65	0.63
2.467	3.76	5.533	8.15	8.600	1.25	11.67	0.63
2.483	3.76	5.550	8.15	8.617	1.25	11.68	0.63
2.500	3.76	5.567	8.15	8.633	1.25	11.70	0.63
2.517	3.76	5.583	8.15	8.650	1.25	11.72	0.63
2.533	3.76	5.600	8.15	8.667	1.25	11.73	0.63
2.550	3.76	5.617	8.15	8.683	1.25	11.75	0.63
2.567	3.76	5.633	8.15	8.700	1.25	11.77	0.63
2.583	3.76	5.650	8.15	8.717	1.25	11.78	0.63
2.600	3.76	5.667	8.15	8.733	1.25	11.80	0.63
2.617	3.76	5.683	8.15	8.750	1.25	11.82	0.63
2.633	3.76	5.700	8.15	8.767	1.25	11.83	0.63
2.650	3.76	5.717	8.15	8.783	1.25	11.85	0.63
2.667	3.76	5.733	8.15	8.800	1.25	11.87	0.63
2.683	3.76	5.750	8.15	8.817	1.25	11.88	0.63
2.700	3.76	5.767	8.15	8.833	1.25	11.90	0.63
2.717	3.76	5.783	8.15	8.850	1.25	11.92	0.63
2.733	3.76	5.800	8.15	8.867	1.25	11.93	0.63
2.750	3.76	5.817	8.15	8.883	1.25	11.95	0.63
2.767	3.76	5.833	8.15	8.900	1.25	11.97	0.63
2.783	3.76	5.850	8.15	8.917	1.25	11.98	0.63
2.800	3.76	5.867	8.15	8.933	1.25	12.00	0.63
2.817	3.76	5.883	8.15	8.950	1.25	12.02	0.63
2.833	3.76	5.900	8.15	8.967	1.25	12.03	0.63
2.850	3.76	5.917	8.15	8.983	1.25	12.05	0.63
2.867	3.76	5.933	8.15	9.000	1.25	12.07	0.63
2.883	3.76	5.950	8.15	9.017	1.25	12.08	0.63
2.900	3.76	5.967	8.15	9.033	1.25	12.10	0.63
2.917	3.76	5.983	8.15	9.050	1.25	12.12	0.63
2.933	3.76	6.000	8.15	9.067	1.25	12.13	0.63
2.950	3.76	6.017	8.15	9.083	1.25	12.15	0.63
2.967	3.76	6.033	8.15	9.100	1.25	12.17	0.63
2.983	3.76	6.050	8.15	9.117	1.25	12.18	0.63
3.000	3.76	6.067	8.15	9.133	1.25	12.20	0.63
3.017	3.76	6.083	8.15	9.150	1.25	12.22	0.63
3.033	3.76	6.100	8.15	9.167	1.25	12.23	0.63
3.050	3.76	6.117	8.15	9.183	1.25	12.25	0.63
3.067	3.76	6.133	8.15	9.200	1.25		

Max.Eff.Inten.(mm/hr)=	28.84	23.99	
over (min)	5.00	8.00	
Storage Coeff. (min)=	4.44 (ii)	7.24 (ii)	
Unit Hyd. Tpeak (min)=	5.00	8.00	
Unit Hyd. peak (cms)=	0.24	0.15	
			TOTALS
PEAK FLOW (cms)=	0.14	0.00	0.144 (iii)
TIME TO PEAK (hrs)=	5.23	5.25	5.25
RUNOFF VOLUME (mm)=	61.71	41.89	61.51
TOTAL RAINFALL (mm)=	62.71	62.71	62.71
RUNOFF COEFFICIENT =	0.98	0.67	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 90.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7625)|	OVERFLOW IS OFF			
IN= 2---> OUT= 1 |				
DT= 1.0 min |	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)

0.0000	0.0000	0.0389	0.1013
0.0164	0.0514	0.0456	0.1141
0.0252	0.0690	0.0514	0.1288
0.0309	0.0825	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7624)	1.800	0.144	5.25	61.51
OUTFLOW: ID= 1 (7625)	1.800	0.028	6.38	59.19

PEAK FLOW REDUCTION [Qout/Qin](%)= 19.24
TIME SHIFT OF PEAK FLOW (min)= 68.00
MAXIMUM STORAGE USED (ha.m.)= 0.0749

CALIB	
STANDHYD (7623)	Area (ha)= 1.15
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.14	0.01
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	87.56	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	3.76	6.150	8.15	9.22	1.25
0.033	0.00	3.100	3.76	6.167	8.15	9.23	1.25
0.050	0.00	3.117	3.76	6.183	8.15	9.25	1.25
0.067	0.00	3.133	3.76	6.200	8.15	9.27	0.63
0.083	0.00	3.150	3.76	6.217	8.15	9.28	0.63
0.100	0.00	3.167	3.76	6.233	8.15	9.30	0.63
0.117	0.00	3.183	3.76	6.250	8.14	9.32	0.63
0.133	0.00	3.200	3.76	6.267	4.39	9.33	0.63
0.150	0.00	3.217	3.76	6.283	4.39	9.35	0.63
0.167	0.00	3.233	3.76	6.300	4.39	9.37	0.63
0.183	0.00	3.250	3.76	6.317	4.39	9.38	0.63
0.200	0.00	3.267	10.66	6.333	4.39	9.40	0.63
0.217	0.00	3.283	10.66	6.350	4.39	9.42	0.63
0.233	0.00	3.300	10.66	6.367	4.39	9.43	0.63
0.250	0.00	3.317	10.66	6.383	4.39	9.45	0.63
0.267	0.63	3.333	10.66	6.400	4.39	9.47	0.63
0.283	0.63	3.350	10.66	6.417	4.39	9.48	0.63
0.300	0.63	3.367	10.66	6.433	4.39	9.50	0.63
0.317	0.63	3.383	10.66	6.450	4.39	9.52	0.63
0.333	0.63	3.400	10.66	6.467	4.39	9.53	0.63
0.350	0.63	3.417	10.66	6.483	4.39	9.55	0.63
0.367	0.63	3.433	10.66	6.500	4.39	9.57	0.63
0.383	0.63	3.450	10.66	6.517	4.39	9.58	0.63
0.400	0.63	3.467	10.66	6.533	4.39	9.60	0.63
0.417	0.63	3.483	10.66	6.550	4.39	9.62	0.63
0.433	0.63	3.500	10.66	6.567	4.39	9.63	0.63
0.450	0.63	3.517	10.66	6.583	4.39	9.65	0.63
0.467	0.63	3.533	10.66	6.600	4.39	9.67	0.63
0.483	0.63	3.550	10.66	6.617	4.39	9.68	0.63
0.500	0.63	3.567	10.66	6.633	4.39	9.70	0.63
0.517	0.63	3.583	10.66	6.650	4.39	9.72	0.63
0.533	0.63	3.600	10.66	6.667	4.39	9.73	0.63
0.550	0.63	3.617	10.66	6.683	4.39	9.75	0.63
0.567	0.63	3.633	10.66	6.700	4.39	9.77	0.63
0.583	0.63	3.650	10.66	6.717	4.39	9.78	0.63
0.600	0.63	3.667	10.66	6.733	4.39	9.80	0.63
0.617	0.63	3.683	10.66	6.750	4.39	9.82	0.63
0.633	0.63	3.700	10.66	6.767	4.39	9.83	0.63
0.650	0.63	3.717	10.66	6.783	4.39	9.85	0.63
0.667	0.63	3.733	10.66	6.800	4.39	9.87	0.63
0.683	0.63	3.750	10.66	6.817	4.39	9.88	0.63
0.700	0.63	3.767	10.66	6.833	4.39	9.90	0.63
0.717	0.63	3.783	10.66	6.850	4.39	9.92	0.63
0.733	0.63	3.800	10.66	6.867	4.39	9.93	0.63
0.750	0.63	3.817	10.66	6.883	4.39	9.95	0.63
0.767	0.63	3.833	10.66	6.900	4.39	9.97	0.63
0.783	0.63	3.850	10.66	6.917	4.39	9.98	0.63
0.800	0.63	3.867	10.66	6.933	4.39	10.00	0.63
0.817	0.63	3.883	10.66	6.950	4.39	10.02	0.63
0.833	0.63	3.900	10.66	6.967	4.39	10.03	0.63
0.850	0.63	3.917	10.66	6.983	4.39	10.05	0.63
0.867	0.63	3.933	10.66	7.000	4.39	10.07	0.63
0.883	0.63	3.950	10.66	7.017	4.39	10.08	0.63
0.900	0.63	3.967	10.66	7.033	4.39	10.10	0.63
0.917	0.63	3.983	10.66	7.050	4.39	10.12	0.63
0.933	0.63	4.000	10.66	7.067	4.39	10.13	0.63
0.950	0.63	4.017	10.66	7.083	4.39	10.15	0.63
0.967	0.63	4.033	10.66	7.100	4.39	10.17	0.63
0.983	0.63	4.050	10.66	7.117	4.39	10.18	0.63
1.000	0.63	4.067	10.66	7.133	4.39	10.20	0.63
1.017	0.63	4.083	10.66	7.150	4.39	10.22	0.63
1.033	0.63	4.100	10.66	7.167	4.39	10.23	0.63
1.050	0.63	4.117	10.66	7.183	4.39	10.25	0.63
1.067	0.63	4.133	10.66	7.200	4.39	10.27	0.63
1.083	0.63	4.150	10.66	7.217	4.39	10.28	0.63
1.100	0.63	4.167	10.66	7.233	4.39	10.30	0.63
1.117	0.63	4.183	10.66	7.250	4.39	10.32	0.63
1.133	0.63	4.200	10.66	7.267	2.51	10.33	0.63
1.150	0.63	4.217	10.66	7.283	2.51	10.35	0.63
1.167	0.63	4.233	10.66	7.300	2.51	10.37	0.63
1.183	0.63	4.250	10.66	7.317	2.51	10.38	0.63
1.200	0.63	4.267	28.84	7.333	2.51	10.40	0.63
1.217	0.63	4.283	28.84	7.350	2.51	10.42	0.63
1.233	0.63	4.300	28.84	7.367	2.51	10.43	0.63
1.250	0.63	4.317	28.84	7.383	2.51	10.45	0.63
1.267	0.63	4.333	28.84	7.400	2.51	10.47	0.63
1.283	0.63	4.350	28.84	7.417	2.51	10.48	0.63
1.300	0.63	4.367	28.84	7.433	2.51	10.50	0.63
1.317	0.63	4.383	28.84	7.450	2.51	10.52	0.63
1.333	0.63	4.400	28.84	7.467	2.51	10.53	0.63
1.350	0.63	4.417	28.84	7.483	2.51	10.55	0.63
1.367	0.63	4.433	28.84	7.500	2.51	10.57	0.63
1.383	0.63	4.450	28.84	7.517	2.51	10.58	0.63
1.400	0.63	4.467	28.84	7.533	2.51	10.60	0.63
1.417	0.63	4.483	28.84	7.550	2.51	10.62	0.63
1.433	0.63	4.500	28.84	7.567	2.51	10.63	0.63
1.450	0.63	4.517	28.84	7.583	2.51	10.65	0.63
1.467	0.63	4.533	28.84	7.600	2.51	10.67	0.63
1.483	0.63	4.550	28.84	7.617	2.51	10.68	0.63
1.500	0.63	4.567	28.84	7.633	2.51	10.70	0.63
1.517	0.63	4.583	28.84	7.650	2.51	10.72	0.63
1.533	0.63	4.600	28.84	7.667	2.51	10.73	0.63
1.550	0.63	4.617	28.84	7.683	2.51	10.75	0.63
1.567	0.63	4.633	28.84	7.700	2.51	10.77	0.63
1.583	0.63	4.650	28.84	7.717	2.51	10.78	0.63
1.600	0.63	4.667	28.84	7.733	2.51	10.80	0.63
1.617	0.63	4.683	28.84	7.750	2.51	10.82	0.63
1.633	0.63	4.700	28.84	7.767	2.51	10.83	0.63
1.650	0.63	4.717	28.84	7.783	2.51	10.85	0.63
1.667	0.63	4.733	28.84	7.800	2.51	10.87	0.63
1.683	0.63	4.750	28.84	7.817	2.51	10.88	0.63
1.700	0.63	4.767	28.84	7.833	2.51	10.90	0.63
1.717	0.63	4.783	28.84	7.850	2.51	10.92	0.63
1.733	0.63	4.800	28.84	7.867	2.51	10.93	0.63
1.750	0.63	4.817	28.84	7.883	2.51	10.95	0.63
1.767	0.63	4.833	28.84	7.900	2.51	10.97	0.63
1.783	0.63	4.850	28.84	7.917	2.51	10.98	0.63
1.800	0.63	4.867	28.84	7.933	2.51	11.00	0.63
1.817	0.63	4.883	28.84	7.950	2.51	11.02	0.63
1.833	0.63	4.900	28.84	7.967	2.51	11.03	0.63
1.850	0.63	4.917	28.84	7.983	2.51	11.05	0.63
1.867	0.63	4.933	28.84	8.000	2.51	11.07	0.63
1.883	0.63	4.950	28.84	8.017	2.51	11.08	0.63
1.900	0.63	4.967	28.84	8.033	2.51	11.10	0.63
1.917	0.63	4.983	28.84	8.050	2.51	11.12	0.63
1.933	0.63	5.000	28.84	8.067	2.51	11.13	0.63
1.950	0.63	5.017	28.84	8.083	2.51	11.15	0.63
1.967	0.63	5.033	28.84	8.100	2.51	11.17	0.63
1.983	0.63	5.050	28.84	8.117	2.51	11.18	0.63

2.000	0.63	5.067	28.84	8.133	2.51	11.20	0.63
2.017	0.63	5.083	28.84	8.150	2.51	11.22	0.63
2.033	0.63	5.100	28.84	8.167	2.51	11.23	0.63
2.050	0.63	5.117	28.84	8.183	2.51	11.25	0.63
2.067	0.63	5.133	28.84	8.200	2.51	11.27	0.63
2.083	0.63	5.150	28.84	8.217	2.51	11.28	0.63
2.100	0.63	5.167	28.84	8.233	2.51	11.30	0.63
2.117	0.63	5.183	28.84	8.250	2.51	11.32	0.63
2.133	0.63	5.200	28.84	8.267	1.25	11.33	0.63
2.150	0.63	5.217	28.84	8.283	1.25	11.35	0.63
2.167	0.63	5.233	28.84	8.300	1.25	11.37	0.63
2.183	0.63	5.250	28.82	8.317	1.25	11.38	0.63
2.200	0.63	5.267	8.15	8.333	1.25	11.40	0.63
2.217	0.63	5.283	8.15	8.350	1.25	11.42	0.63
2.233	0.63	5.300	8.15	8.367	1.25	11.43	0.63
2.250	0.63	5.317	8.15	8.383	1.25	11.45	0.63
2.267	3.76	5.333	8.15	8.400	1.25	11.47	0.63
2.283	3.76	5.350	8.15	8.417	1.25	11.48	0.63
2.300	3.76	5.367	8.15	8.433	1.25	11.50	0.63
2.317	3.76	5.383	8.15	8.450	1.25	11.52	0.63
2.333	3.76	5.400	8.15	8.467	1.25	11.53	0.63
2.350	3.76	5.417	8.15	8.483	1.25	11.55	0.63
2.367	3.76	5.433	8.15	8.500	1.25	11.57	0.63
2.383	3.76	5.450	8.15	8.517	1.25	11.58	0.63
2.400	3.76	5.467	8.15	8.533	1.25	11.60	0.63
2.417	3.76	5.483	8.15	8.550	1.25	11.62	0.63
2.433	3.76	5.500	8.15	8.567	1.25	11.63	0.63
2.450	3.76	5.517	8.15	8.583	1.25	11.65	0.63
2.467	3.76	5.533	8.15	8.600	1.25	11.67	0.63
2.483	3.76	5.550	8.15	8.617	1.25	11.68	0.63
2.500	3.76	5.567	8.15	8.633	1.25	11.70	0.63
2.517	3.76	5.583	8.15	8.650	1.25	11.72	0.63
2.533	3.76	5.600	8.15	8.667	1.25	11.73	0.63
2.550	3.76	5.617	8.15	8.683	1.25	11.75	0.63
2.567	3.76	5.633	8.15	8.700	1.25	11.77	0.63
2.583	3.76	5.650	8.15	8.717	1.25	11.78	0.63
2.600	3.76	5.667	8.15	8.733	1.25	11.80	0.63
2.617	3.76	5.683	8.15	8.750	1.25	11.82	0.63
2.633	3.76	5.700	8.15	8.767	1.25	11.83	0.63
2.650	3.76	5.717	8.15	8.783	1.25	11.85	0.63
2.667	3.76	5.733	8.15	8.800	1.25	11.87	0.63
2.683	3.76	5.750	8.15	8.817	1.25	11.88	0.63
2.700	3.76	5.767	8.15	8.833	1.25	11.90	0.63
2.717	3.76	5.783	8.15	8.850	1.25	11.92	0.63
2.733	3.76	5.800	8.15	8.867	1.25	11.93	0.63
2.750	3.76	5.817	8.15	8.883	1.25	11.95	0.63
2.767	3.76	5.833	8.15	8.900	1.25	11.97	0.63
2.783	3.76	5.850	8.15	8.917	1.25	11.98	0.63
2.800	3.76	5.867	8.15	8.933	1.25	12.00	0.63
2.817	3.76	5.883	8.15	8.950	1.25	12.02	0.63
2.833	3.76	5.900	8.15	8.967	1.25	12.03	0.63
2.850	3.76	5.917	8.15	8.983	1.25	12.05	0.63
2.867	3.76	5.933	8.15	9.000	1.25	12.07	0.63
2.883	3.76	5.950	8.15	9.017	1.25	12.08	0.63
2.900	3.76	5.967	8.15	9.033	1.25	12.10	0.63
2.917	3.76	5.983	8.15	9.050	1.25	12.12	0.63
2.933	3.76	6.000	8.15	9.067	1.25	12.13	0.63
2.950	3.76	6.017	8.15	9.083	1.25	12.15	0.63
2.967	3.76	6.033	8.15	9.100	1.25	12.17	0.63
2.983	3.76	6.050	8.15	9.117	1.25	12.18	0.63
3.000	3.76	6.067	8.15	9.133	1.25	12.20	0.63
3.017	3.76	6.083	8.15	9.150	1.25	12.22	0.63
3.033	3.76	6.100	8.15	9.167	1.25	12.23	0.63
3.050	3.76	6.117	8.15	9.183	1.25	12.25	0.63
3.067	3.76	6.133	8.15	9.200	1.25		

Max.Eff.Inten.(mm/hr)=	28.84	20.90	
over (min)	5.00	7.00	
Storage Coeff. (min)=	3.88 (ii)	6.68 (ii)	
Unit Hyd. Tpeak (min)=	5.00	7.00	
Unit Hyd. peak (cms)=	0.27	0.17	
			TOTALS
PEAK FLOW (cms)=	0.09	0.00	0.092 (iii)
TIME TO PEAK (hrs)=	5.12	5.25	5.25
RUNOFF VOLUME (mm)=	61.71	35.33	61.44
TOTAL RAINFALL (mm)=	62.71	62.71	62.71
RUNOFF COEFFICIENT =	0.98	0.56	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7622)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0258	0.0650
	0.0108	0.0330	0.0302	0.0725
	0.0167	0.0440	0.0340	0.0820
	0.0204	0.0525	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7623)	1.150	0.092	5.25	61.44
OUTFLOW: ID= 1 (7622)	1.150	0.018	6.37	59.32

PEAK FLOW REDUCTION [Qout/Qin](%)= 19.83
TIME SHIFT OF PEAK FLOW (min)= 67.00
MAXIMUM STORAGE USED (ha.m.)= 0.0475

CALIB			
STANDHYD (7629)	Area (ha)= 4.09		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	4.05	0.04	
Dep. Storage (mm)=	1.00	1.50	
Average Slope (%)=	1.00	0.50	
Length (m)=	165.13	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	3.76	6.150	8.15	9.22	1.25
0.033	0.00	3.100	3.76	6.167	8.15	9.23	1.25
0.050	0.00	3.117	3.76	6.183	8.15	9.25	1.25
0.067	0.00	3.133	3.76	6.200	8.15	9.27	0.63
0.083	0.00	3.150	3.76	6.217	8.15	9.28	0.63
0.100	0.00	3.167	3.76	6.233	8.15	9.30	0.63
0.117	0.00	3.183	3.76	6.250	8.14	9.32	0.63
0.133	0.00	3.200	3.76	6.267	4.39	9.33	0.63
0.150	0.00	3.217	3.76	6.283	4.39	9.35	0.63
0.167	0.00	3.233	3.76	6.300	4.39	9.37	0.63
0.183	0.00	3.250	3.76	6.317	4.39	9.38	0.63
0.200	0.00	3.267	10.66	6.333	4.39	9.40	0.63
0.217	0.00	3.283	10.66	6.350	4.39	9.42	0.63
0.233	0.00	3.300	10.66	6.367	4.39	9.43	0.63
0.250	0.00	3.317	10.66	6.383	4.39	9.45	0.63
0.267	0.63	3.333	10.66	6.400	4.39	9.47	0.63
0.283	0.63	3.350	10.66	6.417	4.39	9.48	0.63
0.300	0.63	3.367	10.66	6.433	4.39	9.50	0.63
0.317	0.63	3.383	10.66	6.450	4.39	9.52	0.63
0.333	0.63	3.400	10.66	6.467	4.39	9.53	0.63
0.350	0.63	3.417	10.66	6.483	4.39	9.55	0.63
0.367	0.63	3.433	10.66	6.500	4.39	9.57	0.63
0.383	0.63	3.450	10.66	6.517	4.39	9.58	0.63
0.400	0.63	3.467	10.66	6.533	4.39	9.60	0.63
0.417	0.63	3.483	10.66	6.550	4.39	9.62	0.63
0.433	0.63	3.500	10.66	6.567	4.39	9.63	0.63
0.450	0.63	3.517	10.66	6.583	4.39	9.65	0.63
0.467	0.63	3.533	10.66	6.600	4.39	9.67	0.63

0.483	0.63	3.550	10.66	6.617	4.39	9.68	0.63
0.500	0.63	3.567	10.66	6.633	4.39	9.70	0.63
0.517	0.63	3.583	10.66	6.650	4.39	9.72	0.63
0.533	0.63	3.600	10.66	6.667	4.39	9.73	0.63
0.550	0.63	3.617	10.66	6.683	4.39	9.75	0.63
0.567	0.63	3.633	10.66	6.700	4.39	9.77	0.63
0.583	0.63	3.650	10.66	6.717	4.39	9.78	0.63
0.600	0.63	3.667	10.66	6.733	4.39	9.80	0.63
0.617	0.63	3.683	10.66	6.750	4.39	9.82	0.63
0.633	0.63	3.700	10.66	6.767	4.39	9.83	0.63
0.650	0.63	3.717	10.66	6.783	4.39	9.85	0.63
0.667	0.63	3.733	10.66	6.800	4.39	9.87	0.63
0.683	0.63	3.750	10.66	6.817	4.39	9.88	0.63
0.700	0.63	3.767	10.66	6.833	4.39	9.90	0.63
0.717	0.63	3.783	10.66	6.850	4.39	9.92	0.63
0.733	0.63	3.800	10.66	6.867	4.39	9.93	0.63
0.750	0.63	3.817	10.66	6.883	4.39	9.95	0.63
0.767	0.63	3.833	10.66	6.900	4.39	9.97	0.63
0.783	0.63	3.850	10.66	6.917	4.39	9.98	0.63
0.800	0.63	3.867	10.66	6.933	4.39	10.00	0.63
0.817	0.63	3.883	10.66	6.950	4.39	10.02	0.63
0.833	0.63	3.900	10.66	6.967	4.39	10.03	0.63
0.850	0.63	3.917	10.66	6.983	4.39	10.05	0.63
0.867	0.63	3.933	10.66	7.000	4.39	10.07	0.63
0.883	0.63	3.950	10.66	7.017	4.39	10.08	0.63
0.900	0.63	3.967	10.66	7.033	4.39	10.10	0.63
0.917	0.63	3.983	10.66	7.050	4.39	10.12	0.63
0.933	0.63	4.000	10.66	7.067	4.39	10.13	0.63
0.950	0.63	4.017	10.66	7.083	4.39	10.15	0.63
0.967	0.63	4.033	10.66	7.100	4.39	10.17	0.63
0.983	0.63	4.050	10.66	7.117	4.39	10.18	0.63
1.000	0.63	4.067	10.66	7.133	4.39	10.20	0.63
1.017	0.63	4.083	10.66	7.150	4.39	10.22	0.63
1.033	0.63	4.100	10.66	7.167	4.39	10.23	0.63
1.050	0.63	4.117	10.66	7.183	4.39	10.25	0.63
1.067	0.63	4.133	10.66	7.200	4.39	10.27	0.63
1.083	0.63	4.150	10.66	7.217	4.39	10.28	0.63
1.100	0.63	4.167	10.66	7.233	4.39	10.30	0.63
1.117	0.63	4.183	10.66	7.250	4.39	10.32	0.63
1.133	0.63	4.200	10.66	7.267	2.51	10.33	0.63
1.150	0.63	4.217	10.66	7.283	2.51	10.35	0.63
1.167	0.63	4.233	10.66	7.300	2.51	10.37	0.63
1.183	0.63	4.250	10.66	7.317	2.51	10.38	0.63
1.200	0.63	4.267	28.84	7.333	2.51	10.40	0.63
1.217	0.63	4.283	28.84	7.350	2.51	10.42	0.63
1.233	0.63	4.300	28.84	7.367	2.51	10.43	0.63
1.250	0.63	4.317	28.84	7.383	2.51	10.45	0.63
1.267	0.63	4.333	28.84	7.400	2.51	10.47	0.63
1.283	0.63	4.350	28.84	7.417	2.51	10.48	0.63
1.300	0.63	4.367	28.84	7.433	2.51	10.50	0.63
1.317	0.63	4.383	28.84	7.450	2.51	10.52	0.63
1.333	0.63	4.400	28.84	7.467	2.51	10.53	0.63
1.350	0.63	4.417	28.84	7.483	2.51	10.55	0.63
1.367	0.63	4.433	28.84	7.500	2.51	10.57	0.63
1.383	0.63	4.450	28.84	7.517	2.51	10.58	0.63
1.400	0.63	4.467	28.84	7.533	2.51	10.60	0.63
1.417	0.63	4.483	28.84	7.550	2.51	10.62	0.63
1.433	0.63	4.500	28.84	7.567	2.51	10.63	0.63
1.450	0.63	4.517	28.84	7.583	2.51	10.65	0.63
1.467	0.63	4.533	28.84	7.600	2.51	10.67	0.63
1.483	0.63	4.550	28.84	7.617	2.51	10.68	0.63
1.500	0.63	4.567	28.84	7.633	2.51	10.70	0.63
1.517	0.63	4.583	28.84	7.650	2.51	10.72	0.63
1.533	0.63	4.600	28.84	7.667	2.51	10.73	0.63
1.550	0.63	4.617	28.84	7.683	2.51	10.75	0.63
1.567	0.63	4.633	28.84	7.700	2.51	10.77	0.63
1.583	0.63	4.650	28.84	7.717	2.51	10.78	0.63
1.600	0.63	4.667	28.84	7.733	2.51	10.80	0.63
1.617	0.63	4.683	28.84	7.750	2.51	10.82	0.63
1.633	0.63	4.700	28.84	7.767	2.51	10.83	0.63
1.650	0.63	4.717	28.84	7.783	2.51	10.85	0.63
1.667	0.63	4.733	28.84	7.800	2.51	10.87	0.63
1.683	0.63	4.750	28.84	7.817	2.51	10.88	0.63
1.700	0.63	4.767	28.84	7.833	2.51	10.90	0.63
1.717	0.63	4.783	28.84	7.850	2.51	10.92	0.63
1.733	0.63	4.800	28.84	7.867	2.51	10.93	0.63
1.750	0.63	4.817	28.84	7.883	2.51	10.95	0.63
1.767	0.63	4.833	28.84	7.900	2.51	10.97	0.63
1.783	0.63	4.850	28.84	7.917	2.51	10.98	0.63
1.800	0.63	4.867	28.84	7.933	2.51	11.00	0.63
1.817	0.63	4.883	28.84	7.950	2.51	11.02	0.63
1.833	0.63	4.900	28.84	7.967	2.51	11.03	0.63
1.850	0.63	4.917	28.84	7.983	2.51	11.05	0.63
1.867	0.63	4.933	28.84	8.000	2.51	11.07	0.63
1.883	0.63	4.950	28.84	8.017	2.51	11.08	0.63
1.900	0.63	4.967	28.84	8.033	2.51	11.10	0.63
1.917	0.63	4.983	28.84	8.050	2.51	11.12	0.63
1.933	0.63	5.000	28.84	8.067	2.51	11.13	0.63
1.950	0.63	5.017	28.84	8.083	2.51	11.15	0.63
1.967	0.63	5.033	28.84	8.100	2.51	11.17	0.63
1.983	0.63	5.050	28.84	8.117	2.51	11.18	0.63
2.000	0.63	5.067	28.84	8.133	2.51	11.20	0.63
2.017	0.63	5.083	28.84	8.150	2.51	11.22	0.63
2.033	0.63	5.100	28.84	8.167	2.51	11.23	0.63
2.050	0.63	5.117	28.84	8.183	2.51	11.25	0.63
2.067	0.63	5.133	28.84	8.200	2.51	11.27	0.63
2.083	0.63	5.150	28.84	8.217	2.51	11.28	0.63
2.100	0.63	5.167	28.84	8.233	2.51	11.30	0.63
2.117	0.63	5.183	28.84	8.250	2.51	11.32	0.63
2.133	0.63	5.200	28.84	8.267	1.25	11.33	0.63
2.150	0.63	5.217	28.84	8.283	1.25	11.35	0.63
2.167	0.63	5.233	28.84	8.300	1.25	11.37	0.63
2.183	0.63	5.250	28.82	8.317	1.25	11.38	0.63
2.200	0.63	5.267	8.15	8.333	1.25	11.40	0.63
2.217	0.63	5.283	8.15	8.350	1.25	11.42	0.63
2.233	0.63	5.300	8.15	8.367	1.25	11.43	0.63
2.250	0.63	5.317	8.15	8.383	1.25	11.45	0.63
2.267	3.76	5.333	8.15	8.400	1.25	11.47	0.63
2.283	3.76	5.350	8.15	8.417	1.25	11.48	0.63
2.300	3.76	5.367	8.15	8.433	1.25	11.50	0.63
2.317	3.76	5.383	8.15	8.450	1.25	11.52	0.63
2.333	3.76	5.400	8.15	8.467	1.25	11.53	0.63
2.350	3.76	5.417	8.15	8.483	1.25	11.55	0.63
2.367	3.76	5.433	8.15	8.500	1.25	11.57	0.63
2.383	3.76	5.450	8.15	8.517	1.25	11.58	0.63
2.400	3.76	5.467	8.15	8.533	1.25	11.60	0.63
2.417	3.76	5.483	8.15	8.550	1.25	11.62	0.63
2.433	3.76	5.500	8.15	8.567	1.25	11.63	0.63
2.450	3.76	5.517	8.15	8.583	1.25	11.65	0.63
2.467	3.76	5.533	8.15	8.600	1.25	11.67	0.63
2.483	3.76	5.550	8.15	8.617	1.25	11.68	0.63
2.500	3.76	5.567	8.15	8.633	1.25	11.70	0.63
2.517	3.76	5.583	8.15	8.650	1.25	11.72	0.63
2.533	3.76	5.600	8.15	8.667	1.25	11.73	0.63
2.550	3.76	5.617	8.15	8.683	1.25	11.75	0.63
2.567	3.76	5.633	8.15	8.700	1.25	11.77	0.63
2.583	3.76	5.650	8.15	8.717	1.25	11.78	0.63
2.600	3.76	5.667	8.15	8.733	1.25	11.80	0.63
2.617	3.76	5.683	8.15	8.750	1.25	11.82	0.63
2.633	3.76	5.700	8.15	8.767	1.25	11.83	0.63
2.650	3.76	5.717	8.15	8.783	1.25	11.85	0.63
2.667	3.76	5.733	8.15	8.800	1.25	11.87	0.63
2.683	3.76	5.750	8.15	8.817	1.25	11.88	0.63
2.700	3.76	5.767	8.15	8.833	1.25	11.90	0.63
2.717	3.76	5.783	8.15	8.850	1.25	11.92	0.63
2.733	3.76	5.800	8.15	8.867	1.25	11.93	0.63
2.750	3.76	5.817	8.15	8.883	1.25	11.95	0.63
2.767	3.76	5.833	8.15	8.900	1.25	11.97	0.63
2.783	3.76	5.850	8.15	8.917	1.25	11.98	0.63
2.800	3.76	5.867	8.15	8.933	1.25	12.00	0.63
2.817	3.76	5.883	8.15	8.950	1.25	12.02	0.63
2.833	3.76	5.900	8.15	8.967	1.25	12.03	0.63
2.850	3.76	5.917	8.15	8.983	1.25	12.05	0.63
2.867	3.76	5.933	8.15	9.000	1.25	12.07	0.63
2.883	3.76	5.950	8.15	9.017	1.25	12.08	0.63
2.900	3.76	5.967	8.15	9.033	1.25	12.10	0.63
2.917	3.76	5.983	8.15	9.050	1.25	12.12	0.63
2.933	3.76	6.000	8.15	9.067	1.25	12.13	0.63
2.950	3.76	6.017	8.15	9.083	1.25	12.15	0.63
2.967	3.76	6.033	8.15	9.100	1.25	12.17	0.63
2.983	3.76	6.050	8.15	9.117	1.25	12.18	0.63
3.000	3.76	6.067	8.15	9.133	1.25	12.20	0.63

3.017	3.76	6.083	8.15	9.150	1.25	12.22	0.63
3.033	3.76	6.100	8.15	9.167	1.25	12.23	0.63
3.050	3.76	6.117	8.15	9.183	1.25	12.25	0.63
3.067	3.76	6.133	8.15	9.200	1.25		

Max.Eff.Inten.(mm/hr)=	28.84	20.90	
over (min)	6.00	9.00	
Storage Coeff. (min)=	5.68 (ii)	8.48 (ii)	
Unit Hyd. Tpeak (min)=	6.00	9.00	
Unit Hyd. peak (cms)=	0.20	0.13	
			TOTALS
PEAK FLOW (cms)=	0.32	0.00	0.327 (iii)
TIME TO PEAK (hrs)=	5.23	5.25	5.25
RUNOFF VOLUME (mm)=	61.70	35.33	61.44
TOTAL RAINFALL (mm)=	62.71	62.71	62.71
RUNOFF COEFFICIENT =	0.98	0.56	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7630)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0826	0.2320
	0.0347	0.1170	0.0967	0.2609
	0.0534	0.1580	0.1090	0.2940
	0.0655	0.1890	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7629)	4.090	0.327	5.25	61.44
OUTFLOW: ID= 1 (7630)	4.090	0.059	6.45	58.53

PEAK FLOW REDUCTION [Qout/Qin](%)= 18.09
TIME SHIFT OF PEAK FLOW (min)= 72.00
MAXIMUM STORAGE USED (ha.m.)= 0.1725

CALIB			
STANDHYD (7631)	Area (ha)= 3.91		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	3.87	0.04	
Dep. Storage (mm)=	1.00	1.50	
Average Slope (%)=	1.00	0.50	
Length (m)=	161.45	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	3.76	6.150	8.15	9.22	1.25
0.033	0.00	3.100	3.76	6.167	8.15	9.23	1.25
0.050	0.00	3.117	3.76	6.183	8.15	9.25	1.25
0.067	0.00	3.133	3.76	6.200	8.15	9.27	0.63
0.083	0.00	3.150	3.76	6.217	8.15	9.28	0.63
0.100	0.00	3.167	3.76	6.233	8.15	9.30	0.63
0.117	0.00	3.183	3.76	6.250	8.14	9.32	0.63
0.133	0.00	3.200	3.76	6.267	4.39	9.33	0.63
0.150	0.00	3.217	3.76	6.283	4.39	9.35	0.63
0.167	0.00	3.233	3.76	6.300	4.39	9.37	0.63
0.183	0.00	3.250	3.76	6.317	4.39	9.38	0.63
0.200	0.00	3.267	10.66	6.333	4.39	9.40	0.63
0.217	0.00	3.283	10.66	6.350	4.39	9.42	0.63
0.233	0.00	3.300	10.66	6.367	4.39	9.43	0.63
0.250	0.00	3.317	10.66	6.383	4.39	9.45	0.63
0.267	0.63	3.333	10.66	6.400	4.39	9.47	0.63
0.283	0.63	3.350	10.66	6.417	4.39	9.48	0.63
0.300	0.63	3.367	10.66	6.433	4.39	9.50	0.63
0.317	0.63	3.383	10.66	6.450	4.39	9.52	0.63
0.333	0.63	3.400	10.66	6.467	4.39	9.53	0.63
0.350	0.63	3.417	10.66	6.483	4.39	9.55	0.63
0.367	0.63	3.433	10.66	6.500	4.39	9.57	0.63
0.383	0.63	3.450	10.66	6.517	4.39	9.58	0.63
0.400	0.63	3.467	10.66	6.533	4.39	9.60	0.63
0.417	0.63	3.483	10.66	6.550	4.39	9.62	0.63
0.433	0.63	3.500	10.66	6.567	4.39	9.63	0.63
0.450	0.63	3.517	10.66	6.583	4.39	9.65	0.63
0.467	0.63	3.533	10.66	6.600	4.39	9.67	0.63
0.483	0.63	3.550	10.66	6.617	4.39	9.68	0.63
0.500	0.63	3.567	10.66	6.633	4.39	9.70	0.63
0.517	0.63	3.583	10.66	6.650	4.39	9.72	0.63
0.533	0.63	3.600	10.66	6.667	4.39	9.73	0.63
0.550	0.63	3.617	10.66	6.683	4.39	9.75	0.63
0.567	0.63	3.633	10.66	6.700	4.39	9.77	0.63
0.583	0.63	3.650	10.66	6.717	4.39	9.78	0.63
0.600	0.63	3.667	10.66	6.733	4.39	9.80	0.63
0.617	0.63	3.683	10.66	6.750	4.39	9.82	0.63
0.633	0.63	3.700	10.66	6.767	4.39	9.83	0.63
0.650	0.63	3.717	10.66	6.783	4.39	9.85	0.63
0.667	0.63	3.733	10.66	6.800	4.39	9.87	0.63
0.683	0.63	3.750	10.66	6.817	4.39	9.88	0.63
0.700	0.63	3.767	10.66	6.833	4.39	9.90	0.63
0.717	0.63	3.783	10.66	6.850	4.39	9.92	0.63
0.733	0.63	3.800	10.66	6.867	4.39	9.93	0.63
0.750	0.63	3.817	10.66	6.883	4.39	9.95	0.63
0.767	0.63	3.833	10.66	6.900	4.39	9.97	0.63
0.783	0.63	3.850	10.66	6.917	4.39	9.98	0.63
0.800	0.63	3.867	10.66	6.933	4.39	10.00	0.63
0.817	0.63	3.883	10.66	6.950	4.39	10.02	0.63
0.833	0.63	3.900	10.66	6.967	4.39	10.03	0.63
0.850	0.63	3.917	10.66	6.983	4.39	10.05	0.63
0.867	0.63	3.933	10.66	7.000	4.39	10.07	0.63
0.883	0.63	3.950	10.66	7.017	4.39	10.08	0.63
0.900	0.63	3.967	10.66	7.033	4.39	10.10	0.63
0.917	0.63	3.983	10.66	7.050	4.39	10.12	0.63
0.933	0.63	4.000	10.66	7.067	4.39	10.13	0.63
0.950	0.63	4.017	10.66	7.083	4.39	10.15	0.63
0.967	0.63	4.033	10.66	7.100	4.39	10.17	0.63
0.983	0.63	4.050	10.66	7.117	4.39	10.18	0.63
1.000	0.63	4.067	10.66	7.133	4.39	10.20	0.63
1.017	0.63	4.083	10.66	7.150	4.39	10.22	0.63
1.033	0.63	4.100	10.66	7.167	4.39	10.23	0.63
1.050	0.63	4.117	10.66	7.183	4.39	10.25	0.63
1.067	0.63	4.133	10.66	7.200	4.39	10.27	0.63
1.083	0.63	4.150	10.66	7.217	4.39	10.28	0.63
1.100	0.63	4.167	10.66	7.233	4.39	10.30	0.63
1.117	0.63	4.183	10.66	7.250	4.39	10.32	0.63
1.133	0.63	4.200	10.66	7.267	2.51	10.33	0.63
1.150	0.63	4.217	10.66	7.283	2.51	10.35	0.63
1.167	0.63	4.233	10.66	7.300	2.51	10.37	0.63
1.183	0.63	4.250	10.66	7.317	2.51	10.38	0.63
1.200	0.63	4.267	28.84	7.333	2.51	10.40	0.63
1.217	0.63	4.283	28.84	7.350	2.51	10.42	0.63
1.233	0.63	4.300	28.84	7.367	2.51	10.43	0.63
1.250	0.63	4.317	28.84	7.383	2.51	10.45	0.63
1.267	0.63	4.333	28.84	7.400	2.51	10.47	0.63
1.283	0.63	4.350	28.84	7.417	2.51	10.48	0.63
1.300	0.63	4.367	28.84	7.433	2.51	10.50	0.63
1.317	0.63	4.383	28.84	7.450	2.51	10.52	0.63
1.333	0.63	4.400	28.84	7.467	2.51	10.53	0.63
1.350	0.63	4.417	28.84	7.483	2.51	10.55	0.63
1.367	0.63	4.433	28.84	7.500	2.51	10.57	0.63
1.383	0.63	4.450	28.84	7.517	2.51	10.58	0.63
1.400	0.63	4.467	28.84	7.533	2.51	10.60	0.63
1.417	0.63	4.483	28.84	7.550	2.51	10.62	0.63
1.433	0.63	4.500	28.84	7.567	2.51	10.63	0.63
1.450	0.63	4.517	28.84	7.583	2.51	10.65	0.63
1.467	0.63	4.533	28.84	7.600	2.51	10.67	0.63
1.483	0.63	4.550	28.84	7.617	2.51	10.68	0.63

1.500	0.63	4.567	28.84	7.633	2.51	10.70	0.63
1.517	0.63	4.583	28.84	7.650	2.51	10.72	0.63
1.533	0.63	4.600	28.84	7.667	2.51	10.73	0.63
1.550	0.63	4.617	28.84	7.683	2.51	10.75	0.63
1.567	0.63	4.633	28.84	7.700	2.51	10.77	0.63
1.583	0.63	4.650	28.84	7.717	2.51	10.78	0.63
1.600	0.63	4.667	28.84	7.733	2.51	10.80	0.63
1.617	0.63	4.683	28.84	7.750	2.51	10.82	0.63
1.633	0.63	4.700	28.84	7.767	2.51	10.83	0.63
1.650	0.63	4.717	28.84	7.783	2.51	10.85	0.63
1.667	0.63	4.733	28.84	7.800	2.51	10.87	0.63
1.683	0.63	4.750	28.84	7.817	2.51	10.88	0.63
1.700	0.63	4.767	28.84	7.833	2.51	10.90	0.63
1.717	0.63	4.783	28.84	7.850	2.51	10.92	0.63
1.733	0.63	4.800	28.84	7.867	2.51	10.93	0.63
1.750	0.63	4.817	28.84	7.883	2.51	10.95	0.63
1.767	0.63	4.833	28.84	7.900	2.51	10.97	0.63
1.783	0.63	4.850	28.84	7.917	2.51	10.98	0.63
1.800	0.63	4.867	28.84	7.933	2.51	11.00	0.63
1.817	0.63	4.883	28.84	7.950	2.51	11.02	0.63
1.833	0.63	4.900	28.84	7.967	2.51	11.03	0.63
1.850	0.63	4.917	28.84	7.983	2.51	11.05	0.63
1.867	0.63	4.933	28.84	8.000	2.51	11.07	0.63
1.883	0.63	4.950	28.84	8.017	2.51	11.08	0.63
1.900	0.63	4.967	28.84	8.033	2.51	11.10	0.63
1.917	0.63	4.983	28.84	8.050	2.51	11.12	0.63
1.933	0.63	5.000	28.84	8.067	2.51	11.13	0.63
1.950	0.63	5.017	28.84	8.083	2.51	11.15	0.63
1.967	0.63	5.033	28.84	8.100	2.51	11.17	0.63
1.983	0.63	5.050	28.84	8.117	2.51	11.18	0.63
2.000	0.63	5.067	28.84	8.133	2.51	11.20	0.63
2.017	0.63	5.083	28.84	8.150	2.51	11.22	0.63
2.033	0.63	5.100	28.84	8.167	2.51	11.23	0.63
2.050	0.63	5.117	28.84	8.183	2.51	11.25	0.63
2.067	0.63	5.133	28.84	8.200	2.51	11.27	0.63
2.083	0.63	5.150	28.84	8.217	2.51	11.28	0.63
2.100	0.63	5.167	28.84	8.233	2.51	11.30	0.63
2.117	0.63	5.183	28.84	8.250	2.51	11.32	0.63
2.133	0.63	5.200	28.84	8.267	1.25	11.33	0.63
2.150	0.63	5.217	28.84	8.283	1.25	11.35	0.63
2.167	0.63	5.233	28.84	8.300	1.25	11.37	0.63
2.183	0.63	5.250	28.82	8.317	1.25	11.38	0.63
2.200	0.63	5.267	8.15	8.333	1.25	11.40	0.63
2.217	0.63	5.283	8.15	8.350	1.25	11.42	0.63
2.233	0.63	5.300	8.15	8.367	1.25	11.43	0.63
2.250	0.63	5.317	8.15	8.383	1.25	11.45	0.63
2.267	3.76	5.333	8.15	8.400	1.25	11.47	0.63
2.283	3.76	5.350	8.15	8.417	1.25	11.48	0.63
2.300	3.76	5.367	8.15	8.433	1.25	11.50	0.63
2.317	3.76	5.383	8.15	8.450	1.25	11.52	0.63
2.333	3.76	5.400	8.15	8.467	1.25	11.53	0.63
2.350	3.76	5.417	8.15	8.483	1.25	11.55	0.63
2.367	3.76	5.433	8.15	8.500	1.25	11.57	0.63
2.383	3.76	5.450	8.15	8.517	1.25	11.58	0.63
2.400	3.76	5.467	8.15	8.533	1.25	11.60	0.63
2.417	3.76	5.483	8.15	8.550	1.25	11.62	0.63
2.433	3.76	5.500	8.15	8.567	1.25	11.63	0.63
2.450	3.76	5.517	8.15	8.583	1.25	11.65	0.63
2.467	3.76	5.533	8.15	8.600	1.25	11.67	0.63
2.483	3.76	5.550	8.15	8.617	1.25	11.68	0.63
2.500	3.76	5.567	8.15	8.633	1.25	11.70	0.63
2.517	3.76	5.583	8.15	8.650	1.25	11.72	0.63
2.533	3.76	5.600	8.15	8.667	1.25	11.73	0.63
2.550	3.76	5.617	8.15	8.683	1.25	11.75	0.63
2.567	3.76	5.633	8.15	8.700	1.25	11.77	0.63
2.583	3.76	5.650	8.15	8.717	1.25	11.78	0.63
2.600	3.76	5.667	8.15	8.733	1.25	11.80	0.63
2.617	3.76	5.683	8.15	8.750	1.25	11.82	0.63
2.633	3.76	5.700	8.15	8.767	1.25	11.83	0.63
2.650	3.76	5.717	8.15	8.783	1.25	11.85	0.63
2.667	3.76	5.733	8.15	8.800	1.25	11.87	0.63
2.683	3.76	5.750	8.15	8.817	1.25	11.88	0.63
2.700	3.76	5.767	8.15	8.833	1.25	11.90	0.63
2.717	3.76	5.783	8.15	8.850	1.25	11.92	0.63
2.733	3.76	5.800	8.15	8.867	1.25	11.93	0.63
2.750	3.76	5.817	8.15	8.883	1.25	11.95	0.63
2.767	3.76	5.833	8.15	8.900	1.25	11.97	0.63
2.783	3.76	5.850	8.15	8.917	1.25	11.98	0.63
2.800	3.76	5.867	8.15	8.933	1.25	12.00	0.63
2.817	3.76	5.883	8.15	8.950	1.25	12.02	0.63
2.833	3.76	5.900	8.15	8.967	1.25	12.03	0.63
2.850	3.76	5.917	8.15	8.983	1.25	12.05	0.63
2.867	3.76	5.933	8.15	9.000	1.25	12.07	0.63
2.883	3.76	5.950	8.15	9.017	1.25	12.08	0.63
2.900	3.76	5.967	8.15	9.033	1.25	12.10	0.63
2.917	3.76	5.983	8.15	9.050	1.25	12.12	0.63
2.933	3.76	6.000	8.15	9.067	1.25	12.13	0.63
2.950	3.76	6.017	8.15	9.083	1.25	12.15	0.63
2.967	3.76	6.033	8.15	9.100	1.25	12.17	0.63
2.983	3.76	6.050	8.15	9.117	1.25	12.18	0.63
3.000	3.76	6.067	8.15	9.133	1.25	12.20	0.63
3.017	3.76	6.083	8.15	9.150	1.25	12.22	0.63
3.033	3.76	6.100	8.15	9.167	1.25	12.23	0.63
3.050	3.76	6.117	8.15	9.183	1.25	12.25	0.63
3.067	3.76	6.133	8.15	9.200	1.25		

Max.Eff.Inten.(mm/hr)=		28.84	20.90
over (min)		6.00	9.00
Storage Coeff. (min)=		5.60 (ii)	8.40 (ii)
Unit Hyd. Tpeak (min)=		6.00	9.00
Unit Hyd. peak (cms)=		0.20	0.13
			TOTALS
PEAK FLOW	(cms)=	0.31	0.00	0.312 (iii)
TIME TO PEAK	(hrs)=	5.23	5.25	5.25
RUNOFF VOLUME	(mm)=	61.70	35.33	61.44
TOTAL RAINFALL	(mm)=	62.71	62.71	62.71
RUNOFF COEFFICIENT	=	0.98	0.56	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7632)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0792	0.2220
	0.0333	0.1130	0.0928	0.2500
	0.0512	0.1510	0.1046	0.2810
	0.0629	0.1810	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7631)	3.910	0.312	5.25	61.44
OUTFLOW: ID= 1 (7632)	3.910	0.057	6.45	58.48

PEAK FLOW REDUCTION [Qout/Qin](%)= 18.14
TIME SHIFT OF PEAK FLOW (min)= 72.00
MAXIMUM STORAGE USED (ha.m.)= 0.1650

CALIB			
STANDHYD (7641)	Area (ha)= 2.21		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	2.19	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	121.38	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	3.76	6.150	8.15	9.22	1.25
0.033	0.00	3.100	3.76	6.167	8.15	9.23	1.25
0.050	0.00	3.117	3.76	6.183	8.15	9.25	1.25
0.067	0.00	3.133	3.76	6.200	8.15	9.27	0.63
0.083	0.00	3.150	3.76	6.217	8.15	9.28	0.63
0.100	0.00	3.167	3.76	6.233	8.15	9.30	0.63
0.117	0.00	3.183	3.76	6.250	8.14	9.32	0.63
0.133	0.00	3.200	3.76	6.267	4.39	9.33	0.63
0.150	0.00	3.217	3.76	6.283	4.39	9.35	0.63
0.167	0.00	3.233	3.76	6.300	4.39	9.37	0.63
0.183	0.00	3.250	3.76	6.317	4.39	9.38	0.63
0.200	0.00	3.267	10.66	6.333	4.39	9.40	0.63
0.217	0.00	3.283	10.66	6.350	4.39	9.42	0.63
0.233	0.00	3.300	10.66	6.367	4.39	9.43	0.63
0.250	0.00	3.317	10.66	6.383	4.39	9.45	0.63
0.267	0.63	3.333	10.66	6.400	4.39	9.47	0.63
0.283	0.63	3.350	10.66	6.417	4.39	9.48	0.63
0.300	0.63	3.367	10.66	6.433	4.39	9.50	0.63
0.317	0.63	3.383	10.66	6.450	4.39	9.52	0.63
0.333	0.63	3.400	10.66	6.467	4.39	9.53	0.63
0.350	0.63	3.417	10.66	6.483	4.39	9.55	0.63
0.367	0.63	3.433	10.66	6.500	4.39	9.57	0.63
0.383	0.63	3.450	10.66	6.517	4.39	9.58	0.63
0.400	0.63	3.467	10.66	6.533	4.39	9.60	0.63
0.417	0.63	3.483	10.66	6.550	4.39	9.62	0.63
0.433	0.63	3.500	10.66	6.567	4.39	9.63	0.63
0.450	0.63	3.517	10.66	6.583	4.39	9.65	0.63
0.467	0.63	3.533	10.66	6.600	4.39	9.67	0.63
0.483	0.63	3.550	10.66	6.617	4.39	9.68	0.63
0.500	0.63	3.567	10.66	6.633	4.39	9.70	0.63
0.517	0.63	3.583	10.66	6.650	4.39	9.72	0.63
0.533	0.63	3.600	10.66	6.667	4.39	9.73	0.63
0.550	0.63	3.617	10.66	6.683	4.39	9.75	0.63
0.567	0.63	3.633	10.66	6.700	4.39	9.77	0.63
0.583	0.63	3.650	10.66	6.717	4.39	9.78	0.63
0.600	0.63	3.667	10.66	6.733	4.39	9.80	0.63
0.617	0.63	3.683	10.66	6.750	4.39	9.82	0.63
0.633	0.63	3.700	10.66	6.767	4.39	9.83	0.63
0.650	0.63	3.717	10.66	6.783	4.39	9.85	0.63
0.667	0.63	3.733	10.66	6.800	4.39	9.87	0.63
0.683	0.63	3.750	10.66	6.817	4.39	9.88	0.63
0.700	0.63	3.767	10.66	6.833	4.39	9.90	0.63
0.717	0.63	3.783	10.66	6.850	4.39	9.92	0.63
0.733	0.63	3.800	10.66	6.867	4.39	9.93	0.63
0.750	0.63	3.817	10.66	6.883	4.39	9.95	0.63
0.767	0.63	3.833	10.66	6.900	4.39	9.97	0.63
0.783	0.63	3.850	10.66	6.917	4.39	9.98	0.63
0.800	0.63	3.867	10.66	6.933	4.39	10.00	0.63
0.817	0.63	3.883	10.66	6.950	4.39	10.02	0.63
0.833	0.63	3.900	10.66	6.967	4.39	10.03	0.63
0.850	0.63	3.917	10.66	6.983	4.39	10.05	0.63
0.867	0.63	3.933	10.66	7.000	4.39	10.07	0.63
0.883	0.63	3.950	10.66	7.017	4.39	10.08	0.63
0.900	0.63	3.967	10.66	7.033	4.39	10.10	0.63
0.917	0.63	3.983	10.66	7.050	4.39	10.12	0.63
0.933	0.63	4.000	10.66	7.067	4.39	10.13	0.63
0.950	0.63	4.017	10.66	7.083	4.39	10.15	0.63
0.967	0.63	4.033	10.66	7.100	4.39	10.17	0.63
0.983	0.63	4.050	10.66	7.117	4.39	10.18	0.63
1.000	0.63	4.067	10.66	7.133	4.39	10.20	0.63
1.017	0.63	4.083	10.66	7.150	4.39	10.22	0.63
1.033	0.63	4.100	10.66	7.167	4.39	10.23	0.63
1.050	0.63	4.117	10.66	7.183	4.39	10.25	0.63
1.067	0.63	4.133	10.66	7.200	4.39	10.27	0.63
1.083	0.63	4.150	10.66	7.217	4.39	10.28	0.63
1.100	0.63	4.167	10.66	7.233	4.39	10.30	0.63
1.117	0.63	4.183	10.66	7.250	4.39	10.32	0.63
1.133	0.63	4.200	10.66	7.267	2.51	10.33	0.63
1.150	0.63	4.217	10.66	7.283	2.51	10.35	0.63
1.167	0.63	4.233	10.66	7.300	2.51	10.37	0.63
1.183	0.63	4.250	10.66	7.317	2.51	10.38	0.63
1.200	0.63	4.267	28.84	7.333	2.51	10.40	0.63
1.217	0.63	4.283	28.84	7.350	2.51	10.42	0.63
1.233	0.63	4.300	28.84	7.367	2.51	10.43	0.63
1.250	0.63	4.317	28.84	7.383	2.51	10.45	0.63
1.267	0.63	4.333	28.84	7.400	2.51	10.47	0.63
1.283	0.63	4.350	28.84	7.417	2.51	10.48	0.63
1.300	0.63	4.367	28.84	7.433	2.51	10.50	0.63
1.317	0.63	4.383	28.84	7.450	2.51	10.52	0.63
1.333	0.63	4.400	28.84	7.467	2.51	10.53	0.63
1.350	0.63	4.417	28.84	7.483	2.51	10.55	0.63
1.367	0.63	4.433	28.84	7.500	2.51	10.57	0.63
1.383	0.63	4.450	28.84	7.517	2.51	10.58	0.63
1.400	0.63	4.467	28.84	7.533	2.51	10.60	0.63
1.417	0.63	4.483	28.84	7.550	2.51	10.62	0.63
1.433	0.63	4.500	28.84	7.567	2.51	10.63	0.63
1.450	0.63	4.517	28.84	7.583	2.51	10.65	0.63
1.467	0.63	4.533	28.84	7.600	2.51	10.67	0.63
1.483	0.63	4.550	28.84	7.617	2.51	10.68	0.63
1.500	0.63	4.567	28.84	7.633	2.51	10.70	0.63
1.517	0.63	4.583	28.84	7.650	2.51	10.72	0.63
1.533	0.63	4.600	28.84	7.667	2.51	10.73	0.63
1.550	0.63	4.617	28.84	7.683	2.51	10.75	0.63
1.567	0.63	4.633	28.84	7.700	2.51	10.77	0.63
1.583	0.63	4.650	28.84	7.717	2.51	10.78	0.63
1.600	0.63	4.667	28.84	7.733	2.51	10.80	0.63
1.617	0.63	4.683	28.84	7.750	2.51	10.82	0.63
1.633	0.63	4.700	28.84	7.767	2.51	10.83	0.63
1.650	0.63	4.717	28.84	7.783	2.51	10.85	0.63
1.667	0.63	4.733	28.84	7.800	2.51	10.87	0.63
1.683	0.63	4.750	28.84	7.817	2.51	10.88	0.63
1.700	0.63	4.767	28.84	7.833	2.51	10.90	0.63
1.717	0.63	4.783	28.84	7.850	2.51	10.92	0.63
1.733	0.63	4.800	28.84	7.867	2.51	10.93	0.63
1.750	0.63	4.817	28.84	7.883	2.51	10.95	0.63
1.767	0.63	4.833	28.84	7.900	2.51	10.97	0.63
1.783	0.63	4.850	28.84	7.917	2.51	10.98	0.63
1.800	0.63	4.867	28.84	7.933	2.51	11.00	0.63
1.817	0.63	4.883	28.84	7.950	2.51	11.02	0.63
1.833	0.63	4.900	28.84	7.967	2.51	11.03	0.63
1.850	0.63	4.917	28.84	7.983	2.51	11.05	0.63
1.867	0.63	4.933	28.84	8.000	2.51	11.07	0.63
1.883	0.63	4.950	28.84	8.017	2.51	11.08	0.63
1.900	0.63	4.967	28.84	8.033	2.51	11.10	0.63
1.917	0.63	4.983	28.84	8.050	2.51	11.12	0.63
1.933	0.63	5.000	28.84	8.067	2.51	11.13	0.63
1.950	0.63	5.017	28.84	8.083	2.51	11.15	0.63
1.967	0.63	5.033	28.84	8.100	2.51	11.17	0.63
1.983	0.63	5.050	28.84	8.117	2.51	11.18	0.63
2.000	0.63	5.067	28.84	8.133	2.51	11.20	0.63
2.017	0.63	5.083	28.84	8.150	2.51	11.22	0.63
2.033	0.63	5.100	28.84	8.167	2.51	11.23	0.63
2.050	0.63	5.117	28.84	8.183	2.51	11.25	0.63
2.067	0.63	5.133	28.84	8.200	2.51	11.27	0.63
2.083	0.63	5.150	28.84	8.217	2.51	11.28	0.63
2.100	0.63	5.167	28.84	8.233	2.51	11.30	0.63
2.117	0.63	5.183	28.84	8.250	2.51	11.32	0.63
2.133	0.63	5.200	28.84	8.267	1.25	11.33	0.63
2.150	0.63	5.217	28.84	8.283	1.25	11.35	0.63
2.167	0.63	5.233	28.84	8.300	1.25	11.37	0.63
2.183	0.63	5.250	28.82	8.317	1.25	11.38	0.63
2.200	0.63	5.267	8.15	8.333	1.25	11.40	0.63
2.217	0.63	5.283	8.15	8.350	1.25	11.42	0.63
2.233	0.63	5.300	8.15	8.367	1.25	11.43	0.63
2.250	0.63	5.317	8.15	8.383	1.25	11.45	0.63
2.267	3.76	5.333	8.15	8.400	1.25	11.47	0.63
2.283	3.76	5.350	8.15	8.417	1.25	11.48	0.63
2.300	3.76	5.367	8.15	8.433	1.25	11.50	0.63
2.317	3.76	5.383	8.15	8.450	1.25	11.52	0.63
2.333	3.76	5.400	8.15	8.467	1.25	11.53	0.63
2.350	3.76	5.417	8.15	8.483	1.25	11.55	0.63
2.367	3.76	5.433	8.15	8.500	1.25	11.57	0.63
2.383	3.76	5.450	8.15	8.517	1.25	11.58	0.63
2.400	3.76	5.467	8.15	8.533	1.25	11.60	0.63
2.417	3.76	5.483	8.15	8.550	1.25	11.62	0.63
2.433	3.76	5.500	8.15	8.567	1.25	11.63	0.63
2.450	3.76	5.517	8.15	8.583	1.25	11.65	0.63
2.467	3.76	5.533	8.15	8.600	1.25	11.67	0.63
2.483	3.76	5.550	8.15	8.617	1.25	11.68	0.63
2.500	3.76	5.567	8.15	8.633	1.25	11.70	0.63

2.517	3.76	5.583	8.15	8.650	1.25	11.72	0.63
2.533	3.76	5.600	8.15	8.667	1.25	11.73	0.63
2.550	3.76	5.617	8.15	8.683	1.25	11.75	0.63
2.567	3.76	5.633	8.15	8.700	1.25	11.77	0.63
2.583	3.76	5.650	8.15	8.717	1.25	11.78	0.63
2.600	3.76	5.667	8.15	8.733	1.25	11.80	0.63
2.617	3.76	5.683	8.15	8.750	1.25	11.82	0.63
2.633	3.76	5.700	8.15	8.767	1.25	11.83	0.63
2.650	3.76	5.717	8.15	8.783	1.25	11.85	0.63
2.667	3.76	5.733	8.15	8.800	1.25	11.87	0.63
2.683	3.76	5.750	8.15	8.817	1.25	11.88	0.63
2.700	3.76	5.767	8.15	8.833	1.25	11.90	0.63
2.717	3.76	5.783	8.15	8.850	1.25	11.92	0.63
2.733	3.76	5.800	8.15	8.867	1.25	11.93	0.63
2.750	3.76	5.817	8.15	8.883	1.25	11.95	0.63
2.767	3.76	5.833	8.15	8.900	1.25	11.97	0.63
2.783	3.76	5.850	8.15	8.917	1.25	11.98	0.63
2.800	3.76	5.867	8.15	8.933	1.25	12.00	0.63
2.817	3.76	5.883	8.15	8.950	1.25	12.02	0.63
2.833	3.76	5.900	8.15	8.967	1.25	12.03	0.63
2.850	3.76	5.917	8.15	8.983	1.25	12.05	0.63
2.867	3.76	5.933	8.15	9.000	1.25	12.07	0.63
2.883	3.76	5.950	8.15	9.017	1.25	12.08	0.63
2.900	3.76	5.967	8.15	9.033	1.25	12.10	0.63
2.917	3.76	5.983	8.15	9.050	1.25	12.12	0.63
2.933	3.76	6.000	8.15	9.067	1.25	12.13	0.63
2.950	3.76	6.017	8.15	9.083	1.25	12.15	0.63
2.967	3.76	6.033	8.15	9.100	1.25	12.17	0.63
2.983	3.76	6.050	8.15	9.117	1.25	12.18	0.63
3.000	3.76	6.067	8.15	9.133	1.25	12.20	0.63
3.017	3.76	6.083	8.15	9.150	1.25	12.22	0.63
3.033	3.76	6.100	8.15	9.167	1.25	12.23	0.63
3.050	3.76	6.117	8.15	9.183	1.25	12.25	0.63
3.067	3.76	6.133	8.15	9.200	1.25		

Max.Eff.Inten.(mm/hr)=	28.84	20.90	
over (min)	5.00	8.00	
Storage Coeff. (min)=	4.72 (ii)	7.52 (ii)	
Unit Hyd. Tpeak (min)=	5.00	8.00	
Unit Hyd. peak (cms)=	0.23	0.15	
			TOTALS
PEAK FLOW (cms)=	0.18	0.00	0.177 (iii)
TIME TO PEAK (hrs)=	5.23	5.25	5.25
RUNOFF VOLUME (mm)=	61.71	35.33	61.44
TOTAL RAINFALL (mm)=	62.71	62.71	62.71
RUNOFF COEFFICIENT =	0.98	0.56	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7642)|	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0470	0.1250
	0.0197	0.0630	0.0551	0.1410
	0.0304	0.0850	0.0620	0.1580
	0.0373	0.1020	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7641)	2.210	0.177	5.25	61.44
OUTFLOW: ID= 1 (7642)	2.210	0.033	6.40	58.97

PEAK FLOW REDUCTION [Qout/Qin](%)= 18.89
TIME SHIFT OF PEAK FLOW (min)= 69.00
MAXIMUM STORAGE USED (ha.m.)= 0.0923

CALIB |			
STANDHYD (7643)|	Area (ha)=	2.02	
ID= 1 DT= 1.0 min |	Total Imp(%)=	99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.00	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	116.05	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	3.76	6.150	8.15	9.22	1.25
0.033	0.00	3.100	3.76	6.167	8.15	9.23	1.25
0.050	0.00	3.117	3.76	6.183	8.15	9.25	1.25
0.067	0.00	3.133	3.76	6.200	8.15	9.27	0.63
0.083	0.00	3.150	3.76	6.217	8.15	9.28	0.63
0.100	0.00	3.167	3.76	6.233	8.15	9.30	0.63
0.117	0.00	3.183	3.76	6.250	8.14	9.32	0.63
0.133	0.00	3.200	3.76	6.267	4.39	9.33	0.63
0.150	0.00	3.217	3.76	6.283	4.39	9.35	0.63
0.167	0.00	3.233	3.76	6.300	4.39	9.37	0.63
0.183	0.00	3.250	3.76	6.317	4.39	9.38	0.63
0.200	0.00	3.267	10.66	6.333	4.39	9.40	0.63
0.217	0.00	3.283	10.66	6.350	4.39	9.42	0.63
0.233	0.00	3.300	10.66	6.367	4.39	9.43	0.63
0.250	0.00	3.317	10.66	6.383	4.39	9.45	0.63
0.267	0.63	3.333	10.66	6.400	4.39	9.47	0.63
0.283	0.63	3.350	10.66	6.417	4.39	9.48	0.63
0.300	0.63	3.367	10.66	6.433	4.39	9.50	0.63
0.317	0.63	3.383	10.66	6.450	4.39	9.52	0.63
0.333	0.63	3.400	10.66	6.467	4.39	9.53	0.63
0.350	0.63	3.417	10.66	6.483	4.39	9.55	0.63
0.367	0.63	3.433	10.66	6.500	4.39	9.57	0.63
0.383	0.63	3.450	10.66	6.517	4.39	9.58	0.63
0.400	0.63	3.467	10.66	6.533	4.39	9.60	0.63
0.417	0.63	3.483	10.66	6.550	4.39	9.62	0.63
0.433	0.63	3.500	10.66	6.567	4.39	9.63	0.63
0.450	0.63	3.517	10.66	6.583	4.39	9.65	0.63
0.467	0.63	3.533	10.66	6.600	4.39	9.67	0.63
0.483	0.63	3.550	10.66	6.617	4.39	9.68	0.63
0.500	0.63	3.567	10.66	6.633	4.39	9.70	0.63
0.517	0.63	3.583	10.66	6.650	4.39	9.72	0.63
0.533	0.63	3.600	10.66	6.667	4.39	9.73	0.63
0.550	0.63	3.617	10.66	6.683	4.39	9.75	0.63
0.567	0.63	3.633	10.66	6.700	4.39	9.77	0.63
0.583	0.63	3.650	10.66	6.717	4.39	9.78	0.63
0.600	0.63	3.667	10.66	6.733	4.39	9.80	0.63
0.617	0.63	3.683	10.66	6.750	4.39	9.82	0.63
0.633	0.63	3.700	10.66	6.767	4.39	9.83	0.63
0.650	0.63	3.717	10.66	6.783	4.39	9.85	0.63
0.667	0.63	3.733	10.66	6.800	4.39	9.87	0.63
0.683	0.63	3.750	10.66	6.817	4.39	9.88	0.63
0.700	0.63	3.767	10.66	6.833	4.39	9.90	0.63
0.717	0.63	3.783	10.66	6.850	4.39	9.92	0.63
0.733	0.63	3.800	10.66	6.867	4.39	9.93	0.63
0.750	0.63	3.817	10.66	6.883	4.39	9.95	0.63
0.767	0.63	3.833	10.66	6.900	4.39	9.97	0.63
0.783	0.63	3.850	10.66	6.917	4.39	9.98	0.63
0.800	0.63	3.867	10.66	6.933	4.39	10.00	0.63
0.817	0.63	3.883	10.66	6.950	4.39	10.02	0.63
0.833	0.63	3.900	10.66	6.967	4.39	10.03	0.63
0.850	0.63	3.917	10.66	6.983	4.39	10.05	0.63
0.867	0.63	3.933	10.66	7.000	4.39	10.07	0.63
0.883	0.63	3.950	10.66	7.017	4.39	10.08	0.63
0.900	0.63	3.967	10.66	7.033	4.39	10.10	0.63
0.917	0.63	3.983	10.66	7.050	4.39	10.12	0.63
0.933	0.63	4.000	10.66	7.067	4.39	10.13	0.63
0.950	0.63	4.017	10.66	7.083	4.39	10.15	0.63
0.967	0.63	4.033	10.66	7.100	4.39	10.17	0.63
0.983	0.63	4.050	10.66	7.117	4.39	10.18	0.63

1.000	0.63	4.067	10.66	7.133	4.39	10.20	0.63
1.017	0.63	4.083	10.66	7.150	4.39	10.22	0.63
1.033	0.63	4.100	10.66	7.167	4.39	10.23	0.63
1.050	0.63	4.117	10.66	7.183	4.39	10.25	0.63
1.067	0.63	4.133	10.66	7.200	4.39	10.27	0.63
1.083	0.63	4.150	10.66	7.217	4.39	10.28	0.63
1.100	0.63	4.167	10.66	7.233	4.39	10.30	0.63
1.117	0.63	4.183	10.66	7.250	4.39	10.32	0.63
1.133	0.63	4.200	10.66	7.267	2.51	10.33	0.63
1.150	0.63	4.217	10.66	7.283	2.51	10.35	0.63
1.167	0.63	4.233	10.66	7.300	2.51	10.37	0.63
1.183	0.63	4.250	10.66	7.317	2.51	10.38	0.63
1.200	0.63	4.267	28.84	7.333	2.51	10.40	0.63
1.217	0.63	4.283	28.84	7.350	2.51	10.42	0.63
1.233	0.63	4.300	28.84	7.367	2.51	10.43	0.63
1.250	0.63	4.317	28.84	7.383	2.51	10.45	0.63
1.267	0.63	4.333	28.84	7.400	2.51	10.47	0.63
1.283	0.63	4.350	28.84	7.417	2.51	10.48	0.63
1.300	0.63	4.367	28.84	7.433	2.51	10.50	0.63
1.317	0.63	4.383	28.84	7.450	2.51	10.52	0.63
1.333	0.63	4.400	28.84	7.467	2.51	10.53	0.63
1.350	0.63	4.417	28.84	7.483	2.51	10.55	0.63
1.367	0.63	4.433	28.84	7.500	2.51	10.57	0.63
1.383	0.63	4.450	28.84	7.517	2.51	10.58	0.63
1.400	0.63	4.467	28.84	7.533	2.51	10.60	0.63
1.417	0.63	4.483	28.84	7.550	2.51	10.62	0.63
1.433	0.63	4.500	28.84	7.567	2.51	10.63	0.63
1.450	0.63	4.517	28.84	7.583	2.51	10.65	0.63
1.467	0.63	4.533	28.84	7.600	2.51	10.67	0.63
1.483	0.63	4.550	28.84	7.617	2.51	10.68	0.63
1.500	0.63	4.567	28.84	7.633	2.51	10.70	0.63
1.517	0.63	4.583	28.84	7.650	2.51	10.72	0.63
1.533	0.63	4.600	28.84	7.667	2.51	10.73	0.63
1.550	0.63	4.617	28.84	7.683	2.51	10.75	0.63
1.567	0.63	4.633	28.84	7.700	2.51	10.77	0.63
1.583	0.63	4.650	28.84	7.717	2.51	10.78	0.63
1.600	0.63	4.667	28.84	7.733	2.51	10.80	0.63
1.617	0.63	4.683	28.84	7.750	2.51	10.82	0.63
1.633	0.63	4.700	28.84	7.767	2.51	10.83	0.63
1.650	0.63	4.717	28.84	7.783	2.51	10.85	0.63
1.667	0.63	4.733	28.84	7.800	2.51	10.87	0.63
1.683	0.63	4.750	28.84	7.817	2.51	10.88	0.63
1.700	0.63	4.767	28.84	7.833	2.51	10.90	0.63
1.717	0.63	4.783	28.84	7.850	2.51	10.92	0.63
1.733	0.63	4.800	28.84	7.867	2.51	10.93	0.63
1.750	0.63	4.817	28.84	7.883	2.51	10.95	0.63
1.767	0.63	4.833	28.84	7.900	2.51	10.97	0.63
1.783	0.63	4.850	28.84	7.917	2.51	10.98	0.63
1.800	0.63	4.867	28.84	7.933	2.51	11.00	0.63
1.817	0.63	4.883	28.84	7.950	2.51	11.02	0.63
1.833	0.63	4.900	28.84	7.967	2.51	11.03	0.63
1.850	0.63	4.917	28.84	7.983	2.51	11.05	0.63
1.867	0.63	4.933	28.84	8.000	2.51	11.07	0.63
1.883	0.63	4.950	28.84	8.017	2.51	11.08	0.63
1.900	0.63	4.967	28.84	8.033	2.51	11.10	0.63
1.917	0.63	4.983	28.84	8.050	2.51	11.12	0.63
1.933	0.63	5.000	28.84	8.067	2.51	11.13	0.63
1.950	0.63	5.017	28.84	8.083	2.51	11.15	0.63
1.967	0.63	5.033	28.84	8.100	2.51	11.17	0.63
1.983	0.63	5.050	28.84	8.117	2.51	11.18	0.63
2.000	0.63	5.067	28.84	8.133	2.51	11.20	0.63
2.017	0.63	5.083	28.84	8.150	2.51	11.22	0.63
2.033	0.63	5.100	28.84	8.167	2.51	11.23	0.63
2.050	0.63	5.117	28.84	8.183	2.51	11.25	0.63
2.067	0.63	5.133	28.84	8.200	2.51	11.27	0.63
2.083	0.63	5.150	28.84	8.217	2.51	11.28	0.63
2.100	0.63	5.167	28.84	8.233	2.51	11.30	0.63
2.117	0.63	5.183	28.84	8.250	2.51	11.32	0.63
2.133	0.63	5.200	28.84	8.267	1.25	11.33	0.63
2.150	0.63	5.217	28.84	8.283	1.25	11.35	0.63
2.167	0.63	5.233	28.84	8.300	1.25	11.37	0.63
2.183	0.63	5.250	28.82	8.317	1.25	11.38	0.63
2.200	0.63	5.267	8.15	8.333	1.25	11.40	0.63
2.217	0.63	5.283	8.15	8.350	1.25	11.42	0.63
2.233	0.63	5.300	8.15	8.367	1.25	11.43	0.63
2.250	0.63	5.317	8.15	8.383	1.25	11.45	0.63
2.267	3.76	5.333	8.15	8.400	1.25	11.47	0.63
2.283	3.76	5.350	8.15	8.417	1.25	11.48	0.63
2.300	3.76	5.367	8.15	8.433	1.25	11.50	0.63
2.317	3.76	5.383	8.15	8.450	1.25	11.52	0.63
2.333	3.76	5.400	8.15	8.467	1.25	11.53	0.63
2.350	3.76	5.417	8.15	8.483	1.25	11.55	0.63
2.367	3.76	5.433	8.15	8.500	1.25	11.57	0.63
2.383	3.76	5.450	8.15	8.517	1.25	11.58	0.63
2.400	3.76	5.467	8.15	8.533	1.25	11.60	0.63
2.417	3.76	5.483	8.15	8.550	1.25	11.62	0.63
2.433	3.76	5.500	8.15	8.567	1.25	11.63	0.63
2.450	3.76	5.517	8.15	8.583	1.25	11.65	0.63
2.467	3.76	5.533	8.15	8.600	1.25	11.67	0.63
2.483	3.76	5.550	8.15	8.617	1.25	11.68	0.63
2.500	3.76	5.567	8.15	8.633	1.25	11.70	0.63
2.517	3.76	5.583	8.15	8.650	1.25	11.72	0.63
2.533	3.76	5.600	8.15	8.667	1.25	11.73	0.63
2.550	3.76	5.617	8.15	8.683	1.25	11.75	0.63
2.567	3.76	5.633	8.15	8.700	1.25	11.77	0.63
2.583	3.76	5.650	8.15	8.717	1.25	11.78	0.63
2.600	3.76	5.667	8.15	8.733	1.25	11.80	0.63
2.617	3.76	5.683	8.15	8.750	1.25	11.82	0.63
2.633	3.76	5.700	8.15	8.767	1.25	11.83	0.63
2.650	3.76	5.717	8.15	8.783	1.25	11.85	0.63
2.667	3.76	5.733	8.15	8.800	1.25	11.87	0.63
2.683	3.76	5.750	8.15	8.817	1.25	11.88	0.63
2.700	3.76	5.767	8.15	8.833	1.25	11.90	0.63
2.717	3.76	5.783	8.15	8.850	1.25	11.92	0.63
2.733	3.76	5.800	8.15	8.867	1.25	11.93	0.63
2.750	3.76	5.817	8.15	8.883	1.25	11.95	0.63
2.767	3.76	5.833	8.15	8.900	1.25	11.97	0.63
2.783	3.76	5.850	8.15	8.917	1.25	11.98	0.63
2.800	3.76	5.867	8.15	8.933	1.25	12.00	0.63
2.817	3.76	5.883	8.15	8.950	1.25	12.02	0.63
2.833	3.76	5.900	8.15	8.967	1.25	12.03	0.63
2.850	3.76	5.917	8.15	8.983	1.25	12.05	0.63
2.867	3.76	5.933	8.15	9.000	1.25	12.07	0.63
2.883	3.76	5.950	8.15	9.017	1.25	12.08	0.63
2.900	3.76	5.967	8.15	9.033	1.25	12.10	0.63
2.917	3.76	5.983	8.15	9.050	1.25	12.12	0.63
2.933	3.76	6.000	8.15	9.067	1.25	12.13	0.63
2.950	3.76	6.017	8.15	9.083	1.25	12.15	0.63
2.967	3.76	6.033	8.15	9.100	1.25	12.17	0.63
2.983	3.76	6.050	8.15	9.117	1.25	12.18	0.63
3.000	3.76	6.067	8.15	9.133	1.25	12.20	0.63
3.017	3.76	6.083	8.15	9.150	1.25	12.22	0.63
3.033	3.76	6.100	8.15	9.167	1.25	12.23	0.63
3.050	3.76	6.117	8.15	9.183	1.25	12.25	0.63
3.067	3.76	6.133	8.15	9.200	1.25		

Max.Eff.Inten.(mm/hr)=	28.84	20.90	
over (min)	5.00	8.00	
Storage Coeff. (min)=	4.59 (ii)	7.39 (ii)	
Unit Hyd. Tpeak (min)=	5.00	8.00	
Unit Hyd. peak (cms)=	0.24	0.15	
			TOTALS
PEAK FLOW (cms)=	0.16	0.00	0.161 (iii)
TIME TO PEAK (hrs)=	5.23	5.25	5.25
RUNOFF VOLUME (mm)=	61.71	35.33	61.44
TOTAL RAINFALL (mm)=	62.71	62.71	62.71
RUNOFF COEFFICIENT =	0.98	0.56	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7644)| IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF		|		
	OUTFLOW (cms)	STORAGE (ha.m.)	|	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	|	0.0433	0.1140

GEI Consultants

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                    0.0182     0.0580   |   0.0507      0.1280
                    0.0280     0.0775   |   0.0571      0.1440
                    0.0343     0.0930   |   0.0000      0.0000

                           AREA     QPEAK     TPEAK       R.V.
                           (ha)     (cms)     (hrs)       (mm)
  INFLOW : ID= 2 (  7643)      2.020     0.161      5.25      61.44
  OUTFLOW: ID= 1 (  7644)      2.020     0.031      6.38      59.00

               PEAK   FLOW   REDUCTION [Qout/Qin](%)= 19.04
               TIME SHIFT OF PEAK FLOW         (min)= 68.00
               MAXIMUM  STORAGE   USED       (ha.m.)=  0.0842

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================================================================================
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      V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
      V    V   I    SS     U   U   A A   L
       V  V    I     SS    U   U  AAAAA  L
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
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                 *****  D E T A I L E D   O U T P U T *****


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DATE: 06/14/2024                          TIME: 12:48:37

USER:


COMMENTS: _____

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  ************************************************
  ** SIMULATION : 92. 10 Year 24 Hour AES (Bloo **
  ************************************************


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|    READ STORM    |    Filename: C:\Users\ygollamudi\AppD
|                  |              ata\Local\Temp\
|                  |              3c3f87d5-a26e-4c6b-b2ae-56a7ba29ab7f\c53c0fdf
| Ptotal= 68.76 mm |    Comments: 10 Year 24 Hour AES (Bloor, TRCA)
-------------------
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.00    0.00 |  6.25    5.85 | 12.50    2.41 | 18.75    0.34
               0.25    0.34 |  6.50    5.85 | 12.75    2.41 | 19.00    0.34
               0.50    0.34 |  6.75    5.85 | 13.00    2.41 | 19.25    0.34
               0.75    0.34 |  7.00    5.85 | 13.25    2.41 | 19.50    0.34
               1.00    0.34 |  7.25    5.85 | 13.50    2.41 | 19.75    0.34
               1.25    0.34 |  7.50    5.85 | 13.75    2.41 | 20.00    0.34
               1.50    0.34 |  7.75    5.85 | 14.00    2.41 | 20.25    0.34
               1.75    0.34 |  8.00    5.85 | 14.25    1.38 | 20.50    0.34
               2.00    0.34 |  8.25   15.82 | 14.50    1.38 | 20.75    0.34
               2.25    0.34 |  8.50   15.82 | 14.75    1.38 | 21.00    0.34
               2.50    0.34 |  8.75   15.82 | 15.00    1.38 | 21.25    0.34
               2.75    0.34 |  9.00   15.82 | 15.25    1.38 | 21.50    0.34
               3.00    0.34 |  9.25   15.82 | 15.50    1.38 | 21.75    0.34
               3.25    0.34 |  9.50   15.82 | 15.75    1.38 | 22.00    0.34
               3.50    0.34 |  9.75   15.82 | 16.00    1.38 | 22.25    0.34
               3.75    0.34 | 10.00   15.82 | 16.25    0.69 | 22.50    0.34
               4.00    0.34 | 10.25    4.47 | 16.50    0.69 | 22.75    0.34
               4.25    2.06 | 10.50    4.47 | 16.75    0.69 | 23.00    0.34
               4.50    2.06 | 10.75    4.47 | 17.00    0.69 | 23.25    0.34
               4.75    2.06 | 11.00    4.47 | 17.25    0.69 | 23.50    0.34
               5.00    2.06 | 11.25    4.47 | 17.50    0.69 | 23.75    0.34
               5.25    2.06 | 11.50    4.47 | 17.75    0.69 | 24.00    0.34
               5.50    2.06 | 11.75    4.47 | 18.00    0.69 |
               5.75    2.06 | 12.00    4.47 | 18.25    0.34 |
               6.00    2.06 | 12.25    2.41 | 18.50    0.34 |

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| CALIB            |
| STANDHYD (  7567)|   Area    (ha)=   2.72
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
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                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.69          0.03
     Dep. Storage     (mm)=       1.00          1.50
     Average Slope     (%)=       1.00          0.50
     Length            (m)=     134.66         40.00
     Mannings n           =      0.013         0.250

     NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
0.017    0.00 | 6.083    2.06 |12.150    4.47 | 18.22    0.69
0.033    0.00 | 6.100    2.06 |12.167    4.47 | 18.23    0.69
0.050    0.00 | 6.117    2.06 |12.183    4.47 | 18.25    0.69
0.067    0.00 | 6.133    2.06 |12.200    4.47 | 18.27    0.34
0.083    0.00 | 6.150    2.06 |12.217    4.47 | 18.28    0.34
0.100    0.00 | 6.167    2.06 |12.233    4.47 | 18.30    0.34
0.117    0.00 | 6.183    2.06 |12.250    4.47 | 18.32    0.34
0.133    0.00 | 6.200    2.06 |12.267    2.41 | 18.33    0.34
0.150    0.00 | 6.217    2.06 |12.283    2.41 | 18.35    0.34
0.167    0.00 | 6.233    2.06 |12.300    2.41 | 18.37    0.34
0.183    0.00 | 6.250    2.07 |12.317    2.41 | 18.38    0.34
0.200    0.00 | 6.267    5.85 |12.333    2.41 | 18.40    0.34
0.217    0.00 | 6.283    5.85 |12.350    2.41 | 18.42    0.34
0.233    0.00 | 6.300    5.85 |12.367    2.41 | 18.43    0.34
0.250    0.00 | 6.317    5.85 |12.383    2.41 | 18.45    0.34
0.267    0.34 | 6.333    5.85 |12.400    2.41 | 18.47    0.34
0.283    0.34 | 6.350    5.85 |12.417    2.41 | 18.48    0.34
0.300    0.34 | 6.367    5.85 |12.433    2.41 | 18.50    0.34
0.317    0.34 | 6.383    5.85 |12.450    2.41 | 18.52    0.34
0.333    0.34 | 6.400    5.85 |12.467    2.41 | 18.53    0.34
0.350    0.34 | 6.417    5.85 |12.483    2.41 | 18.55    0.34
0.367    0.34 | 6.433    5.85 |12.500    2.41 | 18.57    0.34
0.383    0.34 | 6.450    5.85 |12.517    2.41 | 18.58    0.34
0.400    0.34 | 6.467    5.85 |12.533    2.41 | 18.60    0.34
0.417    0.34 | 6.483    5.85 |12.550    2.41 | 18.62    0.34
0.433    0.34 | 6.500    5.85 |12.567    2.41 | 18.63    0.34
0.450    0.34 | 6.517    5.85 |12.583    2.41 | 18.65    0.34
0.467    0.34 | 6.533    5.85 |12.600    2.41 | 18.67    0.34
0.483    0.34 | 6.550    5.85 |12.617    2.41 | 18.68    0.34
0.500    0.34 | 6.567    5.85 |12.633    2.41 | 18.70    0.34
0.517    0.34 | 6.583    5.85 |12.650    2.41 | 18.72    0.34
0.533    0.34 | 6.600    5.85 |12.667    2.41 | 18.73    0.34
0.550    0.34 | 6.617    5.85 |12.683    2.41 | 18.75    0.34
0.567    0.34 | 6.633    5.85 |12.700    2.41 | 18.77    0.34
0.583    0.34 | 6.650    5.85 |12.717    2.41 | 18.78    0.34
0.600    0.34 | 6.667    5.85 |12.733    2.41 | 18.80    0.34
0.617    0.34 | 6.683    5.85 |12.750    2.41 | 18.82    0.34
0.633    0.34 | 6.700    5.85 |12.767    2.41 | 18.83    0.34
0.650    0.34 | 6.717    5.85 |12.783    2.41 | 18.85    0.34
0.667    0.34 | 6.733    5.85 |12.800    2.41 | 18.87    0.34
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0.683	0.34	6.750	5.85	12.817	2.41	18.88	0.34
0.700	0.34	6.767	5.85	12.833	2.41	18.90	0.34
0.717	0.34	6.783	5.85	12.850	2.41	18.92	0.34
0.733	0.34	6.800	5.85	12.867	2.41	18.93	0.34
0.750	0.34	6.817	5.85	12.883	2.41	18.95	0.34
0.767	0.34	6.833	5.85	12.900	2.41	18.97	0.34
0.783	0.34	6.850	5.85	12.917	2.41	18.98	0.34
0.800	0.34	6.867	5.85	12.933	2.41	19.00	0.34
0.817	0.34	6.883	5.85	12.950	2.41	19.02	0.34
0.833	0.34	6.900	5.85	12.967	2.41	19.03	0.34
0.850	0.34	6.917	5.85	12.983	2.41	19.05	0.34
0.867	0.34	6.933	5.85	13.000	2.41	19.07	0.34
0.883	0.34	6.950	5.85	13.017	2.41	19.08	0.34
0.900	0.34	6.967	5.85	13.033	2.41	19.10	0.34
0.917	0.34	6.983	5.85	13.050	2.41	19.12	0.34
0.933	0.34	7.000	5.85	13.067	2.41	19.13	0.34
0.950	0.34	7.017	5.85	13.083	2.41	19.15	0.34
0.967	0.34	7.033	5.85	13.100	2.41	19.17	0.34
0.983	0.34	7.050	5.85	13.117	2.41	19.18	0.34
1.000	0.34	7.067	5.85	13.133	2.41	19.20	0.34
1.017	0.34	7.083	5.85	13.150	2.41	19.22	0.34
1.033	0.34	7.100	5.85	13.167	2.41	19.23	0.34
1.050	0.34	7.117	5.85	13.183	2.41	19.25	0.34
1.067	0.34	7.133	5.85	13.200	2.41	19.27	0.34
1.083	0.34	7.150	5.85	13.217	2.41	19.28	0.34
1.100	0.34	7.167	5.85	13.233	2.41	19.30	0.34
1.117	0.34	7.183	5.85	13.250	2.41	19.32	0.34
1.133	0.34	7.200	5.85	13.267	2.41	19.33	0.34
1.150	0.34	7.217	5.85	13.283	2.41	19.35	0.34
1.167	0.34	7.233	5.85	13.300	2.41	19.37	0.34
1.183	0.34	7.250	5.85	13.317	2.41	19.38	0.34
1.200	0.34	7.267	5.85	13.333	2.41	19.40	0.34
1.217	0.34	7.283	5.85	13.350	2.41	19.42	0.34
1.233	0.34	7.300	5.85	13.367	2.41	19.43	0.34
1.250	0.34	7.317	5.85	13.383	2.41	19.45	0.34
1.267	0.34	7.333	5.85	13.400	2.41	19.47	0.34
1.283	0.34	7.350	5.85	13.417	2.41	19.48	0.34
1.300	0.34	7.367	5.85	13.433	2.41	19.50	0.34
1.317	0.34	7.383	5.85	13.450	2.41	19.52	0.34
1.333	0.34	7.400	5.85	13.467	2.41	19.53	0.34
1.350	0.34	7.417	5.85	13.483	2.41	19.55	0.34
1.367	0.34	7.433	5.85	13.500	2.41	19.57	0.34
1.383	0.34	7.450	5.85	13.517	2.41	19.58	0.34
1.400	0.34	7.467	5.85	13.533	2.41	19.60	0.34
1.417	0.34	7.483	5.85	13.550	2.41	19.62	0.34
1.433	0.34	7.500	5.85	13.567	2.41	19.63	0.34
1.450	0.34	7.517	5.85	13.583	2.41	19.65	0.34
1.467	0.34	7.533	5.85	13.600	2.41	19.67	0.34
1.483	0.34	7.550	5.85	13.617	2.41	19.68	0.34
1.500	0.34	7.567	5.85	13.633	2.41	19.70	0.34
1.517	0.34	7.583	5.85	13.650	2.41	19.72	0.34
1.533	0.34	7.600	5.85	13.667	2.41	19.73	0.34
1.550	0.34	7.617	5.85	13.683	2.41	19.75	0.34
1.567	0.34	7.633	5.85	13.700	2.41	19.77	0.34
1.583	0.34	7.650	5.85	13.717	2.41	19.78	0.34
1.600	0.34	7.667	5.85	13.733	2.41	19.80	0.34
1.617	0.34	7.683	5.85	13.750	2.41	19.82	0.34
1.633	0.34	7.700	5.85	13.767	2.41	19.83	0.34
1.650	0.34	7.717	5.85	13.783	2.41	19.85	0.34
1.667	0.34	7.733	5.85	13.800	2.41	19.87	0.34
1.683	0.34	7.750	5.85	13.817	2.41	19.88	0.34
1.700	0.34	7.767	5.85	13.833	2.41	19.90	0.34
1.717	0.34	7.783	5.85	13.850	2.41	19.92	0.34
1.733	0.34	7.800	5.85	13.867	2.41	19.93	0.34
1.750	0.34	7.817	5.85	13.883	2.41	19.95	0.34
1.767	0.34	7.833	5.85	13.900	2.41	19.97	0.34
1.783	0.34	7.850	5.85	13.917	2.41	19.98	0.34
1.800	0.34	7.867	5.85	13.933	2.41	20.00	0.34
1.817	0.34	7.883	5.85	13.950	2.41	20.02	0.34
1.833	0.34	7.900	5.85	13.967	2.41	20.03	0.34
1.850	0.34	7.917	5.85	13.983	2.41	20.05	0.34
1.867	0.34	7.933	5.85	14.000	2.41	20.07	0.34
1.883	0.34	7.950	5.85	14.017	2.41	20.08	0.34
1.900	0.34	7.967	5.85	14.033	2.41	20.10	0.34
1.917	0.34	7.983	5.85	14.050	2.41	20.12	0.34
1.933	0.34	8.000	5.85	14.067	2.41	20.13	0.34
1.950	0.34	8.017	5.85	14.083	2.41	20.15	0.34
1.967	0.34	8.033	5.85	14.100	2.41	20.17	0.34
1.983	0.34	8.050	5.85	14.117	2.41	20.18	0.34
2.000	0.34	8.067	5.85	14.133	2.41	20.20	0.34
2.017	0.34	8.083	5.85	14.150	2.41	20.22	0.34
2.033	0.34	8.100	5.85	14.167	2.41	20.23	0.34
2.050	0.34	8.117	5.85	14.183	2.41	20.25	0.34
2.067	0.34	8.133	5.85	14.200	2.41	20.27	0.34
2.083	0.34	8.150	5.85	14.217	2.41	20.28	0.34
2.100	0.34	8.167	5.85	14.233	2.41	20.30	0.34
2.117	0.34	8.183	5.85	14.250	2.41	20.32	0.34
2.133	0.34	8.200	5.85	14.267	1.38	20.33	0.34
2.150	0.34	8.217	5.85	14.283	1.38	20.35	0.34
2.167	0.34	8.233	5.85	14.300	1.38	20.37	0.34
2.183	0.34	8.250	5.88	14.317	1.38	20.38	0.34
2.200	0.34	8.267	15.82	14.333	1.38	20.40	0.34
2.217	0.34	8.283	15.82	14.350	1.38	20.42	0.34
2.233	0.34	8.300	15.82	14.367	1.38	20.43	0.34
2.250	0.34	8.317	15.82	14.383	1.38	20.45	0.34
2.267	0.34	8.333	15.82	14.400	1.38	20.47	0.34
2.283	0.34	8.350	15.82	14.417	1.38	20.48	0.34
2.300	0.34	8.367	15.82	14.433	1.38	20.50	0.34
2.317	0.34	8.383	15.82	14.450	1.38	20.52	0.34
2.333	0.34	8.400	15.82	14.467	1.38	20.53	0.34
2.350	0.34	8.417	15.82	14.483	1.38	20.55	0.34
2.367	0.34	8.433	15.82	14.500	1.38	20.57	0.34
2.383	0.34	8.450	15.82	14.517	1.38	20.58	0.34
2.400	0.34	8.467	15.82	14.533	1.38	20.60	0.34
2.417	0.34	8.483	15.82	14.550	1.38	20.62	0.34
2.433	0.34	8.500	15.82	14.567	1.38	20.63	0.34
2.450	0.34	8.517	15.82	14.583	1.38	20.65	0.34
2.467	0.34	8.533	15.82	14.600	1.38	20.67	0.34
2.483	0.34	8.550	15.82	14.617	1.38	20.68	0.34
2.500	0.34	8.567	15.82	14.633	1.38	20.70	0.34
2.517	0.34	8.583	15.82	14.650	1.38	20.72	0.34
2.533	0.34	8.600	15.82	14.667	1.38	20.73	0.34
2.550	0.34	8.617	15.82	14.683	1.38	20.75	0.34
2.567	0.34	8.633	15.82	14.700	1.38	20.77	0.34
2.583	0.34	8.650	15.82	14.717	1.38	20.78	0.34
2.600	0.34	8.667	15.82	14.733	1.38	20.80	0.34
2.617	0.34	8.683	15.82	14.750	1.38	20.82	0.34
2.633	0.34	8.700	15.82	14.767	1.38	20.83	0.34
2.650	0.34	8.717	15.82	14.783	1.38	20.85	0.34
2.667	0.34	8.733	15.82	14.800	1.38	20.87	0.34
2.683	0.34	8.750	15.82	14.817	1.38	20.88	0.34
2.700	0.34	8.767	15.82	14.833	1.38	20.90	0.34
2.717	0.34	8.783	15.82	14.850	1.38	20.92	0.34
2.733	0.34	8.800	15.82	14.867	1.38	20.93	0.34
2.750	0.34	8.817	15.82	14.883	1.38	20.95	0.34
2.767	0.34	8.833	15.82	14.900	1.38	20.97	0.34
2.783	0.34	8.850	15.82	14.917	1.38	20.98	0.34
2.800	0.34	8.867	15.82	14.933	1.38	21.00	0.34
2.817	0.34	8.883	15.82	14.950	1.38	21.02	0.34
2.833	0.34	8.900	15.82	14.967	1.38	21.03	0.34
2.850	0.34	8.917	15.82	14.983	1.38	21.05	0.34
2.867	0.34	8.933	15.82	15.000	1.38	21.07	0.34
2.883	0.34	8.950	15.82	15.017	1.38	21.08	0.34
2.900	0.34	8.967	15.82	15.033	1.38	21.10	0.34
2.917	0.34	8.983	15.82	15.050	1.38	21.12	0.34
2.933	0.34	9.000	15.82	15.067	1.38	21.13	0.34
2.950	0.34	9.017	15.82	15.083	1.38	21.15	0.34
2.967	0.34	9.033	15.82	15.100	1.38	21.17	0.34
2.983	0.34	9.050	15.82	15.117	1.38	21.18	0.34
3.000	0.34	9.067	15.82	15.133	1.38	21.20	0.34
3.017	0.34	9.083	15.82	15.150	1.38	21.22	0.34
3.033	0.34	9.100	15.82	15.167	1.38	21.23	0.34
3.050	0.34	9.117	15.82	15.183	1.38	21.25	0.34
3.067	0.34	9.133	15.82	15.200	1.38	21.27	0.34
3.083	0.34	9.150	15.82	15.217	1.38	21.28	0.34
3.100	0.34	9.167	15.82	15.233	1.38	21.30	0.34
3.117	0.34	9.183	15.82	15.250	1.38	21.32	0.34
3.133	0.34	9.200	15.82	15.267	1.38	21.33	0.34
3.150	0.34	9.217	15.82	15.283	1.38	21.35	0.34
3.167	0.34	9.233	15.82	15.300	1.38	21.37	0.34
3.183	0.34	9.250	15.82	15.317	1.38	21.38	0.34
3.200	0.34	9.267	15.82	15.333	1.38	21.40	0.34

3.217	0.34	9.283	15.82	15.350	1.38	21.42	0.34		4.483	2.06	10.550	4.47	16.617	0.69	22.68	0.34
3.233	0.34	9.300	15.82	15.367	1.38	21.43	0.34		4.500	2.06	10.567	4.47	16.633	0.69	22.70	0.34
3.250	0.34	9.317	15.82	15.383	1.38	21.45	0.34		4.517	2.06	10.583	4.47	16.650	0.69	22.72	0.34
3.267	0.34	9.333	15.82	15.400	1.38	21.47	0.34		4.533	2.06	10.600	4.47	16.667	0.69	22.73	0.34
3.283	0.34	9.350	15.82	15.417	1.38	21.48	0.34		4.550	2.06	10.617	4.47	16.683	0.69	22.75	0.34
3.300	0.34	9.367	15.82	15.433	1.38	21.50	0.34		4.567	2.06	10.633	4.47	16.700	0.69	22.77	0.34
3.317	0.34	9.383	15.82	15.450	1.38	21.52	0.34		4.583	2.06	10.650	4.47	16.717	0.69	22.78	0.34
3.333	0.34	9.400	15.82	15.467	1.38	21.53	0.34		4.600	2.06	10.667	4.47	16.733	0.69	22.80	0.34
3.350	0.34	9.417	15.82	15.483	1.38	21.55	0.34		4.617	2.06	10.683	4.47	16.750	0.69	22.82	0.34
3.367	0.34	9.433	15.82	15.500	1.38	21.57	0.34		4.633	2.06	10.700	4.47	16.767	0.69	22.83	0.34
3.383	0.34	9.450	15.82	15.517	1.38	21.58	0.34		4.650	2.06	10.717	4.47	16.783	0.69	22.85	0.34
3.400	0.34	9.467	15.82	15.533	1.38	21.60	0.34		4.667	2.06	10.733	4.47	16.800	0.69	22.87	0.34
3.417	0.34	9.483	15.82	15.550	1.38	21.62	0.34		4.683	2.06	10.750	4.47	16.817	0.69	22.88	0.34
3.433	0.34	9.500	15.82	15.567	1.38	21.63	0.34		4.700	2.06	10.767	4.47	16.833	0.69	22.90	0.34
3.450	0.34	9.517	15.82	15.583	1.38	21.65	0.34		4.717	2.06	10.783	4.47	16.850	0.69	22.92	0.34
3.467	0.34	9.533	15.82	15.600	1.38	21.67	0.34		4.733	2.06	10.800	4.47	16.867	0.69	22.93	0.34
3.483	0.34	9.550	15.82	15.617	1.38	21.68	0.34		4.750	2.06	10.817	4.47	16.883	0.69	22.95	0.34
3.500	0.34	9.567	15.82	15.633	1.38	21.70	0.34		4.767	2.06	10.833	4.47	16.900	0.69	22.97	0.34
3.517	0.34	9.583	15.82	15.650	1.38	21.72	0.34		4.783	2.06	10.850	4.47	16.917	0.69	22.98	0.34
3.533	0.34	9.600	15.82	15.667	1.38	21.73	0.34		4.800	2.06	10.867	4.47	16.933	0.69	23.00	0.34
3.550	0.34	9.617	15.82	15.683	1.38	21.75	0.34		4.817	2.06	10.883	4.47	16.950	0.69	23.02	0.34
3.567	0.34	9.633	15.82	15.700	1.38	21.77	0.34		4.833	2.06	10.900	4.47	16.967	0.69	23.03	0.34
3.583	0.34	9.650	15.82	15.717	1.38	21.78	0.34		4.850	2.06	10.917	4.47	16.983	0.69	23.05	0.34
3.600	0.34	9.667	15.82	15.733	1.38	21.80	0.34		4.867	2.06	10.933	4.47	17.000	0.69	23.07	0.34
3.617	0.34	9.683	15.82	15.750	1.38	21.82	0.34		4.883	2.06	10.950	4.47	17.017	0.69	23.08	0.34
3.633	0.34	9.700	15.82	15.767	1.38	21.83	0.34		4.900	2.06	10.967	4.47	17.033	0.69	23.10	0.34
3.650	0.34	9.717	15.82	15.783	1.38	21.85	0.34		4.917	2.06	10.983	4.47	17.050	0.69	23.12	0.34
3.667	0.34	9.733	15.82	15.800	1.38	21.87	0.34		4.933	2.06	11.000	4.47	17.067	0.69	23.13	0.34
3.683	0.34	9.750	15.82	15.817	1.38	21.88	0.34		4.950	2.06	11.017	4.47	17.083	0.69	23.15	0.34
3.700	0.34	9.767	15.82	15.833	1.38	21.90	0.34		4.967	2.06	11.033	4.47	17.100	0.69	23.17	0.34
3.717	0.34	9.783	15.82	15.850	1.38	21.92	0.34		4.983	2.06	11.050	4.47	17.117	0.69	23.18	0.34
3.733	0.34	9.800	15.82	15.867	1.38	21.93	0.34		5.000	2.06	11.067	4.47	17.133	0.69	23.20	0.34
3.750	0.34	9.817	15.82	15.883	1.38	21.95	0.34		5.017	2.06	11.083	4.47	17.150	0.69	23.22	0.34
3.767	0.34	9.833	15.82	15.900	1.38	21.97	0.34		5.033	2.06	11.100	4.47	17.167	0.69	23.23	0.34
3.783	0.34	9.850	15.82	15.917	1.38	21.98	0.34		5.050	2.06	11.117	4.47	17.183	0.69	23.25	0.34
3.800	0.34	9.867	15.82	15.933	1.38	22.00	0.34		5.067	2.06	11.133	4.47	17.200	0.69	23.27	0.34
3.817	0.34	9.883	15.82	15.950	1.38	22.02	0.34		5.083	2.06	11.150	4.47	17.217	0.69	23.28	0.34
3.833	0.34	9.900	15.82	15.967	1.38	22.03	0.34		5.100	2.06	11.167	4.47	17.233	0.69	23.30	0.34
3.850	0.34	9.917	15.82	15.983	1.38	22.05	0.34		5.117	2.06	11.183	4.47	17.250	0.69	23.32	0.34
3.867	0.34	9.933	15.82	16.000	1.38	22.07	0.34		5.133	2.06	11.200	4.47	17.267	0.69	23.33	0.34
3.883	0.34	9.950	15.82	16.017	1.38	22.08	0.34		5.150	2.06	11.217	4.47	17.283	0.69	23.35	0.34
3.900	0.34	9.967	15.82	16.033	1.38	22.10	0.34		5.167	2.06	11.233	4.47	17.300	0.69	23.37	0.34
3.917	0.34	9.983	15.82	16.050	1.38	22.12	0.34		5.183	2.06	11.250	4.47	17.317	0.69	23.38	0.34
3.933	0.34	10.000	15.82	16.067	1.38	22.13	0.34		5.200	2.06	11.267	4.47	17.333	0.69	23.40	0.34
3.950	0.34	10.017	15.82	16.083	1.38	22.15	0.34		5.217	2.06	11.283	4.47	17.350	0.69	23.42	0.34
3.967	0.34	10.033	15.82	16.100	1.38	22.17	0.34		5.233	2.06	11.300	4.47	17.367	0.69	23.43	0.34
3.983	0.34	10.050	15.82	16.117	1.38	22.18	0.34		5.250	2.06	11.317	4.47	17.383	0.69	23.45	0.34
4.000	0.34	10.067	15.82	16.133	1.38	22.20	0.34		5.267	2.06	11.333	4.47	17.400	0.69	23.47	0.34
4.017	0.34	10.083	15.82	16.150	1.38	22.22	0.34		5.283	2.06	11.350	4.47	17.417	0.69	23.48	0.34
4.033	0.34	10.100	15.82	16.167	1.38	22.23	0.34		5.300	2.06	11.367	4.47	17.433	0.69	23.50	0.34
4.050	0.34	10.117	15.82	16.183	1.38	22.25	0.34		5.317	2.06	11.383	4.47	17.450	0.69	23.52	0.34
4.067	0.34	10.133	15.82	16.200	1.38	22.27	0.34		5.333	2.06	11.400	4.47	17.467	0.69	23.53	0.34
4.083	0.34	10.150	15.82	16.217	1.38	22.28	0.34		5.350	2.06	11.417	4.47	17.483	0.69	23.55	0.34
4.100	0.34	10.167	15.82	16.233	1.38	22.30	0.34		5.367	2.06	11.433	4.47	17.500	0.69	23.57	0.34
4.117	0.34	10.183	15.82	16.250	1.38	22.32	0.34		5.383	2.06	11.450	4.47	17.517	0.69	23.58	0.34
4.133	0.34	10.200	15.82	16.267	0.69	22.33	0.34		5.400	2.06	11.467	4.47	17.533	0.69	23.60	0.34
4.150	0.34	10.217	15.82	16.283	0.69	22.35	0.34		5.417	2.06	11.483	4.47	17.550	0.69	23.62	0.34
4.167	0.34	10.233	15.82	16.300	0.69	22.37	0.34		5.433	2.06	11.500	4.47	17.567	0.69	23.63	0.34
4.183	0.34	10.250	15.81	16.317	0.69	22.38	0.34		5.450	2.06	11.517	4.47	17.583	0.69	23.65	0.34
4.200	0.34	10.267	4.47	16.333	0.69	22.40	0.34		5.467	2.06	11.533	4.47	17.600	0.69	23.67	0.34
4.217	0.34	10.283	4.47	16.350	0.69	22.42	0.34		5.483	2.06	11.550	4.47	17.617	0.69	23.68	0.34
4.233	0.34	10.300	4.47	16.367	0.69	22.43	0.34		5.500	2.06	11.567	4.47	17.633	0.69	23.70	0.34
4.250	0.34	10.317	4.47	16.383	0.69	22.45	0.34		5.517	2.06	11.583	4.47	17.650	0.69	23.72	0.34
4.267	2.06	10.333	4.47	16.400	0.69	22.47	0.34		5.533	2.06	11.600	4.47	17.667	0.69	23.73	0.34
4.283	2.06	10.350	4.47	16.417	0.69	22.48	0.34		5.550	2.06	11.617	4.47	17.683	0.69	23.75	0.34
4.300	2.06	10.367	4.47	16.433	0.69	22.50	0.34		5.567	2.06	11.633	4.47	17.700	0.69	23.77	0.34
4.317	2.06	10.383	4.47	16.450	0.69	22.52	0.34		5.583	2.06	11.650	4.47	17.717	0.69	23.78	0.34
4.333	2.06	10.400	4.47	16.467	0.69	22.53	0.34		5.600	2.06	11.667	4.47	17.733	0.69	23.80	0.34
4.350	2.06	10.417	4.47	16.483	0.69	22.55	0.34		5.617	2.06	11.683	4.47	17.750	0.69	23.82	0.34
4.367	2.06	10.433	4.47	16.500	0.69	22.57	0.34		5.633	2.06	11.700	4.47	17.767	0.69	23.83	0.34
4.383	2.06	10.450	4.47	16.517	0.69	22.58	0.34		5.650	2.06	11.717	4.47	17.783	0.69	23.85	0.34
4.400	2.06	10.467	4.47	16.533	0.69	22.60	0.34		5.667	2.06	11.733	4.47	17.800	0.69	23.87	0.34
4.417	2.06	10.483	4.47	16.550	0.69	22.62	0.34		5.683	2.06	11.750	4.47	17.817	0.69	23.88	0.34
4.433	2.06	10.500	4.47	16.567	0.69	22.63	0.34		5.700	2.06	11.767	4.47	17.833	0.69	23.90	0.34
4.450	2.06	10.517	4.47	16.583	0.69	22.65	0.34		5.717	2.06	11.783	4.47	17.850	0.69	23.92	0.34
4.467	2.06	10.533	4.47	16.600	0.69	22.67	0.34		5.733	2.06	11.800	4.47	17.867	0.69	23.93	0.34

5.750	2.06	11.817	4.47	17.883	0.69	23.95	0.34
5.767	2.06	11.833	4.47	17.900	0.69	23.97	0.34
5.783	2.06	11.850	4.47	17.917	0.69	23.98	0.34
5.800	2.06	11.867	4.47	17.933	0.69	24.00	0.34
5.817	2.06	11.883	4.47	17.950	0.69	24.02	0.34
5.833	2.06	11.900	4.47	17.967	0.69	24.03	0.34
5.850	2.06	11.917	4.47	17.983	0.69	24.05	0.34
5.867	2.06	11.933	4.47	18.000	0.69	24.07	0.34
5.883	2.06	11.950	4.47	18.017	0.69	24.08	0.34
5.900	2.06	11.967	4.47	18.033	0.69	24.10	0.34
5.917	2.06	11.983	4.47	18.050	0.69	24.12	0.34
5.933	2.06	12.000	4.47	18.067	0.69	24.13	0.34
5.950	2.06	12.017	4.47	18.083	0.69	24.15	0.34
5.967	2.06	12.033	4.47	18.100	0.69	24.17	0.34
5.983	2.06	12.050	4.47	18.117	0.69	24.18	0.34
6.000	2.06	12.067	4.47	18.133	0.69	24.20	0.34
6.017	2.06	12.083	4.47	18.150	0.69	24.22	0.34
6.033	2.06	12.100	4.47	18.167	0.69	24.23	0.34
6.050	2.06	12.117	4.47	18.183	0.69	24.25	0.34
6.067	2.06	12.133	4.47	18.200	0.69		

Max.Eff.Inten.(mm/hr)=	15.82	11.97	
over (min)	6.00	10.00	
Storage Coeff. (min)=	6.39 (ii)	9.94 (ii)	
Unit Hyd. Tpeak (min)=	6.00	10.00	
Unit Hyd. peak (cms)=	0.18	0.11	
			TOTALS
PEAK FLOW (cms)=	0.12	0.00	0.119 (iii)
TIME TO PEAK (hrs)=	9.73	10.25	10.25
RUNOFF VOLUME (mm)=	67.74	40.36	67.49
TOTAL RAINFALL (mm)=	68.76	68.76	68.76
RUNOFF COEFFICIENT =	0.99	0.59	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7626)|	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0568	0.1530
	0.0239	0.0780	0.0660	0.1730
	0.0370	0.1040	0.0751	0.2000
	0.0451	0.1250	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7567)	2.720	0.119	10.25	67.49
OUTFLOW: ID= 1 (7626)	2.720	0.037	10.63	62.16

PEAK FLOW REDUCTION [Qout/Qin](%)= 31.44
TIME SHIFT OF PEAK FLOW (min)= 23.00
MAXIMUM STORAGE USED (ha.m.)= 0.1053

CALIB |				
STANDHYD (7624)|	Area (ha)= 1.80			
ID= 1 DT= 1.0 min |	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00		
		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	1.78	0.02	
Dep. Storage	(mm)=	1.00	1.50	
Average Slope	(%)=	1.00	0.50	
Length	(m)=	109.54	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	2.06	12.150	4.47	18.22	0.69
0.033	0.00	6.100	2.06	12.167	4.47	18.23	0.69
0.050	0.00	6.117	2.06	12.183	4.47	18.25	0.69
0.067	0.00	6.133	2.06	12.200	4.47	18.27	0.34
0.083	0.00	6.150	2.06	12.217	4.47	18.28	0.34
0.100	0.00	6.167	2.06	12.233	4.47	18.30	0.34
0.117	0.00	6.183	2.06	12.250	4.47	18.32	0.34
0.133	0.00	6.200	2.06	12.267	2.41	18.33	0.34
0.150	0.00	6.217	2.06	12.283	2.41	18.35	0.34
0.167	0.00	6.233	2.06	12.300	2.41	18.37	0.34
0.183	0.00	6.250	2.07	12.317	2.41	18.38	0.34
0.200	0.00	6.267	5.85	12.333	2.41	18.40	0.34
0.217	0.00	6.283	5.85	12.350	2.41	18.42	0.34
0.233	0.00	6.300	5.85	12.367	2.41	18.43	0.34
0.250	0.00	6.317	5.85	12.383	2.41	18.45	0.34
0.267	0.34	6.333	5.85	12.400	2.41	18.47	0.34
0.283	0.34	6.350	5.85	12.417	2.41	18.48	0.34
0.300	0.34	6.367	5.85	12.433	2.41	18.50	0.34
0.317	0.34	6.383	5.85	12.450	2.41	18.52	0.34
0.333	0.34	6.400	5.85	12.467	2.41	18.53	0.34
0.350	0.34	6.417	5.85	12.483	2.41	18.55	0.34
0.367	0.34	6.433	5.85	12.500	2.41	18.57	0.34
0.383	0.34	6.450	5.85	12.517	2.41	18.58	0.34
0.400	0.34	6.467	5.85	12.533	2.41	18.60	0.34
0.417	0.34	6.483	5.85	12.550	2.41	18.62	0.34
0.433	0.34	6.500	5.85	12.567	2.41	18.63	0.34
0.450	0.34	6.517	5.85	12.583	2.41	18.65	0.34
0.467	0.34	6.533	5.85	12.600	2.41	18.67	0.34
0.483	0.34	6.550	5.85	12.617	2.41	18.68	0.34
0.500	0.34	6.567	5.85	12.633	2.41	18.70	0.34
0.517	0.34	6.583	5.85	12.650	2.41	18.72	0.34
0.533	0.34	6.600	5.85	12.667	2.41	18.73	0.34
0.550	0.34	6.617	5.85	12.683	2.41	18.75	0.34
0.567	0.34	6.633	5.85	12.700	2.41	18.77	0.34
0.583	0.34	6.650	5.85	12.717	2.41	18.78	0.34
0.600	0.34	6.667	5.85	12.733	2.41	18.80	0.34
0.617	0.34	6.683	5.85	12.750	2.41	18.82	0.34
0.633	0.34	6.700	5.85	12.767	2.41	18.83	0.34
0.650	0.34	6.717	5.85	12.783	2.41	18.85	0.34
0.667	0.34	6.733	5.85	12.800	2.41	18.87	0.34
0.683	0.34	6.750	5.85	12.817	2.41	18.88	0.34
0.700	0.34	6.767	5.85	12.833	2.41	18.90	0.34
0.717	0.34	6.783	5.85	12.850	2.41	18.92	0.34
0.733	0.34	6.800	5.85	12.867	2.41	18.93	0.34
0.750	0.34	6.817	5.85	12.883	2.41	18.95	0.34
0.767	0.34	6.833	5.85	12.900	2.41	18.97	0.34
0.783	0.34	6.850	5.85	12.917	2.41	18.98	0.34
0.800	0.34	6.867	5.85	12.933	2.41	19.00	0.34
0.817	0.34	6.883	5.85	12.950	2.41	19.02	0.34
0.833	0.34	6.900	5.85	12.967	2.41	19.03	0.34
0.850	0.34	6.917	5.85	12.983	2.41	19.05	0.34
0.867	0.34	6.933	5.85	13.000	2.41	19.07	0.34
0.883	0.34	6.950	5.85	13.017	2.41	19.08	0.34
0.900	0.34	6.967	5.85	13.033	2.41	19.10	0.34
0.917	0.34	6.983	5.85	13.050	2.41	19.12	0.34
0.933	0.34	7.000	5.85	13.067	2.41	19.13	0.34
0.950	0.34	7.017	5.85	13.083	2.41	19.15	0.34
0.967	0.34	7.033	5.85	13.100	2.41	19.17	0.34
0.983	0.34	7.050	5.85	13.117	2.41	19.18	0.34
1.000	0.34	7.067	5.85	13.133	2.41	19.20	0.34
1.017	0.34	7.083	5.85	13.150	2.41	19.22	0.34
1.033	0.34	7.100	5.85	13.167	2.41	19.23	0.34
1.050	0.34	7.117	5.85	13.183	2.41	19.25	0.34
1.067	0.34	7.133	5.85	13.200	2.41	19.27	0.34
1.083	0.34	7.150	5.85	13.217	2.41	19.28	0.34
1.100	0.34	7.167	5.85	13.233	2.41	19.30	0.34
1.117	0.34	7.183	5.85	13.250	2.41	19.32	0.34
1.133	0.34	7.200	5.85	13.267	2.41	19.33	0.34
1.150	0.34	7.217	5.85	13.283	2.41	19.35	0.34
1.167	0.34	7.233	5.85	13.300	2.41	19.37	0.34
1.183	0.34	7.250	5.85	13.317	2.41	19.38	0.34
1.200	0.34	7.267	5.85	13.333	2.41	19.40	0.34
1.217	0.34	7.283	5.85	13.350	2.41	19.42	0.34

1.233	0.34	7.300	5.85	13.367	2.41	19.43	0.34	2.500	0.34	8.567	15.82	14.633	1.38	20.70	0.34
1.250	0.34	7.317	5.85	13.383	2.41	19.45	0.34	2.517	0.34	8.583	15.82	14.650	1.38	20.72	0.34
1.267	0.34	7.333	5.85	13.400	2.41	19.47	0.34	2.533	0.34	8.600	15.82	14.667	1.38	20.73	0.34
1.283	0.34	7.350	5.85	13.417	2.41	19.48	0.34	2.550	0.34	8.617	15.82	14.683	1.38	20.75	0.34
1.300	0.34	7.367	5.85	13.433	2.41	19.50	0.34	2.567	0.34	8.633	15.82	14.700	1.38	20.77	0.34
1.317	0.34	7.383	5.85	13.450	2.41	19.52	0.34	2.583	0.34	8.650	15.82	14.717	1.38	20.78	0.34
1.333	0.34	7.400	5.85	13.467	2.41	19.53	0.34	2.600	0.34	8.667	15.82	14.733	1.38	20.80	0.34
1.350	0.34	7.417	5.85	13.483	2.41	19.55	0.34	2.617	0.34	8.683	15.82	14.750	1.38	20.82	0.34
1.367	0.34	7.433	5.85	13.500	2.41	19.57	0.34	2.633	0.34	8.700	15.82	14.767	1.38	20.83	0.34
1.383	0.34	7.450	5.85	13.517	2.41	19.58	0.34	2.650	0.34	8.717	15.82	14.783	1.38	20.85	0.34
1.400	0.34	7.467	5.85	13.533	2.41	19.60	0.34	2.667	0.34	8.733	15.82	14.800	1.38	20.87	0.34
1.417	0.34	7.483	5.85	13.550	2.41	19.62	0.34	2.683	0.34	8.750	15.82	14.817	1.38	20.88	0.34
1.433	0.34	7.500	5.85	13.567	2.41	19.63	0.34	2.700	0.34	8.767	15.82	14.833	1.38	20.90	0.34
1.450	0.34	7.517	5.85	13.583	2.41	19.65	0.34	2.717	0.34	8.783	15.82	14.850	1.38	20.92	0.34
1.467	0.34	7.533	5.85	13.600	2.41	19.67	0.34	2.733	0.34	8.800	15.82	14.867	1.38	20.93	0.34
1.483	0.34	7.550	5.85	13.617	2.41	19.68	0.34	2.750	0.34	8.817	15.82	14.883	1.38	20.95	0.34
1.500	0.34	7.567	5.85	13.633	2.41	19.70	0.34	2.767	0.34	8.833	15.82	14.900	1.38	20.97	0.34
1.517	0.34	7.583	5.85	13.650	2.41	19.72	0.34	2.783	0.34	8.850	15.82	14.917	1.38	20.98	0.34
1.533	0.34	7.600	5.85	13.667	2.41	19.73	0.34	2.800	0.34	8.867	15.82	14.933	1.38	21.00	0.34
1.550	0.34	7.617	5.85	13.683	2.41	19.75	0.34	2.817	0.34	8.883	15.82	14.950	1.38	21.02	0.34
1.567	0.34	7.633	5.85	13.700	2.41	19.77	0.34	2.833	0.34	8.900	15.82	14.967	1.38	21.03	0.34
1.583	0.34	7.650	5.85	13.717	2.41	19.78	0.34	2.850	0.34	8.917	15.82	14.983	1.38	21.05	0.34
1.600	0.34	7.667	5.85	13.733	2.41	19.80	0.34	2.867	0.34	8.933	15.82	15.000	1.38	21.07	0.34
1.617	0.34	7.683	5.85	13.750	2.41	19.82	0.34	2.883	0.34	8.950	15.82	15.017	1.38	21.08	0.34
1.633	0.34	7.700	5.85	13.767	2.41	19.83	0.34	2.900	0.34	8.967	15.82	15.033	1.38	21.10	0.34
1.650	0.34	7.717	5.85	13.783	2.41	19.85	0.34	2.917	0.34	8.983	15.82	15.050	1.38	21.12	0.34
1.667	0.34	7.733	5.85	13.800	2.41	19.87	0.34	2.933	0.34	9.000	15.82	15.067	1.38	21.13	0.34
1.683	0.34	7.750	5.85	13.817	2.41	19.88	0.34	2.950	0.34	9.017	15.82	15.083	1.38	21.15	0.34
1.700	0.34	7.767	5.85	13.833	2.41	19.90	0.34	2.967	0.34	9.033	15.82	15.100	1.38	21.17	0.34
1.717	0.34	7.783	5.85	13.850	2.41	19.92	0.34	2.983	0.34	9.050	15.82	15.117	1.38	21.18	0.34
1.733	0.34	7.800	5.85	13.867	2.41	19.93	0.34	3.000	0.34	9.067	15.82	15.133	1.38	21.20	0.34
1.750	0.34	7.817	5.85	13.883	2.41	19.95	0.34	3.017	0.34	9.083	15.82	15.150	1.38	21.22	0.34
1.767	0.34	7.833	5.85	13.900	2.41	19.97	0.34	3.033	0.34	9.100	15.82	15.167	1.38	21.23	0.34
1.783	0.34	7.850	5.85	13.917	2.41	19.98	0.34	3.050	0.34	9.117	15.82	15.183	1.38	21.25	0.34
1.800	0.34	7.867	5.85	13.933	2.41	20.00	0.34	3.067	0.34	9.133	15.82	15.200	1.38	21.27	0.34
1.817	0.34	7.883	5.85	13.950	2.41	20.02	0.34	3.083	0.34	9.150	15.82	15.217	1.38	21.28	0.34
1.833	0.34	7.900	5.85	13.967	2.41	20.03	0.34	3.100	0.34	9.167	15.82	15.233	1.38	21.30	0.34
1.850	0.34	7.917	5.85	13.983	2.41	20.05	0.34	3.117	0.34	9.183	15.82	15.250	1.38	21.32	0.34
1.867	0.34	7.933	5.85	14.000	2.41	20.07	0.34	3.133	0.34	9.200	15.82	15.267	1.38	21.33	0.34
1.883	0.34	7.950	5.85	14.017	2.41	20.08	0.34	3.150	0.34	9.217	15.82	15.283	1.38	21.35	0.34
1.900	0.34	7.967	5.85	14.033	2.41	20.10	0.34	3.167	0.34	9.233	15.82	15.300	1.38	21.37	0.34
1.917	0.34	7.983	5.85	14.050	2.41	20.12	0.34	3.183	0.34	9.250	15.82	15.317	1.38	21.38	0.34
1.933	0.34	8.000	5.85	14.067	2.41	20.13	0.34	3.200	0.34	9.267	15.82	15.333	1.38	21.40	0.34
1.950	0.34	8.017	5.85	14.083	2.41	20.15	0.34	3.217	0.34	9.283	15.82	15.350	1.38	21.42	0.34
1.967	0.34	8.033	5.85	14.100	2.41	20.17	0.34	3.233	0.34	9.300	15.82	15.367	1.38	21.43	0.34
1.983	0.34	8.050	5.85	14.117	2.41	20.18	0.34	3.250	0.34	9.317	15.82	15.383	1.38	21.45	0.34
2.000	0.34	8.067	5.85	14.133	2.41	20.20	0.34	3.267	0.34	9.333	15.82	15.400	1.38	21.47	0.34
2.017	0.34	8.083	5.85	14.150	2.41	20.22	0.34	3.283	0.34	9.350	15.82	15.417	1.38	21.48	0.34
2.033	0.34	8.100	5.85	14.167	2.41	20.23	0.34	3.300	0.34	9.367	15.82	15.433	1.38	21.50	0.34
2.050	0.34	8.117	5.85	14.183	2.41	20.25	0.34	3.317	0.34	9.383	15.82	15.450	1.38	21.52	0.34
2.067	0.34	8.133	5.85	14.200	2.41	20.27	0.34	3.333	0.34	9.400	15.82	15.467	1.38	21.53	0.34
2.083	0.34	8.150	5.85	14.217	2.41	20.28	0.34	3.350	0.34	9.417	15.82	15.483	1.38	21.55	0.34
2.100	0.34	8.167	5.85	14.233	2.41	20.30	0.34	3.367	0.34	9.433	15.82	15.500	1.38	21.57	0.34
2.117	0.34	8.183	5.85	14.250	2.41	20.32	0.34	3.383	0.34	9.450	15.82	15.517	1.38	21.58	0.34
2.133	0.34	8.200	5.85	14.267	1.38	20.33	0.34	3.400	0.34	9.467	15.82	15.533	1.38	21.60	0.34
2.150	0.34	8.217	5.85	14.283	1.38	20.35	0.34	3.417	0.34	9.483	15.82	15.550	1.38	21.62	0.34
2.167	0.34	8.233	5.85	14.300	1.38	20.37	0.34	3.433	0.34	9.500	15.82	15.567	1.38	21.63	0.34
2.183	0.34	8.250	5.88	14.317	1.38	20.38	0.34	3.450	0.34	9.517	15.82	15.583	1.38	21.65	0.34
2.200	0.34	8.267	15.82	14.333	1.38	20.40	0.34	3.467	0.34	9.533	15.82	15.600	1.38	21.67	0.34
2.217	0.34	8.283	15.82	14.350	1.38	20.42	0.34	3.483	0.34	9.550	15.82	15.617	1.38	21.68	0.34
2.233	0.34	8.300	15.82	14.367	1.38	20.43	0.34	3.500	0.34	9.567	15.82	15.633	1.38	21.70	0.34
2.250	0.34	8.317	15.82	14.383	1.38	20.45	0.34	3.517	0.34	9.583	15.82	15.650	1.38	21.72	0.34
2.267	0.34	8.333	15.82	14.400	1.38	20.47	0.34	3.533	0.34	9.600	15.82	15.667	1.38	21.73	0.34
2.283	0.34	8.350	15.82	14.417	1.38	20.48	0.34	3.550	0.34	9.617	15.82	15.683	1.38	21.75	0.34
2.300	0.34	8.367	15.82	14.433	1.38	20.50	0.34	3.567	0.34	9.633	15.82	15.700	1.38	21.77	0.34
2.317	0.34	8.383	15.82	14.450	1.38	20.52	0.34	3.583	0.34	9.650	15.82	15.717	1.38	21.78	0.34
2.333	0.34	8.400	15.82	14.467	1.38	20.53	0.34	3.600	0.34	9.667	15.82	15.733	1.38	21.80	0.34
2.350	0.34	8.417	15.82	14.483	1.38	20.55	0.34	3.617	0.34	9.683	15.82	15.750	1.38	21.82	0.34
2.367	0.34	8.433	15.82	14.500	1.38	20.57	0.34	3.633	0.34	9.700	15.82	15.767	1.38	21.83	0.34
2.383	0.34	8.450	15.82	14.517	1.38	20.58	0.34	3.650	0.34	9.717	15.82	15.783	1.38	21.85	0.34
2.400	0.34	8.467	15.82	14.533	1.38	20.60	0.34	3.667	0.34	9.733	15.82	15.800	1.38	21.87	0.34
2.417	0.34	8.483	15.82	14.550	1.38	20.62	0.34	3.683	0.34	9.750	15.82	15.817	1.38	21.88	0.34
2.433	0.34	8.500	15.82	14.567	1.38	20.63	0.34	3.700	0.34	9.767	15.82	15.833	1.38	21.90	0.34
2.450	0.34	8.517	15.82	14.583	1.38	20.65	0.34	3.717	0.34	9.783	15.82	15.850	1.38	21.92	0.34
2.467	0.34	8.533	15.82	14.600	1.38	20.67	0.34	3.733	0.34	9.800	15.82	15.867	1.38	21.93	0.34
2.483	0.34	8.550	15.82	14.617	1.38	20.68	0.34	3.750	0.34	9.817	15.82	15.883	1.38	21.95	0.34

3.767	0.34	9.833	15.82	15.900	1.38	21.97	0.34
3.783	0.34	9.850	15.82	15.917	1.38	21.98	0.34
3.800	0.34	9.867	15.82	15.933	1.38	22.00	0.34
3.817	0.34	9.883	15.82	15.950	1.38	22.02	0.34
3.833	0.34	9.900	15.82	15.967	1.38	22.03	0.34
3.850	0.34	9.917	15.82	15.983	1.38	22.05	0.34
3.867	0.34	9.933	15.82	16.000	1.38	22.07	0.34
3.883	0.34	9.950	15.82	16.017	1.38	22.08	0.34
3.900	0.34	9.967	15.82	16.033	1.38	22.10	0.34
3.917	0.34	9.983	15.82	16.050	1.38	22.12	0.34
3.933	0.34	10.000	15.82	16.067	1.38	22.13	0.34
3.950	0.34	10.017	15.82	16.083	1.38	22.15	0.34
3.967	0.34	10.033	15.82	16.100	1.38	22.17	0.34
3.983	0.34	10.050	15.82	16.117	1.38	22.18	0.34
4.000	0.34	10.067	15.82	16.133	1.38	22.20	0.34
4.017	0.34	10.083	15.82	16.150	1.38	22.22	0.34
4.033	0.34	10.100	15.82	16.167	1.38	22.23	0.34
4.050	0.34	10.117	15.82	16.183	1.38	22.25	0.34
4.067	0.34	10.133	15.82	16.200	1.38	22.27	0.34
4.083	0.34	10.150	15.82	16.217	1.38	22.28	0.34
4.100	0.34	10.167	15.82	16.233	1.38	22.30	0.34
4.117	0.34	10.183	15.82	16.250	1.38	22.32	0.34
4.133	0.34	10.200	15.82	16.267	0.69	22.33	0.34
4.150	0.34	10.217	15.82	16.283	0.69	22.35	0.34
4.167	0.34	10.233	15.82	16.300	0.69	22.37	0.34
4.183	0.34	10.250	15.81	16.317	0.69	22.38	0.34
4.200	0.34	10.267	4.47	16.333	0.69	22.40	0.34
4.217	0.34	10.283	4.47	16.350	0.69	22.42	0.34
4.233	0.34	10.300	4.47	16.367	0.69	22.43	0.34
4.250	0.34	10.317	4.47	16.383	0.69	22.45	0.34
4.267	2.06	10.333	4.47	16.400	0.69	22.47	0.34
4.283	2.06	10.350	4.47	16.417	0.69	22.48	0.34
4.300	2.06	10.367	4.47	16.433	0.69	22.50	0.34
4.317	2.06	10.383	4.47	16.450	0.69	22.52	0.34
4.333	2.06	10.400	4.47	16.467	0.69	22.53	0.34
4.350	2.06	10.417	4.47	16.483	0.69	22.55	0.34
4.367	2.06	10.433	4.47	16.500	0.69	22.57	0.34
4.383	2.06	10.450	4.47	16.517	0.69	22.58	0.34
4.400	2.06	10.467	4.47	16.533	0.69	22.60	0.34
4.417	2.06	10.483	4.47	16.550	0.69	22.62	0.34
4.433	2.06	10.500	4.47	16.567	0.69	22.63	0.34
4.450	2.06	10.517	4.47	16.583	0.69	22.65	0.34
4.467	2.06	10.533	4.47	16.600	0.69	22.67	0.34
4.483	2.06	10.550	4.47	16.617	0.69	22.68	0.34
4.500	2.06	10.567	4.47	16.633	0.69	22.70	0.34
4.517	2.06	10.583	4.47	16.650	0.69	22.72	0.34
4.533	2.06	10.600	4.47	16.667	0.69	22.73	0.34
4.550	2.06	10.617	4.47	16.683	0.69	22.75	0.34
4.567	2.06	10.633	4.47	16.700	0.69	22.77	0.34
4.583	2.06	10.650	4.47	16.717	0.69	22.78	0.34
4.600	2.06	10.667	4.47	16.733	0.69	22.80	0.34
4.617	2.06	10.683	4.47	16.750	0.69	22.82	0.34
4.633	2.06	10.700	4.47	16.767	0.69	22.83	0.34
4.650	2.06	10.717	4.47	16.783	0.69	22.85	0.34
4.667	2.06	10.733	4.47	16.800	0.69	22.87	0.34
4.683	2.06	10.750	4.47	16.817	0.69	22.88	0.34
4.700	2.06	10.767	4.47	16.833	0.69	22.90	0.34
4.717	2.06	10.783	4.47	16.850	0.69	22.92	0.34
4.733	2.06	10.800	4.47	16.867	0.69	22.93	0.34
4.750	2.06	10.817	4.47	16.883	0.69	22.95	0.34
4.767	2.06	10.833	4.47	16.900	0.69	22.97	0.34
4.783	2.06	10.850	4.47	16.917	0.69	22.98	0.34
4.800	2.06	10.867	4.47	16.933	0.69	23.00	0.34
4.817	2.06	10.883	4.47	16.950	0.69	23.02	0.34
4.833	2.06	10.900	4.47	16.967	0.69	23.03	0.34
4.850	2.06	10.917	4.47	16.983	0.69	23.05	0.34
4.867	2.06	10.933	4.47	17.000	0.69	23.07	0.34
4.883	2.06	10.950	4.47	17.017	0.69	23.08	0.34
4.900	2.06	10.967	4.47	17.033	0.69	23.10	0.34
4.917	2.06	10.983	4.47	17.050	0.69	23.12	0.34
4.933	2.06	11.000	4.47	17.067	0.69	23.13	0.34
4.950	2.06	11.017	4.47	17.083	0.69	23.15	0.34
4.967	2.06	11.033	4.47	17.100	0.69	23.17	0.34
4.983	2.06	11.050	4.47	17.117	0.69	23.18	0.34
5.000	2.06	11.067	4.47	17.133	0.69	23.20	0.34
5.017	2.06	11.083	4.47	17.150	0.69	23.22	0.34
5.033	2.06	11.100	4.47	17.167	0.69	23.23	0.34
5.050	2.06	11.117	4.47	17.183	0.69	23.25	0.34
5.067	2.06	11.133	4.47	17.200	0.69	23.27	0.34
5.083	2.06	11.150	4.47	17.217	0.69	23.28	0.34
5.100	2.06	11.167	4.47	17.233	0.69	23.30	0.34
5.117	2.06	11.183	4.47	17.250	0.69	23.32	0.34
5.133	2.06	11.200	4.47	17.267	0.69	23.33	0.34
5.150	2.06	11.217	4.47	17.283	0.69	23.35	0.34
5.167	2.06	11.233	4.47	17.300	0.69	23.37	0.34
5.183	2.06	11.250	4.47	17.317	0.69	23.38	0.34
5.200	2.06	11.267	4.47	17.333	0.69	23.40	0.34
5.217	2.06	11.283	4.47	17.350	0.69	23.42	0.34
5.233	2.06	11.300	4.47	17.367	0.69	23.43	0.34
5.250	2.06	11.317	4.47	17.383	0.69	23.45	0.34
5.267	2.06	11.333	4.47	17.400	0.69	23.47	0.34
5.283	2.06	11.350	4.47	17.417	0.69	23.48	0.34
5.300	2.06	11.367	4.47	17.433	0.69	23.50	0.34
5.317	2.06	11.383	4.47	17.450	0.69	23.52	0.34
5.333	2.06	11.400	4.47	17.467	0.69	23.53	0.34
5.350	2.06	11.417	4.47	17.483	0.69	23.55	0.34
5.367	2.06	11.433	4.47	17.500	0.69	23.57	0.34
5.383	2.06	11.450	4.47	17.517	0.69	23.58	0.34
5.400	2.06	11.467	4.47	17.533	0.69	23.60	0.34
5.417	2.06	11.483	4.47	17.550	0.69	23.62	0.34
5.433	2.06	11.500	4.47	17.567	0.69	23.63	0.34
5.450	2.06	11.517	4.47	17.583	0.69	23.65	0.34
5.467	2.06	11.533	4.47	17.600	0.69	23.67	0.34
5.483	2.06	11.550	4.47	17.617	0.69	23.68	0.34
5.500	2.06	11.567	4.47	17.633	0.69	23.70	0.34
5.517	2.06	11.583	4.47	17.650	0.69	23.72	0.34
5.533	2.06	11.600	4.47	17.667	0.69	23.73	0.34
5.550	2.06	11.617	4.47	17.683	0.69	23.75	0.34
5.567	2.06	11.633	4.47	17.700	0.69	23.77	0.34
5.583	2.06	11.650	4.47	17.717	0.69	23.78	0.34
5.600	2.06	11.667	4.47	17.733	0.69	23.80	0.34
5.617	2.06	11.683	4.47	17.750	0.69	23.82	0.34
5.633	2.06	11.700	4.47	17.767	0.69	23.83	0.34
5.650	2.06	11.717	4.47	17.783	0.69	23.85	0.34
5.667	2.06	11.733	4.47	17.800	0.69	23.87	0.34
5.683	2.06	11.750	4.47	17.817	0.69	23.88	0.34
5.700	2.06	11.767	4.47	17.833	0.69	23.90	0.34
5.717	2.06	11.783	4.47	17.850	0.69	23.92	0.34
5.733	2.06	11.800	4.47	17.867	0.69	23.93	0.34
5.750	2.06	11.817	4.47	17.883	0.69	23.95	0.34
5.767	2.06	11.833	4.47	17.900	0.69	23.97	0.34
5.783	2.06	11.850	4.47	17.917	0.69	23.98	0.34
5.800	2.06	11.867	4.47	17.933	0.69	24.00	0.34
5.817	2.06	11.883	4.47	17.950	0.69	24.02	0.34
5.833	2.06	11.900	4.47	17.967	0.69	24.03	0.34
5.850	2.06	11.917	4.47	17.983	0.69	24.05	0.34
5.867	2.06	11.933	4.47	18.000	0.69	24.07	0.34
5.883	2.06	11.950	4.47	18.017	0.69	24.08	0.34
5.900	2.06	11.967	4.47	18.033	0.69	24.10	0.34
5.917	2.06	11.983	4.47	18.050	0.69	24.12	0.34
5.933	2.06	12.000	4.47	18.067	0.69	24.13	0.34
5.950	2.06	12.017	4.47	18.083	0.69	24.15	0.34
5.967	2.06	12.033	4.47	18.100	0.69	24.17	0.34
5.983	2.06	12.050	4.47	18.117	0.69	24.18	0.34
6.000	2.06	12.067	4.47	18.133	0.69	24.20	0.34
6.017	2.06	12.083	4.47	18.150	0.69	24.22	0.34
6.033	2.06	12.100	4.47	18.167	0.69	24.23	0.34
6.050	2.06	12.117	4.47	18.183	0.69	24.25	0.34
6.067	2.06	12.133	4.47	18.200	0.69		

Max.Eff.Inten.(mm/hr)=	15.82	13.53	
over (min)	6.00	10.00	
Storage Coeff. (min)=	5.64 (ii)	9.20 (ii)	
Unit Hyd. Tpeak (min)=	6.00	10.00	
Unit Hyd. peak (cms)=	0.20	0.12	
			TOTALS
PEAK FLOW (cms)=	0.08	0.00	0.079 (iii)
TIME TO PEAK (hrs)=	9.73	10.25	10.23
RUNOFF VOLUME (mm)=	67.75	47.37	67.55
TOTAL RAINFALL (mm)=	68.76	68.76	68.76
RUNOFF COEFFICIENT =	0.99	0.69	0.98

GEI Consultants

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 90.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| RESERVOIR(7625)| OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT= 1.0 min | OUTFLOW STORAGE | OUTFLOW STORAGE
(cms) (ha.m.) | (cms) (ha.m.)
0.0000 0.0000 | 0.0389 0.1013
0.0164 0.0514 | 0.0456 0.1141
0.0252 0.0690 | 0.0514 0.1288
0.0309 0.0825 | 0.0000 0.0000

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (7624)	1.800	0.079	10.23	67.55
OUTFLOW: ID= 1 (7625)	1.800	0.025	10.58	62.70

PEAK FLOW REDUCTION [Qout/Qin](%)= 32.05
TIME SHIFT OF PEAK FLOW (min)= 21.00
MAXIMUM STORAGE USED (ha.m.)= 0.0693

| CALIB |
| STANDHYD (7623)| Area (ha)= 1.15
|ID= 1 DT= 1.0 min | Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.14	0.01
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	87.56	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	2.06	12.150	4.47	18.22	0.69
0.033	0.00	6.100	2.06	12.167	4.47	18.23	0.69
0.050	0.00	6.117	2.06	12.183	4.47	18.25	0.69
0.067	0.00	6.133	2.06	12.200	4.47	18.27	0.34
0.083	0.00	6.150	2.06	12.217	4.47	18.28	0.34
0.100	0.00	6.167	2.06	12.233	4.47	18.30	0.34
0.117	0.00	6.183	2.06	12.250	4.47	18.32	0.34
0.133	0.00	6.200	2.06	12.267	2.41	18.33	0.34
0.150	0.00	6.217	2.06	12.283	2.41	18.35	0.34
0.167	0.00	6.233	2.06	12.300	2.41	18.37	0.34
0.183	0.00	6.250	2.07	12.317	2.41	18.38	0.34
0.200	0.00	6.267	5.85	12.333	2.41	18.40	0.34
0.217	0.00	6.283	5.85	12.350	2.41	18.42	0.34
0.233	0.00	6.300	5.85	12.367	2.41	18.43	0.34
0.250	0.00	6.317	5.85	12.383	2.41	18.45	0.34
0.267	0.34	6.333	5.85	12.400	2.41	18.47	0.34
0.283	0.34	6.350	5.85	12.417	2.41	18.48	0.34
0.300	0.34	6.367	5.85	12.433	2.41	18.50	0.34
0.317	0.34	6.383	5.85	12.450	2.41	18.52	0.34
0.333	0.34	6.400	5.85	12.467	2.41	18.53	0.34
0.350	0.34	6.417	5.85	12.483	2.41	18.55	0.34
0.367	0.34	6.433	5.85	12.500	2.41	18.57	0.34
0.383	0.34	6.450	5.85	12.517	2.41	18.58	0.34
0.400	0.34	6.467	5.85	12.533	2.41	18.60	0.34
0.417	0.34	6.483	5.85	12.550	2.41	18.62	0.34
0.433	0.34	6.500	5.85	12.567	2.41	18.63	0.34
0.450	0.34	6.517	5.85	12.583	2.41	18.65	0.34
0.467	0.34	6.533	5.85	12.600	2.41	18.67	0.34
0.483	0.34	6.550	5.85	12.617	2.41	18.68	0.34
0.500	0.34	6.567	5.85	12.633	2.41	18.70	0.34
0.517	0.34	6.583	5.85	12.650	2.41	18.72	0.34
0.533	0.34	6.600	5.85	12.667	2.41	18.73	0.34
0.550	0.34	6.617	5.85	12.683	2.41	18.75	0.34
0.567	0.34	6.633	5.85	12.700	2.41	18.77	0.34
0.583	0.34	6.650	5.85	12.717	2.41	18.78	0.34
0.600	0.34	6.667	5.85	12.733	2.41	18.80	0.34
0.617	0.34	6.683	5.85	12.750	2.41	18.82	0.34
0.633	0.34	6.700	5.85	12.767	2.41	18.83	0.34
0.650	0.34	6.717	5.85	12.783	2.41	18.85	0.34
0.667	0.34	6.733	5.85	12.800	2.41	18.87	0.34
0.683	0.34	6.750	5.85	12.817	2.41	18.88	0.34
0.700	0.34	6.767	5.85	12.833	2.41	18.90	0.34
0.717	0.34	6.783	5.85	12.850	2.41	18.92	0.34
0.733	0.34	6.800	5.85	12.867	2.41	18.93	0.34
0.750	0.34	6.817	5.85	12.883	2.41	18.95	0.34
0.767	0.34	6.833	5.85	12.900	2.41	18.97	0.34
0.783	0.34	6.850	5.85	12.917	2.41	18.98	0.34
0.800	0.34	6.867	5.85	12.933	2.41	19.00	0.34
0.817	0.34	6.883	5.85	12.950	2.41	19.02	0.34
0.833	0.34	6.900	5.85	12.967	2.41	19.03	0.34
0.850	0.34	6.917	5.85	12.983	2.41	19.05	0.34
0.867	0.34	6.933	5.85	13.000	2.41	19.07	0.34
0.883	0.34	6.950	5.85	13.017	2.41	19.08	0.34
0.900	0.34	6.967	5.85	13.033	2.41	19.10	0.34
0.917	0.34	6.983	5.85	13.050	2.41	19.12	0.34
0.933	0.34	7.000	5.85	13.067	2.41	19.13	0.34
0.950	0.34	7.017	5.85	13.083	2.41	19.15	0.34
0.967	0.34	7.033	5.85	13.100	2.41	19.17	0.34
0.983	0.34	7.050	5.85	13.117	2.41	19.18	0.34
1.000	0.34	7.067	5.85	13.133	2.41	19.20	0.34
1.017	0.34	7.083	5.85	13.150	2.41	19.22	0.34
1.033	0.34	7.100	5.85	13.167	2.41	19.23	0.34
1.050	0.34	7.117	5.85	13.183	2.41	19.25	0.34
1.067	0.34	7.133	5.85	13.200	2.41	19.27	0.34
1.083	0.34	7.150	5.85	13.217	2.41	19.28	0.34
1.100	0.34	7.167	5.85	13.233	2.41	19.30	0.34
1.117	0.34	7.183	5.85	13.250	2.41	19.32	0.34
1.133	0.34	7.200	5.85	13.267	2.41	19.33	0.34
1.150	0.34	7.217	5.85	13.283	2.41	19.35	0.34
1.167	0.34	7.233	5.85	13.300	2.41	19.37	0.34
1.183	0.34	7.250	5.85	13.317	2.41	19.38	0.34
1.200	0.34	7.267	5.85	13.333	2.41	19.40	0.34
1.217	0.34	7.283	5.85	13.350	2.41	19.42	0.34
1.233	0.34	7.300	5.85	13.367	2.41	19.43	0.34
1.250	0.34	7.317	5.85	13.383	2.41	19.45	0.34
1.267	0.34	7.333	5.85	13.400	2.41	19.47	0.34
1.283	0.34	7.350	5.85	13.417	2.41	19.48	0.34
1.300	0.34	7.367	5.85	13.433	2.41	19.50	0.34
1.317	0.34	7.383	5.85	13.450	2.41	19.52	0.34
1.333	0.34	7.400	5.85	13.467	2.41	19.53	0.34
1.350	0.34	7.417	5.85	13.483	2.41	19.55	0.34
1.367	0.34	7.433	5.85	13.500	2.41	19.57	0.34
1.383	0.34	7.450	5.85	13.517	2.41	19.58	0.34
1.400	0.34	7.467	5.85	13.533	2.41	19.60	0.34
1.417	0.34	7.483	5.85	13.550	2.41	19.62	0.34
1.433	0.34	7.500	5.85	13.567	2.41	19.63	0.34
1.450	0.34	7.517	5.85	13.583	2.41	19.65	0.34
1.467	0.34	7.533	5.85	13.600	2.41	19.67	0.34
1.483	0.34	7.550	5.85	13.617	2.41	19.68	0.34
1.500	0.34	7.567	5.85	13.633	2.41	19.70	0.34
1.517	0.34	7.583	5.85	13.650	2.41	19.72	0.34
1.533	0.34	7.600	5.85	13.667	2.41	19.73	0.34
1.550	0.34	7.617	5.85	13.683	2.41	19.75	0.34
1.567	0.34	7.633	5.85	13.700	2.41	19.77	0.34
1.583	0.34	7.650	5.85	13.717	2.41	19.78	0.34
1.600	0.34	7.667	5.85	13.733	2.41	19.80	0.34
1.617	0.34	7.683	5.85	13.750	2.41	19.82	0.34
1.633	0.34	7.700	5.85	13.767	2.41	19.83	0.34
1.650	0.34	7.717	5.85	13.783	2.41	19.85	0.34
1.667	0.34	7.733	5.85	13.800	2.41	19.87	0.34
1.683	0.34	7.750	5.85	13.817	2.41	19.88	0.34
1.700	0.34	7.767	5.85	13.833	2.41	19.90	0.34
1.717	0.34	7.783	5.85	13.850	2.41	19.92	0.34
1.733	0.34	7.800	5.85	13.867	2.41	19.93	0.34
1.750	0.34	7.817	5.85	13.883	2.41	19.95	0.34
1.767	0.34	7.833	5.85	13.900	2.41	19.97	0.34

1.783	0.34	7.850	5.85	13.917	2.41	19.98	0.34	3.050	0.34	9.117	15.82	15.183	1.38	21.25	0.34
1.800	0.34	7.867	5.85	13.933	2.41	20.00	0.34	3.067	0.34	9.133	15.82	15.200	1.38	21.27	0.34
1.817	0.34	7.883	5.85	13.950	2.41	20.02	0.34	3.083	0.34	9.150	15.82	15.217	1.38	21.28	0.34
1.833	0.34	7.900	5.85	13.967	2.41	20.03	0.34	3.100	0.34	9.167	15.82	15.233	1.38	21.30	0.34
1.850	0.34	7.917	5.85	13.983	2.41	20.05	0.34	3.117	0.34	9.183	15.82	15.250	1.38	21.32	0.34
1.867	0.34	7.933	5.85	14.000	2.41	20.07	0.34	3.133	0.34	9.200	15.82	15.267	1.38	21.33	0.34
1.883	0.34	7.950	5.85	14.017	2.41	20.08	0.34	3.150	0.34	9.217	15.82	15.283	1.38	21.35	0.34
1.900	0.34	7.967	5.85	14.033	2.41	20.10	0.34	3.167	0.34	9.233	15.82	15.300	1.38	21.37	0.34
1.917	0.34	7.983	5.85	14.050	2.41	20.12	0.34	3.183	0.34	9.250	15.82	15.317	1.38	21.38	0.34
1.933	0.34	8.000	5.85	14.067	2.41	20.13	0.34	3.200	0.34	9.267	15.82	15.333	1.38	21.40	0.34
1.950	0.34	8.017	5.85	14.083	2.41	20.15	0.34	3.217	0.34	9.283	15.82	15.350	1.38	21.42	0.34
1.967	0.34	8.033	5.85	14.100	2.41	20.17	0.34	3.233	0.34	9.300	15.82	15.367	1.38	21.43	0.34
1.983	0.34	8.050	5.85	14.117	2.41	20.18	0.34	3.250	0.34	9.317	15.82	15.383	1.38	21.45	0.34
2.000	0.34	8.067	5.85	14.133	2.41	20.20	0.34	3.267	0.34	9.333	15.82	15.400	1.38	21.47	0.34
2.017	0.34	8.083	5.85	14.150	2.41	20.22	0.34	3.283	0.34	9.350	15.82	15.417	1.38	21.48	0.34
2.033	0.34	8.100	5.85	14.167	2.41	20.23	0.34	3.300	0.34	9.367	15.82	15.433	1.38	21.50	0.34
2.050	0.34	8.117	5.85	14.183	2.41	20.25	0.34	3.317	0.34	9.383	15.82	15.450	1.38	21.52	0.34
2.067	0.34	8.133	5.85	14.200	2.41	20.27	0.34	3.333	0.34	9.400	15.82	15.467	1.38	21.53	0.34
2.083	0.34	8.150	5.85	14.217	2.41	20.28	0.34	3.350	0.34	9.417	15.82	15.483	1.38	21.55	0.34
2.100	0.34	8.167	5.85	14.233	2.41	20.30	0.34	3.367	0.34	9.433	15.82	15.500	1.38	21.57	0.34
2.117	0.34	8.183	5.85	14.250	2.41	20.32	0.34	3.383	0.34	9.450	15.82	15.517	1.38	21.58	0.34
2.133	0.34	8.200	5.85	14.267	1.38	20.33	0.34	3.400	0.34	9.467	15.82	15.533	1.38	21.60	0.34
2.150	0.34	8.217	5.85	14.283	1.38	20.35	0.34	3.417	0.34	9.483	15.82	15.550	1.38	21.62	0.34
2.167	0.34	8.233	5.85	14.300	1.38	20.37	0.34	3.433	0.34	9.500	15.82	15.567	1.38	21.63	0.34
2.183	0.34	8.250	5.88	14.317	1.38	20.38	0.34	3.450	0.34	9.517	15.82	15.583	1.38	21.65	0.34
2.200	0.34	8.267	15.82	14.333	1.38	20.40	0.34	3.467	0.34	9.533	15.82	15.600	1.38	21.67	0.34
2.217	0.34	8.283	15.82	14.350	1.38	20.42	0.34	3.483	0.34	9.550	15.82	15.617	1.38	21.68	0.34
2.233	0.34	8.300	15.82	14.367	1.38	20.43	0.34	3.500	0.34	9.567	15.82	15.633	1.38	21.70	0.34
2.250	0.34	8.317	15.82	14.383	1.38	20.45	0.34	3.517	0.34	9.583	15.82	15.650	1.38	21.72	0.34
2.267	0.34	8.333	15.82	14.400	1.38	20.47	0.34	3.533	0.34	9.600	15.82	15.667	1.38	21.73	0.34
2.283	0.34	8.350	15.82	14.417	1.38	20.48	0.34	3.550	0.34	9.617	15.82	15.683	1.38	21.75	0.34
2.300	0.34	8.367	15.82	14.433	1.38	20.50	0.34	3.567	0.34	9.633	15.82	15.700	1.38	21.77	0.34
2.317	0.34	8.383	15.82	14.450	1.38	20.52	0.34	3.583	0.34	9.650	15.82	15.717	1.38	21.78	0.34
2.333	0.34	8.400	15.82	14.467	1.38	20.53	0.34	3.600	0.34	9.667	15.82	15.733	1.38	21.80	0.34
2.350	0.34	8.417	15.82	14.483	1.38	20.55	0.34	3.617	0.34	9.683	15.82	15.750	1.38	21.82	0.34
2.367	0.34	8.433	15.82	14.500	1.38	20.57	0.34	3.633	0.34	9.700	15.82	15.767	1.38	21.83	0.34
2.383	0.34	8.450	15.82	14.517	1.38	20.58	0.34	3.650	0.34	9.717	15.82	15.783	1.38	21.85	0.34
2.400	0.34	8.467	15.82	14.533	1.38	20.60	0.34	3.667	0.34	9.733	15.82	15.800	1.38	21.87	0.34
2.417	0.34	8.483	15.82	14.550	1.38	20.62	0.34	3.683	0.34	9.750	15.82	15.817	1.38	21.88	0.34
2.433	0.34	8.500	15.82	14.567	1.38	20.63	0.34	3.700	0.34	9.767	15.82	15.833	1.38	21.90	0.34
2.450	0.34	8.517	15.82	14.583	1.38	20.65	0.34	3.717	0.34	9.783	15.82	15.850	1.38	21.92	0.34
2.467	0.34	8.533	15.82	14.600	1.38	20.67	0.34	3.733	0.34	9.800	15.82	15.867	1.38	21.93	0.34
2.483	0.34	8.550	15.82	14.617	1.38	20.68	0.34	3.750	0.34	9.817	15.82	15.883	1.38	21.95	0.34
2.500	0.34	8.567	15.82	14.633	1.38	20.70	0.34	3.767	0.34	9.833	15.82	15.900	1.38	21.97	0.34
2.517	0.34	8.583	15.82	14.650	1.38	20.72	0.34	3.783	0.34	9.850	15.82	15.917	1.38	21.98	0.34
2.533	0.34	8.600	15.82	14.667	1.38	20.73	0.34	3.800	0.34	9.867	15.82	15.933	1.38	22.00	0.34
2.550	0.34	8.617	15.82	14.683	1.38	20.75	0.34	3.817	0.34	9.883	15.82	15.950	1.38	22.02	0.34
2.567	0.34	8.633	15.82	14.700	1.38	20.77	0.34	3.833	0.34	9.900	15.82	15.967	1.38	22.03	0.34
2.583	0.34	8.650	15.82	14.717	1.38	20.78	0.34	3.850	0.34	9.917	15.82	15.983	1.38	22.05	0.34
2.600	0.34	8.667	15.82	14.733	1.38	20.80	0.34	3.867	0.34	9.933	15.82	16.000	1.38	22.07	0.34
2.617	0.34	8.683	15.82	14.750	1.38	20.82	0.34	3.883	0.34	9.950	15.82	16.017	1.38	22.08	0.34
2.633	0.34	8.700	15.82	14.767	1.38	20.83	0.34	3.900	0.34	9.967	15.82	16.033	1.38	22.10	0.34
2.650	0.34	8.717	15.82	14.783	1.38	20.85	0.34	3.917	0.34	9.983	15.82	16.050	1.38	22.12	0.34
2.667	0.34	8.733	15.82	14.800	1.38	20.87	0.34	3.933	0.34	10.000	15.82	16.067	1.38	22.13	0.34
2.683	0.34	8.750	15.82	14.817	1.38	20.88	0.34	3.950	0.34	10.017	15.82	16.083	1.38	22.15	0.34
2.700	0.34	8.767	15.82	14.833	1.38	20.90	0.34	3.967	0.34	10.033	15.82	16.100	1.38	22.17	0.34
2.717	0.34	8.783	15.82	14.850	1.38	20.92	0.34	3.983	0.34	10.050	15.82	16.117	1.38	22.18	0.34
2.733	0.34	8.800	15.82	14.867	1.38	20.93	0.34	4.000	0.34	10.067	15.82	16.133	1.38	22.20	0.34
2.750	0.34	8.817	15.82	14.883	1.38	20.95	0.34	4.017	0.34	10.083	15.82	16.150	1.38	22.22	0.34
2.767	0.34	8.833	15.82	14.900	1.38	20.97	0.34	4.033	0.34	10.100	15.82	16.167	1.38	22.23	0.34
2.783	0.34	8.850	15.82	14.917	1.38	20.98	0.34	4.050	0.34	10.117	15.82	16.183	1.38	22.25	0.34
2.800	0.34	8.867	15.82	14.933	1.38	21.00	0.34	4.067	0.34	10.133	15.82	16.200	1.38	22.27	0.34
2.817	0.34	8.883	15.82	14.950	1.38	21.02	0.34	4.083	0.34	10.150	15.82	16.217	1.38	22.28	0.34
2.833	0.34	8.900	15.82	14.967	1.38	21.03	0.34	4.100	0.34	10.167	15.82	16.233	1.38	22.30	0.34
2.850	0.34	8.917	15.82	14.983	1.38	21.05	0.34	4.117	0.34	10.183	15.82	16.250	1.38	22.32	0.34
2.867	0.34	8.933	15.82	15.000	1.38	21.07	0.34	4.133	0.34	10.200	15.82	16.267	0.69	22.33	0.34
2.883	0.34	8.950	15.82	15.017	1.38	21.08	0.34	4.150	0.34	10.217	15.82	16.283	0.69	22.35	0.34
2.900	0.34	8.967	15.82	15.033	1.38	21.10	0.34	4.167	0.34	10.233	15.82	16.300	0.69	22.37	0.34
2.917	0.34	8.983	15.82	15.050	1.38	21.12	0.34	4.183	0.34	10.250	15.81	16.317	0.69	22.38	0.34
2.933	0.34	9.000	15.82	15.067	1.38	21.13	0.34	4.200	0.34	10.267	4.47	16.333	0.69	22.40	0.34
2.950	0.34	9.017	15.82	15.083	1.38	21.15	0.34	4.217	0.34	10.283	4.47	16.350	0.69	22.42	0.34
2.967	0.34	9.033	15.82	15.100	1.38	21.17	0.34	4.233	0.34	10.300	4.47	16.367	0.69	22.43	0.34
2.983	0.34	9.050	15.82	15.117	1.38	21.18	0.34	4.250	0.34	10.317	4.47	16.383	0.69	22.45	0.34
3.000	0.34	9.067	15.82	15.133	1.38	21.20	0.34	4.267	2.06	10.333	4.47	16.400	0.69	22.47	0.34
3.017	0.34	9.083	15.82	15.150	1.38	21.22	0.34	4.283	2.06	10.350	4.47	16.417	0.69	22.48	0.34
3.033	0.34	9.100	15.82	15.167	1.38	21.23	0.34	4.300	2.06	10.367	4.47	16.433	0.69	22.50	0.34

4.317	2.06	10.383	4.47	16.450	0.69	22.52	0.34
4.333	2.06	10.400	4.47	16.467	0.69	22.53	0.34
4.350	2.06	10.417	4.47	16.483	0.69	22.55	0.34
4.367	2.06	10.433	4.47	16.500	0.69	22.57	0.34
4.383	2.06	10.450	4.47	16.517	0.69	22.58	0.34
4.400	2.06	10.467	4.47	16.533	0.69	22.60	0.34
4.417	2.06	10.483	4.47	16.550	0.69	22.62	0.34
4.433	2.06	10.500	4.47	16.567	0.69	22.63	0.34
4.450	2.06	10.517	4.47	16.583	0.69	22.65	0.34
4.467	2.06	10.533	4.47	16.600	0.69	22.67	0.34
4.483	2.06	10.550	4.47	16.617	0.69	22.68	0.34
4.500	2.06	10.567	4.47	16.633	0.69	22.70	0.34
4.517	2.06	10.583	4.47	16.650	0.69	22.72	0.34
4.533	2.06	10.600	4.47	16.667	0.69	22.73	0.34
4.550	2.06	10.617	4.47	16.683	0.69	22.75	0.34
4.567	2.06	10.633	4.47	16.700	0.69	22.77	0.34
4.583	2.06	10.650	4.47	16.717	0.69	22.78	0.34
4.600	2.06	10.667	4.47	16.733	0.69	22.80	0.34
4.617	2.06	10.683	4.47	16.750	0.69	22.82	0.34
4.633	2.06	10.700	4.47	16.767	0.69	22.83	0.34
4.650	2.06	10.717	4.47	16.783	0.69	22.85	0.34
4.667	2.06	10.733	4.47	16.800	0.69	22.87	0.34
4.683	2.06	10.750	4.47	16.817	0.69	22.88	0.34
4.700	2.06	10.767	4.47	16.833	0.69	22.90	0.34
4.717	2.06	10.783	4.47	16.850	0.69	22.92	0.34
4.733	2.06	10.800	4.47	16.867	0.69	22.93	0.34
4.750	2.06	10.817	4.47	16.883	0.69	22.95	0.34
4.767	2.06	10.833	4.47	16.900	0.69	22.97	0.34
4.783	2.06	10.850	4.47	16.917	0.69	22.98	0.34
4.800	2.06	10.867	4.47	16.933	0.69	23.00	0.34
4.817	2.06	10.883	4.47	16.950	0.69	23.02	0.34
4.833	2.06	10.900	4.47	16.967	0.69	23.03	0.34
4.850	2.06	10.917	4.47	16.983	0.69	23.05	0.34
4.867	2.06	10.933	4.47	17.000	0.69	23.07	0.34
4.883	2.06	10.950	4.47	17.017	0.69	23.08	0.34
4.900	2.06	10.967	4.47	17.033	0.69	23.10	0.34
4.917	2.06	10.983	4.47	17.050	0.69	23.12	0.34
4.933	2.06	11.000	4.47	17.067	0.69	23.13	0.34
4.950	2.06	11.017	4.47	17.083	0.69	23.15	0.34
4.967	2.06	11.033	4.47	17.100	0.69	23.17	0.34
4.983	2.06	11.050	4.47	17.117	0.69	23.18	0.34
5.000	2.06	11.067	4.47	17.133	0.69	23.20	0.34
5.017	2.06	11.083	4.47	17.150	0.69	23.22	0.34
5.033	2.06	11.100	4.47	17.167	0.69	23.23	0.34
5.050	2.06	11.117	4.47	17.183	0.69	23.25	0.34
5.067	2.06	11.133	4.47	17.200	0.69	23.27	0.34
5.083	2.06	11.150	4.47	17.217	0.69	23.28	0.34
5.100	2.06	11.167	4.47	17.233	0.69	23.30	0.34
5.117	2.06	11.183	4.47	17.250	0.69	23.32	0.34
5.133	2.06	11.200	4.47	17.267	0.69	23.33	0.34
5.150	2.06	11.217	4.47	17.283	0.69	23.35	0.34
5.167	2.06	11.233	4.47	17.300	0.69	23.37	0.34
5.183	2.06	11.250	4.47	17.317	0.69	23.38	0.34
5.200	2.06	11.267	4.47	17.333	0.69	23.40	0.34
5.217	2.06	11.283	4.47	17.350	0.69	23.42	0.34
5.233	2.06	11.300	4.47	17.367	0.69	23.43	0.34
5.250	2.06	11.317	4.47	17.383	0.69	23.45	0.34
5.267	2.06	11.333	4.47	17.400	0.69	23.47	0.34
5.283	2.06	11.350	4.47	17.417	0.69	23.48	0.34
5.300	2.06	11.367	4.47	17.433	0.69	23.50	0.34
5.317	2.06	11.383	4.47	17.450	0.69	23.52	0.34
5.333	2.06	11.400	4.47	17.467	0.69	23.53	0.34
5.350	2.06	11.417	4.47	17.483	0.69	23.55	0.34
5.367	2.06	11.433	4.47	17.500	0.69	23.57	0.34
5.383	2.06	11.450	4.47	17.517	0.69	23.58	0.34
5.400	2.06	11.467	4.47	17.533	0.69	23.60	0.34
5.417	2.06	11.483	4.47	17.550	0.69	23.62	0.34
5.433	2.06	11.500	4.47	17.567	0.69	23.63	0.34
5.450	2.06	11.517	4.47	17.583	0.69	23.65	0.34
5.467	2.06	11.533	4.47	17.600	0.69	23.67	0.34
5.483	2.06	11.550	4.47	17.617	0.69	23.68	0.34
5.500	2.06	11.567	4.47	17.633	0.69	23.70	0.34
5.517	2.06	11.583	4.47	17.650	0.69	23.72	0.34
5.533	2.06	11.600	4.47	17.667	0.69	23.73	0.34
5.550	2.06	11.617	4.47	17.683	0.69	23.75	0.34
5.567	2.06	11.633	4.47	17.700	0.69	23.77	0.34
5.583	2.06	11.650	4.47	17.717	0.69	23.78	0.34
5.600	2.06	11.667	4.47	17.733	0.69	23.80	0.34
5.617	2.06	11.683	4.47	17.750	0.69	23.82	0.34
5.633	2.06	11.700	4.47	17.767	0.69	23.83	0.34
5.650	2.06	11.717	4.47	17.783	0.69	23.85	0.34
5.667	2.06	11.733	4.47	17.800	0.69	23.87	0.34
5.683	2.06	11.750	4.47	17.817	0.69	23.88	0.34
5.700	2.06	11.767	4.47	17.833	0.69	23.90	0.34
5.717	2.06	11.783	4.47	17.850	0.69	23.92	0.34
5.733	2.06	11.800	4.47	17.867	0.69	23.93	0.34
5.750	2.06	11.817	4.47	17.883	0.69	23.95	0.34
5.767	2.06	11.833	4.47	17.900	0.69	23.97	0.34
5.783	2.06	11.850	4.47	17.917	0.69	23.98	0.34
5.800	2.06	11.867	4.47	17.933	0.69	24.00	0.34
5.817	2.06	11.883	4.47	17.950	0.69	24.02	0.34
5.833	2.06	11.900	4.47	17.967	0.69	24.03	0.34
5.850	2.06	11.917	4.47	17.983	0.69	24.05	0.34
5.867	2.06	11.933	4.47	18.000	0.69	24.07	0.34
5.883	2.06	11.950	4.47	18.017	0.69	24.08	0.34
5.900	2.06	11.967	4.47	18.033	0.69	24.10	0.34
5.917	2.06	11.983	4.47	18.050	0.69	24.12	0.34
5.933	2.06	12.000	4.47	18.067	0.69	24.13	0.34
5.950	2.06	12.017	4.47	18.083	0.69	24.15	0.34
5.967	2.06	12.033	4.47	18.100	0.69	24.17	0.34
5.983	2.06	12.050	4.47	18.117	0.69	24.18	0.34
6.000	2.06	12.067	4.47	18.133	0.69	24.20	0.34
6.017	2.06	12.083	4.47	18.150	0.69	24.22	0.34
6.033	2.06	12.100	4.47	18.167	0.69	24.23	0.34
6.050	2.06	12.117	4.47	18.183	0.69	24.25	0.34
6.067	2.06	12.133	4.47	18.200	0.69		

Max.Eff.Inten.(mm/hr)=	15.82	11.97	
over (min)	5.00	9.00	
Storage Coeff. (min)=	4.93 (ii)	8.49 (ii)	
Unit Hyd. Tpeak (min)=	5.00	9.00	
Unit Hyd. peak (cms)=	0.23	0.13	
			TOTALS
PEAK FLOW (cms)=	0.05	0.00	0.050 (iii)
TIME TO PEAK (hrs)=	9.48	10.25	10.23
RUNOFF VOLUME (mm)=	67.75	40.36	67.48
TOTAL RAINFALL (mm)=	68.76	68.76	68.76
RUNOFF COEFFICIENT =	0.99	0.59	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7622)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0258	0.0650
	0.0108	0.0330	0.0302	0.0725
	0.0167	0.0440	0.0340	0.0820
	0.0204	0.0525	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7623)	1.150	0.050	10.23	67.48
OUTFLOW: ID= 1 (7622)	1.150	0.017	10.52	62.95

PEAK FLOW REDUCTION [Qout/Qin](%)= 33.08
TIME SHIFT OF PEAK FLOW (min)= 17.00
MAXIMUM STORAGE USED (ha.m.)= 0.0440

CALIB			
STANDHYD (7629)	Area (ha)= 4.09		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	

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		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	4.05	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	165.13	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	2.06	12.150	4.47	18.22	0.69
0.033	0.00	6.100	2.06	12.167	4.47	18.23	0.69
0.050	0.00	6.117	2.06	12.183	4.47	18.25	0.69
0.067	0.00	6.133	2.06	12.200	4.47	18.27	0.34
0.083	0.00	6.150	2.06	12.217	4.47	18.28	0.34
0.100	0.00	6.167	2.06	12.233	4.47	18.30	0.34
0.117	0.00	6.183	2.06	12.250	4.47	18.32	0.34
0.133	0.00	6.200	2.06	12.267	2.41	18.33	0.34
0.150	0.00	6.217	2.06	12.283	2.41	18.35	0.34
0.167	0.00	6.233	2.06	12.300	2.41	18.37	0.34
0.183	0.00	6.250	2.07	12.317	2.41	18.38	0.34
0.200	0.00	6.267	5.85	12.333	2.41	18.40	0.34
0.217	0.00	6.283	5.85	12.350	2.41	18.42	0.34
0.233	0.00	6.300	5.85	12.367	2.41	18.43	0.34
0.250	0.00	6.317	5.85	12.383	2.41	18.45	0.34
0.267	0.34	6.333	5.85	12.400	2.41	18.47	0.34
0.283	0.34	6.350	5.85	12.417	2.41	18.48	0.34
0.300	0.34	6.367	5.85	12.433	2.41	18.50	0.34
0.317	0.34	6.383	5.85	12.450	2.41	18.52	0.34
0.333	0.34	6.400	5.85	12.467	2.41	18.53	0.34
0.350	0.34	6.417	5.85	12.483	2.41	18.55	0.34
0.367	0.34	6.433	5.85	12.500	2.41	18.57	0.34
0.383	0.34	6.450	5.85	12.517	2.41	18.58	0.34
0.400	0.34	6.467	5.85	12.533	2.41	18.60	0.34
0.417	0.34	6.483	5.85	12.550	2.41	18.62	0.34
0.433	0.34	6.500	5.85	12.567	2.41	18.63	0.34
0.450	0.34	6.517	5.85	12.583	2.41	18.65	0.34
0.467	0.34	6.533	5.85	12.600	2.41	18.67	0.34
0.483	0.34	6.550	5.85	12.617	2.41	18.68	0.34
0.500	0.34	6.567	5.85	12.633	2.41	18.70	0.34
0.517	0.34	6.583	5.85	12.650	2.41	18.72	0.34
0.533	0.34	6.600	5.85	12.667	2.41	18.73	0.34
0.550	0.34	6.617	5.85	12.683	2.41	18.75	0.34
0.567	0.34	6.633	5.85	12.700	2.41	18.77	0.34
0.583	0.34	6.650	5.85	12.717	2.41	18.78	0.34
0.600	0.34	6.667	5.85	12.733	2.41	18.80	0.34
0.617	0.34	6.683	5.85	12.750	2.41	18.82	0.34
0.633	0.34	6.700	5.85	12.767	2.41	18.83	0.34
0.650	0.34	6.717	5.85	12.783	2.41	18.85	0.34
0.667	0.34	6.733	5.85	12.800	2.41	18.87	0.34
0.683	0.34	6.750	5.85	12.817	2.41	18.88	0.34
0.700	0.34	6.767	5.85	12.833	2.41	18.90	0.34
0.717	0.34	6.783	5.85	12.850	2.41	18.92	0.34
0.733	0.34	6.800	5.85	12.867	2.41	18.93	0.34
0.750	0.34	6.817	5.85	12.883	2.41	18.95	0.34
0.767	0.34	6.833	5.85	12.900	2.41	18.97	0.34
0.783	0.34	6.850	5.85	12.917	2.41	18.98	0.34
0.800	0.34	6.867	5.85	12.933	2.41	19.00	0.34
0.817	0.34	6.883	5.85	12.950	2.41	19.02	0.34
0.833	0.34	6.900	5.85	12.967	2.41	19.03	0.34
0.850	0.34	6.917	5.85	12.983	2.41	19.05	0.34
0.867	0.34	6.933	5.85	13.000	2.41	19.07	0.34
0.883	0.34	6.950	5.85	13.017	2.41	19.08	0.34
0.900	0.34	6.967	5.85	13.033	2.41	19.10	0.34
0.917	0.34	6.983	5.85	13.050	2.41	19.12	0.34
0.933	0.34	7.000	5.85	13.067	2.41	19.13	0.34
0.950	0.34	7.017	5.85	13.083	2.41	19.15	0.34
0.967	0.34	7.033	5.85	13.100	2.41	19.17	0.34
0.983	0.34	7.050	5.85	13.117	2.41	19.18	0.34
1.000	0.34	7.067	5.85	13.133	2.41	19.20	0.34
1.017	0.34	7.083	5.85	13.150	2.41	19.22	0.34
1.033	0.34	7.100	5.85	13.167	2.41	19.23	0.34
1.050	0.34	7.117	5.85	13.183	2.41	19.25	0.34
1.067	0.34	7.133	5.85	13.200	2.41	19.27	0.34
1.083	0.34	7.150	5.85	13.217	2.41	19.28	0.34
1.100	0.34	7.167	5.85	13.233	2.41	19.30	0.34
1.117	0.34	7.183	5.85	13.250	2.41	19.32	0.34
1.133	0.34	7.200	5.85	13.267	2.41	19.33	0.34
1.150	0.34	7.217	5.85	13.283	2.41	19.35	0.34
1.167	0.34	7.233	5.85	13.300	2.41	19.37	0.34
1.183	0.34	7.250	5.85	13.317	2.41	19.38	0.34
1.200	0.34	7.267	5.85	13.333	2.41	19.40	0.34
1.217	0.34	7.283	5.85	13.350	2.41	19.42	0.34
1.233	0.34	7.300	5.85	13.367	2.41	19.43	0.34
1.250	0.34	7.317	5.85	13.383	2.41	19.45	0.34
1.267	0.34	7.333	5.85	13.400	2.41	19.47	0.34
1.283	0.34	7.350	5.85	13.417	2.41	19.48	0.34
1.300	0.34	7.367	5.85	13.433	2.41	19.50	0.34
1.317	0.34	7.383	5.85	13.450	2.41	19.52	0.34
1.333	0.34	7.400	5.85	13.467	2.41	19.53	0.34
1.350	0.34	7.417	5.85	13.483	2.41	19.55	0.34
1.367	0.34	7.433	5.85	13.500	2.41	19.57	0.34
1.383	0.34	7.450	5.85	13.517	2.41	19.58	0.34
1.400	0.34	7.467	5.85	13.533	2.41	19.60	0.34
1.417	0.34	7.483	5.85	13.550	2.41	19.62	0.34
1.433	0.34	7.500	5.85	13.567	2.41	19.63	0.34
1.450	0.34	7.517	5.85	13.583	2.41	19.65	0.34
1.467	0.34	7.533	5.85	13.600	2.41	19.67	0.34
1.483	0.34	7.550	5.85	13.617	2.41	19.68	0.34
1.500	0.34	7.567	5.85	13.633	2.41	19.70	0.34
1.517	0.34	7.583	5.85	13.650	2.41	19.72	0.34
1.533	0.34	7.600	5.85	13.667	2.41	19.73	0.34
1.550	0.34	7.617	5.85	13.683	2.41	19.75	0.34
1.567	0.34	7.633	5.85	13.700	2.41	19.77	0.34
1.583	0.34	7.650	5.85	13.717	2.41	19.78	0.34
1.600	0.34	7.667	5.85	13.733	2.41	19.80	0.34
1.617	0.34	7.683	5.85	13.750	2.41	19.82	0.34
1.633	0.34	7.700	5.85	13.767	2.41	19.83	0.34
1.650	0.34	7.717	5.85	13.783	2.41	19.85	0.34
1.667	0.34	7.733	5.85	13.800	2.41	19.87	0.34
1.683	0.34	7.750	5.85	13.817	2.41	19.88	0.34
1.700	0.34	7.767	5.85	13.833	2.41	19.90	0.34
1.717	0.34	7.783	5.85	13.850	2.41	19.92	0.34
1.733	0.34	7.800	5.85	13.867	2.41	19.93	0.34
1.750	0.34	7.817	5.85	13.883	2.41	19.95	0.34
1.767	0.34	7.833	5.85	13.900	2.41	19.97	0.34
1.783	0.34	7.850	5.85	13.917	2.41	19.98	0.34
1.800	0.34	7.867	5.85	13.933	2.41	20.00	0.34
1.817	0.34	7.883	5.85	13.950	2.41	20.02	0.34
1.833	0.34	7.900	5.85	13.967	2.41	20.03	0.34
1.850	0.34	7.917	5.85	13.983	2.41	20.05	0.34
1.867	0.34	7.933	5.85	14.000	2.41	20.07	0.34
1.883	0.34	7.950	5.85	14.017	2.41	20.08	0.34
1.900	0.34	7.967	5.85	14.033	2.41	20.10	0.34
1.917	0.34	7.983	5.85	14.050	2.41	20.12	0.34
1.933	0.34	8.000	5.85	14.067	2.41	20.13	0.34
1.950	0.34	8.017	5.85	14.083	2.41	20.15	0.34
1.967	0.34	8.033	5.85	14.100	2.41	20.17	0.34
1.983	0.34	8.050	5.85	14.117	2.41	20.18	0.34
2.000	0.34	8.067	5.85	14.133	2.41	20.20	0.34
2.017	0.34	8.083	5.85	14.150	2.41	20.22	0.34
2.033	0.34	8.100	5.85	14.167	2.41	20.23	0.34
2.050	0.34	8.117	5.85	14.183	2.41	20.25	0.34
2.067	0.34	8.133	5.85	14.200	2.41	20.27	0.34
2.083	0.34	8.150	5.85	14.217	2.41	20.28	0.34
2.100	0.34	8.167	5.85	14.233	2.41	20.30	0.34
2.117	0.34	8.183	5.85	14.250	2.41	20.32	0.34
2.133	0.34	8.200	5.85	14.267	1.38	20.33	0.34
2.150	0.34	8.217	5.85	14.283	1.38	20.35	0.34
2.167	0.34	8.233	5.85	14.300	1.38	20.37	0.34
2.183	0.34	8.250	5.88	14.317	1.38	20.38	0.34
2.200	0.34	8.267	15.82	14.333	1.38	20.40	0.34
2.217	0.34	8.283	15.82	14.350	1.38	20.42	0.34
2.233	0.34	8.300	15.82	14.367	1.38	20.43	0.34
2.250	0.34	8.317	15.82	14.383	1.38	20.45	0.34
2.267	0.34	8.333	15.82	14.400	1.38	20.47	0.34
2.283	0.34	8.350	15.82	14.417	1.38	20.48	0.34
2.300	0.34	8.367	15.82	14.433	1.38	20.50	0.34
2.317	0.34	8.383	15.82	14.450	1.38	20.52	0.34

2.333	0.34	8.400	15.82	14.467	1.38	20.53	0.34
2.350	0.34	8.417	15.82	14.483	1.38	20.55	0.34
2.367	0.34	8.433	15.82	14.500	1.38	20.57	0.34
2.383	0.34	8.450	15.82	14.517	1.38	20.58	0.34
2.400	0.34	8.467	15.82	14.533	1.38	20.60	0.34
2.417	0.34	8.483	15.82	14.550	1.38	20.62	0.34
2.433	0.34	8.500	15.82	14.567	1.38	20.63	0.34
2.450	0.34	8.517	15.82	14.583	1.38	20.65	0.34
2.467	0.34	8.533	15.82	14.600	1.38	20.67	0.34
2.483	0.34	8.550	15.82	14.617	1.38	20.68	0.34
2.500	0.34	8.567	15.82	14.633	1.38	20.70	0.34
2.517	0.34	8.583	15.82	14.650	1.38	20.72	0.34
2.533	0.34	8.600	15.82	14.667	1.38	20.73	0.34
2.550	0.34	8.617	15.82	14.683	1.38	20.75	0.34
2.567	0.34	8.633	15.82	14.700	1.38	20.77	0.34
2.583	0.34	8.650	15.82	14.717	1.38	20.78	0.34
2.600	0.34	8.667	15.82	14.733	1.38	20.80	0.34
2.617	0.34	8.683	15.82	14.750	1.38	20.82	0.34
2.633	0.34	8.700	15.82	14.767	1.38	20.83	0.34
2.650	0.34	8.717	15.82	14.783	1.38	20.85	0.34
2.667	0.34	8.733	15.82	14.800	1.38	20.87	0.34
2.683	0.34	8.750	15.82	14.817	1.38	20.88	0.34
2.700	0.34	8.767	15.82	14.833	1.38	20.90	0.34
2.717	0.34	8.783	15.82	14.850	1.38	20.92	0.34
2.733	0.34	8.800	15.82	14.867	1.38	20.93	0.34
2.750	0.34	8.817	15.82	14.883	1.38	20.95	0.34
2.767	0.34	8.833	15.82	14.900	1.38	20.97	0.34
2.783	0.34	8.850	15.82	14.917	1.38	20.98	0.34
2.800	0.34	8.867	15.82	14.933	1.38	21.00	0.34
2.817	0.34	8.883	15.82	14.950	1.38	21.02	0.34
2.833	0.34	8.900	15.82	14.967	1.38	21.03	0.34
2.850	0.34	8.917	15.82	14.983	1.38	21.05	0.34
2.867	0.34	8.933	15.82	15.000	1.38	21.07	0.34
2.883	0.34	8.950	15.82	15.017	1.38	21.08	0.34
2.900	0.34	8.967	15.82	15.033	1.38	21.10	0.34
2.917	0.34	8.983	15.82	15.050	1.38	21.12	0.34
2.933	0.34	9.000	15.82	15.067	1.38	21.13	0.34
2.950	0.34	9.017	15.82	15.083	1.38	21.15	0.34
2.967	0.34	9.033	15.82	15.100	1.38	21.17	0.34
2.983	0.34	9.050	15.82	15.117	1.38	21.18	0.34
3.000	0.34	9.067	15.82	15.133	1.38	21.20	0.34
3.017	0.34	9.083	15.82	15.150	1.38	21.22	0.34
3.033	0.34	9.100	15.82	15.167	1.38	21.23	0.34
3.050	0.34	9.117	15.82	15.183	1.38	21.25	0.34
3.067	0.34	9.133	15.82	15.200	1.38	21.27	0.34
3.083	0.34	9.150	15.82	15.217	1.38	21.28	0.34
3.100	0.34	9.167	15.82	15.233	1.38	21.30	0.34
3.117	0.34	9.183	15.82	15.250	1.38	21.32	0.34
3.133	0.34	9.200	15.82	15.267	1.38	21.33	0.34
3.150	0.34	9.217	15.82	15.283	1.38	21.35	0.34
3.167	0.34	9.233	15.82	15.300	1.38	21.37	0.34
3.183	0.34	9.250	15.82	15.317	1.38	21.38	0.34
3.200	0.34	9.267	15.82	15.333	1.38	21.40	0.34
3.217	0.34	9.283	15.82	15.350	1.38	21.42	0.34
3.233	0.34	9.300	15.82	15.367	1.38	21.43	0.34
3.250	0.34	9.317	15.82	15.383	1.38	21.45	0.34
3.267	0.34	9.333	15.82	15.400	1.38	21.47	0.34
3.283	0.34	9.350	15.82	15.417	1.38	21.48	0.34
3.300	0.34	9.367	15.82	15.433	1.38	21.50	0.34
3.317	0.34	9.383	15.82	15.450	1.38	21.52	0.34
3.333	0.34	9.400	15.82	15.467	1.38	21.53	0.34
3.350	0.34	9.417	15.82	15.483	1.38	21.55	0.34
3.367	0.34	9.433	15.82	15.500	1.38	21.57	0.34
3.383	0.34	9.450	15.82	15.517	1.38	21.58	0.34
3.400	0.34	9.467	15.82	15.533	1.38	21.60	0.34
3.417	0.34	9.483	15.82	15.550	1.38	21.62	0.34
3.433	0.34	9.500	15.82	15.567	1.38	21.63	0.34
3.450	0.34	9.517	15.82	15.583	1.38	21.65	0.34
3.467	0.34	9.533	15.82	15.600	1.38	21.67	0.34
3.483	0.34	9.550	15.82	15.617	1.38	21.68	0.34
3.500	0.34	9.567	15.82	15.633	1.38	21.70	0.34
3.517	0.34	9.583	15.82	15.650	1.38	21.72	0.34
3.533	0.34	9.600	15.82	15.667	1.38	21.73	0.34
3.550	0.34	9.617	15.82	15.683	1.38	21.75	0.34
3.567	0.34	9.633	15.82	15.700	1.38	21.77	0.34
3.583	0.34	9.650	15.82	15.717	1.38	21.78	0.34
3.600	0.34	9.667	15.82	15.733	1.38	21.80	0.34
3.617	0.34	9.683	15.82	15.750	1.38	21.82	0.34
3.633	0.34	9.700	15.82	15.767	1.38	21.83	0.34
3.650	0.34	9.717	15.82	15.783	1.38	21.85	0.34
3.667	0.34	9.733	15.82	15.800	1.38	21.87	0.34
3.683	0.34	9.750	15.82	15.817	1.38	21.88	0.34
3.700	0.34	9.767	15.82	15.833	1.38	21.90	0.34
3.717	0.34	9.783	15.82	15.850	1.38	21.92	0.34
3.733	0.34	9.800	15.82	15.867	1.38	21.93	0.34
3.750	0.34	9.817	15.82	15.883	1.38	21.95	0.34
3.767	0.34	9.833	15.82	15.900	1.38	21.97	0.34
3.783	0.34	9.850	15.82	15.917	1.38	21.98	0.34
3.800	0.34	9.867	15.82	15.933	1.38	22.00	0.34
3.817	0.34	9.883	15.82	15.950	1.38	22.02	0.34
3.833	0.34	9.900	15.82	15.967	1.38	22.03	0.34
3.850	0.34	9.917	15.82	15.983	1.38	22.05	0.34
3.867	0.34	9.933	15.82	16.000	1.38	22.07	0.34
3.883	0.34	9.950	15.82	16.017	1.38	22.08	0.34
3.900	0.34	9.967	15.82	16.033	1.38	22.10	0.34
3.917	0.34	9.983	15.82	16.050	1.38	22.12	0.34
3.933	0.34	10.000	15.82	16.067	1.38	22.13	0.34
3.950	0.34	10.017	15.82	16.083	1.38	22.15	0.34
3.967	0.34	10.033	15.82	16.100	1.38	22.17	0.34
3.983	0.34	10.050	15.82	16.117	1.38	22.18	0.34
4.000	0.34	10.067	15.82	16.133	1.38	22.20	0.34
4.017	0.34	10.083	15.82	16.150	1.38	22.22	0.34
4.033	0.34	10.100	15.82	16.167	1.38	22.23	0.34
4.050	0.34	10.117	15.82	16.183	1.38	22.25	0.34
4.067	0.34	10.133	15.82	16.200	1.38	22.27	0.34
4.083	0.34	10.150	15.82	16.217	1.38	22.28	0.34
4.100	0.34	10.167	15.82	16.233	1.38	22.30	0.34
4.117	0.34	10.183	15.82	16.250	1.38	22.32	0.34
4.133	0.34	10.200	15.82	16.267	0.69	22.33	0.34
4.150	0.34	10.217	15.82	16.283	0.69	22.35	0.34
4.167	0.34	10.233	15.82	16.300	0.69	22.37	0.34
4.183	0.34	10.250	15.81	16.317	0.69	22.38	0.34
4.200	0.34	10.267	4.47	16.333	0.69	22.40	0.34
4.217	0.34	10.283	4.47	16.350	0.69	22.42	0.34
4.233	0.34	10.300	4.47	16.367	0.69	22.43	0.34
4.250	0.34	10.317	4.47	16.383	0.69	22.45	0.34
4.267	2.06	10.333	4.47	16.400	0.69	22.47	0.34
4.283	2.06	10.350	4.47	16.417	0.69	22.48	0.34
4.300	2.06	10.367	4.47	16.433	0.69	22.50	0.34
4.317	2.06	10.383	4.47	16.450	0.69	22.52	0.34
4.333	2.06	10.400	4.47	16.467	0.69	22.53	0.34
4.350	2.06	10.417	4.47	16.483	0.69	22.55	0.34
4.367	2.06	10.433	4.47	16.500	0.69	22.57	0.34
4.383	2.06	10.450	4.47	16.517	0.69	22.58	0.34
4.400	2.06	10.467	4.47	16.533	0.69	22.60	0.34
4.417	2.06	10.483	4.47	16.550	0.69	22.62	0.34
4.433	2.06	10.500	4.47	16.567	0.69	22.63	0.34
4.450	2.06	10.517	4.47	16.583	0.69	22.65	0.34
4.467	2.06	10.533	4.47	16.600	0.69	22.67	0.34
4.483	2.06	10.550	4.47	16.617	0.69	22.68	0.34
4.500	2.06	10.567	4.47	16.633	0.69	22.70	0.34
4.517	2.06	10.583	4.47	16.650	0.69	22.72	0.34
4.533	2.06	10.600	4.47	16.667	0.69	22.73	0.34
4.550	2.06	10.617	4.47	16.683	0.69	22.75	0.34
4.567	2.06	10.633	4.47	16.700	0.69	22.77	0.34
4.583	2.06	10.650	4.47	16.717	0.69	22.78	0.34
4.600	2.06	10.667	4.47	16.733	0.69	22.80	0.34
4.617	2.06	10.683	4.47	16.750	0.69	22.82	0.34
4.633	2.06	10.700	4.47	16.767	0.69	22.83	0.34
4.650	2.06	10.717	4.47	16.783	0.69	22.85	0.34
4.667	2.06	10.733	4.47	16.800	0.69	22.87	0.34
4.683	2.06	10.750	4.47	16.817	0.69	22.88	0.34
4.700	2.06	10.767	4.47	16.833	0.69	22.90	0.34
4.717	2.06	10.783	4.47	16.850	0.69	22.92	0.34
4.733	2.06	10.800	4.47	16.867	0.69	22.93	0.34
4.750	2.06	10.817	4.47	16.883	0.69	22.95	0.34
4.767	2.06	10.833	4.47	16.900	0.69	22.97	0.34
4.783	2.06	10.850	4.47	16.917	0.69	22.98	0.34
4.800	2.06	10.867	4.47	16.933	0.69	23.00	0.34
4.817	2.06	10.883	4.47	16.950	0.69	23.02	0.34
4.833	2.06	10.900	4.47	16.967	0.69	23.03	0.34
4.850	2.06	10.917	4.47	16.983	0.69	23.05	0.34

4.867	2.06	10.933	4.47	17.000	0.69	23.07	0.34
4.883	2.06	10.950	4.47	17.017	0.69	23.08	0.34
4.900	2.06	10.967	4.47	17.033	0.69	23.10	0.34
4.917	2.06	10.983	4.47	17.050	0.69	23.12	0.34
4.933	2.06	11.000	4.47	17.067	0.69	23.13	0.34
4.950	2.06	11.017	4.47	17.083	0.69	23.15	0.34
4.967	2.06	11.033	4.47	17.100	0.69	23.17	0.34
4.983	2.06	11.050	4.47	17.117	0.69	23.18	0.34
5.000	2.06	11.067	4.47	17.133	0.69	23.20	0.34
5.017	2.06	11.083	4.47	17.150	0.69	23.22	0.34
5.033	2.06	11.100	4.47	17.167	0.69	23.23	0.34
5.050	2.06	11.117	4.47	17.183	0.69	23.25	0.34
5.067	2.06	11.133	4.47	17.200	0.69	23.27	0.34
5.083	2.06	11.150	4.47	17.217	0.69	23.28	0.34
5.100	2.06	11.167	4.47	17.233	0.69	23.30	0.34
5.117	2.06	11.183	4.47	17.250	0.69	23.32	0.34
5.133	2.06	11.200	4.47	17.267	0.69	23.33	0.34
5.150	2.06	11.217	4.47	17.283	0.69	23.35	0.34
5.167	2.06	11.233	4.47	17.300	0.69	23.37	0.34
5.183	2.06	11.250	4.47	17.317	0.69	23.38	0.34
5.200	2.06	11.267	4.47	17.333	0.69	23.40	0.34
5.217	2.06	11.283	4.47	17.350	0.69	23.42	0.34
5.233	2.06	11.300	4.47	17.367	0.69	23.43	0.34
5.250	2.06	11.317	4.47	17.383	0.69	23.45	0.34
5.267	2.06	11.333	4.47	17.400	0.69	23.47	0.34
5.283	2.06	11.350	4.47	17.417	0.69	23.48	0.34
5.300	2.06	11.367	4.47	17.433	0.69	23.50	0.34
5.317	2.06	11.383	4.47	17.450	0.69	23.52	0.34
5.333	2.06	11.400	4.47	17.467	0.69	23.53	0.34
5.350	2.06	11.417	4.47	17.483	0.69	23.55	0.34
5.367	2.06	11.433	4.47	17.500	0.69	23.57	0.34
5.383	2.06	11.450	4.47	17.517	0.69	23.58	0.34
5.400	2.06	11.467	4.47	17.533	0.69	23.60	0.34
5.417	2.06	11.483	4.47	17.550	0.69	23.62	0.34
5.433	2.06	11.500	4.47	17.567	0.69	23.63	0.34
5.450	2.06	11.517	4.47	17.583	0.69	23.65	0.34
5.467	2.06	11.533	4.47	17.600	0.69	23.67	0.34
5.483	2.06	11.550	4.47	17.617	0.69	23.68	0.34
5.500	2.06	11.567	4.47	17.633	0.69	23.70	0.34
5.517	2.06	11.583	4.47	17.650	0.69	23.72	0.34
5.533	2.06	11.600	4.47	17.667	0.69	23.73	0.34
5.550	2.06	11.617	4.47	17.683	0.69	23.75	0.34
5.567	2.06	11.633	4.47	17.700	0.69	23.77	0.34
5.583	2.06	11.650	4.47	17.717	0.69	23.78	0.34
5.600	2.06	11.667	4.47	17.733	0.69	23.80	0.34
5.617	2.06	11.683	4.47	17.750	0.69	23.82	0.34
5.633	2.06	11.700	4.47	17.767	0.69	23.83	0.34
5.650	2.06	11.717	4.47	17.783	0.69	23.85	0.34
5.667	2.06	11.733	4.47	17.800	0.69	23.87	0.34
5.683	2.06	11.750	4.47	17.817	0.69	23.88	0.34
5.700	2.06	11.767	4.47	17.833	0.69	23.90	0.34
5.717	2.06	11.783	4.47	17.850	0.69	23.92	0.34
5.733	2.06	11.800	4.47	17.867	0.69	23.93	0.34
5.750	2.06	11.817	4.47	17.883	0.69	23.95	0.34
5.767	2.06	11.833	4.47	17.900	0.69	23.97	0.34
5.783	2.06	11.850	4.47	17.917	0.69	23.98	0.34
5.800	2.06	11.867	4.47	17.933	0.69	24.00	0.34
5.817	2.06	11.883	4.47	17.950	0.69	24.02	0.34
5.833	2.06	11.900	4.47	17.967	0.69	24.03	0.34
5.850	2.06	11.917	4.47	17.983	0.69	24.05	0.34
5.867	2.06	11.933	4.47	18.000	0.69	24.07	0.34
5.883	2.06	11.950	4.47	18.017	0.69	24.08	0.34
5.900	2.06	11.967	4.47	18.033	0.69	24.10	0.34
5.917	2.06	11.983	4.47	18.050	0.69	24.12	0.34
5.933	2.06	12.000	4.47	18.067	0.69	24.13	0.34
5.950	2.06	12.017	4.47	18.083	0.69	24.15	0.34
5.967	2.06	12.033	4.47	18.100	0.69	24.17	0.34
5.983	2.06	12.050	4.47	18.117	0.69	24.18	0.34
6.000	2.06	12.067	4.47	18.133	0.69	24.20	0.34
6.017	2.06	12.083	4.47	18.150	0.69	24.22	0.34
6.033	2.06	12.100	4.47	18.167	0.69	24.23	0.34
6.050	2.06	12.117	4.47	18.183	0.69	24.25	0.34
6.067	2.06	12.133	4.47	18.200	0.69		

Max.Eff.Inten.(mm/hr)=	15.82	11.97
over (min)	7.00	11.00

Storage Coeff. (min)=	7.22 (ii)	10.78 (ii)	
Unit Hyd. Tpeak (min)=	7.00	11.00	
Unit Hyd. peak (cms)=	0.16	0.10	
			TOTALS
PEAK FLOW (cms)=	0.18	0.00	0.179 (iii)
TIME TO PEAK (hrs)=	9.98	10.25	10.25
RUNOFF VOLUME (mm)=	67.75	40.35	67.49
TOTAL RAINFALL (mm)=	68.76	68.76	68.76
RUNOFF COEFFICIENT =	0.99	0.59	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7630)| OVERFLOW IS OFF
IN= 2---> OUT= 1
DT= 1.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0826	0.2320
0.0347	0.1170	0.0967	0.2609
0.0534	0.1580	0.1090	0.2940
0.0655	0.1890	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (	7629)	4.090	0.179	10.25	67.49
OUTFLOW: ID= 1 (	7630)	4.090	0.054	10.75	61.69

PEAK FLOW REDUCTION [Qout/Qin](%)= 30.13
TIME SHIFT OF PEAK FLOW (min)= 30.00
MAXIMUM STORAGE USED (ha.m.)= 0.1596

CALIB
STANDHYD (7631)| Area (ha)= 3.91
ID= 1 DT= 1.0 min | Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.87	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	161.45	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	2.06	12.150	4.47	18.22	0.69
0.033	0.00	6.100	2.06	12.167	4.47	18.23	0.69
0.050	0.00	6.117	2.06	12.183	4.47	18.25	0.69
0.067	0.00	6.133	2.06	12.200	4.47	18.27	0.34
0.083	0.00	6.150	2.06	12.217	4.47	18.28	0.34
0.100	0.00	6.167	2.06	12.233	4.47	18.30	0.34
0.117	0.00	6.183	2.06	12.250	4.47	18.32	0.34
0.133	0.00	6.200	2.06	12.267	2.41	18.33	0.34
0.150	0.00	6.217	2.06	12.283	2.41	18.35	0.34
0.167	0.00	6.233	2.06	12.300	2.41	18.37	0.34
0.183	0.00	6.250	2.07	12.317	2.41	18.38	0.34
0.200	0.00	6.267	5.85	12.333	2.41	18.40	0.34
0.217	0.00	6.283	5.85	12.350	2.41	18.42	0.34
0.233	0.00	6.300	5.85	12.367	2.41	18.43	0.34
0.250	0.00	6.317	5.85	12.383	2.41	18.45	0.34
0.267	0.34	6.333	5.85	12.400	2.41	18.47	0.34
0.283	0.34	6.350	5.85	12.417	2.41	18.48	0.34
0.300	0.34	6.367	5.85	12.433	2.41	18.50	0.34
0.317	0.34	6.383	5.85	12.450	2.41	18.52	0.34
0.333	0.34	6.400	5.85	12.467	2.41	18.53	0.34

0.350	0.34	6.417	5.85	12.483	2.41	18.55	0.34
0.367	0.34	6.433	5.85	12.500	2.41	18.57	0.34
0.383	0.34	6.450	5.85	12.517	2.41	18.58	0.34
0.400	0.34	6.467	5.85	12.533	2.41	18.60	0.34
0.417	0.34	6.483	5.85	12.550	2.41	18.62	0.34
0.433	0.34	6.500	5.85	12.567	2.41	18.63	0.34
0.450	0.34	6.517	5.85	12.583	2.41	18.65	0.34
0.467	0.34	6.533	5.85	12.600	2.41	18.67	0.34
0.483	0.34	6.550	5.85	12.617	2.41	18.68	0.34
0.500	0.34	6.567	5.85	12.633	2.41	18.70	0.34
0.517	0.34	6.583	5.85	12.650	2.41	18.72	0.34
0.533	0.34	6.600	5.85	12.667	2.41	18.73	0.34
0.550	0.34	6.617	5.85	12.683	2.41	18.75	0.34
0.567	0.34	6.633	5.85	12.700	2.41	18.77	0.34
0.583	0.34	6.650	5.85	12.717	2.41	18.78	0.34
0.600	0.34	6.667	5.85	12.733	2.41	18.80	0.34
0.617	0.34	6.683	5.85	12.750	2.41	18.82	0.34
0.633	0.34	6.700	5.85	12.767	2.41	18.83	0.34
0.650	0.34	6.717	5.85	12.783	2.41	18.85	0.34
0.667	0.34	6.733	5.85	12.800	2.41	18.87	0.34
0.683	0.34	6.750	5.85	12.817	2.41	18.88	0.34
0.700	0.34	6.767	5.85	12.833	2.41	18.90	0.34
0.717	0.34	6.783	5.85	12.850	2.41	18.92	0.34
0.733	0.34	6.800	5.85	12.867	2.41	18.93	0.34
0.750	0.34	6.817	5.85	12.883	2.41	18.95	0.34
0.767	0.34	6.833	5.85	12.900	2.41	18.97	0.34
0.783	0.34	6.850	5.85	12.917	2.41	18.98	0.34
0.800	0.34	6.867	5.85	12.933	2.41	19.00	0.34
0.817	0.34	6.883	5.85	12.950	2.41	19.02	0.34
0.833	0.34	6.900	5.85	12.967	2.41	19.03	0.34
0.850	0.34	6.917	5.85	12.983	2.41	19.05	0.34
0.867	0.34	6.933	5.85	13.000	2.41	19.07	0.34
0.883	0.34	6.950	5.85	13.017	2.41	19.08	0.34
0.900	0.34	6.967	5.85	13.033	2.41	19.10	0.34
0.917	0.34	6.983	5.85	13.050	2.41	19.12	0.34
0.933	0.34	7.000	5.85	13.067	2.41	19.13	0.34
0.950	0.34	7.017	5.85	13.083	2.41	19.15	0.34
0.967	0.34	7.033	5.85	13.100	2.41	19.17	0.34
0.983	0.34	7.050	5.85	13.117	2.41	19.18	0.34
1.000	0.34	7.067	5.85	13.133	2.41	19.20	0.34
1.017	0.34	7.083	5.85	13.150	2.41	19.22	0.34
1.033	0.34	7.100	5.85	13.167	2.41	19.23	0.34
1.050	0.34	7.117	5.85	13.183	2.41	19.25	0.34
1.067	0.34	7.133	5.85	13.200	2.41	19.27	0.34
1.083	0.34	7.150	5.85	13.217	2.41	19.28	0.34
1.100	0.34	7.167	5.85	13.233	2.41	19.30	0.34
1.117	0.34	7.183	5.85	13.250	2.41	19.32	0.34
1.133	0.34	7.200	5.85	13.267	2.41	19.33	0.34
1.150	0.34	7.217	5.85	13.283	2.41	19.35	0.34
1.167	0.34	7.233	5.85	13.300	2.41	19.37	0.34
1.183	0.34	7.250	5.85	13.317	2.41	19.38	0.34
1.200	0.34	7.267	5.85	13.333	2.41	19.40	0.34
1.217	0.34	7.283	5.85	13.350	2.41	19.42	0.34
1.233	0.34	7.300	5.85	13.367	2.41	19.43	0.34
1.250	0.34	7.317	5.85	13.383	2.41	19.45	0.34
1.267	0.34	7.333	5.85	13.400	2.41	19.47	0.34
1.283	0.34	7.350	5.85	13.417	2.41	19.48	0.34
1.300	0.34	7.367	5.85	13.433	2.41	19.50	0.34
1.317	0.34	7.383	5.85	13.450	2.41	19.52	0.34
1.333	0.34	7.400	5.85	13.467	2.41	19.53	0.34
1.350	0.34	7.417	5.85	13.483	2.41	19.55	0.34
1.367	0.34	7.433	5.85	13.500	2.41	19.57	0.34
1.383	0.34	7.450	5.85	13.517	2.41	19.58	0.34
1.400	0.34	7.467	5.85	13.533	2.41	19.60	0.34
1.417	0.34	7.483	5.85	13.550	2.41	19.62	0.34
1.433	0.34	7.500	5.85	13.567	2.41	19.63	0.34
1.450	0.34	7.517	5.85	13.583	2.41	19.65	0.34
1.467	0.34	7.533	5.85	13.600	2.41	19.67	0.34
1.483	0.34	7.550	5.85	13.617	2.41	19.68	0.34
1.500	0.34	7.567	5.85	13.633	2.41	19.70	0.34
1.517	0.34	7.583	5.85	13.650	2.41	19.72	0.34
1.533	0.34	7.600	5.85	13.667	2.41	19.73	0.34
1.550	0.34	7.617	5.85	13.683	2.41	19.75	0.34
1.567	0.34	7.633	5.85	13.700	2.41	19.77	0.34
1.583	0.34	7.650	5.85	13.717	2.41	19.78	0.34
1.600	0.34	7.667	5.85	13.733	2.41	19.80	0.34
1.617	0.34	7.683	5.85	13.750	2.41	19.82	0.34
1.633	0.34	7.700	5.85	13.767	2.41	19.83	0.34
1.650	0.34	7.717	5.85	13.783	2.41	19.85	0.34
1.667	0.34	7.733	5.85	13.800	2.41	19.87	0.34
1.683	0.34	7.750	5.85	13.817	2.41	19.88	0.34
1.700	0.34	7.767	5.85	13.833	2.41	19.90	0.34
1.717	0.34	7.783	5.85	13.850	2.41	19.92	0.34
1.733	0.34	7.800	5.85	13.867	2.41	19.93	0.34
1.750	0.34	7.817	5.85	13.883	2.41	19.95	0.34
1.767	0.34	7.833	5.85	13.900	2.41	19.97	0.34
1.783	0.34	7.850	5.85	13.917	2.41	19.98	0.34
1.800	0.34	7.867	5.85	13.933	2.41	20.00	0.34
1.817	0.34	7.883	5.85	13.950	2.41	20.02	0.34
1.833	0.34	7.900	5.85	13.967	2.41	20.03	0.34
1.850	0.34	7.917	5.85	13.983	2.41	20.05	0.34
1.867	0.34	7.933	5.85	14.000	2.41	20.07	0.34
1.883	0.34	7.950	5.85	14.017	2.41	20.08	0.34
1.900	0.34	7.967	5.85	14.033	2.41	20.10	0.34
1.917	0.34	7.983	5.85	14.050	2.41	20.12	0.34
1.933	0.34	8.000	5.85	14.067	2.41	20.13	0.34
1.950	0.34	8.017	5.85	14.083	2.41	20.15	0.34
1.967	0.34	8.033	5.85	14.100	2.41	20.17	0.34
1.983	0.34	8.050	5.85	14.117	2.41	20.18	0.34
2.000	0.34	8.067	5.85	14.133	2.41	20.20	0.34
2.017	0.34	8.083	5.85	14.150	2.41	20.22	0.34
2.033	0.34	8.100	5.85	14.167	2.41	20.23	0.34
2.050	0.34	8.117	5.85	14.183	2.41	20.25	0.34
2.067	0.34	8.133	5.85	14.200	2.41	20.27	0.34
2.083	0.34	8.150	5.85	14.217	2.41	20.28	0.34
2.100	0.34	8.167	5.85	14.233	2.41	20.30	0.34
2.117	0.34	8.183	5.85	14.250	2.41	20.32	0.34
2.133	0.34	8.200	5.85	14.267	1.38	20.33	0.34
2.150	0.34	8.217	5.85	14.283	1.38	20.35	0.34
2.167	0.34	8.233	5.85	14.300	1.38	20.37	0.34
2.183	0.34	8.250	5.88	14.317	1.38	20.38	0.34
2.200	0.34	8.267	15.82	14.333	1.38	20.40	0.34
2.217	0.34	8.283	15.82	14.350	1.38	20.42	0.34
2.233	0.34	8.300	15.82	14.367	1.38	20.43	0.34
2.250	0.34	8.317	15.82	14.383	1.38	20.45	0.34
2.267	0.34	8.333	15.82	14.400	1.38	20.47	0.34
2.283	0.34	8.350	15.82	14.417	1.38	20.48	0.34
2.300	0.34	8.367	15.82	14.433	1.38	20.50	0.34
2.317	0.34	8.383	15.82	14.450	1.38	20.52	0.34
2.333	0.34	8.400	15.82	14.467	1.38	20.53	0.34
2.350	0.34	8.417	15.82	14.483	1.38	20.55	0.34
2.367	0.34	8.433	15.82	14.500	1.38	20.57	0.34
2.383	0.34	8.450	15.82	14.517	1.38	20.58	0.34
2.400	0.34	8.467	15.82	14.533	1.38	20.60	0.34
2.417	0.34	8.483	15.82	14.550	1.38	20.62	0.34
2.433	0.34	8.500	15.82	14.567	1.38	20.63	0.34
2.450	0.34	8.517	15.82	14.583	1.38	20.65	0.34
2.467	0.34	8.533	15.82	14.600	1.38	20.67	0.34
2.483	0.34	8.550	15.82	14.617	1.38	20.68	0.34
2.500	0.34	8.567	15.82	14.633	1.38	20.70	0.34
2.517	0.34	8.583	15.82	14.650	1.38	20.72	0.34
2.533	0.34	8.600	15.82	14.667	1.38	20.73	0.34
2.550	0.34	8.617	15.82	14.683	1.38	20.75	0.34
2.567	0.34	8.633	15.82	14.700	1.38	20.77	0.34
2.583	0.34	8.650	15.82	14.717	1.38	20.78	0.34
2.600	0.34	8.667	15.82	14.733	1.38	20.80	0.34
2.617	0.34	8.683	15.82	14.750	1.38	20.82	0.34
2.633	0.34	8.700	15.82	14.767	1.38	20.83	0.34
2.650	0.34	8.717	15.82	14.783	1.38	20.85	0.34
2.667	0.34	8.733	15.82	14.800	1.38	20.87	0.34
2.683	0.34	8.750	15.82	14.817	1.38	20.88	0.34
2.700	0.34	8.767	15.82	14.833	1.38	20.90	0.34
2.717	0.34	8.783	15.82	14.850	1.38	20.92	0.34
2.733	0.34	8.800	15.82	14.867	1.38	20.93	0.34
2.750	0.34	8.817	15.82	14.883	1.38	20.95	0.34
2.767	0.34	8.833	15.82	14.900	1.38	20.97	0.34
2.783	0.34	8.850	15.82	14.917	1.38	20.98	0.34
2.800	0.34	8.867	15.82	14.933	1.38	21.00	0.34
2.817	0.34	8.883	15.82	14.950	1.38	21.02	0.34
2.833	0.34	8.900	15.82	14.967	1.38	21.03	0.34
2.850	0.34	8.917	15.82	14.983	1.38	21.05	0.34
2.867	0.34	8.933	15.82	15.000	1.38	21.07	0.34

2.883	0.34	8.950	15.82	15.017	1.38	21.08	0.34
2.900	0.34	8.967	15.82	15.033	1.38	21.10	0.34
2.917	0.34	8.983	15.82	15.050	1.38	21.12	0.34
2.933	0.34	9.000	15.82	15.067	1.38	21.13	0.34
2.950	0.34	9.017	15.82	15.083	1.38	21.15	0.34
2.967	0.34	9.033	15.82	15.100	1.38	21.17	0.34
2.983	0.34	9.050	15.82	15.117	1.38	21.18	0.34
3.000	0.34	9.067	15.82	15.133	1.38	21.20	0.34
3.017	0.34	9.083	15.82	15.150	1.38	21.22	0.34
3.033	0.34	9.100	15.82	15.167	1.38	21.23	0.34
3.050	0.34	9.117	15.82	15.183	1.38	21.25	0.34
3.067	0.34	9.133	15.82	15.200	1.38	21.27	0.34
3.083	0.34	9.150	15.82	15.217	1.38	21.28	0.34
3.100	0.34	9.167	15.82	15.233	1.38	21.30	0.34
3.117	0.34	9.183	15.82	15.250	1.38	21.32	0.34
3.133	0.34	9.200	15.82	15.267	1.38	21.33	0.34
3.150	0.34	9.217	15.82	15.283	1.38	21.35	0.34
3.167	0.34	9.233	15.82	15.300	1.38	21.37	0.34
3.183	0.34	9.250	15.82	15.317	1.38	21.38	0.34
3.200	0.34	9.267	15.82	15.333	1.38	21.40	0.34
3.217	0.34	9.283	15.82	15.350	1.38	21.42	0.34
3.233	0.34	9.300	15.82	15.367	1.38	21.43	0.34
3.250	0.34	9.317	15.82	15.383	1.38	21.45	0.34
3.267	0.34	9.333	15.82	15.400	1.38	21.47	0.34
3.283	0.34	9.350	15.82	15.417	1.38	21.48	0.34
3.300	0.34	9.367	15.82	15.433	1.38	21.50	0.34
3.317	0.34	9.383	15.82	15.450	1.38	21.52	0.34
3.333	0.34	9.400	15.82	15.467	1.38	21.53	0.34
3.350	0.34	9.417	15.82	15.483	1.38	21.55	0.34
3.367	0.34	9.433	15.82	15.500	1.38	21.57	0.34
3.383	0.34	9.450	15.82	15.517	1.38	21.58	0.34
3.400	0.34	9.467	15.82	15.533	1.38	21.60	0.34
3.417	0.34	9.483	15.82	15.550	1.38	21.62	0.34
3.433	0.34	9.500	15.82	15.567	1.38	21.63	0.34
3.450	0.34	9.517	15.82	15.583	1.38	21.65	0.34
3.467	0.34	9.533	15.82	15.600	1.38	21.67	0.34
3.483	0.34	9.550	15.82	15.617	1.38	21.68	0.34
3.500	0.34	9.567	15.82	15.633	1.38	21.70	0.34
3.517	0.34	9.583	15.82	15.650	1.38	21.72	0.34
3.533	0.34	9.600	15.82	15.667	1.38	21.73	0.34
3.550	0.34	9.617	15.82	15.683	1.38	21.75	0.34
3.567	0.34	9.633	15.82	15.700	1.38	21.77	0.34
3.583	0.34	9.650	15.82	15.717	1.38	21.78	0.34
3.600	0.34	9.667	15.82	15.733	1.38	21.80	0.34
3.617	0.34	9.683	15.82	15.750	1.38	21.82	0.34
3.633	0.34	9.700	15.82	15.767	1.38	21.83	0.34
3.650	0.34	9.717	15.82	15.783	1.38	21.85	0.34
3.667	0.34	9.733	15.82	15.800	1.38	21.87	0.34
3.683	0.34	9.750	15.82	15.817	1.38	21.88	0.34
3.700	0.34	9.767	15.82	15.833	1.38	21.90	0.34
3.717	0.34	9.783	15.82	15.850	1.38	21.92	0.34
3.733	0.34	9.800	15.82	15.867	1.38	21.93	0.34
3.750	0.34	9.817	15.82	15.883	1.38	21.95	0.34
3.767	0.34	9.833	15.82	15.900	1.38	21.97	0.34
3.783	0.34	9.850	15.82	15.917	1.38	21.98	0.34
3.800	0.34	9.867	15.82	15.933	1.38	22.00	0.34
3.817	0.34	9.883	15.82	15.950	1.38	22.02	0.34
3.833	0.34	9.900	15.82	15.967	1.38	22.03	0.34
3.850	0.34	9.917	15.82	15.983	1.38	22.05	0.34
3.867	0.34	9.933	15.82	16.000	1.38	22.07	0.34
3.883	0.34	9.950	15.82	16.017	1.38	22.08	0.34
3.900	0.34	9.967	15.82	16.033	1.38	22.10	0.34
3.917	0.34	9.983	15.82	16.050	1.38	22.12	0.34
3.933	0.34	10.000	15.82	16.067	1.38	22.13	0.34
3.950	0.34	10.017	15.82	16.083	1.38	22.15	0.34
3.967	0.34	10.033	15.82	16.100	1.38	22.17	0.34
3.983	0.34	10.050	15.82	16.117	1.38	22.18	0.34
4.000	0.34	10.067	15.82	16.133	1.38	22.20	0.34
4.017	0.34	10.083	15.82	16.150	1.38	22.22	0.34
4.033	0.34	10.100	15.82	16.167	1.38	22.23	0.34
4.050	0.34	10.117	15.82	16.183	1.38	22.25	0.34
4.067	0.34	10.133	15.82	16.200	1.38	22.27	0.34
4.083	0.34	10.150	15.82	16.217	1.38	22.28	0.34
4.100	0.34	10.167	15.82	16.233	1.38	22.30	0.34
4.117	0.34	10.183	15.82	16.250	1.38	22.32	0.34
4.133	0.34	10.200	15.82	16.267	0.69	22.33	0.34
4.150	0.34	10.217	15.82	16.283	0.69	22.35	0.34
4.167	0.34	10.233	15.82	16.300	0.69	22.37	0.34
4.183	0.34	10.250	15.81	16.317	0.69	22.38	0.34
4.200	0.34	10.267	4.47	16.333	0.69	22.40	0.34
4.217	0.34	10.283	4.47	16.350	0.69	22.42	0.34
4.233	0.34	10.300	4.47	16.367	0.69	22.43	0.34
4.250	0.34	10.317	4.47	16.383	0.69	22.45	0.34
4.267	2.06	10.333	4.47	16.400	0.69	22.47	0.34
4.283	2.06	10.350	4.47	16.417	0.69	22.48	0.34
4.300	2.06	10.367	4.47	16.433	0.69	22.50	0.34
4.317	2.06	10.383	4.47	16.450	0.69	22.52	0.34
4.333	2.06	10.400	4.47	16.467	0.69	22.53	0.34
4.350	2.06	10.417	4.47	16.483	0.69	22.55	0.34
4.367	2.06	10.433	4.47	16.500	0.69	22.57	0.34
4.383	2.06	10.450	4.47	16.517	0.69	22.58	0.34
4.400	2.06	10.467	4.47	16.533	0.69	22.60	0.34
4.417	2.06	10.483	4.47	16.550	0.69	22.62	0.34
4.433	2.06	10.500	4.47	16.567	0.69	22.63	0.34
4.450	2.06	10.517	4.47	16.583	0.69	22.65	0.34
4.467	2.06	10.533	4.47	16.600	0.69	22.67	0.34
4.483	2.06	10.550	4.47	16.617	0.69	22.68	0.34
4.500	2.06	10.567	4.47	16.633	0.69	22.70	0.34
4.517	2.06	10.583	4.47	16.650	0.69	22.72	0.34
4.533	2.06	10.600	4.47	16.667	0.69	22.73	0.34
4.550	2.06	10.617	4.47	16.683	0.69	22.75	0.34
4.567	2.06	10.633	4.47	16.700	0.69	22.77	0.34
4.583	2.06	10.650	4.47	16.717	0.69	22.78	0.34
4.600	2.06	10.667	4.47	16.733	0.69	22.80	0.34
4.617	2.06	10.683	4.47	16.750	0.69	22.82	0.34
4.633	2.06	10.700	4.47	16.767	0.69	22.83	0.34
4.650	2.06	10.717	4.47	16.783	0.69	22.85	0.34
4.667	2.06	10.733	4.47	16.800	0.69	22.87	0.34
4.683	2.06	10.750	4.47	16.817	0.69	22.88	0.34
4.700	2.06	10.767	4.47	16.833	0.69	22.90	0.34
4.717	2.06	10.783	4.47	16.850	0.69	22.92	0.34
4.733	2.06	10.800	4.47	16.867	0.69	22.93	0.34
4.750	2.06	10.817	4.47	16.883	0.69	22.95	0.34
4.767	2.06	10.833	4.47	16.900	0.69	22.97	0.34
4.783	2.06	10.850	4.47	16.917	0.69	22.98	0.34
4.800	2.06	10.867	4.47	16.933	0.69	23.00	0.34
4.817	2.06	10.883	4.47	16.950	0.69	23.02	0.34
4.833	2.06	10.900	4.47	16.967	0.69	23.03	0.34
4.850	2.06	10.917	4.47	16.983	0.69	23.05	0.34
4.867	2.06	10.933	4.47	17.000	0.69	23.07	0.34
4.883	2.06	10.950	4.47	17.017	0.69	23.08	0.34
4.900	2.06	10.967	4.47	17.033	0.69	23.10	0.34
4.917	2.06	10.983	4.47	17.050	0.69	23.12	0.34
4.933	2.06	11.000	4.47	17.067	0.69	23.13	0.34
4.950	2.06	11.017	4.47	17.083	0.69	23.15	0.34
4.967	2.06	11.033	4.47	17.100	0.69	23.17	0.34
4.983	2.06	11.050	4.47	17.117	0.69	23.18	0.34
5.000	2.06	11.067	4.47	17.133	0.69	23.20	0.34
5.017	2.06	11.083	4.47	17.150	0.69	23.22	0.34
5.033	2.06	11.100	4.47	17.167	0.69	23.23	0.34
5.050	2.06	11.117	4.47	17.183	0.69	23.25	0.34
5.067	2.06	11.133	4.47	17.200	0.69	23.27	0.34
5.083	2.06	11.150	4.47	17.217	0.69	23.28	0.34
5.100	2.06	11.167	4.47	17.233	0.69	23.30	0.34
5.117	2.06	11.183	4.47	17.250	0.69	23.32	0.34
5.133	2.06	11.200	4.47	17.267	0.69	23.33	0.34
5.150	2.06	11.217	4.47	17.283	0.69	23.35	0.34
5.167	2.06	11.233	4.47	17.300	0.69	23.37	0.34
5.183	2.06	11.250	4.47	17.317	0.69	23.38	0.34
5.200	2.06	11.267	4.47	17.333	0.69	23.40	0.34
5.217	2.06	11.283	4.47	17.350	0.69	23.42	0.34
5.233	2.06	11.300	4.47	17.367	0.69	23.43	0.34
5.250	2.06	11.317	4.47	17.383	0.69	23.45	0.34
5.267	2.06	11.333	4.47	17.400	0.69	23.47	0.34
5.283	2.06	11.350	4.47	17.417	0.69	23.48	0.34
5.300	2.06	11.367	4.47	17.433	0.69	23.50	0.34
5.317	2.06	11.383	4.47	17.450	0.69	23.52	0.34
5.333	2.06	11.400	4.47	17.467	0.69	23.53	0.34
5.350	2.06	11.417	4.47	17.483	0.69	23.55	0.34
5.367	2.06	11.433	4.47	17.500	0.69	23.57	0.34
5.383	2.06	11.450	4.47	17.517	0.69	23.58	0.34
5.400	2.06	11.467	4.47	17.533	0.69	23.60	0.34

5.417	2.06	11.483	4.47	17.550	0.69	23.62	0.34
5.433	2.06	11.500	4.47	17.567	0.69	23.63	0.34
5.450	2.06	11.517	4.47	17.583	0.69	23.65	0.34
5.467	2.06	11.533	4.47	17.600	0.69	23.67	0.34
5.483	2.06	11.550	4.47	17.617	0.69	23.68	0.34
5.500	2.06	11.567	4.47	17.633	0.69	23.70	0.34
5.517	2.06	11.583	4.47	17.650	0.69	23.72	0.34
5.533	2.06	11.600	4.47	17.667	0.69	23.73	0.34
5.550	2.06	11.617	4.47	17.683	0.69	23.75	0.34
5.567	2.06	11.633	4.47	17.700	0.69	23.77	0.34
5.583	2.06	11.650	4.47	17.717	0.69	23.78	0.34
5.600	2.06	11.667	4.47	17.733	0.69	23.80	0.34
5.617	2.06	11.683	4.47	17.750	0.69	23.82	0.34
5.633	2.06	11.700	4.47	17.767	0.69	23.83	0.34
5.650	2.06	11.717	4.47	17.783	0.69	23.85	0.34
5.667	2.06	11.733	4.47	17.800	0.69	23.87	0.34
5.683	2.06	11.750	4.47	17.817	0.69	23.88	0.34
5.700	2.06	11.767	4.47	17.833	0.69	23.90	0.34
5.717	2.06	11.783	4.47	17.850	0.69	23.92	0.34
5.733	2.06	11.800	4.47	17.867	0.69	23.93	0.34
5.750	2.06	11.817	4.47	17.883	0.69	23.95	0.34
5.767	2.06	11.833	4.47	17.900	0.69	23.97	0.34
5.783	2.06	11.850	4.47	17.917	0.69	23.98	0.34
5.800	2.06	11.867	4.47	17.933	0.69	24.00	0.34
5.817	2.06	11.883	4.47	17.950	0.69	24.02	0.34
5.833	2.06	11.900	4.47	17.967	0.69	24.03	0.34
5.850	2.06	11.917	4.47	17.983	0.69	24.05	0.34
5.867	2.06	11.933	4.47	18.000	0.69	24.07	0.34
5.883	2.06	11.950	4.47	18.017	0.69	24.08	0.34
5.900	2.06	11.967	4.47	18.033	0.69	24.10	0.34
5.917	2.06	11.983	4.47	18.050	0.69	24.12	0.34
5.933	2.06	12.000	4.47	18.067	0.69	24.13	0.34
5.950	2.06	12.017	4.47	18.083	0.69	24.15	0.34
5.967	2.06	12.033	4.47	18.100	0.69	24.17	0.34
5.983	2.06	12.050	4.47	18.117	0.69	24.18	0.34
6.000	2.06	12.067	4.47	18.133	0.69	24.20	0.34
6.017	2.06	12.083	4.47	18.150	0.69	24.22	0.34
6.033	2.06	12.100	4.47	18.167	0.69	24.23	0.34
6.050	2.06	12.117	4.47	18.183	0.69	24.25	0.34
6.067	2.06	12.133	4.47	18.200	0.69		

Max.Eff.Inten.(mm/hr)=	15.82	11.97	
over (min)	7.00	11.00	
Storage Coeff. (min)=	7.12 (ii)	10.68 (ii)	
Unit Hyd. Tpeak (min)=	7.00	11.00	
Unit Hyd. peak (cms)=	0.16	0.10	
			TOTALS
PEAK FLOW (cms)=	0.17	0.00	0.171 (iii)
TIME TO PEAK (hrs)=	9.98	10.25	10.25
RUNOFF VOLUME (mm)=	67.74	40.35	67.49
TOTAL RAINFALL (mm)=	68.76	68.76	68.76
RUNOFF COEFFICIENT =	0.99	0.59	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7632) IN= 2---> OUT= 1 DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0792	0.2220
	0.0333	0.1130	0.0928	0.2500
	0.0512	0.1510	0.1046	0.2810
	0.0629	0.1810	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7631)	3.910	0.171	10.25	67.49
OUTFLOW: ID= 1 (7632)	3.910	0.052	10.73	61.63

PEAK FLOW REDUCTION [Qout/Qin](%)= 30.25
TIME SHIFT OF PEAK FLOW (min)= 29.00
MAXIMUM STORAGE USED (ha.m.)= 0.1527

CALIB
STANDHYD (7641) Area (ha)= 2.21
ID= 1 DT= 1.0 min Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.19	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	121.38	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	2.06	12.150	4.47	18.22	0.69
0.033	0.00	6.100	2.06	12.167	4.47	18.23	0.69
0.050	0.00	6.117	2.06	12.183	4.47	18.25	0.69
0.067	0.00	6.133	2.06	12.200	4.47	18.27	0.34
0.083	0.00	6.150	2.06	12.217	4.47	18.28	0.34
0.100	0.00	6.167	2.06	12.233	4.47	18.30	0.34
0.117	0.00	6.183	2.06	12.250	4.47	18.32	0.34
0.133	0.00	6.200	2.06	12.267	2.41	18.33	0.34
0.150	0.00	6.217	2.06	12.283	2.41	18.35	0.34
0.167	0.00	6.233	2.06	12.300	2.41	18.37	0.34
0.183	0.00	6.250	2.07	12.317	2.41	18.38	0.34
0.200	0.00	6.267	5.85	12.333	2.41	18.40	0.34
0.217	0.00	6.283	5.85	12.350	2.41	18.42	0.34
0.233	0.00	6.300	5.85	12.367	2.41	18.43	0.34
0.250	0.00	6.317	5.85	12.383	2.41	18.45	0.34
0.267	0.34	6.333	5.85	12.400	2.41	18.47	0.34
0.283	0.34	6.350	5.85	12.417	2.41	18.48	0.34
0.300	0.34	6.367	5.85	12.433	2.41	18.50	0.34
0.317	0.34	6.383	5.85	12.450	2.41	18.52	0.34
0.333	0.34	6.400	5.85	12.467	2.41	18.53	0.34
0.350	0.34	6.417	5.85	12.483	2.41	18.55	0.34
0.367	0.34	6.433	5.85	12.500	2.41	18.57	0.34
0.383	0.34	6.450	5.85	12.517	2.41	18.58	0.34
0.400	0.34	6.467	5.85	12.533	2.41	18.60	0.34
0.417	0.34	6.483	5.85	12.550	2.41	18.62	0.34
0.433	0.34	6.500	5.85	12.567	2.41	18.63	0.34
0.450	0.34	6.517	5.85	12.583	2.41	18.65	0.34
0.467	0.34	6.533	5.85	12.600	2.41	18.67	0.34
0.483	0.34	6.550	5.85	12.617	2.41	18.68	0.34
0.500	0.34	6.567	5.85	12.633	2.41	18.70	0.34
0.517	0.34	6.583	5.85	12.650	2.41	18.72	0.34
0.533	0.34	6.600	5.85	12.667	2.41	18.73	0.34
0.550	0.34	6.617	5.85	12.683	2.41	18.75	0.34
0.567	0.34	6.633	5.85	12.700	2.41	18.77	0.34
0.583	0.34	6.650	5.85	12.717	2.41	18.78	0.34
0.600	0.34	6.667	5.85	12.733	2.41	18.80	0.34
0.617	0.34	6.683	5.85	12.750	2.41	18.82	0.34
0.633	0.34	6.700	5.85	12.767	2.41	18.83	0.34
0.650	0.34	6.717	5.85	12.783	2.41	18.85	0.34
0.667	0.34	6.733	5.85	12.800	2.41	18.87	0.34
0.683	0.34	6.750	5.85	12.817	2.41	18.88	0.34
0.700	0.34	6.767	5.85	12.833	2.41	18.90	0.34
0.717	0.34	6.783	5.85	12.850	2.41	18.92	0.34
0.733	0.34	6.800	5.85	12.867	2.41	18.93	0.34
0.750	0.34	6.817	5.85	12.883	2.41	18.95	0.34
0.767	0.34	6.833	5.85	12.900	2.41	18.97	0.34
0.783	0.34	6.850	5.85	12.917	2.41	18.98	0.34
0.800	0.34	6.867	5.85	12.933	2.41	19.00	0.34
0.817	0.34	6.883	5.85	12.950	2.41	19.02	0.34
0.833	0.34	6.900	5.85	12.967	2.41	19.03	0.34
0.850	0.34	6.917	5.85	12.983	2.41	19.05	0.34
0.867	0.34	6.933	5.85	13.000	2.41	19.07	0.34
0.883	0.34	6.950	5.85	13.017	2.41	19.08	0.34

0.900	0.34	6.967	5.85	13.033	2.41	19.10	0.34
0.917	0.34	6.983	5.85	13.050	2.41	19.12	0.34
0.933	0.34	7.000	5.85	13.067	2.41	19.13	0.34
0.950	0.34	7.017	5.85	13.083	2.41	19.15	0.34
0.967	0.34	7.033	5.85	13.100	2.41	19.17	0.34
0.983	0.34	7.050	5.85	13.117	2.41	19.18	0.34
1.000	0.34	7.067	5.85	13.133	2.41	19.20	0.34
1.017	0.34	7.083	5.85	13.150	2.41	19.22	0.34
1.033	0.34	7.100	5.85	13.167	2.41	19.23	0.34
1.050	0.34	7.117	5.85	13.183	2.41	19.25	0.34
1.067	0.34	7.133	5.85	13.200	2.41	19.27	0.34
1.083	0.34	7.150	5.85	13.217	2.41	19.28	0.34
1.100	0.34	7.167	5.85	13.233	2.41	19.30	0.34
1.117	0.34	7.183	5.85	13.250	2.41	19.32	0.34
1.133	0.34	7.200	5.85	13.267	2.41	19.33	0.34
1.150	0.34	7.217	5.85	13.283	2.41	19.35	0.34
1.167	0.34	7.233	5.85	13.300	2.41	19.37	0.34
1.183	0.34	7.250	5.85	13.317	2.41	19.38	0.34
1.200	0.34	7.267	5.85	13.333	2.41	19.40	0.34
1.217	0.34	7.283	5.85	13.350	2.41	19.42	0.34
1.233	0.34	7.300	5.85	13.367	2.41	19.43	0.34
1.250	0.34	7.317	5.85	13.383	2.41	19.45	0.34
1.267	0.34	7.333	5.85	13.400	2.41	19.47	0.34
1.283	0.34	7.350	5.85	13.417	2.41	19.48	0.34
1.300	0.34	7.367	5.85	13.433	2.41	19.50	0.34
1.317	0.34	7.383	5.85	13.450	2.41	19.52	0.34
1.333	0.34	7.400	5.85	13.467	2.41	19.53	0.34
1.350	0.34	7.417	5.85	13.483	2.41	19.55	0.34
1.367	0.34	7.433	5.85	13.500	2.41	19.57	0.34
1.383	0.34	7.450	5.85	13.517	2.41	19.58	0.34
1.400	0.34	7.467	5.85	13.533	2.41	19.60	0.34
1.417	0.34	7.483	5.85	13.550	2.41	19.62	0.34
1.433	0.34	7.500	5.85	13.567	2.41	19.63	0.34
1.450	0.34	7.517	5.85	13.583	2.41	19.65	0.34
1.467	0.34	7.533	5.85	13.600	2.41	19.67	0.34
1.483	0.34	7.550	5.85	13.617	2.41	19.68	0.34
1.500	0.34	7.567	5.85	13.633	2.41	19.70	0.34
1.517	0.34	7.583	5.85	13.650	2.41	19.72	0.34
1.533	0.34	7.600	5.85	13.667	2.41	19.73	0.34
1.550	0.34	7.617	5.85	13.683	2.41	19.75	0.34
1.567	0.34	7.633	5.85	13.700	2.41	19.77	0.34
1.583	0.34	7.650	5.85	13.717	2.41	19.78	0.34
1.600	0.34	7.667	5.85	13.733	2.41	19.80	0.34
1.617	0.34	7.683	5.85	13.750	2.41	19.82	0.34
1.633	0.34	7.700	5.85	13.767	2.41	19.83	0.34
1.650	0.34	7.717	5.85	13.783	2.41	19.85	0.34
1.667	0.34	7.733	5.85	13.800	2.41	19.87	0.34
1.683	0.34	7.750	5.85	13.817	2.41	19.88	0.34
1.700	0.34	7.767	5.85	13.833	2.41	19.90	0.34
1.717	0.34	7.783	5.85	13.850	2.41	19.92	0.34
1.733	0.34	7.800	5.85	13.867	2.41	19.93	0.34
1.750	0.34	7.817	5.85	13.883	2.41	19.95	0.34
1.767	0.34	7.833	5.85	13.900	2.41	19.97	0.34
1.783	0.34	7.850	5.85	13.917	2.41	19.98	0.34
1.800	0.34	7.867	5.85	13.933	2.41	20.00	0.34
1.817	0.34	7.883	5.85	13.950	2.41	20.02	0.34
1.833	0.34	7.900	5.85	13.967	2.41	20.03	0.34
1.850	0.34	7.917	5.85	13.983	2.41	20.05	0.34
1.867	0.34	7.933	5.85	14.000	2.41	20.07	0.34
1.883	0.34	7.950	5.85	14.017	2.41	20.08	0.34
1.900	0.34	7.967	5.85	14.033	2.41	20.10	0.34
1.917	0.34	7.983	5.85	14.050	2.41	20.12	0.34
1.933	0.34	8.000	5.85	14.067	2.41	20.13	0.34
1.950	0.34	8.017	5.85	14.083	2.41	20.15	0.34
1.967	0.34	8.033	5.85	14.100	2.41	20.17	0.34
1.983	0.34	8.050	5.85	14.117	2.41	20.18	0.34
2.000	0.34	8.067	5.85	14.133	2.41	20.20	0.34
2.017	0.34	8.083	5.85	14.150	2.41	20.22	0.34
2.033	0.34	8.100	5.85	14.167	2.41	20.23	0.34
2.050	0.34	8.117	5.85	14.183	2.41	20.25	0.34
2.067	0.34	8.133	5.85	14.200	2.41	20.27	0.34
2.083	0.34	8.150	5.85	14.217	2.41	20.28	0.34
2.100	0.34	8.167	5.85	14.233	2.41	20.30	0.34
2.117	0.34	8.183	5.85	14.250	2.41	20.32	0.34
2.133	0.34	8.200	5.85	14.267	1.38	20.33	0.34
2.150	0.34	8.217	5.85	14.283	1.38	20.35	0.34
2.167	0.34	8.233	5.85	14.300	1.38	20.37	0.34
2.183	0.34	8.250	5.88	14.317	1.38	20.38	0.34
2.200	0.34	8.267	15.82	14.333	1.38	20.40	0.34
2.217	0.34	8.283	15.82	14.350	1.38	20.42	0.34
2.233	0.34	8.300	15.82	14.367	1.38	20.43	0.34
2.250	0.34	8.317	15.82	14.383	1.38	20.45	0.34
2.267	0.34	8.333	15.82	14.400	1.38	20.47	0.34
2.283	0.34	8.350	15.82	14.417	1.38	20.48	0.34
2.300	0.34	8.367	15.82	14.433	1.38	20.50	0.34
2.317	0.34	8.383	15.82	14.450	1.38	20.52	0.34
2.333	0.34	8.400	15.82	14.467	1.38	20.53	0.34
2.350	0.34	8.417	15.82	14.483	1.38	20.55	0.34
2.367	0.34	8.433	15.82	14.500	1.38	20.57	0.34
2.383	0.34	8.450	15.82	14.517	1.38	20.58	0.34
2.400	0.34	8.467	15.82	14.533	1.38	20.60	0.34
2.417	0.34	8.483	15.82	14.550	1.38	20.62	0.34
2.433	0.34	8.500	15.82	14.567	1.38	20.63	0.34
2.450	0.34	8.517	15.82	14.583	1.38	20.65	0.34
2.467	0.34	8.533	15.82	14.600	1.38	20.67	0.34
2.483	0.34	8.550	15.82	14.617	1.38	20.68	0.34
2.500	0.34	8.567	15.82	14.633	1.38	20.70	0.34
2.517	0.34	8.583	15.82	14.650	1.38	20.72	0.34
2.533	0.34	8.600	15.82	14.667	1.38	20.73	0.34
2.550	0.34	8.617	15.82	14.683	1.38	20.75	0.34
2.567	0.34	8.633	15.82	14.700	1.38	20.77	0.34
2.583	0.34	8.650	15.82	14.717	1.38	20.78	0.34
2.600	0.34	8.667	15.82	14.733	1.38	20.80	0.34
2.617	0.34	8.683	15.82	14.750	1.38	20.82	0.34
2.633	0.34	8.700	15.82	14.767	1.38	20.83	0.34
2.650	0.34	8.717	15.82	14.783	1.38	20.85	0.34
2.667	0.34	8.733	15.82	14.800	1.38	20.87	0.34
2.683	0.34	8.750	15.82	14.817	1.38	20.88	0.34
2.700	0.34	8.767	15.82	14.833	1.38	20.90	0.34
2.717	0.34	8.783	15.82	14.850	1.38	20.92	0.34
2.733	0.34	8.800	15.82	14.867	1.38	20.93	0.34
2.750	0.34	8.817	15.82	14.883	1.38	20.95	0.34
2.767	0.34	8.833	15.82	14.900	1.38	20.97	0.34
2.783	0.34	8.850	15.82	14.917	1.38	20.98	0.34
2.800	0.34	8.867	15.82	14.933	1.38	21.00	0.34
2.817	0.34	8.883	15.82	14.950	1.38	21.02	0.34
2.833	0.34	8.900	15.82	14.967	1.38	21.03	0.34
2.850	0.34	8.917	15.82	14.983	1.38	21.05	0.34
2.867	0.34	8.933	15.82	15.000	1.38	21.07	0.34
2.883	0.34	8.950	15.82	15.017	1.38	21.08	0.34
2.900	0.34	8.967	15.82	15.033	1.38	21.10	0.34
2.917	0.34	8.983	15.82	15.050	1.38	21.12	0.34
2.933	0.34	9.000	15.82	15.067	1.38	21.13	0.34
2.950	0.34	9.017	15.82	15.083	1.38	21.15	0.34
2.967	0.34	9.033	15.82	15.100	1.38	21.17	0.34
2.983	0.34	9.050	15.82	15.117	1.38	21.18	0.34
3.000	0.34	9.067	15.82	15.133	1.38	21.20	0.34
3.017	0.34	9.083	15.82	15.150	1.38	21.22	0.34
3.033	0.34	9.100	15.82	15.167	1.38	21.23	0.34
3.050	0.34	9.117	15.82	15.183	1.38	21.25	0.34
3.067	0.34	9.133	15.82	15.200	1.38	21.27	0.34
3.083	0.34	9.150	15.82	15.217	1.38	21.28	0.34
3.100	0.34	9.167	15.82	15.233	1.38	21.30	0.34
3.117	0.34	9.183	15.82	15.250	1.38	21.32	0.34
3.133	0.34	9.200	15.82	15.267	1.38	21.33	0.34
3.150	0.34	9.217	15.82	15.283	1.38	21.35	0.34
3.167	0.34	9.233	15.82	15.300	1.38	21.37	0.34
3.183	0.34	9.250	15.82	15.317	1.38	21.38	0.34
3.200	0.34	9.267	15.82	15.333	1.38	21.40	0.34
3.217	0.34	9.283	15.82	15.350	1.38	21.42	0.34
3.233	0.34	9.300	15.82	15.367	1.38	21.43	0.34
3.250	0.34	9.317	15.82	15.383	1.38	21.45	0.34
3.267	0.34	9.333	15.82	15.400	1.38	21.47	0.34
3.283	0.34	9.350	15.82	15.417	1.38	21.48	0.34
3.300	0.34	9.367	15.82	15.433	1.38	21.50	0.34
3.317	0.34	9.383	15.82	15.450	1.38	21.52	0.34
3.333	0.34	9.400	15.82	15.467	1.38	21.53	0.34
3.350	0.34	9.417	15.82	15.483	1.38	21.55	0.34
3.367	0.34	9.433	15.82	15.500	1.38	21.57	0.34
3.383	0.34	9.450	15.82	15.517	1.38	21.58	0.34
3.400	0.34	9.467	15.82	15.533	1.38	21.60	0.34
3.417	0.34	9.483	15.82	15.550	1.38	21.62	0.34

3.433	0.34	9.500	15.82	15.567	1.38	21.63	0.34
3.450	0.34	9.517	15.82	15.583	1.38	21.65	0.34
3.467	0.34	9.533	15.82	15.600	1.38	21.67	0.34
3.483	0.34	9.550	15.82	15.617	1.38	21.68	0.34
3.500	0.34	9.567	15.82	15.633	1.38	21.70	0.34
3.517	0.34	9.583	15.82	15.650	1.38	21.72	0.34
3.533	0.34	9.600	15.82	15.667	1.38	21.73	0.34
3.550	0.34	9.617	15.82	15.683	1.38	21.75	0.34
3.567	0.34	9.633	15.82	15.700	1.38	21.77	0.34
3.583	0.34	9.650	15.82	15.717	1.38	21.78	0.34
3.600	0.34	9.667	15.82	15.733	1.38	21.80	0.34
3.617	0.34	9.683	15.82	15.750	1.38	21.82	0.34
3.633	0.34	9.700	15.82	15.767	1.38	21.83	0.34
3.650	0.34	9.717	15.82	15.783	1.38	21.85	0.34
3.667	0.34	9.733	15.82	15.800	1.38	21.87	0.34
3.683	0.34	9.750	15.82	15.817	1.38	21.88	0.34
3.700	0.34	9.767	15.82	15.833	1.38	21.90	0.34
3.717	0.34	9.783	15.82	15.850	1.38	21.92	0.34
3.733	0.34	9.800	15.82	15.867	1.38	21.93	0.34
3.750	0.34	9.817	15.82	15.883	1.38	21.95	0.34
3.767	0.34	9.833	15.82	15.900	1.38	21.97	0.34
3.783	0.34	9.850	15.82	15.917	1.38	21.98	0.34
3.800	0.34	9.867	15.82	15.933	1.38	22.00	0.34
3.817	0.34	9.883	15.82	15.950	1.38	22.02	0.34
3.833	0.34	9.900	15.82	15.967	1.38	22.03	0.34
3.850	0.34	9.917	15.82	15.983	1.38	22.05	0.34
3.867	0.34	9.933	15.82	16.000	1.38	22.07	0.34
3.883	0.34	9.950	15.82	16.017	1.38	22.08	0.34
3.900	0.34	9.967	15.82	16.033	1.38	22.10	0.34
3.917	0.34	9.983	15.82	16.050	1.38	22.12	0.34
3.933	0.34	10.000	15.82	16.067	1.38	22.13	0.34
3.950	0.34	10.017	15.82	16.083	1.38	22.15	0.34
3.967	0.34	10.033	15.82	16.100	1.38	22.17	0.34
3.983	0.34	10.050	15.82	16.117	1.38	22.18	0.34
4.000	0.34	10.067	15.82	16.133	1.38	22.20	0.34
4.017	0.34	10.083	15.82	16.150	1.38	22.22	0.34
4.033	0.34	10.100	15.82	16.167	1.38	22.23	0.34
4.050	0.34	10.117	15.82	16.183	1.38	22.25	0.34
4.067	0.34	10.133	15.82	16.200	1.38	22.27	0.34
4.083	0.34	10.150	15.82	16.217	1.38	22.28	0.34
4.100	0.34	10.167	15.82	16.233	1.38	22.30	0.34
4.117	0.34	10.183	15.82	16.250	1.38	22.32	0.34
4.133	0.34	10.200	15.82	16.267	0.69	22.33	0.34
4.150	0.34	10.217	15.82	16.283	0.69	22.35	0.34
4.167	0.34	10.233	15.82	16.300	0.69	22.37	0.34
4.183	0.34	10.250	15.81	16.317	0.69	22.38	0.34
4.200	0.34	10.267	4.47	16.333	0.69	22.40	0.34
4.217	0.34	10.283	4.47	16.350	0.69	22.42	0.34
4.233	0.34	10.300	4.47	16.367	0.69	22.43	0.34
4.250	0.34	10.317	4.47	16.383	0.69	22.45	0.34
4.267	2.06	10.333	4.47	16.400	0.69	22.47	0.34
4.283	2.06	10.350	4.47	16.417	0.69	22.48	0.34
4.300	2.06	10.367	4.47	16.433	0.69	22.50	0.34
4.317	2.06	10.383	4.47	16.450	0.69	22.52	0.34
4.333	2.06	10.400	4.47	16.467	0.69	22.53	0.34
4.350	2.06	10.417	4.47	16.483	0.69	22.55	0.34
4.367	2.06	10.433	4.47	16.500	0.69	22.57	0.34
4.383	2.06	10.450	4.47	16.517	0.69	22.58	0.34
4.400	2.06	10.467	4.47	16.533	0.69	22.60	0.34
4.417	2.06	10.483	4.47	16.550	0.69	22.62	0.34
4.433	2.06	10.500	4.47	16.567	0.69	22.63	0.34
4.450	2.06	10.517	4.47	16.583	0.69	22.65	0.34
4.467	2.06	10.533	4.47	16.600	0.69	22.67	0.34
4.483	2.06	10.550	4.47	16.617	0.69	22.68	0.34
4.500	2.06	10.567	4.47	16.633	0.69	22.70	0.34
4.517	2.06	10.583	4.47	16.650	0.69	22.72	0.34
4.533	2.06	10.600	4.47	16.667	0.69	22.73	0.34
4.550	2.06	10.617	4.47	16.683	0.69	22.75	0.34
4.567	2.06	10.633	4.47	16.700	0.69	22.77	0.34
4.583	2.06	10.650	4.47	16.717	0.69	22.78	0.34
4.600	2.06	10.667	4.47	16.733	0.69	22.80	0.34
4.617	2.06	10.683	4.47	16.750	0.69	22.82	0.34
4.633	2.06	10.700	4.47	16.767	0.69	22.83	0.34
4.650	2.06	10.717	4.47	16.783	0.69	22.85	0.34
4.667	2.06	10.733	4.47	16.800	0.69	22.87	0.34
4.683	2.06	10.750	4.47	16.817	0.69	22.88	0.34
4.700	2.06	10.767	4.47	16.833	0.69	22.90	0.34
4.717	2.06	10.783	4.47	16.850	0.69	22.92	0.34
4.733	2.06	10.800	4.47	16.867	0.69	22.93	0.34
4.750	2.06	10.817	4.47	16.883	0.69	22.95	0.34
4.767	2.06	10.833	4.47	16.900	0.69	22.97	0.34
4.783	2.06	10.850	4.47	16.917	0.69	22.98	0.34
4.800	2.06	10.867	4.47	16.933	0.69	23.00	0.34
4.817	2.06	10.883	4.47	16.950	0.69	23.02	0.34
4.833	2.06	10.900	4.47	16.967	0.69	23.03	0.34
4.850	2.06	10.917	4.47	16.983	0.69	23.05	0.34
4.867	2.06	10.933	4.47	17.000	0.69	23.07	0.34
4.883	2.06	10.950	4.47	17.017	0.69	23.08	0.34
4.900	2.06	10.967	4.47	17.033	0.69	23.10	0.34
4.917	2.06	10.983	4.47	17.050	0.69	23.12	0.34
4.933	2.06	11.000	4.47	17.067	0.69	23.13	0.34
4.950	2.06	11.017	4.47	17.083	0.69	23.15	0.34
4.967	2.06	11.033	4.47	17.100	0.69	23.17	0.34
4.983	2.06	11.050	4.47	17.117	0.69	23.18	0.34
5.000	2.06	11.067	4.47	17.133	0.69	23.20	0.34
5.017	2.06	11.083	4.47	17.150	0.69	23.22	0.34
5.033	2.06	11.100	4.47	17.167	0.69	23.23	0.34
5.050	2.06	11.117	4.47	17.183	0.69	23.25	0.34
5.067	2.06	11.133	4.47	17.200	0.69	23.27	0.34
5.083	2.06	11.150	4.47	17.217	0.69	23.28	0.34
5.100	2.06	11.167	4.47	17.233	0.69	23.30	0.34
5.117	2.06	11.183	4.47	17.250	0.69	23.32	0.34
5.133	2.06	11.200	4.47	17.267	0.69	23.33	0.34
5.150	2.06	11.217	4.47	17.283	0.69	23.35	0.34
5.167	2.06	11.233	4.47	17.300	0.69	23.37	0.34
5.183	2.06	11.250	4.47	17.317	0.69	23.38	0.34
5.200	2.06	11.267	4.47	17.333	0.69	23.40	0.34
5.217	2.06	11.283	4.47	17.350	0.69	23.42	0.34
5.233	2.06	11.300	4.47	17.367	0.69	23.43	0.34
5.250	2.06	11.317	4.47	17.383	0.69	23.45	0.34
5.267	2.06	11.333	4.47	17.400	0.69	23.47	0.34
5.283	2.06	11.350	4.47	17.417	0.69	23.48	0.34
5.300	2.06	11.367	4.47	17.433	0.69	23.50	0.34
5.317	2.06	11.383	4.47	17.450	0.69	23.52	0.34
5.333	2.06	11.400	4.47	17.467	0.69	23.53	0.34
5.350	2.06	11.417	4.47	17.483	0.69	23.55	0.34
5.367	2.06	11.433	4.47	17.500	0.69	23.57	0.34
5.383	2.06	11.450	4.47	17.517	0.69	23.58	0.34
5.400	2.06	11.467	4.47	17.533	0.69	23.60	0.34
5.417	2.06	11.483	4.47	17.550	0.69	23.62	0.34
5.433	2.06	11.500	4.47	17.567	0.69	23.63	0.34
5.450	2.06	11.517	4.47	17.583	0.69	23.65	0.34
5.467	2.06	11.533	4.47	17.600	0.69	23.67	0.34
5.483	2.06	11.550	4.47	17.617	0.69	23.68	0.34
5.500	2.06	11.567	4.47	17.633	0.69	23.70	0.34
5.517	2.06	11.583	4.47	17.650	0.69	23.72	0.34
5.533	2.06	11.600	4.47	17.667	0.69	23.73	0.34
5.550	2.06	11.617	4.47	17.683	0.69	23.75	0.34
5.567	2.06	11.633	4.47	17.700	0.69	23.77	0.34
5.583	2.06	11.650	4.47	17.717	0.69	23.78	0.34
5.600	2.06	11.667	4.47	17.733	0.69	23.80	0.34
5.617	2.06	11.683	4.47	17.750	0.69	23.82	0.34
5.633	2.06	11.700	4.47	17.767	0.69	23.83	0.34
5.650	2.06	11.717	4.47	17.783	0.69	23.85	0.34
5.667	2.06	11.733	4.47	17.800	0.69	23.87	0.34
5.683	2.06	11.750	4.47	17.817	0.69	23.88	0.34
5.700	2.06	11.767	4.47	17.833	0.69	23.90	0.34
5.717	2.06	11.783	4.47	17.850	0.69	23.92	0.34
5.733	2.06	11.800	4.47	17.867	0.69	23.93	0.34
5.750	2.06	11.817	4.47	17.883	0.69	23.95	0.34
5.767	2.06	11.833	4.47	17.900	0.69	23.97	0.34
5.783	2.06	11.850	4.47	17.917	0.69	23.98	0.34
5.800	2.06	11.867	4.47	17.933	0.69	24.00	0.34
5.817	2.06	11.883	4.47	17.950	0.69	24.02	0.34
5.833	2.06	11.900	4.47	17.967	0.69	24.03	0.34
5.850	2.06	11.917	4.47	17.983	0.69	24.05	0.34
5.867	2.06	11.933	4.47	18.000	0.69	24.07	0.34
5.883	2.06	11.950	4.47	18.017	0.69	24.08	0.34
5.900	2.06	11.967	4.47	18.033	0.69	24.10	0.34
5.917	2.06	11.983	4.47	18.050	0.69	24.12	0.34
5.933	2.06	12.000	4.47	18.067	0.69	24.13	0.34
5.950	2.06	12.017	4.47	18.083	0.69	24.15	0.34

5.967	2.06	12.033	4.47	18.100	0.69	24.17	0.34	
5.983	2.06	12.050	4.47	18.117	0.69	24.18	0.34	
6.000	2.06	12.067	4.47	18.133	0.69	24.20	0.34	
6.017	2.06	12.083	4.47	18.150	0.69	24.22	0.34	
6.033	2.06	12.100	4.47	18.167	0.69	24.23	0.34	
6.050	2.06	12.117	4.47	18.183	0.69	24.25	0.34	
6.067	2.06	12.133	4.47	18.200	0.69			

Max.Eff.Inten.(mm/hr)=	15.82	11.97	
over (min)	6.00	10.00	
Storage Coeff. (min)=	6.00 (ii)	9.56 (ii)	
Unit Hyd. Tpeak (min)=	6.00	10.00	
Unit Hyd. peak (cms)=	0.19	0.12	
			TOTALS
PEAK FLOW (cms)=	0.10	0.00	0.097 (iii)
TIME TO PEAK (hrs)=	9.73	10.25	10.25
RUNOFF VOLUME (mm)=	67.75	40.36	67.48
TOTAL RAINFALL (mm)=	68.76	68.76	68.76
RUNOFF COEFFICIENT =	0.99	0.59	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7642)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0470	0.1250
	0.0197	0.0630	0.0551	0.1410
	0.0304	0.0850	0.0620	0.1580
	0.0373	0.1020	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7641)	2.210	0.097	10.25	67.48
OUTFLOW: ID= 1 (7642)	2.210	0.031	10.62	62.39

PEAK FLOW REDUCTION [Qout/Qin](%)= 31.51
TIME SHIFT OF PEAK FLOW (min)= 22.00
MAXIMUM STORAGE USED (ha.m.)= 0.0853

CALIB			
STANDHYD (7643)	Area (ha)= 2.02		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	2.00	0.02	
Dep. Storage (mm)=	1.00	1.50	
Average Slope (%)=	1.00	0.50	
Length (m)=	116.05	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	2.06	12.150	4.47	18.22	0.69
0.033	0.00	6.100	2.06	12.167	4.47	18.23	0.69
0.050	0.00	6.117	2.06	12.183	4.47	18.25	0.69
0.067	0.00	6.133	2.06	12.200	4.47	18.27	0.34
0.083	0.00	6.150	2.06	12.217	4.47	18.28	0.34
0.100	0.00	6.167	2.06	12.233	4.47	18.30	0.34
0.117	0.00	6.183	2.06	12.250	4.47	18.32	0.34
0.133	0.00	6.200	2.06	12.267	2.41	18.33	0.34
0.150	0.00	6.217	2.06	12.283	2.41	18.35	0.34
0.167	0.00	6.233	2.06	12.300	2.41	18.37	0.34
0.183	0.00	6.250	2.07	12.317	2.41	18.38	0.34
0.200	0.00	6.267	5.85	12.333	2.41	18.40	0.34
0.217	0.00	6.283	5.85	12.350	2.41	18.42	0.34
0.233	0.00	6.300	5.85	12.367	2.41	18.43	0.34
0.250	0.00	6.317	5.85	12.383	2.41	18.45	0.34
0.267	0.34	6.333	5.85	12.400	2.41	18.47	0.34
0.283	0.34	6.350	5.85	12.417	2.41	18.48	0.34
0.300	0.34	6.367	5.85	12.433	2.41	18.50	0.34
0.317	0.34	6.383	5.85	12.450	2.41	18.52	0.34
0.333	0.34	6.400	5.85	12.467	2.41	18.53	0.34
0.350	0.34	6.417	5.85	12.483	2.41	18.55	0.34
0.367	0.34	6.433	5.85	12.500	2.41	18.57	0.34
0.383	0.34	6.450	5.85	12.517	2.41	18.58	0.34
0.400	0.34	6.467	5.85	12.533	2.41	18.60	0.34
0.417	0.34	6.483	5.85	12.550	2.41	18.62	0.34
0.433	0.34	6.500	5.85	12.567	2.41	18.63	0.34
0.450	0.34	6.517	5.85	12.583	2.41	18.65	0.34
0.467	0.34	6.533	5.85	12.600	2.41	18.67	0.34
0.483	0.34	6.550	5.85	12.617	2.41	18.68	0.34
0.500	0.34	6.567	5.85	12.633	2.41	18.70	0.34
0.517	0.34	6.583	5.85	12.650	2.41	18.72	0.34
0.533	0.34	6.600	5.85	12.667	2.41	18.73	0.34
0.550	0.34	6.617	5.85	12.683	2.41	18.75	0.34
0.567	0.34	6.633	5.85	12.700	2.41	18.77	0.34
0.583	0.34	6.650	5.85	12.717	2.41	18.78	0.34
0.600	0.34	6.667	5.85	12.733	2.41	18.80	0.34
0.617	0.34	6.683	5.85	12.750	2.41	18.82	0.34
0.633	0.34	6.700	5.85	12.767	2.41	18.83	0.34
0.650	0.34	6.717	5.85	12.783	2.41	18.85	0.34
0.667	0.34	6.733	5.85	12.800	2.41	18.87	0.34
0.683	0.34	6.750	5.85	12.817	2.41	18.88	0.34
0.700	0.34	6.767	5.85	12.833	2.41	18.90	0.34
0.717	0.34	6.783	5.85	12.850	2.41	18.92	0.34
0.733	0.34	6.800	5.85	12.867	2.41	18.93	0.34
0.750	0.34	6.817	5.85	12.883	2.41	18.95	0.34
0.767	0.34	6.833	5.85	12.900	2.41	18.97	0.34
0.783	0.34	6.850	5.85	12.917	2.41	18.98	0.34
0.800	0.34	6.867	5.85	12.933	2.41	19.00	0.34
0.817	0.34	6.883	5.85	12.950	2.41	19.02	0.34
0.833	0.34	6.900	5.85	12.967	2.41	19.03	0.34
0.850	0.34	6.917	5.85	12.983	2.41	19.05	0.34
0.867	0.34	6.933	5.85	13.000	2.41	19.07	0.34
0.883	0.34	6.950	5.85	13.017	2.41	19.08	0.34
0.900	0.34	6.967	5.85	13.033	2.41	19.10	0.34
0.917	0.34	6.983	5.85	13.050	2.41	19.12	0.34
0.933	0.34	7.000	5.85	13.067	2.41	19.13	0.34
0.950	0.34	7.017	5.85	13.083	2.41	19.15	0.34
0.967	0.34	7.033	5.85	13.100	2.41	19.17	0.34
0.983	0.34	7.050	5.85	13.117	2.41	19.18	0.34
1.000	0.34	7.067	5.85	13.133	2.41	19.20	0.34
1.017	0.34	7.083	5.85	13.150	2.41	19.22	0.34
1.033	0.34	7.100	5.85	13.167	2.41	19.23	0.34
1.050	0.34	7.117	5.85	13.183	2.41	19.25	0.34
1.067	0.34	7.133	5.85	13.200	2.41	19.27	0.34
1.083	0.34	7.150	5.85	13.217	2.41	19.28	0.34
1.100	0.34	7.167	5.85	13.233	2.41	19.30	0.34
1.117	0.34	7.183	5.85	13.250	2.41	19.32	0.34
1.133	0.34	7.200	5.85	13.267	2.41	19.33	0.34
1.150	0.34	7.217	5.85	13.283	2.41	19.35	0.34
1.167	0.34	7.233	5.85	13.300	2.41	19.37	0.34
1.183	0.34	7.250	5.85	13.317	2.41	19.38	0.34
1.200	0.34	7.267	5.85	13.333	2.41	19.40	0.34
1.217	0.34	7.283	5.85	13.350	2.41	19.42	0.34
1.233	0.34	7.300	5.85	13.367	2.41	19.43	0.34
1.250	0.34	7.317	5.85	13.383	2.41	19.45	0.34
1.267	0.34	7.333	5.85	13.400	2.41	19.47	0.34
1.283	0.34	7.350	5.85	13.417	2.41	19.48	0.34
1.300	0.34	7.367	5.85	13.433	2.41	19.50	0.34
1.317	0.34	7.383	5.85	13.450	2.41	19.52	0.34
1.333	0.34	7.400	5.85	13.467	2.41	19.53	0.34
1.350	0.34	7.417	5.85	13.483	2.41	19.55	0.34
1.367	0.34	7.433	5.85	13.500	2.41	19.57	0.34
1.383	0.34	7.450	5.85	13.517	2.41	19.58	0.34
1.400	0.34	7.467	5.85	13.533	2.41	19.60	0.34
1.417	0.34	7.483	5.85	13.550	2.41	19.62	0.34
1.433	0.34	7.500	5.85	13.567	2.41	19.63	0.34

1.450	0.34	7.517	5.85	13.583	2.41	19.65	0.34
1.467	0.34	7.533	5.85	13.600	2.41	19.67	0.34
1.483	0.34	7.550	5.85	13.617	2.41	19.68	0.34
1.500	0.34	7.567	5.85	13.633	2.41	19.70	0.34
1.517	0.34	7.583	5.85	13.650	2.41	19.72	0.34
1.533	0.34	7.600	5.85	13.667	2.41	19.73	0.34
1.550	0.34	7.617	5.85	13.683	2.41	19.75	0.34
1.567	0.34	7.633	5.85	13.700	2.41	19.77	0.34
1.583	0.34	7.650	5.85	13.717	2.41	19.78	0.34
1.600	0.34	7.667	5.85	13.733	2.41	19.80	0.34
1.617	0.34	7.683	5.85	13.750	2.41	19.82	0.34
1.633	0.34	7.700	5.85	13.767	2.41	19.83	0.34
1.650	0.34	7.717	5.85	13.783	2.41	19.85	0.34
1.667	0.34	7.733	5.85	13.800	2.41	19.87	0.34
1.683	0.34	7.750	5.85	13.817	2.41	19.88	0.34
1.700	0.34	7.767	5.85	13.833	2.41	19.90	0.34
1.717	0.34	7.783	5.85	13.850	2.41	19.92	0.34
1.733	0.34	7.800	5.85	13.867	2.41	19.93	0.34
1.750	0.34	7.817	5.85	13.883	2.41	19.95	0.34
1.767	0.34	7.833	5.85	13.900	2.41	19.97	0.34
1.783	0.34	7.850	5.85	13.917	2.41	19.98	0.34
1.800	0.34	7.867	5.85	13.933	2.41	20.00	0.34
1.817	0.34	7.883	5.85	13.950	2.41	20.02	0.34
1.833	0.34	7.900	5.85	13.967	2.41	20.03	0.34
1.850	0.34	7.917	5.85	13.983	2.41	20.05	0.34
1.867	0.34	7.933	5.85	14.000	2.41	20.07	0.34
1.883	0.34	7.950	5.85	14.017	2.41	20.08	0.34
1.900	0.34	7.967	5.85	14.033	2.41	20.10	0.34
1.917	0.34	7.983	5.85	14.050	2.41	20.12	0.34
1.933	0.34	8.000	5.85	14.067	2.41	20.13	0.34
1.950	0.34	8.017	5.85	14.083	2.41	20.15	0.34
1.967	0.34	8.033	5.85	14.100	2.41	20.17	0.34
1.983	0.34	8.050	5.85	14.117	2.41	20.18	0.34
2.000	0.34	8.067	5.85	14.133	2.41	20.20	0.34
2.017	0.34	8.083	5.85	14.150	2.41	20.22	0.34
2.033	0.34	8.100	5.85	14.167	2.41	20.23	0.34
2.050	0.34	8.117	5.85	14.183	2.41	20.25	0.34
2.067	0.34	8.133	5.85	14.200	2.41	20.27	0.34
2.083	0.34	8.150	5.85	14.217	2.41	20.28	0.34
2.100	0.34	8.167	5.85	14.233	2.41	20.30	0.34
2.117	0.34	8.183	5.85	14.250	2.41	20.32	0.34
2.133	0.34	8.200	5.85	14.267	1.38	20.33	0.34
2.150	0.34	8.217	5.85	14.283	1.38	20.35	0.34
2.167	0.34	8.233	5.85	14.300	1.38	20.37	0.34
2.183	0.34	8.250	5.88	14.317	1.38	20.38	0.34
2.200	0.34	8.267	15.82	14.333	1.38	20.40	0.34
2.217	0.34	8.283	15.82	14.350	1.38	20.42	0.34
2.233	0.34	8.300	15.82	14.367	1.38	20.43	0.34
2.250	0.34	8.317	15.82	14.383	1.38	20.45	0.34
2.267	0.34	8.333	15.82	14.400	1.38	20.47	0.34
2.283	0.34	8.350	15.82	14.417	1.38	20.48	0.34
2.300	0.34	8.367	15.82	14.433	1.38	20.50	0.34
2.317	0.34	8.383	15.82	14.450	1.38	20.52	0.34
2.333	0.34	8.400	15.82	14.467	1.38	20.53	0.34
2.350	0.34	8.417	15.82	14.483	1.38	20.55	0.34
2.367	0.34	8.433	15.82	14.500	1.38	20.57	0.34
2.383	0.34	8.450	15.82	14.517	1.38	20.58	0.34
2.400	0.34	8.467	15.82	14.533	1.38	20.60	0.34
2.417	0.34	8.483	15.82	14.550	1.38	20.62	0.34
2.433	0.34	8.500	15.82	14.567	1.38	20.63	0.34
2.450	0.34	8.517	15.82	14.583	1.38	20.65	0.34
2.467	0.34	8.533	15.82	14.600	1.38	20.67	0.34
2.483	0.34	8.550	15.82	14.617	1.38	20.68	0.34
2.500	0.34	8.567	15.82	14.633	1.38	20.70	0.34
2.517	0.34	8.583	15.82	14.650	1.38	20.72	0.34
2.533	0.34	8.600	15.82	14.667	1.38	20.73	0.34
2.550	0.34	8.617	15.82	14.683	1.38	20.75	0.34
2.567	0.34	8.633	15.82	14.700	1.38	20.77	0.34
2.583	0.34	8.650	15.82	14.717	1.38	20.78	0.34
2.600	0.34	8.667	15.82	14.733	1.38	20.80	0.34
2.617	0.34	8.683	15.82	14.750	1.38	20.82	0.34
2.633	0.34	8.700	15.82	14.767	1.38	20.83	0.34
2.650	0.34	8.717	15.82	14.783	1.38	20.85	0.34
2.667	0.34	8.733	15.82	14.800	1.38	20.87	0.34
2.683	0.34	8.750	15.82	14.817	1.38	20.88	0.34
2.700	0.34	8.767	15.82	14.833	1.38	20.90	0.34
2.717	0.34	8.783	15.82	14.850	1.38	20.92	0.34
2.733	0.34	8.800	15.82	14.867	1.38	20.93	0.34
2.750	0.34	8.817	15.82	14.883	1.38	20.95	0.34
2.767	0.34	8.833	15.82	14.900	1.38	20.97	0.34
2.783	0.34	8.850	15.82	14.917	1.38	20.98	0.34
2.800	0.34	8.867	15.82	14.933	1.38	21.00	0.34
2.817	0.34	8.883	15.82	14.950	1.38	21.02	0.34
2.833	0.34	8.900	15.82	14.967	1.38	21.03	0.34
2.850	0.34	8.917	15.82	14.983	1.38	21.05	0.34
2.867	0.34	8.933	15.82	15.000	1.38	21.07	0.34
2.883	0.34	8.950	15.82	15.017	1.38	21.08	0.34
2.900	0.34	8.967	15.82	15.033	1.38	21.10	0.34
2.917	0.34	8.983	15.82	15.050	1.38	21.12	0.34
2.933	0.34	9.000	15.82	15.067	1.38	21.13	0.34
2.950	0.34	9.017	15.82	15.083	1.38	21.15	0.34
2.967	0.34	9.033	15.82	15.100	1.38	21.17	0.34
2.983	0.34	9.050	15.82	15.117	1.38	21.18	0.34
3.000	0.34	9.067	15.82	15.133	1.38	21.20	0.34
3.017	0.34	9.083	15.82	15.150	1.38	21.22	0.34
3.033	0.34	9.100	15.82	15.167	1.38	21.23	0.34
3.050	0.34	9.117	15.82	15.183	1.38	21.25	0.34
3.067	0.34	9.133	15.82	15.200	1.38	21.27	0.34
3.083	0.34	9.150	15.82	15.217	1.38	21.28	0.34
3.100	0.34	9.167	15.82	15.233	1.38	21.30	0.34
3.117	0.34	9.183	15.82	15.250	1.38	21.32	0.34
3.133	0.34	9.200	15.82	15.267	1.38	21.33	0.34
3.150	0.34	9.217	15.82	15.283	1.38	21.35	0.34
3.167	0.34	9.233	15.82	15.300	1.38	21.37	0.34
3.183	0.34	9.250	15.82	15.317	1.38	21.38	0.34
3.200	0.34	9.267	15.82	15.333	1.38	21.40	0.34
3.217	0.34	9.283	15.82	15.350	1.38	21.42	0.34
3.233	0.34	9.300	15.82	15.367	1.38	21.43	0.34
3.250	0.34	9.317	15.82	15.383	1.38	21.45	0.34
3.267	0.34	9.333	15.82	15.400	1.38	21.47	0.34
3.283	0.34	9.350	15.82	15.417	1.38	21.48	0.34
3.300	0.34	9.367	15.82	15.433	1.38	21.50	0.34
3.317	0.34	9.383	15.82	15.450	1.38	21.52	0.34
3.333	0.34	9.400	15.82	15.467	1.38	21.53	0.34
3.350	0.34	9.417	15.82	15.483	1.38	21.55	0.34
3.367	0.34	9.433	15.82	15.500	1.38	21.57	0.34
3.383	0.34	9.450	15.82	15.517	1.38	21.58	0.34
3.400	0.34	9.467	15.82	15.533	1.38	21.60	0.34
3.417	0.34	9.483	15.82	15.550	1.38	21.62	0.34
3.433	0.34	9.500	15.82	15.567	1.38	21.63	0.34
3.450	0.34	9.517	15.82	15.583	1.38	21.65	0.34
3.467	0.34	9.533	15.82	15.600	1.38	21.67	0.34
3.483	0.34	9.550	15.82	15.617	1.38	21.68	0.34
3.500	0.34	9.567	15.82	15.633	1.38	21.70	0.34
3.517	0.34	9.583	15.82	15.650	1.38	21.72	0.34
3.533	0.34	9.600	15.82	15.667	1.38	21.73	0.34
3.550	0.34	9.617	15.82	15.683	1.38	21.75	0.34
3.567	0.34	9.633	15.82	15.700	1.38	21.77	0.34
3.583	0.34	9.650	15.82	15.717	1.38	21.78	0.34
3.600	0.34	9.667	15.82	15.733	1.38	21.80	0.34
3.617	0.34	9.683	15.82	15.750	1.38	21.82	0.34
3.633	0.34	9.700	15.82	15.767	1.38	21.83	0.34
3.650	0.34	9.717	15.82	15.783	1.38	21.85	0.34
3.667	0.34	9.733	15.82	15.800	1.38	21.87	0.34
3.683	0.34	9.750	15.82	15.817	1.38	21.88	0.34
3.700	0.34	9.767	15.82	15.833	1.38	21.90	0.34
3.717	0.34	9.783	15.82	15.850	1.38	21.92	0.34
3.733	0.34	9.800	15.82	15.867	1.38	21.93	0.34
3.750	0.34	9.817	15.82	15.883	1.38	21.95	0.34
3.767	0.34	9.833	15.82	15.900	1.38	21.97	0.34
3.783	0.34	9.850	15.82	15.917	1.38	21.98	0.34
3.800	0.34	9.867	15.82	15.933	1.38	22.00	0.34
3.817	0.34	9.883	15.82	15.950	1.38	22.02	0.34
3.833	0.34	9.900	15.82	15.967	1.38	22.03	0.34
3.850	0.34	9.917	15.82	15.983	1.38	22.05	0.34
3.867	0.34	9.933	15.82	16.000	1.38	22.07	0.34
3.883	0.34	9.950	15.82	16.017	1.38	22.08	0.34
3.900	0.34	9.967	15.82	16.033	1.38	22.10	0.34
3.917	0.34	9.983	15.82	16.050	1.38	22.12	0.34
3.933	0.34	10.000	15.82	16.067	1.38	22.13	0.34
3.950	0.34	10.017	15.82	16.083	1.38	22.15	0.34
3.967	0.34	10.033	15.82	16.100	1.38	22.17	0.34

3.983	0.34	10.050	15.82	16.117	1.38	22.18	0.34
4.000	0.34	10.067	15.82	16.133	1.38	22.20	0.34
4.017	0.34	10.083	15.82	16.150	1.38	22.22	0.34
4.033	0.34	10.100	15.82	16.167	1.38	22.23	0.34
4.050	0.34	10.117	15.82	16.183	1.38	22.25	0.34
4.067	0.34	10.133	15.82	16.200	1.38	22.27	0.34
4.083	0.34	10.150	15.82	16.217	1.38	22.28	0.34
4.100	0.34	10.167	15.82	16.233	1.38	22.30	0.34
4.117	0.34	10.183	15.82	16.250	1.38	22.32	0.34
4.133	0.34	10.200	15.82	16.267	0.69	22.33	0.34
4.150	0.34	10.217	15.82	16.283	0.69	22.35	0.34
4.167	0.34	10.233	15.82	16.300	0.69	22.37	0.34
4.183	0.34	10.250	15.81	16.317	0.69	22.38	0.34
4.200	0.34	10.267	4.47	16.333	0.69	22.40	0.34
4.217	0.34	10.283	4.47	16.350	0.69	22.42	0.34
4.233	0.34	10.300	4.47	16.367	0.69	22.43	0.34
4.250	0.34	10.317	4.47	16.383	0.69	22.45	0.34
4.267	2.06	10.333	4.47	16.400	0.69	22.47	0.34
4.283	2.06	10.350	4.47	16.417	0.69	22.48	0.34
4.300	2.06	10.367	4.47	16.433	0.69	22.50	0.34
4.317	2.06	10.383	4.47	16.450	0.69	22.52	0.34
4.333	2.06	10.400	4.47	16.467	0.69	22.53	0.34
4.350	2.06	10.417	4.47	16.483	0.69	22.55	0.34
4.367	2.06	10.433	4.47	16.500	0.69	22.57	0.34
4.383	2.06	10.450	4.47	16.517	0.69	22.58	0.34
4.400	2.06	10.467	4.47	16.533	0.69	22.60	0.34
4.417	2.06	10.483	4.47	16.550	0.69	22.62	0.34
4.433	2.06	10.500	4.47	16.567	0.69	22.63	0.34
4.450	2.06	10.517	4.47	16.583	0.69	22.65	0.34
4.467	2.06	10.533	4.47	16.600	0.69	22.67	0.34
4.483	2.06	10.550	4.47	16.617	0.69	22.68	0.34
4.500	2.06	10.567	4.47	16.633	0.69	22.70	0.34
4.517	2.06	10.583	4.47	16.650	0.69	22.72	0.34
4.533	2.06	10.600	4.47	16.667	0.69	22.73	0.34
4.550	2.06	10.617	4.47	16.683	0.69	22.75	0.34
4.567	2.06	10.633	4.47	16.700	0.69	22.77	0.34
4.583	2.06	10.650	4.47	16.717	0.69	22.78	0.34
4.600	2.06	10.667	4.47	16.733	0.69	22.80	0.34
4.617	2.06	10.683	4.47	16.750	0.69	22.82	0.34
4.633	2.06	10.700	4.47	16.767	0.69	22.83	0.34
4.650	2.06	10.717	4.47	16.783	0.69	22.85	0.34
4.667	2.06	10.733	4.47	16.800	0.69	22.87	0.34
4.683	2.06	10.750	4.47	16.817	0.69	22.88	0.34
4.700	2.06	10.767	4.47	16.833	0.69	22.90	0.34
4.717	2.06	10.783	4.47	16.850	0.69	22.92	0.34
4.733	2.06	10.800	4.47	16.867	0.69	22.93	0.34
4.750	2.06	10.817	4.47	16.883	0.69	22.95	0.34
4.767	2.06	10.833	4.47	16.900	0.69	22.97	0.34
4.783	2.06	10.850	4.47	16.917	0.69	22.98	0.34
4.800	2.06	10.867	4.47	16.933	0.69	23.00	0.34
4.817	2.06	10.883	4.47	16.950	0.69	23.02	0.34
4.833	2.06	10.900	4.47	16.967	0.69	23.03	0.34
4.850	2.06	10.917	4.47	16.983	0.69	23.05	0.34
4.867	2.06	10.933	4.47	17.000	0.69	23.07	0.34
4.883	2.06	10.950	4.47	17.017	0.69	23.08	0.34
4.900	2.06	10.967	4.47	17.033	0.69	23.10	0.34
4.917	2.06	10.983	4.47	17.050	0.69	23.12	0.34
4.933	2.06	11.000	4.47	17.067	0.69	23.13	0.34
4.950	2.06	11.017	4.47	17.083	0.69	23.15	0.34
4.967	2.06	11.033	4.47	17.100	0.69	23.17	0.34
4.983	2.06	11.050	4.47	17.117	0.69	23.18	0.34
5.000	2.06	11.067	4.47	17.133	0.69	23.20	0.34
5.017	2.06	11.083	4.47	17.150	0.69	23.22	0.34
5.033	2.06	11.100	4.47	17.167	0.69	23.23	0.34
5.050	2.06	11.117	4.47	17.183	0.69	23.25	0.34
5.067	2.06	11.133	4.47	17.200	0.69	23.27	0.34
5.083	2.06	11.150	4.47	17.217	0.69	23.28	0.34
5.100	2.06	11.167	4.47	17.233	0.69	23.30	0.34
5.117	2.06	11.183	4.47	17.250	0.69	23.32	0.34
5.133	2.06	11.200	4.47	17.267	0.69	23.33	0.34
5.150	2.06	11.217	4.47	17.283	0.69	23.35	0.34
5.167	2.06	11.233	4.47	17.300	0.69	23.37	0.34
5.183	2.06	11.250	4.47	17.317	0.69	23.38	0.34
5.200	2.06	11.267	4.47	17.333	0.69	23.40	0.34
5.217	2.06	11.283	4.47	17.350	0.69	23.42	0.34
5.233	2.06	11.300	4.47	17.367	0.69	23.43	0.34
5.250	2.06	11.317	4.47	17.383	0.69	23.45	0.34
5.267	2.06	11.333	4.47	17.400	0.69	23.47	0.34
5.283	2.06	11.350	4.47	17.417	0.69	23.48	0.34
5.300	2.06	11.367	4.47	17.433	0.69	23.50	0.34
5.317	2.06	11.383	4.47	17.450	0.69	23.52	0.34
5.333	2.06	11.400	4.47	17.467	0.69	23.53	0.34
5.350	2.06	11.417	4.47	17.483	0.69	23.55	0.34
5.367	2.06	11.433	4.47	17.500	0.69	23.57	0.34
5.383	2.06	11.450	4.47	17.517	0.69	23.58	0.34
5.400	2.06	11.467	4.47	17.533	0.69	23.60	0.34
5.417	2.06	11.483	4.47	17.550	0.69	23.62	0.34
5.433	2.06	11.500	4.47	17.567	0.69	23.63	0.34
5.450	2.06	11.517	4.47	17.583	0.69	23.65	0.34
5.467	2.06	11.533	4.47	17.600	0.69	23.67	0.34
5.483	2.06	11.550	4.47	17.617	0.69	23.68	0.34
5.500	2.06	11.567	4.47	17.633	0.69	23.70	0.34
5.517	2.06	11.583	4.47	17.650	0.69	23.72	0.34
5.533	2.06	11.600	4.47	17.667	0.69	23.73	0.34
5.550	2.06	11.617	4.47	17.683	0.69	23.75	0.34
5.567	2.06	11.633	4.47	17.700	0.69	23.77	0.34
5.583	2.06	11.650	4.47	17.717	0.69	23.78	0.34
5.600	2.06	11.667	4.47	17.733	0.69	23.80	0.34
5.617	2.06	11.683	4.47	17.750	0.69	23.82	0.34
5.633	2.06	11.700	4.47	17.767	0.69	23.83	0.34
5.650	2.06	11.717	4.47	17.783	0.69	23.85	0.34
5.667	2.06	11.733	4.47	17.800	0.69	23.87	0.34
5.683	2.06	11.750	4.47	17.817	0.69	23.88	0.34
5.700	2.06	11.767	4.47	17.833	0.69	23.90	0.34
5.717	2.06	11.783	4.47	17.850	0.69	23.92	0.34
5.733	2.06	11.800	4.47	17.867	0.69	23.93	0.34
5.750	2.06	11.817	4.47	17.883	0.69	23.95	0.34
5.767	2.06	11.833	4.47	17.900	0.69	23.97	0.34
5.783	2.06	11.850	4.47	17.917	0.69	23.98	0.34
5.800	2.06	11.867	4.47	17.933	0.69	24.00	0.34
5.817	2.06	11.883	4.47	17.950	0.69	24.02	0.34
5.833	2.06	11.900	4.47	17.967	0.69	24.03	0.34
5.850	2.06	11.917	4.47	17.983	0.69	24.05	0.34
5.867	2.06	11.933	4.47	18.000	0.69	24.07	0.34
5.883	2.06	11.950	4.47	18.017	0.69	24.08	0.34
5.900	2.06	11.967	4.47	18.033	0.69	24.10	0.34
5.917	2.06	11.983	4.47	18.050	0.69	24.12	0.34
5.933	2.06	12.000	4.47	18.067	0.69	24.13	0.34
5.950	2.06	12.017	4.47	18.083	0.69	24.15	0.34
5.967	2.06	12.033	4.47	18.100	0.69	24.17	0.34
5.983	2.06	12.050	4.47	18.117	0.69	24.18	0.34
6.000	2.06	12.067	4.47	18.133	0.69	24.20	0.34
6.017	2.06	12.083	4.47	18.150	0.69	24.22	0.34
6.033	2.06	12.100	4.47	18.167	0.69	24.23	0.34
6.050	2.06	12.117	4.47	18.183	0.69	24.25	0.34
6.067	2.06	12.133	4.47	18.200	0.69		

Max.Eff.Inten.(mm/hr)=	15.82	11.97	
over (min)	6.00	10.00	
Storage Coeff. (min)=	5.84 (ii)	9.40 (ii)	
Unit Hyd. Tpeak (min)=	6.00	10.00	
Unit Hyd. peak (cms)=	0.19	0.12	
			TOTALS
PEAK FLOW (cms)=	0.09	0.00	0.089 (iii)
TIME TO PEAK (hrs)=	9.73	10.25	10.25
RUNOFF VOLUME (mm)=	67.74	40.36	67.48
TOTAL RAINFALL (mm)=	68.76	68.76	68.76
RUNOFF COEFFICIENT =	0.99	0.59	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7644)|	OVERFLOW IS OFF			
IN= 2---> OUT= 1 |				
DT= 1.0 min |	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)

	0.0000	0.0000	|	0.0433	0.1140
	0.0182	0.0580	|	0.0507	0.1280
	0.0280	0.0775	|	0.0571	0.1440
	0.0343	0.0930	|	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (	7643)	2.020	0.089	10.25	67.48
OUTFLOW: ID= 1 (	7644)	2.020	0.028	10.60	62.44

PEAK FLOW REDUCTION [Qout/Qin](%)= 31.80
TIME SHIFT OF PEAK FLOW (min)= 21.00
MAXIMUM STORAGE USED (ha.m.)= 0.0779

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      V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
      V    V   I    SS     U   U   A A   L
       V  V    I     SS    U   U  AAAAA  L
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
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***** D E T A I L E D O U T P U T *****

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Output filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-a4eb17eaad57\4daefbef-4209-4866-b2da-fed360c82855\s
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DATE: 06/14/2024 TIME: 12:48:38

USER:

COMMENTS: _____

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  ************************************************
  ** SIMULATION : 93. 10yr 4hr 10min Chicago    **
  ************************************************
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CHICAGO STORM	IDF curve parameters: A=2221.000
Ptotal= 58.62 mm	B= 12.000
	C= 0.908

used in: INTENSITY = A / (t + B)^C

Duration of storm = 4.00 hrs
Storm time step = 10.00 min
Time to peak ratio = 0.33

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	2.39	1.00	37.17	2.00	8.06	3.00	3.05
0.17	2.89	1.17	134.16	2.17	6.42	3.17	2.75
0.33	3.65	1.33	50.03	2.33	5.30	3.33	2.50
0.50	4.89	1.50	24.37	2.50	4.50	3.50	2.29
0.67	7.23	1.67	15.14	2.67	3.89	3.67	2.11
0.83	12.87	1.83	10.64	2.83	3.42	3.83	1.96

CALIB			
STANDHYD (7567)	Area (ha)= 2.72		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.69	0.03
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	134.66	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.39	1.017	37.17	2.017	8.06	3.02	3.05
0.033	2.39	1.033	37.17	2.033	8.06	3.03	3.05
0.050	2.39	1.050	37.17	2.050	8.06	3.05	3.05
0.067	2.39	1.067	37.17	2.067	8.06	3.07	3.05
0.083	2.39	1.083	37.17	2.083	8.06	3.08	3.05
0.100	2.39	1.100	37.17	2.100	8.06	3.10	3.05
0.117	2.39	1.117	37.17	2.117	8.06	3.12	3.05
0.133	2.39	1.133	37.17	2.133	8.06	3.13	3.05
0.150	2.39	1.150	37.17	2.150	8.06	3.15	3.05
0.167	2.39	1.167	37.17	2.167	8.06	3.17	3.05
0.183	2.89	1.183	134.16	2.183	6.42	3.18	2.75
0.200	2.89	1.200	134.16	2.200	6.42	3.20	2.75
0.217	2.89	1.217	134.16	2.217	6.42	3.22	2.75
0.233	2.89	1.233	134.16	2.233	6.42	3.23	2.75
0.250	2.89	1.250	134.16	2.250	6.42	3.25	2.75
0.267	2.89	1.267	134.16	2.267	6.42	3.27	2.75
0.283	2.89	1.283	134.16	2.283	6.42	3.28	2.75
0.300	2.89	1.300	134.16	2.300	6.42	3.30	2.75
0.317	2.89	1.317	134.16	2.317	6.42	3.32	2.75
0.333	2.89	1.333	134.16	2.333	6.42	3.33	2.75
0.350	3.65	1.350	50.04	2.350	5.30	3.35	2.50
0.367	3.65	1.367	50.03	2.367	5.30	3.37	2.50
0.383	3.65	1.383	50.03	2.383	5.30	3.38	2.50
0.400	3.65	1.400	50.03	2.400	5.30	3.40	2.50
0.417	3.65	1.417	50.03	2.417	5.30	3.42	2.50
0.433	3.65	1.433	50.03	2.433	5.30	3.43	2.50
0.450	3.65	1.450	50.03	2.450	5.30	3.45	2.50
0.467	3.65	1.467	50.03	2.467	5.30	3.47	2.50
0.483	3.65	1.483	50.03	2.483	5.30	3.48	2.50
0.500	3.65	1.500	50.03	2.500	5.30	3.50	2.50
0.517	4.89	1.517	24.37	2.517	4.50	3.52	2.29
0.533	4.89	1.533	24.37	2.533	4.50	3.53	2.29
0.550	4.89	1.550	24.37	2.550	4.50	3.55	2.29
0.567	4.89	1.567	24.37	2.567	4.50	3.57	2.29
0.583	4.89	1.583	24.37	2.583	4.50	3.58	2.29
0.600	4.89	1.600	24.37	2.600	4.50	3.60	2.29
0.617	4.89	1.617	24.37	2.617	4.50	3.62	2.29
0.633	4.89	1.633	24.37	2.633	4.50	3.63	2.29
0.650	4.89	1.650	24.37	2.650	4.50	3.65	2.29
0.667	4.89	1.667	24.37	2.667	4.50	3.67	2.29
0.683	7.23	1.683	15.14	2.683	3.89	3.68	2.11
0.700	7.23	1.700	15.14	2.700	3.89	3.70	2.11
0.717	7.23	1.717	15.14	2.717	3.89	3.72	2.11
0.733	7.23	1.733	15.14	2.733	3.89	3.73	2.11
0.750	7.23	1.750	15.14	2.750	3.89	3.75	2.11
0.767	7.23	1.767	15.14	2.767	3.89	3.77	2.11
0.783	7.23	1.783	15.14	2.783	3.89	3.78	2.11
0.800	7.23	1.800	15.14	2.800	3.89	3.80	2.11
0.817	7.23	1.817	15.14	2.817	3.89	3.82	2.11
0.833	7.23	1.833	15.14	2.833	3.89	3.83	2.11
0.850	12.87	1.850	10.64	2.850	3.42	3.85	1.96
0.867	12.87	1.867	10.64	2.867	3.42	3.87	1.96
0.883	12.87	1.883	10.64	2.883	3.42	3.88	1.96
0.900	12.87	1.900	10.64	2.900	3.42	3.90	1.96
0.917	12.87	1.917	10.64	2.917	3.42	3.92	1.96

0.933	12.87	1.933	10.64	2.933	3.42	3.93	1.96
0.950	12.87	1.950	10.64	2.950	3.42	3.95	1.96
0.967	12.87	1.967	10.64	2.967	3.42	3.97	1.96
0.983	12.87	1.983	10.64	2.983	3.42	3.98	1.96
1.000	12.87	2.000	10.64	3.000	3.42	4.00	1.96

Max.Eff.Inten.(mm/hr)=	134.16	71.15	
over (min)	5.00	5.00	
Storage Coeff. (min)=	2.72 (ii)	4.23 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.32	0.25	
			TOTALS
PEAK FLOW (cms)=	0.95	0.00	0.959 (iii)
TIME TO PEAK (hrs)=	1.33	1.37	1.33
RUNOFF VOLUME (mm)=	57.62	32.00	57.36
TOTAL RAINFALL (mm)=	58.62	58.62	58.62
RUNOFF COEFFICIENT =	0.98	0.55	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7626) IN= 2---> OUT= 1 DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0568	0.1530
	0.0239	0.0780	0.0660	0.1730
	0.0370	0.1040	0.0751	0.2000
	0.0451	0.1250	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7567)	2.720	0.959	1.33	57.36
OUTFLOW: ID= 1 (7626)	2.720	0.045	2.40	55.76

PEAK FLOW REDUCTION [Qout/Qin](%)= 4.69
TIME SHIFT OF PEAK FLOW (min)= 64.00
MAXIMUM STORAGE USED (ha.m.)= 0.1248

CALIB STANDHYD (7624) ID= 1 DT= 1.0 min	Area (ha)= 1.80 Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00		
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	1.78	0.02	
Dep. Storage (mm)=	1.00	1.50	
Average Slope (%)=	1.00	0.50	
Length (m)=	109.54	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.39	1.017	37.17	2.017	8.06	3.02	3.05
0.033	2.39	1.033	37.17	2.033	8.06	3.03	3.05
0.050	2.39	1.050	37.17	2.050	8.06	3.05	3.05
0.067	2.39	1.067	37.17	2.067	8.06	3.07	3.05
0.083	2.39	1.083	37.17	2.083	8.06	3.08	3.05
0.100	2.39	1.100	37.17	2.100	8.06	3.10	3.05
0.117	2.39	1.117	37.17	2.117	8.06	3.12	3.05
0.133	2.39	1.133	37.17	2.133	8.06	3.13	3.05
0.150	2.39	1.150	37.17	2.150	8.06	3.15	3.05
0.167	2.39	1.167	37.17	2.167	8.06	3.17	3.05
0.183	2.89	1.183	134.16	2.183	6.42	3.18	2.75
0.200	2.89	1.200	134.16	2.200	6.42	3.20	2.75
0.217	2.89	1.217	134.16	2.217	6.42	3.22	2.75
0.233	2.89	1.233	134.16	2.233	6.42	3.23	2.75
0.250	2.89	1.250	134.16	2.250	6.42	3.25	2.75
0.267	2.89	1.267	134.16	2.267	6.42	3.27	2.75
0.283	2.89	1.283	134.16	2.283	6.42	3.28	2.75
0.300	2.89	1.300	134.16	2.300	6.42	3.30	2.75
0.317	2.89	1.317	134.16	2.317	6.42	3.32	2.75
0.333	2.89	1.333	134.16	2.333	6.42	3.33	2.75
0.350	3.65	1.350	50.04	2.350	5.30	3.35	2.50
0.367	3.65	1.367	50.03	2.367	5.30	3.37	2.50
0.383	3.65	1.383	50.03	2.383	5.30	3.38	2.50
0.400	3.65	1.400	50.03	2.400	5.30	3.40	2.50
0.417	3.65	1.417	50.03	2.417	5.30	3.42	2.50
0.433	3.65	1.433	50.03	2.433	5.30	3.43	2.50
0.450	3.65	1.450	50.03	2.450	5.30	3.45	2.50
0.467	3.65	1.467	50.03	2.467	5.30	3.47	2.50
0.483	3.65	1.483	50.03	2.483	5.30	3.48	2.50
0.500	3.65	1.500	50.03	2.500	5.30	3.50	2.50
0.517	4.89	1.517	24.37	2.517	4.50	3.52	2.29
0.533	4.89	1.533	24.37	2.533	4.50	3.53	2.29
0.550	4.89	1.550	24.37	2.550	4.50	3.55	2.29
0.567	4.89	1.567	24.37	2.567	4.50	3.57	2.29
0.583	4.89	1.583	24.37	2.583	4.50	3.58	2.29
0.600	4.89	1.600	24.37	2.600	4.50	3.60	2.29
0.617	4.89	1.617	24.37	2.617	4.50	3.62	2.29
0.633	4.89	1.633	24.37	2.633	4.50	3.63	2.29
0.650	4.89	1.650	24.37	2.650	4.50	3.65	2.29
0.667	4.89	1.667	24.37	2.667	4.50	3.67	2.29
0.683	7.23	1.683	15.14	2.683	3.89	3.68	2.11
0.700	7.23	1.700	15.14	2.700	3.89	3.70	2.11
0.717	7.23	1.717	15.14	2.717	3.89	3.72	2.11
0.733	7.23	1.733	15.14	2.733	3.89	3.73	2.11
0.750	7.23	1.750	15.14	2.750	3.89	3.75	2.11
0.767	7.23	1.767	15.14	2.767	3.89	3.77	2.11
0.783	7.23	1.783	15.14	2.783	3.89	3.78	2.11
0.800	7.23	1.800	15.14	2.800	3.89	3.80	2.11
0.817	7.23	1.817	15.14	2.817	3.89	3.82	2.11
0.833	7.23	1.833	15.14	2.833	3.89	3.83	2.11
0.850	12.87	1.850	10.64	2.850	3.42	3.85	1.96
0.867	12.87	1.867	10.64	2.867	3.42	3.87	1.96
0.883	12.87	1.883	10.64	2.883	3.42	3.88	1.96
0.900	12.87	1.900	10.64	2.900	3.42	3.90	1.96
0.917	12.87	1.917	10.64	2.917	3.42	3.92	1.96
0.933	12.87	1.933	10.64	2.933	3.42	3.93	1.96
0.950	12.87	1.950	10.64	2.950	3.42	3.95	1.96
0.967	12.87	1.967	10.64	2.967	3.42	3.97	1.96
0.983	12.87	1.983	10.64	2.983	3.42	3.98	1.96
1.000	12.87	2.000	10.64	3.000	3.42	4.00	1.96

Max.Eff.Inten.(mm/hr)=	134.16	88.69	
over (min)	5.00	4.00	
Storage Coeff. (min)=	2.40 (ii)	3.91 (ii)	
Unit Hyd. Tpeak (min)=	5.00	4.00	
Unit Hyd. peak (cms)=	0.34	0.29	
			TOTALS
PEAK FLOW (cms)=	0.64	0.00	0.645 (iii)
TIME TO PEAK (hrs)=	1.33	1.35	1.33
RUNOFF VOLUME (mm)=	57.62	38.23	57.42
TOTAL RAINFALL (mm)=	58.62	58.62	58.62
RUNOFF COEFFICIENT =	0.98	0.65	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 90.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7625) IN= 2---> OUT= 1 DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0389	0.1013
	0.0164	0.0514	0.0456	0.1141

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                      0.0252     0.0690   |   0.0514      0.1288
                      0.0309     0.0825   |   0.0000      0.0000

                                 AREA      QPEAK     TPEAK       R.V.
                                 (ha)      (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (   7624)      1.800      0.645      1.33      57.42
   OUTFLOW: ID= 1 (   7625)      1.800      0.031      2.38      56.03

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  4.78
                TIME SHIFT OF PEAK FLOW         (min)= 63.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.0823

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| CALIB           |
| STANDHYD (   7623)|   Area    (ha)=   1.15
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
-------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.14         0.01
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=      87.56        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
  TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.017    2.39 | 1.017   37.17 | 2.017    8.06 |  3.02    3.05
 0.033    2.39 | 1.033   37.17 | 2.033    8.06 |  3.03    3.05
 0.050    2.39 | 1.050   37.17 | 2.050    8.06 |  3.05    3.05
 0.067    2.39 | 1.067   37.17 | 2.067    8.06 |  3.07    3.05
 0.083    2.39 | 1.083   37.17 | 2.083    8.06 |  3.08    3.05
 0.100    2.39 | 1.100   37.17 | 2.100    8.06 |  3.10    3.05
 0.117    2.39 | 1.117   37.17 | 2.117    8.06 |  3.12    3.05
 0.133    2.39 | 1.133   37.17 | 2.133    8.06 |  3.13    3.05
 0.150    2.39 | 1.150   37.17 | 2.150    8.06 |  3.15    3.05
 0.167    2.39 | 1.167   37.17 | 2.167    8.06 |  3.17    3.05
 0.183    2.89 | 1.183  134.16 | 2.183    6.42 |  3.18    2.75
 0.200    2.89 | 1.200  134.16 | 2.200    6.42 |  3.20    2.75
 0.217    2.89 | 1.217  134.16 | 2.217    6.42 |  3.22    2.75
 0.233    2.89 | 1.233  134.16 | 2.233    6.42 |  3.23    2.75
 0.250    2.89 | 1.250  134.16 | 2.250    6.42 |  3.25    2.75
 0.267    2.89 | 1.267  134.16 | 2.267    6.42 |  3.27    2.75
 0.283    2.89 | 1.283  134.16 | 2.283    6.42 |  3.28    2.75
 0.300    2.89 | 1.300  134.16 | 2.300    6.42 |  3.30    2.75
 0.317    2.89 | 1.317  134.16 | 2.317    6.42 |  3.32    2.75
 0.333    2.89 | 1.333  134.16 | 2.333    6.42 |  3.33    2.75
 0.350    3.65 | 1.350   50.04 | 2.350    5.30 |  3.35    2.50
 0.367    3.65 | 1.367   50.03 | 2.367    5.30 |  3.37    2.50
 0.383    3.65 | 1.383   50.03 | 2.383    5.30 |  3.38    2.50
 0.400    3.65 | 1.400   50.03 | 2.400    5.30 |  3.40    2.50
 0.417    3.65 | 1.417   50.03 | 2.417    5.30 |  3.42    2.50
 0.433    3.65 | 1.433   50.03 | 2.433    5.30 |  3.43    2.50
 0.450    3.65 | 1.450   50.03 | 2.450    5.30 |  3.45    2.50
 0.467    3.65 | 1.467   50.03 | 2.467    5.30 |  3.47    2.50
 0.483    3.65 | 1.483   50.03 | 2.483    5.30 |  3.48    2.50
 0.500    3.65 | 1.500   50.03 | 2.500    5.30 |  3.50    2.50
 0.517    4.89 | 1.517   24.37 | 2.517    4.50 |  3.52    2.29
 0.533    4.89 | 1.533   24.37 | 2.533    4.50 |  3.53    2.29
 0.550    4.89 | 1.550   24.37 | 2.550    4.50 |  3.55    2.29
 0.567    4.89 | 1.567   24.37 | 2.567    4.50 |  3.57    2.29
 0.583    4.89 | 1.583   24.37 | 2.583    4.50 |  3.58    2.29
 0.600    4.89 | 1.600   24.37 | 2.600    4.50 |  3.60    2.29
 0.617    4.89 | 1.617   24.37 | 2.617    4.50 |  3.62    2.29
 0.633    4.89 | 1.633   24.37 | 2.633    4.50 |  3.63    2.29
 0.650    4.89 | 1.650   24.37 | 2.650    4.50 |  3.65    2.29
 0.667    4.89 | 1.667   24.37 | 2.667    4.50 |  3.67    2.29
 0.683    7.23 | 1.683   15.14 | 2.683    3.89 |  3.68    2.11
 0.700    7.23 | 1.700   15.14 | 2.700    3.89 |  3.70    2.11
 0.717    7.23 | 1.717   15.14 | 2.717    3.89 |  3.72    2.11
 0.733    7.23 | 1.733   15.14 | 2.733    3.89 |  3.73    2.11
 0.750    7.23 | 1.750   15.14 | 2.750    3.89 |  3.75    2.11
 0.767    7.23 | 1.767   15.14 | 2.767    3.89 |  3.77    2.11
 0.783    7.23 | 1.783   15.14 | 2.783    3.89 |  3.78    2.11
 0.800    7.23 | 1.800   15.14 | 2.800    3.89 |  3.80    2.11
 0.817    7.23 | 1.817   15.14 | 2.817    3.89 |  3.82    2.11
 0.833    7.23 | 1.833   15.14 | 2.833    3.89 |  3.83    2.11
 0.850   12.87 | 1.850   10.64 | 2.850    3.42 |  3.85    1.96
 0.867   12.87 | 1.867   10.64 | 2.867    3.42 |  3.87    1.96
 0.883   12.87 | 1.883   10.64 | 2.883    3.42 |  3.88    1.96
 0.900   12.87 | 1.900   10.64 | 2.900    3.42 |  3.90    1.96
 0.917   12.87 | 1.917   10.64 | 2.917    3.42 |  3.92    1.96
 0.933   12.87 | 1.933   10.64 | 2.933    3.42 |  3.93    1.96
 0.950   12.87 | 1.950   10.64 | 2.950    3.42 |  3.95    1.96
 0.967   12.87 | 1.967   10.64 | 2.967    3.42 |  3.97    1.96
 0.983   12.87 | 1.983   10.64 | 2.983    3.42 |  3.98    1.96
 1.000   12.87 | 2.000   10.64 | 3.000    3.42 |  4.00    1.96

     Max.Eff.Inten.(mm/hr)=     134.16        71.15
                   over (min)        5.00         4.00
     Storage Coeff.  (min)=       2.10 (ii)    3.61 (ii)
     Unit Hyd. Tpeak (min)=       5.00         4.00
     Unit Hyd. peak  (cms)=       0.37         0.30
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.41         0.00          0.416 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.35           1.33
     RUNOFF VOLUME    (mm)=      57.62        32.00          57.36
     TOTAL RAINFALL   (mm)=      58.62        58.62          58.62
     RUNOFF COEFFICIENT   =       0.98         0.55           0.98

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  85.0     Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| RESERVOIR(  7622)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0258      0.0650
                         0.0108     0.0330   |   0.0302      0.0725
                         0.0167     0.0440   |   0.0340      0.0820
                         0.0204     0.0525   |   0.0000      0.0000

                                 AREA      QPEAK     TPEAK       R.V.
                                 (ha)      (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (   7623)      1.150      0.416      1.33      57.36
   OUTFLOW: ID= 1 (   7622)      1.150      0.020      2.35      56.10

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  4.88
                TIME SHIFT OF PEAK FLOW         (min)= 61.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.0523

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| CALIB           |
| STANDHYD (   7629)|   Area    (ha)=   4.09
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
-------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.05         0.04
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=     165.13        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
  TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.017    2.39 | 1.017   37.17 | 2.017    8.06 |  3.02    3.05
 0.033    2.39 | 1.033   37.17 | 2.033    8.06 |  3.03    3.05
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0.050	2.39	1.050	37.17	2.050	8.06	3.05	3.05
0.067	2.39	1.067	37.17	2.067	8.06	3.07	3.05
0.083	2.39	1.083	37.17	2.083	8.06	3.08	3.05
0.100	2.39	1.100	37.17	2.100	8.06	3.10	3.05
0.117	2.39	1.117	37.17	2.117	8.06	3.12	3.05
0.133	2.39	1.133	37.17	2.133	8.06	3.13	3.05
0.150	2.39	1.150	37.17	2.150	8.06	3.15	3.05
0.167	2.39	1.167	37.17	2.167	8.06	3.17	3.05
0.183	2.89	1.183	134.16	2.183	6.42	3.18	2.75
0.200	2.89	1.200	134.16	2.200	6.42	3.20	2.75
0.217	2.89	1.217	134.16	2.217	6.42	3.22	2.75
0.233	2.89	1.233	134.16	2.233	6.42	3.23	2.75
0.250	2.89	1.250	134.16	2.250	6.42	3.25	2.75
0.267	2.89	1.267	134.16	2.267	6.42	3.27	2.75
0.283	2.89	1.283	134.16	2.283	6.42	3.28	2.75
0.300	2.89	1.300	134.16	2.300	6.42	3.30	2.75
0.317	2.89	1.317	134.16	2.317	6.42	3.32	2.75
0.333	2.89	1.333	134.16	2.333	6.42	3.33	2.75
0.350	3.65	1.350	50.04	2.350	5.30	3.35	2.50
0.367	3.65	1.367	50.03	2.367	5.30	3.37	2.50
0.383	3.65	1.383	50.03	2.383	5.30	3.38	2.50
0.400	3.65	1.400	50.03	2.400	5.30	3.40	2.50
0.417	3.65	1.417	50.03	2.417	5.30	3.42	2.50
0.433	3.65	1.433	50.03	2.433	5.30	3.43	2.50
0.450	3.65	1.450	50.03	2.450	5.30	3.45	2.50
0.467	3.65	1.467	50.03	2.467	5.30	3.47	2.50
0.483	3.65	1.483	50.03	2.483	5.30	3.48	2.50
0.500	3.65	1.500	50.03	2.500	5.30	3.50	2.50
0.517	4.89	1.517	24.37	2.517	4.50	3.52	2.29
0.533	4.89	1.533	24.37	2.533	4.50	3.53	2.29
0.550	4.89	1.550	24.37	2.550	4.50	3.55	2.29
0.567	4.89	1.567	24.37	2.567	4.50	3.57	2.29
0.583	4.89	1.583	24.37	2.583	4.50	3.58	2.29
0.600	4.89	1.600	24.37	2.600	4.50	3.60	2.29
0.617	4.89	1.617	24.37	2.617	4.50	3.62	2.29
0.633	4.89	1.633	24.37	2.633	4.50	3.63	2.29
0.650	4.89	1.650	24.37	2.650	4.50	3.65	2.29
0.667	4.89	1.667	24.37	2.667	4.50	3.67	2.29
0.683	7.23	1.683	15.14	2.683	3.89	3.68	2.11
0.700	7.23	1.700	15.14	2.700	3.89	3.70	2.11
0.717	7.23	1.717	15.14	2.717	3.89	3.72	2.11
0.733	7.23	1.733	15.14	2.733	3.89	3.73	2.11
0.750	7.23	1.750	15.14	2.750	3.89	3.75	2.11
0.767	7.23	1.767	15.14	2.767	3.89	3.77	2.11
0.783	7.23	1.783	15.14	2.783	3.89	3.78	2.11
0.800	7.23	1.800	15.14	2.800	3.89	3.80	2.11
0.817	7.23	1.817	15.14	2.817	3.89	3.82	2.11
0.833	7.23	1.833	15.14	2.833	3.89	3.83	2.11
0.850	12.87	1.850	10.64	2.850	3.42	3.85	1.96
0.867	12.87	1.867	10.64	2.867	3.42	3.87	1.96
0.883	12.87	1.883	10.64	2.883	3.42	3.88	1.96
0.900	12.87	1.900	10.64	2.900	3.42	3.90	1.96
0.917	12.87	1.917	10.64	2.917	3.42	3.92	1.96
0.933	12.87	1.933	10.64	2.933	3.42	3.93	1.96
0.950	12.87	1.950	10.64	2.950	3.42	3.95	1.96
0.967	12.87	1.967	10.64	2.967	3.42	3.97	1.96
0.983	12.87	1.983	10.64	2.983	3.42	3.98	1.96
1.000	12.87	2.000	10.64	3.000	3.42	4.00	1.96

Max.Eff.Inten.(mm/hr)=	134.16	71.15	
over (min)	5.00	5.00	
Storage Coeff. (min)=	3.07 (ii)	4.58 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.30	0.24	
			TOTALS
PEAK FLOW (cms)=	1.41	0.01	1.416 (iii)
TIME TO PEAK (hrs)=	1.33	1.37	1.33
RUNOFF VOLUME (mm)=	57.62	32.00	57.36
TOTAL RAINFALL (mm)=	58.62	58.62	58.62
RUNOFF COEFFICIENT =	0.98	0.55	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7630)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0826	0.2320
	0.0347	0.1170	0.0967	0.2609
	0.0534	0.1580	0.1090	0.2940
	0.0655	0.1890	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7629)	4.090	1.416	1.33	57.36
OUTFLOW: ID= 1 (7630)	4.090	0.065	2.43	55.56

PEAK FLOW REDUCTION [Qout/Qin](%)= 4.61
TIME SHIFT OF PEAK FLOW (min)= 66.00
MAXIMUM STORAGE USED (ha.m.)= 0.1886

CALIB			
STANDHYD (7631)	Area (ha)=	3.91	
ID= 1 DT= 1.0 min	Total Imp(%)=	99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.87	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	161.45	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.39	1.017	37.17	2.017	8.06	3.02	3.05
0.033	2.39	1.033	37.17	2.033	8.06	3.03	3.05
0.050	2.39	1.050	37.17	2.050	8.06	3.05	3.05
0.067	2.39	1.067	37.17	2.067	8.06	3.07	3.05
0.083	2.39	1.083	37.17	2.083	8.06	3.08	3.05
0.100	2.39	1.100	37.17	2.100	8.06	3.10	3.05
0.117	2.39	1.117	37.17	2.117	8.06	3.12	3.05
0.133	2.39	1.133	37.17	2.133	8.06	3.13	3.05
0.150	2.39	1.150	37.17	2.150	8.06	3.15	3.05
0.167	2.39	1.167	37.17	2.167	8.06	3.17	3.05
0.183	2.89	1.183	134.16	2.183	6.42	3.18	2.75
0.200	2.89	1.200	134.16	2.200	6.42	3.20	2.75
0.217	2.89	1.217	134.16	2.217	6.42	3.22	2.75
0.233	2.89	1.233	134.16	2.233	6.42	3.23	2.75
0.250	2.89	1.250	134.16	2.250	6.42	3.25	2.75
0.267	2.89	1.267	134.16	2.267	6.42	3.27	2.75
0.283	2.89	1.283	134.16	2.283	6.42	3.28	2.75
0.300	2.89	1.300	134.16	2.300	6.42	3.30	2.75
0.317	2.89	1.317	134.16	2.317	6.42	3.32	2.75
0.333	2.89	1.333	134.16	2.333	6.42	3.33	2.75
0.350	3.65	1.350	50.04	2.350	5.30	3.35	2.50
0.367	3.65	1.367	50.03	2.367	5.30	3.37	2.50
0.383	3.65	1.383	50.03	2.383	5.30	3.38	2.50
0.400	3.65	1.400	50.03	2.400	5.30	3.40	2.50
0.417	3.65	1.417	50.03	2.417	5.30	3.42	2.50
0.433	3.65	1.433	50.03	2.433	5.30	3.43	2.50
0.450	3.65	1.450	50.03	2.450	5.30	3.45	2.50
0.467	3.65	1.467	50.03	2.467	5.30	3.47	2.50
0.483	3.65	1.483	50.03	2.483	5.30	3.48	2.50
0.500	3.65	1.500	50.03	2.500	5.30	3.50	2.50
0.517	4.89	1.517	24.37	2.517	4.50	3.52	2.29
0.533	4.89	1.533	24.37	2.533	4.50	3.53	2.29
0.550	4.89	1.550	24.37	2.550	4.50	3.55	2.29
0.567	4.89	1.567	24.37	2.567	4.50	3.57	2.29
0.583	4.89	1.583	24.37	2.583	4.50	3.58	2.29

0.600	4.89	1.600	24.37	2.600	4.50	3.60	2.29
0.617	4.89	1.617	24.37	2.617	4.50	3.62	2.29
0.633	4.89	1.633	24.37	2.633	4.50	3.63	2.29
0.650	4.89	1.650	24.37	2.650	4.50	3.65	2.29
0.667	4.89	1.667	24.37	2.667	4.50	3.67	2.29
0.683	7.23	1.683	15.14	2.683	3.89	3.68	2.11
0.700	7.23	1.700	15.14	2.700	3.89	3.70	2.11
0.717	7.23	1.717	15.14	2.717	3.89	3.72	2.11
0.733	7.23	1.733	15.14	2.733	3.89	3.73	2.11
0.750	7.23	1.750	15.14	2.750	3.89	3.75	2.11
0.767	7.23	1.767	15.14	2.767	3.89	3.77	2.11
0.783	7.23	1.783	15.14	2.783	3.89	3.78	2.11
0.800	7.23	1.800	15.14	2.800	3.89	3.80	2.11
0.817	7.23	1.817	15.14	2.817	3.89	3.82	2.11
0.833	7.23	1.833	15.14	2.833	3.89	3.83	2.11
0.850	12.87	1.850	10.64	2.850	3.42	3.85	1.96
0.867	12.87	1.867	10.64	2.867	3.42	3.87	1.96
0.883	12.87	1.883	10.64	2.883	3.42	3.88	1.96
0.900	12.87	1.900	10.64	2.900	3.42	3.90	1.96
0.917	12.87	1.917	10.64	2.917	3.42	3.92	1.96
0.933	12.87	1.933	10.64	2.933	3.42	3.93	1.96
0.950	12.87	1.950	10.64	2.950	3.42	3.95	1.96
0.967	12.87	1.967	10.64	2.967	3.42	3.97	1.96
0.983	12.87	1.983	10.64	2.983	3.42	3.98	1.96
1.000	12.87	2.000	10.64	3.000	3.42	4.00	1.96

			TOTALS
Max.Eff.Inten.(mm/hr)=	134.16	71.15	
over (min)	5.00	5.00	
Storage Coeff. (min)=	3.03 (ii)	4.54 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.31	0.24	
PEAK FLOW (cms)=	1.35	0.01	1.356 (iii)
TIME TO PEAK (hrs)=	1.33	1.37	1.33
RUNOFF VOLUME (mm)=	57.61	32.00	57.36
TOTAL RAINFALL (mm)=	58.62	58.62	58.62
RUNOFF COEFFICIENT =	0.98	0.55	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7632) IN= 2---> OUT= 1 DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0792	0.2220
	0.0333	0.1130	0.0928	0.2500
	0.0512	0.1510	0.1046	0.2810
	0.0629	0.1810	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7631)	3.910	1.356	1.33	57.36
OUTFLOW: ID= 1 (7632)	3.910	0.063	2.42	55.52

PEAK FLOW REDUCTION [Qout/Qin](%)= 4.62
TIME SHIFT OF PEAK FLOW (min)= 65.00
MAXIMUM STORAGE USED (ha.m.)= 0.1802

CALIB STANDHYD (7641) ID= 1 DT= 1.0 min	Area (ha)= 2.21	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.19	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	121.38	40.00

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.39	1.017	37.17	2.017	8.06	3.02	3.05
0.033	2.39	1.033	37.17	2.033	8.06	3.03	3.05
0.050	2.39	1.050	37.17	2.050	8.06	3.05	3.05
0.067	2.39	1.067	37.17	2.067	8.06	3.07	3.05
0.083	2.39	1.083	37.17	2.083	8.06	3.08	3.05
0.100	2.39	1.100	37.17	2.100	8.06	3.10	3.05
0.117	2.39	1.117	37.17	2.117	8.06	3.12	3.05
0.133	2.39	1.133	37.17	2.133	8.06	3.13	3.05
0.150	2.39	1.150	37.17	2.150	8.06	3.15	3.05
0.167	2.39	1.167	37.17	2.167	8.06	3.17	3.05
0.183	2.89	1.183	134.16	2.183	6.42	3.18	2.75
0.200	2.89	1.200	134.16	2.200	6.42	3.20	2.75
0.217	2.89	1.217	134.16	2.217	6.42	3.22	2.75
0.233	2.89	1.233	134.16	2.233	6.42	3.23	2.75
0.250	2.89	1.250	134.16	2.250	6.42	3.25	2.75
0.267	2.89	1.267	134.16	2.267	6.42	3.27	2.75
0.283	2.89	1.283	134.16	2.283	6.42	3.28	2.75
0.300	2.89	1.300	134.16	2.300	6.42	3.30	2.75
0.317	2.89	1.317	134.16	2.317	6.42	3.32	2.75
0.333	2.89	1.333	134.16	2.333	6.42	3.33	2.75
0.350	3.65	1.350	50.04	2.350	5.30	3.35	2.50
0.367	3.65	1.367	50.03	2.367	5.30	3.37	2.50
0.383	3.65	1.383	50.03	2.383	5.30	3.38	2.50
0.400	3.65	1.400	50.03	2.400	5.30	3.40	2.50
0.417	3.65	1.417	50.03	2.417	5.30	3.42	2.50
0.433	3.65	1.433	50.03	2.433	5.30	3.43	2.50
0.450	3.65	1.450	50.03	2.450	5.30	3.45	2.50
0.467	3.65	1.467	50.03	2.467	5.30	3.47	2.50
0.483	3.65	1.483	50.03	2.483	5.30	3.48	2.50
0.500	3.65	1.500	50.03	2.500	5.30	3.50	2.50
0.517	4.89	1.517	24.37	2.517	4.50	3.52	2.29
0.533	4.89	1.533	24.37	2.533	4.50	3.53	2.29
0.550	4.89	1.550	24.37	2.550	4.50	3.55	2.29
0.567	4.89	1.567	24.37	2.567	4.50	3.57	2.29
0.583	4.89	1.583	24.37	2.583	4.50	3.58	2.29
0.600	4.89	1.600	24.37	2.600	4.50	3.60	2.29
0.617	4.89	1.617	24.37	2.617	4.50	3.62	2.29
0.633	4.89	1.633	24.37	2.633	4.50	3.63	2.29
0.650	4.89	1.650	24.37	2.650	4.50	3.65	2.29
0.667	4.89	1.667	24.37	2.667	4.50	3.67	2.29
0.683	7.23	1.683	15.14	2.683	3.89	3.68	2.11
0.700	7.23	1.700	15.14	2.700	3.89	3.70	2.11
0.717	7.23	1.717	15.14	2.717	3.89	3.72	2.11
0.733	7.23	1.733	15.14	2.733	3.89	3.73	2.11
0.750	7.23	1.750	15.14	2.750	3.89	3.75	2.11
0.767	7.23	1.767	15.14	2.767	3.89	3.77	2.11
0.783	7.23	1.783	15.14	2.783	3.89	3.78	2.11
0.800	7.23	1.800	15.14	2.800	3.89	3.80	2.11
0.817	7.23	1.817	15.14	2.817	3.89	3.82	2.11
0.833	7.23	1.833	15.14	2.833	3.89	3.83	2.11
0.850	12.87	1.850	10.64	2.850	3.42	3.85	1.96
0.867	12.87	1.867	10.64	2.867	3.42	3.87	1.96
0.883	12.87	1.883	10.64	2.883	3.42	3.88	1.96
0.900	12.87	1.900	10.64	2.900	3.42	3.90	1.96
0.917	12.87	1.917	10.64	2.917	3.42	3.92	1.96
0.933	12.87	1.933	10.64	2.933	3.42	3.93	1.96
0.950	12.87	1.950	10.64	2.950	3.42	3.95	1.96
0.967	12.87	1.967	10.64	2.967	3.42	3.97	1.96
0.983	12.87	1.983	10.64	2.983	3.42	3.98	1.96
1.000	12.87	2.000	10.64	3.000	3.42	4.00	1.96

			TOTALS
Max.Eff.Inten.(mm/hr)=	134.16	71.15	
over (min)	5.00	5.00	
Storage Coeff. (min)=	2.55 (ii)	4.06 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.33	0.26	
PEAK FLOW (cms)=	0.78	0.00	0.785 (iii)

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    TIME TO PEAK    (hrs)=       1.33         1.37          1.33
    RUNOFF VOLUME    (mm)=      57.62        32.00         57.36
    TOTAL RAINFALL   (mm)=      58.62        58.62         58.62
    RUNOFF COEFFICIENT   =       0.98         0.55          0.98


     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN*  =  85.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| RESERVOIR(  7642)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0470     0.1250
                         0.0197     0.0630   |   0.0551     0.1410
                         0.0304     0.0850   |   0.0620     0.1580
                         0.0373     0.1020   |   0.0000     0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  7641)     2.210     0.785      1.33      57.36
   OUTFLOW: ID= 1 (  7642)     2.210     0.037      2.40      55.86

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  4.71
                TIME SHIFT OF PEAK FLOW          (min)= 64.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.1012

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-------------------
| CALIB            |
| STANDHYD (  7643)|   Area    (ha)=   2.02
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
-------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.00         0.02
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=     116.05        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |   hrs   mm/hr |   hrs   mm/hr
 0.017    2.39 | 1.017   37.17 | 2.017    8.06 |  3.02    3.05
 0.033    2.39 | 1.033   37.17 | 2.033    8.06 |  3.03    3.05
 0.050    2.39 | 1.050   37.17 | 2.050    8.06 |  3.05    3.05
 0.067    2.39 | 1.067   37.17 | 2.067    8.06 |  3.07    3.05
 0.083    2.39 | 1.083   37.17 | 2.083    8.06 |  3.08    3.05
 0.100    2.39 | 1.100   37.17 | 2.100    8.06 |  3.10    3.05
 0.117    2.39 | 1.117   37.17 | 2.117    8.06 |  3.12    3.05
 0.133    2.39 | 1.133   37.17 | 2.133    8.06 |  3.13    3.05
 0.150    2.39 | 1.150   37.17 | 2.150    8.06 |  3.15    3.05
 0.167    2.39 | 1.167   37.17 | 2.167    8.06 |  3.17    3.05
 0.183    2.89 | 1.183  134.16 | 2.183    6.42 |  3.18    2.75
 0.200    2.89 | 1.200  134.16 | 2.200    6.42 |  3.20    2.75
 0.217    2.89 | 1.217  134.16 | 2.217    6.42 |  3.22    2.75
 0.233    2.89 | 1.233  134.16 | 2.233    6.42 |  3.23    2.75
 0.250    2.89 | 1.250  134.16 | 2.250    6.42 |  3.25    2.75
 0.267    2.89 | 1.267  134.16 | 2.267    6.42 |  3.27    2.75
 0.283    2.89 | 1.283  134.16 | 2.283    6.42 |  3.28    2.75
 0.300    2.89 | 1.300  134.16 | 2.300    6.42 |  3.30    2.75
 0.317    2.89 | 1.317  134.16 | 2.317    6.42 |  3.32    2.75
 0.333    2.89 | 1.333  134.16 | 2.333    6.42 |  3.33    2.75
 0.350    3.65 | 1.350   50.04 | 2.350    5.30 |  3.35    2.50
 0.367    3.65 | 1.367   50.03 | 2.367    5.30 |  3.37    2.50
 0.383    3.65 | 1.383   50.03 | 2.383    5.30 |  3.38    2.50
 0.400    3.65 | 1.400   50.03 | 2.400    5.30 |  3.40    2.50
 0.417    3.65 | 1.417   50.03 | 2.417    5.30 |  3.42    2.50
 0.433    3.65 | 1.433   50.03 | 2.433    5.30 |  3.43    2.50
 0.450    3.65 | 1.450   50.03 | 2.450    5.30 |  3.45    2.50
 0.467    3.65 | 1.467   50.03 | 2.467    5.30 |  3.47    2.50
 0.483    3.65 | 1.483   50.03 | 2.483    5.30 |  3.48    2.50
 0.500    3.65 | 1.500   50.03 | 2.500    5.30 |  3.50    2.50
 0.517    4.89 | 1.517   24.37 | 2.517    4.50 |  3.52    2.29
 0.533    4.89 | 1.533   24.37 | 2.533    4.50 |  3.53    2.29
 0.550    4.89 | 1.550   24.37 | 2.550    4.50 |  3.55    2.29
 0.567    4.89 | 1.567   24.37 | 2.567    4.50 |  3.57    2.29
 0.583    4.89 | 1.583   24.37 | 2.583    4.50 |  3.58    2.29
 0.600    4.89 | 1.600   24.37 | 2.600    4.50 |  3.60    2.29
 0.617    4.89 | 1.617   24.37 | 2.617    4.50 |  3.62    2.29
 0.633    4.89 | 1.633   24.37 | 2.633    4.50 |  3.63    2.29
 0.650    4.89 | 1.650   24.37 | 2.650    4.50 |  3.65    2.29
 0.667    4.89 | 1.667   24.37 | 2.667    4.50 |  3.67    2.29
 0.683    7.23 | 1.683   15.14 | 2.683    3.89 |  3.68    2.11
 0.700    7.23 | 1.700   15.14 | 2.700    3.89 |  3.70    2.11
 0.717    7.23 | 1.717   15.14 | 2.717    3.89 |  3.72    2.11
 0.733    7.23 | 1.733   15.14 | 2.733    3.89 |  3.73    2.11
 0.750    7.23 | 1.750   15.14 | 2.750    3.89 |  3.75    2.11
 0.767    7.23 | 1.767   15.14 | 2.767    3.89 |  3.77    2.11
 0.783    7.23 | 1.783   15.14 | 2.783    3.89 |  3.78    2.11
 0.800    7.23 | 1.800   15.14 | 2.800    3.89 |  3.80    2.11
 0.817    7.23 | 1.817   15.14 | 2.817    3.89 |  3.82    2.11
 0.833    7.23 | 1.833   15.14 | 2.833    3.89 |  3.83    2.11
 0.850   12.87 | 1.850   10.64 | 2.850    3.42 |  3.85    1.96
 0.867   12.87 | 1.867   10.64 | 2.867    3.42 |  3.87    1.96
 0.883   12.87 | 1.883   10.64 | 2.883    3.42 |  3.88    1.96
 0.900   12.87 | 1.900   10.64 | 2.900    3.42 |  3.90    1.96
 0.917   12.87 | 1.917   10.64 | 2.917    3.42 |  3.92    1.96
 0.933   12.87 | 1.933   10.64 | 2.933    3.42 |  3.93    1.96
 0.950   12.87 | 1.950   10.64 | 2.950    3.42 |  3.95    1.96
 0.967   12.87 | 1.967   10.64 | 2.967    3.42 |  3.97    1.96
 0.983   12.87 | 1.983   10.64 | 2.983    3.42 |  3.98    1.96
 1.000   12.87 | 2.000   10.64 | 3.000    3.42 |  4.00    1.96

    Max.Eff.Inten.(mm/hr)=     134.16        71.15
              over (min)         5.00         4.00
    Storage Coeff.  (min)=       2.48 (ii)    4.00 (ii)
    Unit Hyd. Tpeak (min)=       5.00         4.00
    Unit Hyd. peak  (cms)=       0.34         0.28
                                                      *TOTALS*
    PEAK FLOW       (cms)=       0.72         0.00       0.720 (iii)
    TIME TO PEAK    (hrs)=       1.33         1.35        1.33
    RUNOFF VOLUME    (mm)=      57.62        32.00       57.36
    TOTAL RAINFALL   (mm)=      58.62        58.62       58.62
    RUNOFF COEFFICIENT   =       0.98         0.55        0.98


      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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-------------------
| RESERVOIR(  7644)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0433     0.1140
                         0.0182     0.0580   |   0.0507     0.1280
                         0.0280     0.0775   |   0.0571     0.1440
                         0.0343     0.0930   |   0.0000     0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  7643)     2.020     0.720      1.33      57.36
   OUTFLOW: ID= 1 (  7644)     2.020     0.034      2.40      55.89

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  4.73
                TIME SHIFT OF PEAK FLOW          (min)= 64.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.0924

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       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-
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  Summary filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-
a4eb17eaad57\cc777929-04cb-4e08-9da4-b0cdb7f12cf9\s


DATE: 06/14/2024                          TIME: 12:48:38

USER:


COMMENTS: _____


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  ************************************************
  ** SIMULATION : 94. 25 Year 6 Hour AES (Bloor **
  ************************************************


--------------------
|    READ STORM    |    Filename: C:\Users\ygollamudi\AppD
|                  |              ata\Local\Temp\
|                  |              3c3f87d5-a26e-4c6b-b2ae-56a7ba29ab7f\05ff30ee
| Ptotal= 65.59 mm |    Comments: 25 Year 6 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.00    0.00 |  1.75   22.30 |  3.50    9.18 |  5.25    1.31
                0.25    1.31 |  2.00   22.30 |  3.75    5.25 |  5.50    1.31
                0.50    1.31 |  2.25   60.35 |  4.00    5.25 |  5.75    1.31
                0.75    1.31 |  2.50   60.35 |  4.25    2.62 |  6.00    1.31
                1.00    1.31 |  2.75   17.06 |  4.50    2.62 |
                1.25    7.87 |  3.00   17.06 |  4.75    1.31 |
                1.50    7.87 |  3.25    9.18 |  5.00    1.31 |

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| CALIB            |
| STANDHYD (  7567)|   Area    (ha)=   2.72
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.69         0.03
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=     134.66        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.
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---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	7.87	3.150	17.06	4.72	2.62
0.033	0.00	1.600	7.87	3.167	17.06	4.73	2.62
0.050	0.00	1.617	7.87	3.183	17.06	4.75	2.62
0.067	0.00	1.633	7.87	3.200	17.06	4.77	1.31
0.083	0.00	1.650	7.87	3.217	17.06	4.78	1.31
0.100	0.00	1.667	7.87	3.233	17.06	4.80	1.31
0.117	0.00	1.683	7.87	3.250	17.06	4.82	1.31
0.133	0.00	1.700	7.87	3.267	9.18	4.83	1.31
0.150	0.00	1.717	7.87	3.283	9.18	4.85	1.31
0.167	0.00	1.733	7.87	3.300	9.18	4.87	1.31
0.183	0.00	1.750	7.87	3.317	9.18	4.88	1.31
0.200	0.00	1.767	22.30	3.333	9.18	4.90	1.31
0.217	0.00	1.783	22.30	3.350	9.18	4.92	1.31
0.233	0.00	1.800	22.30	3.367	9.18	4.93	1.31
0.250	0.00	1.817	22.30	3.383	9.18	4.95	1.31
0.267	1.31	1.833	22.30	3.400	9.18	4.97	1.31
0.283	1.31	1.850	22.30	3.417	9.18	4.98	1.31
0.300	1.31	1.867	22.30	3.433	9.18	5.00	1.31
0.317	1.31	1.883	22.30	3.450	9.18	5.02	1.31
0.333	1.31	1.900	22.30	3.467	9.18	5.03	1.31
0.350	1.31	1.917	22.30	3.483	9.18	5.05	1.31
0.367	1.31	1.933	22.30	3.500	9.18	5.07	1.31
0.383	1.31	1.950	22.30	3.517	9.18	5.08	1.31
0.400	1.31	1.967	22.30	3.533	9.18	5.10	1.31
0.417	1.31	1.983	22.30	3.550	9.18	5.12	1.31
0.433	1.31	2.000	22.30	3.567	9.18	5.13	1.31
0.450	1.31	2.017	22.30	3.583	9.18	5.15	1.31
0.467	1.31	2.033	22.30	3.600	9.18	5.17	1.31
0.483	1.31	2.050	22.30	3.617	9.18	5.18	1.31
0.500	1.31	2.067	22.30	3.633	9.18	5.20	1.31
0.517	1.31	2.083	22.30	3.650	9.18	5.22	1.31
0.533	1.31	2.100	22.30	3.667	9.18	5.23	1.31
0.550	1.31	2.117	22.30	3.683	9.18	5.25	1.31
0.567	1.31	2.133	22.30	3.700	9.18	5.27	1.31
0.583	1.31	2.150	22.30	3.717	9.18	5.28	1.31
0.600	1.31	2.167	22.30	3.733	9.18	5.30	1.31
0.617	1.31	2.183	22.30	3.750	9.18	5.32	1.31
0.633	1.31	2.200	22.30	3.767	5.25	5.33	1.31
0.650	1.31	2.217	22.30	3.783	5.25	5.35	1.31
0.667	1.31	2.233	22.30	3.800	5.25	5.37	1.31
0.683	1.31	2.250	22.30	3.817	5.25	5.38	1.31
0.700	1.31	2.267	60.35	3.833	5.25	5.40	1.31
0.717	1.31	2.283	60.35	3.850	5.25	5.42	1.31
0.733	1.31	2.300	60.35	3.867	5.25	5.43	1.31
0.750	1.31	2.317	60.35	3.883	5.25	5.45	1.31
0.767	1.31	2.333	60.35	3.900	5.25	5.47	1.31
0.783	1.31	2.350	60.35	3.917	5.25	5.48	1.31
0.800	1.31	2.367	60.35	3.933	5.25	5.50	1.31
0.817	1.31	2.383	60.35	3.950	5.25	5.52	1.31
0.833	1.31	2.400	60.35	3.967	5.25	5.53	1.31
0.850	1.31	2.417	60.35	3.983	5.25	5.55	1.31
0.867	1.31	2.433	60.35	4.000	5.25	5.57	1.31
0.883	1.31	2.450	60.35	4.017	5.25	5.58	1.31
0.900	1.31	2.467	60.35	4.033	5.25	5.60	1.31
0.917	1.31	2.483	60.35	4.050	5.25	5.62	1.31
0.933	1.31	2.500	60.35	4.067	5.25	5.63	1.31
0.950	1.31	2.517	60.35	4.083	5.25	5.65	1.31
0.967	1.31	2.533	60.35	4.100	5.25	5.67	1.31
0.983	1.31	2.550	60.35	4.117	5.25	5.68	1.31
1.000	1.31	2.567	60.35	4.133	5.25	5.70	1.31
1.017	1.31	2.583	60.35	4.150	5.25	5.72	1.31
1.033	1.31	2.600	60.35	4.167	5.25	5.73	1.31
1.050	1.31	2.617	60.35	4.183	5.25	5.75	1.31
1.067	1.31	2.633	60.35	4.200	5.25	5.77	1.31
1.083	1.31	2.650	60.35	4.217	5.25	5.78	1.31
1.100	1.31	2.667	60.35	4.233	5.25	5.80	1.31
1.117	1.31	2.683	60.35	4.250	5.25	5.82	1.31
1.133	1.31	2.700	60.35	4.267	2.62	5.83	1.31
1.150	1.31	2.717	60.35	4.283	2.62	5.85	1.31
1.167	1.31	2.733	60.35	4.300	2.62	5.87	1.31
1.183	1.31	2.750	60.35	4.317	2.62	5.88	1.31
1.200	1.31	2.767	17.06	4.333	2.62	5.90	1.31

1.217	1.31	2.783	17.06	4.350	2.62	5.92	1.31
1.233	1.31	2.800	17.06	4.367	2.62	5.93	1.31
1.250	1.31	2.817	17.06	4.383	2.62	5.95	1.31
1.267	7.87	2.833	17.06	4.400	2.62	5.97	1.31
1.283	7.87	2.850	17.06	4.417	2.62	5.98	1.31
1.300	7.87	2.867	17.06	4.433	2.62	6.00	1.31
1.317	7.87	2.883	17.06	4.450	2.62	6.02	1.31
1.333	7.87	2.900	17.06	4.467	2.62	6.03	1.31
1.350	7.87	2.917	17.06	4.483	2.62	6.05	1.31
1.367	7.87	2.933	17.06	4.500	2.62	6.07	1.31
1.383	7.87	2.950	17.06	4.517	2.62	6.08	1.31
1.400	7.87	2.967	17.06	4.533	2.62	6.10	1.31
1.417	7.87	2.983	17.06	4.550	2.62	6.12	1.31
1.433	7.87	3.000	17.06	4.567	2.62	6.13	1.31
1.450	7.87	3.017	17.06	4.583	2.62	6.15	1.31
1.467	7.87	3.033	17.06	4.600	2.62	6.17	1.31
1.483	7.87	3.050	17.06	4.617	2.62	6.18	1.31
1.500	7.87	3.067	17.06	4.633	2.62	6.20	1.31
1.517	7.87	3.083	17.06	4.650	2.62	6.22	1.31
1.533	7.87	3.100	17.06	4.667	2.62	6.23	1.31
1.550	7.87	3.117	17.06	4.683	2.62	6.25	1.31
1.567	7.87	3.133	17.06	4.700	2.62		

Max.Eff.Inten.(mm/hr)=	60.35	43.45	
over (min)	5.00	6.00	
Storage Coeff. (min)=	3.74 (ii)	5.82 (ii)	
Unit Hyd. Tpeak (min)=	5.00	6.00	
Unit Hyd. peak (cms)=	0.27	0.19	
			TOTALS
PEAK FLOW (cms)=	0.45	0.00	0.454 (iii)
TIME TO PEAK (hrs)=	2.75	2.75	2.75
RUNOFF VOLUME (mm)=	64.59	37.71	64.32
TOTAL RAINFALL (mm)=	65.59	65.59	65.59
RUNOFF COEFFICIENT =	0.98	0.57	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7626)	OVERFLOW IS OFF				
IN= 2---> OUT= 1					
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)	
	0.0000	0.0000	0.0568	0.1530	
	0.0239	0.0780	0.0660	0.1730	
	0.0370	0.1040	0.0751	0.2000	
	0.0451	0.1250	0.0000	0.0000	

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7567)	2.720	0.454	2.75	64.32
OUTFLOW: ID= 1 (7626)	2.720	0.049	3.87	62.30

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.88
TIME SHIFT OF PEAK FLOW (min)= 67.00
MAXIMUM STORAGE USED (ha.m.)= 0.1354

CALIB					
STANDHYD (7624)	Area (ha)= 1.80				
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00			

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.78	0.02
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.00	0.50
Length (m)=	109.54	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	7.87	3.150	17.06	4.72	2.62
0.033	0.00	1.600	7.87	3.167	17.06	4.73	2.62
0.050	0.00	1.617	7.87	3.183	17.06	4.75	2.62
0.067	0.00	1.633	7.87	3.200	17.06	4.77	1.31
0.083	0.00	1.650	7.87	3.217	17.06	4.78	1.31
0.100	0.00	1.667	7.87	3.233	17.06	4.80	1.31
0.117	0.00	1.683	7.87	3.250	17.06	4.82	1.31
0.133	0.00	1.700	7.87	3.267	9.18	4.83	1.31
0.150	0.00	1.717	7.87	3.283	9.18	4.85	1.31
0.167	0.00	1.733	7.87	3.300	9.18	4.87	1.31
0.183	0.00	1.750	7.87	3.317	9.18	4.88	1.31
0.200	0.00	1.767	22.30	3.333	9.18	4.90	1.31
0.217	0.00	1.783	22.30	3.350	9.18	4.92	1.31
0.233	0.00	1.800	22.30	3.367	9.18	4.93	1.31
0.250	0.00	1.817	22.30	3.383	9.18	4.95	1.31
0.267	1.31	1.833	22.30	3.400	9.18	4.97	1.31
0.283	1.31	1.850	22.30	3.417	9.18	4.98	1.31
0.300	1.31	1.867	22.30	3.433	9.18	5.00	1.31
0.317	1.31	1.883	22.30	3.450	9.18	5.02	1.31
0.333	1.31	1.900	22.30	3.467	9.18	5.03	1.31
0.350	1.31	1.917	22.30	3.483	9.18	5.05	1.31
0.367	1.31	1.933	22.30	3.500	9.18	5.07	1.31
0.383	1.31	1.950	22.30	3.517	9.18	5.08	1.31
0.400	1.31	1.967	22.30	3.533	9.18	5.10	1.31
0.417	1.31	1.983	22.30	3.550	9.18	5.12	1.31
0.433	1.31	2.000	22.30	3.567	9.18	5.13	1.31
0.450	1.31	2.017	22.30	3.583	9.18	5.15	1.31
0.467	1.31	2.033	22.30	3.600	9.18	5.17	1.31
0.483	1.31	2.050	22.30	3.617	9.18	5.18	1.31
0.500	1.31	2.067	22.30	3.633	9.18	5.20	1.31
0.517	1.31	2.083	22.30	3.650	9.18	5.22	1.31
0.533	1.31	2.100	22.30	3.667	9.18	5.23	1.31
0.550	1.31	2.117	22.30	3.683	9.18	5.25	1.31
0.567	1.31	2.133	22.30	3.700	9.18	5.27	1.31
0.583	1.31	2.150	22.30	3.717	9.18	5.28	1.31
0.600	1.31	2.167	22.30	3.733	9.18	5.30	1.31
0.617	1.31	2.183	22.30	3.750	9.18	5.32	1.31
0.633	1.31	2.200	22.30	3.767	5.25	5.33	1.31
0.650	1.31	2.217	22.30	3.783	5.25	5.35	1.31
0.667	1.31	2.233	22.30	3.800	5.25	5.37	1.31
0.683	1.31	2.250	22.30	3.817	5.25	5.38	1.31
0.700	1.31	2.267	60.35	3.833	5.25	5.40	1.31
0.717	1.31	2.283	60.35	3.850	5.25	5.42	1.31
0.733	1.31	2.300	60.35	3.867	5.25	5.43	1.31
0.750	1.31	2.317	60.35	3.883	5.25	5.45	1.31
0.767	1.31	2.333	60.35	3.900	5.25	5.47	1.31
0.783	1.31	2.350	60.35	3.917	5.25	5.48	1.31
0.800	1.31	2.367	60.35	3.933	5.25	5.50	1.31
0.817	1.31	2.383	60.35	3.950	5.25	5.52	1.31
0.833	1.31	2.400	60.35	3.967	5.25	5.53	1.31
0.850	1.31	2.417	60.35	3.983	5.25	5.55	1.31
0.867	1.31	2.433	60.35	4.000	5.25	5.57	1.31
0.883	1.31	2.450	60.35	4.017	5.25	5.58	1.31
0.900	1.31	2.467	60.35	4.033	5.25	5.60	1.31
0.917	1.31	2.483	60.35	4.050	5.25	5.62	1.31
0.933	1.31	2.500	60.35	4.067	5.25	5.63	1.31
0.950	1.31	2.517	60.35	4.083	5.25	5.65	1.31
0.967	1.31	2.533	60.35	4.100	5.25	5.67	1.31
0.983	1.31	2.550	60.35	4.117	5.25	5.68	1.31
1.000	1.31	2.567	60.35	4.133	5.25	5.70	1.31
1.017	1.31	2.583	60.35	4.150	5.25	5.72	1.31
1.033	1.31	2.600	60.35	4.167	5.25	5.73	1.31
1.050	1.31	2.617	60.35	4.183	5.25	5.75	1.31
1.067	1.31	2.633	60.35	4.200	5.25	5.77	1.31
1.083	1.31	2.650	60.35	4.217	5.25	5.78	1.31
1.100	1.31	2.667	60.35	4.233	5.25	5.80	1.31
1.117	1.31	2.683	60.35	4.250	5.25	5.82	1.31
1.133	1.31	2.700	60.35	4.267	2.62	5.83	1.31
1.150	1.31	2.717	60.35	4.283	2.62	5.85	1.31
1.167	1.31	2.733	60.35	4.300	2.62	5.87	1.31
1.183	1.31	2.750	60.35	4.317	2.62	5.88	1.31

1.200	1.31	2.767	17.06	4.333	2.62	5.90	1.31
1.217	1.31	2.783	17.06	4.350	2.62	5.92	1.31
1.233	1.31	2.800	17.06	4.367	2.62	5.93	1.31
1.250	1.31	2.817	17.06	4.383	2.62	5.95	1.31
1.267	7.87	2.833	17.06	4.400	2.62	5.97	1.31
1.283	7.87	2.850	17.06	4.417	2.62	5.98	1.31
1.300	7.87	2.867	17.06	4.433	2.62	6.00	1.31
1.317	7.87	2.883	17.06	4.450	2.62	6.02	1.31
1.333	7.87	2.900	17.06	4.467	2.62	6.03	1.31
1.350	7.87	2.917	17.06	4.483	2.62	6.05	1.31
1.367	7.87	2.933	17.06	4.500	2.62	6.07	1.31
1.383	7.87	2.950	17.06	4.517	2.62	6.08	1.31
1.400	7.87	2.967	17.06	4.533	2.62	6.10	1.31
1.417	7.87	2.983	17.06	4.550	2.62	6.12	1.31
1.433	7.87	3.000	17.06	4.567	2.62	6.13	1.31
1.450	7.87	3.017	17.06	4.583	2.62	6.15	1.31
1.467	7.87	3.033	17.06	4.600	2.62	6.17	1.31
1.483	7.87	3.050	17.06	4.617	2.62	6.18	1.31
1.500	7.87	3.067	17.06	4.633	2.62	6.20	1.31
1.517	7.87	3.083	17.06	4.650	2.62	6.22	1.31
1.533	7.87	3.100	17.06	4.667	2.62	6.23	1.31
1.550	7.87	3.117	17.06	4.683	2.62	6.25	1.31
1.567	7.87	3.133	17.06	4.700	2.62		

Max.Eff.Inten.(mm/hr)=	60.35	49.98	
over (min)	5.00	6.00	
Storage Coeff. (min)=	3.30 (ii)	5.39 (ii)	
Unit Hyd. Tpeak (min)=	5.00	6.00	
Unit Hyd. peak (cms)=	0.29	0.20	
			TOTALS
PEAK FLOW (cms)=	0.30	0.00	0.301 (iii)
TIME TO PEAK (hrs)=	2.75	2.75	2.75
RUNOFF VOLUME (mm)=	64.59	44.50	64.39
TOTAL RAINFALL (mm)=	65.59	65.59	65.59
RUNOFF COEFFICIENT =	0.98	0.68	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 90.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7625)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0389	0.1013
	0.0164	0.0514	0.0456	0.1141
	0.0252	0.0690	0.0514	0.1288
	0.0309	0.0825	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7624)		1.800	0.301	2.75	64.39
OUTFLOW: ID= 1 (7625)		1.800	0.034	3.85	62.62

PEAK FLOW REDUCTION [Qout/Qin](%)= 11.21
TIME SHIFT OF PEAK FLOW (min)= 66.00
MAXIMUM STORAGE USED (ha.m.)= 0.0892

CALIB		
STANDHYD (7623)	Area (ha)= 1.15	
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.14	0.01
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	87.56	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	7.87	3.150	17.06	4.72	2.62
0.033	0.00	1.600	7.87	3.167	17.06	4.73	2.62
0.050	0.00	1.617	7.87	3.183	17.06	4.75	2.62
0.067	0.00	1.633	7.87	3.200	17.06	4.77	1.31
0.083	0.00	1.650	7.87	3.217	17.06	4.78	1.31
0.100	0.00	1.667	7.87	3.233	17.06	4.80	1.31
0.117	0.00	1.683	7.87	3.250	17.06	4.82	1.31
0.133	0.00	1.700	7.87	3.267	9.18	4.83	1.31
0.150	0.00	1.717	7.87	3.283	9.18	4.85	1.31
0.167	0.00	1.733	7.87	3.300	9.18	4.87	1.31
0.183	0.00	1.750	7.87	3.317	9.18	4.88	1.31
0.200	0.00	1.767	22.30	3.333	9.18	4.90	1.31
0.217	0.00	1.783	22.30	3.350	9.18	4.92	1.31
0.233	0.00	1.800	22.30	3.367	9.18	4.93	1.31
0.250	0.00	1.817	22.30	3.383	9.18	4.95	1.31
0.267	1.31	1.833	22.30	3.400	9.18	4.97	1.31
0.283	1.31	1.850	22.30	3.417	9.18	4.98	1.31
0.300	1.31	1.867	22.30	3.433	9.18	5.00	1.31
0.317	1.31	1.883	22.30	3.450	9.18	5.02	1.31
0.333	1.31	1.900	22.30	3.467	9.18	5.03	1.31
0.350	1.31	1.917	22.30	3.483	9.18	5.05	1.31
0.367	1.31	1.933	22.30	3.500	9.18	5.07	1.31
0.383	1.31	1.950	22.30	3.517	9.18	5.08	1.31
0.400	1.31	1.967	22.30	3.533	9.18	5.10	1.31
0.417	1.31	1.983	22.30	3.550	9.18	5.12	1.31
0.433	1.31	2.000	22.30	3.567	9.18	5.13	1.31
0.450	1.31	2.017	22.30	3.583	9.18	5.15	1.31
0.467	1.31	2.033	22.30	3.600	9.18	5.17	1.31
0.483	1.31	2.050	22.30	3.617	9.18	5.18	1.31
0.500	1.31	2.067	22.30	3.633	9.18	5.20	1.31
0.517	1.31	2.083	22.30	3.650	9.18	5.22	1.31
0.533	1.31	2.100	22.30	3.667	9.18	5.23	1.31
0.550	1.31	2.117	22.30	3.683	9.18	5.25	1.31
0.567	1.31	2.133	22.30	3.700	9.18	5.27	1.31
0.583	1.31	2.150	22.30	3.717	9.18	5.28	1.31
0.600	1.31	2.167	22.30	3.733	9.18	5.30	1.31
0.617	1.31	2.183	22.30	3.750	9.18	5.32	1.31
0.633	1.31	2.200	22.30	3.767	5.25	5.33	1.31
0.650	1.31	2.217	22.30	3.783	5.25	5.35	1.31
0.667	1.31	2.233	22.30	3.800	5.25	5.37	1.31
0.683	1.31	2.250	22.30	3.817	5.25	5.38	1.31
0.700	1.31	2.267	60.35	3.833	5.25	5.40	1.31
0.717	1.31	2.283	60.35	3.850	5.25	5.42	1.31
0.733	1.31	2.300	60.35	3.867	5.25	5.43	1.31
0.750	1.31	2.317	60.35	3.883	5.25	5.45	1.31
0.767	1.31	2.333	60.35	3.900	5.25	5.47	1.31
0.783	1.31	2.350	60.35	3.917	5.25	5.48	1.31
0.800	1.31	2.367	60.35	3.933	5.25	5.50	1.31
0.817	1.31	2.383	60.35	3.950	5.25	5.52	1.31
0.833	1.31	2.400	60.35	3.967	5.25	5.53	1.31
0.850	1.31	2.417	60.35	3.983	5.25	5.55	1.31
0.867	1.31	2.433	60.35	4.000	5.25	5.57	1.31
0.883	1.31	2.450	60.35	4.017	5.25	5.58	1.31
0.900	1.31	2.467	60.35	4.033	5.25	5.60	1.31
0.917	1.31	2.483	60.35	4.050	5.25	5.62	1.31
0.933	1.31	2.500	60.35	4.067	5.25	5.63	1.31
0.950	1.31	2.517	60.35	4.083	5.25	5.65	1.31
0.967	1.31	2.533	60.35	4.100	5.25	5.67	1.31
0.983	1.31	2.550	60.35	4.117	5.25	5.68	1.31
1.000	1.31	2.567	60.35	4.133	5.25	5.70	1.31
1.017	1.31	2.583	60.35	4.150	5.25	5.72	1.31
1.033	1.31	2.600	60.35	4.167	5.25	5.73	1.31
1.050	1.31	2.617	60.35	4.183	5.25	5.75	1.31
1.067	1.31	2.633	60.35	4.200	5.25	5.77	1.31
1.083	1.31	2.650	60.35	4.217	5.25	5.78	1.31
1.100	1.31	2.667	60.35	4.233	5.25	5.80	1.31
1.117	1.31	2.683	60.35	4.250	5.25	5.82	1.31
1.133	1.31	2.700	60.35	4.267	2.62	5.83	1.31
1.150	1.31	2.717	60.35	4.283	2.62	5.85	1.31
1.167	1.31	2.733	60.35	4.300	2.62	5.87	1.31

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1.183	1.31	2.750	60.35	4.317	2.62	5.88	1.31
1.200	1.31	2.767	17.06	4.333	2.62	5.90	1.31
1.217	1.31	2.783	17.06	4.350	2.62	5.92	1.31
1.233	1.31	2.800	17.06	4.367	2.62	5.93	1.31
1.250	1.31	2.817	17.06	4.383	2.62	5.95	1.31
1.267	7.87	2.833	17.06	4.400	2.62	5.97	1.31
1.283	7.87	2.850	17.06	4.417	2.62	5.98	1.31
1.300	7.87	2.867	17.06	4.433	2.62	6.00	1.31
1.317	7.87	2.883	17.06	4.450	2.62	6.02	1.31
1.333	7.87	2.900	17.06	4.467	2.62	6.03	1.31
1.350	7.87	2.917	17.06	4.483	2.62	6.05	1.31
1.367	7.87	2.933	17.06	4.500	2.62	6.07	1.31
1.383	7.87	2.950	17.06	4.517	2.62	6.08	1.31
1.400	7.87	2.967	17.06	4.533	2.62	6.10	1.31
1.417	7.87	2.983	17.06	4.550	2.62	6.12	1.31
1.433	7.87	3.000	17.06	4.567	2.62	6.13	1.31
1.450	7.87	3.017	17.06	4.583	2.62	6.15	1.31
1.467	7.87	3.033	17.06	4.600	2.62	6.17	1.31
1.483	7.87	3.050	17.06	4.617	2.62	6.18	1.31
1.500	7.87	3.067	17.06	4.633	2.62	6.20	1.31
1.517	7.87	3.083	17.06	4.650	2.62	6.22	1.31
1.533	7.87	3.100	17.06	4.667	2.62	6.23	1.31
1.550	7.87	3.117	17.06	4.683	2.62	6.25	1.31
1.567	7.87	3.133	17.06	4.700	2.62		

Max.Eff.Inten.(mm/hr)=	60.35	43.45	
over (min)	5.00	5.00	
Storage Coeff. (min)=	2.89 (ii)	4.97 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.31	0.23	
			TOTALS
PEAK FLOW (cms)=	0.19	0.00	0.192 (iii)
TIME TO PEAK (hrs)=	2.75	2.75	2.75
RUNOFF VOLUME (mm)=	64.59	37.71	64.32
TOTAL RAINFALL (mm)=	65.59	65.59	65.59
RUNOFF COEFFICIENT =	0.98	0.57	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7622)	OVERFLOW IS OFF
IN= 2---> OUT= 1	
DT= 1.0 min	

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0258	0.0650
0.0108	0.0330	0.0302	0.0725
0.0167	0.0440	0.0340	0.0820
0.0204	0.0525	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (	7623)	1.150	0.192	2.75	64.32
OUTFLOW: ID= 1 (	7622)	1.150	0.022	3.83	62.72

PEAK FLOW REDUCTION [Qout/Qin](%)= 11.54
TIME SHIFT OF PEAK FLOW (min)= 65.00
MAXIMUM STORAGE USED (ha.m.)= 0.0566

CALIB	
STANDHYD (7629)	Area (ha)= 4.09
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	4.05	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	165.13	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	7.87	3.150	17.06	4.72	2.62
0.033	0.00	1.600	7.87	3.167	17.06	4.73	2.62
0.050	0.00	1.617	7.87	3.183	17.06	4.75	2.62
0.067	0.00	1.633	7.87	3.200	17.06	4.77	1.31
0.083	0.00	1.650	7.87	3.217	17.06	4.78	1.31
0.100	0.00	1.667	7.87	3.233	17.06	4.80	1.31
0.117	0.00	1.683	7.87	3.250	17.06	4.82	1.31
0.133	0.00	1.700	7.87	3.267	9.18	4.83	1.31
0.150	0.00	1.717	7.87	3.283	9.18	4.85	1.31
0.167	0.00	1.733	7.87	3.300	9.18	4.87	1.31
0.183	0.00	1.750	7.87	3.317	9.18	4.88	1.31
0.200	0.00	1.767	22.30	3.333	9.18	4.90	1.31
0.217	0.00	1.783	22.30	3.350	9.18	4.92	1.31
0.233	0.00	1.800	22.30	3.367	9.18	4.93	1.31
0.250	0.00	1.817	22.30	3.383	9.18	4.95	1.31
0.267	1.31	1.833	22.30	3.400	9.18	4.97	1.31
0.283	1.31	1.850	22.30	3.417	9.18	4.98	1.31
0.300	1.31	1.867	22.30	3.433	9.18	5.00	1.31
0.317	1.31	1.883	22.30	3.450	9.18	5.02	1.31
0.333	1.31	1.900	22.30	3.467	9.18	5.03	1.31
0.350	1.31	1.917	22.30	3.483	9.18	5.05	1.31
0.367	1.31	1.933	22.30	3.500	9.18	5.07	1.31
0.383	1.31	1.950	22.30	3.517	9.18	5.08	1.31
0.400	1.31	1.967	22.30	3.533	9.18	5.10	1.31
0.417	1.31	1.983	22.30	3.550	9.18	5.12	1.31
0.433	1.31	2.000	22.30	3.567	9.18	5.13	1.31
0.450	1.31	2.017	22.30	3.583	9.18	5.15	1.31
0.467	1.31	2.033	22.30	3.600	9.18	5.17	1.31
0.483	1.31	2.050	22.30	3.617	9.18	5.18	1.31
0.500	1.31	2.067	22.30	3.633	9.18	5.20	1.31
0.517	1.31	2.083	22.30	3.650	9.18	5.22	1.31
0.533	1.31	2.100	22.30	3.667	9.18	5.23	1.31
0.550	1.31	2.117	22.30	3.683	9.18	5.25	1.31
0.567	1.31	2.133	22.30	3.700	9.18	5.27	1.31
0.583	1.31	2.150	22.30	3.717	9.18	5.28	1.31
0.600	1.31	2.167	22.30	3.733	9.18	5.30	1.31
0.617	1.31	2.183	22.30	3.750	9.18	5.32	1.31
0.633	1.31	2.200	22.30	3.767	5.25	5.33	1.31
0.650	1.31	2.217	22.30	3.783	5.25	5.35	1.31
0.667	1.31	2.233	22.30	3.800	5.25	5.37	1.31
0.683	1.31	2.250	22.30	3.817	5.25	5.38	1.31
0.700	1.31	2.267	60.35	3.833	5.25	5.40	1.31
0.717	1.31	2.283	60.35	3.850	5.25	5.42	1.31
0.733	1.31	2.300	60.35	3.867	5.25	5.43	1.31
0.750	1.31	2.317	60.35	3.883	5.25	5.45	1.31
0.767	1.31	2.333	60.35	3.900	5.25	5.47	1.31
0.783	1.31	2.350	60.35	3.917	5.25	5.48	1.31
0.800	1.31	2.367	60.35	3.933	5.25	5.50	1.31
0.817	1.31	2.383	60.35	3.950	5.25	5.52	1.31
0.833	1.31	2.400	60.35	3.967	5.25	5.53	1.31
0.850	1.31	2.417	60.35	3.983	5.25	5.55	1.31
0.867	1.31	2.433	60.35	4.000	5.25	5.57	1.31
0.883	1.31	2.450	60.35	4.017	5.25	5.58	1.31
0.900	1.31	2.467	60.35	4.033	5.25	5.60	1.31
0.917	1.31	2.483	60.35	4.050	5.25	5.62	1.31
0.933	1.31	2.500	60.35	4.067	5.25	5.63	1.31
0.950	1.31	2.517	60.35	4.083	5.25	5.65	1.31
0.967	1.31	2.533	60.35	4.100	5.25	5.67	1.31
0.983	1.31	2.550	60.35	4.117	5.25	5.68	1.31
1.000	1.31	2.567	60.35	4.133	5.25	5.70	1.31
1.017	1.31	2.583	60.35	4.150	5.25	5.72	1.31
1.033	1.31	2.600	60.35	4.167	5.25	5.73	1.31
1.050	1.31	2.617	60.35	4.183	5.25	5.75	1.31
1.067	1.31	2.633	60.35	4.200	5.25	5.77	1.31
1.083	1.31	2.650	60.35	4.217	5.25	5.78	1.31
1.100	1.31	2.667	60.35	4.233	5.25	5.80	1.31
1.117	1.31	2.683	60.35	4.250	5.25	5.82	1.31
1.133	1.31	2.700	60.35	4.267	2.62	5.83	1.31
1.150	1.31	2.717	60.35	4.283	2.62	5.85	1.31

1.167	1.31	2.733	60.35	4.300	2.62	5.87	1.31
1.183	1.31	2.750	60.35	4.317	2.62	5.88	1.31
1.200	1.31	2.767	17.06	4.333	2.62	5.90	1.31
1.217	1.31	2.783	17.06	4.350	2.62	5.92	1.31
1.233	1.31	2.800	17.06	4.367	2.62	5.93	1.31
1.250	1.31	2.817	17.06	4.383	2.62	5.95	1.31
1.267	7.87	2.833	17.06	4.400	2.62	5.97	1.31
1.283	7.87	2.850	17.06	4.417	2.62	5.98	1.31
1.300	7.87	2.867	17.06	4.433	2.62	6.00	1.31
1.317	7.87	2.883	17.06	4.450	2.62	6.02	1.31
1.333	7.87	2.900	17.06	4.467	2.62	6.03	1.31
1.350	7.87	2.917	17.06	4.483	2.62	6.05	1.31
1.367	7.87	2.933	17.06	4.500	2.62	6.07	1.31
1.383	7.87	2.950	17.06	4.517	2.62	6.08	1.31
1.400	7.87	2.967	17.06	4.533	2.62	6.10	1.31
1.417	7.87	2.983	17.06	4.550	2.62	6.12	1.31
1.433	7.87	3.000	17.06	4.567	2.62	6.13	1.31
1.450	7.87	3.017	17.06	4.583	2.62	6.15	1.31
1.467	7.87	3.033	17.06	4.600	2.62	6.17	1.31
1.483	7.87	3.050	17.06	4.617	2.62	6.18	1.31
1.500	7.87	3.067	17.06	4.633	2.62	6.20	1.31
1.517	7.87	3.083	17.06	4.650	2.62	6.22	1.31
1.533	7.87	3.100	17.06	4.667	2.62	6.23	1.31
1.550	7.87	3.117	17.06	4.683	2.62	6.25	1.31
1.567	7.87	3.133	17.06	4.700	2.62		

Max.Eff.Inten.(mm/hr)=	60.35	43.45	
over (min)	5.00	7.00	
Storage Coeff. (min)=	4.22 (ii)	6.31 (ii)	
Unit Hyd. Tpeak (min)=	5.00	7.00	
Unit Hyd. peak (cms)=	0.25	0.17	
			TOTALS
PEAK FLOW (cms)=	0.68	0.00	0.683 (iii)
TIME TO PEAK (hrs)=	2.75	2.77	2.75
RUNOFF VOLUME (mm)=	64.59	37.71	64.32
TOTAL RAINFALL (mm)=	65.59	65.59	65.59
RUNOFF COEFFICIENT =	0.98	0.57	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7630)| IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0826	0.2320
	0.0347	0.1170	0.0967	0.2609
	0.0534	0.1580	0.1090	0.2940
	0.0655	0.1890	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7629)	4.090	0.683	2.75	64.32
OUTFLOW: ID= 1 (7630)	4.090	0.072	3.88	62.05

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.51
TIME SHIFT OF PEAK FLOW (min)= 68.00
MAXIMUM STORAGE USED (ha.m.)= 0.2048

CALIB STANDHYD (7631)| ID= 1 DT= 1.0 min |	Area (ha)= 3.91		
	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	3.87	0.04	
Dep. Storage (mm)=	1.00	1.50	
Average Slope (%)=	1.00	0.50	
Length (m)=	161.45	40.00	

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	7.87	3.150	17.06	4.72	2.62
0.033	0.00	1.600	7.87	3.167	17.06	4.73	2.62
0.050	0.00	1.617	7.87	3.183	17.06	4.75	2.62
0.067	0.00	1.633	7.87	3.200	17.06	4.77	1.31
0.083	0.00	1.650	7.87	3.217	17.06	4.78	1.31
0.100	0.00	1.667	7.87	3.233	17.06	4.80	1.31
0.117	0.00	1.683	7.87	3.250	17.06	4.82	1.31
0.133	0.00	1.700	7.87	3.267	9.18	4.83	1.31
0.150	0.00	1.717	7.87	3.283	9.18	4.85	1.31
0.167	0.00	1.733	7.87	3.300	9.18	4.87	1.31
0.183	0.00	1.750	7.87	3.317	9.18	4.88	1.31
0.200	0.00	1.767	22.30	3.333	9.18	4.90	1.31
0.217	0.00	1.783	22.30	3.350	9.18	4.92	1.31
0.233	0.00	1.800	22.30	3.367	9.18	4.93	1.31
0.250	0.00	1.817	22.30	3.383	9.18	4.95	1.31
0.267	1.31	1.833	22.30	3.400	9.18	4.97	1.31
0.283	1.31	1.850	22.30	3.417	9.18	4.98	1.31
0.300	1.31	1.867	22.30	3.433	9.18	5.00	1.31
0.317	1.31	1.883	22.30	3.450	9.18	5.02	1.31
0.333	1.31	1.900	22.30	3.467	9.18	5.03	1.31
0.350	1.31	1.917	22.30	3.483	9.18	5.05	1.31
0.367	1.31	1.933	22.30	3.500	9.18	5.07	1.31
0.383	1.31	1.950	22.30	3.517	9.18	5.08	1.31
0.400	1.31	1.967	22.30	3.533	9.18	5.10	1.31
0.417	1.31	1.983	22.30	3.550	9.18	5.12	1.31
0.433	1.31	2.000	22.30	3.567	9.18	5.13	1.31
0.450	1.31	2.017	22.30	3.583	9.18	5.15	1.31
0.467	1.31	2.033	22.30	3.600	9.18	5.17	1.31
0.483	1.31	2.050	22.30	3.617	9.18	5.18	1.31
0.500	1.31	2.067	22.30	3.633	9.18	5.20	1.31
0.517	1.31	2.083	22.30	3.650	9.18	5.22	1.31
0.533	1.31	2.100	22.30	3.667	9.18	5.23	1.31
0.550	1.31	2.117	22.30	3.683	9.18	5.25	1.31
0.567	1.31	2.133	22.30	3.700	9.18	5.27	1.31
0.583	1.31	2.150	22.30	3.717	9.18	5.28	1.31
0.600	1.31	2.167	22.30	3.733	9.18	5.30	1.31
0.617	1.31	2.183	22.30	3.750	9.18	5.32	1.31
0.633	1.31	2.200	22.30	3.767	5.25	5.33	1.31
0.650	1.31	2.217	22.30	3.783	5.25	5.35	1.31
0.667	1.31	2.233	22.30	3.800	5.25	5.37	1.31
0.683	1.31	2.250	22.30	3.817	5.25	5.38	1.31
0.700	1.31	2.267	60.35	3.833	5.25	5.40	1.31
0.717	1.31	2.283	60.35	3.850	5.25	5.42	1.31
0.733	1.31	2.300	60.35	3.867	5.25	5.43	1.31
0.750	1.31	2.317	60.35	3.883	5.25	5.45	1.31
0.767	1.31	2.333	60.35	3.900	5.25	5.47	1.31
0.783	1.31	2.350	60.35	3.917	5.25	5.48	1.31
0.800	1.31	2.367	60.35	3.933	5.25	5.50	1.31
0.817	1.31	2.383	60.35	3.950	5.25	5.52	1.31
0.833	1.31	2.400	60.35	3.967	5.25	5.53	1.31
0.850	1.31	2.417	60.35	3.983	5.25	5.55	1.31
0.867	1.31	2.433	60.35	4.000	5.25	5.57	1.31
0.883	1.31	2.450	60.35	4.017	5.25	5.58	1.31
0.900	1.31	2.467	60.35	4.033	5.25	5.60	1.31
0.917	1.31	2.483	60.35	4.050	5.25	5.62	1.31
0.933	1.31	2.500	60.35	4.067	5.25	5.63	1.31
0.950	1.31	2.517	60.35	4.083	5.25	5.65	1.31
0.967	1.31	2.533	60.35	4.100	5.25	5.67	1.31
0.983	1.31	2.550	60.35	4.117	5.25	5.68	1.31
1.000	1.31	2.567	60.35	4.133	5.25	5.70	1.31
1.017	1.31	2.583	60.35	4.150	5.25	5.72	1.31
1.033	1.31	2.600	60.35	4.167	5.25	5.73	1.31
1.050	1.31	2.617	60.35	4.183	5.25	5.75	1.31
1.067	1.31	2.633	60.35	4.200	5.25	5.77	1.31
1.083	1.31	2.650	60.35	4.217	5.25	5.78	1.31
1.100	1.31	2.667	60.35	4.233	5.25	5.80	1.31
1.117	1.31	2.683	60.35	4.250	5.25	5.82	1.31
1.133	1.31	2.700	60.35	4.267	2.62	5.83	1.31

1.150	1.31	2.717	60.35	4.283	2.62	5.85	1.31
1.167	1.31	2.733	60.35	4.300	2.62	5.87	1.31
1.183	1.31	2.750	60.35	4.317	2.62	5.88	1.31
1.200	1.31	2.767	17.06	4.333	2.62	5.90	1.31
1.217	1.31	2.783	17.06	4.350	2.62	5.92	1.31
1.233	1.31	2.800	17.06	4.367	2.62	5.93	1.31
1.250	1.31	2.817	17.06	4.383	2.62	5.95	1.31
1.267	7.87	2.833	17.06	4.400	2.62	5.97	1.31
1.283	7.87	2.850	17.06	4.417	2.62	5.98	1.31
1.300	7.87	2.867	17.06	4.433	2.62	6.00	1.31
1.317	7.87	2.883	17.06	4.450	2.62	6.02	1.31
1.333	7.87	2.900	17.06	4.467	2.62	6.03	1.31
1.350	7.87	2.917	17.06	4.483	2.62	6.05	1.31
1.367	7.87	2.933	17.06	4.500	2.62	6.07	1.31
1.383	7.87	2.950	17.06	4.517	2.62	6.08	1.31
1.400	7.87	2.967	17.06	4.533	2.62	6.10	1.31
1.417	7.87	2.983	17.06	4.550	2.62	6.12	1.31
1.433	7.87	3.000	17.06	4.567	2.62	6.13	1.31
1.450	7.87	3.017	17.06	4.583	2.62	6.15	1.31
1.467	7.87	3.033	17.06	4.600	2.62	6.17	1.31
1.483	7.87	3.050	17.06	4.617	2.62	6.18	1.31
1.500	7.87	3.067	17.06	4.633	2.62	6.20	1.31
1.517	7.87	3.083	17.06	4.650	2.62	6.22	1.31
1.533	7.87	3.100	17.06	4.667	2.62	6.23	1.31
1.550	7.87	3.117	17.06	4.683	2.62	6.25	1.31
1.567	7.87	3.133	17.06	4.700	2.62		

Max.Eff.Inten.(mm/hr)=		60.35	43.45	
over (min)		5.00	7.00	
Storage Coeff. (min)=		4.17 (ii)	6.25 (ii)	
Unit Hyd. Tpeak (min)=		5.00	7.00	
Unit Hyd. peak (cms)=		0.25	0.17	
				TOTALS
PEAK FLOW	(cms)=	0.65	0.00	0.653 (iii)
TIME TO PEAK	(hrs)=	2.75	2.77	2.75
RUNOFF VOLUME	(mm)=	64.59	37.71	64.32
TOTAL RAINFALL	(mm)=	65.59	65.59	65.59
RUNOFF COEFFICIENT	=	0.98	0.57	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7632)	IN= 2---> OUT= 1	DT= 1.0 min	OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0792	0.2220
0.0333	0.1130	0.0928	0.2500
0.0512	0.1510	0.1046	0.2810
0.0629	0.1810	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (	7631)	3.910	0.653	2.75	64.32
OUTFLOW: ID= 1 (	7632)	3.910	0.069	3.88	62.02

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.54
TIME SHIFT OF PEAK FLOW (min)= 68.00
MAXIMUM STORAGE USED (ha.m.)= 0.1958

CALIB	STANDHYD (7641)	ID= 1 DT= 1.0 min	Area (ha)= 2.21	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.19	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50

Length	(m)=	121.38	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	7.87	3.150	17.06	4.72	2.62
0.033	0.00	1.600	7.87	3.167	17.06	4.73	2.62
0.050	0.00	1.617	7.87	3.183	17.06	4.75	2.62
0.067	0.00	1.633	7.87	3.200	17.06	4.77	1.31
0.083	0.00	1.650	7.87	3.217	17.06	4.78	1.31
0.100	0.00	1.667	7.87	3.233	17.06	4.80	1.31
0.117	0.00	1.683	7.87	3.250	17.06	4.82	1.31
0.133	0.00	1.700	7.87	3.267	9.18	4.83	1.31
0.150	0.00	1.717	7.87	3.283	9.18	4.85	1.31
0.167	0.00	1.733	7.87	3.300	9.18	4.87	1.31
0.183	0.00	1.750	7.87	3.317	9.18	4.88	1.31
0.200	0.00	1.767	22.30	3.333	9.18	4.90	1.31
0.217	0.00	1.783	22.30	3.350	9.18	4.92	1.31
0.233	0.00	1.800	22.30	3.367	9.18	4.93	1.31
0.250	0.00	1.817	22.30	3.383	9.18	4.95	1.31
0.267	1.31	1.833	22.30	3.400	9.18	4.97	1.31
0.283	1.31	1.850	22.30	3.417	9.18	4.98	1.31
0.300	1.31	1.867	22.30	3.433	9.18	5.00	1.31
0.317	1.31	1.883	22.30	3.450	9.18	5.02	1.31
0.333	1.31	1.900	22.30	3.467	9.18	5.03	1.31
0.350	1.31	1.917	22.30	3.483	9.18	5.05	1.31
0.367	1.31	1.933	22.30	3.500	9.18	5.07	1.31
0.383	1.31	1.950	22.30	3.517	9.18	5.08	1.31
0.400	1.31	1.967	22.30	3.533	9.18	5.10	1.31
0.417	1.31	1.983	22.30	3.550	9.18	5.12	1.31
0.433	1.31	2.000	22.30	3.567	9.18	5.13	1.31
0.450	1.31	2.017	22.30	3.583	9.18	5.15	1.31
0.467	1.31	2.033	22.30	3.600	9.18	5.17	1.31
0.483	1.31	2.050	22.30	3.617	9.18	5.18	1.31
0.500	1.31	2.067	22.30	3.633	9.18	5.20	1.31
0.517	1.31	2.083	22.30	3.650	9.18	5.22	1.31
0.533	1.31	2.100	22.30	3.667	9.18	5.23	1.31
0.550	1.31	2.117	22.30	3.683	9.18	5.25	1.31
0.567	1.31	2.133	22.30	3.700	9.18	5.27	1.31
0.583	1.31	2.150	22.30	3.717	9.18	5.28	1.31
0.600	1.31	2.167	22.30	3.733	9.18	5.30	1.31
0.617	1.31	2.183	22.30	3.750	9.18	5.32	1.31
0.633	1.31	2.200	22.30	3.767	5.25	5.33	1.31
0.650	1.31	2.217	22.30	3.783	5.25	5.35	1.31
0.667	1.31	2.233	22.30	3.800	5.25	5.37	1.31
0.683	1.31	2.250	22.30	3.817	5.25	5.38	1.31
0.700	1.31	2.267	60.35	3.833	5.25	5.40	1.31
0.717	1.31	2.283	60.35	3.850	5.25	5.42	1.31
0.733	1.31	2.300	60.35	3.867	5.25	5.43	1.31
0.750	1.31	2.317	60.35	3.883	5.25	5.45	1.31
0.767	1.31	2.333	60.35	3.900	5.25	5.47	1.31
0.783	1.31	2.350	60.35	3.917	5.25	5.48	1.31
0.800	1.31	2.367	60.35	3.933	5.25	5.50	1.31
0.817	1.31	2.383	60.35	3.950	5.25	5.52	1.31
0.833	1.31	2.400	60.35	3.967	5.25	5.53	1.31
0.850	1.31	2.417	60.35	3.983	5.25	5.55	1.31
0.867	1.31	2.433	60.35	4.000	5.25	5.57	1.31
0.883	1.31	2.450	60.35	4.017	5.25	5.58	1.31
0.900	1.31	2.467	60.35	4.033	5.25	5.60	1.31
0.917	1.31	2.483	60.35	4.050	5.25	5.62	1.31
0.933	1.31	2.500	60.35	4.067	5.25	5.63	1.31
0.950	1.31	2.517	60.35	4.083	5.25	5.65	1.31
0.967	1.31	2.533	60.35	4.100	5.25	5.67	1.31
0.983	1.31	2.550	60.35	4.117	5.25	5.68	1.31
1.000	1.31	2.567	60.35	4.133	5.25	5.70	1.31
1.017	1.31	2.583	60.35	4.150	5.25	5.72	1.31
1.033	1.31	2.600	60.35	4.167	5.25	5.73	1.31
1.050	1.31	2.617	60.35	4.183	5.25	5.75	1.31
1.067	1.31	2.633	60.35	4.200	5.25	5.77	1.31
1.083	1.31	2.650	60.35	4.217	5.25	5.78	1.31
1.100	1.31	2.667	60.35	4.233	5.25	5.80	1.31
1.117	1.31	2.683	60.35	4.250	5.25	5.82	1.31

1.133	1.31	2.700	60.35	4.267	2.62	5.83	1.31
1.150	1.31	2.717	60.35	4.283	2.62	5.85	1.31
1.167	1.31	2.733	60.35	4.300	2.62	5.87	1.31
1.183	1.31	2.750	60.35	4.317	2.62	5.88	1.31
1.200	1.31	2.767	17.06	4.333	2.62	5.90	1.31
1.217	1.31	2.783	17.06	4.350	2.62	5.92	1.31
1.233	1.31	2.800	17.06	4.367	2.62	5.93	1.31
1.250	1.31	2.817	17.06	4.383	2.62	5.95	1.31
1.267	7.87	2.833	17.06	4.400	2.62	5.97	1.31
1.283	7.87	2.850	17.06	4.417	2.62	5.98	1.31
1.300	7.87	2.867	17.06	4.433	2.62	6.00	1.31
1.317	7.87	2.883	17.06	4.450	2.62	6.02	1.31
1.333	7.87	2.900	17.06	4.467	2.62	6.03	1.31
1.350	7.87	2.917	17.06	4.483	2.62	6.05	1.31
1.367	7.87	2.933	17.06	4.500	2.62	6.07	1.31
1.383	7.87	2.950	17.06	4.517	2.62	6.08	1.31
1.400	7.87	2.967	17.06	4.533	2.62	6.10	1.31
1.417	7.87	2.983	17.06	4.550	2.62	6.12	1.31
1.433	7.87	3.000	17.06	4.567	2.62	6.13	1.31
1.450	7.87	3.017	17.06	4.583	2.62	6.15	1.31
1.467	7.87	3.033	17.06	4.600	2.62	6.17	1.31
1.483	7.87	3.050	17.06	4.617	2.62	6.18	1.31
1.500	7.87	3.067	17.06	4.633	2.62	6.20	1.31
1.517	7.87	3.083	17.06	4.650	2.62	6.22	1.31
1.533	7.87	3.100	17.06	4.667	2.62	6.23	1.31
1.550	7.87	3.117	17.06	4.683	2.62	6.25	1.31
1.567	7.87	3.133	17.06	4.700	2.62		

Max.Eff.Inten.(mm/hr)=	60.35	43.45	
over (min)	5.00	6.00	
Storage Coeff. (min)=	3.51 (ii)	5.60 (ii)	
Unit Hyd. Tpeak (min)=	5.00	6.00	
Unit Hyd. peak (cms)=	0.28	0.20	
			TOTALS
PEAK FLOW (cms)=	0.37	0.00	0.369 (iii)
TIME TO PEAK (hrs)=	2.75	2.75	2.75
RUNOFF VOLUME (mm)=	64.59	37.71	64.32
TOTAL RAINFALL (mm)=	65.59	65.59	65.59
RUNOFF COEFFICIENT =	0.98	0.57	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7642)| IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0470	0.1250
	0.0197	0.0630	0.0551	0.1410
	0.0304	0.0850	0.0620	0.1580
	0.0373	0.1020	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7641)	2.210	0.369	2.75	64.32
OUTFLOW: ID= 1 (7642)	2.210	0.041	3.85	62.43

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.99
TIME SHIFT OF PEAK FLOW (min)= 66.00
MAXIMUM STORAGE USED (ha.m.)= 0.1098

CALIB | STANDHYD (7643)| ID= 1 DT= 1.0 min	Area (ha)= 2.02 Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00	
	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.00	0.02
Dep. Storage (mm)=	1.00	1.50

Average Slope (%)=	1.00	0.50
Length (m)=	116.05	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	7.87	3.150	17.06	4.72	2.62
0.033	0.00	1.600	7.87	3.167	17.06	4.73	2.62
0.050	0.00	1.617	7.87	3.183	17.06	4.75	2.62
0.067	0.00	1.633	7.87	3.200	17.06	4.77	1.31
0.083	0.00	1.650	7.87	3.217	17.06	4.78	1.31
0.100	0.00	1.667	7.87	3.233	17.06	4.80	1.31
0.117	0.00	1.683	7.87	3.250	17.06	4.82	1.31
0.133	0.00	1.700	7.87	3.267	9.18	4.83	1.31
0.150	0.00	1.717	7.87	3.283	9.18	4.85	1.31
0.167	0.00	1.733	7.87	3.300	9.18	4.87	1.31
0.183	0.00	1.750	7.87	3.317	9.18	4.88	1.31
0.200	0.00	1.767	22.30	3.333	9.18	4.90	1.31
0.217	0.00	1.783	22.30	3.350	9.18	4.92	1.31
0.233	0.00	1.800	22.30	3.367	9.18	4.93	1.31
0.250	0.00	1.817	22.30	3.383	9.18	4.95	1.31
0.267	1.31	1.833	22.30	3.400	9.18	4.97	1.31
0.283	1.31	1.850	22.30	3.417	9.18	4.98	1.31
0.300	1.31	1.867	22.30	3.433	9.18	5.00	1.31
0.317	1.31	1.883	22.30	3.450	9.18	5.02	1.31
0.333	1.31	1.900	22.30	3.467	9.18	5.03	1.31
0.350	1.31	1.917	22.30	3.483	9.18	5.05	1.31
0.367	1.31	1.933	22.30	3.500	9.18	5.07	1.31
0.383	1.31	1.950	22.30	3.517	9.18	5.08	1.31
0.400	1.31	1.967	22.30	3.533	9.18	5.10	1.31
0.417	1.31	1.983	22.30	3.550	9.18	5.12	1.31
0.433	1.31	2.000	22.30	3.567	9.18	5.13	1.31
0.450	1.31	2.017	22.30	3.583	9.18	5.15	1.31
0.467	1.31	2.033	22.30	3.600	9.18	5.17	1.31
0.483	1.31	2.050	22.30	3.617	9.18	5.18	1.31
0.500	1.31	2.067	22.30	3.633	9.18	5.20	1.31
0.517	1.31	2.083	22.30	3.650	9.18	5.22	1.31
0.533	1.31	2.100	22.30	3.667	9.18	5.23	1.31
0.550	1.31	2.117	22.30	3.683	9.18	5.25	1.31
0.567	1.31	2.133	22.30	3.700	9.18	5.27	1.31
0.583	1.31	2.150	22.30	3.717	9.18	5.28	1.31
0.600	1.31	2.167	22.30	3.733	9.18	5.30	1.31
0.617	1.31	2.183	22.30	3.750	9.18	5.32	1.31
0.633	1.31	2.200	22.30	3.767	5.25	5.33	1.31
0.650	1.31	2.217	22.30	3.783	5.25	5.35	1.31
0.667	1.31	2.233	22.30	3.800	5.25	5.37	1.31
0.683	1.31	2.250	22.30	3.817	5.25	5.38	1.31
0.700	1.31	2.267	60.35	3.833	5.25	5.40	1.31
0.717	1.31	2.283	60.35	3.850	5.25	5.42	1.31
0.733	1.31	2.300	60.35	3.867	5.25	5.43	1.31
0.750	1.31	2.317	60.35	3.883	5.25	5.45	1.31
0.767	1.31	2.333	60.35	3.900	5.25	5.47	1.31
0.783	1.31	2.350	60.35	3.917	5.25	5.48	1.31
0.800	1.31	2.367	60.35	3.933	5.25	5.50	1.31
0.817	1.31	2.383	60.35	3.950	5.25	5.52	1.31
0.833	1.31	2.400	60.35	3.967	5.25	5.53	1.31
0.850	1.31	2.417	60.35	3.983	5.25	5.55	1.31
0.867	1.31	2.433	60.35	4.000	5.25	5.57	1.31
0.883	1.31	2.450	60.35	4.017	5.25	5.58	1.31
0.900	1.31	2.467	60.35	4.033	5.25	5.60	1.31
0.917	1.31	2.483	60.35	4.050	5.25	5.62	1.31
0.933	1.31	2.500	60.35	4.067	5.25	5.63	1.31
0.950	1.31	2.517	60.35	4.083	5.25	5.65	1.31
0.967	1.31	2.533	60.35	4.100	5.25	5.67	1.31
0.983	1.31	2.550	60.35	4.117	5.25	5.68	1.31
1.000	1.31	2.567	60.35	4.133	5.25	5.70	1.31
1.017	1.31	2.583	60.35	4.150	5.25	5.72	1.31
1.033	1.31	2.600	60.35	4.167	5.25	5.73	1.31
1.050	1.31	2.617	60.35	4.183	5.25	5.75	1.31
1.067	1.31	2.633	60.35	4.200	5.25	5.77	1.31
1.083	1.31	2.650	60.35	4.217	5.25	5.78	1.31
1.100	1.31	2.667	60.35	4.233	5.25	5.80	1.31

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  1.117    1.31 | 2.683   60.35 | 4.250    5.25 |  5.82    1.31
  1.133    1.31 | 2.700   60.35 | 4.267    2.62 |  5.83    1.31
  1.150    1.31 | 2.717   60.35 | 4.283    2.62 |  5.85    1.31
  1.167    1.31 | 2.733   60.35 | 4.300    2.62 |  5.87    1.31
  1.183    1.31 | 2.750   60.35 | 4.317    2.62 |  5.88    1.31
  1.200    1.31 | 2.767   17.06 | 4.333    2.62 |  5.90    1.31
  1.217    1.31 | 2.783   17.06 | 4.350    2.62 |  5.92    1.31
  1.233    1.31 | 2.800   17.06 | 4.367    2.62 |  5.93    1.31
  1.250    1.31 | 2.817   17.06 | 4.383    2.62 |  5.95    1.31
  1.267    7.87 | 2.833   17.06 | 4.400    2.62 |  5.97    1.31
  1.283    7.87 | 2.850   17.06 | 4.417    2.62 |  5.98    1.31
  1.300    7.87 | 2.867   17.06 | 4.433    2.62 |  6.00    1.31
  1.317    7.87 | 2.883   17.06 | 4.450    2.62 |  6.02    1.31
  1.333    7.87 | 2.900   17.06 | 4.467    2.62 |  6.03    1.31
  1.350    7.87 | 2.917   17.06 | 4.483    2.62 |  6.05    1.31
  1.367    7.87 | 2.933   17.06 | 4.500    2.62 |  6.07    1.31
  1.383    7.87 | 2.950   17.06 | 4.517    2.62 |  6.08    1.31
  1.400    7.87 | 2.967   17.06 | 4.533    2.62 |  6.10    1.31
  1.417    7.87 | 2.983   17.06 | 4.550    2.62 |  6.12    1.31
  1.433    7.87 | 3.000   17.06 | 4.567    2.62 |  6.13    1.31
  1.450    7.87 | 3.017   17.06 | 4.583    2.62 |  6.15    1.31
  1.467    7.87 | 3.033   17.06 | 4.600    2.62 |  6.17    1.31
  1.483    7.87 | 3.050   17.06 | 4.617    2.62 |  6.18    1.31
  1.500    7.87 | 3.067   17.06 | 4.633    2.62 |  6.20    1.31
  1.517    7.87 | 3.083   17.06 | 4.650    2.62 |  6.22    1.31
  1.533    7.87 | 3.100   17.06 | 4.667    2.62 |  6.23    1.31
  1.550    7.87 | 3.117   17.06 | 4.683    2.62 |  6.25    1.31
  1.567    7.87 | 3.133   17.06 | 4.700    2.62 |

 Max.Eff.Inten.(mm/hr)=      60.35        43.45
           over (min)         5.00         6.00
 Storage Coeff.  (min)=       3.42 (ii)    5.50 (ii)
 Unit Hyd. Tpeak (min)=       5.00         6.00
 Unit Hyd. peak  (cms)=       0.29         0.20
                                                 *TOTALS*
 PEAK FLOW       (cms)=       0.34         0.00          0.338 (iii)
 TIME TO PEAK    (hrs)=       2.75         2.75          2.75
 RUNOFF VOLUME    (mm)=      64.59        37.71         64.32
 TOTAL RAINFALL   (mm)=      65.59        65.59         65.59
 RUNOFF COEFFICIENT   =       0.98         0.58          0.98


   (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
       CN*  =  85.0    Ia = Dep. Storage  (Above)
  (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
       THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
-------------------
| RESERVOIR(  7644)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0433     0.1140
                         0.0182     0.0580   |   0.0507     0.1280
                         0.0280     0.0775   |   0.0571     0.1440
                         0.0343     0.0930   |   0.0000     0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  7643)    2.020     0.338      2.75      64.32
   OUTFLOW: ID= 1 (  7644)    2.020     0.037      3.85      62.45

                PEAK   FLOW   REDUCTION [Qout/Qin](%)= 11.08
                TIME SHIFT OF PEAK FLOW         (min)= 66.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.1002

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================================================================================================================
======

       V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I      SS   U   U  AAAAA  L
        V  V    I       SS  U   U  A   A  L

         VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-
a4eb17eaad57\57f13400-2108-486e-ada1-1cee78bc7bfd\s
  Summary filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-
a4eb17eaad57\57f13400-2108-486e-ada1-1cee78bc7bfd\s


DATE: 06/14/2024                          TIME: 12:48:38

USER:


COMMENTS: _____________________________________________________

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  ************************************************
  ** SIMULATION : 95. 25 Year 12 Hour AES (Bloo **
  ************************************************


-------------------
|    READ STORM    |    Filename: C:\Users\ygollamudi\AppD
|                  |              ata\Local\Temp\
|                  |              3c3f87d5-a26e-4c6b-b2ae-56a7ba29ab7f\74cd624d
| Ptotal= 73.10 mm |    Comments: 25 Year 12 Hour AES (Bloor, TRCA)
-------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.00    0.00 |  3.25   12.43 |  6.50    5.12 |  9.75    0.73
                0.25    0.73 |  3.50   12.43 |  6.75    5.12 | 10.00    0.73
                0.50    0.73 |  3.75   12.43 |  7.00    5.12 | 10.25    0.73
                0.75    0.73 |  4.00   12.43 |  7.25    2.92 | 10.50    0.73
                1.00    0.73 |  4.25   33.63 |  7.50    2.92 | 10.75    0.73
                1.25    0.73 |  4.50   33.63 |  7.75    2.92 | 11.00    0.73
                1.50    0.73 |  4.75   33.63 |  8.00    2.92 | 11.25    0.73
                1.75    0.73 |  5.00   33.63 |  8.25    1.46 | 11.50    0.73
                2.00    0.73 |  5.25    9.50 |  8.50    1.46 | 11.75    0.73
                2.25    4.39 |  5.50    9.50 |  8.75    1.46 | 12.00    0.73
                2.50    4.39 |  5.75    9.50 |  9.00    1.46 |
                2.75    4.39 |  6.00    9.50 |  9.25    0.73 |
                3.00    4.39 |  6.25    5.12 |  9.50    0.73 |

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-------------------
| CALIB            |
| STANDHYD (  7567)|   Area    (ha)=   2.72
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
-------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        2.69         0.03
     Dep. Storage     (mm)=        1.00         1.50
     Average Slope     (%)=        1.00         0.50
     Length            (m)=      134.66        40.00
     Mannings n             =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.
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---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	4.39	6.150	9.50	9.22	1.46
0.033	0.00	3.100	4.39	6.167	9.50	9.23	1.46
0.050	0.00	3.117	4.39	6.183	9.50	9.25	1.46
0.067	0.00	3.133	4.39	6.200	9.50	9.27	0.73
0.083	0.00	3.150	4.39	6.217	9.50	9.28	0.73
0.100	0.00	3.167	4.39	6.233	9.50	9.30	0.73
0.117	0.00	3.183	4.39	6.250	9.49	9.32	0.73
0.133	0.00	3.200	4.39	6.267	5.12	9.33	0.73
0.150	0.00	3.217	4.39	6.283	5.12	9.35	0.73
0.167	0.00	3.233	4.39	6.300	5.12	9.37	0.73
0.183	0.00	3.250	4.39	6.317	5.12	9.38	0.73
0.200	0.00	3.267	12.43	6.333	5.12	9.40	0.73
0.217	0.00	3.283	12.43	6.350	5.12	9.42	0.73
0.233	0.00	3.300	12.43	6.367	5.12	9.43	0.73
0.250	0.00	3.317	12.43	6.383	5.12	9.45	0.73
0.267	0.73	3.333	12.43	6.400	5.12	9.47	0.73
0.283	0.73	3.350	12.43	6.417	5.12	9.48	0.73
0.300	0.73	3.367	12.43	6.433	5.12	9.50	0.73
0.317	0.73	3.383	12.43	6.450	5.12	9.52	0.73
0.333	0.73	3.400	12.43	6.467	5.12	9.53	0.73
0.350	0.73	3.417	12.43	6.483	5.12	9.55	0.73
0.367	0.73	3.433	12.43	6.500	5.12	9.57	0.73
0.383	0.73	3.450	12.43	6.517	5.12	9.58	0.73
0.400	0.73	3.467	12.43	6.533	5.12	9.60	0.73
0.417	0.73	3.483	12.43	6.550	5.12	9.62	0.73
0.433	0.73	3.500	12.43	6.567	5.12	9.63	0.73
0.450	0.73	3.517	12.43	6.583	5.12	9.65	0.73
0.467	0.73	3.533	12.43	6.600	5.12	9.67	0.73
0.483	0.73	3.550	12.43	6.617	5.12	9.68	0.73
0.500	0.73	3.567	12.43	6.633	5.12	9.70	0.73
0.517	0.73	3.583	12.43	6.650	5.12	9.72	0.73
0.533	0.73	3.600	12.43	6.667	5.12	9.73	0.73
0.550	0.73	3.617	12.43	6.683	5.12	9.75	0.73
0.567	0.73	3.633	12.43	6.700	5.12	9.77	0.73
0.583	0.73	3.650	12.43	6.717	5.12	9.78	0.73
0.600	0.73	3.667	12.43	6.733	5.12	9.80	0.73
0.617	0.73	3.683	12.43	6.750	5.12	9.82	0.73
0.633	0.73	3.700	12.43	6.767	5.12	9.83	0.73
0.650	0.73	3.717	12.43	6.783	5.12	9.85	0.73
0.667	0.73	3.733	12.43	6.800	5.12	9.87	0.73
0.683	0.73	3.750	12.43	6.817	5.12	9.88	0.73
0.700	0.73	3.767	12.43	6.833	5.12	9.90	0.73
0.717	0.73	3.783	12.43	6.850	5.12	9.92	0.73
0.733	0.73	3.800	12.43	6.867	5.12	9.93	0.73
0.750	0.73	3.817	12.43	6.883	5.12	9.95	0.73
0.767	0.73	3.833	12.43	6.900	5.12	9.97	0.73
0.783	0.73	3.850	12.43	6.917	5.12	9.98	0.73
0.800	0.73	3.867	12.43	6.933	5.12	10.00	0.73
0.817	0.73	3.883	12.43	6.950	5.12	10.02	0.73
0.833	0.73	3.900	12.43	6.967	5.12	10.03	0.73
0.850	0.73	3.917	12.43	6.983	5.12	10.05	0.73
0.867	0.73	3.933	12.43	7.000	5.12	10.07	0.73
0.883	0.73	3.950	12.43	7.017	5.12	10.08	0.73
0.900	0.73	3.967	12.43	7.033	5.12	10.10	0.73
0.917	0.73	3.983	12.43	7.050	5.12	10.12	0.73
0.933	0.73	4.000	12.43	7.067	5.12	10.13	0.73
0.950	0.73	4.017	12.43	7.083	5.12	10.15	0.73
0.967	0.73	4.033	12.43	7.100	5.12	10.17	0.73
0.983	0.73	4.050	12.43	7.117	5.12	10.18	0.73
1.000	0.73	4.067	12.43	7.133	5.12	10.20	0.73
1.017	0.73	4.083	12.43	7.150	5.12	10.22	0.73
1.033	0.73	4.100	12.43	7.167	5.12	10.23	0.73
1.050	0.73	4.117	12.43	7.183	5.12	10.25	0.73
1.067	0.73	4.133	12.43	7.200	5.12	10.27	0.73
1.083	0.73	4.150	12.43	7.217	5.12	10.28	0.73
1.100	0.73	4.167	12.43	7.233	5.12	10.30	0.73
1.117	0.73	4.183	12.43	7.250	5.11	10.32	0.73
1.133	0.73	4.200	12.43	7.267	2.92	10.33	0.73
1.150	0.73	4.217	12.43	7.283	2.92	10.35	0.73
1.167	0.73	4.233	12.43	7.300	2.92	10.37	0.73
1.183	0.73	4.250	12.43	7.317	2.92	10.38	0.73
1.200	0.73	4.267	33.63	7.333	2.92	10.40	0.73
1.217	0.73	4.283	33.63	7.350	2.92	10.42	0.73
1.233	0.73	4.300	33.63	7.367	2.92	10.43	0.73
1.250	0.73	4.317	33.63	7.383	2.92	10.45	0.73
1.267	0.73	4.333	33.63	7.400	2.92	10.47	0.73
1.283	0.73	4.350	33.63	7.417	2.92	10.48	0.73
1.300	0.73	4.367	33.63	7.433	2.92	10.50	0.73
1.317	0.73	4.383	33.63	7.450	2.92	10.52	0.73
1.333	0.73	4.400	33.63	7.467	2.92	10.53	0.73
1.350	0.73	4.417	33.63	7.483	2.92	10.55	0.73
1.367	0.73	4.433	33.63	7.500	2.92	10.57	0.73
1.383	0.73	4.450	33.63	7.517	2.92	10.58	0.73
1.400	0.73	4.467	33.63	7.533	2.92	10.60	0.73
1.417	0.73	4.483	33.63	7.550	2.92	10.62	0.73
1.433	0.73	4.500	33.63	7.567	2.92	10.63	0.73
1.450	0.73	4.517	33.63	7.583	2.92	10.65	0.73
1.467	0.73	4.533	33.63	7.600	2.92	10.67	0.73
1.483	0.73	4.550	33.63	7.617	2.92	10.68	0.73
1.500	0.73	4.567	33.63	7.633	2.92	10.70	0.73
1.517	0.73	4.583	33.63	7.650	2.92	10.72	0.73
1.533	0.73	4.600	33.63	7.667	2.92	10.73	0.73
1.550	0.73	4.617	33.63	7.683	2.92	10.75	0.73
1.567	0.73	4.633	33.63	7.700	2.92	10.77	0.73
1.583	0.73	4.650	33.63	7.717	2.92	10.78	0.73
1.600	0.73	4.667	33.63	7.733	2.92	10.80	0.73
1.617	0.73	4.683	33.63	7.750	2.92	10.82	0.73
1.633	0.73	4.700	33.63	7.767	2.92	10.83	0.73
1.650	0.73	4.717	33.63	7.783	2.92	10.85	0.73
1.667	0.73	4.733	33.63	7.800	2.92	10.87	0.73
1.683	0.73	4.750	33.63	7.817	2.92	10.88	0.73
1.700	0.73	4.767	33.63	7.833	2.92	10.90	0.73
1.717	0.73	4.783	33.63	7.850	2.92	10.92	0.73
1.733	0.73	4.800	33.63	7.867	2.92	10.93	0.73
1.750	0.73	4.817	33.63	7.883	2.92	10.95	0.73
1.767	0.73	4.833	33.63	7.900	2.92	10.97	0.73
1.783	0.73	4.850	33.63	7.917	2.92	10.98	0.73
1.800	0.73	4.867	33.63	7.933	2.92	11.00	0.73
1.817	0.73	4.883	33.63	7.950	2.92	11.02	0.73
1.833	0.73	4.900	33.63	7.967	2.92	11.03	0.73
1.850	0.73	4.917	33.63	7.983	2.92	11.05	0.73
1.867	0.73	4.933	33.63	8.000	2.92	11.07	0.73
1.883	0.73	4.950	33.63	8.017	2.92	11.08	0.73
1.900	0.73	4.967	33.63	8.033	2.92	11.10	0.73
1.917	0.73	4.983	33.63	8.050	2.92	11.12	0.73
1.933	0.73	5.000	33.63	8.067	2.92	11.13	0.73
1.950	0.73	5.017	33.63	8.083	2.92	11.15	0.73
1.967	0.73	5.033	33.63	8.100	2.92	11.17	0.73
1.983	0.73	5.050	33.63	8.117	2.92	11.18	0.73
2.000	0.73	5.067	33.63	8.133	2.92	11.20	0.73
2.017	0.73	5.083	33.63	8.150	2.92	11.22	0.73
2.033	0.73	5.100	33.63	8.167	2.92	11.23	0.73
2.050	0.73	5.117	33.63	8.183	2.92	11.25	0.73
2.067	0.73	5.133	33.63	8.200	2.92	11.27	0.73
2.083	0.73	5.150	33.63	8.217	2.92	11.28	0.73
2.100	0.73	5.167	33.63	8.233	2.92	11.30	0.73
2.117	0.73	5.183	33.63	8.250	2.92	11.32	0.73
2.133	0.73	5.200	33.63	8.267	1.46	11.33	0.73
2.150	0.73	5.217	33.63	8.283	1.46	11.35	0.73
2.167	0.73	5.233	33.63	8.300	1.46	11.37	0.73
2.183	0.73	5.250	33.61	8.317	1.46	11.38	0.73
2.200	0.73	5.267	9.50	8.333	1.46	11.40	0.73
2.217	0.73	5.283	9.50	8.350	1.46	11.42	0.73
2.233	0.73	5.300	9.50	8.367	1.46	11.43	0.73
2.250	0.73	5.317	9.50	8.383	1.46	11.45	0.73
2.267	4.39	5.333	9.50	8.400	1.46	11.47	0.73
2.283	4.39	5.350	9.50	8.417	1.46	11.48	0.73
2.300	4.39	5.367	9.50	8.433	1.46	11.50	0.73
2.317	4.39	5.383	9.50	8.450	1.46	11.52	0.73
2.333	4.39	5.400	9.50	8.467	1.46	11.53	0.73
2.350	4.39	5.417	9.50	8.483	1.46	11.55	0.73
2.367	4.39	5.433	9.50	8.500	1.46	11.57	0.73
2.383	4.39	5.450	9.50	8.517	1.46	11.58	0.73
2.400	4.39	5.467	9.50	8.533	1.46	11.60	0.73
2.417	4.39	5.483	9.50	8.550	1.46	11.62	0.73
2.433	4.39	5.500	9.50	8.567	1.46	11.63	0.73
2.450	4.39	5.517	9.50	8.583	1.46	11.65	0.73
2.467	4.39	5.533	9.50	8.600	1.46	11.67	0.73
2.483	4.39	5.550	9.50	8.617	1.46	11.68	0.73

2.500	4.39	5.567	9.50	8.633	1.46	11.70	0.73
2.517	4.39	5.583	9.50	8.650	1.46	11.72	0.73
2.533	4.39	5.600	9.50	8.667	1.46	11.73	0.73
2.550	4.39	5.617	9.50	8.683	1.46	11.75	0.73
2.567	4.39	5.633	9.50	8.700	1.46	11.77	0.73
2.583	4.39	5.650	9.50	8.717	1.46	11.78	0.73
2.600	4.39	5.667	9.50	8.733	1.46	11.80	0.73
2.617	4.39	5.683	9.50	8.750	1.46	11.82	0.73
2.633	4.39	5.700	9.50	8.767	1.46	11.83	0.73
2.650	4.39	5.717	9.50	8.783	1.46	11.85	0.73
2.667	4.39	5.733	9.50	8.800	1.46	11.87	0.73
2.683	4.39	5.750	9.50	8.817	1.46	11.88	0.73
2.700	4.39	5.767	9.50	8.833	1.46	11.90	0.73
2.717	4.39	5.783	9.50	8.850	1.46	11.92	0.73
2.733	4.39	5.800	9.50	8.867	1.46	11.93	0.73
2.750	4.39	5.817	9.50	8.883	1.46	11.95	0.73
2.767	4.39	5.833	9.50	8.900	1.46	11.97	0.73
2.783	4.39	5.850	9.50	8.917	1.46	11.98	0.73
2.800	4.39	5.867	9.50	8.933	1.46	12.00	0.73
2.817	4.39	5.883	9.50	8.950	1.46	12.02	0.73
2.833	4.39	5.900	9.50	8.967	1.46	12.03	0.73
2.850	4.39	5.917	9.50	8.983	1.46	12.05	0.73
2.867	4.39	5.933	9.50	9.000	1.46	12.07	0.73
2.883	4.39	5.950	9.50	9.017	1.46	12.08	0.73
2.900	4.39	5.967	9.50	9.033	1.46	12.10	0.73
2.917	4.39	5.983	9.50	9.050	1.46	12.12	0.73
2.933	4.39	6.000	9.50	9.067	1.46	12.13	0.73
2.950	4.39	6.017	9.50	9.083	1.46	12.15	0.73
2.967	4.39	6.033	9.50	9.100	1.46	12.17	0.73
2.983	4.39	6.050	9.50	9.117	1.46	12.18	0.73
3.000	4.39	6.067	9.50	9.133	1.46	12.20	0.73
3.017	4.39	6.083	9.50	9.150	1.46	12.22	0.73
3.033	4.39	6.100	9.50	9.167	1.46	12.23	0.73
3.050	4.39	6.117	9.50	9.183	1.46	12.25	0.73
3.067	4.39	6.133	9.50	9.200	1.46		

Max.Eff.Inten.(mm/hr)=	33.63	25.71	
over (min)	5.00	8.00	
Storage Coeff. (min)=	4.72 (ii)	7.36 (ii)	
Unit Hyd. Tpeak (min)=	5.00	8.00	
Unit Hyd. peak (cms)=	0.23	0.15	
			TOTALS
PEAK FLOW (cms)=	0.25	0.00	0.253 (iii)
TIME TO PEAK (hrs)=	5.23	5.25	5.25
RUNOFF VOLUME (mm)=	72.09	44.03	71.82
TOTAL RAINFALL (mm)=	73.10	73.10	73.10
RUNOFF COEFFICIENT =	0.99	0.60	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7626)	OVERFLOW IS OFF
IN= 2---> OUT= 1	
DT= 1.0 min	

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0568	0.1530
0.0239	0.0780	0.0660	0.1730
0.0370	0.1040	0.0751	0.2000
0.0451	0.1250	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7567)	2.720	0.253	5.25	71.82
OUTFLOW: ID= 1 (7626)	2.720	0.048	6.38	68.85

PEAK FLOW REDUCTION [Qout/Qin](%)= 19.03
TIME SHIFT OF PEAK FLOW (min)= 68.00
MAXIMUM STORAGE USED (ha.m.)= 0.1325

CALIB	
STANDHYD (7624)	Area (ha)= 1.80
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.78	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	109.54	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	4.39	6.150	9.50	9.22	1.46
0.033	0.00	3.100	4.39	6.167	9.50	9.23	1.46
0.050	0.00	3.117	4.39	6.183	9.50	9.25	1.46
0.067	0.00	3.133	4.39	6.200	9.50	9.27	0.73
0.083	0.00	3.150	4.39	6.217	9.50	9.28	0.73
0.100	0.00	3.167	4.39	6.233	9.50	9.30	0.73
0.117	0.00	3.183	4.39	6.250	9.49	9.32	0.73
0.133	0.00	3.200	4.39	6.267	5.12	9.33	0.73
0.150	0.00	3.217	4.39	6.283	5.12	9.35	0.73
0.167	0.00	3.233	4.39	6.300	5.12	9.37	0.73
0.183	0.00	3.250	4.39	6.317	5.12	9.38	0.73
0.200	0.00	3.267	12.43	6.333	5.12	9.40	0.73
0.217	0.00	3.283	12.43	6.350	5.12	9.42	0.73
0.233	0.00	3.300	12.43	6.367	5.12	9.43	0.73
0.250	0.00	3.317	12.43	6.383	5.12	9.45	0.73
0.267	0.73	3.333	12.43	6.400	5.12	9.47	0.73
0.283	0.73	3.350	12.43	6.417	5.12	9.48	0.73
0.300	0.73	3.367	12.43	6.433	5.12	9.50	0.73
0.317	0.73	3.383	12.43	6.450	5.12	9.52	0.73
0.333	0.73	3.400	12.43	6.467	5.12	9.53	0.73
0.350	0.73	3.417	12.43	6.483	5.12	9.55	0.73
0.367	0.73	3.433	12.43	6.500	5.12	9.57	0.73
0.383	0.73	3.450	12.43	6.517	5.12	9.58	0.73
0.400	0.73	3.467	12.43	6.533	5.12	9.60	0.73
0.417	0.73	3.483	12.43	6.550	5.12	9.62	0.73
0.433	0.73	3.500	12.43	6.567	5.12	9.63	0.73
0.450	0.73	3.517	12.43	6.583	5.12	9.65	0.73
0.467	0.73	3.533	12.43	6.600	5.12	9.67	0.73
0.483	0.73	3.550	12.43	6.617	5.12	9.68	0.73
0.500	0.73	3.567	12.43	6.633	5.12	9.70	0.73
0.517	0.73	3.583	12.43	6.650	5.12	9.72	0.73
0.533	0.73	3.600	12.43	6.667	5.12	9.73	0.73
0.550	0.73	3.617	12.43	6.683	5.12	9.75	0.73
0.567	0.73	3.633	12.43	6.700	5.12	9.77	0.73
0.583	0.73	3.650	12.43	6.717	5.12	9.78	0.73
0.600	0.73	3.667	12.43	6.733	5.12	9.80	0.73
0.617	0.73	3.683	12.43	6.750	5.12	9.82	0.73
0.633	0.73	3.700	12.43	6.767	5.12	9.83	0.73
0.650	0.73	3.717	12.43	6.783	5.12	9.85	0.73
0.667	0.73	3.733	12.43	6.800	5.12	9.87	0.73
0.683	0.73	3.750	12.43	6.817	5.12	9.88	0.73
0.700	0.73	3.767	12.43	6.833	5.12	9.90	0.73
0.717	0.73	3.783	12.43	6.850	5.12	9.92	0.73
0.733	0.73	3.800	12.43	6.867	5.12	9.93	0.73
0.750	0.73	3.817	12.43	6.883	5.12	9.95	0.73
0.767	0.73	3.833	12.43	6.900	5.12	9.97	0.73
0.783	0.73	3.850	12.43	6.917	5.12	9.98	0.73
0.800	0.73	3.867	12.43	6.933	5.12	10.00	0.73
0.817	0.73	3.883	12.43	6.950	5.12	10.02	0.73
0.833	0.73	3.900	12.43	6.967	5.12	10.03	0.73
0.850	0.73	3.917	12.43	6.983	5.12	10.05	0.73
0.867	0.73	3.933	12.43	7.000	5.12	10.07	0.73
0.883	0.73	3.950	12.43	7.017	5.12	10.08	0.73
0.900	0.73	3.967	12.43	7.033	5.12	10.10	0.73
0.917	0.73	3.983	12.43	7.050	5.12	10.12	0.73
0.933	0.73	4.000	12.43	7.067	5.12	10.13	0.73
0.950	0.73	4.017	12.43	7.083	5.12	10.15	0.73
0.967	0.73	4.033	12.43	7.100	5.12	10.17	0.73

0.983	0.73	4.050	12.43	7.117	5.12	10.18	0.73
1.000	0.73	4.067	12.43	7.133	5.12	10.20	0.73
1.017	0.73	4.083	12.43	7.150	5.12	10.22	0.73
1.033	0.73	4.100	12.43	7.167	5.12	10.23	0.73
1.050	0.73	4.117	12.43	7.183	5.12	10.25	0.73
1.067	0.73	4.133	12.43	7.200	5.12	10.27	0.73
1.083	0.73	4.150	12.43	7.217	5.12	10.28	0.73
1.100	0.73	4.167	12.43	7.233	5.12	10.30	0.73
1.117	0.73	4.183	12.43	7.250	5.11	10.32	0.73
1.133	0.73	4.200	12.43	7.267	2.92	10.33	0.73
1.150	0.73	4.217	12.43	7.283	2.92	10.35	0.73
1.167	0.73	4.233	12.43	7.300	2.92	10.37	0.73
1.183	0.73	4.250	12.43	7.317	2.92	10.38	0.73
1.200	0.73	4.267	33.63	7.333	2.92	10.40	0.73
1.217	0.73	4.283	33.63	7.350	2.92	10.42	0.73
1.233	0.73	4.300	33.63	7.367	2.92	10.43	0.73
1.250	0.73	4.317	33.63	7.383	2.92	10.45	0.73
1.267	0.73	4.333	33.63	7.400	2.92	10.47	0.73
1.283	0.73	4.350	33.63	7.417	2.92	10.48	0.73
1.300	0.73	4.367	33.63	7.433	2.92	10.50	0.73
1.317	0.73	4.383	33.63	7.450	2.92	10.52	0.73
1.333	0.73	4.400	33.63	7.467	2.92	10.53	0.73
1.350	0.73	4.417	33.63	7.483	2.92	10.55	0.73
1.367	0.73	4.433	33.63	7.500	2.92	10.57	0.73
1.383	0.73	4.450	33.63	7.517	2.92	10.58	0.73
1.400	0.73	4.467	33.63	7.533	2.92	10.60	0.73
1.417	0.73	4.483	33.63	7.550	2.92	10.62	0.73
1.433	0.73	4.500	33.63	7.567	2.92	10.63	0.73
1.450	0.73	4.517	33.63	7.583	2.92	10.65	0.73
1.467	0.73	4.533	33.63	7.600	2.92	10.67	0.73
1.483	0.73	4.550	33.63	7.617	2.92	10.68	0.73
1.500	0.73	4.567	33.63	7.633	2.92	10.70	0.73
1.517	0.73	4.583	33.63	7.650	2.92	10.72	0.73
1.533	0.73	4.600	33.63	7.667	2.92	10.73	0.73
1.550	0.73	4.617	33.63	7.683	2.92	10.75	0.73
1.567	0.73	4.633	33.63	7.700	2.92	10.77	0.73
1.583	0.73	4.650	33.63	7.717	2.92	10.78	0.73
1.600	0.73	4.667	33.63	7.733	2.92	10.80	0.73
1.617	0.73	4.683	33.63	7.750	2.92	10.82	0.73
1.633	0.73	4.700	33.63	7.767	2.92	10.83	0.73
1.650	0.73	4.717	33.63	7.783	2.92	10.85	0.73
1.667	0.73	4.733	33.63	7.800	2.92	10.87	0.73
1.683	0.73	4.750	33.63	7.817	2.92	10.88	0.73
1.700	0.73	4.767	33.63	7.833	2.92	10.90	0.73
1.717	0.73	4.783	33.63	7.850	2.92	10.92	0.73
1.733	0.73	4.800	33.63	7.867	2.92	10.93	0.73
1.750	0.73	4.817	33.63	7.883	2.92	10.95	0.73
1.767	0.73	4.833	33.63	7.900	2.92	10.97	0.73
1.783	0.73	4.850	33.63	7.917	2.92	10.98	0.73
1.800	0.73	4.867	33.63	7.933	2.92	11.00	0.73
1.817	0.73	4.883	33.63	7.950	2.92	11.02	0.73
1.833	0.73	4.900	33.63	7.967	2.92	11.03	0.73
1.850	0.73	4.917	33.63	7.983	2.92	11.05	0.73
1.867	0.73	4.933	33.63	8.000	2.92	11.07	0.73
1.883	0.73	4.950	33.63	8.017	2.92	11.08	0.73
1.900	0.73	4.967	33.63	8.033	2.92	11.10	0.73
1.917	0.73	4.983	33.63	8.050	2.92	11.12	0.73
1.933	0.73	5.000	33.63	8.067	2.92	11.13	0.73
1.950	0.73	5.017	33.63	8.083	2.92	11.15	0.73
1.967	0.73	5.033	33.63	8.100	2.92	11.17	0.73
1.983	0.73	5.050	33.63	8.117	2.92	11.18	0.73
2.000	0.73	5.067	33.63	8.133	2.92	11.20	0.73
2.017	0.73	5.083	33.63	8.150	2.92	11.22	0.73
2.033	0.73	5.100	33.63	8.167	2.92	11.23	0.73
2.050	0.73	5.117	33.63	8.183	2.92	11.25	0.73
2.067	0.73	5.133	33.63	8.200	2.92	11.27	0.73
2.083	0.73	5.150	33.63	8.217	2.92	11.28	0.73
2.100	0.73	5.167	33.63	8.233	2.92	11.30	0.73
2.117	0.73	5.183	33.63	8.250	2.92	11.32	0.73
2.133	0.73	5.200	33.63	8.267	1.46	11.33	0.73
2.150	0.73	5.217	33.63	8.283	1.46	11.35	0.73
2.167	0.73	5.233	33.63	8.300	1.46	11.37	0.73
2.183	0.73	5.250	33.61	8.317	1.46	11.38	0.73
2.200	0.73	5.267	9.50	8.333	1.46	11.40	0.73
2.217	0.73	5.283	9.50	8.350	1.46	11.42	0.73
2.233	0.73	5.300	9.50	8.367	1.46	11.43	0.73
2.250	0.73	5.317	9.50	8.383	1.46	11.45	0.73
2.267	4.39	5.333	9.50	8.400	1.46	11.47	0.73
2.283	4.39	5.350	9.50	8.417	1.46	11.48	0.73
2.300	4.39	5.367	9.50	8.433	1.46	11.50	0.73
2.317	4.39	5.383	9.50	8.450	1.46	11.52	0.73
2.333	4.39	5.400	9.50	8.467	1.46	11.53	0.73
2.350	4.39	5.417	9.50	8.483	1.46	11.55	0.73
2.367	4.39	5.433	9.50	8.500	1.46	11.57	0.73
2.383	4.39	5.450	9.50	8.517	1.46	11.58	0.73
2.400	4.39	5.467	9.50	8.533	1.46	11.60	0.73
2.417	4.39	5.483	9.50	8.550	1.46	11.62	0.73
2.433	4.39	5.500	9.50	8.567	1.46	11.63	0.73
2.450	4.39	5.517	9.50	8.583	1.46	11.65	0.73
2.467	4.39	5.533	9.50	8.600	1.46	11.67	0.73
2.483	4.39	5.550	9.50	8.617	1.46	11.68	0.73
2.500	4.39	5.567	9.50	8.633	1.46	11.70	0.73
2.517	4.39	5.583	9.50	8.650	1.46	11.72	0.73
2.533	4.39	5.600	9.50	8.667	1.46	11.73	0.73
2.550	4.39	5.617	9.50	8.683	1.46	11.75	0.73
2.567	4.39	5.633	9.50	8.700	1.46	11.77	0.73
2.583	4.39	5.650	9.50	8.717	1.46	11.78	0.73
2.600	4.39	5.667	9.50	8.733	1.46	11.80	0.73
2.617	4.39	5.683	9.50	8.750	1.46	11.82	0.73
2.633	4.39	5.700	9.50	8.767	1.46	11.83	0.73
2.650	4.39	5.717	9.50	8.783	1.46	11.85	0.73
2.667	4.39	5.733	9.50	8.800	1.46	11.87	0.73
2.683	4.39	5.750	9.50	8.817	1.46	11.88	0.73
2.700	4.39	5.767	9.50	8.833	1.46	11.90	0.73
2.717	4.39	5.783	9.50	8.850	1.46	11.92	0.73
2.733	4.39	5.800	9.50	8.867	1.46	11.93	0.73
2.750	4.39	5.817	9.50	8.883	1.46	11.95	0.73
2.767	4.39	5.833	9.50	8.900	1.46	11.97	0.73
2.783	4.39	5.850	9.50	8.917	1.46	11.98	0.73
2.800	4.39	5.867	9.50	8.933	1.46	12.00	0.73
2.817	4.39	5.883	9.50	8.950	1.46	12.02	0.73
2.833	4.39	5.900	9.50	8.967	1.46	12.03	0.73
2.850	4.39	5.917	9.50	8.983	1.46	12.05	0.73
2.867	4.39	5.933	9.50	9.000	1.46	12.07	0.73
2.883	4.39	5.950	9.50	9.017	1.46	12.08	0.73
2.900	4.39	5.967	9.50	9.033	1.46	12.10	0.73
2.917	4.39	5.983	9.50	9.050	1.46	12.12	0.73
2.933	4.39	6.000	9.50	9.067	1.46	12.13	0.73
2.950	4.39	6.017	9.50	9.083	1.46	12.15	0.73
2.967	4.39	6.033	9.50	9.100	1.46	12.17	0.73
2.983	4.39	6.050	9.50	9.117	1.46	12.18	0.73
3.000	4.39	6.067	9.50	9.133	1.46	12.20	0.73
3.017	4.39	6.083	9.50	9.150	1.46	12.22	0.73
3.033	4.39	6.100	9.50	9.167	1.46	12.23	0.73
3.050	4.39	6.117	9.50	9.183	1.46	12.25	0.73
3.067	4.39	6.133	9.50	9.200	1.46		

Max.Eff.Inten.(mm/hr)=	33.63	28.96	
over (min)	5.00	7.00	
Storage Coeff. (min)=	4.17 (ii)	6.80 (ii)	
Unit Hyd. Tpeak (min)=	5.00	7.00	
Unit Hyd. peak (cms)=	0.25	0.16	
			TOTALS
PEAK FLOW (cms)=	0.17	0.00	0.168 (iii)
TIME TO PEAK (hrs)=	5.22	5.25	5.25
RUNOFF VOLUME (mm)=	72.09	51.35	71.89
TOTAL RAINFALL (mm)=	73.10	73.10	73.10
RUNOFF COEFFICIENT =	0.99	0.70	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 90.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7625)|	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)

GEI Consultants

0.0000	0.0000	0.0389	0.1013
0.0164	0.0514	0.0456	0.1141
0.0252	0.0690	0.0514	0.1288
0.0309	0.0825	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7624)	1.800	0.168	5.25	71.89
OUTFLOW: ID= 1 (7625)	1.800	0.033	6.37	69.26

PEAK FLOW REDUCTION [Qout/Qin](%)= 19.58
TIME SHIFT OF PEAK FLOW (min)= 67.00
MAXIMUM STORAGE USED (ha.m.)= 0.0871

CALIB
STANDHYD (7623) | Area (ha)= 1.15
ID= 1 DT= 1.0 min | Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.14	0.01
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	87.56	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	4.39	6.150	9.50	9.22	1.46
0.033	0.00	3.100	4.39	6.167	9.50	9.23	1.46
0.050	0.00	3.117	4.39	6.183	9.50	9.25	1.46
0.067	0.00	3.133	4.39	6.200	9.50	9.27	0.73
0.083	0.00	3.150	4.39	6.217	9.50	9.28	0.73
0.100	0.00	3.167	4.39	6.233	9.50	9.30	0.73
0.117	0.00	3.183	4.39	6.250	9.49	9.32	0.73
0.133	0.00	3.200	4.39	6.267	5.12	9.33	0.73
0.150	0.00	3.217	4.39	6.283	5.12	9.35	0.73
0.167	0.00	3.233	4.39	6.300	5.12	9.37	0.73
0.183	0.00	3.250	4.39	6.317	5.12	9.38	0.73
0.200	0.00	3.267	12.43	6.333	5.12	9.40	0.73
0.217	0.00	3.283	12.43	6.350	5.12	9.42	0.73
0.233	0.00	3.300	12.43	6.367	5.12	9.43	0.73
0.250	0.00	3.317	12.43	6.383	5.12	9.45	0.73
0.267	0.73	3.333	12.43	6.400	5.12	9.47	0.73
0.283	0.73	3.350	12.43	6.417	5.12	9.48	0.73
0.300	0.73	3.367	12.43	6.433	5.12	9.50	0.73
0.317	0.73	3.383	12.43	6.450	5.12	9.52	0.73
0.333	0.73	3.400	12.43	6.467	5.12	9.53	0.73
0.350	0.73	3.417	12.43	6.483	5.12	9.55	0.73
0.367	0.73	3.433	12.43	6.500	5.12	9.57	0.73
0.383	0.73	3.450	12.43	6.517	5.12	9.58	0.73
0.400	0.73	3.467	12.43	6.533	5.12	9.60	0.73
0.417	0.73	3.483	12.43	6.550	5.12	9.62	0.73
0.433	0.73	3.500	12.43	6.567	5.12	9.63	0.73
0.450	0.73	3.517	12.43	6.583	5.12	9.65	0.73
0.467	0.73	3.533	12.43	6.600	5.12	9.67	0.73
0.483	0.73	3.550	12.43	6.617	5.12	9.68	0.73
0.500	0.73	3.567	12.43	6.633	5.12	9.70	0.73
0.517	0.73	3.583	12.43	6.650	5.12	9.72	0.73
0.533	0.73	3.600	12.43	6.667	5.12	9.73	0.73
0.550	0.73	3.617	12.43	6.683	5.12	9.75	0.73
0.567	0.73	3.633	12.43	6.700	5.12	9.77	0.73
0.583	0.73	3.650	12.43	6.717	5.12	9.78	0.73
0.600	0.73	3.667	12.43	6.733	5.12	9.80	0.73
0.617	0.73	3.683	12.43	6.750	5.12	9.82	0.73
0.633	0.73	3.700	12.43	6.767	5.12	9.83	0.73
0.650	0.73	3.717	12.43	6.783	5.12	9.85	0.73
0.667	0.73	3.733	12.43	6.800	5.12	9.87	0.73
0.683	0.73	3.750	12.43	6.817	5.12	9.88	0.73
0.700	0.73	3.767	12.43	6.833	5.12	9.90	0.73
0.717	0.73	3.783	12.43	6.850	5.12	9.92	0.73
0.733	0.73	3.800	12.43	6.867	5.12	9.93	0.73
0.750	0.73	3.817	12.43	6.883	5.12	9.95	0.73
0.767	0.73	3.833	12.43	6.900	5.12	9.97	0.73
0.783	0.73	3.850	12.43	6.917	5.12	9.98	0.73
0.800	0.73	3.867	12.43	6.933	5.12	10.00	0.73
0.817	0.73	3.883	12.43	6.950	5.12	10.02	0.73
0.833	0.73	3.900	12.43	6.967	5.12	10.03	0.73
0.850	0.73	3.917	12.43	6.983	5.12	10.05	0.73
0.867	0.73	3.933	12.43	7.000	5.12	10.07	0.73
0.883	0.73	3.950	12.43	7.017	5.12	10.08	0.73
0.900	0.73	3.967	12.43	7.033	5.12	10.10	0.73
0.917	0.73	3.983	12.43	7.050	5.12	10.12	0.73
0.933	0.73	4.000	12.43	7.067	5.12	10.13	0.73
0.950	0.73	4.017	12.43	7.083	5.12	10.15	0.73
0.967	0.73	4.033	12.43	7.100	5.12	10.17	0.73
0.983	0.73	4.050	12.43	7.117	5.12	10.18	0.73
1.000	0.73	4.067	12.43	7.133	5.12	10.20	0.73
1.017	0.73	4.083	12.43	7.150	5.12	10.22	0.73
1.033	0.73	4.100	12.43	7.167	5.12	10.23	0.73
1.050	0.73	4.117	12.43	7.183	5.12	10.25	0.73
1.067	0.73	4.133	12.43	7.200	5.12	10.27	0.73
1.083	0.73	4.150	12.43	7.217	5.12	10.28	0.73
1.100	0.73	4.167	12.43	7.233	5.12	10.30	0.73
1.117	0.73	4.183	12.43	7.250	5.11	10.32	0.73
1.133	0.73	4.200	12.43	7.267	2.92	10.33	0.73
1.150	0.73	4.217	12.43	7.283	2.92	10.35	0.73
1.167	0.73	4.233	12.43	7.300	2.92	10.37	0.73
1.183	0.73	4.250	12.43	7.317	2.92	10.38	0.73
1.200	0.73	4.267	33.63	7.333	2.92	10.40	0.73
1.217	0.73	4.283	33.63	7.350	2.92	10.42	0.73
1.233	0.73	4.300	33.63	7.367	2.92	10.43	0.73
1.250	0.73	4.317	33.63	7.383	2.92	10.45	0.73
1.267	0.73	4.333	33.63	7.400	2.92	10.47	0.73
1.283	0.73	4.350	33.63	7.417	2.92	10.48	0.73
1.300	0.73	4.367	33.63	7.433	2.92	10.50	0.73
1.317	0.73	4.383	33.63	7.450	2.92	10.52	0.73
1.333	0.73	4.400	33.63	7.467	2.92	10.53	0.73
1.350	0.73	4.417	33.63	7.483	2.92	10.55	0.73
1.367	0.73	4.433	33.63	7.500	2.92	10.57	0.73
1.383	0.73	4.450	33.63	7.517	2.92	10.58	0.73
1.400	0.73	4.467	33.63	7.533	2.92	10.60	0.73
1.417	0.73	4.483	33.63	7.550	2.92	10.62	0.73
1.433	0.73	4.500	33.63	7.567	2.92	10.63	0.73
1.450	0.73	4.517	33.63	7.583	2.92	10.65	0.73
1.467	0.73	4.533	33.63	7.600	2.92	10.67	0.73
1.483	0.73	4.550	33.63	7.617	2.92	10.68	0.73
1.500	0.73	4.567	33.63	7.633	2.92	10.70	0.73
1.517	0.73	4.583	33.63	7.650	2.92	10.72	0.73
1.533	0.73	4.600	33.63	7.667	2.92	10.73	0.73
1.550	0.73	4.617	33.63	7.683	2.92	10.75	0.73
1.567	0.73	4.633	33.63	7.700	2.92	10.77	0.73
1.583	0.73	4.650	33.63	7.717	2.92	10.78	0.73
1.600	0.73	4.667	33.63	7.733	2.92	10.80	0.73
1.617	0.73	4.683	33.63	7.750	2.92	10.82	0.73
1.633	0.73	4.700	33.63	7.767	2.92	10.83	0.73
1.650	0.73	4.717	33.63	7.783	2.92	10.85	0.73
1.667	0.73	4.733	33.63	7.800	2.92	10.87	0.73
1.683	0.73	4.750	33.63	7.817	2.92	10.88	0.73
1.700	0.73	4.767	33.63	7.833	2.92	10.90	0.73
1.717	0.73	4.783	33.63	7.850	2.92	10.92	0.73
1.733	0.73	4.800	33.63	7.867	2.92	10.93	0.73
1.750	0.73	4.817	33.63	7.883	2.92	10.95	0.73
1.767	0.73	4.833	33.63	7.900	2.92	10.97	0.73
1.783	0.73	4.850	33.63	7.917	2.92	10.98	0.73
1.800	0.73	4.867	33.63	7.933	2.92	11.00	0.73
1.817	0.73	4.883	33.63	7.950	2.92	11.02	0.73
1.833	0.73	4.900	33.63	7.967	2.92	11.03	0.73
1.850	0.73	4.917	33.63	7.983	2.92	11.05	0.73
1.867	0.73	4.933	33.63	8.000	2.92	11.07	0.73
1.883	0.73	4.950	33.63	8.017	2.92	11.08	0.73
1.900	0.73	4.967	33.63	8.033	2.92	11.10	0.73
1.917	0.73	4.983	33.63	8.050	2.92	11.12	0.73
1.933	0.73	5.000	33.63	8.067	2.92	11.13	0.73
1.950	0.73	5.017	33.63	8.083	2.92	11.15	0.73
1.967	0.73	5.033	33.63	8.100	2.92	11.17	0.73
1.983	0.73	5.050	33.63	8.117	2.92	11.18	0.73

2.000	0.73	5.067	33.63	8.133	2.92	11.20	0.73
2.017	0.73	5.083	33.63	8.150	2.92	11.22	0.73
2.033	0.73	5.100	33.63	8.167	2.92	11.23	0.73
2.050	0.73	5.117	33.63	8.183	2.92	11.25	0.73
2.067	0.73	5.133	33.63	8.200	2.92	11.27	0.73
2.083	0.73	5.150	33.63	8.217	2.92	11.28	0.73
2.100	0.73	5.167	33.63	8.233	2.92	11.30	0.73
2.117	0.73	5.183	33.63	8.250	2.92	11.32	0.73
2.133	0.73	5.200	33.63	8.267	1.46	11.33	0.73
2.150	0.73	5.217	33.63	8.283	1.46	11.35	0.73
2.167	0.73	5.233	33.63	8.300	1.46	11.37	0.73
2.183	0.73	5.250	33.61	8.317	1.46	11.38	0.73
2.200	0.73	5.267	9.50	8.333	1.46	11.40	0.73
2.217	0.73	5.283	9.50	8.350	1.46	11.42	0.73
2.233	0.73	5.300	9.50	8.367	1.46	11.43	0.73
2.250	0.73	5.317	9.50	8.383	1.46	11.45	0.73
2.267	4.39	5.333	9.50	8.400	1.46	11.47	0.73
2.283	4.39	5.350	9.50	8.417	1.46	11.48	0.73
2.300	4.39	5.367	9.50	8.433	1.46	11.50	0.73
2.317	4.39	5.383	9.50	8.450	1.46	11.52	0.73
2.333	4.39	5.400	9.50	8.467	1.46	11.53	0.73
2.350	4.39	5.417	9.50	8.483	1.46	11.55	0.73
2.367	4.39	5.433	9.50	8.500	1.46	11.57	0.73
2.383	4.39	5.450	9.50	8.517	1.46	11.58	0.73
2.400	4.39	5.467	9.50	8.533	1.46	11.60	0.73
2.417	4.39	5.483	9.50	8.550	1.46	11.62	0.73
2.433	4.39	5.500	9.50	8.567	1.46	11.63	0.73
2.450	4.39	5.517	9.50	8.583	1.46	11.65	0.73
2.467	4.39	5.533	9.50	8.600	1.46	11.67	0.73
2.483	4.39	5.550	9.50	8.617	1.46	11.68	0.73
2.500	4.39	5.567	9.50	8.633	1.46	11.70	0.73
2.517	4.39	5.583	9.50	8.650	1.46	11.72	0.73
2.533	4.39	5.600	9.50	8.667	1.46	11.73	0.73
2.550	4.39	5.617	9.50	8.683	1.46	11.75	0.73
2.567	4.39	5.633	9.50	8.700	1.46	11.77	0.73
2.583	4.39	5.650	9.50	8.717	1.46	11.78	0.73
2.600	4.39	5.667	9.50	8.733	1.46	11.80	0.73
2.617	4.39	5.683	9.50	8.750	1.46	11.82	0.73
2.633	4.39	5.700	9.50	8.767	1.46	11.83	0.73
2.650	4.39	5.717	9.50	8.783	1.46	11.85	0.73
2.667	4.39	5.733	9.50	8.800	1.46	11.87	0.73
2.683	4.39	5.750	9.50	8.817	1.46	11.88	0.73
2.700	4.39	5.767	9.50	8.833	1.46	11.90	0.73
2.717	4.39	5.783	9.50	8.850	1.46	11.92	0.73
2.733	4.39	5.800	9.50	8.867	1.46	11.93	0.73
2.750	4.39	5.817	9.50	8.883	1.46	11.95	0.73
2.767	4.39	5.833	9.50	8.900	1.46	11.97	0.73
2.783	4.39	5.850	9.50	8.917	1.46	11.98	0.73
2.800	4.39	5.867	9.50	8.933	1.46	12.00	0.73
2.817	4.39	5.883	9.50	8.950	1.46	12.02	0.73
2.833	4.39	5.900	9.50	8.967	1.46	12.03	0.73
2.850	4.39	5.917	9.50	8.983	1.46	12.05	0.73
2.867	4.39	5.933	9.50	9.000	1.46	12.07	0.73
2.883	4.39	5.950	9.50	9.017	1.46	12.08	0.73
2.900	4.39	5.967	9.50	9.033	1.46	12.10	0.73
2.917	4.39	5.983	9.50	9.050	1.46	12.12	0.73
2.933	4.39	6.000	9.50	9.067	1.46	12.13	0.73
2.950	4.39	6.017	9.50	9.083	1.46	12.15	0.73
2.967	4.39	6.033	9.50	9.100	1.46	12.17	0.73
2.983	4.39	6.050	9.50	9.117	1.46	12.18	0.73
3.000	4.39	6.067	9.50	9.133	1.46	12.20	0.73
3.017	4.39	6.083	9.50	9.150	1.46	12.22	0.73
3.033	4.39	6.100	9.50	9.167	1.46	12.23	0.73
3.050	4.39	6.117	9.50	9.183	1.46	12.25	0.73
3.067	4.39	6.133	9.50	9.200	1.46		

Max.Eff.Inten.(mm/hr)=	33.63	25.71	
over (min)	5.00	7.00	
Storage Coeff. (min)=	3.65 (ii)	6.28 (ii)	
Unit Hyd. Tpeak (min)=	5.00	7.00	
Unit Hyd. peak (cms)=	0.28	0.17	
			TOTALS
PEAK FLOW (cms)=	0.11	0.00	0.107 (iii)
TIME TO PEAK (hrs)=	5.07	5.25	5.25
RUNOFF VOLUME (mm)=	72.10	44.03	71.82
TOTAL RAINFALL (mm)=	73.10	73.10	73.10

RUNOFF COEFFICIENT = 0.99 0.60 0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7622)| IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0258	0.0650
0.0108	0.0330	0.0302	0.0725
0.0167	0.0440	0.0340	0.0820
0.0204	0.0525	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7623)	1.150	0.107	5.25	71.82
OUTFLOW: ID= 1 (7622)	1.150	0.022	6.35	69.41

PEAK FLOW REDUCTION [Qout/Qin](%)= 20.14
TIME SHIFT OF PEAK FLOW (min)= 66.00
MAXIMUM STORAGE USED (ha.m.)= 0.0552

CALIB | STANDHYD (7629)| ID= 1 DT= 1.0 min	Area (ha)= 4.09 Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	4.05	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	165.13	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	4.39	6.150	9.50	9.22	1.46
0.033	0.00	3.100	4.39	6.167	9.50	9.23	1.46
0.050	0.00	3.117	4.39	6.183	9.50	9.25	1.46
0.067	0.00	3.133	4.39	6.200	9.50	9.27	0.73
0.083	0.00	3.150	4.39	6.217	9.50	9.28	0.73
0.100	0.00	3.167	4.39	6.233	9.50	9.30	0.73
0.117	0.00	3.183	4.39	6.250	9.49	9.32	0.73
0.133	0.00	3.200	4.39	6.267	5.12	9.33	0.73
0.150	0.00	3.217	4.39	6.283	5.12	9.35	0.73
0.167	0.00	3.233	4.39	6.300	5.12	9.37	0.73
0.183	0.00	3.250	4.39	6.317	5.12	9.38	0.73
0.200	0.00	3.267	12.43	6.333	5.12	9.40	0.73
0.217	0.00	3.283	12.43	6.350	5.12	9.42	0.73
0.233	0.00	3.300	12.43	6.367	5.12	9.43	0.73
0.250	0.00	3.317	12.43	6.383	5.12	9.45	0.73
0.267	0.73	3.333	12.43	6.400	5.12	9.47	0.73
0.283	0.73	3.350	12.43	6.417	5.12	9.48	0.73
0.300	0.73	3.367	12.43	6.433	5.12	9.50	0.73
0.317	0.73	3.383	12.43	6.450	5.12	9.52	0.73
0.333	0.73	3.400	12.43	6.467	5.12	9.53	0.73
0.350	0.73	3.417	12.43	6.483	5.12	9.55	0.73
0.367	0.73	3.433	12.43	6.500	5.12	9.57	0.73
0.383	0.73	3.450	12.43	6.517	5.12	9.58	0.73
0.400	0.73	3.467	12.43	6.533	5.12	9.60	0.73
0.417	0.73	3.483	12.43	6.550	5.12	9.62	0.73
0.433	0.73	3.500	12.43	6.567	5.12	9.63	0.73
0.450	0.73	3.517	12.43	6.583	5.12	9.65	0.73
0.467	0.73	3.533	12.43	6.600	5.12	9.67	0.73

0.483	0.73	3.550	12.43	6.617	5.12	9.68	0.73
0.500	0.73	3.567	12.43	6.633	5.12	9.70	0.73
0.517	0.73	3.583	12.43	6.650	5.12	9.72	0.73
0.533	0.73	3.600	12.43	6.667	5.12	9.73	0.73
0.550	0.73	3.617	12.43	6.683	5.12	9.75	0.73
0.567	0.73	3.633	12.43	6.700	5.12	9.77	0.73
0.583	0.73	3.650	12.43	6.717	5.12	9.78	0.73
0.600	0.73	3.667	12.43	6.733	5.12	9.80	0.73
0.617	0.73	3.683	12.43	6.750	5.12	9.82	0.73
0.633	0.73	3.700	12.43	6.767	5.12	9.83	0.73
0.650	0.73	3.717	12.43	6.783	5.12	9.85	0.73
0.667	0.73	3.733	12.43	6.800	5.12	9.87	0.73
0.683	0.73	3.750	12.43	6.817	5.12	9.88	0.73
0.700	0.73	3.767	12.43	6.833	5.12	9.90	0.73
0.717	0.73	3.783	12.43	6.850	5.12	9.92	0.73
0.733	0.73	3.800	12.43	6.867	5.12	9.93	0.73
0.750	0.73	3.817	12.43	6.883	5.12	9.95	0.73
0.767	0.73	3.833	12.43	6.900	5.12	9.97	0.73
0.783	0.73	3.850	12.43	6.917	5.12	9.98	0.73
0.800	0.73	3.867	12.43	6.933	5.12	10.00	0.73
0.817	0.73	3.883	12.43	6.950	5.12	10.02	0.73
0.833	0.73	3.900	12.43	6.967	5.12	10.03	0.73
0.850	0.73	3.917	12.43	6.983	5.12	10.05	0.73
0.867	0.73	3.933	12.43	7.000	5.12	10.07	0.73
0.883	0.73	3.950	12.43	7.017	5.12	10.08	0.73
0.900	0.73	3.967	12.43	7.033	5.12	10.10	0.73
0.917	0.73	3.983	12.43	7.050	5.12	10.12	0.73
0.933	0.73	4.000	12.43	7.067	5.12	10.13	0.73
0.950	0.73	4.017	12.43	7.083	5.12	10.15	0.73
0.967	0.73	4.033	12.43	7.100	5.12	10.17	0.73
0.983	0.73	4.050	12.43	7.117	5.12	10.18	0.73
1.000	0.73	4.067	12.43	7.133	5.12	10.20	0.73
1.017	0.73	4.083	12.43	7.150	5.12	10.22	0.73
1.033	0.73	4.100	12.43	7.167	5.12	10.23	0.73
1.050	0.73	4.117	12.43	7.183	5.12	10.25	0.73
1.067	0.73	4.133	12.43	7.200	5.12	10.27	0.73
1.083	0.73	4.150	12.43	7.217	5.12	10.28	0.73
1.100	0.73	4.167	12.43	7.233	5.12	10.30	0.73
1.117	0.73	4.183	12.43	7.250	5.11	10.32	0.73
1.133	0.73	4.200	12.43	7.267	2.92	10.33	0.73
1.150	0.73	4.217	12.43	7.283	2.92	10.35	0.73
1.167	0.73	4.233	12.43	7.300	2.92	10.37	0.73
1.183	0.73	4.250	12.43	7.317	2.92	10.38	0.73
1.200	0.73	4.267	33.63	7.333	2.92	10.40	0.73
1.217	0.73	4.283	33.63	7.350	2.92	10.42	0.73
1.233	0.73	4.300	33.63	7.367	2.92	10.43	0.73
1.250	0.73	4.317	33.63	7.383	2.92	10.45	0.73
1.267	0.73	4.333	33.63	7.400	2.92	10.47	0.73
1.283	0.73	4.350	33.63	7.417	2.92	10.48	0.73
1.300	0.73	4.367	33.63	7.433	2.92	10.50	0.73
1.317	0.73	4.383	33.63	7.450	2.92	10.52	0.73
1.333	0.73	4.400	33.63	7.467	2.92	10.53	0.73
1.350	0.73	4.417	33.63	7.483	2.92	10.55	0.73
1.367	0.73	4.433	33.63	7.500	2.92	10.57	0.73
1.383	0.73	4.450	33.63	7.517	2.92	10.58	0.73
1.400	0.73	4.467	33.63	7.533	2.92	10.60	0.73
1.417	0.73	4.483	33.63	7.550	2.92	10.62	0.73
1.433	0.73	4.500	33.63	7.567	2.92	10.63	0.73
1.450	0.73	4.517	33.63	7.583	2.92	10.65	0.73
1.467	0.73	4.533	33.63	7.600	2.92	10.67	0.73
1.483	0.73	4.550	33.63	7.617	2.92	10.68	0.73
1.500	0.73	4.567	33.63	7.633	2.92	10.70	0.73
1.517	0.73	4.583	33.63	7.650	2.92	10.72	0.73
1.533	0.73	4.600	33.63	7.667	2.92	10.73	0.73
1.550	0.73	4.617	33.63	7.683	2.92	10.75	0.73
1.567	0.73	4.633	33.63	7.700	2.92	10.77	0.73
1.583	0.73	4.650	33.63	7.717	2.92	10.78	0.73
1.600	0.73	4.667	33.63	7.733	2.92	10.80	0.73
1.617	0.73	4.683	33.63	7.750	2.92	10.82	0.73
1.633	0.73	4.700	33.63	7.767	2.92	10.83	0.73
1.650	0.73	4.717	33.63	7.783	2.92	10.85	0.73
1.667	0.73	4.733	33.63	7.800	2.92	10.87	0.73
1.683	0.73	4.750	33.63	7.817	2.92	10.88	0.73
1.700	0.73	4.767	33.63	7.833	2.92	10.90	0.73
1.717	0.73	4.783	33.63	7.850	2.92	10.92	0.73
1.733	0.73	4.800	33.63	7.867	2.92	10.93	0.73
1.750	0.73	4.817	33.63	7.883	2.92	10.95	0.73
1.767	0.73	4.833	33.63	7.900	2.92	10.97	0.73
1.783	0.73	4.850	33.63	7.917	2.92	10.98	0.73
1.800	0.73	4.867	33.63	7.933	2.92	11.00	0.73
1.817	0.73	4.883	33.63	7.950	2.92	11.02	0.73
1.833	0.73	4.900	33.63	7.967	2.92	11.03	0.73
1.850	0.73	4.917	33.63	7.983	2.92	11.05	0.73
1.867	0.73	4.933	33.63	8.000	2.92	11.07	0.73
1.883	0.73	4.950	33.63	8.017	2.92	11.08	0.73
1.900	0.73	4.967	33.63	8.033	2.92	11.10	0.73
1.917	0.73	4.983	33.63	8.050	2.92	11.12	0.73
1.933	0.73	5.000	33.63	8.067	2.92	11.13	0.73
1.950	0.73	5.017	33.63	8.083	2.92	11.15	0.73
1.967	0.73	5.033	33.63	8.100	2.92	11.17	0.73
1.983	0.73	5.050	33.63	8.117	2.92	11.18	0.73
2.000	0.73	5.067	33.63	8.133	2.92	11.20	0.73
2.017	0.73	5.083	33.63	8.150	2.92	11.22	0.73
2.033	0.73	5.100	33.63	8.167	2.92	11.23	0.73
2.050	0.73	5.117	33.63	8.183	2.92	11.25	0.73
2.067	0.73	5.133	33.63	8.200	2.92	11.27	0.73
2.083	0.73	5.150	33.63	8.217	2.92	11.28	0.73
2.100	0.73	5.167	33.63	8.233	2.92	11.30	0.73
2.117	0.73	5.183	33.63	8.250	2.92	11.32	0.73
2.133	0.73	5.200	33.63	8.267	1.46	11.33	0.73
2.150	0.73	5.217	33.63	8.283	1.46	11.35	0.73
2.167	0.73	5.233	33.63	8.300	1.46	11.37	0.73
2.183	0.73	5.250	33.61	8.317	1.46	11.38	0.73
2.200	0.73	5.267	9.50	8.333	1.46	11.40	0.73
2.217	0.73	5.283	9.50	8.350	1.46	11.42	0.73
2.233	0.73	5.300	9.50	8.367	1.46	11.43	0.73
2.250	0.73	5.317	9.50	8.383	1.46	11.45	0.73
2.267	4.39	5.333	9.50	8.400	1.46	11.47	0.73
2.283	4.39	5.350	9.50	8.417	1.46	11.48	0.73
2.300	4.39	5.367	9.50	8.433	1.46	11.50	0.73
2.317	4.39	5.383	9.50	8.450	1.46	11.52	0.73
2.333	4.39	5.400	9.50	8.467	1.46	11.53	0.73
2.350	4.39	5.417	9.50	8.483	1.46	11.55	0.73
2.367	4.39	5.433	9.50	8.500	1.46	11.57	0.73
2.383	4.39	5.450	9.50	8.517	1.46	11.58	0.73
2.400	4.39	5.467	9.50	8.533	1.46	11.60	0.73
2.417	4.39	5.483	9.50	8.550	1.46	11.62	0.73
2.433	4.39	5.500	9.50	8.567	1.46	11.63	0.73
2.450	4.39	5.517	9.50	8.583	1.46	11.65	0.73
2.467	4.39	5.533	9.50	8.600	1.46	11.67	0.73
2.483	4.39	5.550	9.50	8.617	1.46	11.68	0.73
2.500	4.39	5.567	9.50	8.633	1.46	11.70	0.73
2.517	4.39	5.583	9.50	8.650	1.46	11.72	0.73
2.533	4.39	5.600	9.50	8.667	1.46	11.73	0.73
2.550	4.39	5.617	9.50	8.683	1.46	11.75	0.73
2.567	4.39	5.633	9.50	8.700	1.46	11.77	0.73
2.583	4.39	5.650	9.50	8.717	1.46	11.78	0.73
2.600	4.39	5.667	9.50	8.733	1.46	11.80	0.73
2.617	4.39	5.683	9.50	8.750	1.46	11.82	0.73
2.633	4.39	5.700	9.50	8.767	1.46	11.83	0.73
2.650	4.39	5.717	9.50	8.783	1.46	11.85	0.73
2.667	4.39	5.733	9.50	8.800	1.46	11.87	0.73
2.683	4.39	5.750	9.50	8.817	1.46	11.88	0.73
2.700	4.39	5.767	9.50	8.833	1.46	11.90	0.73
2.717	4.39	5.783	9.50	8.850	1.46	11.92	0.73
2.733	4.39	5.800	9.50	8.867	1.46	11.93	0.73
2.750	4.39	5.817	9.50	8.883	1.46	11.95	0.73
2.767	4.39	5.833	9.50	8.900	1.46	11.97	0.73
2.783	4.39	5.850	9.50	8.917	1.46	11.98	0.73
2.800	4.39	5.867	9.50	8.933	1.46	12.00	0.73
2.817	4.39	5.883	9.50	8.950	1.46	12.02	0.73
2.833	4.39	5.900	9.50	8.967	1.46	12.03	0.73
2.850	4.39	5.917	9.50	8.983	1.46	12.05	0.73
2.867	4.39	5.933	9.50	9.000	1.46	12.07	0.73
2.883	4.39	5.950	9.50	9.017	1.46	12.08	0.73
2.900	4.39	5.967	9.50	9.033	1.46	12.10	0.73
2.917	4.39	5.983	9.50	9.050	1.46	12.12	0.73
2.933	4.39	6.000	9.50	9.067	1.46	12.13	0.73
2.950	4.39	6.017	9.50	9.083	1.46	12.15	0.73
2.967	4.39	6.033	9.50	9.100	1.46	12.17	0.73
2.983	4.39	6.050	9.50	9.117	1.46	12.18	0.73
3.000	4.39	6.067	9.50	9.133	1.46	12.20	0.73

3.017	4.39	6.083	9.50	9.150	1.46	12.22	0.73
3.033	4.39	6.100	9.50	9.167	1.46	12.23	0.73
3.050	4.39	6.117	9.50	9.183	1.46	12.25	0.73
3.067	4.39	6.133	9.50	9.200	1.46		

Max.Eff.Inten.(mm/hr)=	33.63	25.71	
over (min)	5.00	8.00	
Storage Coeff. (min)=	5.34 (ii)	7.97 (ii)	
Unit Hyd. Tpeak (min)=	5.00	8.00	
Unit Hyd. peak (cms)=	0.22	0.14	
			TOTALS
PEAK FLOW (cms)=	0.38	0.00	0.381 (iii)
TIME TO PEAK (hrs)=	5.23	5.25	5.25
RUNOFF VOLUME (mm)=	72.10	44.03	71.82
TOTAL RAINFALL (mm)=	73.10	73.10	73.10
RUNOFF COEFFICIENT =	0.99	0.60	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7630)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0826	0.2320
	0.0347	0.1170	0.0967	0.2609
	0.0534	0.1580	0.1090	0.2940
	0.0655	0.1890	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7629)	4.090	0.381	5.25	71.82
OUTFLOW: ID= 1 (7630)	4.090	0.070	6.42	68.52

PEAK FLOW REDUCTION [Qout/Qin](%)= 18.42
TIME SHIFT OF PEAK FLOW (min)= 70.00
MAXIMUM STORAGE USED (ha.m.)= 0.2008

CALIB			
STANDHYD (7631)	Area (ha)= 3.91		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	3.87	0.04	
Dep. Storage (mm)=	1.00	1.50	
Average Slope (%)=	1.00	0.50	
Length (m)=	161.45	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	4.39	6.150	9.50	9.22	1.46
0.033	0.00	3.100	4.39	6.167	9.50	9.23	1.46
0.050	0.00	3.117	4.39	6.183	9.50	9.25	1.46
0.067	0.00	3.133	4.39	6.200	9.50	9.27	0.73
0.083	0.00	3.150	4.39	6.217	9.50	9.28	0.73
0.100	0.00	3.167	4.39	6.233	9.50	9.30	0.73
0.117	0.00	3.183	4.39	6.250	9.49	9.32	0.73
0.133	0.00	3.200	4.39	6.267	5.12	9.33	0.73
0.150	0.00	3.217	4.39	6.283	5.12	9.35	0.73
0.167	0.00	3.233	4.39	6.300	5.12	9.37	0.73
0.183	0.00	3.250	4.39	6.317	5.12	9.38	0.73
0.200	0.00	3.267	12.43	6.333	5.12	9.40	0.73
0.217	0.00	3.283	12.43	6.350	5.12	9.42	0.73
0.233	0.00	3.300	12.43	6.367	5.12	9.43	0.73
0.250	0.00	3.317	12.43	6.383	5.12	9.45	0.73
0.267	0.73	3.333	12.43	6.400	5.12	9.47	0.73
0.283	0.73	3.350	12.43	6.417	5.12	9.48	0.73
0.300	0.73	3.367	12.43	6.433	5.12	9.50	0.73
0.317	0.73	3.383	12.43	6.450	5.12	9.52	0.73
0.333	0.73	3.400	12.43	6.467	5.12	9.53	0.73
0.350	0.73	3.417	12.43	6.483	5.12	9.55	0.73
0.367	0.73	3.433	12.43	6.500	5.12	9.57	0.73
0.383	0.73	3.450	12.43	6.517	5.12	9.58	0.73
0.400	0.73	3.467	12.43	6.533	5.12	9.60	0.73
0.417	0.73	3.483	12.43	6.550	5.12	9.62	0.73
0.433	0.73	3.500	12.43	6.567	5.12	9.63	0.73
0.450	0.73	3.517	12.43	6.583	5.12	9.65	0.73
0.467	0.73	3.533	12.43	6.600	5.12	9.67	0.73
0.483	0.73	3.550	12.43	6.617	5.12	9.68	0.73
0.500	0.73	3.567	12.43	6.633	5.12	9.70	0.73
0.517	0.73	3.583	12.43	6.650	5.12	9.72	0.73
0.533	0.73	3.600	12.43	6.667	5.12	9.73	0.73
0.550	0.73	3.617	12.43	6.683	5.12	9.75	0.73
0.567	0.73	3.633	12.43	6.700	5.12	9.77	0.73
0.583	0.73	3.650	12.43	6.717	5.12	9.78	0.73
0.600	0.73	3.667	12.43	6.733	5.12	9.80	0.73
0.617	0.73	3.683	12.43	6.750	5.12	9.82	0.73
0.633	0.73	3.700	12.43	6.767	5.12	9.83	0.73
0.650	0.73	3.717	12.43	6.783	5.12	9.85	0.73
0.667	0.73	3.733	12.43	6.800	5.12	9.87	0.73
0.683	0.73	3.750	12.43	6.817	5.12	9.88	0.73
0.700	0.73	3.767	12.43	6.833	5.12	9.90	0.73
0.717	0.73	3.783	12.43	6.850	5.12	9.92	0.73
0.733	0.73	3.800	12.43	6.867	5.12	9.93	0.73
0.750	0.73	3.817	12.43	6.883	5.12	9.95	0.73
0.767	0.73	3.833	12.43	6.900	5.12	9.97	0.73
0.783	0.73	3.850	12.43	6.917	5.12	9.98	0.73
0.800	0.73	3.867	12.43	6.933	5.12	10.00	0.73
0.817	0.73	3.883	12.43	6.950	5.12	10.02	0.73
0.833	0.73	3.900	12.43	6.967	5.12	10.03	0.73
0.850	0.73	3.917	12.43	6.983	5.12	10.05	0.73
0.867	0.73	3.933	12.43	7.000	5.12	10.07	0.73
0.883	0.73	3.950	12.43	7.017	5.12	10.08	0.73
0.900	0.73	3.967	12.43	7.033	5.12	10.10	0.73
0.917	0.73	3.983	12.43	7.050	5.12	10.12	0.73
0.933	0.73	4.000	12.43	7.067	5.12	10.13	0.73
0.950	0.73	4.017	12.43	7.083	5.12	10.15	0.73
0.967	0.73	4.033	12.43	7.100	5.12	10.17	0.73
0.983	0.73	4.050	12.43	7.117	5.12	10.18	0.73
1.000	0.73	4.067	12.43	7.133	5.12	10.20	0.73
1.017	0.73	4.083	12.43	7.150	5.12	10.22	0.73
1.033	0.73	4.100	12.43	7.167	5.12	10.23	0.73
1.050	0.73	4.117	12.43	7.183	5.12	10.25	0.73
1.067	0.73	4.133	12.43	7.200	5.12	10.27	0.73
1.083	0.73	4.150	12.43	7.217	5.12	10.28	0.73
1.100	0.73	4.167	12.43	7.233	5.12	10.30	0.73
1.117	0.73	4.183	12.43	7.250	5.11	10.32	0.73
1.133	0.73	4.200	12.43	7.267	2.92	10.33	0.73
1.150	0.73	4.217	12.43	7.283	2.92	10.35	0.73
1.167	0.73	4.233	12.43	7.300	2.92	10.37	0.73
1.183	0.73	4.250	12.43	7.317	2.92	10.38	0.73
1.200	0.73	4.267	33.63	7.333	2.92	10.40	0.73
1.217	0.73	4.283	33.63	7.350	2.92	10.42	0.73
1.233	0.73	4.300	33.63	7.367	2.92	10.43	0.73
1.250	0.73	4.317	33.63	7.383	2.92	10.45	0.73
1.267	0.73	4.333	33.63	7.400	2.92	10.47	0.73
1.283	0.73	4.350	33.63	7.417	2.92	10.48	0.73
1.300	0.73	4.367	33.63	7.433	2.92	10.50	0.73
1.317	0.73	4.383	33.63	7.450	2.92	10.52	0.73
1.333	0.73	4.400	33.63	7.467	2.92	10.53	0.73
1.350	0.73	4.417	33.63	7.483	2.92	10.55	0.73
1.367	0.73	4.433	33.63	7.500	2.92	10.57	0.73
1.383	0.73	4.450	33.63	7.517	2.92	10.58	0.73
1.400	0.73	4.467	33.63	7.533	2.92	10.60	0.73
1.417	0.73	4.483	33.63	7.550	2.92	10.62	0.73
1.433	0.73	4.500	33.63	7.567	2.92	10.63	0.73
1.450	0.73	4.517	33.63	7.583	2.92	10.65	0.73
1.467	0.73	4.533	33.63	7.600	2.92	10.67	0.73
1.483	0.73	4.550	33.63	7.617	2.92	10.68	0.73

1.500	0.73	4.567	33.63	7.633	2.92	10.70	0.73
1.517	0.73	4.583	33.63	7.650	2.92	10.72	0.73
1.533	0.73	4.600	33.63	7.667	2.92	10.73	0.73
1.550	0.73	4.617	33.63	7.683	2.92	10.75	0.73
1.567	0.73	4.633	33.63	7.700	2.92	10.77	0.73
1.583	0.73	4.650	33.63	7.717	2.92	10.78	0.73
1.600	0.73	4.667	33.63	7.733	2.92	10.80	0.73
1.617	0.73	4.683	33.63	7.750	2.92	10.82	0.73
1.633	0.73	4.700	33.63	7.767	2.92	10.83	0.73
1.650	0.73	4.717	33.63	7.783	2.92	10.85	0.73
1.667	0.73	4.733	33.63	7.800	2.92	10.87	0.73
1.683	0.73	4.750	33.63	7.817	2.92	10.88	0.73
1.700	0.73	4.767	33.63	7.833	2.92	10.90	0.73
1.717	0.73	4.783	33.63	7.850	2.92	10.92	0.73
1.733	0.73	4.800	33.63	7.867	2.92	10.93	0.73
1.750	0.73	4.817	33.63	7.883	2.92	10.95	0.73
1.767	0.73	4.833	33.63	7.900	2.92	10.97	0.73
1.783	0.73	4.850	33.63	7.917	2.92	10.98	0.73
1.800	0.73	4.867	33.63	7.933	2.92	11.00	0.73
1.817	0.73	4.883	33.63	7.950	2.92	11.02	0.73
1.833	0.73	4.900	33.63	7.967	2.92	11.03	0.73
1.850	0.73	4.917	33.63	7.983	2.92	11.05	0.73
1.867	0.73	4.933	33.63	8.000	2.92	11.07	0.73
1.883	0.73	4.950	33.63	8.017	2.92	11.08	0.73
1.900	0.73	4.967	33.63	8.033	2.92	11.10	0.73
1.917	0.73	4.983	33.63	8.050	2.92	11.12	0.73
1.933	0.73	5.000	33.63	8.067	2.92	11.13	0.73
1.950	0.73	5.017	33.63	8.083	2.92	11.15	0.73
1.967	0.73	5.033	33.63	8.100	2.92	11.17	0.73
1.983	0.73	5.050	33.63	8.117	2.92	11.18	0.73
2.000	0.73	5.067	33.63	8.133	2.92	11.20	0.73
2.017	0.73	5.083	33.63	8.150	2.92	11.22	0.73
2.033	0.73	5.100	33.63	8.167	2.92	11.23	0.73
2.050	0.73	5.117	33.63	8.183	2.92	11.25	0.73
2.067	0.73	5.133	33.63	8.200	2.92	11.27	0.73
2.083	0.73	5.150	33.63	8.217	2.92	11.28	0.73
2.100	0.73	5.167	33.63	8.233	2.92	11.30	0.73
2.117	0.73	5.183	33.63	8.250	2.92	11.32	0.73
2.133	0.73	5.200	33.63	8.267	1.46	11.33	0.73
2.150	0.73	5.217	33.63	8.283	1.46	11.35	0.73
2.167	0.73	5.233	33.63	8.300	1.46	11.37	0.73
2.183	0.73	5.250	33.61	8.317	1.46	11.38	0.73
2.200	0.73	5.267	9.50	8.333	1.46	11.40	0.73
2.217	0.73	5.283	9.50	8.350	1.46	11.42	0.73
2.233	0.73	5.300	9.50	8.367	1.46	11.43	0.73
2.250	0.73	5.317	9.50	8.383	1.46	11.45	0.73
2.267	4.39	5.333	9.50	8.400	1.46	11.47	0.73
2.283	4.39	5.350	9.50	8.417	1.46	11.48	0.73
2.300	4.39	5.367	9.50	8.433	1.46	11.50	0.73
2.317	4.39	5.383	9.50	8.450	1.46	11.52	0.73
2.333	4.39	5.400	9.50	8.467	1.46	11.53	0.73
2.350	4.39	5.417	9.50	8.483	1.46	11.55	0.73
2.367	4.39	5.433	9.50	8.500	1.46	11.57	0.73
2.383	4.39	5.450	9.50	8.517	1.46	11.58	0.73
2.400	4.39	5.467	9.50	8.533	1.46	11.60	0.73
2.417	4.39	5.483	9.50	8.550	1.46	11.62	0.73
2.433	4.39	5.500	9.50	8.567	1.46	11.63	0.73
2.450	4.39	5.517	9.50	8.583	1.46	11.65	0.73
2.467	4.39	5.533	9.50	8.600	1.46	11.67	0.73
2.483	4.39	5.550	9.50	8.617	1.46	11.68	0.73
2.500	4.39	5.567	9.50	8.633	1.46	11.70	0.73
2.517	4.39	5.583	9.50	8.650	1.46	11.72	0.73
2.533	4.39	5.600	9.50	8.667	1.46	11.73	0.73
2.550	4.39	5.617	9.50	8.683	1.46	11.75	0.73
2.567	4.39	5.633	9.50	8.700	1.46	11.77	0.73
2.583	4.39	5.650	9.50	8.717	1.46	11.78	0.73
2.600	4.39	5.667	9.50	8.733	1.46	11.80	0.73
2.617	4.39	5.683	9.50	8.750	1.46	11.82	0.73
2.633	4.39	5.700	9.50	8.767	1.46	11.83	0.73
2.650	4.39	5.717	9.50	8.783	1.46	11.85	0.73
2.667	4.39	5.733	9.50	8.800	1.46	11.87	0.73
2.683	4.39	5.750	9.50	8.817	1.46	11.88	0.73
2.700	4.39	5.767	9.50	8.833	1.46	11.90	0.73
2.717	4.39	5.783	9.50	8.850	1.46	11.92	0.73
2.733	4.39	5.800	9.50	8.867	1.46	11.93	0.73
2.750	4.39	5.817	9.50	8.883	1.46	11.95	0.73
2.767	4.39	5.833	9.50	8.900	1.46	11.97	0.73
2.783	4.39	5.850	9.50	8.917	1.46	11.98	0.73
2.800	4.39	5.867	9.50	8.933	1.46	12.00	0.73
2.817	4.39	5.883	9.50	8.950	1.46	12.02	0.73
2.833	4.39	5.900	9.50	8.967	1.46	12.03	0.73
2.850	4.39	5.917	9.50	8.983	1.46	12.05	0.73
2.867	4.39	5.933	9.50	9.000	1.46	12.07	0.73
2.883	4.39	5.950	9.50	9.017	1.46	12.08	0.73
2.900	4.39	5.967	9.50	9.033	1.46	12.10	0.73
2.917	4.39	5.983	9.50	9.050	1.46	12.12	0.73
2.933	4.39	6.000	9.50	9.067	1.46	12.13	0.73
2.950	4.39	6.017	9.50	9.083	1.46	12.15	0.73
2.967	4.39	6.033	9.50	9.100	1.46	12.17	0.73
2.983	4.39	6.050	9.50	9.117	1.46	12.18	0.73
3.000	4.39	6.067	9.50	9.133	1.46	12.20	0.73
3.017	4.39	6.083	9.50	9.150	1.46	12.22	0.73
3.033	4.39	6.100	9.50	9.167	1.46	12.23	0.73
3.050	4.39	6.117	9.50	9.183	1.46	12.25	0.73
3.067	4.39	6.133	9.50	9.200	1.46		

Max.Eff.Inten.(mm/hr)=	33.63	25.71	
over (min)	5.00	8.00	
Storage Coeff. (min)=	5.27 (ii)	7.90 (ii)	
Unit Hyd. Tpeak (min)=	5.00	8.00	
Unit Hyd. peak (cms)=	0.22	0.14	
			TOTALS
PEAK FLOW (cms)=	0.36	0.00	0.364 (iii)
TIME TO PEAK (hrs)=	5.23	5.25	5.25
RUNOFF VOLUME (mm)=	72.10	44.03	71.82
TOTAL RAINFALL (mm)=	73.10	73.10	73.10
RUNOFF COEFFICIENT =	0.99	0.60	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7632)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0792	0.2220
	0.0333	0.1130	0.0928	0.2500
	0.0512	0.1510	0.1046	0.2810
	0.0629	0.1810	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7631)	3.910	0.364	5.25	71.82
OUTFLOW: ID= 1 (7632)	3.910	0.067	6.42	68.47

PEAK FLOW REDUCTION [Qout/Qin](%)= 18.46
TIME SHIFT OF PEAK FLOW (min)= 70.00
MAXIMUM STORAGE USED (ha.m.)= 0.1920

CALIB			
STANDHYD (7641)	Area (ha)= 2.21		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.19	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	121.38	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

GEI Consultants

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	4.39	6.150	9.50	9.22	1.46
0.033	0.00	3.100	4.39	6.167	9.50	9.23	1.46
0.050	0.00	3.117	4.39	6.183	9.50	9.25	1.46
0.067	0.00	3.133	4.39	6.200	9.50	9.27	0.73
0.083	0.00	3.150	4.39	6.217	9.50	9.28	0.73
0.100	0.00	3.167	4.39	6.233	9.50	9.30	0.73
0.117	0.00	3.183	4.39	6.250	9.49	9.32	0.73
0.133	0.00	3.200	4.39	6.267	5.12	9.33	0.73
0.150	0.00	3.217	4.39	6.283	5.12	9.35	0.73
0.167	0.00	3.233	4.39	6.300	5.12	9.37	0.73
0.183	0.00	3.250	4.39	6.317	5.12	9.38	0.73
0.200	0.00	3.267	12.43	6.333	5.12	9.40	0.73
0.217	0.00	3.283	12.43	6.350	5.12	9.42	0.73
0.233	0.00	3.300	12.43	6.367	5.12	9.43	0.73
0.250	0.00	3.317	12.43	6.383	5.12	9.45	0.73
0.267	0.73	3.333	12.43	6.400	5.12	9.47	0.73
0.283	0.73	3.350	12.43	6.417	5.12	9.48	0.73
0.300	0.73	3.367	12.43	6.433	5.12	9.50	0.73
0.317	0.73	3.383	12.43	6.450	5.12	9.52	0.73
0.333	0.73	3.400	12.43	6.467	5.12	9.53	0.73
0.350	0.73	3.417	12.43	6.483	5.12	9.55	0.73
0.367	0.73	3.433	12.43	6.500	5.12	9.57	0.73
0.383	0.73	3.450	12.43	6.517	5.12	9.58	0.73
0.400	0.73	3.467	12.43	6.533	5.12	9.60	0.73
0.417	0.73	3.483	12.43	6.550	5.12	9.62	0.73
0.433	0.73	3.500	12.43	6.567	5.12	9.63	0.73
0.450	0.73	3.517	12.43	6.583	5.12	9.65	0.73
0.467	0.73	3.533	12.43	6.600	5.12	9.67	0.73
0.483	0.73	3.550	12.43	6.617	5.12	9.68	0.73
0.500	0.73	3.567	12.43	6.633	5.12	9.70	0.73
0.517	0.73	3.583	12.43	6.650	5.12	9.72	0.73
0.533	0.73	3.600	12.43	6.667	5.12	9.73	0.73
0.550	0.73	3.617	12.43	6.683	5.12	9.75	0.73
0.567	0.73	3.633	12.43	6.700	5.12	9.77	0.73
0.583	0.73	3.650	12.43	6.717	5.12	9.78	0.73
0.600	0.73	3.667	12.43	6.733	5.12	9.80	0.73
0.617	0.73	3.683	12.43	6.750	5.12	9.82	0.73
0.633	0.73	3.700	12.43	6.767	5.12	9.83	0.73
0.650	0.73	3.717	12.43	6.783	5.12	9.85	0.73
0.667	0.73	3.733	12.43	6.800	5.12	9.87	0.73
0.683	0.73	3.750	12.43	6.817	5.12	9.88	0.73
0.700	0.73	3.767	12.43	6.833	5.12	9.90	0.73
0.717	0.73	3.783	12.43	6.850	5.12	9.92	0.73
0.733	0.73	3.800	12.43	6.867	5.12	9.93	0.73
0.750	0.73	3.817	12.43	6.883	5.12	9.95	0.73
0.767	0.73	3.833	12.43	6.900	5.12	9.97	0.73
0.783	0.73	3.850	12.43	6.917	5.12	9.98	0.73
0.800	0.73	3.867	12.43	6.933	5.12	10.00	0.73
0.817	0.73	3.883	12.43	6.950	5.12	10.02	0.73
0.833	0.73	3.900	12.43	6.967	5.12	10.03	0.73
0.850	0.73	3.917	12.43	6.983	5.12	10.05	0.73
0.867	0.73	3.933	12.43	7.000	5.12	10.07	0.73
0.883	0.73	3.950	12.43	7.017	5.12	10.08	0.73
0.900	0.73	3.967	12.43	7.033	5.12	10.10	0.73
0.917	0.73	3.983	12.43	7.050	5.12	10.12	0.73
0.933	0.73	4.000	12.43	7.067	5.12	10.13	0.73
0.950	0.73	4.017	12.43	7.083	5.12	10.15	0.73
0.967	0.73	4.033	12.43	7.100	5.12	10.17	0.73
0.983	0.73	4.050	12.43	7.117	5.12	10.18	0.73
1.000	0.73	4.067	12.43	7.133	5.12	10.20	0.73
1.017	0.73	4.083	12.43	7.150	5.12	10.22	0.73
1.033	0.73	4.100	12.43	7.167	5.12	10.23	0.73
1.050	0.73	4.117	12.43	7.183	5.12	10.25	0.73
1.067	0.73	4.133	12.43	7.200	5.12	10.27	0.73
1.083	0.73	4.150	12.43	7.217	5.12	10.28	0.73
1.100	0.73	4.167	12.43	7.233	5.12	10.30	0.73
1.117	0.73	4.183	12.43	7.250	5.11	10.32	0.73
1.133	0.73	4.200	12.43	7.267	2.92	10.33	0.73
1.150	0.73	4.217	12.43	7.283	2.92	10.35	0.73
1.167	0.73	4.233	12.43	7.300	2.92	10.37	0.73
1.183	0.73	4.250	12.43	7.317	2.92	10.38	0.73
1.200	0.73	4.267	33.63	7.333	2.92	10.40	0.73
1.217	0.73	4.283	33.63	7.350	2.92	10.42	0.73
1.233	0.73	4.300	33.63	7.367	2.92	10.43	0.73
1.250	0.73	4.317	33.63	7.383	2.92	10.45	0.73
1.267	0.73	4.333	33.63	7.400	2.92	10.47	0.73
1.283	0.73	4.350	33.63	7.417	2.92	10.48	0.73
1.300	0.73	4.367	33.63	7.433	2.92	10.50	0.73
1.317	0.73	4.383	33.63	7.450	2.92	10.52	0.73
1.333	0.73	4.400	33.63	7.467	2.92	10.53	0.73
1.350	0.73	4.417	33.63	7.483	2.92	10.55	0.73
1.367	0.73	4.433	33.63	7.500	2.92	10.57	0.73
1.383	0.73	4.450	33.63	7.517	2.92	10.58	0.73
1.400	0.73	4.467	33.63	7.533	2.92	10.60	0.73
1.417	0.73	4.483	33.63	7.550	2.92	10.62	0.73
1.433	0.73	4.500	33.63	7.567	2.92	10.63	0.73
1.450	0.73	4.517	33.63	7.583	2.92	10.65	0.73
1.467	0.73	4.533	33.63	7.600	2.92	10.67	0.73
1.483	0.73	4.550	33.63	7.617	2.92	10.68	0.73
1.500	0.73	4.567	33.63	7.633	2.92	10.70	0.73
1.517	0.73	4.583	33.63	7.650	2.92	10.72	0.73
1.533	0.73	4.600	33.63	7.667	2.92	10.73	0.73
1.550	0.73	4.617	33.63	7.683	2.92	10.75	0.73
1.567	0.73	4.633	33.63	7.700	2.92	10.77	0.73
1.583	0.73	4.650	33.63	7.717	2.92	10.78	0.73
1.600	0.73	4.667	33.63	7.733	2.92	10.80	0.73
1.617	0.73	4.683	33.63	7.750	2.92	10.82	0.73
1.633	0.73	4.700	33.63	7.767	2.92	10.83	0.73
1.650	0.73	4.717	33.63	7.783	2.92	10.85	0.73
1.667	0.73	4.733	33.63	7.800	2.92	10.87	0.73
1.683	0.73	4.750	33.63	7.817	2.92	10.88	0.73
1.700	0.73	4.767	33.63	7.833	2.92	10.90	0.73
1.717	0.73	4.783	33.63	7.850	2.92	10.92	0.73
1.733	0.73	4.800	33.63	7.867	2.92	10.93	0.73
1.750	0.73	4.817	33.63	7.883	2.92	10.95	0.73
1.767	0.73	4.833	33.63	7.900	2.92	10.97	0.73
1.783	0.73	4.850	33.63	7.917	2.92	10.98	0.73
1.800	0.73	4.867	33.63	7.933	2.92	11.00	0.73
1.817	0.73	4.883	33.63	7.950	2.92	11.02	0.73
1.833	0.73	4.900	33.63	7.967	2.92	11.03	0.73
1.850	0.73	4.917	33.63	7.983	2.92	11.05	0.73
1.867	0.73	4.933	33.63	8.000	2.92	11.07	0.73
1.883	0.73	4.950	33.63	8.017	2.92	11.08	0.73
1.900	0.73	4.967	33.63	8.033	2.92	11.10	0.73
1.917	0.73	4.983	33.63	8.050	2.92	11.12	0.73
1.933	0.73	5.000	33.63	8.067	2.92	11.13	0.73
1.950	0.73	5.017	33.63	8.083	2.92	11.15	0.73
1.967	0.73	5.033	33.63	8.100	2.92	11.17	0.73
1.983	0.73	5.050	33.63	8.117	2.92	11.18	0.73
2.000	0.73	5.067	33.63	8.133	2.92	11.20	0.73
2.017	0.73	5.083	33.63	8.150	2.92	11.22	0.73
2.033	0.73	5.100	33.63	8.167	2.92	11.23	0.73
2.050	0.73	5.117	33.63	8.183	2.92	11.25	0.73
2.067	0.73	5.133	33.63	8.200	2.92	11.27	0.73
2.083	0.73	5.150	33.63	8.217	2.92	11.28	0.73
2.100	0.73	5.167	33.63	8.233	2.92	11.30	0.73
2.117	0.73	5.183	33.63	8.250	2.92	11.32	0.73
2.133	0.73	5.200	33.63	8.267	1.46	11.33	0.73
2.150	0.73	5.217	33.63	8.283	1.46	11.35	0.73
2.167	0.73	5.233	33.63	8.300	1.46	11.37	0.73
2.183	0.73	5.250	33.61	8.317	1.46	11.38	0.73
2.200	0.73	5.267	9.50	8.333	1.46	11.40	0.73
2.217	0.73	5.283	9.50	8.350	1.46	11.42	0.73
2.233	0.73	5.300	9.50	8.367	1.46	11.43	0.73
2.250	0.73	5.317	9.50	8.383	1.46	11.45	0.73
2.267	4.39	5.333	9.50	8.400	1.46	11.47	0.73
2.283	4.39	5.350	9.50	8.417	1.46	11.48	0.73
2.300	4.39	5.367	9.50	8.433	1.46	11.50	0.73
2.317	4.39	5.383	9.50	8.450	1.46	11.52	0.73
2.333	4.39	5.400	9.50	8.467	1.46	11.53	0.73
2.350	4.39	5.417	9.50	8.483	1.46	11.55	0.73
2.367	4.39	5.433	9.50	8.500	1.46	11.57	0.73
2.383	4.39	5.450	9.50	8.517	1.46	11.58	0.73
2.400	4.39	5.467	9.50	8.533	1.46	11.60	0.73
2.417	4.39	5.483	9.50	8.550	1.46	11.62	0.73
2.433	4.39	5.500	9.50	8.567	1.46	11.63	0.73
2.450	4.39	5.517	9.50	8.583	1.46	11.65	0.73
2.467	4.39	5.533	9.50	8.600	1.46	11.67	0.73
2.483	4.39	5.550	9.50	8.617	1.46	11.68	0.73
2.500	4.39	5.567	9.50	8.633	1.46	11.70	0.73

2.517	4.39	5.583	9.50	8.650	1.46	11.72	0.73
2.533	4.39	5.600	9.50	8.667	1.46	11.73	0.73
2.550	4.39	5.617	9.50	8.683	1.46	11.75	0.73
2.567	4.39	5.633	9.50	8.700	1.46	11.77	0.73
2.583	4.39	5.650	9.50	8.717	1.46	11.78	0.73
2.600	4.39	5.667	9.50	8.733	1.46	11.80	0.73
2.617	4.39	5.683	9.50	8.750	1.46	11.82	0.73
2.633	4.39	5.700	9.50	8.767	1.46	11.83	0.73
2.650	4.39	5.717	9.50	8.783	1.46	11.85	0.73
2.667	4.39	5.733	9.50	8.800	1.46	11.87	0.73
2.683	4.39	5.750	9.50	8.817	1.46	11.88	0.73
2.700	4.39	5.767	9.50	8.833	1.46	11.90	0.73
2.717	4.39	5.783	9.50	8.850	1.46	11.92	0.73
2.733	4.39	5.800	9.50	8.867	1.46	11.93	0.73
2.750	4.39	5.817	9.50	8.883	1.46	11.95	0.73
2.767	4.39	5.833	9.50	8.900	1.46	11.97	0.73
2.783	4.39	5.850	9.50	8.917	1.46	11.98	0.73
2.800	4.39	5.867	9.50	8.933	1.46	12.00	0.73
2.817	4.39	5.883	9.50	8.950	1.46	12.02	0.73
2.833	4.39	5.900	9.50	8.967	1.46	12.03	0.73
2.850	4.39	5.917	9.50	8.983	1.46	12.05	0.73
2.867	4.39	5.933	9.50	9.000	1.46	12.07	0.73
2.883	4.39	5.950	9.50	9.017	1.46	12.08	0.73
2.900	4.39	5.967	9.50	9.033	1.46	12.10	0.73
2.917	4.39	5.983	9.50	9.050	1.46	12.12	0.73
2.933	4.39	6.000	9.50	9.067	1.46	12.13	0.73
2.950	4.39	6.017	9.50	9.083	1.46	12.15	0.73
2.967	4.39	6.033	9.50	9.100	1.46	12.17	0.73
2.983	4.39	6.050	9.50	9.117	1.46	12.18	0.73
3.000	4.39	6.067	9.50	9.133	1.46	12.20	0.73
3.017	4.39	6.083	9.50	9.150	1.46	12.22	0.73
3.033	4.39	6.100	9.50	9.167	1.46	12.23	0.73
3.050	4.39	6.117	9.50	9.183	1.46	12.25	0.73
3.067	4.39	6.133	9.50	9.200	1.46		

Max.Eff.Inten.(mm/hr)=	33.63	25.71	
over (min)	5.00	8.00	
Storage Coeff. (min)=	4.44 (ii)	7.07 (ii)	
Unit Hyd. Tpeak (min)=	5.00	8.00	
Unit Hyd. peak (cms)=	0.24	0.15	
			TOTALS
PEAK FLOW (cms)=	0.20	0.00	0.206 (iii)
TIME TO PEAK (hrs)=	5.23	5.25	5.25
RUNOFF VOLUME (mm)=	72.10	44.03	71.82
TOTAL RAINFALL (mm)=	73.10	73.10	73.10
RUNOFF COEFFICIENT =	0.99	0.60	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7642)	OVERFLOW IS OFF
IN= 2---> OUT= 1	
DT= 1.0 min	

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0470	0.1250
0.0197	0.0630	0.0551	0.1410
0.0304	0.0850	0.0620	0.1580
0.0373	0.1020	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7641)	2.210	0.206	5.25	71.82
OUTFLOW: ID= 1 (7642)	2.210	0.040	6.38	69.01

PEAK FLOW REDUCTION [Qout/Qin](%)= 19.21
TIME SHIFT OF PEAK FLOW (min)= 68.00
MAXIMUM STORAGE USED (ha.m.)= 0.1074

CALIB	
STANDHYD (7643)	Area (ha)= 2.02
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.00	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	116.05	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	4.39	6.150	9.50	9.22	1.46
0.033	0.00	3.100	4.39	6.167	9.50	9.23	1.46
0.050	0.00	3.117	4.39	6.183	9.50	9.25	1.46
0.067	0.00	3.133	4.39	6.200	9.50	9.27	0.73
0.083	0.00	3.150	4.39	6.217	9.50	9.28	0.73
0.100	0.00	3.167	4.39	6.233	9.50	9.30	0.73
0.117	0.00	3.183	4.39	6.250	9.49	9.32	0.73
0.133	0.00	3.200	4.39	6.267	5.12	9.33	0.73
0.150	0.00	3.217	4.39	6.283	5.12	9.35	0.73
0.167	0.00	3.233	4.39	6.300	5.12	9.37	0.73
0.183	0.00	3.250	4.39	6.317	5.12	9.38	0.73
0.200	0.00	3.267	12.43	6.333	5.12	9.40	0.73
0.217	0.00	3.283	12.43	6.350	5.12	9.42	0.73
0.233	0.00	3.300	12.43	6.367	5.12	9.43	0.73
0.250	0.00	3.317	12.43	6.383	5.12	9.45	0.73
0.267	0.73	3.333	12.43	6.400	5.12	9.47	0.73
0.283	0.73	3.350	12.43	6.417	5.12	9.48	0.73
0.300	0.73	3.367	12.43	6.433	5.12	9.50	0.73
0.317	0.73	3.383	12.43	6.450	5.12	9.52	0.73
0.333	0.73	3.400	12.43	6.467	5.12	9.53	0.73
0.350	0.73	3.417	12.43	6.483	5.12	9.55	0.73
0.367	0.73	3.433	12.43	6.500	5.12	9.57	0.73
0.383	0.73	3.450	12.43	6.517	5.12	9.58	0.73
0.400	0.73	3.467	12.43	6.533	5.12	9.60	0.73
0.417	0.73	3.483	12.43	6.550	5.12	9.62	0.73
0.433	0.73	3.500	12.43	6.567	5.12	9.63	0.73
0.450	0.73	3.517	12.43	6.583	5.12	9.65	0.73
0.467	0.73	3.533	12.43	6.600	5.12	9.67	0.73
0.483	0.73	3.550	12.43	6.617	5.12	9.68	0.73
0.500	0.73	3.567	12.43	6.633	5.12	9.70	0.73
0.517	0.73	3.583	12.43	6.650	5.12	9.72	0.73
0.533	0.73	3.600	12.43	6.667	5.12	9.73	0.73
0.550	0.73	3.617	12.43	6.683	5.12	9.75	0.73
0.567	0.73	3.633	12.43	6.700	5.12	9.77	0.73
0.583	0.73	3.650	12.43	6.717	5.12	9.78	0.73
0.600	0.73	3.667	12.43	6.733	5.12	9.80	0.73
0.617	0.73	3.683	12.43	6.750	5.12	9.82	0.73
0.633	0.73	3.700	12.43	6.767	5.12	9.83	0.73
0.650	0.73	3.717	12.43	6.783	5.12	9.85	0.73
0.667	0.73	3.733	12.43	6.800	5.12	9.87	0.73
0.683	0.73	3.750	12.43	6.817	5.12	9.88	0.73
0.700	0.73	3.767	12.43	6.833	5.12	9.90	0.73
0.717	0.73	3.783	12.43	6.850	5.12	9.92	0.73
0.733	0.73	3.800	12.43	6.867	5.12	9.93	0.73
0.750	0.73	3.817	12.43	6.883	5.12	9.95	0.73
0.767	0.73	3.833	12.43	6.900	5.12	9.97	0.73
0.783	0.73	3.850	12.43	6.917	5.12	9.98	0.73
0.800	0.73	3.867	12.43	6.933	5.12	10.00	0.73
0.817	0.73	3.883	12.43	6.950	5.12	10.02	0.73
0.833	0.73	3.900	12.43	6.967	5.12	10.03	0.73
0.850	0.73	3.917	12.43	6.983	5.12	10.05	0.73
0.867	0.73	3.933	12.43	7.000	5.12	10.07	0.73
0.883	0.73	3.950	12.43	7.017	5.12	10.08	0.73
0.900	0.73	3.967	12.43	7.033	5.12	10.10	0.73
0.917	0.73	3.983	12.43	7.050	5.12	10.12	0.73
0.933	0.73	4.000	12.43	7.067	5.12	10.13	0.73
0.950	0.73	4.017	12.43	7.083	5.12	10.15	0.73
0.967	0.73	4.033	12.43	7.100	5.12	10.17	0.73
0.983	0.73	4.050	12.43	7.117	5.12	10.18	0.73

1.000	0.73	4.067	12.43	7.133	5.12	10.20	0.73
1.017	0.73	4.083	12.43	7.150	5.12	10.22	0.73
1.033	0.73	4.100	12.43	7.167	5.12	10.23	0.73
1.050	0.73	4.117	12.43	7.183	5.12	10.25	0.73
1.067	0.73	4.133	12.43	7.200	5.12	10.27	0.73
1.083	0.73	4.150	12.43	7.217	5.12	10.28	0.73
1.100	0.73	4.167	12.43	7.233	5.12	10.30	0.73
1.117	0.73	4.183	12.43	7.250	5.11	10.32	0.73
1.133	0.73	4.200	12.43	7.267	2.92	10.33	0.73
1.150	0.73	4.217	12.43	7.283	2.92	10.35	0.73
1.167	0.73	4.233	12.43	7.300	2.92	10.37	0.73
1.183	0.73	4.250	12.43	7.317	2.92	10.38	0.73
1.200	0.73	4.267	33.63	7.333	2.92	10.40	0.73
1.217	0.73	4.283	33.63	7.350	2.92	10.42	0.73
1.233	0.73	4.300	33.63	7.367	2.92	10.43	0.73
1.250	0.73	4.317	33.63	7.383	2.92	10.45	0.73
1.267	0.73	4.333	33.63	7.400	2.92	10.47	0.73
1.283	0.73	4.350	33.63	7.417	2.92	10.48	0.73
1.300	0.73	4.367	33.63	7.433	2.92	10.50	0.73
1.317	0.73	4.383	33.63	7.450	2.92	10.52	0.73
1.333	0.73	4.400	33.63	7.467	2.92	10.53	0.73
1.350	0.73	4.417	33.63	7.483	2.92	10.55	0.73
1.367	0.73	4.433	33.63	7.500	2.92	10.57	0.73
1.383	0.73	4.450	33.63	7.517	2.92	10.58	0.73
1.400	0.73	4.467	33.63	7.533	2.92	10.60	0.73
1.417	0.73	4.483	33.63	7.550	2.92	10.62	0.73
1.433	0.73	4.500	33.63	7.567	2.92	10.63	0.73
1.450	0.73	4.517	33.63	7.583	2.92	10.65	0.73
1.467	0.73	4.533	33.63	7.600	2.92	10.67	0.73
1.483	0.73	4.550	33.63	7.617	2.92	10.68	0.73
1.500	0.73	4.567	33.63	7.633	2.92	10.70	0.73
1.517	0.73	4.583	33.63	7.650	2.92	10.72	0.73
1.533	0.73	4.600	33.63	7.667	2.92	10.73	0.73
1.550	0.73	4.617	33.63	7.683	2.92	10.75	0.73
1.567	0.73	4.633	33.63	7.700	2.92	10.77	0.73
1.583	0.73	4.650	33.63	7.717	2.92	10.78	0.73
1.600	0.73	4.667	33.63	7.733	2.92	10.80	0.73
1.617	0.73	4.683	33.63	7.750	2.92	10.82	0.73
1.633	0.73	4.700	33.63	7.767	2.92	10.83	0.73
1.650	0.73	4.717	33.63	7.783	2.92	10.85	0.73
1.667	0.73	4.733	33.63	7.800	2.92	10.87	0.73
1.683	0.73	4.750	33.63	7.817	2.92	10.88	0.73
1.700	0.73	4.767	33.63	7.833	2.92	10.90	0.73
1.717	0.73	4.783	33.63	7.850	2.92	10.92	0.73
1.733	0.73	4.800	33.63	7.867	2.92	10.93	0.73
1.750	0.73	4.817	33.63	7.883	2.92	10.95	0.73
1.767	0.73	4.833	33.63	7.900	2.92	10.97	0.73
1.783	0.73	4.850	33.63	7.917	2.92	10.98	0.73
1.800	0.73	4.867	33.63	7.933	2.92	11.00	0.73
1.817	0.73	4.883	33.63	7.950	2.92	11.02	0.73
1.833	0.73	4.900	33.63	7.967	2.92	11.03	0.73
1.850	0.73	4.917	33.63	7.983	2.92	11.05	0.73
1.867	0.73	4.933	33.63	8.000	2.92	11.07	0.73
1.883	0.73	4.950	33.63	8.017	2.92	11.08	0.73
1.900	0.73	4.967	33.63	8.033	2.92	11.10	0.73
1.917	0.73	4.983	33.63	8.050	2.92	11.12	0.73
1.933	0.73	5.000	33.63	8.067	2.92	11.13	0.73
1.950	0.73	5.017	33.63	8.083	2.92	11.15	0.73
1.967	0.73	5.033	33.63	8.100	2.92	11.17	0.73
1.983	0.73	5.050	33.63	8.117	2.92	11.18	0.73
2.000	0.73	5.067	33.63	8.133	2.92	11.20	0.73
2.017	0.73	5.083	33.63	8.150	2.92	11.22	0.73
2.033	0.73	5.100	33.63	8.167	2.92	11.23	0.73
2.050	0.73	5.117	33.63	8.183	2.92	11.25	0.73
2.067	0.73	5.133	33.63	8.200	2.92	11.27	0.73
2.083	0.73	5.150	33.63	8.217	2.92	11.28	0.73
2.100	0.73	5.167	33.63	8.233	2.92	11.30	0.73
2.117	0.73	5.183	33.63	8.250	2.92	11.32	0.73
2.133	0.73	5.200	33.63	8.267	1.46	11.33	0.73
2.150	0.73	5.217	33.63	8.283	1.46	11.35	0.73
2.167	0.73	5.233	33.63	8.300	1.46	11.37	0.73
2.183	0.73	5.250	33.61	8.317	1.46	11.38	0.73
2.200	0.73	5.267	9.50	8.333	1.46	11.40	0.73
2.217	0.73	5.283	9.50	8.350	1.46	11.42	0.73
2.233	0.73	5.300	9.50	8.367	1.46	11.43	0.73
2.250	0.73	5.317	9.50	8.383	1.46	11.45	0.73
2.267	4.39	5.333	9.50	8.400	1.46	11.47	0.73
2.283	4.39	5.350	9.50	8.417	1.46	11.48	0.73
2.300	4.39	5.367	9.50	8.433	1.46	11.50	0.73
2.317	4.39	5.383	9.50	8.450	1.46	11.52	0.73
2.333	4.39	5.400	9.50	8.467	1.46	11.53	0.73
2.350	4.39	5.417	9.50	8.483	1.46	11.55	0.73
2.367	4.39	5.433	9.50	8.500	1.46	11.57	0.73
2.383	4.39	5.450	9.50	8.517	1.46	11.58	0.73
2.400	4.39	5.467	9.50	8.533	1.46	11.60	0.73
2.417	4.39	5.483	9.50	8.550	1.46	11.62	0.73
2.433	4.39	5.500	9.50	8.567	1.46	11.63	0.73
2.450	4.39	5.517	9.50	8.583	1.46	11.65	0.73
2.467	4.39	5.533	9.50	8.600	1.46	11.67	0.73
2.483	4.39	5.550	9.50	8.617	1.46	11.68	0.73
2.500	4.39	5.567	9.50	8.633	1.46	11.70	0.73
2.517	4.39	5.583	9.50	8.650	1.46	11.72	0.73
2.533	4.39	5.600	9.50	8.667	1.46	11.73	0.73
2.550	4.39	5.617	9.50	8.683	1.46	11.75	0.73
2.567	4.39	5.633	9.50	8.700	1.46	11.77	0.73
2.583	4.39	5.650	9.50	8.717	1.46	11.78	0.73
2.600	4.39	5.667	9.50	8.733	1.46	11.80	0.73
2.617	4.39	5.683	9.50	8.750	1.46	11.82	0.73
2.633	4.39	5.700	9.50	8.767	1.46	11.83	0.73
2.650	4.39	5.717	9.50	8.783	1.46	11.85	0.73
2.667	4.39	5.733	9.50	8.800	1.46	11.87	0.73
2.683	4.39	5.750	9.50	8.817	1.46	11.88	0.73
2.700	4.39	5.767	9.50	8.833	1.46	11.90	0.73
2.717	4.39	5.783	9.50	8.850	1.46	11.92	0.73
2.733	4.39	5.800	9.50	8.867	1.46	11.93	0.73
2.750	4.39	5.817	9.50	8.883	1.46	11.95	0.73
2.767	4.39	5.833	9.50	8.900	1.46	11.97	0.73
2.783	4.39	5.850	9.50	8.917	1.46	11.98	0.73
2.800	4.39	5.867	9.50	8.933	1.46	12.00	0.73
2.817	4.39	5.883	9.50	8.950	1.46	12.02	0.73
2.833	4.39	5.900	9.50	8.967	1.46	12.03	0.73
2.850	4.39	5.917	9.50	8.983	1.46	12.05	0.73
2.867	4.39	5.933	9.50	9.000	1.46	12.07	0.73
2.883	4.39	5.950	9.50	9.017	1.46	12.08	0.73
2.900	4.39	5.967	9.50	9.033	1.46	12.10	0.73
2.917	4.39	5.983	9.50	9.050	1.46	12.12	0.73
2.933	4.39	6.000	9.50	9.067	1.46	12.13	0.73
2.950	4.39	6.017	9.50	9.083	1.46	12.15	0.73
2.967	4.39	6.033	9.50	9.100	1.46	12.17	0.73
2.983	4.39	6.050	9.50	9.117	1.46	12.18	0.73
3.000	4.39	6.067	9.50	9.133	1.46	12.20	0.73
3.017	4.39	6.083	9.50	9.150	1.46	12.22	0.73
3.033	4.39	6.100	9.50	9.167	1.46	12.23	0.73
3.050	4.39	6.117	9.50	9.183	1.46	12.25	0.73
3.067	4.39	6.133	9.50	9.200	1.46		

Max.Eff.Inten.(mm/hr)=	33.63	25.71	
over (min)	5.00	7.00	
Storage Coeff. (min)=	4.32 (ii)	6.95 (ii)	
Unit Hyd. Tpeak (min)=	5.00	7.00	
Unit Hyd. peak (cms)=	0.25	0.16	
			TOTALS
PEAK FLOW (cms)=	0.19	0.00	0.188 (iii)
TIME TO PEAK (hrs)=	5.23	5.25	5.25
RUNOFF VOLUME (mm)=	72.10	44.03	71.82
TOTAL RAINFALL (mm)=	73.10	73.10	73.10
RUNOFF COEFFICIENT =	0.99	0.60	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7644)| IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF		|		
	OUTFLOW (cms)	STORAGE (ha.m.)	|	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	|	0.0433	0.1140

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                      0.0182     0.0580   |   0.0507      0.1280
                      0.0280     0.0775   |   0.0571      0.1440
                      0.0343     0.0930   |   0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  7643)     2.020     0.188      5.25      71.82
   OUTFLOW: ID= 1 (  7644)     2.020     0.036      6.38      69.05

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 19.36
                  TIME SHIFT OF PEAK FLOW         (min)= 68.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0980

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================================================================================================================
======

       V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-
a4eb17eaad57\949b17f0-263f-483e-bb9d-f7fd44d19705\s
  Summary filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-
a4eb17eaad57\949b17f0-263f-483e-bb9d-f7fd44d19705\s


DATE: 06/14/2024                          TIME: 12:48:39

USER:


COMMENTS: _____

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  ************************************************
  ** SIMULATION : 96. 25 Year 24 Hour AES (Bloo **
  ************************************************


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|    READ STORM    |    Filename: C:\Users\ygollamudi\AppD
|                  |              ata\Local\Temp\
|                  |              3c3f87d5-a26e-4c6b-b2ae-56a7ba29ab7f\b98d6b81
| Ptotal= 79.70 mm |    Comments: 25 Year 24 Hour AES (Bloor, TRCA)
--------------------
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.00    0.00 |  6.25    6.77 | 12.50    2.79 | 18.75    0.40
               0.25    0.40 |  6.50    6.77 | 12.75    2.79 | 19.00    0.40
               0.50    0.40 |  6.75    6.77 | 13.00    2.79 | 19.25    0.40
               0.75    0.40 |  7.00    6.77 | 13.25    2.79 | 19.50    0.40
               1.00    0.40 |  7.25    6.77 | 13.50    2.79 | 19.75    0.40
               1.25    0.40 |  7.50    6.77 | 13.75    2.79 | 20.00    0.40
               1.50    0.40 |  7.75    6.77 | 14.00    2.79 | 20.25    0.40
               1.75    0.40 |  8.00    6.77 | 14.25    1.59 | 20.50    0.40
               2.00    0.40 |  8.25   18.33 | 14.50    1.59 | 20.75    0.40
               2.25    0.40 |  8.50   18.33 | 14.75    1.59 | 21.00    0.40
               2.50    0.40 |  8.75   18.33 | 15.00    1.59 | 21.25    0.40
               2.75    0.40 |  9.00   18.33 | 15.25    1.59 | 21.50    0.40
               3.00    0.40 |  9.25   18.33 | 15.50    1.59 | 21.75    0.40
               3.25    0.40 |  9.50   18.33 | 15.75    1.59 | 22.00    0.40
               3.50    0.40 |  9.75   18.33 | 16.00    1.59 | 22.25    0.40
               3.75    0.40 | 10.00   18.33 | 16.25    0.80 | 22.50    0.40
               4.00    0.40 | 10.25    5.18 | 16.50    0.80 | 22.75    0.40
               4.25    2.39 | 10.50    5.18 | 16.75    0.80 | 23.00    0.40
               4.50    2.39 | 10.75    5.18 | 17.00    0.80 | 23.25    0.40
               4.75    2.39 | 11.00    5.18 | 17.25    0.80 | 23.50    0.40
               5.00    2.39 | 11.25    5.18 | 17.50    0.80 | 23.75    0.40
               5.25    2.39 | 11.50    5.18 | 17.75    0.80 | 24.00    0.40
               5.50    2.39 | 11.75    5.18 | 18.00    0.80 |
               5.75    2.39 | 12.00    5.18 | 18.25    0.40 |
               6.00    2.39 | 12.25    2.79 | 18.50    0.40 |

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| CALIB            |
| STANDHYD (  7567)|   Area    (ha)=   2.72
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------

                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.69          0.03
     Dep. Storage     (mm)=       1.00          1.50
     Average Slope     (%)=       1.00          0.50
     Length            (m)=     134.66         40.00
     Mannings n           =      0.013         0.250

     NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
0.017    0.00 | 6.083    2.39 |12.150    5.18 | 18.22    0.80
0.033    0.00 | 6.100    2.39 |12.167    5.18 | 18.23    0.80
0.050    0.00 | 6.117    2.39 |12.183    5.18 | 18.25    0.80
0.067    0.00 | 6.133    2.39 |12.200    5.18 | 18.27    0.40
0.083    0.00 | 6.150    2.39 |12.217    5.18 | 18.28    0.40
0.100    0.00 | 6.167    2.39 |12.233    5.18 | 18.30    0.40
0.117    0.00 | 6.183    2.39 |12.250    5.18 | 18.32    0.40
0.133    0.00 | 6.200    2.39 |12.267    2.79 | 18.33    0.40
0.150    0.00 | 6.217    2.39 |12.283    2.79 | 18.35    0.40
0.167    0.00 | 6.233    2.39 |12.300    2.79 | 18.37    0.40
0.183    0.00 | 6.250    2.40 |12.317    2.79 | 18.38    0.40
0.200    0.00 | 6.267    6.77 |12.333    2.79 | 18.40    0.40
0.217    0.00 | 6.283    6.77 |12.350    2.79 | 18.42    0.40
0.233    0.00 | 6.300    6.77 |12.367    2.79 | 18.43    0.40
0.250    0.00 | 6.317    6.77 |12.383    2.79 | 18.45    0.40
0.267    0.40 | 6.333    6.77 |12.400    2.79 | 18.47    0.40
0.283    0.40 | 6.350    6.77 |12.417    2.79 | 18.48    0.40
0.300    0.40 | 6.367    6.77 |12.433    2.79 | 18.50    0.40
0.317    0.40 | 6.383    6.77 |12.450    2.79 | 18.52    0.40
0.333    0.40 | 6.400    6.77 |12.467    2.79 | 18.53    0.40
0.350    0.40 | 6.417    6.77 |12.483    2.79 | 18.55    0.40
0.367    0.40 | 6.433    6.77 |12.500    2.79 | 18.57    0.40
0.383    0.40 | 6.450    6.77 |12.517    2.79 | 18.58    0.40
0.400    0.40 | 6.467    6.77 |12.533    2.79 | 18.60    0.40
0.417    0.40 | 6.483    6.77 |12.550    2.79 | 18.62    0.40
0.433    0.40 | 6.500    6.77 |12.567    2.79 | 18.63    0.40
0.450    0.40 | 6.517    6.77 |12.583    2.79 | 18.65    0.40
0.467    0.40 | 6.533    6.77 |12.600    2.79 | 18.67    0.40
0.483    0.40 | 6.550    6.77 |12.617    2.79 | 18.68    0.40
0.500    0.40 | 6.567    6.77 |12.633    2.79 | 18.70    0.40
0.517    0.40 | 6.583    6.77 |12.650    2.79 | 18.72    0.40
0.533    0.40 | 6.600    6.77 |12.667    2.79 | 18.73    0.40
0.550    0.40 | 6.617    6.77 |12.683    2.79 | 18.75    0.40
0.567    0.40 | 6.633    6.77 |12.700    2.79 | 18.77    0.40
0.583    0.40 | 6.650    6.77 |12.717    2.79 | 18.78    0.40
0.600    0.40 | 6.667    6.77 |12.733    2.79 | 18.80    0.40
0.617    0.40 | 6.683    6.77 |12.750    2.79 | 18.82    0.40
0.633    0.40 | 6.700    6.77 |12.767    2.79 | 18.83    0.40
0.650    0.40 | 6.717    6.77 |12.783    2.79 | 18.85    0.40
0.667    0.40 | 6.733    6.77 |12.800    2.79 | 18.87    0.40
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0.683	0.40	6.750	6.77	12.817	2.79	18.88	0.40
0.700	0.40	6.767	6.77	12.833	2.79	18.90	0.40
0.717	0.40	6.783	6.77	12.850	2.79	18.92	0.40
0.733	0.40	6.800	6.77	12.867	2.79	18.93	0.40
0.750	0.40	6.817	6.77	12.883	2.79	18.95	0.40
0.767	0.40	6.833	6.77	12.900	2.79	18.97	0.40
0.783	0.40	6.850	6.77	12.917	2.79	18.98	0.40
0.800	0.40	6.867	6.77	12.933	2.79	19.00	0.40
0.817	0.40	6.883	6.77	12.950	2.79	19.02	0.40
0.833	0.40	6.900	6.77	12.967	2.79	19.03	0.40
0.850	0.40	6.917	6.77	12.983	2.79	19.05	0.40
0.867	0.40	6.933	6.77	13.000	2.79	19.07	0.40
0.883	0.40	6.950	6.77	13.017	2.79	19.08	0.40
0.900	0.40	6.967	6.77	13.033	2.79	19.10	0.40
0.917	0.40	6.983	6.77	13.050	2.79	19.12	0.40
0.933	0.40	7.000	6.77	13.067	2.79	19.13	0.40
0.950	0.40	7.017	6.77	13.083	2.79	19.15	0.40
0.967	0.40	7.033	6.77	13.100	2.79	19.17	0.40
0.983	0.40	7.050	6.77	13.117	2.79	19.18	0.40
1.000	0.40	7.067	6.77	13.133	2.79	19.20	0.40
1.017	0.40	7.083	6.77	13.150	2.79	19.22	0.40
1.033	0.40	7.100	6.77	13.167	2.79	19.23	0.40
1.050	0.40	7.117	6.77	13.183	2.79	19.25	0.40
1.067	0.40	7.133	6.77	13.200	2.79	19.27	0.40
1.083	0.40	7.150	6.77	13.217	2.79	19.28	0.40
1.100	0.40	7.167	6.77	13.233	2.79	19.30	0.40
1.117	0.40	7.183	6.77	13.250	2.79	19.32	0.40
1.133	0.40	7.200	6.77	13.267	2.79	19.33	0.40
1.150	0.40	7.217	6.77	13.283	2.79	19.35	0.40
1.167	0.40	7.233	6.77	13.300	2.79	19.37	0.40
1.183	0.40	7.250	6.77	13.317	2.79	19.38	0.40
1.200	0.40	7.267	6.77	13.333	2.79	19.40	0.40
1.217	0.40	7.283	6.77	13.350	2.79	19.42	0.40
1.233	0.40	7.300	6.77	13.367	2.79	19.43	0.40
1.250	0.40	7.317	6.77	13.383	2.79	19.45	0.40
1.267	0.40	7.333	6.77	13.400	2.79	19.47	0.40
1.283	0.40	7.350	6.77	13.417	2.79	19.48	0.40
1.300	0.40	7.367	6.77	13.433	2.79	19.50	0.40
1.317	0.40	7.383	6.77	13.450	2.79	19.52	0.40
1.333	0.40	7.400	6.77	13.467	2.79	19.53	0.40
1.350	0.40	7.417	6.77	13.483	2.79	19.55	0.40
1.367	0.40	7.433	6.77	13.500	2.79	19.57	0.40
1.383	0.40	7.450	6.77	13.517	2.79	19.58	0.40
1.400	0.40	7.467	6.77	13.533	2.79	19.60	0.40
1.417	0.40	7.483	6.77	13.550	2.79	19.62	0.40
1.433	0.40	7.500	6.77	13.567	2.79	19.63	0.40
1.450	0.40	7.517	6.77	13.583	2.79	19.65	0.40
1.467	0.40	7.533	6.77	13.600	2.79	19.67	0.40
1.483	0.40	7.550	6.77	13.617	2.79	19.68	0.40
1.500	0.40	7.567	6.77	13.633	2.79	19.70	0.40
1.517	0.40	7.583	6.77	13.650	2.79	19.72	0.40
1.533	0.40	7.600	6.77	13.667	2.79	19.73	0.40
1.550	0.40	7.617	6.77	13.683	2.79	19.75	0.40
1.567	0.40	7.633	6.77	13.700	2.79	19.77	0.40
1.583	0.40	7.650	6.77	13.717	2.79	19.78	0.40
1.600	0.40	7.667	6.77	13.733	2.79	19.80	0.40
1.617	0.40	7.683	6.77	13.750	2.79	19.82	0.40
1.633	0.40	7.700	6.77	13.767	2.79	19.83	0.40
1.650	0.40	7.717	6.77	13.783	2.79	19.85	0.40
1.667	0.40	7.733	6.77	13.800	2.79	19.87	0.40
1.683	0.40	7.750	6.77	13.817	2.79	19.88	0.40
1.700	0.40	7.767	6.77	13.833	2.79	19.90	0.40
1.717	0.40	7.783	6.77	13.850	2.79	19.92	0.40
1.733	0.40	7.800	6.77	13.867	2.79	19.93	0.40
1.750	0.40	7.817	6.77	13.883	2.79	19.95	0.40
1.767	0.40	7.833	6.77	13.900	2.79	19.97	0.40
1.783	0.40	7.850	6.77	13.917	2.79	19.98	0.40
1.800	0.40	7.867	6.77	13.933	2.79	20.00	0.40
1.817	0.40	7.883	6.77	13.950	2.79	20.02	0.40
1.833	0.40	7.900	6.77	13.967	2.79	20.03	0.40
1.850	0.40	7.917	6.77	13.983	2.79	20.05	0.40
1.867	0.40	7.933	6.77	14.000	2.79	20.07	0.40
1.883	0.40	7.950	6.77	14.017	2.79	20.08	0.40
1.900	0.40	7.967	6.77	14.033	2.79	20.10	0.40
1.917	0.40	7.983	6.77	14.050	2.79	20.12	0.40
1.933	0.40	8.000	6.77	14.067	2.79	20.13	0.40
1.950	0.40	8.017	6.77	14.083	2.79	20.15	0.40
1.967	0.40	8.033	6.77	14.100	2.79	20.17	0.40
1.983	0.40	8.050	6.77	14.117	2.79	20.18	0.40
2.000	0.40	8.067	6.77	14.133	2.79	20.20	0.40
2.017	0.40	8.083	6.77	14.150	2.79	20.22	0.40
2.033	0.40	8.100	6.77	14.167	2.79	20.23	0.40
2.050	0.40	8.117	6.77	14.183	2.79	20.25	0.40
2.067	0.40	8.133	6.77	14.200	2.79	20.27	0.40
2.083	0.40	8.150	6.77	14.217	2.79	20.28	0.40
2.100	0.40	8.167	6.77	14.233	2.79	20.30	0.40
2.117	0.40	8.183	6.77	14.250	2.79	20.32	0.40
2.133	0.40	8.200	6.77	14.267	1.59	20.33	0.40
2.150	0.40	8.217	6.77	14.283	1.59	20.35	0.40
2.167	0.40	8.233	6.77	14.300	1.59	20.37	0.40
2.183	0.40	8.250	6.80	14.317	1.59	20.38	0.40
2.200	0.40	8.267	18.33	14.333	1.59	20.40	0.40
2.217	0.40	8.283	18.33	14.350	1.59	20.42	0.40
2.233	0.40	8.300	18.33	14.367	1.59	20.43	0.40
2.250	0.40	8.317	18.33	14.383	1.59	20.45	0.40
2.267	0.40	8.333	18.33	14.400	1.59	20.47	0.40
2.283	0.40	8.350	18.33	14.417	1.59	20.48	0.40
2.300	0.40	8.367	18.33	14.433	1.59	20.50	0.40
2.317	0.40	8.383	18.33	14.450	1.59	20.52	0.40
2.333	0.40	8.400	18.33	14.467	1.59	20.53	0.40
2.350	0.40	8.417	18.33	14.483	1.59	20.55	0.40
2.367	0.40	8.433	18.33	14.500	1.59	20.57	0.40
2.383	0.40	8.450	18.33	14.517	1.59	20.58	0.40
2.400	0.40	8.467	18.33	14.533	1.59	20.60	0.40
2.417	0.40	8.483	18.33	14.550	1.59	20.62	0.40
2.433	0.40	8.500	18.33	14.567	1.59	20.63	0.40
2.450	0.40	8.517	18.33	14.583	1.59	20.65	0.40
2.467	0.40	8.533	18.33	14.600	1.59	20.67	0.40
2.483	0.40	8.550	18.33	14.617	1.59	20.68	0.40
2.500	0.40	8.567	18.33	14.633	1.59	20.70	0.40
2.517	0.40	8.583	18.33	14.650	1.59	20.72	0.40
2.533	0.40	8.600	18.33	14.667	1.59	20.73	0.40
2.550	0.40	8.617	18.33	14.683	1.59	20.75	0.40
2.567	0.40	8.633	18.33	14.700	1.59	20.77	0.40
2.583	0.40	8.650	18.33	14.717	1.59	20.78	0.40
2.600	0.40	8.667	18.33	14.733	1.59	20.80	0.40
2.617	0.40	8.683	18.33	14.750	1.59	20.82	0.40
2.633	0.40	8.700	18.33	14.767	1.59	20.83	0.40
2.650	0.40	8.717	18.33	14.783	1.59	20.85	0.40
2.667	0.40	8.733	18.33	14.800	1.59	20.87	0.40
2.683	0.40	8.750	18.33	14.817	1.59	20.88	0.40
2.700	0.40	8.767	18.33	14.833	1.59	20.90	0.40
2.717	0.40	8.783	18.33	14.850	1.59	20.92	0.40
2.733	0.40	8.800	18.33	14.867	1.59	20.93	0.40
2.750	0.40	8.817	18.33	14.883	1.59	20.95	0.40
2.767	0.40	8.833	18.33	14.900	1.59	20.97	0.40
2.783	0.40	8.850	18.33	14.917	1.59	20.98	0.40
2.800	0.40	8.867	18.33	14.933	1.59	21.00	0.40
2.817	0.40	8.883	18.33	14.950	1.59	21.02	0.40
2.833	0.40	8.900	18.33	14.967	1.59	21.03	0.40
2.850	0.40	8.917	18.33	14.983	1.59	21.05	0.40
2.867	0.40	8.933	18.33	15.000	1.59	21.07	0.40
2.883	0.40	8.950	18.33	15.017	1.59	21.08	0.40
2.900	0.40	8.967	18.33	15.033	1.59	21.10	0.40
2.917	0.40	8.983	18.33	15.050	1.59	21.12	0.40
2.933	0.40	9.000	18.33	15.067	1.59	21.13	0.40
2.950	0.40	9.017	18.33	15.083	1.59	21.15	0.40
2.967	0.40	9.033	18.33	15.100	1.59	21.17	0.40
2.983	0.40	9.050	18.33	15.117	1.59	21.18	0.40
3.000	0.40	9.067	18.33	15.133	1.59	21.20	0.40
3.017	0.40	9.083	18.33	15.150	1.59	21.22	0.40
3.033	0.40	9.100	18.33	15.167	1.59	21.23	0.40
3.050	0.40	9.117	18.33	15.183	1.59	21.25	0.40
3.067	0.40	9.133	18.33	15.200	1.59	21.27	0.40
3.083	0.40	9.150	18.33	15.217	1.59	21.28	0.40
3.100	0.40	9.167	18.33	15.233	1.59	21.30	0.40
3.117	0.40	9.183	18.33	15.250	1.59	21.32	0.40
3.133	0.40	9.200	18.33	15.267	1.59	21.33	0.40
3.150	0.40	9.217	18.33	15.283	1.59	21.35	0.40
3.167	0.40	9.233	18.33	15.300	1.59	21.37	0.40
3.183	0.40	9.250	18.33	15.317	1.59	21.38	0.40
3.200	0.40	9.267	18.33	15.333	1.59	21.40	0.40

3.217	0.40	9.283	18.33	15.350	1.59	21.42	0.40
3.233	0.40	9.300	18.33	15.367	1.59	21.43	0.40
3.250	0.40	9.317	18.33	15.383	1.59	21.45	0.40
3.267	0.40	9.333	18.33	15.400	1.59	21.47	0.40
3.283	0.40	9.350	18.33	15.417	1.59	21.48	0.40
3.300	0.40	9.367	18.33	15.433	1.59	21.50	0.40
3.317	0.40	9.383	18.33	15.450	1.59	21.52	0.40
3.333	0.40	9.400	18.33	15.467	1.59	21.53	0.40
3.350	0.40	9.417	18.33	15.483	1.59	21.55	0.40
3.367	0.40	9.433	18.33	15.500	1.59	21.57	0.40
3.383	0.40	9.450	18.33	15.517	1.59	21.58	0.40
3.400	0.40	9.467	18.33	15.533	1.59	21.60	0.40
3.417	0.40	9.483	18.33	15.550	1.59	21.62	0.40
3.433	0.40	9.500	18.33	15.567	1.59	21.63	0.40
3.450	0.40	9.517	18.33	15.583	1.59	21.65	0.40
3.467	0.40	9.533	18.33	15.600	1.59	21.67	0.40
3.483	0.40	9.550	18.33	15.617	1.59	21.68	0.40
3.500	0.40	9.567	18.33	15.633	1.59	21.70	0.40
3.517	0.40	9.583	18.33	15.650	1.59	21.72	0.40
3.533	0.40	9.600	18.33	15.667	1.59	21.73	0.40
3.550	0.40	9.617	18.33	15.683	1.59	21.75	0.40
3.567	0.40	9.633	18.33	15.700	1.59	21.77	0.40
3.583	0.40	9.650	18.33	15.717	1.59	21.78	0.40
3.600	0.40	9.667	18.33	15.733	1.59	21.80	0.40
3.617	0.40	9.683	18.33	15.750	1.59	21.82	0.40
3.633	0.40	9.700	18.33	15.767	1.59	21.83	0.40
3.650	0.40	9.717	18.33	15.783	1.59	21.85	0.40
3.667	0.40	9.733	18.33	15.800	1.59	21.87	0.40
3.683	0.40	9.750	18.33	15.817	1.59	21.88	0.40
3.700	0.40	9.767	18.33	15.833	1.59	21.90	0.40
3.717	0.40	9.783	18.33	15.850	1.59	21.92	0.40
3.733	0.40	9.800	18.33	15.867	1.59	21.93	0.40
3.750	0.40	9.817	18.33	15.883	1.59	21.95	0.40
3.767	0.40	9.833	18.33	15.900	1.59	21.97	0.40
3.783	0.40	9.850	18.33	15.917	1.59	21.98	0.40
3.800	0.40	9.867	18.33	15.933	1.59	22.00	0.40
3.817	0.40	9.883	18.33	15.950	1.59	22.02	0.40
3.833	0.40	9.900	18.33	15.967	1.59	22.03	0.40
3.850	0.40	9.917	18.33	15.983	1.59	22.05	0.40
3.867	0.40	9.933	18.33	16.000	1.59	22.07	0.40
3.883	0.40	9.950	18.33	16.017	1.59	22.08	0.40
3.900	0.40	9.967	18.33	16.033	1.59	22.10	0.40
3.917	0.40	9.983	18.33	16.050	1.59	22.12	0.40
3.933	0.40	10.000	18.33	16.067	1.59	22.13	0.40
3.950	0.40	10.017	18.33	16.083	1.59	22.15	0.40
3.967	0.40	10.033	18.33	16.100	1.59	22.17	0.40
3.983	0.40	10.050	18.33	16.117	1.59	22.18	0.40
4.000	0.40	10.067	18.33	16.133	1.59	22.20	0.40
4.017	0.40	10.083	18.33	16.150	1.59	22.22	0.40
4.033	0.40	10.100	18.33	16.167	1.59	22.23	0.40
4.050	0.40	10.117	18.33	16.183	1.59	22.25	0.40
4.067	0.40	10.133	18.33	16.200	1.59	22.27	0.40
4.083	0.40	10.150	18.33	16.217	1.59	22.28	0.40
4.100	0.40	10.167	18.33	16.233	1.59	22.30	0.40
4.117	0.40	10.183	18.33	16.250	1.59	22.32	0.40
4.133	0.40	10.200	18.33	16.267	0.80	22.33	0.40
4.150	0.40	10.217	18.33	16.283	0.80	22.35	0.40
4.167	0.40	10.233	18.33	16.300	0.80	22.37	0.40
4.183	0.40	10.250	18.32	16.317	0.80	22.38	0.40
4.200	0.40	10.267	5.18	16.333	0.80	22.40	0.40
4.217	0.40	10.283	5.18	16.350	0.80	22.42	0.40
4.233	0.40	10.300	5.18	16.367	0.80	22.43	0.40
4.250	0.40	10.317	5.18	16.383	0.80	22.45	0.40
4.267	2.39	10.333	5.18	16.400	0.80	22.47	0.40
4.283	2.39	10.350	5.18	16.417	0.80	22.48	0.40
4.300	2.39	10.367	5.18	16.433	0.80	22.50	0.40
4.317	2.39	10.383	5.18	16.450	0.80	22.52	0.40
4.333	2.39	10.400	5.18	16.467	0.80	22.53	0.40
4.350	2.39	10.417	5.18	16.483	0.80	22.55	0.40
4.367	2.39	10.433	5.18	16.500	0.80	22.57	0.40
4.383	2.39	10.450	5.18	16.517	0.80	22.58	0.40
4.400	2.39	10.467	5.18	16.533	0.80	22.60	0.40
4.417	2.39	10.483	5.18	16.550	0.80	22.62	0.40
4.433	2.39	10.500	5.18	16.567	0.80	22.63	0.40
4.450	2.39	10.517	5.18	16.583	0.80	22.65	0.40
4.467	2.39	10.533	5.18	16.600	0.80	22.67	0.40
4.483	2.39	10.550	5.18	16.617	0.80	22.68	0.40
4.500	2.39	10.567	5.18	16.633	0.80	22.70	0.40
4.517	2.39	10.583	5.18	16.650	0.80	22.72	0.40
4.533	2.39	10.600	5.18	16.667	0.80	22.73	0.40
4.550	2.39	10.617	5.18	16.683	0.80	22.75	0.40
4.567	2.39	10.633	5.18	16.700	0.80	22.77	0.40
4.583	2.39	10.650	5.18	16.717	0.80	22.78	0.40
4.600	2.39	10.667	5.18	16.733	0.80	22.80	0.40
4.617	2.39	10.683	5.18	16.750	0.80	22.82	0.40
4.633	2.39	10.700	5.18	16.767	0.80	22.83	0.40
4.650	2.39	10.717	5.18	16.783	0.80	22.85	0.40
4.667	2.39	10.733	5.18	16.800	0.80	22.87	0.40
4.683	2.39	10.750	5.18	16.817	0.80	22.88	0.40
4.700	2.39	10.767	5.18	16.833	0.80	22.90	0.40
4.717	2.39	10.783	5.18	16.850	0.80	22.92	0.40
4.733	2.39	10.800	5.18	16.867	0.80	22.93	0.40
4.750	2.39	10.817	5.18	16.883	0.80	22.95	0.40
4.767	2.39	10.833	5.18	16.900	0.80	22.97	0.40
4.783	2.39	10.850	5.18	16.917	0.80	22.98	0.40
4.800	2.39	10.867	5.18	16.933	0.80	23.00	0.40
4.817	2.39	10.883	5.18	16.950	0.80	23.02	0.40
4.833	2.39	10.900	5.18	16.967	0.80	23.03	0.40
4.850	2.39	10.917	5.18	16.983	0.80	23.05	0.40
4.867	2.39	10.933	5.18	17.000	0.80	23.07	0.40
4.883	2.39	10.950	5.18	17.017	0.80	23.08	0.40
4.900	2.39	10.967	5.18	17.033	0.80	23.10	0.40
4.917	2.39	10.983	5.18	17.050	0.80	23.12	0.40
4.933	2.39	11.000	5.18	17.067	0.80	23.13	0.40
4.950	2.39	11.017	5.18	17.083	0.80	23.15	0.40
4.967	2.39	11.033	5.18	17.100	0.80	23.17	0.40
4.983	2.39	11.050	5.18	17.117	0.80	23.18	0.40
5.000	2.39	11.067	5.18	17.133	0.80	23.20	0.40
5.017	2.39	11.083	5.18	17.150	0.80	23.22	0.40
5.033	2.39	11.100	5.18	17.167	0.80	23.23	0.40
5.050	2.39	11.117	5.18	17.183	0.80	23.25	0.40
5.067	2.39	11.133	5.18	17.200	0.80	23.27	0.40
5.083	2.39	11.150	5.18	17.217	0.80	23.28	0.40
5.100	2.39	11.167	5.18	17.233	0.80	23.30	0.40
5.117	2.39	11.183	5.18	17.250	0.80	23.32	0.40
5.133	2.39	11.200	5.18	17.267	0.80	23.33	0.40
5.150	2.39	11.217	5.18	17.283	0.80	23.35	0.40
5.167	2.39	11.233	5.18	17.300	0.80	23.37	0.40
5.183	2.39	11.250	5.18	17.317	0.80	23.38	0.40
5.200	2.39	11.267	5.18	17.333	0.80	23.40	0.40
5.217	2.39	11.283	5.18	17.350	0.80	23.42	0.40
5.233	2.39	11.300	5.18	17.367	0.80	23.43	0.40
5.250	2.39	11.317	5.18	17.383	0.80	23.45	0.40
5.267	2.39	11.333	5.18	17.400	0.80	23.47	0.40
5.283	2.39	11.350	5.18	17.417	0.80	23.48	0.40
5.300	2.39	11.367	5.18	17.433	0.80	23.50	0.40
5.317	2.39	11.383	5.18	17.450	0.80	23.52	0.40
5.333	2.39	11.400	5.18	17.467	0.80	23.53	0.40
5.350	2.39	11.417	5.18	17.483	0.80	23.55	0.40
5.367	2.39	11.433	5.18	17.500	0.80	23.57	0.40
5.383	2.39	11.450	5.18	17.517	0.80	23.58	0.40
5.400	2.39	11.467	5.18	17.533	0.80	23.60	0.40
5.417	2.39	11.483	5.18	17.550	0.80	23.62	0.40
5.433	2.39	11.500	5.18	17.567	0.80	23.63	0.40
5.450	2.39	11.517	5.18	17.583	0.80	23.65	0.40
5.467	2.39	11.533	5.18	17.600	0.80	23.67	0.40
5.483	2.39	11.550	5.18	17.617	0.80	23.68	0.40
5.500	2.39	11.567	5.18	17.633	0.80	23.70	0.40
5.517	2.39	11.583	5.18	17.650	0.80	23.72	0.40
5.533	2.39	11.600	5.18	17.667	0.80	23.73	0.40
5.550	2.39	11.617	5.18	17.683	0.80	23.75	0.40
5.567	2.39	11.633	5.18	17.700	0.80	23.77	0.40
5.583	2.39	11.650	5.18	17.717	0.80	23.78	0.40
5.600	2.39	11.667	5.18	17.733	0.80	23.80	0.40
5.617	2.39	11.683	5.18	17.750	0.80	23.82	0.40
5.633	2.39	11.700	5.18	17.767	0.80	23.83	0.40
5.650	2.39	11.717	5.18	17.783	0.80	23.85	0.40
5.667	2.39	11.733	5.18	17.800	0.80	23.87	0.40
5.683	2.39	11.750	5.18	17.817	0.80	23.88	0.40
5.700	2.39	11.767	5.18	17.833	0.80	23.90	0.40
5.717	2.39	11.783	5.18	17.850	0.80	23.92	0.40
5.733	2.39	11.800	5.18	17.867	0.80	23.93	0.40

5.750	2.39	11.817	5.18	17.883	0.80	23.95	0.40
5.767	2.39	11.833	5.18	17.900	0.80	23.97	0.40
5.783	2.39	11.850	5.18	17.917	0.80	23.98	0.40
5.800	2.39	11.867	5.18	17.933	0.80	24.00	0.40
5.817	2.39	11.883	5.18	17.950	0.80	24.02	0.40
5.833	2.39	11.900	5.18	17.967	0.80	24.03	0.40
5.850	2.39	11.917	5.18	17.983	0.80	24.05	0.40
5.867	2.39	11.933	5.18	18.000	0.80	24.07	0.40
5.883	2.39	11.950	5.18	18.017	0.80	24.08	0.40
5.900	2.39	11.967	5.18	18.033	0.80	24.10	0.40
5.917	2.39	11.983	5.18	18.050	0.80	24.12	0.40
5.933	2.39	12.000	5.18	18.067	0.80	24.13	0.40
5.950	2.39	12.017	5.18	18.083	0.80	24.15	0.40
5.967	2.39	12.033	5.18	18.100	0.80	24.17	0.40
5.983	2.39	12.050	5.18	18.117	0.80	24.18	0.40
6.000	2.39	12.067	5.18	18.133	0.80	24.20	0.40
6.017	2.39	12.083	5.18	18.150	0.80	24.22	0.40
6.033	2.39	12.100	5.18	18.167	0.80	24.23	0.40
6.050	2.39	12.117	5.18	18.183	0.80	24.25	0.40
6.067	2.39	12.133	5.18	18.200	0.80		

Max.Eff.Inten.(mm/hr)=	18.33	14.52	
over (min)	6.00	10.00	
Storage Coeff. (min)=	6.02 (ii)	9.38 (ii)	
Unit Hyd. Tpeak (min)=	6.00	10.00	
Unit Hyd. peak (cms)=	0.19	0.12	
			TOTALS
PEAK FLOW (cms)=	0.14	0.00	0.138 (iii)
TIME TO PEAK (hrs)=	9.73	10.25	10.25
RUNOFF VOLUME (mm)=	78.68	49.70	78.41
TOTAL RAINFALL (mm)=	79.70	79.70	79.70
RUNOFF COEFFICIENT =	0.99	0.62	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7626)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0568	0.1530
	0.0239	0.0780	0.0660	0.1730
	0.0370	0.1040	0.0751	0.2000
	0.0451	0.1250	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7567)	2.720	0.138	10.25	78.41
OUTFLOW: ID= 1 (7626)	2.720	0.044	10.62	72.41

PEAK FLOW REDUCTION [Qout/Qin](%)= 31.68
TIME SHIFT OF PEAK FLOW (min)= 22.00
MAXIMUM STORAGE USED (ha.m.)= 0.1216

CALIB			
STANDHYD (7624)	Area (ha)= 1.80		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	1.78	0.02	
Dep. Storage (mm)=	1.00	1.50	
Average Slope (%)=	1.00	0.50	
Length (m)=	109.54	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	2.39	12.150	5.18	18.22	0.80
0.033	0.00	6.100	2.39	12.167	5.18	18.23	0.80
0.050	0.00	6.117	2.39	12.183	5.18	18.25	0.80
0.067	0.00	6.133	2.39	12.200	5.18	18.27	0.40
0.083	0.00	6.150	2.39	12.217	5.18	18.28	0.40
0.100	0.00	6.167	2.39	12.233	5.18	18.30	0.40
0.117	0.00	6.183	2.39	12.250	5.18	18.32	0.40
0.133	0.00	6.200	2.39	12.267	2.79	18.33	0.40
0.150	0.00	6.217	2.39	12.283	2.79	18.35	0.40
0.167	0.00	6.233	2.39	12.300	2.79	18.37	0.40
0.183	0.00	6.250	2.40	12.317	2.79	18.38	0.40
0.200	0.00	6.267	6.77	12.333	2.79	18.40	0.40
0.217	0.00	6.283	6.77	12.350	2.79	18.42	0.40
0.233	0.00	6.300	6.77	12.367	2.79	18.43	0.40
0.250	0.00	6.317	6.77	12.383	2.79	18.45	0.40
0.267	0.40	6.333	6.77	12.400	2.79	18.47	0.40
0.283	0.40	6.350	6.77	12.417	2.79	18.48	0.40
0.300	0.40	6.367	6.77	12.433	2.79	18.50	0.40
0.317	0.40	6.383	6.77	12.450	2.79	18.52	0.40
0.333	0.40	6.400	6.77	12.467	2.79	18.53	0.40
0.350	0.40	6.417	6.77	12.483	2.79	18.55	0.40
0.367	0.40	6.433	6.77	12.500	2.79	18.57	0.40
0.383	0.40	6.450	6.77	12.517	2.79	18.58	0.40
0.400	0.40	6.467	6.77	12.533	2.79	18.60	0.40
0.417	0.40	6.483	6.77	12.550	2.79	18.62	0.40
0.433	0.40	6.500	6.77	12.567	2.79	18.63	0.40
0.450	0.40	6.517	6.77	12.583	2.79	18.65	0.40
0.467	0.40	6.533	6.77	12.600	2.79	18.67	0.40
0.483	0.40	6.550	6.77	12.617	2.79	18.68	0.40
0.500	0.40	6.567	6.77	12.633	2.79	18.70	0.40
0.517	0.40	6.583	6.77	12.650	2.79	18.72	0.40
0.533	0.40	6.600	6.77	12.667	2.79	18.73	0.40
0.550	0.40	6.617	6.77	12.683	2.79	18.75	0.40
0.567	0.40	6.633	6.77	12.700	2.79	18.77	0.40
0.583	0.40	6.650	6.77	12.717	2.79	18.78	0.40
0.600	0.40	6.667	6.77	12.733	2.79	18.80	0.40
0.617	0.40	6.683	6.77	12.750	2.79	18.82	0.40
0.633	0.40	6.700	6.77	12.767	2.79	18.83	0.40
0.650	0.40	6.717	6.77	12.783	2.79	18.85	0.40
0.667	0.40	6.733	6.77	12.800	2.79	18.87	0.40
0.683	0.40	6.750	6.77	12.817	2.79	18.88	0.40
0.700	0.40	6.767	6.77	12.833	2.79	18.90	0.40
0.717	0.40	6.783	6.77	12.850	2.79	18.92	0.40
0.733	0.40	6.800	6.77	12.867	2.79	18.93	0.40
0.750	0.40	6.817	6.77	12.883	2.79	18.95	0.40
0.767	0.40	6.833	6.77	12.900	2.79	18.97	0.40
0.783	0.40	6.850	6.77	12.917	2.79	18.98	0.40
0.800	0.40	6.867	6.77	12.933	2.79	19.00	0.40
0.817	0.40	6.883	6.77	12.950	2.79	19.02	0.40
0.833	0.40	6.900	6.77	12.967	2.79	19.03	0.40
0.850	0.40	6.917	6.77	12.983	2.79	19.05	0.40
0.867	0.40	6.933	6.77	13.000	2.79	19.07	0.40
0.883	0.40	6.950	6.77	13.017	2.79	19.08	0.40
0.900	0.40	6.967	6.77	13.033	2.79	19.10	0.40
0.917	0.40	6.983	6.77	13.050	2.79	19.12	0.40
0.933	0.40	7.000	6.77	13.067	2.79	19.13	0.40
0.950	0.40	7.017	6.77	13.083	2.79	19.15	0.40
0.967	0.40	7.033	6.77	13.100	2.79	19.17	0.40
0.983	0.40	7.050	6.77	13.117	2.79	19.18	0.40
1.000	0.40	7.067	6.77	13.133	2.79	19.20	0.40
1.017	0.40	7.083	6.77	13.150	2.79	19.22	0.40
1.033	0.40	7.100	6.77	13.167	2.79	19.23	0.40
1.050	0.40	7.117	6.77	13.183	2.79	19.25	0.40
1.067	0.40	7.133	6.77	13.200	2.79	19.27	0.40
1.083	0.40	7.150	6.77	13.217	2.79	19.28	0.40
1.100	0.40	7.167	6.77	13.233	2.79	19.30	0.40
1.117	0.40	7.183	6.77	13.250	2.79	19.32	0.40
1.133	0.40	7.200	6.77	13.267	2.79	19.33	0.40
1.150	0.40	7.217	6.77	13.283	2.79	19.35	0.40
1.167	0.40	7.233	6.77	13.300	2.79	19.37	0.40
1.183	0.40	7.250	6.77	13.317	2.79	19.38	0.40
1.200	0.40	7.267	6.77	13.333	2.79	19.40	0.40
1.217	0.40	7.283	6.77	13.350	2.79	19.42	0.40

1.233	0.40	7.300	6.77	13.367	2.79	19.43	0.40
1.250	0.40	7.317	6.77	13.383	2.79	19.45	0.40
1.267	0.40	7.333	6.77	13.400	2.79	19.47	0.40
1.283	0.40	7.350	6.77	13.417	2.79	19.48	0.40
1.300	0.40	7.367	6.77	13.433	2.79	19.50	0.40
1.317	0.40	7.383	6.77	13.450	2.79	19.52	0.40
1.333	0.40	7.400	6.77	13.467	2.79	19.53	0.40
1.350	0.40	7.417	6.77	13.483	2.79	19.55	0.40
1.367	0.40	7.433	6.77	13.500	2.79	19.57	0.40
1.383	0.40	7.450	6.77	13.517	2.79	19.58	0.40
1.400	0.40	7.467	6.77	13.533	2.79	19.60	0.40
1.417	0.40	7.483	6.77	13.550	2.79	19.62	0.40
1.433	0.40	7.500	6.77	13.567	2.79	19.63	0.40
1.450	0.40	7.517	6.77	13.583	2.79	19.65	0.40
1.467	0.40	7.533	6.77	13.600	2.79	19.67	0.40
1.483	0.40	7.550	6.77	13.617	2.79	19.68	0.40
1.500	0.40	7.567	6.77	13.633	2.79	19.70	0.40
1.517	0.40	7.583	6.77	13.650	2.79	19.72	0.40
1.533	0.40	7.600	6.77	13.667	2.79	19.73	0.40
1.550	0.40	7.617	6.77	13.683	2.79	19.75	0.40
1.567	0.40	7.633	6.77	13.700	2.79	19.77	0.40
1.583	0.40	7.650	6.77	13.717	2.79	19.78	0.40
1.600	0.40	7.667	6.77	13.733	2.79	19.80	0.40
1.617	0.40	7.683	6.77	13.750	2.79	19.82	0.40
1.633	0.40	7.700	6.77	13.767	2.79	19.83	0.40
1.650	0.40	7.717	6.77	13.783	2.79	19.85	0.40
1.667	0.40	7.733	6.77	13.800	2.79	19.87	0.40
1.683	0.40	7.750	6.77	13.817	2.79	19.88	0.40
1.700	0.40	7.767	6.77	13.833	2.79	19.90	0.40
1.717	0.40	7.783	6.77	13.850	2.79	19.92	0.40
1.733	0.40	7.800	6.77	13.867	2.79	19.93	0.40
1.750	0.40	7.817	6.77	13.883	2.79	19.95	0.40
1.767	0.40	7.833	6.77	13.900	2.79	19.97	0.40
1.783	0.40	7.850	6.77	13.917	2.79	19.98	0.40
1.800	0.40	7.867	6.77	13.933	2.79	20.00	0.40
1.817	0.40	7.883	6.77	13.950	2.79	20.02	0.40
1.833	0.40	7.900	6.77	13.967	2.79	20.03	0.40
1.850	0.40	7.917	6.77	13.983	2.79	20.05	0.40
1.867	0.40	7.933	6.77	14.000	2.79	20.07	0.40
1.883	0.40	7.950	6.77	14.017	2.79	20.08	0.40
1.900	0.40	7.967	6.77	14.033	2.79	20.10	0.40
1.917	0.40	7.983	6.77	14.050	2.79	20.12	0.40
1.933	0.40	8.000	6.77	14.067	2.79	20.13	0.40
1.950	0.40	8.017	6.77	14.083	2.79	20.15	0.40
1.967	0.40	8.033	6.77	14.100	2.79	20.17	0.40
1.983	0.40	8.050	6.77	14.117	2.79	20.18	0.40
2.000	0.40	8.067	6.77	14.133	2.79	20.20	0.40
2.017	0.40	8.083	6.77	14.150	2.79	20.22	0.40
2.033	0.40	8.100	6.77	14.167	2.79	20.23	0.40
2.050	0.40	8.117	6.77	14.183	2.79	20.25	0.40
2.067	0.40	8.133	6.77	14.200	2.79	20.27	0.40
2.083	0.40	8.150	6.77	14.217	2.79	20.28	0.40
2.100	0.40	8.167	6.77	14.233	2.79	20.30	0.40
2.117	0.40	8.183	6.77	14.250	2.79	20.32	0.40
2.133	0.40	8.200	6.77	14.267	1.59	20.33	0.40
2.150	0.40	8.217	6.77	14.283	1.59	20.35	0.40
2.167	0.40	8.233	6.77	14.300	1.59	20.37	0.40
2.183	0.40	8.250	6.80	14.317	1.59	20.38	0.40
2.200	0.40	8.267	18.33	14.333	1.59	20.40	0.40
2.217	0.40	8.283	18.33	14.350	1.59	20.42	0.40
2.233	0.40	8.300	18.33	14.367	1.59	20.43	0.40
2.250	0.40	8.317	18.33	14.383	1.59	20.45	0.40
2.267	0.40	8.333	18.33	14.400	1.59	20.47	0.40
2.283	0.40	8.350	18.33	14.417	1.59	20.48	0.40
2.300	0.40	8.367	18.33	14.433	1.59	20.50	0.40
2.317	0.40	8.383	18.33	14.450	1.59	20.52	0.40
2.333	0.40	8.400	18.33	14.467	1.59	20.53	0.40
2.350	0.40	8.417	18.33	14.483	1.59	20.55	0.40
2.367	0.40	8.433	18.33	14.500	1.59	20.57	0.40
2.383	0.40	8.450	18.33	14.517	1.59	20.58	0.40
2.400	0.40	8.467	18.33	14.533	1.59	20.60	0.40
2.417	0.40	8.483	18.33	14.550	1.59	20.62	0.40
2.433	0.40	8.500	18.33	14.567	1.59	20.63	0.40
2.450	0.40	8.517	18.33	14.583	1.59	20.65	0.40
2.467	0.40	8.533	18.33	14.600	1.59	20.67	0.40
2.483	0.40	8.550	18.33	14.617	1.59	20.68	0.40
2.500	0.40	8.567	18.33	14.633	1.59	20.70	0.40
2.517	0.40	8.583	18.33	14.650	1.59	20.72	0.40
2.533	0.40	8.600	18.33	14.667	1.59	20.73	0.40
2.550	0.40	8.617	18.33	14.683	1.59	20.75	0.40
2.567	0.40	8.633	18.33	14.700	1.59	20.77	0.40
2.583	0.40	8.650	18.33	14.717	1.59	20.78	0.40
2.600	0.40	8.667	18.33	14.733	1.59	20.80	0.40
2.617	0.40	8.683	18.33	14.750	1.59	20.82	0.40
2.633	0.40	8.700	18.33	14.767	1.59	20.83	0.40
2.650	0.40	8.717	18.33	14.783	1.59	20.85	0.40
2.667	0.40	8.733	18.33	14.800	1.59	20.87	0.40
2.683	0.40	8.750	18.33	14.817	1.59	20.88	0.40
2.700	0.40	8.767	18.33	14.833	1.59	20.90	0.40
2.717	0.40	8.783	18.33	14.850	1.59	20.92	0.40
2.733	0.40	8.800	18.33	14.867	1.59	20.93	0.40
2.750	0.40	8.817	18.33	14.883	1.59	20.95	0.40
2.767	0.40	8.833	18.33	14.900	1.59	20.97	0.40
2.783	0.40	8.850	18.33	14.917	1.59	20.98	0.40
2.800	0.40	8.867	18.33	14.933	1.59	21.00	0.40
2.817	0.40	8.883	18.33	14.950	1.59	21.02	0.40
2.833	0.40	8.900	18.33	14.967	1.59	21.03	0.40
2.850	0.40	8.917	18.33	14.983	1.59	21.05	0.40
2.867	0.40	8.933	18.33	15.000	1.59	21.07	0.40
2.883	0.40	8.950	18.33	15.017	1.59	21.08	0.40
2.900	0.40	8.967	18.33	15.033	1.59	21.10	0.40
2.917	0.40	8.983	18.33	15.050	1.59	21.12	0.40
2.933	0.40	9.000	18.33	15.067	1.59	21.13	0.40
2.950	0.40	9.017	18.33	15.083	1.59	21.15	0.40
2.967	0.40	9.033	18.33	15.100	1.59	21.17	0.40
2.983	0.40	9.050	18.33	15.117	1.59	21.18	0.40
3.000	0.40	9.067	18.33	15.133	1.59	21.20	0.40
3.017	0.40	9.083	18.33	15.150	1.59	21.22	0.40
3.033	0.40	9.100	18.33	15.167	1.59	21.23	0.40
3.050	0.40	9.117	18.33	15.183	1.59	21.25	0.40
3.067	0.40	9.133	18.33	15.200	1.59	21.27	0.40
3.083	0.40	9.150	18.33	15.217	1.59	21.28	0.40
3.100	0.40	9.167	18.33	15.233	1.59	21.30	0.40
3.117	0.40	9.183	18.33	15.250	1.59	21.32	0.40
3.133	0.40	9.200	18.33	15.267	1.59	21.33	0.40
3.150	0.40	9.217	18.33	15.283	1.59	21.35	0.40
3.167	0.40	9.233	18.33	15.300	1.59	21.37	0.40
3.183	0.40	9.250	18.33	15.317	1.59	21.38	0.40
3.200	0.40	9.267	18.33	15.333	1.59	21.40	0.40
3.217	0.40	9.283	18.33	15.350	1.59	21.42	0.40
3.233	0.40	9.300	18.33	15.367	1.59	21.43	0.40
3.250	0.40	9.317	18.33	15.383	1.59	21.45	0.40
3.267	0.40	9.333	18.33	15.400	1.59	21.47	0.40
3.283	0.40	9.350	18.33	15.417	1.59	21.48	0.40
3.300	0.40	9.367	18.33	15.433	1.59	21.50	0.40
3.317	0.40	9.383	18.33	15.450	1.59	21.52	0.40
3.333	0.40	9.400	18.33	15.467	1.59	21.53	0.40
3.350	0.40	9.417	18.33	15.483	1.59	21.55	0.40
3.367	0.40	9.433	18.33	15.500	1.59	21.57	0.40
3.383	0.40	9.450	18.33	15.517	1.59	21.58	0.40
3.400	0.40	9.467	18.33	15.533	1.59	21.60	0.40
3.417	0.40	9.483	18.33	15.550	1.59	21.62	0.40
3.433	0.40	9.500	18.33	15.567	1.59	21.63	0.40
3.450	0.40	9.517	18.33	15.583	1.59	21.65	0.40
3.467	0.40	9.533	18.33	15.600	1.59	21.67	0.40
3.483	0.40	9.550	18.33	15.617	1.59	21.68	0.40
3.500	0.40	9.567	18.33	15.633	1.59	21.70	0.40
3.517	0.40	9.583	18.33	15.650	1.59	21.72	0.40
3.533	0.40	9.600	18.33	15.667	1.59	21.73	0.40
3.550	0.40	9.617	18.33	15.683	1.59	21.75	0.40
3.567	0.40	9.633	18.33	15.700	1.59	21.77	0.40
3.583	0.40	9.650	18.33	15.717	1.59	21.78	0.40
3.600	0.40	9.667	18.33	15.733	1.59	21.80	0.40
3.617	0.40	9.683	18.33	15.750	1.59	21.82	0.40
3.633	0.40	9.700	18.33	15.767	1.59	21.83	0.40
3.650	0.40	9.717	18.33	15.783	1.59	21.85	0.40
3.667	0.40	9.733	18.33	15.800	1.59	21.87	0.40
3.683	0.40	9.750	18.33	15.817	1.59	21.88	0.40
3.700	0.40	9.767	18.33	15.833	1.59	21.90	0.40
3.717	0.40	9.783	18.33	15.850	1.59	21.92	0.40
3.733	0.40	9.800	18.33	15.867	1.59	21.93	0.40
3.750	0.40	9.817	18.33	15.883	1.59	21.95	0.40

3.767	0.40	9.833	18.33	15.900	1.59	21.97	0.40
3.783	0.40	9.850	18.33	15.917	1.59	21.98	0.40
3.800	0.40	9.867	18.33	15.933	1.59	22.00	0.40
3.817	0.40	9.883	18.33	15.950	1.59	22.02	0.40
3.833	0.40	9.900	18.33	15.967	1.59	22.03	0.40
3.850	0.40	9.917	18.33	15.983	1.59	22.05	0.40
3.867	0.40	9.933	18.33	16.000	1.59	22.07	0.40
3.883	0.40	9.950	18.33	16.017	1.59	22.08	0.40
3.900	0.40	9.967	18.33	16.033	1.59	22.10	0.40
3.917	0.40	9.983	18.33	16.050	1.59	22.12	0.40
3.933	0.40	10.000	18.33	16.067	1.59	22.13	0.40
3.950	0.40	10.017	18.33	16.083	1.59	22.15	0.40
3.967	0.40	10.033	18.33	16.100	1.59	22.17	0.40
3.983	0.40	10.050	18.33	16.117	1.59	22.18	0.40
4.000	0.40	10.067	18.33	16.133	1.59	22.20	0.40
4.017	0.40	10.083	18.33	16.150	1.59	22.22	0.40
4.033	0.40	10.100	18.33	16.167	1.59	22.23	0.40
4.050	0.40	10.117	18.33	16.183	1.59	22.25	0.40
4.067	0.40	10.133	18.33	16.200	1.59	22.27	0.40
4.083	0.40	10.150	18.33	16.217	1.59	22.28	0.40
4.100	0.40	10.167	18.33	16.233	1.59	22.30	0.40
4.117	0.40	10.183	18.33	16.250	1.59	22.32	0.40
4.133	0.40	10.200	18.33	16.267	0.80	22.33	0.40
4.150	0.40	10.217	18.33	16.283	0.80	22.35	0.40
4.167	0.40	10.233	18.33	16.300	0.80	22.37	0.40
4.183	0.40	10.250	18.32	16.317	0.80	22.38	0.40
4.200	0.40	10.267	5.18	16.333	0.80	22.40	0.40
4.217	0.40	10.283	5.18	16.350	0.80	22.42	0.40
4.233	0.40	10.300	5.18	16.367	0.80	22.43	0.40
4.250	0.40	10.317	5.18	16.383	0.80	22.45	0.40
4.267	2.39	10.333	5.18	16.400	0.80	22.47	0.40
4.283	2.39	10.350	5.18	16.417	0.80	22.48	0.40
4.300	2.39	10.367	5.18	16.433	0.80	22.50	0.40
4.317	2.39	10.383	5.18	16.450	0.80	22.52	0.40
4.333	2.39	10.400	5.18	16.467	0.80	22.53	0.40
4.350	2.39	10.417	5.18	16.483	0.80	22.55	0.40
4.367	2.39	10.433	5.18	16.500	0.80	22.57	0.40
4.383	2.39	10.450	5.18	16.517	0.80	22.58	0.40
4.400	2.39	10.467	5.18	16.533	0.80	22.60	0.40
4.417	2.39	10.483	5.18	16.550	0.80	22.62	0.40
4.433	2.39	10.500	5.18	16.567	0.80	22.63	0.40
4.450	2.39	10.517	5.18	16.583	0.80	22.65	0.40
4.467	2.39	10.533	5.18	16.600	0.80	22.67	0.40
4.483	2.39	10.550	5.18	16.617	0.80	22.68	0.40
4.500	2.39	10.567	5.18	16.633	0.80	22.70	0.40
4.517	2.39	10.583	5.18	16.650	0.80	22.72	0.40
4.533	2.39	10.600	5.18	16.667	0.80	22.73	0.40
4.550	2.39	10.617	5.18	16.683	0.80	22.75	0.40
4.567	2.39	10.633	5.18	16.700	0.80	22.77	0.40
4.583	2.39	10.650	5.18	16.717	0.80	22.78	0.40
4.600	2.39	10.667	5.18	16.733	0.80	22.80	0.40
4.617	2.39	10.683	5.18	16.750	0.80	22.82	0.40
4.633	2.39	10.700	5.18	16.767	0.80	22.83	0.40
4.650	2.39	10.717	5.18	16.783	0.80	22.85	0.40
4.667	2.39	10.733	5.18	16.800	0.80	22.87	0.40
4.683	2.39	10.750	5.18	16.817	0.80	22.88	0.40
4.700	2.39	10.767	5.18	16.833	0.80	22.90	0.40
4.717	2.39	10.783	5.18	16.850	0.80	22.92	0.40
4.733	2.39	10.800	5.18	16.867	0.80	22.93	0.40
4.750	2.39	10.817	5.18	16.883	0.80	22.95	0.40
4.767	2.39	10.833	5.18	16.900	0.80	22.97	0.40
4.783	2.39	10.850	5.18	16.917	0.80	22.98	0.40
4.800	2.39	10.867	5.18	16.933	0.80	23.00	0.40
4.817	2.39	10.883	5.18	16.950	0.80	23.02	0.40
4.833	2.39	10.900	5.18	16.967	0.80	23.03	0.40
4.850	2.39	10.917	5.18	16.983	0.80	23.05	0.40
4.867	2.39	10.933	5.18	17.000	0.80	23.07	0.40
4.883	2.39	10.950	5.18	17.017	0.80	23.08	0.40
4.900	2.39	10.967	5.18	17.033	0.80	23.10	0.40
4.917	2.39	10.983	5.18	17.050	0.80	23.12	0.40
4.933	2.39	11.000	5.18	17.067	0.80	23.13	0.40
4.950	2.39	11.017	5.18	17.083	0.80	23.15	0.40
4.967	2.39	11.033	5.18	17.100	0.80	23.17	0.40
4.983	2.39	11.050	5.18	17.117	0.80	23.18	0.40
5.000	2.39	11.067	5.18	17.133	0.80	23.20	0.40
5.017	2.39	11.083	5.18	17.150	0.80	23.22	0.40
5.033	2.39	11.100	5.18	17.167	0.80	23.23	0.40
5.050	2.39	11.117	5.18	17.183	0.80	23.25	0.40
5.067	2.39	11.133	5.18	17.200	0.80	23.27	0.40
5.083	2.39	11.150	5.18	17.217	0.80	23.28	0.40
5.100	2.39	11.167	5.18	17.233	0.80	23.30	0.40
5.117	2.39	11.183	5.18	17.250	0.80	23.32	0.40
5.133	2.39	11.200	5.18	17.267	0.80	23.33	0.40
5.150	2.39	11.217	5.18	17.283	0.80	23.35	0.40
5.167	2.39	11.233	5.18	17.300	0.80	23.37	0.40
5.183	2.39	11.250	5.18	17.317	0.80	23.38	0.40
5.200	2.39	11.267	5.18	17.333	0.80	23.40	0.40
5.217	2.39	11.283	5.18	17.350	0.80	23.42	0.40
5.233	2.39	11.300	5.18	17.367	0.80	23.43	0.40
5.250	2.39	11.317	5.18	17.383	0.80	23.45	0.40
5.267	2.39	11.333	5.18	17.400	0.80	23.47	0.40
5.283	2.39	11.350	5.18	17.417	0.80	23.48	0.40
5.300	2.39	11.367	5.18	17.433	0.80	23.50	0.40
5.317	2.39	11.383	5.18	17.450	0.80	23.52	0.40
5.333	2.39	11.400	5.18	17.467	0.80	23.53	0.40
5.350	2.39	11.417	5.18	17.483	0.80	23.55	0.40
5.367	2.39	11.433	5.18	17.500	0.80	23.57	0.40
5.383	2.39	11.450	5.18	17.517	0.80	23.58	0.40
5.400	2.39	11.467	5.18	17.533	0.80	23.60	0.40
5.417	2.39	11.483	5.18	17.550	0.80	23.62	0.40
5.433	2.39	11.500	5.18	17.567	0.80	23.63	0.40
5.450	2.39	11.517	5.18	17.583	0.80	23.65	0.40
5.467	2.39	11.533	5.18	17.600	0.80	23.67	0.40
5.483	2.39	11.550	5.18	17.617	0.80	23.68	0.40
5.500	2.39	11.567	5.18	17.633	0.80	23.70	0.40
5.517	2.39	11.583	5.18	17.650	0.80	23.72	0.40
5.533	2.39	11.600	5.18	17.667	0.80	23.73	0.40
5.550	2.39	11.617	5.18	17.683	0.80	23.75	0.40
5.567	2.39	11.633	5.18	17.700	0.80	23.77	0.40
5.583	2.39	11.650	5.18	17.717	0.80	23.78	0.40
5.600	2.39	11.667	5.18	17.733	0.80	23.80	0.40
5.617	2.39	11.683	5.18	17.750	0.80	23.82	0.40
5.633	2.39	11.700	5.18	17.767	0.80	23.83	0.40
5.650	2.39	11.717	5.18	17.783	0.80	23.85	0.40
5.667	2.39	11.733	5.18	17.800	0.80	23.87	0.40
5.683	2.39	11.750	5.18	17.817	0.80	23.88	0.40
5.700	2.39	11.767	5.18	17.833	0.80	23.90	0.40
5.717	2.39	11.783	5.18	17.850	0.80	23.92	0.40
5.733	2.39	11.800	5.18	17.867	0.80	23.93	0.40
5.750	2.39	11.817	5.18	17.883	0.80	23.95	0.40
5.767	2.39	11.833	5.18	17.900	0.80	23.97	0.40
5.783	2.39	11.850	5.18	17.917	0.80	23.98	0.40
5.800	2.39	11.867	5.18	17.933	0.80	24.00	0.40
5.817	2.39	11.883	5.18	17.950	0.80	24.02	0.40
5.833	2.39	11.900	5.18	17.967	0.80	24.03	0.40
5.850	2.39	11.917	5.18	17.983	0.80	24.05	0.40
5.867	2.39	11.933	5.18	18.000	0.80	24.07	0.40
5.883	2.39	11.950	5.18	18.017	0.80	24.08	0.40
5.900	2.39	11.967	5.18	18.033	0.80	24.10	0.40
5.917	2.39	11.983	5.18	18.050	0.80	24.12	0.40
5.933	2.39	12.000	5.18	18.067	0.80	24.13	0.40
5.950	2.39	12.017	5.18	18.083	0.80	24.15	0.40
5.967	2.39	12.033	5.18	18.100	0.80	24.17	0.40
5.983	2.39	12.050	5.18	18.117	0.80	24.18	0.40
6.000	2.39	12.067	5.18	18.133	0.80	24.20	0.40
6.017	2.39	12.083	5.18	18.150	0.80	24.22	0.40
6.033	2.39	12.100	5.18	18.167	0.80	24.23	0.40
6.050	2.39	12.117	5.18	18.183	0.80	24.25	0.40
6.067	2.39	12.133	5.18	18.200	0.80		

Max.Eff.Inten.(mm/hr)=	18.33	16.14	
over (min)	5.00	9.00	
Storage Coeff. (min)=	5.32 (ii)	8.67 (ii)	
Unit Hyd. Tpeak (min)=	5.00	9.00	
Unit Hyd. peak (cms)=	0.22	0.13	
			TOTALS
PEAK FLOW (cms)=	0.09	0.00	0.092 (iii)
TIME TO PEAK (hrs)=	9.48	10.25	10.23
RUNOFF VOLUME (mm)=	78.68	57.46	78.49
TOTAL RAINFALL (mm)=	79.70	79.70	79.70
RUNOFF COEFFICIENT =	0.99	0.72	0.98

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      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  90.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| RESERVOIR(  7625)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0389      0.1013
                          0.0164     0.0514   |   0.0456      0.1141
                          0.0252     0.0690   |   0.0514      0.1288
                          0.0309     0.0825   |   0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  7624)     1.800     0.092     10.23      78.49
   OUTFLOW: ID= 1 (  7625)     1.800     0.030     10.55      73.02

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 32.59
                  TIME SHIFT OF PEAK FLOW         (min)= 19.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0800

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| CALIB           |
| STANDHYD (  7623)|   Area    (ha)=   1.15
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
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                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.14         0.01
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=      87.56        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.017    0.00 | 6.083    2.39 |12.150    5.18 | 18.22    0.80
               0.033    0.00 | 6.100    2.39 |12.167    5.18 | 18.23    0.80
               0.050    0.00 | 6.117    2.39 |12.183    5.18 | 18.25    0.80
               0.067    0.00 | 6.133    2.39 |12.200    5.18 | 18.27    0.40
               0.083    0.00 | 6.150    2.39 |12.217    5.18 | 18.28    0.40
               0.100    0.00 | 6.167    2.39 |12.233    5.18 | 18.30    0.40
               0.117    0.00 | 6.183    2.39 |12.250    5.18 | 18.32    0.40
               0.133    0.00 | 6.200    2.39 |12.267    2.79 | 18.33    0.40
               0.150    0.00 | 6.217    2.39 |12.283    2.79 | 18.35    0.40
               0.167    0.00 | 6.233    2.39 |12.300    2.79 | 18.37    0.40
               0.183    0.00 | 6.250    2.40 |12.317    2.79 | 18.38    0.40
               0.200    0.00 | 6.267    6.77 |12.333    2.79 | 18.40    0.40
               0.217    0.00 | 6.283    6.77 |12.350    2.79 | 18.42    0.40
               0.233    0.00 | 6.300    6.77 |12.367    2.79 | 18.43    0.40
               0.250    0.00 | 6.317    6.77 |12.383    2.79 | 18.45    0.40
               0.267    0.40 | 6.333    6.77 |12.400    2.79 | 18.47    0.40
               0.283    0.40 | 6.350    6.77 |12.417    2.79 | 18.48    0.40
               0.300    0.40 | 6.367    6.77 |12.433    2.79 | 18.50    0.40
               0.317    0.40 | 6.383    6.77 |12.450    2.79 | 18.52    0.40
               0.333    0.40 | 6.400    6.77 |12.467    2.79 | 18.53    0.40
               0.350    0.40 | 6.417    6.77 |12.483    2.79 | 18.55    0.40
               0.367    0.40 | 6.433    6.77 |12.500    2.79 | 18.57    0.40
               0.383    0.40 | 6.450    6.77 |12.517    2.79 | 18.58    0.40
               0.400    0.40 | 6.467    6.77 |12.533    2.79 | 18.60    0.40
               0.417    0.40 | 6.483    6.77 |12.550    2.79 | 18.62    0.40
               0.433    0.40 | 6.500    6.77 |12.567    2.79 | 18.63    0.40
               0.450    0.40 | 6.517    6.77 |12.583    2.79 | 18.65    0.40
               0.467    0.40 | 6.533    6.77 |12.600    2.79 | 18.67    0.40
               0.483    0.40 | 6.550    6.77 |12.617    2.79 | 18.68    0.40
               0.500    0.40 | 6.567    6.77 |12.633    2.79 | 18.70    0.40
               0.517    0.40 | 6.583    6.77 |12.650    2.79 | 18.72    0.40
               0.533    0.40 | 6.600    6.77 |12.667    2.79 | 18.73    0.40
               0.550    0.40 | 6.617    6.77 |12.683    2.79 | 18.75    0.40
               0.567    0.40 | 6.633    6.77 |12.700    2.79 | 18.77    0.40
               0.583    0.40 | 6.650    6.77 |12.717    2.79 | 18.78    0.40
               0.600    0.40 | 6.667    6.77 |12.733    2.79 | 18.80    0.40
               0.617    0.40 | 6.683    6.77 |12.750    2.79 | 18.82    0.40
               0.633    0.40 | 6.700    6.77 |12.767    2.79 | 18.83    0.40
               0.650    0.40 | 6.717    6.77 |12.783    2.79 | 18.85    0.40
               0.667    0.40 | 6.733    6.77 |12.800    2.79 | 18.87    0.40
               0.683    0.40 | 6.750    6.77 |12.817    2.79 | 18.88    0.40
               0.700    0.40 | 6.767    6.77 |12.833    2.79 | 18.90    0.40
               0.717    0.40 | 6.783    6.77 |12.850    2.79 | 18.92    0.40
               0.733    0.40 | 6.800    6.77 |12.867    2.79 | 18.93    0.40
               0.750    0.40 | 6.817    6.77 |12.883    2.79 | 18.95    0.40
               0.767    0.40 | 6.833    6.77 |12.900    2.79 | 18.97    0.40
               0.783    0.40 | 6.850    6.77 |12.917    2.79 | 18.98    0.40
               0.800    0.40 | 6.867    6.77 |12.933    2.79 | 19.00    0.40
               0.817    0.40 | 6.883    6.77 |12.950    2.79 | 19.02    0.40
               0.833    0.40 | 6.900    6.77 |12.967    2.79 | 19.03    0.40
               0.850    0.40 | 6.917    6.77 |12.983    2.79 | 19.05    0.40
               0.867    0.40 | 6.933    6.77 |13.000    2.79 | 19.07    0.40
               0.883    0.40 | 6.950    6.77 |13.017    2.79 | 19.08    0.40
               0.900    0.40 | 6.967    6.77 |13.033    2.79 | 19.10    0.40
               0.917    0.40 | 6.983    6.77 |13.050    2.79 | 19.12    0.40
               0.933    0.40 | 7.000    6.77 |13.067    2.79 | 19.13    0.40
               0.950    0.40 | 7.017    6.77 |13.083    2.79 | 19.15    0.40
               0.967    0.40 | 7.033    6.77 |13.100    2.79 | 19.17    0.40
               0.983    0.40 | 7.050    6.77 |13.117    2.79 | 19.18    0.40
               1.000    0.40 | 7.067    6.77 |13.133    2.79 | 19.20    0.40
               1.017    0.40 | 7.083    6.77 |13.150    2.79 | 19.22    0.40
               1.033    0.40 | 7.100    6.77 |13.167    2.79 | 19.23    0.40
               1.050    0.40 | 7.117    6.77 |13.183    2.79 | 19.25    0.40
               1.067    0.40 | 7.133    6.77 |13.200    2.79 | 19.27    0.40
               1.083    0.40 | 7.150    6.77 |13.217    2.79 | 19.28    0.40
               1.100    0.40 | 7.167    6.77 |13.233    2.79 | 19.30    0.40
               1.117    0.40 | 7.183    6.77 |13.250    2.79 | 19.32    0.40
               1.133    0.40 | 7.200    6.77 |13.267    2.79 | 19.33    0.40
               1.150    0.40 | 7.217    6.77 |13.283    2.79 | 19.35    0.40
               1.167    0.40 | 7.233    6.77 |13.300    2.79 | 19.37    0.40
               1.183    0.40 | 7.250    6.77 |13.317    2.79 | 19.38    0.40
               1.200    0.40 | 7.267    6.77 |13.333    2.79 | 19.40    0.40
               1.217    0.40 | 7.283    6.77 |13.350    2.79 | 19.42    0.40
               1.233    0.40 | 7.300    6.77 |13.367    2.79 | 19.43    0.40
               1.250    0.40 | 7.317    6.77 |13.383    2.79 | 19.45    0.40
               1.267    0.40 | 7.333    6.77 |13.400    2.79 | 19.47    0.40
               1.283    0.40 | 7.350    6.77 |13.417    2.79 | 19.48    0.40
               1.300    0.40 | 7.367    6.77 |13.433    2.79 | 19.50    0.40
               1.317    0.40 | 7.383    6.77 |13.450    2.79 | 19.52    0.40
               1.333    0.40 | 7.400    6.77 |13.467    2.79 | 19.53    0.40
               1.350    0.40 | 7.417    6.77 |13.483    2.79 | 19.55    0.40
               1.367    0.40 | 7.433    6.77 |13.500    2.79 | 19.57    0.40
               1.383    0.40 | 7.450    6.77 |13.517    2.79 | 19.58    0.40
               1.400    0.40 | 7.467    6.77 |13.533    2.79 | 19.60    0.40
               1.417    0.40 | 7.483    6.77 |13.550    2.79 | 19.62    0.40
               1.433    0.40 | 7.500    6.77 |13.567    2.79 | 19.63    0.40
               1.450    0.40 | 7.517    6.77 |13.583    2.79 | 19.65    0.40
               1.467    0.40 | 7.533    6.77 |13.600    2.79 | 19.67    0.40
               1.483    0.40 | 7.550    6.77 |13.617    2.79 | 19.68    0.40
               1.500    0.40 | 7.567    6.77 |13.633    2.79 | 19.70    0.40
               1.517    0.40 | 7.583    6.77 |13.650    2.79 | 19.72    0.40
               1.533    0.40 | 7.600    6.77 |13.667    2.79 | 19.73    0.40
               1.550    0.40 | 7.617    6.77 |13.683    2.79 | 19.75    0.40
               1.567    0.40 | 7.633    6.77 |13.700    2.79 | 19.77    0.40
               1.583    0.40 | 7.650    6.77 |13.717    2.79 | 19.78    0.40
               1.600    0.40 | 7.667    6.77 |13.733    2.79 | 19.80    0.40
               1.617    0.40 | 7.683    6.77 |13.750    2.79 | 19.82    0.40
               1.633    0.40 | 7.700    6.77 |13.767    2.79 | 19.83    0.40
               1.650    0.40 | 7.717    6.77 |13.783    2.79 | 19.85    0.40
               1.667    0.40 | 7.733    6.77 |13.800    2.79 | 19.87    0.40
               1.683    0.40 | 7.750    6.77 |13.817    2.79 | 19.88    0.40
               1.700    0.40 | 7.767    6.77 |13.833    2.79 | 19.90    0.40
               1.717    0.40 | 7.783    6.77 |13.850    2.79 | 19.92    0.40
               1.733    0.40 | 7.800    6.77 |13.867    2.79 | 19.93    0.40
               1.750    0.40 | 7.817    6.77 |13.883    2.79 | 19.95    0.40
               1.767    0.40 | 7.833    6.77 |13.900    2.79 | 19.97    0.40
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1.783	0.40	7.850	6.77	13.917	2.79	19.98	0.40
1.800	0.40	7.867	6.77	13.933	2.79	20.00	0.40
1.817	0.40	7.883	6.77	13.950	2.79	20.02	0.40
1.833	0.40	7.900	6.77	13.967	2.79	20.03	0.40
1.850	0.40	7.917	6.77	13.983	2.79	20.05	0.40
1.867	0.40	7.933	6.77	14.000	2.79	20.07	0.40
1.883	0.40	7.950	6.77	14.017	2.79	20.08	0.40
1.900	0.40	7.967	6.77	14.033	2.79	20.10	0.40
1.917	0.40	7.983	6.77	14.050	2.79	20.12	0.40
1.933	0.40	8.000	6.77	14.067	2.79	20.13	0.40
1.950	0.40	8.017	6.77	14.083	2.79	20.15	0.40
1.967	0.40	8.033	6.77	14.100	2.79	20.17	0.40
1.983	0.40	8.050	6.77	14.117	2.79	20.18	0.40
2.000	0.40	8.067	6.77	14.133	2.79	20.20	0.40
2.017	0.40	8.083	6.77	14.150	2.79	20.22	0.40
2.033	0.40	8.100	6.77	14.167	2.79	20.23	0.40
2.050	0.40	8.117	6.77	14.183	2.79	20.25	0.40
2.067	0.40	8.133	6.77	14.200	2.79	20.27	0.40
2.083	0.40	8.150	6.77	14.217	2.79	20.28	0.40
2.100	0.40	8.167	6.77	14.233	2.79	20.30	0.40
2.117	0.40	8.183	6.77	14.250	2.79	20.32	0.40
2.133	0.40	8.200	6.77	14.267	1.59	20.33	0.40
2.150	0.40	8.217	6.77	14.283	1.59	20.35	0.40
2.167	0.40	8.233	6.77	14.300	1.59	20.37	0.40
2.183	0.40	8.250	6.80	14.317	1.59	20.38	0.40
2.200	0.40	8.267	18.33	14.333	1.59	20.40	0.40
2.217	0.40	8.283	18.33	14.350	1.59	20.42	0.40
2.233	0.40	8.300	18.33	14.367	1.59	20.43	0.40
2.250	0.40	8.317	18.33	14.383	1.59	20.45	0.40
2.267	0.40	8.333	18.33	14.400	1.59	20.47	0.40
2.283	0.40	8.350	18.33	14.417	1.59	20.48	0.40
2.300	0.40	8.367	18.33	14.433	1.59	20.50	0.40
2.317	0.40	8.383	18.33	14.450	1.59	20.52	0.40
2.333	0.40	8.400	18.33	14.467	1.59	20.53	0.40
2.350	0.40	8.417	18.33	14.483	1.59	20.55	0.40
2.367	0.40	8.433	18.33	14.500	1.59	20.57	0.40
2.383	0.40	8.450	18.33	14.517	1.59	20.58	0.40
2.400	0.40	8.467	18.33	14.533	1.59	20.60	0.40
2.417	0.40	8.483	18.33	14.550	1.59	20.62	0.40
2.433	0.40	8.500	18.33	14.567	1.59	20.63	0.40
2.450	0.40	8.517	18.33	14.583	1.59	20.65	0.40
2.467	0.40	8.533	18.33	14.600	1.59	20.67	0.40
2.483	0.40	8.550	18.33	14.617	1.59	20.68	0.40
2.500	0.40	8.567	18.33	14.633	1.59	20.70	0.40
2.517	0.40	8.583	18.33	14.650	1.59	20.72	0.40
2.533	0.40	8.600	18.33	14.667	1.59	20.73	0.40
2.550	0.40	8.617	18.33	14.683	1.59	20.75	0.40
2.567	0.40	8.633	18.33	14.700	1.59	20.77	0.40
2.583	0.40	8.650	18.33	14.717	1.59	20.78	0.40
2.600	0.40	8.667	18.33	14.733	1.59	20.80	0.40
2.617	0.40	8.683	18.33	14.750	1.59	20.82	0.40
2.633	0.40	8.700	18.33	14.767	1.59	20.83	0.40
2.650	0.40	8.717	18.33	14.783	1.59	20.85	0.40
2.667	0.40	8.733	18.33	14.800	1.59	20.87	0.40
2.683	0.40	8.750	18.33	14.817	1.59	20.88	0.40
2.700	0.40	8.767	18.33	14.833	1.59	20.90	0.40
2.717	0.40	8.783	18.33	14.850	1.59	20.92	0.40
2.733	0.40	8.800	18.33	14.867	1.59	20.93	0.40
2.750	0.40	8.817	18.33	14.883	1.59	20.95	0.40
2.767	0.40	8.833	18.33	14.900	1.59	20.97	0.40
2.783	0.40	8.850	18.33	14.917	1.59	20.98	0.40
2.800	0.40	8.867	18.33	14.933	1.59	21.00	0.40
2.817	0.40	8.883	18.33	14.950	1.59	21.02	0.40
2.833	0.40	8.900	18.33	14.967	1.59	21.03	0.40
2.850	0.40	8.917	18.33	14.983	1.59	21.05	0.40
2.867	0.40	8.933	18.33	15.000	1.59	21.07	0.40
2.883	0.40	8.950	18.33	15.017	1.59	21.08	0.40
2.900	0.40	8.967	18.33	15.033	1.59	21.10	0.40
2.917	0.40	8.983	18.33	15.050	1.59	21.12	0.40
2.933	0.40	9.000	18.33	15.067	1.59	21.13	0.40
2.950	0.40	9.017	18.33	15.083	1.59	21.15	0.40
2.967	0.40	9.033	18.33	15.100	1.59	21.17	0.40
2.983	0.40	9.050	18.33	15.117	1.59	21.18	0.40
3.000	0.40	9.067	18.33	15.133	1.59	21.20	0.40
3.017	0.40	9.083	18.33	15.150	1.59	21.22	0.40
3.033	0.40	9.100	18.33	15.167	1.59	21.23	0.40
3.050	0.40	9.117	18.33	15.183	1.59	21.25	0.40
3.067	0.40	9.133	18.33	15.200	1.59	21.27	0.40
3.083	0.40	9.150	18.33	15.217	1.59	21.28	0.40
3.100	0.40	9.167	18.33	15.233	1.59	21.30	0.40
3.117	0.40	9.183	18.33	15.250	1.59	21.32	0.40
3.133	0.40	9.200	18.33	15.267	1.59	21.33	0.40
3.150	0.40	9.217	18.33	15.283	1.59	21.35	0.40
3.167	0.40	9.233	18.33	15.300	1.59	21.37	0.40
3.183	0.40	9.250	18.33	15.317	1.59	21.38	0.40
3.200	0.40	9.267	18.33	15.333	1.59	21.40	0.40
3.217	0.40	9.283	18.33	15.350	1.59	21.42	0.40
3.233	0.40	9.300	18.33	15.367	1.59	21.43	0.40
3.250	0.40	9.317	18.33	15.383	1.59	21.45	0.40
3.267	0.40	9.333	18.33	15.400	1.59	21.47	0.40
3.283	0.40	9.350	18.33	15.417	1.59	21.48	0.40
3.300	0.40	9.367	18.33	15.433	1.59	21.50	0.40
3.317	0.40	9.383	18.33	15.450	1.59	21.52	0.40
3.333	0.40	9.400	18.33	15.467	1.59	21.53	0.40
3.350	0.40	9.417	18.33	15.483	1.59	21.55	0.40
3.367	0.40	9.433	18.33	15.500	1.59	21.57	0.40
3.383	0.40	9.450	18.33	15.517	1.59	21.58	0.40
3.400	0.40	9.467	18.33	15.533	1.59	21.60	0.40
3.417	0.40	9.483	18.33	15.550	1.59	21.62	0.40
3.433	0.40	9.500	18.33	15.567	1.59	21.63	0.40
3.450	0.40	9.517	18.33	15.583	1.59	21.65	0.40
3.467	0.40	9.533	18.33	15.600	1.59	21.67	0.40
3.483	0.40	9.550	18.33	15.617	1.59	21.68	0.40
3.500	0.40	9.567	18.33	15.633	1.59	21.70	0.40
3.517	0.40	9.583	18.33	15.650	1.59	21.72	0.40
3.533	0.40	9.600	18.33	15.667	1.59	21.73	0.40
3.550	0.40	9.617	18.33	15.683	1.59	21.75	0.40
3.567	0.40	9.633	18.33	15.700	1.59	21.77	0.40
3.583	0.40	9.650	18.33	15.717	1.59	21.78	0.40
3.600	0.40	9.667	18.33	15.733	1.59	21.80	0.40
3.617	0.40	9.683	18.33	15.750	1.59	21.82	0.40
3.633	0.40	9.700	18.33	15.767	1.59	21.83	0.40
3.650	0.40	9.717	18.33	15.783	1.59	21.85	0.40
3.667	0.40	9.733	18.33	15.800	1.59	21.87	0.40
3.683	0.40	9.750	18.33	15.817	1.59	21.88	0.40
3.700	0.40	9.767	18.33	15.833	1.59	21.90	0.40
3.717	0.40	9.783	18.33	15.850	1.59	21.92	0.40
3.733	0.40	9.800	18.33	15.867	1.59	21.93	0.40
3.750	0.40	9.817	18.33	15.883	1.59	21.95	0.40
3.767	0.40	9.833	18.33	15.900	1.59	21.97	0.40
3.783	0.40	9.850	18.33	15.917	1.59	21.98	0.40
3.800	0.40	9.867	18.33	15.933	1.59	22.00	0.40
3.817	0.40	9.883	18.33	15.950	1.59	22.02	0.40
3.833	0.40	9.900	18.33	15.967	1.59	22.03	0.40
3.850	0.40	9.917	18.33	15.983	1.59	22.05	0.40
3.867	0.40	9.933	18.33	16.000	1.59	22.07	0.40
3.883	0.40	9.950	18.33	16.017	1.59	22.08	0.40
3.900	0.40	9.967	18.33	16.033	1.59	22.10	0.40
3.917	0.40	9.983	18.33	16.050	1.59	22.12	0.40
3.933	0.40	10.000	18.33	16.067	1.59	22.13	0.40
3.950	0.40	10.017	18.33	16.083	1.59	22.15	0.40
3.967	0.40	10.033	18.33	16.100	1.59	22.17	0.40
3.983	0.40	10.050	18.33	16.117	1.59	22.18	0.40
4.000	0.40	10.067	18.33	16.133	1.59	22.20	0.40
4.017	0.40	10.083	18.33	16.150	1.59	22.22	0.40
4.033	0.40	10.100	18.33	16.167	1.59	22.23	0.40
4.050	0.40	10.117	18.33	16.183	1.59	22.25	0.40
4.067	0.40	10.133	18.33	16.200	1.59	22.27	0.40
4.083	0.40	10.150	18.33	16.217	1.59	22.28	0.40
4.100	0.40	10.167	18.33	16.233	1.59	22.30	0.40
4.117	0.40	10.183	18.33	16.250	1.59	22.32	0.40
4.133	0.40	10.200	18.33	16.267	0.80	22.33	0.40
4.150	0.40	10.217	18.33	16.283	0.80	22.35	0.40
4.167	0.40	10.233	18.33	16.300	0.80	22.37	0.40
4.183	0.40	10.250	18.32	16.317	0.80	22.38	0.40
4.200	0.40	10.267	5.18	16.333	0.80	22.40	0.40
4.217	0.40	10.283	5.18	16.350	0.80	22.42	0.40
4.233	0.40	10.300	5.18	16.367	0.80	22.43	0.40
4.250	0.40	10.317	5.18	16.383	0.80	22.45	0.40
4.267	2.39	10.333	5.18	16.400	0.80	22.47	0.40
4.283	2.39	10.350	5.18	16.417	0.80	22.48	0.40
4.300	2.39	10.367	5.18	16.433	0.80	22.50	0.40

4.317	2.39	10.383	5.18	16.450	0.80	22.52	0.40
4.333	2.39	10.400	5.18	16.467	0.80	22.53	0.40
4.350	2.39	10.417	5.18	16.483	0.80	22.55	0.40
4.367	2.39	10.433	5.18	16.500	0.80	22.57	0.40
4.383	2.39	10.450	5.18	16.517	0.80	22.58	0.40
4.400	2.39	10.467	5.18	16.533	0.80	22.60	0.40
4.417	2.39	10.483	5.18	16.550	0.80	22.62	0.40
4.433	2.39	10.500	5.18	16.567	0.80	22.63	0.40
4.450	2.39	10.517	5.18	16.583	0.80	22.65	0.40
4.467	2.39	10.533	5.18	16.600	0.80	22.67	0.40
4.483	2.39	10.550	5.18	16.617	0.80	22.68	0.40
4.500	2.39	10.567	5.18	16.633	0.80	22.70	0.40
4.517	2.39	10.583	5.18	16.650	0.80	22.72	0.40
4.533	2.39	10.600	5.18	16.667	0.80	22.73	0.40
4.550	2.39	10.617	5.18	16.683	0.80	22.75	0.40
4.567	2.39	10.633	5.18	16.700	0.80	22.77	0.40
4.583	2.39	10.650	5.18	16.717	0.80	22.78	0.40
4.600	2.39	10.667	5.18	16.733	0.80	22.80	0.40
4.617	2.39	10.683	5.18	16.750	0.80	22.82	0.40
4.633	2.39	10.700	5.18	16.767	0.80	22.83	0.40
4.650	2.39	10.717	5.18	16.783	0.80	22.85	0.40
4.667	2.39	10.733	5.18	16.800	0.80	22.87	0.40
4.683	2.39	10.750	5.18	16.817	0.80	22.88	0.40
4.700	2.39	10.767	5.18	16.833	0.80	22.90	0.40
4.717	2.39	10.783	5.18	16.850	0.80	22.92	0.40
4.733	2.39	10.800	5.18	16.867	0.80	22.93	0.40
4.750	2.39	10.817	5.18	16.883	0.80	22.95	0.40
4.767	2.39	10.833	5.18	16.900	0.80	22.97	0.40
4.783	2.39	10.850	5.18	16.917	0.80	22.98	0.40
4.800	2.39	10.867	5.18	16.933	0.80	23.00	0.40
4.817	2.39	10.883	5.18	16.950	0.80	23.02	0.40
4.833	2.39	10.900	5.18	16.967	0.80	23.03	0.40
4.850	2.39	10.917	5.18	16.983	0.80	23.05	0.40
4.867	2.39	10.933	5.18	17.000	0.80	23.07	0.40
4.883	2.39	10.950	5.18	17.017	0.80	23.08	0.40
4.900	2.39	10.967	5.18	17.033	0.80	23.10	0.40
4.917	2.39	10.983	5.18	17.050	0.80	23.12	0.40
4.933	2.39	11.000	5.18	17.067	0.80	23.13	0.40
4.950	2.39	11.017	5.18	17.083	0.80	23.15	0.40
4.967	2.39	11.033	5.18	17.100	0.80	23.17	0.40
4.983	2.39	11.050	5.18	17.117	0.80	23.18	0.40
5.000	2.39	11.067	5.18	17.133	0.80	23.20	0.40
5.017	2.39	11.083	5.18	17.150	0.80	23.22	0.40
5.033	2.39	11.100	5.18	17.167	0.80	23.23	0.40
5.050	2.39	11.117	5.18	17.183	0.80	23.25	0.40
5.067	2.39	11.133	5.18	17.200	0.80	23.27	0.40
5.083	2.39	11.150	5.18	17.217	0.80	23.28	0.40
5.100	2.39	11.167	5.18	17.233	0.80	23.30	0.40
5.117	2.39	11.183	5.18	17.250	0.80	23.32	0.40
5.133	2.39	11.200	5.18	17.267	0.80	23.33	0.40
5.150	2.39	11.217	5.18	17.283	0.80	23.35	0.40
5.167	2.39	11.233	5.18	17.300	0.80	23.37	0.40
5.183	2.39	11.250	5.18	17.317	0.80	23.38	0.40
5.200	2.39	11.267	5.18	17.333	0.80	23.40	0.40
5.217	2.39	11.283	5.18	17.350	0.80	23.42	0.40
5.233	2.39	11.300	5.18	17.367	0.80	23.43	0.40
5.250	2.39	11.317	5.18	17.383	0.80	23.45	0.40
5.267	2.39	11.333	5.18	17.400	0.80	23.47	0.40
5.283	2.39	11.350	5.18	17.417	0.80	23.48	0.40
5.300	2.39	11.367	5.18	17.433	0.80	23.50	0.40
5.317	2.39	11.383	5.18	17.450	0.80	23.52	0.40
5.333	2.39	11.400	5.18	17.467	0.80	23.53	0.40
5.350	2.39	11.417	5.18	17.483	0.80	23.55	0.40
5.367	2.39	11.433	5.18	17.500	0.80	23.57	0.40
5.383	2.39	11.450	5.18	17.517	0.80	23.58	0.40
5.400	2.39	11.467	5.18	17.533	0.80	23.60	0.40
5.417	2.39	11.483	5.18	17.550	0.80	23.62	0.40
5.433	2.39	11.500	5.18	17.567	0.80	23.63	0.40
5.450	2.39	11.517	5.18	17.583	0.80	23.65	0.40
5.467	2.39	11.533	5.18	17.600	0.80	23.67	0.40
5.483	2.39	11.550	5.18	17.617	0.80	23.68	0.40
5.500	2.39	11.567	5.18	17.633	0.80	23.70	0.40
5.517	2.39	11.583	5.18	17.650	0.80	23.72	0.40
5.533	2.39	11.600	5.18	17.667	0.80	23.73	0.40
5.550	2.39	11.617	5.18	17.683	0.80	23.75	0.40
5.567	2.39	11.633	5.18	17.700	0.80	23.77	0.40
5.583	2.39	11.650	5.18	17.717	0.80	23.78	0.40
5.600	2.39	11.667	5.18	17.733	0.80	23.80	0.40
5.617	2.39	11.683	5.18	17.750	0.80	23.82	0.40
5.633	2.39	11.700	5.18	17.767	0.80	23.83	0.40
5.650	2.39	11.717	5.18	17.783	0.80	23.85	0.40
5.667	2.39	11.733	5.18	17.800	0.80	23.87	0.40
5.683	2.39	11.750	5.18	17.817	0.80	23.88	0.40
5.700	2.39	11.767	5.18	17.833	0.80	23.90	0.40
5.717	2.39	11.783	5.18	17.850	0.80	23.92	0.40
5.733	2.39	11.800	5.18	17.867	0.80	23.93	0.40
5.750	2.39	11.817	5.18	17.883	0.80	23.95	0.40
5.767	2.39	11.833	5.18	17.900	0.80	23.97	0.40
5.783	2.39	11.850	5.18	17.917	0.80	23.98	0.40
5.800	2.39	11.867	5.18	17.933	0.80	24.00	0.40
5.817	2.39	11.883	5.18	17.950	0.80	24.02	0.40
5.833	2.39	11.900	5.18	17.967	0.80	24.03	0.40
5.850	2.39	11.917	5.18	17.983	0.80	24.05	0.40
5.867	2.39	11.933	5.18	18.000	0.80	24.07	0.40
5.883	2.39	11.950	5.18	18.017	0.80	24.08	0.40
5.900	2.39	11.967	5.18	18.033	0.80	24.10	0.40
5.917	2.39	11.983	5.18	18.050	0.80	24.12	0.40
5.933	2.39	12.000	5.18	18.067	0.80	24.13	0.40
5.950	2.39	12.017	5.18	18.083	0.80	24.15	0.40
5.967	2.39	12.033	5.18	18.100	0.80	24.17	0.40
5.983	2.39	12.050	5.18	18.117	0.80	24.18	0.40
6.000	2.39	12.067	5.18	18.133	0.80	24.20	0.40
6.017	2.39	12.083	5.18	18.150	0.80	24.22	0.40
6.033	2.39	12.100	5.18	18.167	0.80	24.23	0.40
6.050	2.39	12.117	5.18	18.183	0.80	24.25	0.40
6.067	2.39	12.133	5.18	18.200	0.80		

Max.Eff.Inten.(mm/hr)=	18.33	14.52	
over (min)	5.00	9.00	
Storage Coeff. (min)=	4.65 (ii)	8.01 (ii)	
Unit Hyd. Tpeak (min)=	5.00	9.00	
Unit Hyd. peak (cms)=	0.24	0.14	
			TOTALS
PEAK FLOW (cms)=	0.06	0.00	0.058 (iii)
TIME TO PEAK (hrs)=	9.48	10.25	10.23
RUNOFF VOLUME (mm)=	78.69	49.71	78.41
TOTAL RAINFALL (mm)=	79.70	79.70	79.70
RUNOFF COEFFICIENT =	0.99	0.62	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7622)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0258	0.0650
	0.0108	0.0330	0.0302	0.0725
	0.0167	0.0440	0.0340	0.0820
	0.0204	0.0525	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7623)	1.150	0.058	10.23	78.41
OUTFLOW: ID= 1 (7622)	1.150	0.020	10.50	73.31

PEAK FLOW REDUCTION [Qout/Qin](%)= 33.59
TIME SHIFT OF PEAK FLOW (min)= 16.00
MAXIMUM STORAGE USED (ha.m.)= 0.0507

CALIB			
STANDHYD (7629)	Area (ha)= 4.09		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	

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		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	4.05	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	165.13	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	2.39	12.150	5.18	18.22	0.80
0.033	0.00	6.100	2.39	12.167	5.18	18.23	0.80
0.050	0.00	6.117	2.39	12.183	5.18	18.25	0.80
0.067	0.00	6.133	2.39	12.200	5.18	18.27	0.40
0.083	0.00	6.150	2.39	12.217	5.18	18.28	0.40
0.100	0.00	6.167	2.39	12.233	5.18	18.30	0.40
0.117	0.00	6.183	2.39	12.250	5.18	18.32	0.40
0.133	0.00	6.200	2.39	12.267	2.79	18.33	0.40
0.150	0.00	6.217	2.39	12.283	2.79	18.35	0.40
0.167	0.00	6.233	2.39	12.300	2.79	18.37	0.40
0.183	0.00	6.250	2.40	12.317	2.79	18.38	0.40
0.200	0.00	6.267	6.77	12.333	2.79	18.40	0.40
0.217	0.00	6.283	6.77	12.350	2.79	18.42	0.40
0.233	0.00	6.300	6.77	12.367	2.79	18.43	0.40
0.250	0.00	6.317	6.77	12.383	2.79	18.45	0.40
0.267	0.40	6.333	6.77	12.400	2.79	18.47	0.40
0.283	0.40	6.350	6.77	12.417	2.79	18.48	0.40
0.300	0.40	6.367	6.77	12.433	2.79	18.50	0.40
0.317	0.40	6.383	6.77	12.450	2.79	18.52	0.40
0.333	0.40	6.400	6.77	12.467	2.79	18.53	0.40
0.350	0.40	6.417	6.77	12.483	2.79	18.55	0.40
0.367	0.40	6.433	6.77	12.500	2.79	18.57	0.40
0.383	0.40	6.450	6.77	12.517	2.79	18.58	0.40
0.400	0.40	6.467	6.77	12.533	2.79	18.60	0.40
0.417	0.40	6.483	6.77	12.550	2.79	18.62	0.40
0.433	0.40	6.500	6.77	12.567	2.79	18.63	0.40
0.450	0.40	6.517	6.77	12.583	2.79	18.65	0.40
0.467	0.40	6.533	6.77	12.600	2.79	18.67	0.40
0.483	0.40	6.550	6.77	12.617	2.79	18.68	0.40
0.500	0.40	6.567	6.77	12.633	2.79	18.70	0.40
0.517	0.40	6.583	6.77	12.650	2.79	18.72	0.40
0.533	0.40	6.600	6.77	12.667	2.79	18.73	0.40
0.550	0.40	6.617	6.77	12.683	2.79	18.75	0.40
0.567	0.40	6.633	6.77	12.700	2.79	18.77	0.40
0.583	0.40	6.650	6.77	12.717	2.79	18.78	0.40
0.600	0.40	6.667	6.77	12.733	2.79	18.80	0.40
0.617	0.40	6.683	6.77	12.750	2.79	18.82	0.40
0.633	0.40	6.700	6.77	12.767	2.79	18.83	0.40
0.650	0.40	6.717	6.77	12.783	2.79	18.85	0.40
0.667	0.40	6.733	6.77	12.800	2.79	18.87	0.40
0.683	0.40	6.750	6.77	12.817	2.79	18.88	0.40
0.700	0.40	6.767	6.77	12.833	2.79	18.90	0.40
0.717	0.40	6.783	6.77	12.850	2.79	18.92	0.40
0.733	0.40	6.800	6.77	12.867	2.79	18.93	0.40
0.750	0.40	6.817	6.77	12.883	2.79	18.95	0.40
0.767	0.40	6.833	6.77	12.900	2.79	18.97	0.40
0.783	0.40	6.850	6.77	12.917	2.79	18.98	0.40
0.800	0.40	6.867	6.77	12.933	2.79	19.00	0.40
0.817	0.40	6.883	6.77	12.950	2.79	19.02	0.40
0.833	0.40	6.900	6.77	12.967	2.79	19.03	0.40
0.850	0.40	6.917	6.77	12.983	2.79	19.05	0.40
0.867	0.40	6.933	6.77	13.000	2.79	19.07	0.40
0.883	0.40	6.950	6.77	13.017	2.79	19.08	0.40
0.900	0.40	6.967	6.77	13.033	2.79	19.10	0.40
0.917	0.40	6.983	6.77	13.050	2.79	19.12	0.40
0.933	0.40	7.000	6.77	13.067	2.79	19.13	0.40
0.950	0.40	7.017	6.77	13.083	2.79	19.15	0.40
0.967	0.40	7.033	6.77	13.100	2.79	19.17	0.40
0.983	0.40	7.050	6.77	13.117	2.79	19.18	0.40
1.000	0.40	7.067	6.77	13.133	2.79	19.20	0.40
1.017	0.40	7.083	6.77	13.150	2.79	19.22	0.40
1.033	0.40	7.100	6.77	13.167	2.79	19.23	0.40
1.050	0.40	7.117	6.77	13.183	2.79	19.25	0.40
1.067	0.40	7.133	6.77	13.200	2.79	19.27	0.40
1.083	0.40	7.150	6.77	13.217	2.79	19.28	0.40
1.100	0.40	7.167	6.77	13.233	2.79	19.30	0.40
1.117	0.40	7.183	6.77	13.250	2.79	19.32	0.40
1.133	0.40	7.200	6.77	13.267	2.79	19.33	0.40
1.150	0.40	7.217	6.77	13.283	2.79	19.35	0.40
1.167	0.40	7.233	6.77	13.300	2.79	19.37	0.40
1.183	0.40	7.250	6.77	13.317	2.79	19.38	0.40
1.200	0.40	7.267	6.77	13.333	2.79	19.40	0.40
1.217	0.40	7.283	6.77	13.350	2.79	19.42	0.40
1.233	0.40	7.300	6.77	13.367	2.79	19.43	0.40
1.250	0.40	7.317	6.77	13.383	2.79	19.45	0.40
1.267	0.40	7.333	6.77	13.400	2.79	19.47	0.40
1.283	0.40	7.350	6.77	13.417	2.79	19.48	0.40
1.300	0.40	7.367	6.77	13.433	2.79	19.50	0.40
1.317	0.40	7.383	6.77	13.450	2.79	19.52	0.40
1.333	0.40	7.400	6.77	13.467	2.79	19.53	0.40
1.350	0.40	7.417	6.77	13.483	2.79	19.55	0.40
1.367	0.40	7.433	6.77	13.500	2.79	19.57	0.40
1.383	0.40	7.450	6.77	13.517	2.79	19.58	0.40
1.400	0.40	7.467	6.77	13.533	2.79	19.60	0.40
1.417	0.40	7.483	6.77	13.550	2.79	19.62	0.40
1.433	0.40	7.500	6.77	13.567	2.79	19.63	0.40
1.450	0.40	7.517	6.77	13.583	2.79	19.65	0.40
1.467	0.40	7.533	6.77	13.600	2.79	19.67	0.40
1.483	0.40	7.550	6.77	13.617	2.79	19.68	0.40
1.500	0.40	7.567	6.77	13.633	2.79	19.70	0.40
1.517	0.40	7.583	6.77	13.650	2.79	19.72	0.40
1.533	0.40	7.600	6.77	13.667	2.79	19.73	0.40
1.550	0.40	7.617	6.77	13.683	2.79	19.75	0.40
1.567	0.40	7.633	6.77	13.700	2.79	19.77	0.40
1.583	0.40	7.650	6.77	13.717	2.79	19.78	0.40
1.600	0.40	7.667	6.77	13.733	2.79	19.80	0.40
1.617	0.40	7.683	6.77	13.750	2.79	19.82	0.40
1.633	0.40	7.700	6.77	13.767	2.79	19.83	0.40
1.650	0.40	7.717	6.77	13.783	2.79	19.85	0.40
1.667	0.40	7.733	6.77	13.800	2.79	19.87	0.40
1.683	0.40	7.750	6.77	13.817	2.79	19.88	0.40
1.700	0.40	7.767	6.77	13.833	2.79	19.90	0.40
1.717	0.40	7.783	6.77	13.850	2.79	19.92	0.40
1.733	0.40	7.800	6.77	13.867	2.79	19.93	0.40
1.750	0.40	7.817	6.77	13.883	2.79	19.95	0.40
1.767	0.40	7.833	6.77	13.900	2.79	19.97	0.40
1.783	0.40	7.850	6.77	13.917	2.79	19.98	0.40
1.800	0.40	7.867	6.77	13.933	2.79	20.00	0.40
1.817	0.40	7.883	6.77	13.950	2.79	20.02	0.40
1.833	0.40	7.900	6.77	13.967	2.79	20.03	0.40
1.850	0.40	7.917	6.77	13.983	2.79	20.05	0.40
1.867	0.40	7.933	6.77	14.000	2.79	20.07	0.40
1.883	0.40	7.950	6.77	14.017	2.79	20.08	0.40
1.900	0.40	7.967	6.77	14.033	2.79	20.10	0.40
1.917	0.40	7.983	6.77	14.050	2.79	20.12	0.40
1.933	0.40	8.000	6.77	14.067	2.79	20.13	0.40
1.950	0.40	8.017	6.77	14.083	2.79	20.15	0.40
1.967	0.40	8.033	6.77	14.100	2.79	20.17	0.40
1.983	0.40	8.050	6.77	14.117	2.79	20.18	0.40
2.000	0.40	8.067	6.77	14.133	2.79	20.20	0.40
2.017	0.40	8.083	6.77	14.150	2.79	20.22	0.40
2.033	0.40	8.100	6.77	14.167	2.79	20.23	0.40
2.050	0.40	8.117	6.77	14.183	2.79	20.25	0.40
2.067	0.40	8.133	6.77	14.200	2.79	20.27	0.40
2.083	0.40	8.150	6.77	14.217	2.79	20.28	0.40
2.100	0.40	8.167	6.77	14.233	2.79	20.30	0.40
2.117	0.40	8.183	6.77	14.250	2.79	20.32	0.40
2.133	0.40	8.200	6.77	14.267	1.59	20.33	0.40
2.150	0.40	8.217	6.77	14.283	1.59	20.35	0.40
2.167	0.40	8.233	6.77	14.300	1.59	20.37	0.40
2.183	0.40	8.250	6.80	14.317	1.59	20.38	0.40
2.200	0.40	8.267	18.33	14.333	1.59	20.40	0.40
2.217	0.40	8.283	18.33	14.350	1.59	20.42	0.40
2.233	0.40	8.300	18.33	14.367	1.59	20.43	0.40
2.250	0.40	8.317	18.33	14.383	1.59	20.45	0.40
2.267	0.40	8.333	18.33	14.400	1.59	20.47	0.40
2.283	0.40	8.350	18.33	14.417	1.59	20.48	0.40
2.300	0.40	8.367	18.33	14.433	1.59	20.50	0.40
2.317	0.40	8.383	18.33	14.450	1.59	20.52	0.40

2.333	0.40	8.400	18.33	14.467	1.59	20.53	0.40
2.350	0.40	8.417	18.33	14.483	1.59	20.55	0.40
2.367	0.40	8.433	18.33	14.500	1.59	20.57	0.40
2.383	0.40	8.450	18.33	14.517	1.59	20.58	0.40
2.400	0.40	8.467	18.33	14.533	1.59	20.60	0.40
2.417	0.40	8.483	18.33	14.550	1.59	20.62	0.40
2.433	0.40	8.500	18.33	14.567	1.59	20.63	0.40
2.450	0.40	8.517	18.33	14.583	1.59	20.65	0.40
2.467	0.40	8.533	18.33	14.600	1.59	20.67	0.40
2.483	0.40	8.550	18.33	14.617	1.59	20.68	0.40
2.500	0.40	8.567	18.33	14.633	1.59	20.70	0.40
2.517	0.40	8.583	18.33	14.650	1.59	20.72	0.40
2.533	0.40	8.600	18.33	14.667	1.59	20.73	0.40
2.550	0.40	8.617	18.33	14.683	1.59	20.75	0.40
2.567	0.40	8.633	18.33	14.700	1.59	20.77	0.40
2.583	0.40	8.650	18.33	14.717	1.59	20.78	0.40
2.600	0.40	8.667	18.33	14.733	1.59	20.80	0.40
2.617	0.40	8.683	18.33	14.750	1.59	20.82	0.40
2.633	0.40	8.700	18.33	14.767	1.59	20.83	0.40
2.650	0.40	8.717	18.33	14.783	1.59	20.85	0.40
2.667	0.40	8.733	18.33	14.800	1.59	20.87	0.40
2.683	0.40	8.750	18.33	14.817	1.59	20.88	0.40
2.700	0.40	8.767	18.33	14.833	1.59	20.90	0.40
2.717	0.40	8.783	18.33	14.850	1.59	20.92	0.40
2.733	0.40	8.800	18.33	14.867	1.59	20.93	0.40
2.750	0.40	8.817	18.33	14.883	1.59	20.95	0.40
2.767	0.40	8.833	18.33	14.900	1.59	20.97	0.40
2.783	0.40	8.850	18.33	14.917	1.59	20.98	0.40
2.800	0.40	8.867	18.33	14.933	1.59	21.00	0.40
2.817	0.40	8.883	18.33	14.950	1.59	21.02	0.40
2.833	0.40	8.900	18.33	14.967	1.59	21.03	0.40
2.850	0.40	8.917	18.33	14.983	1.59	21.05	0.40
2.867	0.40	8.933	18.33	15.000	1.59	21.07	0.40
2.883	0.40	8.950	18.33	15.017	1.59	21.08	0.40
2.900	0.40	8.967	18.33	15.033	1.59	21.10	0.40
2.917	0.40	8.983	18.33	15.050	1.59	21.12	0.40
2.933	0.40	9.000	18.33	15.067	1.59	21.13	0.40
2.950	0.40	9.017	18.33	15.083	1.59	21.15	0.40
2.967	0.40	9.033	18.33	15.100	1.59	21.17	0.40
2.983	0.40	9.050	18.33	15.117	1.59	21.18	0.40
3.000	0.40	9.067	18.33	15.133	1.59	21.20	0.40
3.017	0.40	9.083	18.33	15.150	1.59	21.22	0.40
3.033	0.40	9.100	18.33	15.167	1.59	21.23	0.40
3.050	0.40	9.117	18.33	15.183	1.59	21.25	0.40
3.067	0.40	9.133	18.33	15.200	1.59	21.27	0.40
3.083	0.40	9.150	18.33	15.217	1.59	21.28	0.40
3.100	0.40	9.167	18.33	15.233	1.59	21.30	0.40
3.117	0.40	9.183	18.33	15.250	1.59	21.32	0.40
3.133	0.40	9.200	18.33	15.267	1.59	21.33	0.40
3.150	0.40	9.217	18.33	15.283	1.59	21.35	0.40
3.167	0.40	9.233	18.33	15.300	1.59	21.37	0.40
3.183	0.40	9.250	18.33	15.317	1.59	21.38	0.40
3.200	0.40	9.267	18.33	15.333	1.59	21.40	0.40
3.217	0.40	9.283	18.33	15.350	1.59	21.42	0.40
3.233	0.40	9.300	18.33	15.367	1.59	21.43	0.40
3.250	0.40	9.317	18.33	15.383	1.59	21.45	0.40
3.267	0.40	9.333	18.33	15.400	1.59	21.47	0.40
3.283	0.40	9.350	18.33	15.417	1.59	21.48	0.40
3.300	0.40	9.367	18.33	15.433	1.59	21.50	0.40
3.317	0.40	9.383	18.33	15.450	1.59	21.52	0.40
3.333	0.40	9.400	18.33	15.467	1.59	21.53	0.40
3.350	0.40	9.417	18.33	15.483	1.59	21.55	0.40
3.367	0.40	9.433	18.33	15.500	1.59	21.57	0.40
3.383	0.40	9.450	18.33	15.517	1.59	21.58	0.40
3.400	0.40	9.467	18.33	15.533	1.59	21.60	0.40
3.417	0.40	9.483	18.33	15.550	1.59	21.62	0.40
3.433	0.40	9.500	18.33	15.567	1.59	21.63	0.40
3.450	0.40	9.517	18.33	15.583	1.59	21.65	0.40
3.467	0.40	9.533	18.33	15.600	1.59	21.67	0.40
3.483	0.40	9.550	18.33	15.617	1.59	21.68	0.40
3.500	0.40	9.567	18.33	15.633	1.59	21.70	0.40
3.517	0.40	9.583	18.33	15.650	1.59	21.72	0.40
3.533	0.40	9.600	18.33	15.667	1.59	21.73	0.40
3.550	0.40	9.617	18.33	15.683	1.59	21.75	0.40
3.567	0.40	9.633	18.33	15.700	1.59	21.77	0.40
3.583	0.40	9.650	18.33	15.717	1.59	21.78	0.40
3.600	0.40	9.667	18.33	15.733	1.59	21.80	0.40
3.617	0.40	9.683	18.33	15.750	1.59	21.82	0.40
3.633	0.40	9.700	18.33	15.767	1.59	21.83	0.40
3.650	0.40	9.717	18.33	15.783	1.59	21.85	0.40
3.667	0.40	9.733	18.33	15.800	1.59	21.87	0.40
3.683	0.40	9.750	18.33	15.817	1.59	21.88	0.40
3.700	0.40	9.767	18.33	15.833	1.59	21.90	0.40
3.717	0.40	9.783	18.33	15.850	1.59	21.92	0.40
3.733	0.40	9.800	18.33	15.867	1.59	21.93	0.40
3.750	0.40	9.817	18.33	15.883	1.59	21.95	0.40
3.767	0.40	9.833	18.33	15.900	1.59	21.97	0.40
3.783	0.40	9.850	18.33	15.917	1.59	21.98	0.40
3.800	0.40	9.867	18.33	15.933	1.59	22.00	0.40
3.817	0.40	9.883	18.33	15.950	1.59	22.02	0.40
3.833	0.40	9.900	18.33	15.967	1.59	22.03	0.40
3.850	0.40	9.917	18.33	15.983	1.59	22.05	0.40
3.867	0.40	9.933	18.33	16.000	1.59	22.07	0.40
3.883	0.40	9.950	18.33	16.017	1.59	22.08	0.40
3.900	0.40	9.967	18.33	16.033	1.59	22.10	0.40
3.917	0.40	9.983	18.33	16.050	1.59	22.12	0.40
3.933	0.40	10.000	18.33	16.067	1.59	22.13	0.40
3.950	0.40	10.017	18.33	16.083	1.59	22.15	0.40
3.967	0.40	10.033	18.33	16.100	1.59	22.17	0.40
3.983	0.40	10.050	18.33	16.117	1.59	22.18	0.40
4.000	0.40	10.067	18.33	16.133	1.59	22.20	0.40
4.017	0.40	10.083	18.33	16.150	1.59	22.22	0.40
4.033	0.40	10.100	18.33	16.167	1.59	22.23	0.40
4.050	0.40	10.117	18.33	16.183	1.59	22.25	0.40
4.067	0.40	10.133	18.33	16.200	1.59	22.27	0.40
4.083	0.40	10.150	18.33	16.217	1.59	22.28	0.40
4.100	0.40	10.167	18.33	16.233	1.59	22.30	0.40
4.117	0.40	10.183	18.33	16.250	1.59	22.32	0.40
4.133	0.40	10.200	18.33	16.267	0.80	22.33	0.40
4.150	0.40	10.217	18.33	16.283	0.80	22.35	0.40
4.167	0.40	10.233	18.33	16.300	0.80	22.37	0.40
4.183	0.40	10.250	18.32	16.317	0.80	22.38	0.40
4.200	0.40	10.267	5.18	16.333	0.80	22.40	0.40
4.217	0.40	10.283	5.18	16.350	0.80	22.42	0.40
4.233	0.40	10.300	5.18	16.367	0.80	22.43	0.40
4.250	0.40	10.317	5.18	16.383	0.80	22.45	0.40
4.267	2.39	10.333	5.18	16.400	0.80	22.47	0.40
4.283	2.39	10.350	5.18	16.417	0.80	22.48	0.40
4.300	2.39	10.367	5.18	16.433	0.80	22.50	0.40
4.317	2.39	10.383	5.18	16.450	0.80	22.52	0.40
4.333	2.39	10.400	5.18	16.467	0.80	22.53	0.40
4.350	2.39	10.417	5.18	16.483	0.80	22.55	0.40
4.367	2.39	10.433	5.18	16.500	0.80	22.57	0.40
4.383	2.39	10.450	5.18	16.517	0.80	22.58	0.40
4.400	2.39	10.467	5.18	16.533	0.80	22.60	0.40
4.417	2.39	10.483	5.18	16.550	0.80	22.62	0.40
4.433	2.39	10.500	5.18	16.567	0.80	22.63	0.40
4.450	2.39	10.517	5.18	16.583	0.80	22.65	0.40
4.467	2.39	10.533	5.18	16.600	0.80	22.67	0.40
4.483	2.39	10.550	5.18	16.617	0.80	22.68	0.40
4.500	2.39	10.567	5.18	16.633	0.80	22.70	0.40
4.517	2.39	10.583	5.18	16.650	0.80	22.72	0.40
4.533	2.39	10.600	5.18	16.667	0.80	22.73	0.40
4.550	2.39	10.617	5.18	16.683	0.80	22.75	0.40
4.567	2.39	10.633	5.18	16.700	0.80	22.77	0.40
4.583	2.39	10.650	5.18	16.717	0.80	22.78	0.40
4.600	2.39	10.667	5.18	16.733	0.80	22.80	0.40
4.617	2.39	10.683	5.18	16.750	0.80	22.82	0.40
4.633	2.39	10.700	5.18	16.767	0.80	22.83	0.40
4.650	2.39	10.717	5.18	16.783	0.80	22.85	0.40
4.667	2.39	10.733	5.18	16.800	0.80	22.87	0.40
4.683	2.39	10.750	5.18	16.817	0.80	22.88	0.40
4.700	2.39	10.767	5.18	16.833	0.80	22.90	0.40
4.717	2.39	10.783	5.18	16.850	0.80	22.92	0.40
4.733	2.39	10.800	5.18	16.867	0.80	22.93	0.40
4.750	2.39	10.817	5.18	16.883	0.80	22.95	0.40
4.767	2.39	10.833	5.18	16.900	0.80	22.97	0.40
4.783	2.39	10.850	5.18	16.917	0.80	22.98	0.40
4.800	2.39	10.867	5.18	16.933	0.80	23.00	0.40
4.817	2.39	10.883	5.18	16.950	0.80	23.02	0.40
4.833	2.39	10.900	5.18	16.967	0.80	23.03	0.40
4.850	2.39	10.917	5.18	16.983	0.80	23.05	0.40

4.867	2.39	10.933	5.18	17.000	0.80	23.07	0.40
4.883	2.39	10.950	5.18	17.017	0.80	23.08	0.40
4.900	2.39	10.967	5.18	17.033	0.80	23.10	0.40
4.917	2.39	10.983	5.18	17.050	0.80	23.12	0.40
4.933	2.39	11.000	5.18	17.067	0.80	23.13	0.40
4.950	2.39	11.017	5.18	17.083	0.80	23.15	0.40
4.967	2.39	11.033	5.18	17.100	0.80	23.17	0.40
4.983	2.39	11.050	5.18	17.117	0.80	23.18	0.40
5.000	2.39	11.067	5.18	17.133	0.80	23.20	0.40
5.017	2.39	11.083	5.18	17.150	0.80	23.22	0.40
5.033	2.39	11.100	5.18	17.167	0.80	23.23	0.40
5.050	2.39	11.117	5.18	17.183	0.80	23.25	0.40
5.067	2.39	11.133	5.18	17.200	0.80	23.27	0.40
5.083	2.39	11.150	5.18	17.217	0.80	23.28	0.40
5.100	2.39	11.167	5.18	17.233	0.80	23.30	0.40
5.117	2.39	11.183	5.18	17.250	0.80	23.32	0.40
5.133	2.39	11.200	5.18	17.267	0.80	23.33	0.40
5.150	2.39	11.217	5.18	17.283	0.80	23.35	0.40
5.167	2.39	11.233	5.18	17.300	0.80	23.37	0.40
5.183	2.39	11.250	5.18	17.317	0.80	23.38	0.40
5.200	2.39	11.267	5.18	17.333	0.80	23.40	0.40
5.217	2.39	11.283	5.18	17.350	0.80	23.42	0.40
5.233	2.39	11.300	5.18	17.367	0.80	23.43	0.40
5.250	2.39	11.317	5.18	17.383	0.80	23.45	0.40
5.267	2.39	11.333	5.18	17.400	0.80	23.47	0.40
5.283	2.39	11.350	5.18	17.417	0.80	23.48	0.40
5.300	2.39	11.367	5.18	17.433	0.80	23.50	0.40
5.317	2.39	11.383	5.18	17.450	0.80	23.52	0.40
5.333	2.39	11.400	5.18	17.467	0.80	23.53	0.40
5.350	2.39	11.417	5.18	17.483	0.80	23.55	0.40
5.367	2.39	11.433	5.18	17.500	0.80	23.57	0.40
5.383	2.39	11.450	5.18	17.517	0.80	23.58	0.40
5.400	2.39	11.467	5.18	17.533	0.80	23.60	0.40
5.417	2.39	11.483	5.18	17.550	0.80	23.62	0.40
5.433	2.39	11.500	5.18	17.567	0.80	23.63	0.40
5.450	2.39	11.517	5.18	17.583	0.80	23.65	0.40
5.467	2.39	11.533	5.18	17.600	0.80	23.67	0.40
5.483	2.39	11.550	5.18	17.617	0.80	23.68	0.40
5.500	2.39	11.567	5.18	17.633	0.80	23.70	0.40
5.517	2.39	11.583	5.18	17.650	0.80	23.72	0.40
5.533	2.39	11.600	5.18	17.667	0.80	23.73	0.40
5.550	2.39	11.617	5.18	17.683	0.80	23.75	0.40
5.567	2.39	11.633	5.18	17.700	0.80	23.77	0.40
5.583	2.39	11.650	5.18	17.717	0.80	23.78	0.40
5.600	2.39	11.667	5.18	17.733	0.80	23.80	0.40
5.617	2.39	11.683	5.18	17.750	0.80	23.82	0.40
5.633	2.39	11.700	5.18	17.767	0.80	23.83	0.40
5.650	2.39	11.717	5.18	17.783	0.80	23.85	0.40
5.667	2.39	11.733	5.18	17.800	0.80	23.87	0.40
5.683	2.39	11.750	5.18	17.817	0.80	23.88	0.40
5.700	2.39	11.767	5.18	17.833	0.80	23.90	0.40
5.717	2.39	11.783	5.18	17.850	0.80	23.92	0.40
5.733	2.39	11.800	5.18	17.867	0.80	23.93	0.40
5.750	2.39	11.817	5.18	17.883	0.80	23.95	0.40
5.767	2.39	11.833	5.18	17.900	0.80	23.97	0.40
5.783	2.39	11.850	5.18	17.917	0.80	23.98	0.40
5.800	2.39	11.867	5.18	17.933	0.80	24.00	0.40
5.817	2.39	11.883	5.18	17.950	0.80	24.02	0.40
5.833	2.39	11.900	5.18	17.967	0.80	24.03	0.40
5.850	2.39	11.917	5.18	17.983	0.80	24.05	0.40
5.867	2.39	11.933	5.18	18.000	0.80	24.07	0.40
5.883	2.39	11.950	5.18	18.017	0.80	24.08	0.40
5.900	2.39	11.967	5.18	18.033	0.80	24.10	0.40
5.917	2.39	11.983	5.18	18.050	0.80	24.12	0.40
5.933	2.39	12.000	5.18	18.067	0.80	24.13	0.40
5.950	2.39	12.017	5.18	18.083	0.80	24.15	0.40
5.967	2.39	12.033	5.18	18.100	0.80	24.17	0.40
5.983	2.39	12.050	5.18	18.117	0.80	24.18	0.40
6.000	2.39	12.067	5.18	18.133	0.80	24.20	0.40
6.017	2.39	12.083	5.18	18.150	0.80	24.22	0.40
6.033	2.39	12.100	5.18	18.167	0.80	24.23	0.40
6.050	2.39	12.117	5.18	18.183	0.80	24.25	0.40
6.067	2.39	12.133	5.18	18.200	0.80		

Max.Eff.Inten.(mm/hr)=	18.33	14.52
over (min)	7.00	11.00

Storage Coeff. (min)=	6.80 (ii)	10.16 (ii)	
Unit Hyd. Tpeak (min)=	7.00	11.00	
Unit Hyd. peak (cms)=	0.16	0.11	
			TOTALS
PEAK FLOW (cms)=	0.21	0.00	0.208 (iii)
TIME TO PEAK (hrs)=	9.98	10.25	10.25
RUNOFF VOLUME (mm)=	78.69	49.70	78.41
TOTAL RAINFALL (mm)=	79.70	79.70	79.70
RUNOFF COEFFICIENT =	0.99	0.62	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7630) | OVERFLOW IS OFF
IN= 2---> OUT= 1
DT= 1.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0826	0.2320
0.0347	0.1170	0.0967	0.2609
0.0534	0.1580	0.1090	0.2940
0.0655	0.1890	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (	7629)	4.090	0.208	10.25	78.41
OUTFLOW: ID= 1 (	7630)	4.090	0.064	10.70	71.88

PEAK FLOW REDUCTION [Qout/Qin](%)= 30.64
TIME SHIFT OF PEAK FLOW (min)= 27.00
MAXIMUM STORAGE USED (ha.m.)= 0.1843

CALIB
STANDHYD (7631) | Area (ha)= 3.91
ID= 1 DT= 1.0 min | Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.87	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	161.45	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	2.39	12.150	5.18	18.22	0.80
0.033	0.00	6.100	2.39	12.167	5.18	18.23	0.80
0.050	0.00	6.117	2.39	12.183	5.18	18.25	0.80
0.067	0.00	6.133	2.39	12.200	5.18	18.27	0.40
0.083	0.00	6.150	2.39	12.217	5.18	18.28	0.40
0.100	0.00	6.167	2.39	12.233	5.18	18.30	0.40
0.117	0.00	6.183	2.39	12.250	5.18	18.32	0.40
0.133	0.00	6.200	2.39	12.267	2.79	18.33	0.40
0.150	0.00	6.217	2.39	12.283	2.79	18.35	0.40
0.167	0.00	6.233	2.39	12.300	2.79	18.37	0.40
0.183	0.00	6.250	2.40	12.317	2.79	18.38	0.40
0.200	0.00	6.267	6.77	12.333	2.79	18.40	0.40
0.217	0.00	6.283	6.77	12.350	2.79	18.42	0.40
0.233	0.00	6.300	6.77	12.367	2.79	18.43	0.40
0.250	0.00	6.317	6.77	12.383	2.79	18.45	0.40
0.267	0.40	6.333	6.77	12.400	2.79	18.47	0.40
0.283	0.40	6.350	6.77	12.417	2.79	18.48	0.40
0.300	0.40	6.367	6.77	12.433	2.79	18.50	0.40
0.317	0.40	6.383	6.77	12.450	2.79	18.52	0.40
0.333	0.40	6.400	6.77	12.467	2.79	18.53	0.40

0.350	0.40	6.417	6.77	12.483	2.79	18.55	0.40
0.367	0.40	6.433	6.77	12.500	2.79	18.57	0.40
0.383	0.40	6.450	6.77	12.517	2.79	18.58	0.40
0.400	0.40	6.467	6.77	12.533	2.79	18.60	0.40
0.417	0.40	6.483	6.77	12.550	2.79	18.62	0.40
0.433	0.40	6.500	6.77	12.567	2.79	18.63	0.40
0.450	0.40	6.517	6.77	12.583	2.79	18.65	0.40
0.467	0.40	6.533	6.77	12.600	2.79	18.67	0.40
0.483	0.40	6.550	6.77	12.617	2.79	18.68	0.40
0.500	0.40	6.567	6.77	12.633	2.79	18.70	0.40
0.517	0.40	6.583	6.77	12.650	2.79	18.72	0.40
0.533	0.40	6.600	6.77	12.667	2.79	18.73	0.40
0.550	0.40	6.617	6.77	12.683	2.79	18.75	0.40
0.567	0.40	6.633	6.77	12.700	2.79	18.77	0.40
0.583	0.40	6.650	6.77	12.717	2.79	18.78	0.40
0.600	0.40	6.667	6.77	12.733	2.79	18.80	0.40
0.617	0.40	6.683	6.77	12.750	2.79	18.82	0.40
0.633	0.40	6.700	6.77	12.767	2.79	18.83	0.40
0.650	0.40	6.717	6.77	12.783	2.79	18.85	0.40
0.667	0.40	6.733	6.77	12.800	2.79	18.87	0.40
0.683	0.40	6.750	6.77	12.817	2.79	18.88	0.40
0.700	0.40	6.767	6.77	12.833	2.79	18.90	0.40
0.717	0.40	6.783	6.77	12.850	2.79	18.92	0.40
0.733	0.40	6.800	6.77	12.867	2.79	18.93	0.40
0.750	0.40	6.817	6.77	12.883	2.79	18.95	0.40
0.767	0.40	6.833	6.77	12.900	2.79	18.97	0.40
0.783	0.40	6.850	6.77	12.917	2.79	18.98	0.40
0.800	0.40	6.867	6.77	12.933	2.79	19.00	0.40
0.817	0.40	6.883	6.77	12.950	2.79	19.02	0.40
0.833	0.40	6.900	6.77	12.967	2.79	19.03	0.40
0.850	0.40	6.917	6.77	12.983	2.79	19.05	0.40
0.867	0.40	6.933	6.77	13.000	2.79	19.07	0.40
0.883	0.40	6.950	6.77	13.017	2.79	19.08	0.40
0.900	0.40	6.967	6.77	13.033	2.79	19.10	0.40
0.917	0.40	6.983	6.77	13.050	2.79	19.12	0.40
0.933	0.40	7.000	6.77	13.067	2.79	19.13	0.40
0.950	0.40	7.017	6.77	13.083	2.79	19.15	0.40
0.967	0.40	7.033	6.77	13.100	2.79	19.17	0.40
0.983	0.40	7.050	6.77	13.117	2.79	19.18	0.40
1.000	0.40	7.067	6.77	13.133	2.79	19.20	0.40
1.017	0.40	7.083	6.77	13.150	2.79	19.22	0.40
1.033	0.40	7.100	6.77	13.167	2.79	19.23	0.40
1.050	0.40	7.117	6.77	13.183	2.79	19.25	0.40
1.067	0.40	7.133	6.77	13.200	2.79	19.27	0.40
1.083	0.40	7.150	6.77	13.217	2.79	19.28	0.40
1.100	0.40	7.167	6.77	13.233	2.79	19.30	0.40
1.117	0.40	7.183	6.77	13.250	2.79	19.32	0.40
1.133	0.40	7.200	6.77	13.267	2.79	19.33	0.40
1.150	0.40	7.217	6.77	13.283	2.79	19.35	0.40
1.167	0.40	7.233	6.77	13.300	2.79	19.37	0.40
1.183	0.40	7.250	6.77	13.317	2.79	19.38	0.40
1.200	0.40	7.267	6.77	13.333	2.79	19.40	0.40
1.217	0.40	7.283	6.77	13.350	2.79	19.42	0.40
1.233	0.40	7.300	6.77	13.367	2.79	19.43	0.40
1.250	0.40	7.317	6.77	13.383	2.79	19.45	0.40
1.267	0.40	7.333	6.77	13.400	2.79	19.47	0.40
1.283	0.40	7.350	6.77	13.417	2.79	19.48	0.40
1.300	0.40	7.367	6.77	13.433	2.79	19.50	0.40
1.317	0.40	7.383	6.77	13.450	2.79	19.52	0.40
1.333	0.40	7.400	6.77	13.467	2.79	19.53	0.40
1.350	0.40	7.417	6.77	13.483	2.79	19.55	0.40
1.367	0.40	7.433	6.77	13.500	2.79	19.57	0.40
1.383	0.40	7.450	6.77	13.517	2.79	19.58	0.40
1.400	0.40	7.467	6.77	13.533	2.79	19.60	0.40
1.417	0.40	7.483	6.77	13.550	2.79	19.62	0.40
1.433	0.40	7.500	6.77	13.567	2.79	19.63	0.40
1.450	0.40	7.517	6.77	13.583	2.79	19.65	0.40
1.467	0.40	7.533	6.77	13.600	2.79	19.67	0.40
1.483	0.40	7.550	6.77	13.617	2.79	19.68	0.40
1.500	0.40	7.567	6.77	13.633	2.79	19.70	0.40
1.517	0.40	7.583	6.77	13.650	2.79	19.72	0.40
1.533	0.40	7.600	6.77	13.667	2.79	19.73	0.40
1.550	0.40	7.617	6.77	13.683	2.79	19.75	0.40
1.567	0.40	7.633	6.77	13.700	2.79	19.77	0.40
1.583	0.40	7.650	6.77	13.717	2.79	19.78	0.40
1.600	0.40	7.667	6.77	13.733	2.79	19.80	0.40
1.617	0.40	7.683	6.77	13.750	2.79	19.82	0.40
1.633	0.40	7.700	6.77	13.767	2.79	19.83	0.40
1.650	0.40	7.717	6.77	13.783	2.79	19.85	0.40
1.667	0.40	7.733	6.77	13.800	2.79	19.87	0.40
1.683	0.40	7.750	6.77	13.817	2.79	19.88	0.40
1.700	0.40	7.767	6.77	13.833	2.79	19.90	0.40
1.717	0.40	7.783	6.77	13.850	2.79	19.92	0.40
1.733	0.40	7.800	6.77	13.867	2.79	19.93	0.40
1.750	0.40	7.817	6.77	13.883	2.79	19.95	0.40
1.767	0.40	7.833	6.77	13.900	2.79	19.97	0.40
1.783	0.40	7.850	6.77	13.917	2.79	19.98	0.40
1.800	0.40	7.867	6.77	13.933	2.79	20.00	0.40
1.817	0.40	7.883	6.77	13.950	2.79	20.02	0.40
1.833	0.40	7.900	6.77	13.967	2.79	20.03	0.40
1.850	0.40	7.917	6.77	13.983	2.79	20.05	0.40
1.867	0.40	7.933	6.77	14.000	2.79	20.07	0.40
1.883	0.40	7.950	6.77	14.017	2.79	20.08	0.40
1.900	0.40	7.967	6.77	14.033	2.79	20.10	0.40
1.917	0.40	7.983	6.77	14.050	2.79	20.12	0.40
1.933	0.40	8.000	6.77	14.067	2.79	20.13	0.40
1.950	0.40	8.017	6.77	14.083	2.79	20.15	0.40
1.967	0.40	8.033	6.77	14.100	2.79	20.17	0.40
1.983	0.40	8.050	6.77	14.117	2.79	20.18	0.40
2.000	0.40	8.067	6.77	14.133	2.79	20.20	0.40
2.017	0.40	8.083	6.77	14.150	2.79	20.22	0.40
2.033	0.40	8.100	6.77	14.167	2.79	20.23	0.40
2.050	0.40	8.117	6.77	14.183	2.79	20.25	0.40
2.067	0.40	8.133	6.77	14.200	2.79	20.27	0.40
2.083	0.40	8.150	6.77	14.217	2.79	20.28	0.40
2.100	0.40	8.167	6.77	14.233	2.79	20.30	0.40
2.117	0.40	8.183	6.77	14.250	2.79	20.32	0.40
2.133	0.40	8.200	6.77	14.267	1.59	20.33	0.40
2.150	0.40	8.217	6.77	14.283	1.59	20.35	0.40
2.167	0.40	8.233	6.77	14.300	1.59	20.37	0.40
2.183	0.40	8.250	6.80	14.317	1.59	20.38	0.40
2.200	0.40	8.267	18.33	14.333	1.59	20.40	0.40
2.217	0.40	8.283	18.33	14.350	1.59	20.42	0.40
2.233	0.40	8.300	18.33	14.367	1.59	20.43	0.40
2.250	0.40	8.317	18.33	14.383	1.59	20.45	0.40
2.267	0.40	8.333	18.33	14.400	1.59	20.47	0.40
2.283	0.40	8.350	18.33	14.417	1.59	20.48	0.40
2.300	0.40	8.367	18.33	14.433	1.59	20.50	0.40
2.317	0.40	8.383	18.33	14.450	1.59	20.52	0.40
2.333	0.40	8.400	18.33	14.467	1.59	20.53	0.40
2.350	0.40	8.417	18.33	14.483	1.59	20.55	0.40
2.367	0.40	8.433	18.33	14.500	1.59	20.57	0.40
2.383	0.40	8.450	18.33	14.517	1.59	20.58	0.40
2.400	0.40	8.467	18.33	14.533	1.59	20.60	0.40
2.417	0.40	8.483	18.33	14.550	1.59	20.62	0.40
2.433	0.40	8.500	18.33	14.567	1.59	20.63	0.40
2.450	0.40	8.517	18.33	14.583	1.59	20.65	0.40
2.467	0.40	8.533	18.33	14.600	1.59	20.67	0.40
2.483	0.40	8.550	18.33	14.617	1.59	20.68	0.40
2.500	0.40	8.567	18.33	14.633	1.59	20.70	0.40
2.517	0.40	8.583	18.33	14.650	1.59	20.72	0.40
2.533	0.40	8.600	18.33	14.667	1.59	20.73	0.40
2.550	0.40	8.617	18.33	14.683	1.59	20.75	0.40
2.567	0.40	8.633	18.33	14.700	1.59	20.77	0.40
2.583	0.40	8.650	18.33	14.717	1.59	20.78	0.40
2.600	0.40	8.667	18.33	14.733	1.59	20.80	0.40
2.617	0.40	8.683	18.33	14.750	1.59	20.82	0.40
2.633	0.40	8.700	18.33	14.767	1.59	20.83	0.40
2.650	0.40	8.717	18.33	14.783	1.59	20.85	0.40
2.667	0.40	8.733	18.33	14.800	1.59	20.87	0.40
2.683	0.40	8.750	18.33	14.817	1.59	20.88	0.40
2.700	0.40	8.767	18.33	14.833	1.59	20.90	0.40
2.717	0.40	8.783	18.33	14.850	1.59	20.92	0.40
2.733	0.40	8.800	18.33	14.867	1.59	20.93	0.40
2.750	0.40	8.817	18.33	14.883	1.59	20.95	0.40
2.767	0.40	8.833	18.33	14.900	1.59	20.97	0.40
2.783	0.40	8.850	18.33	14.917	1.59	20.98	0.40
2.800	0.40	8.867	18.33	14.933	1.59	21.00	0.40
2.817	0.40	8.883	18.33	14.950	1.59	21.02	0.40
2.833	0.40	8.900	18.33	14.967	1.59	21.03	0.40
2.850	0.40	8.917	18.33	14.983	1.59	21.05	0.40
2.867	0.40	8.933	18.33	15.000	1.59	21.07	0.40

2.883	0.40	8.950	18.33	15.017	1.59	21.08	0.40
2.900	0.40	8.967	18.33	15.033	1.59	21.10	0.40
2.917	0.40	8.983	18.33	15.050	1.59	21.12	0.40
2.933	0.40	9.000	18.33	15.067	1.59	21.13	0.40
2.950	0.40	9.017	18.33	15.083	1.59	21.15	0.40
2.967	0.40	9.033	18.33	15.100	1.59	21.17	0.40
2.983	0.40	9.050	18.33	15.117	1.59	21.18	0.40
3.000	0.40	9.067	18.33	15.133	1.59	21.20	0.40
3.017	0.40	9.083	18.33	15.150	1.59	21.22	0.40
3.033	0.40	9.100	18.33	15.167	1.59	21.23	0.40
3.050	0.40	9.117	18.33	15.183	1.59	21.25	0.40
3.067	0.40	9.133	18.33	15.200	1.59	21.27	0.40
3.083	0.40	9.150	18.33	15.217	1.59	21.28	0.40
3.100	0.40	9.167	18.33	15.233	1.59	21.30	0.40
3.117	0.40	9.183	18.33	15.250	1.59	21.32	0.40
3.133	0.40	9.200	18.33	15.267	1.59	21.33	0.40
3.150	0.40	9.217	18.33	15.283	1.59	21.35	0.40
3.167	0.40	9.233	18.33	15.300	1.59	21.37	0.40
3.183	0.40	9.250	18.33	15.317	1.59	21.38	0.40
3.200	0.40	9.267	18.33	15.333	1.59	21.40	0.40
3.217	0.40	9.283	18.33	15.350	1.59	21.42	0.40
3.233	0.40	9.300	18.33	15.367	1.59	21.43	0.40
3.250	0.40	9.317	18.33	15.383	1.59	21.45	0.40
3.267	0.40	9.333	18.33	15.400	1.59	21.47	0.40
3.283	0.40	9.350	18.33	15.417	1.59	21.48	0.40
3.300	0.40	9.367	18.33	15.433	1.59	21.50	0.40
3.317	0.40	9.383	18.33	15.450	1.59	21.52	0.40
3.333	0.40	9.400	18.33	15.467	1.59	21.53	0.40
3.350	0.40	9.417	18.33	15.483	1.59	21.55	0.40
3.367	0.40	9.433	18.33	15.500	1.59	21.57	0.40
3.383	0.40	9.450	18.33	15.517	1.59	21.58	0.40
3.400	0.40	9.467	18.33	15.533	1.59	21.60	0.40
3.417	0.40	9.483	18.33	15.550	1.59	21.62	0.40
3.433	0.40	9.500	18.33	15.567	1.59	21.63	0.40
3.450	0.40	9.517	18.33	15.583	1.59	21.65	0.40
3.467	0.40	9.533	18.33	15.600	1.59	21.67	0.40
3.483	0.40	9.550	18.33	15.617	1.59	21.68	0.40
3.500	0.40	9.567	18.33	15.633	1.59	21.70	0.40
3.517	0.40	9.583	18.33	15.650	1.59	21.72	0.40
3.533	0.40	9.600	18.33	15.667	1.59	21.73	0.40
3.550	0.40	9.617	18.33	15.683	1.59	21.75	0.40
3.567	0.40	9.633	18.33	15.700	1.59	21.77	0.40
3.583	0.40	9.650	18.33	15.717	1.59	21.78	0.40
3.600	0.40	9.667	18.33	15.733	1.59	21.80	0.40
3.617	0.40	9.683	18.33	15.750	1.59	21.82	0.40
3.633	0.40	9.700	18.33	15.767	1.59	21.83	0.40
3.650	0.40	9.717	18.33	15.783	1.59	21.85	0.40
3.667	0.40	9.733	18.33	15.800	1.59	21.87	0.40
3.683	0.40	9.750	18.33	15.817	1.59	21.88	0.40
3.700	0.40	9.767	18.33	15.833	1.59	21.90	0.40
3.717	0.40	9.783	18.33	15.850	1.59	21.92	0.40
3.733	0.40	9.800	18.33	15.867	1.59	21.93	0.40
3.750	0.40	9.817	18.33	15.883	1.59	21.95	0.40
3.767	0.40	9.833	18.33	15.900	1.59	21.97	0.40
3.783	0.40	9.850	18.33	15.917	1.59	21.98	0.40
3.800	0.40	9.867	18.33	15.933	1.59	22.00	0.40
3.817	0.40	9.883	18.33	15.950	1.59	22.02	0.40
3.833	0.40	9.900	18.33	15.967	1.59	22.03	0.40
3.850	0.40	9.917	18.33	15.983	1.59	22.05	0.40
3.867	0.40	9.933	18.33	16.000	1.59	22.07	0.40
3.883	0.40	9.950	18.33	16.017	1.59	22.08	0.40
3.900	0.40	9.967	18.33	16.033	1.59	22.10	0.40
3.917	0.40	9.983	18.33	16.050	1.59	22.12	0.40
3.933	0.40	10.000	18.33	16.067	1.59	22.13	0.40
3.950	0.40	10.017	18.33	16.083	1.59	22.15	0.40
3.967	0.40	10.033	18.33	16.100	1.59	22.17	0.40
3.983	0.40	10.050	18.33	16.117	1.59	22.18	0.40
4.000	0.40	10.067	18.33	16.133	1.59	22.20	0.40
4.017	0.40	10.083	18.33	16.150	1.59	22.22	0.40
4.033	0.40	10.100	18.33	16.167	1.59	22.23	0.40
4.050	0.40	10.117	18.33	16.183	1.59	22.25	0.40
4.067	0.40	10.133	18.33	16.200	1.59	22.27	0.40
4.083	0.40	10.150	18.33	16.217	1.59	22.28	0.40
4.100	0.40	10.167	18.33	16.233	1.59	22.30	0.40
4.117	0.40	10.183	18.33	16.250	1.59	22.32	0.40
4.133	0.40	10.200	18.33	16.267	0.80	22.33	0.40
4.150	0.40	10.217	18.33	16.283	0.80	22.35	0.40
4.167	0.40	10.233	18.33	16.300	0.80	22.37	0.40
4.183	0.40	10.250	18.32	16.317	0.80	22.38	0.40
4.200	0.40	10.267	5.18	16.333	0.80	22.40	0.40
4.217	0.40	10.283	5.18	16.350	0.80	22.42	0.40
4.233	0.40	10.300	5.18	16.367	0.80	22.43	0.40
4.250	0.40	10.317	5.18	16.383	0.80	22.45	0.40
4.267	2.39	10.333	5.18	16.400	0.80	22.47	0.40
4.283	2.39	10.350	5.18	16.417	0.80	22.48	0.40
4.300	2.39	10.367	5.18	16.433	0.80	22.50	0.40
4.317	2.39	10.383	5.18	16.450	0.80	22.52	0.40
4.333	2.39	10.400	5.18	16.467	0.80	22.53	0.40
4.350	2.39	10.417	5.18	16.483	0.80	22.55	0.40
4.367	2.39	10.433	5.18	16.500	0.80	22.57	0.40
4.383	2.39	10.450	5.18	16.517	0.80	22.58	0.40
4.400	2.39	10.467	5.18	16.533	0.80	22.60	0.40
4.417	2.39	10.483	5.18	16.550	0.80	22.62	0.40
4.433	2.39	10.500	5.18	16.567	0.80	22.63	0.40
4.450	2.39	10.517	5.18	16.583	0.80	22.65	0.40
4.467	2.39	10.533	5.18	16.600	0.80	22.67	0.40
4.483	2.39	10.550	5.18	16.617	0.80	22.68	0.40
4.500	2.39	10.567	5.18	16.633	0.80	22.70	0.40
4.517	2.39	10.583	5.18	16.650	0.80	22.72	0.40
4.533	2.39	10.600	5.18	16.667	0.80	22.73	0.40
4.550	2.39	10.617	5.18	16.683	0.80	22.75	0.40
4.567	2.39	10.633	5.18	16.700	0.80	22.77	0.40
4.583	2.39	10.650	5.18	16.717	0.80	22.78	0.40
4.600	2.39	10.667	5.18	16.733	0.80	22.80	0.40
4.617	2.39	10.683	5.18	16.750	0.80	22.82	0.40
4.633	2.39	10.700	5.18	16.767	0.80	22.83	0.40
4.650	2.39	10.717	5.18	16.783	0.80	22.85	0.40
4.667	2.39	10.733	5.18	16.800	0.80	22.87	0.40
4.683	2.39	10.750	5.18	16.817	0.80	22.88	0.40
4.700	2.39	10.767	5.18	16.833	0.80	22.90	0.40
4.717	2.39	10.783	5.18	16.850	0.80	22.92	0.40
4.733	2.39	10.800	5.18	16.867	0.80	22.93	0.40
4.750	2.39	10.817	5.18	16.883	0.80	22.95	0.40
4.767	2.39	10.833	5.18	16.900	0.80	22.97	0.40
4.783	2.39	10.850	5.18	16.917	0.80	22.98	0.40
4.800	2.39	10.867	5.18	16.933	0.80	23.00	0.40
4.817	2.39	10.883	5.18	16.950	0.80	23.02	0.40
4.833	2.39	10.900	5.18	16.967	0.80	23.03	0.40
4.850	2.39	10.917	5.18	16.983	0.80	23.05	0.40
4.867	2.39	10.933	5.18	17.000	0.80	23.07	0.40
4.883	2.39	10.950	5.18	17.017	0.80	23.08	0.40
4.900	2.39	10.967	5.18	17.033	0.80	23.10	0.40
4.917	2.39	10.983	5.18	17.050	0.80	23.12	0.40
4.933	2.39	11.000	5.18	17.067	0.80	23.13	0.40
4.950	2.39	11.017	5.18	17.083	0.80	23.15	0.40
4.967	2.39	11.033	5.18	17.100	0.80	23.17	0.40
4.983	2.39	11.050	5.18	17.117	0.80	23.18	0.40
5.000	2.39	11.067	5.18	17.133	0.80	23.20	0.40
5.017	2.39	11.083	5.18	17.150	0.80	23.22	0.40
5.033	2.39	11.100	5.18	17.167	0.80	23.23	0.40
5.050	2.39	11.117	5.18	17.183	0.80	23.25	0.40
5.067	2.39	11.133	5.18	17.200	0.80	23.27	0.40
5.083	2.39	11.150	5.18	17.217	0.80	23.28	0.40
5.100	2.39	11.167	5.18	17.233	0.80	23.30	0.40
5.117	2.39	11.183	5.18	17.250	0.80	23.32	0.40
5.133	2.39	11.200	5.18	17.267	0.80	23.33	0.40
5.150	2.39	11.217	5.18	17.283	0.80	23.35	0.40
5.167	2.39	11.233	5.18	17.300	0.80	23.37	0.40
5.183	2.39	11.250	5.18	17.317	0.80	23.38	0.40
5.200	2.39	11.267	5.18	17.333	0.80	23.40	0.40
5.217	2.39	11.283	5.18	17.350	0.80	23.42	0.40
5.233	2.39	11.300	5.18	17.367	0.80	23.43	0.40
5.250	2.39	11.317	5.18	17.383	0.80	23.45	0.40
5.267	2.39	11.333	5.18	17.400	0.80	23.47	0.40
5.283	2.39	11.350	5.18	17.417	0.80	23.48	0.40
5.300	2.39	11.367	5.18	17.433	0.80	23.50	0.40
5.317	2.39	11.383	5.18	17.450	0.80	23.52	0.40
5.333	2.39	11.400	5.18	17.467	0.80	23.53	0.40
5.350	2.39	11.417	5.18	17.483	0.80	23.55	0.40
5.367	2.39	11.433	5.18	17.500	0.80	23.57	0.40
5.383	2.39	11.450	5.18	17.517	0.80	23.58	0.40
5.400	2.39	11.467	5.18	17.533	0.80	23.60	0.40

5.417	2.39	11.483	5.18	17.550	0.80	23.62	0.40
5.433	2.39	11.500	5.18	17.567	0.80	23.63	0.40
5.450	2.39	11.517	5.18	17.583	0.80	23.65	0.40
5.467	2.39	11.533	5.18	17.600	0.80	23.67	0.40
5.483	2.39	11.550	5.18	17.617	0.80	23.68	0.40
5.500	2.39	11.567	5.18	17.633	0.80	23.70	0.40
5.517	2.39	11.583	5.18	17.650	0.80	23.72	0.40
5.533	2.39	11.600	5.18	17.667	0.80	23.73	0.40
5.550	2.39	11.617	5.18	17.683	0.80	23.75	0.40
5.567	2.39	11.633	5.18	17.700	0.80	23.77	0.40
5.583	2.39	11.650	5.18	17.717	0.80	23.78	0.40
5.600	2.39	11.667	5.18	17.733	0.80	23.80	0.40
5.617	2.39	11.683	5.18	17.750	0.80	23.82	0.40
5.633	2.39	11.700	5.18	17.767	0.80	23.83	0.40
5.650	2.39	11.717	5.18	17.783	0.80	23.85	0.40
5.667	2.39	11.733	5.18	17.800	0.80	23.87	0.40
5.683	2.39	11.750	5.18	17.817	0.80	23.88	0.40
5.700	2.39	11.767	5.18	17.833	0.80	23.90	0.40
5.717	2.39	11.783	5.18	17.850	0.80	23.92	0.40
5.733	2.39	11.800	5.18	17.867	0.80	23.93	0.40
5.750	2.39	11.817	5.18	17.883	0.80	23.95	0.40
5.767	2.39	11.833	5.18	17.900	0.80	23.97	0.40
5.783	2.39	11.850	5.18	17.917	0.80	23.98	0.40
5.800	2.39	11.867	5.18	17.933	0.80	24.00	0.40
5.817	2.39	11.883	5.18	17.950	0.80	24.02	0.40
5.833	2.39	11.900	5.18	17.967	0.80	24.03	0.40
5.850	2.39	11.917	5.18	17.983	0.80	24.05	0.40
5.867	2.39	11.933	5.18	18.000	0.80	24.07	0.40
5.883	2.39	11.950	5.18	18.017	0.80	24.08	0.40
5.900	2.39	11.967	5.18	18.033	0.80	24.10	0.40
5.917	2.39	11.983	5.18	18.050	0.80	24.12	0.40
5.933	2.39	12.000	5.18	18.067	0.80	24.13	0.40
5.950	2.39	12.017	5.18	18.083	0.80	24.15	0.40
5.967	2.39	12.033	5.18	18.100	0.80	24.17	0.40
5.983	2.39	12.050	5.18	18.117	0.80	24.18	0.40
6.000	2.39	12.067	5.18	18.133	0.80	24.20	0.40
6.017	2.39	12.083	5.18	18.150	0.80	24.22	0.40
6.033	2.39	12.100	5.18	18.167	0.80	24.23	0.40
6.050	2.39	12.117	5.18	18.183	0.80	24.25	0.40
6.067	2.39	12.133	5.18	18.200	0.80		

Max.Eff.Inten.(mm/hr)=	18.33	14.52	
over (min)	7.00	11.00	
Storage Coeff. (min)=	6.71 (ii)	10.07 (ii)	
Unit Hyd. Tpeak (min)=	7.00	11.00	
Unit Hyd. peak (cms)=	0.17	0.11	
			TOTALS
PEAK FLOW (cms)=	0.20	0.00	0.199 (iii)
TIME TO PEAK (hrs)=	9.98	10.25	10.25
RUNOFF VOLUME (mm)=	78.69	49.70	78.41
TOTAL RAINFALL (mm)=	79.70	79.70	79.70
RUNOFF COEFFICIENT =	0.99	0.62	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7632) / IN= 2---> OUT= 1 / DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0792	0.2220
	0.0333	0.1130	0.0928	0.2500
	0.0512	0.1510	0.1046	0.2810
	0.0629	0.1810	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7631)	3.910	0.199	10.25	78.41
OUTFLOW: ID= 1 (7632)	3.910	0.061	10.68	71.81

PEAK FLOW REDUCTION [Qout/Qin](%)= 30.74
TIME SHIFT OF PEAK FLOW (min)= 26.00
MAXIMUM STORAGE USED (ha.m.)= 0.1763

CALIB
STANDHYD (7641) | Area (ha)= 2.21
ID= 1 DT= 1.0 min | Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.19	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	121.38	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	2.39	12.150	5.18	18.22	0.80
0.033	0.00	6.100	2.39	12.167	5.18	18.23	0.80
0.050	0.00	6.117	2.39	12.183	5.18	18.25	0.80
0.067	0.00	6.133	2.39	12.200	5.18	18.27	0.40
0.083	0.00	6.150	2.39	12.217	5.18	18.28	0.40
0.100	0.00	6.167	2.39	12.233	5.18	18.30	0.40
0.117	0.00	6.183	2.39	12.250	5.18	18.32	0.40
0.133	0.00	6.200	2.39	12.267	2.79	18.33	0.40
0.150	0.00	6.217	2.39	12.283	2.79	18.35	0.40
0.167	0.00	6.233	2.39	12.300	2.79	18.37	0.40
0.183	0.00	6.250	2.40	12.317	2.79	18.38	0.40
0.200	0.00	6.267	6.77	12.333	2.79	18.40	0.40
0.217	0.00	6.283	6.77	12.350	2.79	18.42	0.40
0.233	0.00	6.300	6.77	12.367	2.79	18.43	0.40
0.250	0.00	6.317	6.77	12.383	2.79	18.45	0.40
0.267	0.40	6.333	6.77	12.400	2.79	18.47	0.40
0.283	0.40	6.350	6.77	12.417	2.79	18.48	0.40
0.300	0.40	6.367	6.77	12.433	2.79	18.50	0.40
0.317	0.40	6.383	6.77	12.450	2.79	18.52	0.40
0.333	0.40	6.400	6.77	12.467	2.79	18.53	0.40
0.350	0.40	6.417	6.77	12.483	2.79	18.55	0.40
0.367	0.40	6.433	6.77	12.500	2.79	18.57	0.40
0.383	0.40	6.450	6.77	12.517	2.79	18.58	0.40
0.400	0.40	6.467	6.77	12.533	2.79	18.60	0.40
0.417	0.40	6.483	6.77	12.550	2.79	18.62	0.40
0.433	0.40	6.500	6.77	12.567	2.79	18.63	0.40
0.450	0.40	6.517	6.77	12.583	2.79	18.65	0.40
0.467	0.40	6.533	6.77	12.600	2.79	18.67	0.40
0.483	0.40	6.550	6.77	12.617	2.79	18.68	0.40
0.500	0.40	6.567	6.77	12.633	2.79	18.70	0.40
0.517	0.40	6.583	6.77	12.650	2.79	18.72	0.40
0.533	0.40	6.600	6.77	12.667	2.79	18.73	0.40
0.550	0.40	6.617	6.77	12.683	2.79	18.75	0.40
0.567	0.40	6.633	6.77	12.700	2.79	18.77	0.40
0.583	0.40	6.650	6.77	12.717	2.79	18.78	0.40
0.600	0.40	6.667	6.77	12.733	2.79	18.80	0.40
0.617	0.40	6.683	6.77	12.750	2.79	18.82	0.40
0.633	0.40	6.700	6.77	12.767	2.79	18.83	0.40
0.650	0.40	6.717	6.77	12.783	2.79	18.85	0.40
0.667	0.40	6.733	6.77	12.800	2.79	18.87	0.40
0.683	0.40	6.750	6.77	12.817	2.79	18.88	0.40
0.700	0.40	6.767	6.77	12.833	2.79	18.90	0.40
0.717	0.40	6.783	6.77	12.850	2.79	18.92	0.40
0.733	0.40	6.800	6.77	12.867	2.79	18.93	0.40
0.750	0.40	6.817	6.77	12.883	2.79	18.95	0.40
0.767	0.40	6.833	6.77	12.900	2.79	18.97	0.40
0.783	0.40	6.850	6.77	12.917	2.79	18.98	0.40
0.800	0.40	6.867	6.77	12.933	2.79	19.00	0.40
0.817	0.40	6.883	6.77	12.950	2.79	19.02	0.40
0.833	0.40	6.900	6.77	12.967	2.79	19.03	0.40
0.850	0.40	6.917	6.77	12.983	2.79	19.05	0.40
0.867	0.40	6.933	6.77	13.000	2.79	19.07	0.40
0.883	0.40	6.950	6.77	13.017	2.79	19.08	0.40

0.900	0.40	6.967	6.77	13.033	2.79	19.10	0.40		2.167	0.40	8.233	6.77	14.300	1.59	20.37	0.40
0.917	0.40	6.983	6.77	13.050	2.79	19.12	0.40		2.183	0.40	8.250	6.80	14.317	1.59	20.38	0.40
0.933	0.40	7.000	6.77	13.067	2.79	19.13	0.40		2.200	0.40	8.267	18.33	14.333	1.59	20.40	0.40
0.950	0.40	7.017	6.77	13.083	2.79	19.15	0.40		2.217	0.40	8.283	18.33	14.350	1.59	20.42	0.40
0.967	0.40	7.033	6.77	13.100	2.79	19.17	0.40		2.233	0.40	8.300	18.33	14.367	1.59	20.43	0.40
0.983	0.40	7.050	6.77	13.117	2.79	19.18	0.40		2.250	0.40	8.317	18.33	14.383	1.59	20.45	0.40
1.000	0.40	7.067	6.77	13.133	2.79	19.20	0.40		2.267	0.40	8.333	18.33	14.400	1.59	20.47	0.40
1.017	0.40	7.083	6.77	13.150	2.79	19.22	0.40		2.283	0.40	8.350	18.33	14.417	1.59	20.48	0.40
1.033	0.40	7.100	6.77	13.167	2.79	19.23	0.40		2.300	0.40	8.367	18.33	14.433	1.59	20.50	0.40
1.050	0.40	7.117	6.77	13.183	2.79	19.25	0.40		2.317	0.40	8.383	18.33	14.450	1.59	20.52	0.40
1.067	0.40	7.133	6.77	13.200	2.79	19.27	0.40		2.333	0.40	8.400	18.33	14.467	1.59	20.53	0.40
1.083	0.40	7.150	6.77	13.217	2.79	19.28	0.40		2.350	0.40	8.417	18.33	14.483	1.59	20.55	0.40
1.100	0.40	7.167	6.77	13.233	2.79	19.30	0.40		2.367	0.40	8.433	18.33	14.500	1.59	20.57	0.40
1.117	0.40	7.183	6.77	13.250	2.79	19.32	0.40		2.383	0.40	8.450	18.33	14.517	1.59	20.58	0.40
1.133	0.40	7.200	6.77	13.267	2.79	19.33	0.40		2.400	0.40	8.467	18.33	14.533	1.59	20.60	0.40
1.150	0.40	7.217	6.77	13.283	2.79	19.35	0.40		2.417	0.40	8.483	18.33	14.550	1.59	20.62	0.40
1.167	0.40	7.233	6.77	13.300	2.79	19.37	0.40		2.433	0.40	8.500	18.33	14.567	1.59	20.63	0.40
1.183	0.40	7.250	6.77	13.317	2.79	19.38	0.40		2.450	0.40	8.517	18.33	14.583	1.59	20.65	0.40
1.200	0.40	7.267	6.77	13.333	2.79	19.40	0.40		2.467	0.40	8.533	18.33	14.600	1.59	20.67	0.40
1.217	0.40	7.283	6.77	13.350	2.79	19.42	0.40		2.483	0.40	8.550	18.33	14.617	1.59	20.68	0.40
1.233	0.40	7.300	6.77	13.367	2.79	19.43	0.40		2.500	0.40	8.567	18.33	14.633	1.59	20.70	0.40
1.250	0.40	7.317	6.77	13.383	2.79	19.45	0.40		2.517	0.40	8.583	18.33	14.650	1.59	20.72	0.40
1.267	0.40	7.333	6.77	13.400	2.79	19.47	0.40		2.533	0.40	8.600	18.33	14.667	1.59	20.73	0.40
1.283	0.40	7.350	6.77	13.417	2.79	19.48	0.40		2.550	0.40	8.617	18.33	14.683	1.59	20.75	0.40
1.300	0.40	7.367	6.77	13.433	2.79	19.50	0.40		2.567	0.40	8.633	18.33	14.700	1.59	20.77	0.40
1.317	0.40	7.383	6.77	13.450	2.79	19.52	0.40		2.583	0.40	8.650	18.33	14.717	1.59	20.78	0.40
1.333	0.40	7.400	6.77	13.467	2.79	19.53	0.40		2.600	0.40	8.667	18.33	14.733	1.59	20.80	0.40
1.350	0.40	7.417	6.77	13.483	2.79	19.55	0.40		2.617	0.40	8.683	18.33	14.750	1.59	20.82	0.40
1.367	0.40	7.433	6.77	13.500	2.79	19.57	0.40		2.633	0.40	8.700	18.33	14.767	1.59	20.83	0.40
1.383	0.40	7.450	6.77	13.517	2.79	19.58	0.40		2.650	0.40	8.717	18.33	14.783	1.59	20.85	0.40
1.400	0.40	7.467	6.77	13.533	2.79	19.60	0.40		2.667	0.40	8.733	18.33	14.800	1.59	20.87	0.40
1.417	0.40	7.483	6.77	13.550	2.79	19.62	0.40		2.683	0.40	8.750	18.33	14.817	1.59	20.88	0.40
1.433	0.40	7.500	6.77	13.567	2.79	19.63	0.40		2.700	0.40	8.767	18.33	14.833	1.59	20.90	0.40
1.450	0.40	7.517	6.77	13.583	2.79	19.65	0.40		2.717	0.40	8.783	18.33	14.850	1.59	20.92	0.40
1.467	0.40	7.533	6.77	13.600	2.79	19.67	0.40		2.733	0.40	8.800	18.33	14.867	1.59	20.93	0.40
1.483	0.40	7.550	6.77	13.617	2.79	19.68	0.40		2.750	0.40	8.817	18.33	14.883	1.59	20.95	0.40
1.500	0.40	7.567	6.77	13.633	2.79	19.70	0.40		2.767	0.40	8.833	18.33	14.900	1.59	20.97	0.40
1.517	0.40	7.583	6.77	13.650	2.79	19.72	0.40		2.783	0.40	8.850	18.33	14.917	1.59	20.98	0.40
1.533	0.40	7.600	6.77	13.667	2.79	19.73	0.40		2.800	0.40	8.867	18.33	14.933	1.59	21.00	0.40
1.550	0.40	7.617	6.77	13.683	2.79	19.75	0.40		2.817	0.40	8.883	18.33	14.950	1.59	21.02	0.40
1.567	0.40	7.633	6.77	13.700	2.79	19.77	0.40		2.833	0.40	8.900	18.33	14.967	1.59	21.03	0.40
1.583	0.40	7.650	6.77	13.717	2.79	19.78	0.40		2.850	0.40	8.917	18.33	14.983	1.59	21.05	0.40
1.600	0.40	7.667	6.77	13.733	2.79	19.80	0.40		2.867	0.40	8.933	18.33	15.000	1.59	21.07	0.40
1.617	0.40	7.683	6.77	13.750	2.79	19.82	0.40		2.883	0.40	8.950	18.33	15.017	1.59	21.08	0.40
1.633	0.40	7.700	6.77	13.767	2.79	19.83	0.40		2.900	0.40	8.967	18.33	15.033	1.59	21.10	0.40
1.650	0.40	7.717	6.77	13.783	2.79	19.85	0.40		2.917	0.40	8.983	18.33	15.050	1.59	21.12	0.40
1.667	0.40	7.733	6.77	13.800	2.79	19.87	0.40		2.933	0.40	9.000	18.33	15.067	1.59	21.13	0.40
1.683	0.40	7.750	6.77	13.817	2.79	19.88	0.40		2.950	0.40	9.017	18.33	15.083	1.59	21.15	0.40
1.700	0.40	7.767	6.77	13.833	2.79	19.90	0.40		2.967	0.40	9.033	18.33	15.100	1.59	21.17	0.40
1.717	0.40	7.783	6.77	13.850	2.79	19.92	0.40		2.983	0.40	9.050	18.33	15.117	1.59	21.18	0.40
1.733	0.40	7.800	6.77	13.867	2.79	19.93	0.40		3.000	0.40	9.067	18.33	15.133	1.59	21.20	0.40
1.750	0.40	7.817	6.77	13.883	2.79	19.95	0.40		3.017	0.40	9.083	18.33	15.150	1.59	21.22	0.40
1.767	0.40	7.833	6.77	13.900	2.79	19.97	0.40		3.033	0.40	9.100	18.33	15.167	1.59	21.23	0.40
1.783	0.40	7.850	6.77	13.917	2.79	19.98	0.40		3.050	0.40	9.117	18.33	15.183	1.59	21.25	0.40
1.800	0.40	7.867	6.77	13.933	2.79	20.00	0.40		3.067	0.40	9.133	18.33	15.200	1.59	21.27	0.40
1.817	0.40	7.883	6.77	13.950	2.79	20.02	0.40		3.083	0.40	9.150	18.33	15.217	1.59	21.28	0.40
1.833	0.40	7.900	6.77	13.967	2.79	20.03	0.40		3.100	0.40	9.167	18.33	15.233	1.59	21.30	0.40
1.850	0.40	7.917	6.77	13.983	2.79	20.05	0.40		3.117	0.40	9.183	18.33	15.250	1.59	21.32	0.40
1.867	0.40	7.933	6.77	14.000	2.79	20.07	0.40		3.133	0.40	9.200	18.33	15.267	1.59	21.33	0.40
1.883	0.40	7.950	6.77	14.017	2.79	20.08	0.40		3.150	0.40	9.217	18.33	15.283	1.59	21.35	0.40
1.900	0.40	7.967	6.77	14.033	2.79	20.10	0.40		3.167	0.40	9.233	18.33	15.300	1.59	21.37	0.40
1.917	0.40	7.983	6.77	14.050	2.79	20.12	0.40		3.183	0.40	9.250	18.33	15.317	1.59	21.38	0.40
1.933	0.40	8.000	6.77	14.067	2.79	20.13	0.40		3.200	0.40	9.267	18.33	15.333	1.59	21.40	0.40
1.950	0.40	8.017	6.77	14.083	2.79	20.15	0.40		3.217	0.40	9.283	18.33	15.350	1.59	21.42	0.40
1.967	0.40	8.033	6.77	14.100	2.79	20.17	0.40		3.233	0.40	9.300	18.33	15.367	1.59	21.43	0.40
1.983	0.40	8.050	6.77	14.117	2.79	20.18	0.40		3.250	0.40	9.317	18.33	15.383	1.59	21.45	0.40
2.000	0.40	8.067	6.77	14.133	2.79	20.20	0.40		3.267	0.40	9.333	18.33	15.400	1.59	21.47	0.40
2.017	0.40	8.083	6.77	14.150	2.79	20.22	0.40		3.283	0.40	9.350	18.33	15.417	1.59	21.48	0.40
2.033	0.40	8.100	6.77	14.167	2.79	20.23	0.40		3.300	0.40	9.367	18.33	15.433	1.59	21.50	0.40
2.050	0.40	8.117	6.77	14.183	2.79	20.25	0.40		3.317	0.40	9.383	18.33	15.450	1.59	21.52	0.40
2.067	0.40	8.133	6.77	14.200	2.79	20.27	0.40		3.333	0.40	9.400	18.33	15.467	1.59	21.53	0.40
2.083	0.40	8.150	6.77	14.217	2.79	20.28	0.40		3.350	0.40	9.417	18.33	15.483	1.59	21.55	0.40
2.100	0.40	8.167	6.77	14.233	2.79	20.30	0.40		3.367	0.40	9.433	18.33	15.500	1.59	21.57	0.40
2.117	0.40	8.183	6.77	14.250	2.79	20.32	0.40		3.383	0.40	9.450	18.33	15.517	1.59	21.58	0.40
2.133	0.40	8.200	6.77	14.267	1.59	20.33	0.40		3.400	0.40	9.467	18.33	15.533	1.59	21.60	0.40
2.150	0.40	8.217	6.77	14.283	1.59	20.35	0.40		3.417	0.40	9.483	18.33	15.550	1.59	21.62	0.40

3.433	0.40	9.500	18.33	15.567	1.59	21.63	0.40
3.450	0.40	9.517	18.33	15.583	1.59	21.65	0.40
3.467	0.40	9.533	18.33	15.600	1.59	21.67	0.40
3.483	0.40	9.550	18.33	15.617	1.59	21.68	0.40
3.500	0.40	9.567	18.33	15.633	1.59	21.70	0.40
3.517	0.40	9.583	18.33	15.650	1.59	21.72	0.40
3.533	0.40	9.600	18.33	15.667	1.59	21.73	0.40
3.550	0.40	9.617	18.33	15.683	1.59	21.75	0.40
3.567	0.40	9.633	18.33	15.700	1.59	21.77	0.40
3.583	0.40	9.650	18.33	15.717	1.59	21.78	0.40
3.600	0.40	9.667	18.33	15.733	1.59	21.80	0.40
3.617	0.40	9.683	18.33	15.750	1.59	21.82	0.40
3.633	0.40	9.700	18.33	15.767	1.59	21.83	0.40
3.650	0.40	9.717	18.33	15.783	1.59	21.85	0.40
3.667	0.40	9.733	18.33	15.800	1.59	21.87	0.40
3.683	0.40	9.750	18.33	15.817	1.59	21.88	0.40
3.700	0.40	9.767	18.33	15.833	1.59	21.90	0.40
3.717	0.40	9.783	18.33	15.850	1.59	21.92	0.40
3.733	0.40	9.800	18.33	15.867	1.59	21.93	0.40
3.750	0.40	9.817	18.33	15.883	1.59	21.95	0.40
3.767	0.40	9.833	18.33	15.900	1.59	21.97	0.40
3.783	0.40	9.850	18.33	15.917	1.59	21.98	0.40
3.800	0.40	9.867	18.33	15.933	1.59	22.00	0.40
3.817	0.40	9.883	18.33	15.950	1.59	22.02	0.40
3.833	0.40	9.900	18.33	15.967	1.59	22.03	0.40
3.850	0.40	9.917	18.33	15.983	1.59	22.05	0.40
3.867	0.40	9.933	18.33	16.000	1.59	22.07	0.40
3.883	0.40	9.950	18.33	16.017	1.59	22.08	0.40
3.900	0.40	9.967	18.33	16.033	1.59	22.10	0.40
3.917	0.40	9.983	18.33	16.050	1.59	22.12	0.40
3.933	0.40	10.000	18.33	16.067	1.59	22.13	0.40
3.950	0.40	10.017	18.33	16.083	1.59	22.15	0.40
3.967	0.40	10.033	18.33	16.100	1.59	22.17	0.40
3.983	0.40	10.050	18.33	16.117	1.59	22.18	0.40
4.000	0.40	10.067	18.33	16.133	1.59	22.20	0.40
4.017	0.40	10.083	18.33	16.150	1.59	22.22	0.40
4.033	0.40	10.100	18.33	16.167	1.59	22.23	0.40
4.050	0.40	10.117	18.33	16.183	1.59	22.25	0.40
4.067	0.40	10.133	18.33	16.200	1.59	22.27	0.40
4.083	0.40	10.150	18.33	16.217	1.59	22.28	0.40
4.100	0.40	10.167	18.33	16.233	1.59	22.30	0.40
4.117	0.40	10.183	18.33	16.250	1.59	22.32	0.40
4.133	0.40	10.200	18.33	16.267	0.80	22.33	0.40
4.150	0.40	10.217	18.33	16.283	0.80	22.35	0.40
4.167	0.40	10.233	18.33	16.300	0.80	22.37	0.40
4.183	0.40	10.250	18.32	16.317	0.80	22.38	0.40
4.200	0.40	10.267	5.18	16.333	0.80	22.40	0.40
4.217	0.40	10.283	5.18	16.350	0.80	22.42	0.40
4.233	0.40	10.300	5.18	16.367	0.80	22.43	0.40
4.250	0.40	10.317	5.18	16.383	0.80	22.45	0.40
4.267	2.39	10.333	5.18	16.400	0.80	22.47	0.40
4.283	2.39	10.350	5.18	16.417	0.80	22.48	0.40
4.300	2.39	10.367	5.18	16.433	0.80	22.50	0.40
4.317	2.39	10.383	5.18	16.450	0.80	22.52	0.40
4.333	2.39	10.400	5.18	16.467	0.80	22.53	0.40
4.350	2.39	10.417	5.18	16.483	0.80	22.55	0.40
4.367	2.39	10.433	5.18	16.500	0.80	22.57	0.40
4.383	2.39	10.450	5.18	16.517	0.80	22.58	0.40
4.400	2.39	10.467	5.18	16.533	0.80	22.60	0.40
4.417	2.39	10.483	5.18	16.550	0.80	22.62	0.40
4.433	2.39	10.500	5.18	16.567	0.80	22.63	0.40
4.450	2.39	10.517	5.18	16.583	0.80	22.65	0.40
4.467	2.39	10.533	5.18	16.600	0.80	22.67	0.40
4.483	2.39	10.550	5.18	16.617	0.80	22.68	0.40
4.500	2.39	10.567	5.18	16.633	0.80	22.70	0.40
4.517	2.39	10.583	5.18	16.650	0.80	22.72	0.40
4.533	2.39	10.600	5.18	16.667	0.80	22.73	0.40
4.550	2.39	10.617	5.18	16.683	0.80	22.75	0.40
4.567	2.39	10.633	5.18	16.700	0.80	22.77	0.40
4.583	2.39	10.650	5.18	16.717	0.80	22.78	0.40
4.600	2.39	10.667	5.18	16.733	0.80	22.80	0.40
4.617	2.39	10.683	5.18	16.750	0.80	22.82	0.40
4.633	2.39	10.700	5.18	16.767	0.80	22.83	0.40
4.650	2.39	10.717	5.18	16.783	0.80	22.85	0.40
4.667	2.39	10.733	5.18	16.800	0.80	22.87	0.40
4.683	2.39	10.750	5.18	16.817	0.80	22.88	0.40
4.700	2.39	10.767	5.18	16.833	0.80	22.90	0.40
4.717	2.39	10.783	5.18	16.850	0.80	22.92	0.40
4.733	2.39	10.800	5.18	16.867	0.80	22.93	0.40
4.750	2.39	10.817	5.18	16.883	0.80	22.95	0.40
4.767	2.39	10.833	5.18	16.900	0.80	22.97	0.40
4.783	2.39	10.850	5.18	16.917	0.80	22.98	0.40
4.800	2.39	10.867	5.18	16.933	0.80	23.00	0.40
4.817	2.39	10.883	5.18	16.950	0.80	23.02	0.40
4.833	2.39	10.900	5.18	16.967	0.80	23.03	0.40
4.850	2.39	10.917	5.18	16.983	0.80	23.05	0.40
4.867	2.39	10.933	5.18	17.000	0.80	23.07	0.40
4.883	2.39	10.950	5.18	17.017	0.80	23.08	0.40
4.900	2.39	10.967	5.18	17.033	0.80	23.10	0.40
4.917	2.39	10.983	5.18	17.050	0.80	23.12	0.40
4.933	2.39	11.000	5.18	17.067	0.80	23.13	0.40
4.950	2.39	11.017	5.18	17.083	0.80	23.15	0.40
4.967	2.39	11.033	5.18	17.100	0.80	23.17	0.40
4.983	2.39	11.050	5.18	17.117	0.80	23.18	0.40
5.000	2.39	11.067	5.18	17.133	0.80	23.20	0.40
5.017	2.39	11.083	5.18	17.150	0.80	23.22	0.40
5.033	2.39	11.100	5.18	17.167	0.80	23.23	0.40
5.050	2.39	11.117	5.18	17.183	0.80	23.25	0.40
5.067	2.39	11.133	5.18	17.200	0.80	23.27	0.40
5.083	2.39	11.150	5.18	17.217	0.80	23.28	0.40
5.100	2.39	11.167	5.18	17.233	0.80	23.30	0.40
5.117	2.39	11.183	5.18	17.250	0.80	23.32	0.40
5.133	2.39	11.200	5.18	17.267	0.80	23.33	0.40
5.150	2.39	11.217	5.18	17.283	0.80	23.35	0.40
5.167	2.39	11.233	5.18	17.300	0.80	23.37	0.40
5.183	2.39	11.250	5.18	17.317	0.80	23.38	0.40
5.200	2.39	11.267	5.18	17.333	0.80	23.40	0.40
5.217	2.39	11.283	5.18	17.350	0.80	23.42	0.40
5.233	2.39	11.300	5.18	17.367	0.80	23.43	0.40
5.250	2.39	11.317	5.18	17.383	0.80	23.45	0.40
5.267	2.39	11.333	5.18	17.400	0.80	23.47	0.40
5.283	2.39	11.350	5.18	17.417	0.80	23.48	0.40
5.300	2.39	11.367	5.18	17.433	0.80	23.50	0.40
5.317	2.39	11.383	5.18	17.450	0.80	23.52	0.40
5.333	2.39	11.400	5.18	17.467	0.80	23.53	0.40
5.350	2.39	11.417	5.18	17.483	0.80	23.55	0.40
5.367	2.39	11.433	5.18	17.500	0.80	23.57	0.40
5.383	2.39	11.450	5.18	17.517	0.80	23.58	0.40
5.400	2.39	11.467	5.18	17.533	0.80	23.60	0.40
5.417	2.39	11.483	5.18	17.550	0.80	23.62	0.40
5.433	2.39	11.500	5.18	17.567	0.80	23.63	0.40
5.450	2.39	11.517	5.18	17.583	0.80	23.65	0.40
5.467	2.39	11.533	5.18	17.600	0.80	23.67	0.40
5.483	2.39	11.550	5.18	17.617	0.80	23.68	0.40
5.500	2.39	11.567	5.18	17.633	0.80	23.70	0.40
5.517	2.39	11.583	5.18	17.650	0.80	23.72	0.40
5.533	2.39	11.600	5.18	17.667	0.80	23.73	0.40
5.550	2.39	11.617	5.18	17.683	0.80	23.75	0.40
5.567	2.39	11.633	5.18	17.700	0.80	23.77	0.40
5.583	2.39	11.650	5.18	17.717	0.80	23.78	0.40
5.600	2.39	11.667	5.18	17.733	0.80	23.80	0.40
5.617	2.39	11.683	5.18	17.750	0.80	23.82	0.40
5.633	2.39	11.700	5.18	17.767	0.80	23.83	0.40
5.650	2.39	11.717	5.18	17.783	0.80	23.85	0.40
5.667	2.39	11.733	5.18	17.800	0.80	23.87	0.40
5.683	2.39	11.750	5.18	17.817	0.80	23.88	0.40
5.700	2.39	11.767	5.18	17.833	0.80	23.90	0.40
5.717	2.39	11.783	5.18	17.850	0.80	23.92	0.40
5.733	2.39	11.800	5.18	17.867	0.80	23.93	0.40
5.750	2.39	11.817	5.18	17.883	0.80	23.95	0.40
5.767	2.39	11.833	5.18	17.900	0.80	23.97	0.40
5.783	2.39	11.850	5.18	17.917	0.80	23.98	0.40
5.800	2.39	11.867	5.18	17.933	0.80	24.00	0.40
5.817	2.39	11.883	5.18	17.950	0.80	24.02	0.40
5.833	2.39	11.900	5.18	17.967	0.80	24.03	0.40
5.850	2.39	11.917	5.18	17.983	0.80	24.05	0.40
5.867	2.39	11.933	5.18	18.000	0.80	24.07	0.40
5.883	2.39	11.950	5.18	18.017	0.80	24.08	0.40
5.900	2.39	11.967	5.18	18.033	0.80	24.10	0.40
5.917	2.39	11.983	5.18	18.050	0.80	24.12	0.40
5.933	2.39	12.000	5.18	18.067	0.80	24.13	0.40
5.950	2.39	12.017	5.18	18.083	0.80	24.15	0.40

5.967	2.39	12.033	5.18	18.100	0.80	24.17	0.40
5.983	2.39	12.050	5.18	18.117	0.80	24.18	0.40
6.000	2.39	12.067	5.18	18.133	0.80	24.20	0.40
6.017	2.39	12.083	5.18	18.150	0.80	24.22	0.40
6.033	2.39	12.100	5.18	18.167	0.80	24.23	0.40
6.050	2.39	12.117	5.18	18.183	0.80	24.25	0.40
6.067	2.39	12.133	5.18	18.200	0.80		

Max.Eff.Inten.(mm/hr)=	18.33	14.52	
over (min)	6.00	10.00	
Storage Coeff. (min)=	5.66 (ii)	9.01 (ii)	
Unit Hyd. Tpeak (min)=	6.00	10.00	
Unit Hyd. peak (cms)=	0.20	0.12	
			TOTALS
PEAK FLOW (cms)=	0.11	0.00	0.112 (iii)
TIME TO PEAK (hrs)=	9.73	10.25	10.25
RUNOFF VOLUME (mm)=	78.69	49.70	78.41
TOTAL RAINFALL (mm)=	79.70	79.70	79.70
RUNOFF COEFFICIENT =	0.99	0.62	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7642)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0470	0.1250
	0.0197	0.0630	0.0551	0.1410
	0.0304	0.0850	0.0620	0.1580
	0.0373	0.1020	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7641)	2.210	0.112	10.25	78.41
OUTFLOW: ID= 1 (7642)	2.210	0.036	10.58	72.66

PEAK FLOW REDUCTION [Qout/Qin](%)= 31.96
TIME SHIFT OF PEAK FLOW (min)= 20.00
MAXIMUM STORAGE USED (ha.m.)= 0.0985

CALIB				
STANDHYD (7643)	Area (ha)= 2.02			
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00		

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.00	0.02
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.00	0.50
Length (m)=	116.05	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	2.39	12.150	5.18	18.22	0.80
0.033	0.00	6.100	2.39	12.167	5.18	18.23	0.80
0.050	0.00	6.117	2.39	12.183	5.18	18.25	0.80
0.067	0.00	6.133	2.39	12.200	5.18	18.27	0.40
0.083	0.00	6.150	2.39	12.217	5.18	18.28	0.40
0.100	0.00	6.167	2.39	12.233	5.18	18.30	0.40
0.117	0.00	6.183	2.39	12.250	5.18	18.32	0.40
0.133	0.00	6.200	2.39	12.267	2.79	18.33	0.40
0.150	0.00	6.217	2.39	12.283	2.79	18.35	0.40
0.167	0.00	6.233	2.39	12.300	2.79	18.37	0.40
0.183	0.00	6.250	2.40	12.317	2.79	18.38	0.40
0.200	0.00	6.267	6.77	12.333	2.79	18.40	0.40
0.217	0.00	6.283	6.77	12.350	2.79	18.42	0.40
0.233	0.00	6.300	6.77	12.367	2.79	18.43	0.40
0.250	0.00	6.317	6.77	12.383	2.79	18.45	0.40
0.267	0.40	6.333	6.77	12.400	2.79	18.47	0.40
0.283	0.40	6.350	6.77	12.417	2.79	18.48	0.40
0.300	0.40	6.367	6.77	12.433	2.79	18.50	0.40
0.317	0.40	6.383	6.77	12.450	2.79	18.52	0.40
0.333	0.40	6.400	6.77	12.467	2.79	18.53	0.40
0.350	0.40	6.417	6.77	12.483	2.79	18.55	0.40
0.367	0.40	6.433	6.77	12.500	2.79	18.57	0.40
0.383	0.40	6.450	6.77	12.517	2.79	18.58	0.40
0.400	0.40	6.467	6.77	12.533	2.79	18.60	0.40
0.417	0.40	6.483	6.77	12.550	2.79	18.62	0.40
0.433	0.40	6.500	6.77	12.567	2.79	18.63	0.40
0.450	0.40	6.517	6.77	12.583	2.79	18.65	0.40
0.467	0.40	6.533	6.77	12.600	2.79	18.67	0.40
0.483	0.40	6.550	6.77	12.617	2.79	18.68	0.40
0.500	0.40	6.567	6.77	12.633	2.79	18.70	0.40
0.517	0.40	6.583	6.77	12.650	2.79	18.72	0.40
0.533	0.40	6.600	6.77	12.667	2.79	18.73	0.40
0.550	0.40	6.617	6.77	12.683	2.79	18.75	0.40
0.567	0.40	6.633	6.77	12.700	2.79	18.77	0.40
0.583	0.40	6.650	6.77	12.717	2.79	18.78	0.40
0.600	0.40	6.667	6.77	12.733	2.79	18.80	0.40
0.617	0.40	6.683	6.77	12.750	2.79	18.82	0.40
0.633	0.40	6.700	6.77	12.767	2.79	18.83	0.40
0.650	0.40	6.717	6.77	12.783	2.79	18.85	0.40
0.667	0.40	6.733	6.77	12.800	2.79	18.87	0.40
0.683	0.40	6.750	6.77	12.817	2.79	18.88	0.40
0.700	0.40	6.767	6.77	12.833	2.79	18.90	0.40
0.717	0.40	6.783	6.77	12.850	2.79	18.92	0.40
0.733	0.40	6.800	6.77	12.867	2.79	18.93	0.40
0.750	0.40	6.817	6.77	12.883	2.79	18.95	0.40
0.767	0.40	6.833	6.77	12.900	2.79	18.97	0.40
0.783	0.40	6.850	6.77	12.917	2.79	18.98	0.40
0.800	0.40	6.867	6.77	12.933	2.79	19.00	0.40
0.817	0.40	6.883	6.77	12.950	2.79	19.02	0.40
0.833	0.40	6.900	6.77	12.967	2.79	19.03	0.40
0.850	0.40	6.917	6.77	12.983	2.79	19.05	0.40
0.867	0.40	6.933	6.77	13.000	2.79	19.07	0.40
0.883	0.40	6.950	6.77	13.017	2.79	19.08	0.40
0.900	0.40	6.967	6.77	13.033	2.79	19.10	0.40
0.917	0.40	6.983	6.77	13.050	2.79	19.12	0.40
0.933	0.40	7.000	6.77	13.067	2.79	19.13	0.40
0.950	0.40	7.017	6.77	13.083	2.79	19.15	0.40
0.967	0.40	7.033	6.77	13.100	2.79	19.17	0.40
0.983	0.40	7.050	6.77	13.117	2.79	19.18	0.40
1.000	0.40	7.067	6.77	13.133	2.79	19.20	0.40
1.017	0.40	7.083	6.77	13.150	2.79	19.22	0.40
1.033	0.40	7.100	6.77	13.167	2.79	19.23	0.40
1.050	0.40	7.117	6.77	13.183	2.79	19.25	0.40
1.067	0.40	7.133	6.77	13.200	2.79	19.27	0.40
1.083	0.40	7.150	6.77	13.217	2.79	19.28	0.40
1.100	0.40	7.167	6.77	13.233	2.79	19.30	0.40
1.117	0.40	7.183	6.77	13.250	2.79	19.32	0.40
1.133	0.40	7.200	6.77	13.267	2.79	19.33	0.40
1.150	0.40	7.217	6.77	13.283	2.79	19.35	0.40
1.167	0.40	7.233	6.77	13.300	2.79	19.37	0.40
1.183	0.40	7.250	6.77	13.317	2.79	19.38	0.40
1.200	0.40	7.267	6.77	13.333	2.79	19.40	0.40
1.217	0.40	7.283	6.77	13.350	2.79	19.42	0.40
1.233	0.40	7.300	6.77	13.367	2.79	19.43	0.40
1.250	0.40	7.317	6.77	13.383	2.79	19.45	0.40
1.267	0.40	7.333	6.77	13.400	2.79	19.47	0.40
1.283	0.40	7.350	6.77	13.417	2.79	19.48	0.40
1.300	0.40	7.367	6.77	13.433	2.79	19.50	0.40
1.317	0.40	7.383	6.77	13.450	2.79	19.52	0.40
1.333	0.40	7.400	6.77	13.467	2.79	19.53	0.40
1.350	0.40	7.417	6.77	13.483	2.79	19.55	0.40
1.367	0.40	7.433	6.77	13.500	2.79	19.57	0.40
1.383	0.40	7.450	6.77	13.517	2.79	19.58	0.40
1.400	0.40	7.467	6.77	13.533	2.79	19.60	0.40
1.417	0.40	7.483	6.77	13.550	2.79	19.62	0.40
1.433	0.40	7.500	6.77	13.567	2.79	19.63	0.40

1.450	0.40	7.517	6.77	13.583	2.79	19.65	0.40		2.717	0.40	8.783	18.33	14.850	1.59	20.92	0.40
1.467	0.40	7.533	6.77	13.600	2.79	19.67	0.40		2.733	0.40	8.800	18.33	14.867	1.59	20.93	0.40
1.483	0.40	7.550	6.77	13.617	2.79	19.68	0.40		2.750	0.40	8.817	18.33	14.883	1.59	20.95	0.40
1.500	0.40	7.567	6.77	13.633	2.79	19.70	0.40		2.767	0.40	8.833	18.33	14.900	1.59	20.97	0.40
1.517	0.40	7.583	6.77	13.650	2.79	19.72	0.40		2.783	0.40	8.850	18.33	14.917	1.59	20.98	0.40
1.533	0.40	7.600	6.77	13.667	2.79	19.73	0.40		2.800	0.40	8.867	18.33	14.933	1.59	21.00	0.40
1.550	0.40	7.617	6.77	13.683	2.79	19.75	0.40		2.817	0.40	8.883	18.33	14.950	1.59	21.02	0.40
1.567	0.40	7.633	6.77	13.700	2.79	19.77	0.40		2.833	0.40	8.900	18.33	14.967	1.59	21.03	0.40
1.583	0.40	7.650	6.77	13.717	2.79	19.78	0.40		2.850	0.40	8.917	18.33	14.983	1.59	21.05	0.40
1.600	0.40	7.667	6.77	13.733	2.79	19.80	0.40		2.867	0.40	8.933	18.33	15.000	1.59	21.07	0.40
1.617	0.40	7.683	6.77	13.750	2.79	19.82	0.40		2.883	0.40	8.950	18.33	15.017	1.59	21.08	0.40
1.633	0.40	7.700	6.77	13.767	2.79	19.83	0.40		2.900	0.40	8.967	18.33	15.033	1.59	21.10	0.40
1.650	0.40	7.717	6.77	13.783	2.79	19.85	0.40		2.917	0.40	8.983	18.33	15.050	1.59	21.12	0.40
1.667	0.40	7.733	6.77	13.800	2.79	19.87	0.40		2.933	0.40	9.000	18.33	15.067	1.59	21.13	0.40
1.683	0.40	7.750	6.77	13.817	2.79	19.88	0.40		2.950	0.40	9.017	18.33	15.083	1.59	21.15	0.40
1.700	0.40	7.767	6.77	13.833	2.79	19.90	0.40		2.967	0.40	9.033	18.33	15.100	1.59	21.17	0.40
1.717	0.40	7.783	6.77	13.850	2.79	19.92	0.40		2.983	0.40	9.050	18.33	15.117	1.59	21.18	0.40
1.733	0.40	7.800	6.77	13.867	2.79	19.93	0.40		3.000	0.40	9.067	18.33	15.133	1.59	21.20	0.40
1.750	0.40	7.817	6.77	13.883	2.79	19.95	0.40		3.017	0.40	9.083	18.33	15.150	1.59	21.22	0.40
1.767	0.40	7.833	6.77	13.900	2.79	19.97	0.40		3.033	0.40	9.100	18.33	15.167	1.59	21.23	0.40
1.783	0.40	7.850	6.77	13.917	2.79	19.98	0.40		3.050	0.40	9.117	18.33	15.183	1.59	21.25	0.40
1.800	0.40	7.867	6.77	13.933	2.79	20.00	0.40		3.067	0.40	9.133	18.33	15.200	1.59	21.27	0.40
1.817	0.40	7.883	6.77	13.950	2.79	20.02	0.40		3.083	0.40	9.150	18.33	15.217	1.59	21.28	0.40
1.833	0.40	7.900	6.77	13.967	2.79	20.03	0.40		3.100	0.40	9.167	18.33	15.233	1.59	21.30	0.40
1.850	0.40	7.917	6.77	13.983	2.79	20.05	0.40		3.117	0.40	9.183	18.33	15.250	1.59	21.32	0.40
1.867	0.40	7.933	6.77	14.000	2.79	20.07	0.40		3.133	0.40	9.200	18.33	15.267	1.59	21.33	0.40
1.883	0.40	7.950	6.77	14.017	2.79	20.08	0.40		3.150	0.40	9.217	18.33	15.283	1.59	21.35	0.40
1.900	0.40	7.967	6.77	14.033	2.79	20.10	0.40		3.167	0.40	9.233	18.33	15.300	1.59	21.37	0.40
1.917	0.40	7.983	6.77	14.050	2.79	20.12	0.40		3.183	0.40	9.250	18.33	15.317	1.59	21.38	0.40
1.933	0.40	8.000	6.77	14.067	2.79	20.13	0.40		3.200	0.40	9.267	18.33	15.333	1.59	21.40	0.40
1.950	0.40	8.017	6.77	14.083	2.79	20.15	0.40		3.217	0.40	9.283	18.33	15.350	1.59	21.42	0.40
1.967	0.40	8.033	6.77	14.100	2.79	20.17	0.40		3.233	0.40	9.300	18.33	15.367	1.59	21.43	0.40
1.983	0.40	8.050	6.77	14.117	2.79	20.18	0.40		3.250	0.40	9.317	18.33	15.383	1.59	21.45	0.40
2.000	0.40	8.067	6.77	14.133	2.79	20.20	0.40		3.267	0.40	9.333	18.33	15.400	1.59	21.47	0.40
2.017	0.40	8.083	6.77	14.150	2.79	20.22	0.40		3.283	0.40	9.350	18.33	15.417	1.59	21.48	0.40
2.033	0.40	8.100	6.77	14.167	2.79	20.23	0.40		3.300	0.40	9.367	18.33	15.433	1.59	21.50	0.40
2.050	0.40	8.117	6.77	14.183	2.79	20.25	0.40		3.317	0.40	9.383	18.33	15.450	1.59	21.52	0.40
2.067	0.40	8.133	6.77	14.200	2.79	20.27	0.40		3.333	0.40	9.400	18.33	15.467	1.59	21.53	0.40
2.083	0.40	8.150	6.77	14.217	2.79	20.28	0.40		3.350	0.40	9.417	18.33	15.483	1.59	21.55	0.40
2.100	0.40	8.167	6.77	14.233	2.79	20.30	0.40		3.367	0.40	9.433	18.33	15.500	1.59	21.57	0.40
2.117	0.40	8.183	6.77	14.250	2.79	20.32	0.40		3.383	0.40	9.450	18.33	15.517	1.59	21.58	0.40
2.133	0.40	8.200	6.77	14.267	1.59	20.33	0.40		3.400	0.40	9.467	18.33	15.533	1.59	21.60	0.40
2.150	0.40	8.217	6.77	14.283	1.59	20.35	0.40		3.417	0.40	9.483	18.33	15.550	1.59	21.62	0.40
2.167	0.40	8.233	6.77	14.300	1.59	20.37	0.40		3.433	0.40	9.500	18.33	15.567	1.59	21.63	0.40
2.183	0.40	8.250	6.80	14.317	1.59	20.38	0.40		3.450	0.40	9.517	18.33	15.583	1.59	21.65	0.40
2.200	0.40	8.267	18.33	14.333	1.59	20.40	0.40		3.467	0.40	9.533	18.33	15.600	1.59	21.67	0.40
2.217	0.40	8.283	18.33	14.350	1.59	20.42	0.40		3.483	0.40	9.550	18.33	15.617	1.59	21.68	0.40
2.233	0.40	8.300	18.33	14.367	1.59	20.43	0.40		3.500	0.40	9.567	18.33	15.633	1.59	21.70	0.40
2.250	0.40	8.317	18.33	14.383	1.59	20.45	0.40		3.517	0.40	9.583	18.33	15.650	1.59	21.72	0.40
2.267	0.40	8.333	18.33	14.400	1.59	20.47	0.40		3.533	0.40	9.600	18.33	15.667	1.59	21.73	0.40
2.283	0.40	8.350	18.33	14.417	1.59	20.48	0.40		3.550	0.40	9.617	18.33	15.683	1.59	21.75	0.40
2.300	0.40	8.367	18.33	14.433	1.59	20.50	0.40		3.567	0.40	9.633	18.33	15.700	1.59	21.77	0.40
2.317	0.40	8.383	18.33	14.450	1.59	20.52	0.40		3.583	0.40	9.650	18.33	15.717	1.59	21.78	0.40
2.333	0.40	8.400	18.33	14.467	1.59	20.53	0.40		3.600	0.40	9.667	18.33	15.733	1.59	21.80	0.40
2.350	0.40	8.417	18.33	14.483	1.59	20.55	0.40		3.617	0.40	9.683	18.33	15.750	1.59	21.82	0.40
2.367	0.40	8.433	18.33	14.500	1.59	20.57	0.40		3.633	0.40	9.700	18.33	15.767	1.59	21.83	0.40
2.383	0.40	8.450	18.33	14.517	1.59	20.58	0.40		3.650	0.40	9.717	18.33	15.783	1.59	21.85	0.40
2.400	0.40	8.467	18.33	14.533	1.59	20.60	0.40		3.667	0.40	9.733	18.33	15.800	1.59	21.87	0.40
2.417	0.40	8.483	18.33	14.550	1.59	20.62	0.40		3.683	0.40	9.750	18.33	15.817	1.59	21.88	0.40
2.433	0.40	8.500	18.33	14.567	1.59	20.63	0.40		3.700	0.40	9.767	18.33	15.833	1.59	21.90	0.40
2.450	0.40	8.517	18.33	14.583	1.59	20.65	0.40		3.717	0.40	9.783	18.33	15.850	1.59	21.92	0.40
2.467	0.40	8.533	18.33	14.600	1.59	20.67	0.40		3.733	0.40	9.800	18.33	15.867	1.59	21.93	0.40
2.483	0.40	8.550	18.33	14.617	1.59	20.68	0.40		3.750	0.40	9.817	18.33	15.883	1.59	21.95	0.40
2.500	0.40	8.567	18.33	14.633	1.59	20.70	0.40		3.767	0.40	9.833	18.33	15.900	1.59	21.97	0.40
2.517	0.40	8.583	18.33	14.650	1.59	20.72	0.40		3.783	0.40	9.850	18.33	15.917	1.59	21.98	0.40
2.533	0.40	8.600	18.33	14.667	1.59	20.73	0.40		3.800	0.40	9.867	18.33	15.933	1.59	22.00	0.40
2.550	0.40	8.617	18.33	14.683	1.59	20.75	0.40		3.817	0.40	9.883	18.33	15.950	1.59	22.02	0.40
2.567	0.40	8.633	18.33	14.700	1.59	20.77	0.40		3.833	0.40	9.900	18.33	15.967	1.59	22.03	0.40
2.583	0.40	8.650	18.33	14.717	1.59	20.78	0.40		3.850	0.40	9.917	18.33	15.983	1.59	22.05	0.40
2.600	0.40	8.667	18.33	14.733	1.59	20.80	0.40		3.867	0.40	9.933	18.33	16.000	1.59	22.07	0.40
2.617	0.40	8.683	18.33	14.750	1.59	20.82	0.40		3.883	0.40	9.950	18.33	16.017	1.59	22.08	0.40
2.633	0.40	8.700	18.33	14.767	1.59	20.83	0.40		3.900	0.40	9.967	18.33	16.033	1.59	22.10	0.40
2.650	0.40	8.717	18.33	14.783	1.59	20.85	0.40		3.917	0.40	9.983	18.33	16.050	1.59	22.12	0.40
2.667	0.40	8.733	18.33	14.800	1.59	20.87	0.40		3.933	0.40	10.000	18.33	16.067	1.59	22.13	0.40
2.683	0.40	8.750	18.33	14.817	1.59	20.88	0.40		3.950	0.40	10.017	18.33	16.083	1.59	22.15	0.40
2.700	0.40	8.767	18.33	14.833	1.59	20.90	0.40		3.967	0.40	10.033	18.33	16.100	1.59	22.17	0.40

3.983	0.40	10.050	18.33	16.117	1.59	22.18	0.40
4.000	0.40	10.067	18.33	16.133	1.59	22.20	0.40
4.017	0.40	10.083	18.33	16.150	1.59	22.22	0.40
4.033	0.40	10.100	18.33	16.167	1.59	22.23	0.40
4.050	0.40	10.117	18.33	16.183	1.59	22.25	0.40
4.067	0.40	10.133	18.33	16.200	1.59	22.27	0.40
4.083	0.40	10.150	18.33	16.217	1.59	22.28	0.40
4.100	0.40	10.167	18.33	16.233	1.59	22.30	0.40
4.117	0.40	10.183	18.33	16.250	1.59	22.32	0.40
4.133	0.40	10.200	18.33	16.267	0.80	22.33	0.40
4.150	0.40	10.217	18.33	16.283	0.80	22.35	0.40
4.167	0.40	10.233	18.33	16.300	0.80	22.37	0.40
4.183	0.40	10.250	18.32	16.317	0.80	22.38	0.40
4.200	0.40	10.267	5.18	16.333	0.80	22.40	0.40
4.217	0.40	10.283	5.18	16.350	0.80	22.42	0.40
4.233	0.40	10.300	5.18	16.367	0.80	22.43	0.40
4.250	0.40	10.317	5.18	16.383	0.80	22.45	0.40
4.267	2.39	10.333	5.18	16.400	0.80	22.47	0.40
4.283	2.39	10.350	5.18	16.417	0.80	22.48	0.40
4.300	2.39	10.367	5.18	16.433	0.80	22.50	0.40
4.317	2.39	10.383	5.18	16.450	0.80	22.52	0.40
4.333	2.39	10.400	5.18	16.467	0.80	22.53	0.40
4.350	2.39	10.417	5.18	16.483	0.80	22.55	0.40
4.367	2.39	10.433	5.18	16.500	0.80	22.57	0.40
4.383	2.39	10.450	5.18	16.517	0.80	22.58	0.40
4.400	2.39	10.467	5.18	16.533	0.80	22.60	0.40
4.417	2.39	10.483	5.18	16.550	0.80	22.62	0.40
4.433	2.39	10.500	5.18	16.567	0.80	22.63	0.40
4.450	2.39	10.517	5.18	16.583	0.80	22.65	0.40
4.467	2.39	10.533	5.18	16.600	0.80	22.67	0.40
4.483	2.39	10.550	5.18	16.617	0.80	22.68	0.40
4.500	2.39	10.567	5.18	16.633	0.80	22.70	0.40
4.517	2.39	10.583	5.18	16.650	0.80	22.72	0.40
4.533	2.39	10.600	5.18	16.667	0.80	22.73	0.40
4.550	2.39	10.617	5.18	16.683	0.80	22.75	0.40
4.567	2.39	10.633	5.18	16.700	0.80	22.77	0.40
4.583	2.39	10.650	5.18	16.717	0.80	22.78	0.40
4.600	2.39	10.667	5.18	16.733	0.80	22.80	0.40
4.617	2.39	10.683	5.18	16.750	0.80	22.82	0.40
4.633	2.39	10.700	5.18	16.767	0.80	22.83	0.40
4.650	2.39	10.717	5.18	16.783	0.80	22.85	0.40
4.667	2.39	10.733	5.18	16.800	0.80	22.87	0.40
4.683	2.39	10.750	5.18	16.817	0.80	22.88	0.40
4.700	2.39	10.767	5.18	16.833	0.80	22.90	0.40
4.717	2.39	10.783	5.18	16.850	0.80	22.92	0.40
4.733	2.39	10.800	5.18	16.867	0.80	22.93	0.40
4.750	2.39	10.817	5.18	16.883	0.80	22.95	0.40
4.767	2.39	10.833	5.18	16.900	0.80	22.97	0.40
4.783	2.39	10.850	5.18	16.917	0.80	22.98	0.40
4.800	2.39	10.867	5.18	16.933	0.80	23.00	0.40
4.817	2.39	10.883	5.18	16.950	0.80	23.02	0.40
4.833	2.39	10.900	5.18	16.967	0.80	23.03	0.40
4.850	2.39	10.917	5.18	16.983	0.80	23.05	0.40
4.867	2.39	10.933	5.18	17.000	0.80	23.07	0.40
4.883	2.39	10.950	5.18	17.017	0.80	23.08	0.40
4.900	2.39	10.967	5.18	17.033	0.80	23.10	0.40
4.917	2.39	10.983	5.18	17.050	0.80	23.12	0.40
4.933	2.39	11.000	5.18	17.067	0.80	23.13	0.40
4.950	2.39	11.017	5.18	17.083	0.80	23.15	0.40
4.967	2.39	11.033	5.18	17.100	0.80	23.17	0.40
4.983	2.39	11.050	5.18	17.117	0.80	23.18	0.40
5.000	2.39	11.067	5.18	17.133	0.80	23.20	0.40
5.017	2.39	11.083	5.18	17.150	0.80	23.22	0.40
5.033	2.39	11.100	5.18	17.167	0.80	23.23	0.40
5.050	2.39	11.117	5.18	17.183	0.80	23.25	0.40
5.067	2.39	11.133	5.18	17.200	0.80	23.27	0.40
5.083	2.39	11.150	5.18	17.217	0.80	23.28	0.40
5.100	2.39	11.167	5.18	17.233	0.80	23.30	0.40
5.117	2.39	11.183	5.18	17.250	0.80	23.32	0.40
5.133	2.39	11.200	5.18	17.267	0.80	23.33	0.40
5.150	2.39	11.217	5.18	17.283	0.80	23.35	0.40
5.167	2.39	11.233	5.18	17.300	0.80	23.37	0.40
5.183	2.39	11.250	5.18	17.317	0.80	23.38	0.40
5.200	2.39	11.267	5.18	17.333	0.80	23.40	0.40
5.217	2.39	11.283	5.18	17.350	0.80	23.42	0.40
5.233	2.39	11.300	5.18	17.367	0.80	23.43	0.40
5.250	2.39	11.317	5.18	17.383	0.80	23.45	0.40
5.267	2.39	11.333	5.18	17.400	0.80	23.47	0.40
5.283	2.39	11.350	5.18	17.417	0.80	23.48	0.40
5.300	2.39	11.367	5.18	17.433	0.80	23.50	0.40
5.317	2.39	11.383	5.18	17.450	0.80	23.52	0.40
5.333	2.39	11.400	5.18	17.467	0.80	23.53	0.40
5.350	2.39	11.417	5.18	17.483	0.80	23.55	0.40
5.367	2.39	11.433	5.18	17.500	0.80	23.57	0.40
5.383	2.39	11.450	5.18	17.517	0.80	23.58	0.40
5.400	2.39	11.467	5.18	17.533	0.80	23.60	0.40
5.417	2.39	11.483	5.18	17.550	0.80	23.62	0.40
5.433	2.39	11.500	5.18	17.567	0.80	23.63	0.40
5.450	2.39	11.517	5.18	17.583	0.80	23.65	0.40
5.467	2.39	11.533	5.18	17.600	0.80	23.67	0.40
5.483	2.39	11.550	5.18	17.617	0.80	23.68	0.40
5.500	2.39	11.567	5.18	17.633	0.80	23.70	0.40
5.517	2.39	11.583	5.18	17.650	0.80	23.72	0.40
5.533	2.39	11.600	5.18	17.667	0.80	23.73	0.40
5.550	2.39	11.617	5.18	17.683	0.80	23.75	0.40
5.567	2.39	11.633	5.18	17.700	0.80	23.77	0.40
5.583	2.39	11.650	5.18	17.717	0.80	23.78	0.40
5.600	2.39	11.667	5.18	17.733	0.80	23.80	0.40
5.617	2.39	11.683	5.18	17.750	0.80	23.82	0.40
5.633	2.39	11.700	5.18	17.767	0.80	23.83	0.40
5.650	2.39	11.717	5.18	17.783	0.80	23.85	0.40
5.667	2.39	11.733	5.18	17.800	0.80	23.87	0.40
5.683	2.39	11.750	5.18	17.817	0.80	23.88	0.40
5.700	2.39	11.767	5.18	17.833	0.80	23.90	0.40
5.717	2.39	11.783	5.18	17.850	0.80	23.92	0.40
5.733	2.39	11.800	5.18	17.867	0.80	23.93	0.40
5.750	2.39	11.817	5.18	17.883	0.80	23.95	0.40
5.767	2.39	11.833	5.18	17.900	0.80	23.97	0.40
5.783	2.39	11.850	5.18	17.917	0.80	23.98	0.40
5.800	2.39	11.867	5.18	17.933	0.80	24.00	0.40
5.817	2.39	11.883	5.18	17.950	0.80	24.02	0.40
5.833	2.39	11.900	5.18	17.967	0.80	24.03	0.40
5.850	2.39	11.917	5.18	17.983	0.80	24.05	0.40
5.867	2.39	11.933	5.18	18.000	0.80	24.07	0.40
5.883	2.39	11.950	5.18	18.017	0.80	24.08	0.40
5.900	2.39	11.967	5.18	18.033	0.80	24.10	0.40
5.917	2.39	11.983	5.18	18.050	0.80	24.12	0.40
5.933	2.39	12.000	5.18	18.067	0.80	24.13	0.40
5.950	2.39	12.017	5.18	18.083	0.80	24.15	0.40
5.967	2.39	12.033	5.18	18.100	0.80	24.17	0.40
5.983	2.39	12.050	5.18	18.117	0.80	24.18	0.40
6.000	2.39	12.067	5.18	18.133	0.80	24.20	0.40
6.017	2.39	12.083	5.18	18.150	0.80	24.22	0.40
6.033	2.39	12.100	5.18	18.167	0.80	24.23	0.40
6.050	2.39	12.117	5.18	18.183	0.80	24.25	0.40
6.067	2.39	12.133	5.18	18.200	0.80		

Max.Eff.Inten.(mm/hr)=	18.33	14.52	
over (min)	6.00	9.00	
Storage Coeff. (min)=	5.51 (ii)	8.86 (ii)	
Unit Hyd. Tpeak (min)=	6.00	9.00	
Unit Hyd. peak (cms)=	0.20	0.13	
			TOTALS
PEAK FLOW (cms)=	0.10	0.00	0.103 (iii)
TIME TO PEAK (hrs)=	9.72	10.25	10.25
RUNOFF VOLUME (mm)=	78.69	49.71	78.41
TOTAL RAINFALL (mm)=	79.70	79.70	79.70
RUNOFF COEFFICIENT =	0.99	0.62	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7644)|	OVERFLOW IS OFF			
IN= 2---> OUT= 1 |				
DT= 1.0 min |	OUTFLOW (cms)	STORAGE (ha.m.)	| OUTFLOW (cms)	STORAGE (ha.m.)

GEI Consultants

	0.0000	0.0000	0.0433	0.1140
	0.0182	0.0580	0.0507	0.1280
	0.0280	0.0775	0.0571	0.1440
	0.0343	0.0930	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7643)	2.020	0.103	10.25	78.41
OUTFLOW: ID= 1 (7644)	2.020	0.033	10.57	72.72

PEAK FLOW REDUCTION [Qout/Qin](%)= 32.20
TIME SHIFT OF PEAK FLOW (min)= 19.00
MAXIMUM STORAGE USED (ha.m.)= 0.0899

```
       V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
```

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***** D E T A I L E D O U T P U T *****

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Output filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-a4eb17eaad57\532dacc9-e70b-43bc-8708-88cc70becaae\s
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DATE: 06/14/2024 TIME: 12:48:39

USER:

COMMENTS: _____

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  ************************************************
  ** SIMULATION : 97. 25yr 4hr 10min Chicago    **
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CHICAGO STORM
Ptotal= 71.59 mm

IDF curve parameters: A=3158.000
B= 15.000
C= 0.933
used in: INTENSITY = A / (t + B)^C

Duration of storm = 4.00 hrs
Storm time step = 10.00 min
Time to peak ratio = 0.33

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	2.68	1.00	47.76	2.00	10.11	3.00	3.51
0.17	3.31	1.17	156.47	2.17	7.92	3.17	3.13
0.33	4.28	1.33	63.86	2.33	6.44	3.33	2.81
0.50	5.90	1.50	31.72	2.50	5.38	3.50	2.55
0.67	9.00	1.67	19.56	2.67	4.59	3.67	2.33
0.83	16.53	1.83	13.56	2.83	3.99	3.83	2.15

CALIB
STANDHYD (7567)
ID= 1 DT= 1.0 min

Area (ha)= 2.72
Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.69	0.03
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	134.66	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.68	1.017	47.75	2.017	10.11	3.02	3.51
0.033	2.68	1.033	47.76	2.033	10.11	3.03	3.51
0.050	2.68	1.050	47.76	2.050	10.11	3.05	3.51
0.067	2.68	1.067	47.76	2.067	10.11	3.07	3.51
0.083	2.68	1.083	47.76	2.083	10.11	3.08	3.51
0.100	2.68	1.100	47.76	2.100	10.11	3.10	3.51
0.117	2.68	1.117	47.76	2.117	10.11	3.12	3.51
0.133	2.68	1.133	47.76	2.133	10.11	3.13	3.51
0.150	2.68	1.150	47.76	2.150	10.11	3.15	3.51
0.167	2.68	1.167	47.76	2.167	10.11	3.17	3.51
0.183	3.31	1.183	156.47	2.183	7.92	3.18	3.13
0.200	3.31	1.200	156.47	2.200	7.92	3.20	3.13
0.217	3.31	1.217	156.47	2.217	7.92	3.22	3.13
0.233	3.31	1.233	156.47	2.233	7.92	3.23	3.13
0.250	3.31	1.250	156.47	2.250	7.92	3.25	3.13
0.267	3.31	1.267	156.47	2.267	7.92	3.27	3.13
0.283	3.31	1.283	156.47	2.283	7.92	3.28	3.13
0.300	3.31	1.300	156.47	2.300	7.92	3.30	3.13
0.317	3.31	1.317	156.47	2.317	7.92	3.32	3.13
0.333	3.31	1.333	156.47	2.333	7.92	3.33	3.13
0.350	4.28	1.350	63.87	2.350	6.44	3.35	2.81
0.367	4.28	1.367	63.86	2.367	6.44	3.37	2.81
0.383	4.28	1.383	63.86	2.383	6.44	3.38	2.81
0.400	4.28	1.400	63.86	2.400	6.44	3.40	2.81
0.417	4.28	1.417	63.86	2.417	6.44	3.42	2.81
0.433	4.28	1.433	63.86	2.433	6.44	3.43	2.81
0.450	4.28	1.450	63.86	2.450	6.44	3.45	2.81
0.467	4.28	1.467	63.86	2.467	6.44	3.47	2.81
0.483	4.28	1.483	63.86	2.483	6.44	3.48	2.81
0.500	4.28	1.500	63.86	2.500	6.44	3.50	2.81
0.517	5.90	1.517	31.72	2.517	5.38	3.52	2.55
0.533	5.90	1.533	31.72	2.533	5.38	3.53	2.55
0.550	5.90	1.550	31.72	2.550	5.38	3.55	2.55
0.567	5.90	1.567	31.72	2.567	5.38	3.57	2.55
0.583	5.90	1.583	31.72	2.583	5.38	3.58	2.55
0.600	5.90	1.600	31.72	2.600	5.38	3.60	2.55
0.617	5.90	1.617	31.72	2.617	5.38	3.62	2.55
0.633	5.90	1.633	31.72	2.633	5.38	3.63	2.55
0.650	5.90	1.650	31.72	2.650	5.38	3.65	2.55
0.667	5.90	1.667	31.72	2.667	5.38	3.67	2.55
0.683	9.00	1.683	19.56	2.683	4.59	3.68	2.33
0.700	9.00	1.700	19.56	2.700	4.59	3.70	2.33
0.717	9.00	1.717	19.56	2.717	4.59	3.72	2.33
0.733	9.00	1.733	19.56	2.733	4.59	3.73	2.33
0.750	9.00	1.750	19.56	2.750	4.59	3.75	2.33
0.767	9.00	1.767	19.56	2.767	4.59	3.77	2.33
0.783	9.00	1.783	19.56	2.783	4.59	3.78	2.33
0.800	9.00	1.800	19.56	2.800	4.59	3.80	2.33
0.817	9.00	1.817	19.56	2.817	4.59	3.82	2.33
0.833	9.00	1.833	19.56	2.833	4.59	3.83	2.33
0.850	16.53	1.850	13.56	2.850	3.99	3.85	2.15
0.867	16.53	1.867	13.56	2.867	3.99	3.87	2.15
0.883	16.53	1.883	13.56	2.883	3.99	3.88	2.15
0.900	16.53	1.900	13.56	2.900	3.99	3.90	2.15
0.917	16.53	1.917	13.56	2.917	3.99	3.92	2.15

0.933	16.53	1.933	13.56	2.933	3.99	3.93	2.15
0.950	16.53	1.950	13.56	2.950	3.99	3.95	2.15
0.967	16.53	1.967	13.56	2.967	3.99	3.97	2.15
0.983	16.53	1.983	13.56	2.983	3.99	3.98	2.15
1.000	16.53	2.000	13.56	3.000	3.99	4.00	2.15

Max.Eff.Inten.(mm/hr)=	156.47	92.44	
over (min)	5.00	4.00	
Storage Coeff. (min)=	2.55 (ii)	3.98 (ii)	
Unit Hyd. Tpeak (min)=	5.00	4.00	
Unit Hyd. peak (cms)=	0.33	0.28	
			TOTALS
PEAK FLOW (cms)=	1.12	0.01	1.130 (iii)
TIME TO PEAK (hrs)=	1.33	1.35	1.33
RUNOFF VOLUME (mm)=	70.59	42.75	70.31
TOTAL RAINFALL (mm)=	71.59	71.59	71.59
RUNOFF COEFFICIENT =	0.99	0.60	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7626)|	OVERFLOW IS OFF			
IN= 2---> OUT= 1 |				
DT= 1.0 min |	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0568	0.1530
	0.0239	0.0780	0.0660	0.1730
	0.0370	0.1040	0.0751	0.2000
	0.0451	0.1250	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7567)	2.720	1.130	1.33	70.31
OUTFLOW: ID= 1 (7626)	2.720	0.057	2.38	68.43

PEAK FLOW REDUCTION [Qout/Qin](%)= 5.04
TIME SHIFT OF PEAK FLOW (min)= 63.00
MAXIMUM STORAGE USED (ha.m.)= 0.1532

CALIB |			
STANDHYD (7624)|	Area (ha)= 1.80		
ID= 1 DT= 1.0 min |	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	1.78	0.02	
Dep. Storage (mm)=	1.00	1.50	
Average Slope (%)=	1.00	0.50	
Length (m)=	109.54	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.68	1.017	47.75	2.017	10.11	3.02	3.51
0.033	2.68	1.033	47.76	2.033	10.11	3.03	3.51
0.050	2.68	1.050	47.76	2.050	10.11	3.05	3.51
0.067	2.68	1.067	47.76	2.067	10.11	3.07	3.51
0.083	2.68	1.083	47.76	2.083	10.11	3.08	3.51
0.100	2.68	1.100	47.76	2.100	10.11	3.10	3.51
0.117	2.68	1.117	47.76	2.117	10.11	3.12	3.51
0.133	2.68	1.133	47.76	2.133	10.11	3.13	3.51
0.150	2.68	1.150	47.76	2.150	10.11	3.15	3.51
0.167	2.68	1.167	47.76	2.167	10.11	3.17	3.51
0.183	3.31	1.183	156.47	2.183	7.92	3.18	3.13
0.200	3.31	1.200	156.47	2.200	7.92	3.20	3.13
0.217	3.31	1.217	156.47	2.217	7.92	3.22	3.13
0.233	3.31	1.233	156.47	2.233	7.92	3.23	3.13
0.250	3.31	1.250	156.47	2.250	7.92	3.25	3.13
0.267	3.31	1.267	156.47	2.267	7.92	3.27	3.13
0.283	3.31	1.283	156.47	2.283	7.92	3.28	3.13
0.300	3.31	1.300	156.47	2.300	7.92	3.30	3.13
0.317	3.31	1.317	156.47	2.317	7.92	3.32	3.13
0.333	3.31	1.333	156.47	2.333	7.92	3.33	3.13
0.350	4.28	1.350	63.87	2.350	6.44	3.35	2.81
0.367	4.28	1.367	63.86	2.367	6.44	3.37	2.81
0.383	4.28	1.383	63.86	2.383	6.44	3.38	2.81
0.400	4.28	1.400	63.86	2.400	6.44	3.40	2.81
0.417	4.28	1.417	63.86	2.417	6.44	3.42	2.81
0.433	4.28	1.433	63.86	2.433	6.44	3.43	2.81
0.450	4.28	1.450	63.86	2.450	6.44	3.45	2.81
0.467	4.28	1.467	63.86	2.467	6.44	3.47	2.81
0.483	4.28	1.483	63.86	2.483	6.44	3.48	2.81
0.500	4.28	1.500	63.86	2.500	6.44	3.50	2.81
0.517	5.90	1.517	31.72	2.517	5.38	3.52	2.55
0.533	5.90	1.533	31.72	2.533	5.38	3.53	2.55
0.550	5.90	1.550	31.72	2.550	5.38	3.55	2.55
0.567	5.90	1.567	31.72	2.567	5.38	3.57	2.55
0.583	5.90	1.583	31.72	2.583	5.38	3.58	2.55
0.600	5.90	1.600	31.72	2.600	5.38	3.60	2.55
0.617	5.90	1.617	31.72	2.617	5.38	3.62	2.55
0.633	5.90	1.633	31.72	2.633	5.38	3.63	2.55
0.650	5.90	1.650	31.72	2.650	5.38	3.65	2.55
0.667	5.90	1.667	31.72	2.667	5.38	3.67	2.55
0.683	9.00	1.683	19.56	2.683	4.59	3.68	2.33
0.700	9.00	1.700	19.56	2.700	4.59	3.70	2.33
0.717	9.00	1.717	19.56	2.717	4.59	3.72	2.33
0.733	9.00	1.733	19.56	2.733	4.59	3.73	2.33
0.750	9.00	1.750	19.56	2.750	4.59	3.75	2.33
0.767	9.00	1.767	19.56	2.767	4.59	3.77	2.33
0.783	9.00	1.783	19.56	2.783	4.59	3.78	2.33
0.800	9.00	1.800	19.56	2.800	4.59	3.80	2.33
0.817	9.00	1.817	19.56	2.817	4.59	3.82	2.33
0.833	9.00	1.833	19.56	2.833	4.59	3.83	2.33
0.850	16.53	1.850	13.56	2.850	3.99	3.85	2.15
0.867	16.53	1.867	13.56	2.867	3.99	3.87	2.15
0.883	16.53	1.883	13.56	2.883	3.99	3.88	2.15
0.900	16.53	1.900	13.56	2.900	3.99	3.90	2.15
0.917	16.53	1.917	13.56	2.917	3.99	3.92	2.15
0.933	16.53	1.933	13.56	2.933	3.99	3.93	2.15
0.950	16.53	1.950	13.56	2.950	3.99	3.95	2.15
0.967	16.53	1.967	13.56	2.967	3.99	3.97	2.15
0.983	16.53	1.983	13.56	2.983	3.99	3.98	2.15
1.000	16.53	2.000	13.56	3.000	3.99	4.00	2.15

Max.Eff.Inten.(mm/hr)=	156.47	112.26	
over (min)	5.00	4.00	
Storage Coeff. (min)=	2.26 (ii)	3.68 (ii)	
Unit Hyd. Tpeak (min)=	5.00	4.00	
Unit Hyd. peak (cms)=	0.35	0.30	
			TOTALS
PEAK FLOW (cms)=	0.75	0.01	0.758 (iii)
TIME TO PEAK (hrs)=	1.33	1.35	1.33
RUNOFF VOLUME (mm)=	70.59	49.97	70.38
TOTAL RAINFALL (mm)=	71.59	71.59	71.59
RUNOFF COEFFICIENT =	0.99	0.70	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 90.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7625)|	OVERFLOW IS OFF			
IN= 2---> OUT= 1 |				
DT= 1.0 min |	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0389	0.1013
	0.0164	0.0514	0.0456	0.1141

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                      0.0252     0.0690   |   0.0514      0.1288
                      0.0309     0.0825   |   0.0000      0.0000

                                 AREA      QPEAK     TPEAK       R.V.
                                 (ha)      (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (   7624)      1.800      0.758      1.33       70.38
   OUTFLOW: ID= 1 (   7625)      1.800      0.039      2.37       68.74

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.12
                TIME SHIFT OF PEAK FLOW         (min)= 62.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.1011

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--------------------
| CALIB            |
| STANDHYD (   7623)|   Area    (ha)=   1.15
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.14         0.01
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=      87.56        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
  TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.017    2.68 | 1.017   47.75 | 2.017   10.11 |  3.02    3.51
 0.033    2.68 | 1.033   47.76 | 2.033   10.11 |  3.03    3.51
 0.050    2.68 | 1.050   47.76 | 2.050   10.11 |  3.05    3.51
 0.067    2.68 | 1.067   47.76 | 2.067   10.11 |  3.07    3.51
 0.083    2.68 | 1.083   47.76 | 2.083   10.11 |  3.08    3.51
 0.100    2.68 | 1.100   47.76 | 2.100   10.11 |  3.10    3.51
 0.117    2.68 | 1.117   47.76 | 2.117   10.11 |  3.12    3.51
 0.133    2.68 | 1.133   47.76 | 2.133   10.11 |  3.13    3.51
 0.150    2.68 | 1.150   47.76 | 2.150   10.11 |  3.15    3.51
 0.167    2.68 | 1.167   47.76 | 2.167   10.11 |  3.17    3.51
 0.183    3.31 | 1.183  156.47 | 2.183    7.92 |  3.18    3.13
 0.200    3.31 | 1.200  156.47 | 2.200    7.92 |  3.20    3.13
 0.217    3.31 | 1.217  156.47 | 2.217    7.92 |  3.22    3.13
 0.233    3.31 | 1.233  156.47 | 2.233    7.92 |  3.23    3.13
 0.250    3.31 | 1.250  156.47 | 2.250    7.92 |  3.25    3.13
 0.267    3.31 | 1.267  156.47 | 2.267    7.92 |  3.27    3.13
 0.283    3.31 | 1.283  156.47 | 2.283    7.92 |  3.28    3.13
 0.300    3.31 | 1.300  156.47 | 2.300    7.92 |  3.30    3.13
 0.317    3.31 | 1.317  156.47 | 2.317    7.92 |  3.32    3.13
 0.333    3.31 | 1.333  156.47 | 2.333    7.92 |  3.33    3.13
 0.350    4.28 | 1.350   63.87 | 2.350    6.44 |  3.35    2.81
 0.367    4.28 | 1.367   63.86 | 2.367    6.44 |  3.37    2.81
 0.383    4.28 | 1.383   63.86 | 2.383    6.44 |  3.38    2.81
 0.400    4.28 | 1.400   63.86 | 2.400    6.44 |  3.40    2.81
 0.417    4.28 | 1.417   63.86 | 2.417    6.44 |  3.42    2.81
 0.433    4.28 | 1.433   63.86 | 2.433    6.44 |  3.43    2.81
 0.450    4.28 | 1.450   63.86 | 2.450    6.44 |  3.45    2.81
 0.467    4.28 | 1.467   63.86 | 2.467    6.44 |  3.47    2.81
 0.483    4.28 | 1.483   63.86 | 2.483    6.44 |  3.48    2.81
 0.500    4.28 | 1.500   63.86 | 2.500    6.44 |  3.50    2.81
 0.517    5.90 | 1.517   31.72 | 2.517    5.38 |  3.52    2.55
 0.533    5.90 | 1.533   31.72 | 2.533    5.38 |  3.53    2.55
 0.550    5.90 | 1.550   31.72 | 2.550    5.38 |  3.55    2.55
 0.567    5.90 | 1.567   31.72 | 2.567    5.38 |  3.57    2.55
 0.583    5.90 | 1.583   31.72 | 2.583    5.38 |  3.58    2.55
 0.600    5.90 | 1.600   31.72 | 2.600    5.38 |  3.60    2.55
 0.617    5.90 | 1.617   31.72 | 2.617    5.38 |  3.62    2.55
 0.633    5.90 | 1.633   31.72 | 2.633    5.38 |  3.63    2.55
 0.650    5.90 | 1.650   31.72 | 2.650    5.38 |  3.65    2.55
 0.667    5.90 | 1.667   31.72 | 2.667    5.38 |  3.67    2.55
 0.683    9.00 | 1.683   19.56 | 2.683    4.59 |  3.68    2.33
 0.700    9.00 | 1.700   19.56 | 2.700    4.59 |  3.70    2.33
 0.717    9.00 | 1.717   19.56 | 2.717    4.59 |  3.72    2.33
 0.733    9.00 | 1.733   19.56 | 2.733    4.59 |  3.73    2.33
 0.750    9.00 | 1.750   19.56 | 2.750    4.59 |  3.75    2.33
 0.767    9.00 | 1.767   19.56 | 2.767    4.59 |  3.77    2.33
 0.783    9.00 | 1.783   19.56 | 2.783    4.59 |  3.78    2.33
 0.800    9.00 | 1.800   19.56 | 2.800    4.59 |  3.80    2.33
 0.817    9.00 | 1.817   19.56 | 2.817    4.59 |  3.82    2.33
 0.833    9.00 | 1.833   19.56 | 2.833    4.59 |  3.83    2.33
 0.850   16.53 | 1.850   13.56 | 2.850    3.99 |  3.85    2.15
 0.867   16.53 | 1.867   13.56 | 2.867    3.99 |  3.87    2.15
 0.883   16.53 | 1.883   13.56 | 2.883    3.99 |  3.88    2.15
 0.900   16.53 | 1.900   13.56 | 2.900    3.99 |  3.90    2.15
 0.917   16.53 | 1.917   13.56 | 2.917    3.99 |  3.92    2.15
 0.933   16.53 | 1.933   13.56 | 2.933    3.99 |  3.93    2.15
 0.950   16.53 | 1.950   13.56 | 2.950    3.99 |  3.95    2.15
 0.967   16.53 | 1.967   13.56 | 2.967    3.99 |  3.97    2.15
 0.983   16.53 | 1.983   13.56 | 2.983    3.99 |  3.98    2.15
 1.000   16.53 | 2.000   13.56 | 3.000    3.99 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=     156.47        92.44
                   over (min)        5.00         4.00
     Storage Coeff.  (min)=       1.97 (ii)    3.40 (ii)
     Unit Hyd. Tpeak (min)=       5.00         4.00
     Unit Hyd. peak  (cms)=       0.38         0.31
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.49         0.00          0.489 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.35           1.33
     RUNOFF VOLUME    (mm)=      70.59        42.75          70.31
     TOTAL RAINFALL   (mm)=      71.59        71.59          71.59
     RUNOFF COEFFICIENT   =       0.99         0.60           0.98

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  85.0     Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  7622)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0258      0.0650
                          0.0108     0.0330   |   0.0302      0.0725
                          0.0167     0.0440   |   0.0340      0.0820
                          0.0204     0.0525   |   0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (   7623)     1.150      0.489      1.33       70.31
   OUTFLOW: ID= 1 (   7622)     1.150      0.025      2.33       68.83

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.21
                TIME SHIFT OF PEAK FLOW         (min)= 60.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.0642

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| CALIB            |
| STANDHYD (   7629)|   Area    (ha)=   4.09
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.05         0.04
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=     165.13        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
  TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.017    2.68 | 1.017   47.75 | 2.017   10.11 |  3.02    3.51
 0.033    2.68 | 1.033   47.76 | 2.033   10.11 |  3.03    3.51
```

0.050	2.68	1.050	47.76	2.050	10.11	3.05	3.51
0.067	2.68	1.067	47.76	2.067	10.11	3.07	3.51
0.083	2.68	1.083	47.76	2.083	10.11	3.08	3.51
0.100	2.68	1.100	47.76	2.100	10.11	3.10	3.51
0.117	2.68	1.117	47.76	2.117	10.11	3.12	3.51
0.133	2.68	1.133	47.76	2.133	10.11	3.13	3.51
0.150	2.68	1.150	47.76	2.150	10.11	3.15	3.51
0.167	2.68	1.167	47.76	2.167	10.11	3.17	3.51
0.183	3.31	1.183	156.47	2.183	7.92	3.18	3.13
0.200	3.31	1.200	156.47	2.200	7.92	3.20	3.13
0.217	3.31	1.217	156.47	2.217	7.92	3.22	3.13
0.233	3.31	1.233	156.47	2.233	7.92	3.23	3.13
0.250	3.31	1.250	156.47	2.250	7.92	3.25	3.13
0.267	3.31	1.267	156.47	2.267	7.92	3.27	3.13
0.283	3.31	1.283	156.47	2.283	7.92	3.28	3.13
0.300	3.31	1.300	156.47	2.300	7.92	3.30	3.13
0.317	3.31	1.317	156.47	2.317	7.92	3.32	3.13
0.333	3.31	1.333	156.47	2.333	7.92	3.33	3.13
0.350	4.28	1.350	63.87	2.350	6.44	3.35	2.81
0.367	4.28	1.367	63.86	2.367	6.44	3.37	2.81
0.383	4.28	1.383	63.86	2.383	6.44	3.38	2.81
0.400	4.28	1.400	63.86	2.400	6.44	3.40	2.81
0.417	4.28	1.417	63.86	2.417	6.44	3.42	2.81
0.433	4.28	1.433	63.86	2.433	6.44	3.43	2.81
0.450	4.28	1.450	63.86	2.450	6.44	3.45	2.81
0.467	4.28	1.467	63.86	2.467	6.44	3.47	2.81
0.483	4.28	1.483	63.86	2.483	6.44	3.48	2.81
0.500	4.28	1.500	63.86	2.500	6.44	3.50	2.81
0.517	5.90	1.517	31.72	2.517	5.38	3.52	2.55
0.533	5.90	1.533	31.72	2.533	5.38	3.53	2.55
0.550	5.90	1.550	31.72	2.550	5.38	3.55	2.55
0.567	5.90	1.567	31.72	2.567	5.38	3.57	2.55
0.583	5.90	1.583	31.72	2.583	5.38	3.58	2.55
0.600	5.90	1.600	31.72	2.600	5.38	3.60	2.55
0.617	5.90	1.617	31.72	2.617	5.38	3.62	2.55
0.633	5.90	1.633	31.72	2.633	5.38	3.63	2.55
0.650	5.90	1.650	31.72	2.650	5.38	3.65	2.55
0.667	5.90	1.667	31.72	2.667	5.38	3.67	2.55
0.683	9.00	1.683	19.56	2.683	4.59	3.68	2.33
0.700	9.00	1.700	19.56	2.700	4.59	3.70	2.33
0.717	9.00	1.717	19.56	2.717	4.59	3.72	2.33
0.733	9.00	1.733	19.56	2.733	4.59	3.73	2.33
0.750	9.00	1.750	19.56	2.750	4.59	3.75	2.33
0.767	9.00	1.767	19.56	2.767	4.59	3.77	2.33
0.783	9.00	1.783	19.56	2.783	4.59	3.78	2.33
0.800	9.00	1.800	19.56	2.800	4.59	3.80	2.33
0.817	9.00	1.817	19.56	2.817	4.59	3.82	2.33
0.833	9.00	1.833	19.56	2.833	4.59	3.83	2.33
0.850	16.53	1.850	13.56	2.850	3.99	3.85	2.15
0.867	16.53	1.867	13.56	2.867	3.99	3.87	2.15
0.883	16.53	1.883	13.56	2.883	3.99	3.88	2.15
0.900	16.53	1.900	13.56	2.900	3.99	3.90	2.15
0.917	16.53	1.917	13.56	2.917	3.99	3.92	2.15
0.933	16.53	1.933	13.56	2.933	3.99	3.93	2.15
0.950	16.53	1.950	13.56	2.950	3.99	3.95	2.15
0.967	16.53	1.967	13.56	2.967	3.99	3.97	2.15
0.983	16.53	1.983	13.56	2.983	3.99	3.98	2.15
1.000	16.53	2.000	13.56	3.000	3.99	4.00	2.15

Max.Eff.Inten.(mm/hr)=	156.47	92.44	
over (min)	5.00	5.00	
Storage Coeff. (min)=	2.89 (ii)	4.31 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.31	0.25	
			TOTALS
PEAK FLOW (cms)=	1.66	0.01	1.672 (iii)
TIME TO PEAK (hrs)=	1.33	1.37	1.33
RUNOFF VOLUME (mm)=	70.59	42.75	70.31
TOTAL RAINFALL (mm)=	71.59	71.59	71.59
RUNOFF COEFFICIENT =	0.99	0.60	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7630)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0826	0.2320
	0.0347	0.1170	0.0967	0.2609
	0.0534	0.1580	0.1090	0.2940
	0.0655	0.1890	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7629)	4.090	1.672	1.33	70.31
OUTFLOW: ID= 1 (7630)	4.090	0.082	2.42	68.18

PEAK FLOW REDUCTION [Qout/Qin](%)= 4.93
TIME SHIFT OF PEAK FLOW (min)= 65.00
MAXIMUM STORAGE USED (ha.m.)= 0.2316

CALIB			
STANDHYD (7631)	Area (ha)=	3.91	
ID= 1 DT= 1.0 min	Total Imp(%)=	99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.87	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	161.45	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.68	1.017	47.75	2.017	10.11	3.02	3.51
0.033	2.68	1.033	47.76	2.033	10.11	3.03	3.51
0.050	2.68	1.050	47.76	2.050	10.11	3.05	3.51
0.067	2.68	1.067	47.76	2.067	10.11	3.07	3.51
0.083	2.68	1.083	47.76	2.083	10.11	3.08	3.51
0.100	2.68	1.100	47.76	2.100	10.11	3.10	3.51
0.117	2.68	1.117	47.76	2.117	10.11	3.12	3.51
0.133	2.68	1.133	47.76	2.133	10.11	3.13	3.51
0.150	2.68	1.150	47.76	2.150	10.11	3.15	3.51
0.167	2.68	1.167	47.76	2.167	10.11	3.17	3.51
0.183	3.31	1.183	156.47	2.183	7.92	3.18	3.13
0.200	3.31	1.200	156.47	2.200	7.92	3.20	3.13
0.217	3.31	1.217	156.47	2.217	7.92	3.22	3.13
0.233	3.31	1.233	156.47	2.233	7.92	3.23	3.13
0.250	3.31	1.250	156.47	2.250	7.92	3.25	3.13
0.267	3.31	1.267	156.47	2.267	7.92	3.27	3.13
0.283	3.31	1.283	156.47	2.283	7.92	3.28	3.13
0.300	3.31	1.300	156.47	2.300	7.92	3.30	3.13
0.317	3.31	1.317	156.47	2.317	7.92	3.32	3.13
0.333	3.31	1.333	156.47	2.333	7.92	3.33	3.13
0.350	4.28	1.350	63.87	2.350	6.44	3.35	2.81
0.367	4.28	1.367	63.86	2.367	6.44	3.37	2.81
0.383	4.28	1.383	63.86	2.383	6.44	3.38	2.81
0.400	4.28	1.400	63.86	2.400	6.44	3.40	2.81
0.417	4.28	1.417	63.86	2.417	6.44	3.42	2.81
0.433	4.28	1.433	63.86	2.433	6.44	3.43	2.81
0.450	4.28	1.450	63.86	2.450	6.44	3.45	2.81
0.467	4.28	1.467	63.86	2.467	6.44	3.47	2.81
0.483	4.28	1.483	63.86	2.483	6.44	3.48	2.81
0.500	4.28	1.500	63.86	2.500	6.44	3.50	2.81
0.517	5.90	1.517	31.72	2.517	5.38	3.52	2.55
0.533	5.90	1.533	31.72	2.533	5.38	3.53	2.55
0.550	5.90	1.550	31.72	2.550	5.38	3.55	2.55
0.567	5.90	1.567	31.72	2.567	5.38	3.57	2.55
0.583	5.90	1.583	31.72	2.583	5.38	3.58	2.55

0.600	5.90	1.600	31.72	2.600	5.38	3.60	2.55
0.617	5.90	1.617	31.72	2.617	5.38	3.62	2.55
0.633	5.90	1.633	31.72	2.633	5.38	3.63	2.55
0.650	5.90	1.650	31.72	2.650	5.38	3.65	2.55
0.667	5.90	1.667	31.72	2.667	5.38	3.67	2.55
0.683	9.00	1.683	19.56	2.683	4.59	3.68	2.33
0.700	9.00	1.700	19.56	2.700	4.59	3.70	2.33
0.717	9.00	1.717	19.56	2.717	4.59	3.72	2.33
0.733	9.00	1.733	19.56	2.733	4.59	3.73	2.33
0.750	9.00	1.750	19.56	2.750	4.59	3.75	2.33
0.767	9.00	1.767	19.56	2.767	4.59	3.77	2.33
0.783	9.00	1.783	19.56	2.783	4.59	3.78	2.33
0.800	9.00	1.800	19.56	2.800	4.59	3.80	2.33
0.817	9.00	1.817	19.56	2.817	4.59	3.82	2.33
0.833	9.00	1.833	19.56	2.833	4.59	3.83	2.33
0.850	16.53	1.850	13.56	2.850	3.99	3.85	2.15
0.867	16.53	1.867	13.56	2.867	3.99	3.87	2.15
0.883	16.53	1.883	13.56	2.883	3.99	3.88	2.15
0.900	16.53	1.900	13.56	2.900	3.99	3.90	2.15
0.917	16.53	1.917	13.56	2.917	3.99	3.92	2.15
0.933	16.53	1.933	13.56	2.933	3.99	3.93	2.15
0.950	16.53	1.950	13.56	2.950	3.99	3.95	2.15
0.967	16.53	1.967	13.56	2.967	3.99	3.97	2.15
0.983	16.53	1.983	13.56	2.983	3.99	3.98	2.15
1.000	16.53	2.000	13.56	3.000	3.99	4.00	2.15

Max.Eff.Inten.(mm/hr)=	156.47	92.44	
over (min)	5.00	5.00	
Storage Coeff. (min)=	2.85 (ii)	4.27 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.32	0.25	
			TOTALS
PEAK FLOW (cms)=	1.59	0.01	1.601 (iii)
TIME TO PEAK (hrs)=	1.33	1.37	1.33
RUNOFF VOLUME (mm)=	70.59	42.75	70.31
TOTAL RAINFALL (mm)=	71.59	71.59	71.59
RUNOFF COEFFICIENT =	0.99	0.60	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7632) IN= 2---> OUT= 1 DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0792	0.2220
	0.0333	0.1130	0.0928	0.2500
	0.0512	0.1510	0.1046	0.2810
	0.0629	0.1810	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7631)	3.910	1.601	1.33	70.31
OUTFLOW: ID= 1 (7632)	3.910	0.079	2.40	68.15

PEAK FLOW REDUCTION [Qout/Qin](%)= 4.93
TIME SHIFT OF PEAK FLOW (min)= 64.00
MAXIMUM STORAGE USED (ha.m.)= 0.2214

CALIB STANDHYD (7641) ID= 1 DT= 1.0 min	Area (ha)= 2.21 Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00		
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	2.19	0.02	
Dep. Storage (mm)=	1.00	1.50	
Average Slope (%)=	1.00	0.50	
Length (m)=	121.38	40.00	

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.68	1.017	47.75	2.017	10.11	3.02	3.51
0.033	2.68	1.033	47.76	2.033	10.11	3.03	3.51
0.050	2.68	1.050	47.76	2.050	10.11	3.05	3.51
0.067	2.68	1.067	47.76	2.067	10.11	3.07	3.51
0.083	2.68	1.083	47.76	2.083	10.11	3.08	3.51
0.100	2.68	1.100	47.76	2.100	10.11	3.10	3.51
0.117	2.68	1.117	47.76	2.117	10.11	3.12	3.51
0.133	2.68	1.133	47.76	2.133	10.11	3.13	3.51
0.150	2.68	1.150	47.76	2.150	10.11	3.15	3.51
0.167	2.68	1.167	47.76	2.167	10.11	3.17	3.51
0.183	3.31	1.183	156.47	2.183	7.92	3.18	3.13
0.200	3.31	1.200	156.47	2.200	7.92	3.20	3.13
0.217	3.31	1.217	156.47	2.217	7.92	3.22	3.13
0.233	3.31	1.233	156.47	2.233	7.92	3.23	3.13
0.250	3.31	1.250	156.47	2.250	7.92	3.25	3.13
0.267	3.31	1.267	156.47	2.267	7.92	3.27	3.13
0.283	3.31	1.283	156.47	2.283	7.92	3.28	3.13
0.300	3.31	1.300	156.47	2.300	7.92	3.30	3.13
0.317	3.31	1.317	156.47	2.317	7.92	3.32	3.13
0.333	3.31	1.333	156.47	2.333	7.92	3.33	3.13
0.350	4.28	1.350	63.87	2.350	6.44	3.35	2.81
0.367	4.28	1.367	63.86	2.367	6.44	3.37	2.81
0.383	4.28	1.383	63.86	2.383	6.44	3.38	2.81
0.400	4.28	1.400	63.86	2.400	6.44	3.40	2.81
0.417	4.28	1.417	63.86	2.417	6.44	3.42	2.81
0.433	4.28	1.433	63.86	2.433	6.44	3.43	2.81
0.450	4.28	1.450	63.86	2.450	6.44	3.45	2.81
0.467	4.28	1.467	63.86	2.467	6.44	3.47	2.81
0.483	4.28	1.483	63.86	2.483	6.44	3.48	2.81
0.500	4.28	1.500	63.86	2.500	6.44	3.50	2.81
0.517	5.90	1.517	31.72	2.517	5.38	3.52	2.55
0.533	5.90	1.533	31.72	2.533	5.38	3.53	2.55
0.550	5.90	1.550	31.72	2.550	5.38	3.55	2.55
0.567	5.90	1.567	31.72	2.567	5.38	3.57	2.55
0.583	5.90	1.583	31.72	2.583	5.38	3.58	2.55
0.600	5.90	1.600	31.72	2.600	5.38	3.60	2.55
0.617	5.90	1.617	31.72	2.617	5.38	3.62	2.55
0.633	5.90	1.633	31.72	2.633	5.38	3.63	2.55
0.650	5.90	1.650	31.72	2.650	5.38	3.65	2.55
0.667	5.90	1.667	31.72	2.667	5.38	3.67	2.55
0.683	9.00	1.683	19.56	2.683	4.59	3.68	2.33
0.700	9.00	1.700	19.56	2.700	4.59	3.70	2.33
0.717	9.00	1.717	19.56	2.717	4.59	3.72	2.33
0.733	9.00	1.733	19.56	2.733	4.59	3.73	2.33
0.750	9.00	1.750	19.56	2.750	4.59	3.75	2.33
0.767	9.00	1.767	19.56	2.767	4.59	3.77	2.33
0.783	9.00	1.783	19.56	2.783	4.59	3.78	2.33
0.800	9.00	1.800	19.56	2.800	4.59	3.80	2.33
0.817	9.00	1.817	19.56	2.817	4.59	3.82	2.33
0.833	9.00	1.833	19.56	2.833	4.59	3.83	2.33
0.850	16.53	1.850	13.56	2.850	3.99	3.85	2.15
0.867	16.53	1.867	13.56	2.867	3.99	3.87	2.15
0.883	16.53	1.883	13.56	2.883	3.99	3.88	2.15
0.900	16.53	1.900	13.56	2.900	3.99	3.90	2.15
0.917	16.53	1.917	13.56	2.917	3.99	3.92	2.15
0.933	16.53	1.933	13.56	2.933	3.99	3.93	2.15
0.950	16.53	1.950	13.56	2.950	3.99	3.95	2.15
0.967	16.53	1.967	13.56	2.967	3.99	3.97	2.15
0.983	16.53	1.983	13.56	2.983	3.99	3.98	2.15
1.000	16.53	2.000	13.56	3.000	3.99	4.00	2.15

Max.Eff.Inten.(mm/hr)=	156.47	92.44	
over (min)	5.00	4.00	
Storage Coeff. (min)=	2.40 (ii)	3.82 (ii)	
Unit Hyd. Tpeak (min)=	5.00	4.00	
Unit Hyd. peak (cms)=	0.34	0.29	
			TOTALS
PEAK FLOW (cms)=	0.92	0.01	0.924 (iii)

```
    TIME TO PEAK    (hrs)=       1.33         1.35          1.33
    RUNOFF VOLUME    (mm)=      70.59        42.75         70.31
    TOTAL RAINFALL   (mm)=      71.59        71.59         71.59
    RUNOFF COEFFICIENT   =       0.99         0.60          0.98


     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN*  =  85.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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-------------------
| RESERVOIR(  7642)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0470     0.1250
                         0.0197     0.0630   |   0.0551     0.1410
                         0.0304     0.0850   |   0.0620     0.1580
                         0.0373     0.1020   |   0.0000     0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  7641)     2.210     0.924      1.33      70.31
   OUTFLOW: ID= 1 (  7642)     2.210     0.047      2.38      68.54

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.06
                TIME SHIFT OF PEAK FLOW          (min)= 63.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.1243

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-------------------
| CALIB            |
| STANDHYD (  7643)|   Area    (ha)=   2.02
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
-------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.00         0.02
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=     116.05        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |   hrs   mm/hr |   hrs   mm/hr
 0.017    2.68 | 1.017   47.75 | 2.017   10.11 |  3.02    3.51
 0.033    2.68 | 1.033   47.76 | 2.033   10.11 |  3.03    3.51
 0.050    2.68 | 1.050   47.76 | 2.050   10.11 |  3.05    3.51
 0.067    2.68 | 1.067   47.76 | 2.067   10.11 |  3.07    3.51
 0.083    2.68 | 1.083   47.76 | 2.083   10.11 |  3.08    3.51
 0.100    2.68 | 1.100   47.76 | 2.100   10.11 |  3.10    3.51
 0.117    2.68 | 1.117   47.76 | 2.117   10.11 |  3.12    3.51
 0.133    2.68 | 1.133   47.76 | 2.133   10.11 |  3.13    3.51
 0.150    2.68 | 1.150   47.76 | 2.150   10.11 |  3.15    3.51
 0.167    2.68 | 1.167   47.76 | 2.167   10.11 |  3.17    3.51
 0.183    3.31 | 1.183  156.47 | 2.183    7.92 |  3.18    3.13
 0.200    3.31 | 1.200  156.47 | 2.200    7.92 |  3.20    3.13
 0.217    3.31 | 1.217  156.47 | 2.217    7.92 |  3.22    3.13
 0.233    3.31 | 1.233  156.47 | 2.233    7.92 |  3.23    3.13
 0.250    3.31 | 1.250  156.47 | 2.250    7.92 |  3.25    3.13
 0.267    3.31 | 1.267  156.47 | 2.267    7.92 |  3.27    3.13
 0.283    3.31 | 1.283  156.47 | 2.283    7.92 |  3.28    3.13
 0.300    3.31 | 1.300  156.47 | 2.300    7.92 |  3.30    3.13
 0.317    3.31 | 1.317  156.47 | 2.317    7.92 |  3.32    3.13
 0.333    3.31 | 1.333  156.47 | 2.333    7.92 |  3.33    3.13
 0.350    4.28 | 1.350   63.87 | 2.350    6.44 |  3.35    2.81
 0.367    4.28 | 1.367   63.86 | 2.367    6.44 |  3.37    2.81
 0.383    4.28 | 1.383   63.86 | 2.383    6.44 |  3.38    2.81
 0.400    4.28 | 1.400   63.86 | 2.400    6.44 |  3.40    2.81
 0.417    4.28 | 1.417   63.86 | 2.417    6.44 |  3.42    2.81
 0.433    4.28 | 1.433   63.86 | 2.433    6.44 |  3.43    2.81
 0.450    4.28 | 1.450   63.86 | 2.450    6.44 |  3.45    2.81
 0.467    4.28 | 1.467   63.86 | 2.467    6.44 |  3.47    2.81
 0.483    4.28 | 1.483   63.86 | 2.483    6.44 |  3.48    2.81
 0.500    4.28 | 1.500   63.86 | 2.500    6.44 |  3.50    2.81
 0.517    5.90 | 1.517   31.72 | 2.517    5.38 |  3.52    2.55
 0.533    5.90 | 1.533   31.72 | 2.533    5.38 |  3.53    2.55
 0.550    5.90 | 1.550   31.72 | 2.550    5.38 |  3.55    2.55
 0.567    5.90 | 1.567   31.72 | 2.567    5.38 |  3.57    2.55
 0.583    5.90 | 1.583   31.72 | 2.583    5.38 |  3.58    2.55
 0.600    5.90 | 1.600   31.72 | 2.600    5.38 |  3.60    2.55
 0.617    5.90 | 1.617   31.72 | 2.617    5.38 |  3.62    2.55
 0.633    5.90 | 1.633   31.72 | 2.633    5.38 |  3.63    2.55
 0.650    5.90 | 1.650   31.72 | 2.650    5.38 |  3.65    2.55
 0.667    5.90 | 1.667   31.72 | 2.667    5.38 |  3.67    2.55
 0.683    9.00 | 1.683   19.56 | 2.683    4.59 |  3.68    2.33
 0.700    9.00 | 1.700   19.56 | 2.700    4.59 |  3.70    2.33
 0.717    9.00 | 1.717   19.56 | 2.717    4.59 |  3.72    2.33
 0.733    9.00 | 1.733   19.56 | 2.733    4.59 |  3.73    2.33
 0.750    9.00 | 1.750   19.56 | 2.750    4.59 |  3.75    2.33
 0.767    9.00 | 1.767   19.56 | 2.767    4.59 |  3.77    2.33
 0.783    9.00 | 1.783   19.56 | 2.783    4.59 |  3.78    2.33
 0.800    9.00 | 1.800   19.56 | 2.800    4.59 |  3.80    2.33
 0.817    9.00 | 1.817   19.56 | 2.817    4.59 |  3.82    2.33
 0.833    9.00 | 1.833   19.56 | 2.833    4.59 |  3.83    2.33
 0.850   16.53 | 1.850   13.56 | 2.850    3.99 |  3.85    2.15
 0.867   16.53 | 1.867   13.56 | 2.867    3.99 |  3.87    2.15
 0.883   16.53 | 1.883   13.56 | 2.883    3.99 |  3.88    2.15
 0.900   16.53 | 1.900   13.56 | 2.900    3.99 |  3.90    2.15
 0.917   16.53 | 1.917   13.56 | 2.917    3.99 |  3.92    2.15
 0.933   16.53 | 1.933   13.56 | 2.933    3.99 |  3.93    2.15
 0.950   16.53 | 1.950   13.56 | 2.950    3.99 |  3.95    2.15
 0.967   16.53 | 1.967   13.56 | 2.967    3.99 |  3.97    2.15
 0.983   16.53 | 1.983   13.56 | 2.983    3.99 |  3.98    2.15
 1.000   16.53 | 2.000   13.56 | 3.000    3.99 |  4.00    2.15

    Max.Eff.Inten.(mm/hr)=     156.47        92.44
              over (min)          5.00         4.00
    Storage Coeff.  (min)=       2.34 (ii)    3.76 (ii)
    Unit Hyd. Tpeak (min)=       5.00         4.00
    Unit Hyd. peak  (cms)=       0.35         0.29
                                                      *TOTALS*
    PEAK FLOW       (cms)=       0.84         0.00       0.847 (iii)
    TIME TO PEAK    (hrs)=       1.33         1.35        1.33
    RUNOFF VOLUME    (mm)=      70.59        42.75       70.31
    TOTAL RAINFALL   (mm)=      71.59        71.59       71.59
    RUNOFF COEFFICIENT   =       0.99         0.60        0.98


      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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-------------------
| RESERVOIR(  7644)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0433     0.1140
                         0.0182     0.0580   |   0.0507     0.1280
                         0.0280     0.0775   |   0.0571     0.1440
                         0.0343     0.0930   |   0.0000     0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  7643)     2.020     0.847      1.33      70.31
   OUTFLOW: ID= 1 (  7644)     2.020     0.043      2.37      68.57

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.09
                TIME SHIFT OF PEAK FLOW          (min)= 62.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.1135

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GEI Consultants

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       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-
a4eb17eaad57\d475ad52-ee9a-444b-ba73-7eb1a56257cb\s
  Summary filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-
a4eb17eaad57\d475ad52-ee9a-444b-ba73-7eb1a56257cb\s


DATE: 06/14/2024                          TIME: 12:48:39

USER:


COMMENTS: _____________________________________________________


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  ***********************************************
  ** SIMULATION : 98. 50 Year 6 Hour AES (Bloor **
  ***********************************************


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|    READ STORM    |    Filename: C:\Users\ygollamudi\AppD
|                  |              ata\Local\Temp\
|                  |              3c3f87d5-a26e-4c6b-b2ae-56a7ba29ab7f\ebbaf00c
| Ptotal= 73.00 mm |    Comments: 50 Year 6 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.00    0.00 |  1.75   24.82 |  3.50   10.22 |  5.25    1.46
                0.25    1.46 |  2.00   24.82 |  3.75    5.84 |  5.50    1.46
                0.50    1.46 |  2.25   67.16 |  4.00    5.84 |  5.75    1.46
                0.75    1.46 |  2.50   67.16 |  4.25    2.92 |  6.00    1.46
                1.00    1.46 |  2.75   18.98 |  4.50    2.92 |
                1.25    8.76 |  3.00   18.98 |  4.75    1.46 |
                1.50    8.76 |  3.25   10.22 |  5.00    1.46 |

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| CALIB            |
| STANDHYD (  7567)|   Area    (ha)=   2.72
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.69         0.03
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=     134.66        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.
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---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	8.76	3.150	18.98	4.72	2.92
0.033	0.00	1.600	8.76	3.167	18.98	4.73	2.92
0.050	0.00	1.617	8.76	3.183	18.98	4.75	2.92
0.067	0.00	1.633	8.76	3.200	18.98	4.77	1.46
0.083	0.00	1.650	8.76	3.217	18.98	4.78	1.46
0.100	0.00	1.667	8.76	3.233	18.98	4.80	1.46
0.117	0.00	1.683	8.76	3.250	18.98	4.82	1.46
0.133	0.00	1.700	8.76	3.267	10.22	4.83	1.46
0.150	0.00	1.717	8.76	3.283	10.22	4.85	1.46
0.167	0.00	1.733	8.76	3.300	10.22	4.87	1.46
0.183	0.00	1.750	8.76	3.317	10.22	4.88	1.46
0.200	0.00	1.767	24.82	3.333	10.22	4.90	1.46
0.217	0.00	1.783	24.82	3.350	10.22	4.92	1.46
0.233	0.00	1.800	24.82	3.367	10.22	4.93	1.46
0.250	0.00	1.817	24.82	3.383	10.22	4.95	1.46
0.267	1.46	1.833	24.82	3.400	10.22	4.97	1.46
0.283	1.46	1.850	24.82	3.417	10.22	4.98	1.46
0.300	1.46	1.867	24.82	3.433	10.22	5.00	1.46
0.317	1.46	1.883	24.82	3.450	10.22	5.02	1.46
0.333	1.46	1.900	24.82	3.467	10.22	5.03	1.46
0.350	1.46	1.917	24.82	3.483	10.22	5.05	1.46
0.367	1.46	1.933	24.82	3.500	10.22	5.07	1.46
0.383	1.46	1.950	24.82	3.517	10.22	5.08	1.46
0.400	1.46	1.967	24.82	3.533	10.22	5.10	1.46
0.417	1.46	1.983	24.82	3.550	10.22	5.12	1.46
0.433	1.46	2.000	24.82	3.567	10.22	5.13	1.46
0.450	1.46	2.017	24.82	3.583	10.22	5.15	1.46
0.467	1.46	2.033	24.82	3.600	10.22	5.17	1.46
0.483	1.46	2.050	24.82	3.617	10.22	5.18	1.46
0.500	1.46	2.067	24.82	3.633	10.22	5.20	1.46
0.517	1.46	2.083	24.82	3.650	10.22	5.22	1.46
0.533	1.46	2.100	24.82	3.667	10.22	5.23	1.46
0.550	1.46	2.117	24.82	3.683	10.22	5.25	1.46
0.567	1.46	2.133	24.82	3.700	10.22	5.27	1.46
0.583	1.46	2.150	24.82	3.717	10.22	5.28	1.46
0.600	1.46	2.167	24.82	3.733	10.22	5.30	1.46
0.617	1.46	2.183	24.82	3.750	10.22	5.32	1.46
0.633	1.46	2.200	24.82	3.767	5.84	5.33	1.46
0.650	1.46	2.217	24.82	3.783	5.84	5.35	1.46
0.667	1.46	2.233	24.82	3.800	5.84	5.37	1.46
0.683	1.46	2.250	24.82	3.817	5.84	5.38	1.46
0.700	1.46	2.267	67.16	3.833	5.84	5.40	1.46
0.717	1.46	2.283	67.16	3.850	5.84	5.42	1.46
0.733	1.46	2.300	67.16	3.867	5.84	5.43	1.46
0.750	1.46	2.317	67.16	3.883	5.84	5.45	1.46
0.767	1.46	2.333	67.16	3.900	5.84	5.47	1.46
0.783	1.46	2.350	67.16	3.917	5.84	5.48	1.46
0.800	1.46	2.367	67.16	3.933	5.84	5.50	1.46
0.817	1.46	2.383	67.16	3.950	5.84	5.52	1.46
0.833	1.46	2.400	67.16	3.967	5.84	5.53	1.46
0.850	1.46	2.417	67.16	3.983	5.84	5.55	1.46
0.867	1.46	2.433	67.16	4.000	5.84	5.57	1.46
0.883	1.46	2.450	67.16	4.017	5.84	5.58	1.46
0.900	1.46	2.467	67.16	4.033	5.84	5.60	1.46
0.917	1.46	2.483	67.16	4.050	5.84	5.62	1.46
0.933	1.46	2.500	67.16	4.067	5.84	5.63	1.46
0.950	1.46	2.517	67.16	4.083	5.84	5.65	1.46
0.967	1.46	2.533	67.16	4.100	5.84	5.67	1.46
0.983	1.46	2.550	67.16	4.117	5.84	5.68	1.46
1.000	1.46	2.567	67.16	4.133	5.84	5.70	1.46
1.017	1.46	2.583	67.16	4.150	5.84	5.72	1.46
1.033	1.46	2.600	67.16	4.167	5.84	5.73	1.46
1.050	1.46	2.617	67.16	4.183	5.84	5.75	1.46
1.067	1.46	2.633	67.16	4.200	5.84	5.77	1.46
1.083	1.46	2.650	67.16	4.217	5.84	5.78	1.46
1.100	1.46	2.667	67.16	4.233	5.84	5.80	1.46
1.117	1.46	2.683	67.16	4.250	5.84	5.82	1.46
1.133	1.46	2.700	67.16	4.267	2.92	5.83	1.46
1.150	1.46	2.717	67.16	4.283	2.92	5.85	1.46
1.167	1.46	2.733	67.16	4.300	2.92	5.87	1.46
1.183	1.46	2.750	67.16	4.317	2.92	5.88	1.46
1.200	1.46	2.767	18.99	4.333	2.92	5.90	1.46

1.217	1.46	2.783	18.98	4.350	2.92	5.92	1.46
1.233	1.46	2.800	18.98	4.367	2.92	5.93	1.46
1.250	1.46	2.817	18.98	4.383	2.92	5.95	1.46
1.267	8.76	2.833	18.98	4.400	2.92	5.97	1.46
1.283	8.76	2.850	18.98	4.417	2.92	5.98	1.46
1.300	8.76	2.867	18.98	4.433	2.92	6.00	1.46
1.317	8.76	2.883	18.98	4.450	2.92	6.02	1.46
1.333	8.76	2.900	18.98	4.467	2.92	6.03	1.46
1.350	8.76	2.917	18.98	4.483	2.92	6.05	1.46
1.367	8.76	2.933	18.98	4.500	2.92	6.07	1.46
1.383	8.76	2.950	18.98	4.517	2.92	6.08	1.46
1.400	8.76	2.967	18.98	4.533	2.92	6.10	1.46
1.417	8.76	2.983	18.98	4.550	2.92	6.12	1.46
1.433	8.76	3.000	18.98	4.567	2.92	6.13	1.46
1.450	8.76	3.017	18.98	4.583	2.92	6.15	1.46
1.467	8.76	3.033	18.98	4.600	2.92	6.17	1.46
1.483	8.76	3.050	18.98	4.617	2.92	6.18	1.46
1.500	8.76	3.067	18.98	4.633	2.92	6.20	1.46
1.517	8.76	3.083	18.98	4.650	2.92	6.22	1.46
1.533	8.76	3.100	18.98	4.667	2.92	6.23	1.46
1.550	8.76	3.117	18.98	4.683	2.92	6.25	1.46
1.567	8.76	3.133	18.98	4.700	2.92		

Max.Eff.Inten.(mm/hr)=	67.16	50.27	
over (min)	5.00	6.00	
Storage Coeff. (min)=	3.58 (ii)	5.58 (ii)	
Unit Hyd. Tpeak (min)=	5.00	6.00	
Unit Hyd. peak (cms)=	0.28	0.20	
			TOTALS
PEAK FLOW (cms)=	0.50	0.00	0.506 (iii)
TIME TO PEAK (hrs)=	2.75	2.75	2.75
RUNOFF VOLUME (mm)=	72.00	43.95	71.72
TOTAL RAINFALL (mm)=	73.00	73.00	73.00
RUNOFF COEFFICIENT =	0.99	0.60	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7626)	OVERFLOW IS OFF				
IN= 2---> OUT= 1					
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)	
	0.0000	0.0000	0.0568	0.1530	
	0.0239	0.0780	0.0660	0.1730	
	0.0370	0.1040	0.0751	0.2000	
	0.0451	0.1250	0.0000	0.0000	

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7567)	2.720	0.506	2.75	71.72
OUTFLOW: ID= 1 (7626)	2.720	0.056	3.85	69.52

PEAK FLOW REDUCTION [Qout/Qin](%)= 11.03
TIME SHIFT OF PEAK FLOW (min)= 66.00
MAXIMUM STORAGE USED (ha.m.)= 0.1506

CALIB					
STANDHYD (7624)	Area (ha)= 1.80				
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00			

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.78	0.02
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.00	0.50
Length (m)=	109.54	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	8.76	3.150	18.98	4.72	2.92
0.033	0.00	1.600	8.76	3.167	18.98	4.73	2.92
0.050	0.00	1.617	8.76	3.183	18.98	4.75	2.92
0.067	0.00	1.633	8.76	3.200	18.98	4.77	1.46
0.083	0.00	1.650	8.76	3.217	18.98	4.78	1.46
0.100	0.00	1.667	8.76	3.233	18.98	4.80	1.46
0.117	0.00	1.683	8.76	3.250	18.98	4.82	1.46
0.133	0.00	1.700	8.76	3.267	10.22	4.83	1.46
0.150	0.00	1.717	8.76	3.283	10.22	4.85	1.46
0.167	0.00	1.733	8.76	3.300	10.22	4.87	1.46
0.183	0.00	1.750	8.76	3.317	10.22	4.88	1.46
0.200	0.00	1.767	24.82	3.333	10.22	4.90	1.46
0.217	0.00	1.783	24.82	3.350	10.22	4.92	1.46
0.233	0.00	1.800	24.82	3.367	10.22	4.93	1.46
0.250	0.00	1.817	24.82	3.383	10.22	4.95	1.46
0.267	1.46	1.833	24.82	3.400	10.22	4.97	1.46
0.283	1.46	1.850	24.82	3.417	10.22	4.98	1.46
0.300	1.46	1.867	24.82	3.433	10.22	5.00	1.46
0.317	1.46	1.883	24.82	3.450	10.22	5.02	1.46
0.333	1.46	1.900	24.82	3.467	10.22	5.03	1.46
0.350	1.46	1.917	24.82	3.483	10.22	5.05	1.46
0.367	1.46	1.933	24.82	3.500	10.22	5.07	1.46
0.383	1.46	1.950	24.82	3.517	10.22	5.08	1.46
0.400	1.46	1.967	24.82	3.533	10.22	5.10	1.46
0.417	1.46	1.983	24.82	3.550	10.22	5.12	1.46
0.433	1.46	2.000	24.82	3.567	10.22	5.13	1.46
0.450	1.46	2.017	24.82	3.583	10.22	5.15	1.46
0.467	1.46	2.033	24.82	3.600	10.22	5.17	1.46
0.483	1.46	2.050	24.82	3.617	10.22	5.18	1.46
0.500	1.46	2.067	24.82	3.633	10.22	5.20	1.46
0.517	1.46	2.083	24.82	3.650	10.22	5.22	1.46
0.533	1.46	2.100	24.82	3.667	10.22	5.23	1.46
0.550	1.46	2.117	24.82	3.683	10.22	5.25	1.46
0.567	1.46	2.133	24.82	3.700	10.22	5.27	1.46
0.583	1.46	2.150	24.82	3.717	10.22	5.28	1.46
0.600	1.46	2.167	24.82	3.733	10.22	5.30	1.46
0.617	1.46	2.183	24.82	3.750	10.22	5.32	1.46
0.633	1.46	2.200	24.82	3.767	5.84	5.33	1.46
0.650	1.46	2.217	24.82	3.783	5.84	5.35	1.46
0.667	1.46	2.233	24.82	3.800	5.84	5.37	1.46
0.683	1.46	2.250	24.82	3.817	5.84	5.38	1.46
0.700	1.46	2.267	67.16	3.833	5.84	5.40	1.46
0.717	1.46	2.283	67.16	3.850	5.84	5.42	1.46
0.733	1.46	2.300	67.16	3.867	5.84	5.43	1.46
0.750	1.46	2.317	67.16	3.883	5.84	5.45	1.46
0.767	1.46	2.333	67.16	3.900	5.84	5.47	1.46
0.783	1.46	2.350	67.16	3.917	5.84	5.48	1.46
0.800	1.46	2.367	67.16	3.933	5.84	5.50	1.46
0.817	1.46	2.383	67.16	3.950	5.84	5.52	1.46
0.833	1.46	2.400	67.16	3.967	5.84	5.53	1.46
0.850	1.46	2.417	67.16	3.983	5.84	5.55	1.46
0.867	1.46	2.433	67.16	4.000	5.84	5.57	1.46
0.883	1.46	2.450	67.16	4.017	5.84	5.58	1.46
0.900	1.46	2.467	67.16	4.033	5.84	5.60	1.46
0.917	1.46	2.483	67.16	4.050	5.84	5.62	1.46
0.933	1.46	2.500	67.16	4.067	5.84	5.63	1.46
0.950	1.46	2.517	67.16	4.083	5.84	5.65	1.46
0.967	1.46	2.533	67.16	4.100	5.84	5.67	1.46
0.983	1.46	2.550	67.16	4.117	5.84	5.68	1.46
1.000	1.46	2.567	67.16	4.133	5.84	5.70	1.46
1.017	1.46	2.583	67.16	4.150	5.84	5.72	1.46
1.033	1.46	2.600	67.16	4.167	5.84	5.73	1.46
1.050	1.46	2.617	67.16	4.183	5.84	5.75	1.46
1.067	1.46	2.633	67.16	4.200	5.84	5.77	1.46
1.083	1.46	2.650	67.16	4.217	5.84	5.78	1.46
1.100	1.46	2.667	67.16	4.233	5.84	5.80	1.46
1.117	1.46	2.683	67.16	4.250	5.84	5.82	1.46
1.133	1.46	2.700	67.16	4.267	2.92	5.83	1.46
1.150	1.46	2.717	67.16	4.283	2.92	5.85	1.46
1.167	1.46	2.733	67.16	4.300	2.92	5.87	1.46
1.183	1.46	2.750	67.16	4.317	2.92	5.88	1.46

1.200	1.46	2.767	18.99	4.333	2.92	5.90	1.46
1.217	1.46	2.783	18.98	4.350	2.92	5.92	1.46
1.233	1.46	2.800	18.98	4.367	2.92	5.93	1.46
1.250	1.46	2.817	18.98	4.383	2.92	5.95	1.46
1.267	8.76	2.833	18.98	4.400	2.92	5.97	1.46
1.283	8.76	2.850	18.98	4.417	2.92	5.98	1.46
1.300	8.76	2.867	18.98	4.433	2.92	6.00	1.46
1.317	8.76	2.883	18.98	4.450	2.92	6.02	1.46
1.333	8.76	2.900	18.98	4.467	2.92	6.03	1.46
1.350	8.76	2.917	18.98	4.483	2.92	6.05	1.46
1.367	8.76	2.933	18.98	4.500	2.92	6.07	1.46
1.383	8.76	2.950	18.98	4.517	2.92	6.08	1.46
1.400	8.76	2.967	18.98	4.533	2.92	6.10	1.46
1.417	8.76	2.983	18.98	4.550	2.92	6.12	1.46
1.433	8.76	3.000	18.98	4.567	2.92	6.13	1.46
1.450	8.76	3.017	18.98	4.583	2.92	6.15	1.46
1.467	8.76	3.033	18.98	4.600	2.92	6.17	1.46
1.483	8.76	3.050	18.98	4.617	2.92	6.18	1.46
1.500	8.76	3.067	18.98	4.633	2.92	6.20	1.46
1.517	8.76	3.083	18.98	4.650	2.92	6.22	1.46
1.533	8.76	3.100	18.98	4.667	2.92	6.23	1.46
1.550	8.76	3.117	18.98	4.683	2.92	6.25	1.46
1.567	8.76	3.133	18.98	4.700	2.92		

Max.Eff.Inten.(mm/hr)=	67.16	57.05	
over (min)	5.00	6.00	
Storage Coeff. (min)=	3.16 (ii)	5.16 (ii)	
Unit Hyd. Tpeak (min)=	5.00	6.00	
Unit Hyd. peak (cms)=	0.30	0.21	
			TOTALS
PEAK FLOW (cms)=	0.33	0.00	0.335 (iii)
TIME TO PEAK (hrs)=	2.75	2.75	2.75
RUNOFF VOLUME (mm)=	72.00	51.26	71.79
TOTAL RAINFALL (mm)=	73.00	73.00	73.00
RUNOFF COEFFICIENT =	0.99	0.70	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 90.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7625)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0389	0.1013
	0.0164	0.0514	0.0456	0.1141
	0.0252	0.0690	0.0514	0.1288
	0.0309	0.0825	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (	7624)	1.800	0.335	2.75	71.79
OUTFLOW: ID= 1 (	7625)	1.800	0.038	3.85	69.86

PEAK FLOW REDUCTION [Qout/Qin](%)= 11.34
TIME SHIFT OF PEAK FLOW (min)= 66.00
MAXIMUM STORAGE USED (ha.m.)= 0.0992

CALIB		
STANDHYD (7623)	Area (ha)= 1.15	
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.14	0.01
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	87.56	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	8.76	3.150	18.98	4.72	2.92
0.033	0.00	1.600	8.76	3.167	18.98	4.73	2.92
0.050	0.00	1.617	8.76	3.183	18.98	4.75	2.92
0.067	0.00	1.633	8.76	3.200	18.98	4.77	1.46
0.083	0.00	1.650	8.76	3.217	18.98	4.78	1.46
0.100	0.00	1.667	8.76	3.233	18.98	4.80	1.46
0.117	0.00	1.683	8.76	3.250	18.98	4.82	1.46
0.133	0.00	1.700	8.76	3.267	10.22	4.83	1.46
0.150	0.00	1.717	8.76	3.283	10.22	4.85	1.46
0.167	0.00	1.733	8.76	3.300	10.22	4.87	1.46
0.183	0.00	1.750	8.76	3.317	10.22	4.88	1.46
0.200	0.00	1.767	24.82	3.333	10.22	4.90	1.46
0.217	0.00	1.783	24.82	3.350	10.22	4.92	1.46
0.233	0.00	1.800	24.82	3.367	10.22	4.93	1.46
0.250	0.00	1.817	24.82	3.383	10.22	4.95	1.46
0.267	1.46	1.833	24.82	3.400	10.22	4.97	1.46
0.283	1.46	1.850	24.82	3.417	10.22	4.98	1.46
0.300	1.46	1.867	24.82	3.433	10.22	5.00	1.46
0.317	1.46	1.883	24.82	3.450	10.22	5.02	1.46
0.333	1.46	1.900	24.82	3.467	10.22	5.03	1.46
0.350	1.46	1.917	24.82	3.483	10.22	5.05	1.46
0.367	1.46	1.933	24.82	3.500	10.22	5.07	1.46
0.383	1.46	1.950	24.82	3.517	10.22	5.08	1.46
0.400	1.46	1.967	24.82	3.533	10.22	5.10	1.46
0.417	1.46	1.983	24.82	3.550	10.22	5.12	1.46
0.433	1.46	2.000	24.82	3.567	10.22	5.13	1.46
0.450	1.46	2.017	24.82	3.583	10.22	5.15	1.46
0.467	1.46	2.033	24.82	3.600	10.22	5.17	1.46
0.483	1.46	2.050	24.82	3.617	10.22	5.18	1.46
0.500	1.46	2.067	24.82	3.633	10.22	5.20	1.46
0.517	1.46	2.083	24.82	3.650	10.22	5.22	1.46
0.533	1.46	2.100	24.82	3.667	10.22	5.23	1.46
0.550	1.46	2.117	24.82	3.683	10.22	5.25	1.46
0.567	1.46	2.133	24.82	3.700	10.22	5.27	1.46
0.583	1.46	2.150	24.82	3.717	10.22	5.28	1.46
0.600	1.46	2.167	24.82	3.733	10.22	5.30	1.46
0.617	1.46	2.183	24.82	3.750	10.22	5.32	1.46
0.633	1.46	2.200	24.82	3.767	5.84	5.33	1.46
0.650	1.46	2.217	24.82	3.783	5.84	5.35	1.46
0.667	1.46	2.233	24.82	3.800	5.84	5.37	1.46
0.683	1.46	2.250	24.82	3.817	5.84	5.38	1.46
0.700	1.46	2.267	67.16	3.833	5.84	5.40	1.46
0.717	1.46	2.283	67.16	3.850	5.84	5.42	1.46
0.733	1.46	2.300	67.16	3.867	5.84	5.43	1.46
0.750	1.46	2.317	67.16	3.883	5.84	5.45	1.46
0.767	1.46	2.333	67.16	3.900	5.84	5.47	1.46
0.783	1.46	2.350	67.16	3.917	5.84	5.48	1.46
0.800	1.46	2.367	67.16	3.933	5.84	5.50	1.46
0.817	1.46	2.383	67.16	3.950	5.84	5.52	1.46
0.833	1.46	2.400	67.16	3.967	5.84	5.53	1.46
0.850	1.46	2.417	67.16	3.983	5.84	5.55	1.46
0.867	1.46	2.433	67.16	4.000	5.84	5.57	1.46
0.883	1.46	2.450	67.16	4.017	5.84	5.58	1.46
0.900	1.46	2.467	67.16	4.033	5.84	5.60	1.46
0.917	1.46	2.483	67.16	4.050	5.84	5.62	1.46
0.933	1.46	2.500	67.16	4.067	5.84	5.63	1.46
0.950	1.46	2.517	67.16	4.083	5.84	5.65	1.46
0.967	1.46	2.533	67.16	4.100	5.84	5.67	1.46
0.983	1.46	2.550	67.16	4.117	5.84	5.68	1.46
1.000	1.46	2.567	67.16	4.133	5.84	5.70	1.46
1.017	1.46	2.583	67.16	4.150	5.84	5.72	1.46
1.033	1.46	2.600	67.16	4.167	5.84	5.73	1.46
1.050	1.46	2.617	67.16	4.183	5.84	5.75	1.46
1.067	1.46	2.633	67.16	4.200	5.84	5.77	1.46
1.083	1.46	2.650	67.16	4.217	5.84	5.78	1.46
1.100	1.46	2.667	67.16	4.233	5.84	5.80	1.46
1.117	1.46	2.683	67.16	4.250	5.84	5.82	1.46
1.133	1.46	2.700	67.16	4.267	2.92	5.83	1.46
1.150	1.46	2.717	67.16	4.283	2.92	5.85	1.46
1.167	1.46	2.733	67.16	4.300	2.92	5.87	1.46

1.183	1.46	2.750	67.16	4.317	2.92	5.88	1.46
1.200	1.46	2.767	18.99	4.333	2.92	5.90	1.46
1.217	1.46	2.783	18.98	4.350	2.92	5.92	1.46
1.233	1.46	2.800	18.98	4.367	2.92	5.93	1.46
1.250	1.46	2.817	18.98	4.383	2.92	5.95	1.46
1.267	8.76	2.833	18.98	4.400	2.92	5.97	1.46
1.283	8.76	2.850	18.98	4.417	2.92	5.98	1.46
1.300	8.76	2.867	18.98	4.433	2.92	6.00	1.46
1.317	8.76	2.883	18.98	4.450	2.92	6.02	1.46
1.333	8.76	2.900	18.98	4.467	2.92	6.03	1.46
1.350	8.76	2.917	18.98	4.483	2.92	6.05	1.46
1.367	8.76	2.933	18.98	4.500	2.92	6.07	1.46
1.383	8.76	2.950	18.98	4.517	2.92	6.08	1.46
1.400	8.76	2.967	18.98	4.533	2.92	6.10	1.46
1.417	8.76	2.983	18.98	4.550	2.92	6.12	1.46
1.433	8.76	3.000	18.98	4.567	2.92	6.13	1.46
1.450	8.76	3.017	18.98	4.583	2.92	6.15	1.46
1.467	8.76	3.033	18.98	4.600	2.92	6.17	1.46
1.483	8.76	3.050	18.98	4.617	2.92	6.18	1.46
1.500	8.76	3.067	18.98	4.633	2.92	6.20	1.46
1.517	8.76	3.083	18.98	4.650	2.92	6.22	1.46
1.533	8.76	3.100	18.98	4.667	2.92	6.23	1.46
1.550	8.76	3.117	18.98	4.683	2.92	6.25	1.46
1.567	8.76	3.133	18.98	4.700	2.92		

Max.Eff.Inten.(mm/hr)=	67.16	50.27	
over (min)	5.00	5.00	
Storage Coeff. (min)=	2.77 (ii)	4.76 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.32	0.23	
			TOTALS
PEAK FLOW (cms)=	0.21	0.00	0.214 (iii)
TIME TO PEAK (hrs)=	2.75	2.75	2.75
RUNOFF VOLUME (mm)=	72.00	43.95	71.72
TOTAL RAINFALL (mm)=	73.00	73.00	73.00
RUNOFF COEFFICIENT =	0.99	0.60	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7622)	OVERFLOW IS OFF				
IN= 2---> OUT= 1					
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)	
	0.0000	0.0000	0.0258	0.0650	
	0.0108	0.0330	0.0302	0.0725	
	0.0167	0.0440	0.0340	0.0820	
	0.0204	0.0525	0.0000	0.0000	

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7623)	1.150	0.214	2.75	71.72
OUTFLOW: ID= 1 (7622)	1.150	0.025	3.83	69.97

PEAK FLOW REDUCTION [Qout/Qin](%)= 11.65
TIME SHIFT OF PEAK FLOW (min)= 65.00
MAXIMUM STORAGE USED (ha.m.)= 0.0630

CALIB					
STANDHYD (7629)	Area (ha)= 4.09				
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00			

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	4.05	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	165.13	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	8.76	3.150	18.98	4.72	2.92
0.033	0.00	1.600	8.76	3.167	18.98	4.73	2.92
0.050	0.00	1.617	8.76	3.183	18.98	4.75	2.92
0.067	0.00	1.633	8.76	3.200	18.98	4.77	1.46
0.083	0.00	1.650	8.76	3.217	18.98	4.78	1.46
0.100	0.00	1.667	8.76	3.233	18.98	4.80	1.46
0.117	0.00	1.683	8.76	3.250	18.98	4.82	1.46
0.133	0.00	1.700	8.76	3.267	10.22	4.83	1.46
0.150	0.00	1.717	8.76	3.283	10.22	4.85	1.46
0.167	0.00	1.733	8.76	3.300	10.22	4.87	1.46
0.183	0.00	1.750	8.76	3.317	10.22	4.88	1.46
0.200	0.00	1.767	24.82	3.333	10.22	4.90	1.46
0.217	0.00	1.783	24.82	3.350	10.22	4.92	1.46
0.233	0.00	1.800	24.82	3.367	10.22	4.93	1.46
0.250	0.00	1.817	24.82	3.383	10.22	4.95	1.46
0.267	1.46	1.833	24.82	3.400	10.22	4.97	1.46
0.283	1.46	1.850	24.82	3.417	10.22	4.98	1.46
0.300	1.46	1.867	24.82	3.433	10.22	5.00	1.46
0.317	1.46	1.883	24.82	3.450	10.22	5.02	1.46
0.333	1.46	1.900	24.82	3.467	10.22	5.03	1.46
0.350	1.46	1.917	24.82	3.483	10.22	5.05	1.46
0.367	1.46	1.933	24.82	3.500	10.22	5.07	1.46
0.383	1.46	1.950	24.82	3.517	10.22	5.08	1.46
0.400	1.46	1.967	24.82	3.533	10.22	5.10	1.46
0.417	1.46	1.983	24.82	3.550	10.22	5.12	1.46
0.433	1.46	2.000	24.82	3.567	10.22	5.13	1.46
0.450	1.46	2.017	24.82	3.583	10.22	5.15	1.46
0.467	1.46	2.033	24.82	3.600	10.22	5.17	1.46
0.483	1.46	2.050	24.82	3.617	10.22	5.18	1.46
0.500	1.46	2.067	24.82	3.633	10.22	5.20	1.46
0.517	1.46	2.083	24.82	3.650	10.22	5.22	1.46
0.533	1.46	2.100	24.82	3.667	10.22	5.23	1.46
0.550	1.46	2.117	24.82	3.683	10.22	5.25	1.46
0.567	1.46	2.133	24.82	3.700	10.22	5.27	1.46
0.583	1.46	2.150	24.82	3.717	10.22	5.28	1.46
0.600	1.46	2.167	24.82	3.733	10.22	5.30	1.46
0.617	1.46	2.183	24.82	3.750	10.22	5.32	1.46
0.633	1.46	2.200	24.82	3.767	5.84	5.33	1.46
0.650	1.46	2.217	24.82	3.783	5.84	5.35	1.46
0.667	1.46	2.233	24.82	3.800	5.84	5.37	1.46
0.683	1.46	2.250	24.82	3.817	5.84	5.38	1.46
0.700	1.46	2.267	67.16	3.833	5.84	5.40	1.46
0.717	1.46	2.283	67.16	3.850	5.84	5.42	1.46
0.733	1.46	2.300	67.16	3.867	5.84	5.43	1.46
0.750	1.46	2.317	67.16	3.883	5.84	5.45	1.46
0.767	1.46	2.333	67.16	3.900	5.84	5.47	1.46
0.783	1.46	2.350	67.16	3.917	5.84	5.48	1.46
0.800	1.46	2.367	67.16	3.933	5.84	5.50	1.46
0.817	1.46	2.383	67.16	3.950	5.84	5.52	1.46
0.833	1.46	2.400	67.16	3.967	5.84	5.53	1.46
0.850	1.46	2.417	67.16	3.983	5.84	5.55	1.46
0.867	1.46	2.433	67.16	4.000	5.84	5.57	1.46
0.883	1.46	2.450	67.16	4.017	5.84	5.58	1.46
0.900	1.46	2.467	67.16	4.033	5.84	5.60	1.46
0.917	1.46	2.483	67.16	4.050	5.84	5.62	1.46
0.933	1.46	2.500	67.16	4.067	5.84	5.63	1.46
0.950	1.46	2.517	67.16	4.083	5.84	5.65	1.46
0.967	1.46	2.533	67.16	4.100	5.84	5.67	1.46
0.983	1.46	2.550	67.16	4.117	5.84	5.68	1.46
1.000	1.46	2.567	67.16	4.133	5.84	5.70	1.46
1.017	1.46	2.583	67.16	4.150	5.84	5.72	1.46
1.033	1.46	2.600	67.16	4.167	5.84	5.73	1.46
1.050	1.46	2.617	67.16	4.183	5.84	5.75	1.46
1.067	1.46	2.633	67.16	4.200	5.84	5.77	1.46
1.083	1.46	2.650	67.16	4.217	5.84	5.78	1.46
1.100	1.46	2.667	67.16	4.233	5.84	5.80	1.46
1.117	1.46	2.683	67.16	4.250	5.84	5.82	1.46
1.133	1.46	2.700	67.16	4.267	2.92	5.83	1.46
1.150	1.46	2.717	67.16	4.283	2.92	5.85	1.46

1.167	1.46	2.733	67.16	4.300	2.92	5.87	1.46
1.183	1.46	2.750	67.16	4.317	2.92	5.88	1.46
1.200	1.46	2.767	18.99	4.333	2.92	5.90	1.46
1.217	1.46	2.783	18.98	4.350	2.92	5.92	1.46
1.233	1.46	2.800	18.98	4.367	2.92	5.93	1.46
1.250	1.46	2.817	18.98	4.383	2.92	5.95	1.46
1.267	8.76	2.833	18.98	4.400	2.92	5.97	1.46
1.283	8.76	2.850	18.98	4.417	2.92	5.98	1.46
1.300	8.76	2.867	18.98	4.433	2.92	6.00	1.46
1.317	8.76	2.883	18.98	4.450	2.92	6.02	1.46
1.333	8.76	2.900	18.98	4.467	2.92	6.03	1.46
1.350	8.76	2.917	18.98	4.483	2.92	6.05	1.46
1.367	8.76	2.933	18.98	4.500	2.92	6.07	1.46
1.383	8.76	2.950	18.98	4.517	2.92	6.08	1.46
1.400	8.76	2.967	18.98	4.533	2.92	6.10	1.46
1.417	8.76	2.983	18.98	4.550	2.92	6.12	1.46
1.433	8.76	3.000	18.98	4.567	2.92	6.13	1.46
1.450	8.76	3.017	18.98	4.583	2.92	6.15	1.46
1.467	8.76	3.033	18.98	4.600	2.92	6.17	1.46
1.483	8.76	3.050	18.98	4.617	2.92	6.18	1.46
1.500	8.76	3.067	18.98	4.633	2.92	6.20	1.46
1.517	8.76	3.083	18.98	4.650	2.92	6.22	1.46
1.533	8.76	3.100	18.98	4.667	2.92	6.23	1.46
1.550	8.76	3.117	18.98	4.683	2.92	6.25	1.46
1.567	8.76	3.133	18.98	4.700	2.92		

Max.Eff.Inten.(mm/hr)=	67.16	50.27	
over (min)	5.00	7.00	
Storage Coeff. (min)=	4.05 (ii)	6.04 (ii)	
Unit Hyd. Tpeak (min)=	5.00	7.00	
Unit Hyd. peak (cms)=	0.26	0.18	
			TOTALS
PEAK FLOW (cms)=	0.75	0.01	0.760 (iii)
TIME TO PEAK (hrs)=	2.75	2.75	2.75
RUNOFF VOLUME (mm)=	72.00	43.95	71.72
TOTAL RAINFALL (mm)=	73.00	73.00	73.00
RUNOFF COEFFICIENT =	0.99	0.60	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7630)| IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0826	0.2320
	0.0347	0.1170	0.0967	0.2609
	0.0534	0.1580	0.1090	0.2940
	0.0655	0.1890	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7629)	4.090	0.760	2.75	71.72
OUTFLOW: ID= 1 (7630)	4.090	0.081	3.88	69.24

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.65
TIME SHIFT OF PEAK FLOW (min)= 68.00
MAXIMUM STORAGE USED (ha.m.)= 0.2278

CALIB | STANDHYD (7631)| ID= 1 DT= 1.0 min	Area (ha)= 3.91		
	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	3.87	0.04	
Dep. Storage (mm)=	1.00	1.50	
Average Slope (%)=	1.00	0.50	
Length (m)=	161.45	40.00	

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	8.76	3.150	18.98	4.72	2.92
0.033	0.00	1.600	8.76	3.167	18.98	4.73	2.92
0.050	0.00	1.617	8.76	3.183	18.98	4.75	2.92
0.067	0.00	1.633	8.76	3.200	18.98	4.77	1.46
0.083	0.00	1.650	8.76	3.217	18.98	4.78	1.46
0.100	0.00	1.667	8.76	3.233	18.98	4.80	1.46
0.117	0.00	1.683	8.76	3.250	18.98	4.82	1.46
0.133	0.00	1.700	8.76	3.267	10.22	4.83	1.46
0.150	0.00	1.717	8.76	3.283	10.22	4.85	1.46
0.167	0.00	1.733	8.76	3.300	10.22	4.87	1.46
0.183	0.00	1.750	8.76	3.317	10.22	4.88	1.46
0.200	0.00	1.767	24.82	3.333	10.22	4.90	1.46
0.217	0.00	1.783	24.82	3.350	10.22	4.92	1.46
0.233	0.00	1.800	24.82	3.367	10.22	4.93	1.46
0.250	0.00	1.817	24.82	3.383	10.22	4.95	1.46
0.267	1.46	1.833	24.82	3.400	10.22	4.97	1.46
0.283	1.46	1.850	24.82	3.417	10.22	4.98	1.46
0.300	1.46	1.867	24.82	3.433	10.22	5.00	1.46
0.317	1.46	1.883	24.82	3.450	10.22	5.02	1.46
0.333	1.46	1.900	24.82	3.467	10.22	5.03	1.46
0.350	1.46	1.917	24.82	3.483	10.22	5.05	1.46
0.367	1.46	1.933	24.82	3.500	10.22	5.07	1.46
0.383	1.46	1.950	24.82	3.517	10.22	5.08	1.46
0.400	1.46	1.967	24.82	3.533	10.22	5.10	1.46
0.417	1.46	1.983	24.82	3.550	10.22	5.12	1.46
0.433	1.46	2.000	24.82	3.567	10.22	5.13	1.46
0.450	1.46	2.017	24.82	3.583	10.22	5.15	1.46
0.467	1.46	2.033	24.82	3.600	10.22	5.17	1.46
0.483	1.46	2.050	24.82	3.617	10.22	5.18	1.46
0.500	1.46	2.067	24.82	3.633	10.22	5.20	1.46
0.517	1.46	2.083	24.82	3.650	10.22	5.22	1.46
0.533	1.46	2.100	24.82	3.667	10.22	5.23	1.46
0.550	1.46	2.117	24.82	3.683	10.22	5.25	1.46
0.567	1.46	2.133	24.82	3.700	10.22	5.27	1.46
0.583	1.46	2.150	24.82	3.717	10.22	5.28	1.46
0.600	1.46	2.167	24.82	3.733	10.22	5.30	1.46
0.617	1.46	2.183	24.82	3.750	10.22	5.32	1.46
0.633	1.46	2.200	24.82	3.767	5.84	5.33	1.46
0.650	1.46	2.217	24.82	3.783	5.84	5.35	1.46
0.667	1.46	2.233	24.82	3.800	5.84	5.37	1.46
0.683	1.46	2.250	24.82	3.817	5.84	5.38	1.46
0.700	1.46	2.267	67.16	3.833	5.84	5.40	1.46
0.717	1.46	2.283	67.16	3.850	5.84	5.42	1.46
0.733	1.46	2.300	67.16	3.867	5.84	5.43	1.46
0.750	1.46	2.317	67.16	3.883	5.84	5.45	1.46
0.767	1.46	2.333	67.16	3.900	5.84	5.47	1.46
0.783	1.46	2.350	67.16	3.917	5.84	5.48	1.46
0.800	1.46	2.367	67.16	3.933	5.84	5.50	1.46
0.817	1.46	2.383	67.16	3.950	5.84	5.52	1.46
0.833	1.46	2.400	67.16	3.967	5.84	5.53	1.46
0.850	1.46	2.417	67.16	3.983	5.84	5.55	1.46
0.867	1.46	2.433	67.16	4.000	5.84	5.57	1.46
0.883	1.46	2.450	67.16	4.017	5.84	5.58	1.46
0.900	1.46	2.467	67.16	4.033	5.84	5.60	1.46
0.917	1.46	2.483	67.16	4.050	5.84	5.62	1.46
0.933	1.46	2.500	67.16	4.067	5.84	5.63	1.46
0.950	1.46	2.517	67.16	4.083	5.84	5.65	1.46
0.967	1.46	2.533	67.16	4.100	5.84	5.67	1.46
0.983	1.46	2.550	67.16	4.117	5.84	5.68	1.46
1.000	1.46	2.567	67.16	4.133	5.84	5.70	1.46
1.017	1.46	2.583	67.16	4.150	5.84	5.72	1.46
1.033	1.46	2.600	67.16	4.167	5.84	5.73	1.46
1.050	1.46	2.617	67.16	4.183	5.84	5.75	1.46
1.067	1.46	2.633	67.16	4.200	5.84	5.77	1.46
1.083	1.46	2.650	67.16	4.217	5.84	5.78	1.46
1.100	1.46	2.667	67.16	4.233	5.84	5.80	1.46
1.117	1.46	2.683	67.16	4.250	5.84	5.82	1.46
1.133	1.46	2.700	67.16	4.267	2.92	5.83	1.46

1.150	1.46	2.717	67.16	4.283	2.92	5.85	1.46
1.167	1.46	2.733	67.16	4.300	2.92	5.87	1.46
1.183	1.46	2.750	67.16	4.317	2.92	5.88	1.46
1.200	1.46	2.767	18.99	4.333	2.92	5.90	1.46
1.217	1.46	2.783	18.98	4.350	2.92	5.92	1.46
1.233	1.46	2.800	18.98	4.367	2.92	5.93	1.46
1.250	1.46	2.817	18.98	4.383	2.92	5.95	1.46
1.267	8.76	2.833	18.98	4.400	2.92	5.97	1.46
1.283	8.76	2.850	18.98	4.417	2.92	5.98	1.46
1.300	8.76	2.867	18.98	4.433	2.92	6.00	1.46
1.317	8.76	2.883	18.98	4.450	2.92	6.02	1.46
1.333	8.76	2.900	18.98	4.467	2.92	6.03	1.46
1.350	8.76	2.917	18.98	4.483	2.92	6.05	1.46
1.367	8.76	2.933	18.98	4.500	2.92	6.07	1.46
1.383	8.76	2.950	18.98	4.517	2.92	6.08	1.46
1.400	8.76	2.967	18.98	4.533	2.92	6.10	1.46
1.417	8.76	2.983	18.98	4.550	2.92	6.12	1.46
1.433	8.76	3.000	18.98	4.567	2.92	6.13	1.46
1.450	8.76	3.017	18.98	4.583	2.92	6.15	1.46
1.467	8.76	3.033	18.98	4.600	2.92	6.17	1.46
1.483	8.76	3.050	18.98	4.617	2.92	6.18	1.46
1.500	8.76	3.067	18.98	4.633	2.92	6.20	1.46
1.517	8.76	3.083	18.98	4.650	2.92	6.22	1.46
1.533	8.76	3.100	18.98	4.667	2.92	6.23	1.46
1.550	8.76	3.117	18.98	4.683	2.92	6.25	1.46
1.567	8.76	3.133	18.98	4.700	2.92		

Max.Eff.Inten.(mm/hr)=		67.16	50.27	
over (min)		5.00	6.00	
Storage Coeff. (min)=		3.99 (ii)	5.99 (ii)	
Unit Hyd. Tpeak (min)=		5.00	6.00	
Unit Hyd. peak (cms)=		0.26	0.19	
				TOTALS
PEAK FLOW	(cms)=	0.72	0.01	0.727 (iii)
TIME TO PEAK	(hrs)=	2.75	2.75	2.75
RUNOFF VOLUME	(mm)=	72.00	43.95	71.72
TOTAL RAINFALL	(mm)=	73.00	73.00	73.00
RUNOFF COEFFICIENT	=	0.99	0.60	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7632)	IN= 2---> OUT= 1	DT= 1.0 min	OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0792	0.2220
0.0333	0.1130	0.0928	0.2500
0.0512	0.1510	0.1046	0.2810
0.0629	0.1810	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (	7631)	3.910	0.727	2.75	71.72
OUTFLOW: ID= 1 (	7632)	3.910	0.078	3.87	69.20

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.67
TIME SHIFT OF PEAK FLOW (min)= 67.00
MAXIMUM STORAGE USED (ha.m.)= 0.2178

CALIB	STANDHYD (7641)	ID= 1 DT= 1.0 min	Area (ha)= 2.21	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.19	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50

Length	(m)=	121.38 40.00
Mannings n	=	0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	8.76	3.150	18.98	4.72	2.92
0.033	0.00	1.600	8.76	3.167	18.98	4.73	2.92
0.050	0.00	1.617	8.76	3.183	18.98	4.75	2.92
0.067	0.00	1.633	8.76	3.200	18.98	4.77	1.46
0.083	0.00	1.650	8.76	3.217	18.98	4.78	1.46
0.100	0.00	1.667	8.76	3.233	18.98	4.80	1.46
0.117	0.00	1.683	8.76	3.250	18.98	4.82	1.46
0.133	0.00	1.700	8.76	3.267	10.22	4.83	1.46
0.150	0.00	1.717	8.76	3.283	10.22	4.85	1.46
0.167	0.00	1.733	8.76	3.300	10.22	4.87	1.46
0.183	0.00	1.750	8.76	3.317	10.22	4.88	1.46
0.200	0.00	1.767	24.82	3.333	10.22	4.90	1.46
0.217	0.00	1.783	24.82	3.350	10.22	4.92	1.46
0.233	0.00	1.800	24.82	3.367	10.22	4.93	1.46
0.250	0.00	1.817	24.82	3.383	10.22	4.95	1.46
0.267	1.46	1.833	24.82	3.400	10.22	4.97	1.46
0.283	1.46	1.850	24.82	3.417	10.22	4.98	1.46
0.300	1.46	1.867	24.82	3.433	10.22	5.00	1.46
0.317	1.46	1.883	24.82	3.450	10.22	5.02	1.46
0.333	1.46	1.900	24.82	3.467	10.22	5.03	1.46
0.350	1.46	1.917	24.82	3.483	10.22	5.05	1.46
0.367	1.46	1.933	24.82	3.500	10.22	5.07	1.46
0.383	1.46	1.950	24.82	3.517	10.22	5.08	1.46
0.400	1.46	1.967	24.82	3.533	10.22	5.10	1.46
0.417	1.46	1.983	24.82	3.550	10.22	5.12	1.46
0.433	1.46	2.000	24.82	3.567	10.22	5.13	1.46
0.450	1.46	2.017	24.82	3.583	10.22	5.15	1.46
0.467	1.46	2.033	24.82	3.600	10.22	5.17	1.46
0.483	1.46	2.050	24.82	3.617	10.22	5.18	1.46
0.500	1.46	2.067	24.82	3.633	10.22	5.20	1.46
0.517	1.46	2.083	24.82	3.650	10.22	5.22	1.46
0.533	1.46	2.100	24.82	3.667	10.22	5.23	1.46
0.550	1.46	2.117	24.82	3.683	10.22	5.25	1.46
0.567	1.46	2.133	24.82	3.700	10.22	5.27	1.46
0.583	1.46	2.150	24.82	3.717	10.22	5.28	1.46
0.600	1.46	2.167	24.82	3.733	10.22	5.30	1.46
0.617	1.46	2.183	24.82	3.750	10.22	5.32	1.46
0.633	1.46	2.200	24.82	3.767	5.84	5.33	1.46
0.650	1.46	2.217	24.82	3.783	5.84	5.35	1.46
0.667	1.46	2.233	24.82	3.800	5.84	5.37	1.46
0.683	1.46	2.250	24.82	3.817	5.84	5.38	1.46
0.700	1.46	2.267	67.16	3.833	5.84	5.40	1.46
0.717	1.46	2.283	67.16	3.850	5.84	5.42	1.46
0.733	1.46	2.300	67.16	3.867	5.84	5.43	1.46
0.750	1.46	2.317	67.16	3.883	5.84	5.45	1.46
0.767	1.46	2.333	67.16	3.900	5.84	5.47	1.46
0.783	1.46	2.350	67.16	3.917	5.84	5.48	1.46
0.800	1.46	2.367	67.16	3.933	5.84	5.50	1.46
0.817	1.46	2.383	67.16	3.950	5.84	5.52	1.46
0.833	1.46	2.400	67.16	3.967	5.84	5.53	1.46
0.850	1.46	2.417	67.16	3.983	5.84	5.55	1.46
0.867	1.46	2.433	67.16	4.000	5.84	5.57	1.46
0.883	1.46	2.450	67.16	4.017	5.84	5.58	1.46
0.900	1.46	2.467	67.16	4.033	5.84	5.60	1.46
0.917	1.46	2.483	67.16	4.050	5.84	5.62	1.46
0.933	1.46	2.500	67.16	4.067	5.84	5.63	1.46
0.950	1.46	2.517	67.16	4.083	5.84	5.65	1.46
0.967	1.46	2.533	67.16	4.100	5.84	5.67	1.46
0.983	1.46	2.550	67.16	4.117	5.84	5.68	1.46
1.000	1.46	2.567	67.16	4.133	5.84	5.70	1.46
1.017	1.46	2.583	67.16	4.150	5.84	5.72	1.46
1.033	1.46	2.600	67.16	4.167	5.84	5.73	1.46
1.050	1.46	2.617	67.16	4.183	5.84	5.75	1.46
1.067	1.46	2.633	67.16	4.200	5.84	5.77	1.46
1.083	1.46	2.650	67.16	4.217	5.84	5.78	1.46
1.100	1.46	2.667	67.16	4.233	5.84	5.80	1.46
1.117	1.46	2.683	67.16	4.250	5.84	5.82	1.46

1.133	1.46	2.700	67.16	4.267	2.92	5.83	1.46
1.150	1.46	2.717	67.16	4.283	2.92	5.85	1.46
1.167	1.46	2.733	67.16	4.300	2.92	5.87	1.46
1.183	1.46	2.750	67.16	4.317	2.92	5.88	1.46
1.200	1.46	2.767	18.99	4.333	2.92	5.90	1.46
1.217	1.46	2.783	18.98	4.350	2.92	5.92	1.46
1.233	1.46	2.800	18.98	4.367	2.92	5.93	1.46
1.250	1.46	2.817	18.98	4.383	2.92	5.95	1.46
1.267	8.76	2.833	18.98	4.400	2.92	5.97	1.46
1.283	8.76	2.850	18.98	4.417	2.92	5.98	1.46
1.300	8.76	2.867	18.98	4.433	2.92	6.00	1.46
1.317	8.76	2.883	18.98	4.450	2.92	6.02	1.46
1.333	8.76	2.900	18.98	4.467	2.92	6.03	1.46
1.350	8.76	2.917	18.98	4.483	2.92	6.05	1.46
1.367	8.76	2.933	18.98	4.500	2.92	6.07	1.46
1.383	8.76	2.950	18.98	4.517	2.92	6.08	1.46
1.400	8.76	2.967	18.98	4.533	2.92	6.10	1.46
1.417	8.76	2.983	18.98	4.550	2.92	6.12	1.46
1.433	8.76	3.000	18.98	4.567	2.92	6.13	1.46
1.450	8.76	3.017	18.98	4.583	2.92	6.15	1.46
1.467	8.76	3.033	18.98	4.600	2.92	6.17	1.46
1.483	8.76	3.050	18.98	4.617	2.92	6.18	1.46
1.500	8.76	3.067	18.98	4.633	2.92	6.20	1.46
1.517	8.76	3.083	18.98	4.650	2.92	6.22	1.46
1.533	8.76	3.100	18.98	4.667	2.92	6.23	1.46
1.550	8.76	3.117	18.98	4.683	2.92	6.25	1.46
1.567	8.76	3.133	18.98	4.700	2.92		

Max.Eff.Inten.(mm/hr)=	67.16	50.27	
over (min)	5.00	6.00	
Storage Coeff. (min)=	3.36 (ii)	5.36 (ii)	
Unit Hyd. Tpeak (min)=	5.00	6.00	
Unit Hyd. peak (cms)=	0.29	0.20	
			TOTALS
PEAK FLOW (cms)=	0.41	0.00	0.411 (iii)
TIME TO PEAK (hrs)=	2.75	2.75	2.75
RUNOFF VOLUME (mm)=	72.00	43.95	71.72
TOTAL RAINFALL (mm)=	73.00	73.00	73.00
RUNOFF COEFFICIENT =	0.99	0.60	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7642) IN= 2---> OUT= 1 DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0470	0.1250
	0.0197	0.0630	0.0551	0.1410
	0.0304	0.0850	0.0620	0.1580
	0.0373	0.1020	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7641)	2.210	0.411	2.75	71.72
OUTFLOW: ID= 1 (7642)	2.210	0.046	3.85	69.65

PEAK FLOW REDUCTION [Qout/Qin](%)= 11.14
TIME SHIFT OF PEAK FLOW (min)= 66.00
MAXIMUM STORAGE USED (ha.m.)= 0.1221

CALIB STANDHYD (7643) ID= 1 DT= 1.0 min	Area (ha)= 2.02	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.00	0.02
Dep. Storage	(mm)=	1.00	1.50

Average Slope	(%)=	1.00	0.50
Length	(m)=	116.05	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	8.76	3.150	18.98	4.72	2.92
0.033	0.00	1.600	8.76	3.167	18.98	4.73	2.92
0.050	0.00	1.617	8.76	3.183	18.98	4.75	2.92
0.067	0.00	1.633	8.76	3.200	18.98	4.77	1.46
0.083	0.00	1.650	8.76	3.217	18.98	4.78	1.46
0.100	0.00	1.667	8.76	3.233	18.98	4.80	1.46
0.117	0.00	1.683	8.76	3.250	18.98	4.82	1.46
0.133	0.00	1.700	8.76	3.267	10.22	4.83	1.46
0.150	0.00	1.717	8.76	3.283	10.22	4.85	1.46
0.167	0.00	1.733	8.76	3.300	10.22	4.87	1.46
0.183	0.00	1.750	8.76	3.317	10.22	4.88	1.46
0.200	0.00	1.767	24.82	3.333	10.22	4.90	1.46
0.217	0.00	1.783	24.82	3.350	10.22	4.92	1.46
0.233	0.00	1.800	24.82	3.367	10.22	4.93	1.46
0.250	0.00	1.817	24.82	3.383	10.22	4.95	1.46
0.267	1.46	1.833	24.82	3.400	10.22	4.97	1.46
0.283	1.46	1.850	24.82	3.417	10.22	4.98	1.46
0.300	1.46	1.867	24.82	3.433	10.22	5.00	1.46
0.317	1.46	1.883	24.82	3.450	10.22	5.02	1.46
0.333	1.46	1.900	24.82	3.467	10.22	5.03	1.46
0.350	1.46	1.917	24.82	3.483	10.22	5.05	1.46
0.367	1.46	1.933	24.82	3.500	10.22	5.07	1.46
0.383	1.46	1.950	24.82	3.517	10.22	5.08	1.46
0.400	1.46	1.967	24.82	3.533	10.22	5.10	1.46
0.417	1.46	1.983	24.82	3.550	10.22	5.12	1.46
0.433	1.46	2.000	24.82	3.567	10.22	5.13	1.46
0.450	1.46	2.017	24.82	3.583	10.22	5.15	1.46
0.467	1.46	2.033	24.82	3.600	10.22	5.17	1.46
0.483	1.46	2.050	24.82	3.617	10.22	5.18	1.46
0.500	1.46	2.067	24.82	3.633	10.22	5.20	1.46
0.517	1.46	2.083	24.82	3.650	10.22	5.22	1.46
0.533	1.46	2.100	24.82	3.667	10.22	5.23	1.46
0.550	1.46	2.117	24.82	3.683	10.22	5.25	1.46
0.567	1.46	2.133	24.82	3.700	10.22	5.27	1.46
0.583	1.46	2.150	24.82	3.717	10.22	5.28	1.46
0.600	1.46	2.167	24.82	3.733	10.22	5.30	1.46
0.617	1.46	2.183	24.82	3.750	10.22	5.32	1.46
0.633	1.46	2.200	24.82	3.767	5.84	5.33	1.46
0.650	1.46	2.217	24.82	3.783	5.84	5.35	1.46
0.667	1.46	2.233	24.82	3.800	5.84	5.37	1.46
0.683	1.46	2.250	24.82	3.817	5.84	5.38	1.46
0.700	1.46	2.267	67.16	3.833	5.84	5.40	1.46
0.717	1.46	2.283	67.16	3.850	5.84	5.42	1.46
0.733	1.46	2.300	67.16	3.867	5.84	5.43	1.46
0.750	1.46	2.317	67.16	3.883	5.84	5.45	1.46
0.767	1.46	2.333	67.16	3.900	5.84	5.47	1.46
0.783	1.46	2.350	67.16	3.917	5.84	5.48	1.46
0.800	1.46	2.367	67.16	3.933	5.84	5.50	1.46
0.817	1.46	2.383	67.16	3.950	5.84	5.52	1.46
0.833	1.46	2.400	67.16	3.967	5.84	5.53	1.46
0.850	1.46	2.417	67.16	3.983	5.84	5.55	1.46
0.867	1.46	2.433	67.16	4.000	5.84	5.57	1.46
0.883	1.46	2.450	67.16	4.017	5.84	5.58	1.46
0.900	1.46	2.467	67.16	4.033	5.84	5.60	1.46
0.917	1.46	2.483	67.16	4.050	5.84	5.62	1.46
0.933	1.46	2.500	67.16	4.067	5.84	5.63	1.46
0.950	1.46	2.517	67.16	4.083	5.84	5.65	1.46
0.967	1.46	2.533	67.16	4.100	5.84	5.67	1.46
0.983	1.46	2.550	67.16	4.117	5.84	5.68	1.46
1.000	1.46	2.567	67.16	4.133	5.84	5.70	1.46
1.017	1.46	2.583	67.16	4.150	5.84	5.72	1.46
1.033	1.46	2.600	67.16	4.167	5.84	5.73	1.46
1.050	1.46	2.617	67.16	4.183	5.84	5.75	1.46
1.067	1.46	2.633	67.16	4.200	5.84	5.77	1.46
1.083	1.46	2.650	67.16	4.217	5.84	5.78	1.46
1.100	1.46	2.667	67.16	4.233	5.84	5.80	1.46

1.117	1.46	2.683	67.16	4.250	5.84	5.82	1.46
1.133	1.46	2.700	67.16	4.267	2.92	5.83	1.46
1.150	1.46	2.717	67.16	4.283	2.92	5.85	1.46
1.167	1.46	2.733	67.16	4.300	2.92	5.87	1.46
1.183	1.46	2.750	67.16	4.317	2.92	5.88	1.46
1.200	1.46	2.767	18.99	4.333	2.92	5.90	1.46
1.217	1.46	2.783	18.98	4.350	2.92	5.92	1.46
1.233	1.46	2.800	18.98	4.367	2.92	5.93	1.46
1.250	1.46	2.817	18.98	4.383	2.92	5.95	1.46
1.267	8.76	2.833	18.98	4.400	2.92	5.97	1.46
1.283	8.76	2.850	18.98	4.417	2.92	5.98	1.46
1.300	8.76	2.867	18.98	4.433	2.92	6.00	1.46
1.317	8.76	2.883	18.98	4.450	2.92	6.02	1.46
1.333	8.76	2.900	18.98	4.467	2.92	6.03	1.46
1.350	8.76	2.917	18.98	4.483	2.92	6.05	1.46
1.367	8.76	2.933	18.98	4.500	2.92	6.07	1.46
1.383	8.76	2.950	18.98	4.517	2.92	6.08	1.46
1.400	8.76	2.967	18.98	4.533	2.92	6.10	1.46
1.417	8.76	2.983	18.98	4.550	2.92	6.12	1.46
1.433	8.76	3.000	18.98	4.567	2.92	6.13	1.46
1.450	8.76	3.017	18.98	4.583	2.92	6.15	1.46
1.467	8.76	3.033	18.98	4.600	2.92	6.17	1.46
1.483	8.76	3.050	18.98	4.617	2.92	6.18	1.46
1.500	8.76	3.067	18.98	4.633	2.92	6.20	1.46
1.517	8.76	3.083	18.98	4.650	2.92	6.22	1.46
1.533	8.76	3.100	18.98	4.667	2.92	6.23	1.46
1.550	8.76	3.117	18.98	4.683	2.92	6.25	1.46
1.567	8.76	3.133	18.98	4.700	2.92		

			TOTALS
Max.Eff.Inten.(mm/hr)=	67.16	50.27	
over (min)	5.00	6.00	
Storage Coeff. (min)=	3.28 (ii)	5.27 (ii)	
Unit Hyd. Tpeak (min)=	5.00	6.00	
Unit Hyd. peak (cms)=	0.29	0.21	
PEAK FLOW (cms)=	0.37	0.00	0.376 (iii)
TIME TO PEAK (hrs)=	2.75	2.75	2.75
RUNOFF VOLUME (mm)=	72.00	43.95	71.72
TOTAL RAINFALL (mm)=	73.00	73.00	73.00
RUNOFF COEFFICIENT =	0.99	0.60	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7644)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0433	0.1140
	0.0182	0.0580	0.0507	0.1280
	0.0280	0.0775	0.0571	0.1440
	0.0343	0.0930	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7643)	2.020	0.376	2.75	71.72
OUTFLOW: ID= 1 (7644)	2.020	0.042	3.85	69.68

PEAK FLOW REDUCTION [Qout/Qin](%)= 11.23
TIME SHIFT OF PEAK FLOW (min)= 66.00
MAXIMUM STORAGE USED (ha.m.)= 0.1114

```
      V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
      V    V   I    SS     U   U   A A   L
       V  V    I      SS   U   U  AAAAA  L
        V V    I       SS  U   U  A   A  L
```

```
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
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```

***** D E T A I L E D O U T P U T *****

```
  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-
a4eb17eaad57\e20b5703-23ac-49ec-bff9-ab8c18e02f40\s
  Summary filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-
a4eb17eaad57\e20b5703-23ac-49ec-bff9-ab8c18e02f40\s

DATE: 06/14/2024                          TIME: 12:48:40

USER:


COMMENTS: _____
```

```
  ************************************************
  ** SIMULATION : 99. 50 Year 12 Hour AES (Bloo **
  ************************************************
```

READ STORM	Filename: C:\Users\ygollamudi\AppData\Local\Temp\3c3f87d5-a26e-4c6b-b2ae-56a7ba29ab7f\2327b4a8
Ptotal= 80.82 mm	Comments: 50 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	3.25	13.74	6.50	5.66	9.75	0.81
0.25	0.81	3.50	13.74	6.75	5.66	10.00	0.81
0.50	0.81	3.75	13.74	7.00	5.66	10.25	0.81
0.75	0.81	4.00	13.74	7.25	3.23	10.50	0.81
1.00	0.81	4.25	37.17	7.50	3.23	10.75	0.81
1.25	0.81	4.50	37.17	7.75	3.23	11.00	0.81
1.50	0.81	4.75	37.17	8.00	3.23	11.25	0.81
1.75	0.81	5.00	37.17	8.25	1.62	11.50	0.81
2.00	0.81	5.25	10.50	8.50	1.62	11.75	0.81
2.25	4.85	5.50	10.50	8.75	1.62	12.00	0.81
2.50	4.85	5.75	10.50	9.00	1.62		
2.75	4.85	6.00	10.50	9.25	0.81		
3.00	4.85	6.25	5.66	9.50	0.81		

CALIB		
STANDHYD (7567)	Area (ha)= 2.72	
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.69	0.03
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.00	0.50
Length (m)=	134.66	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

GEI Consultants

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	4.85	6.150	10.50	9.22	1.62
0.033	0.00	3.100	4.85	6.167	10.50	9.23	1.62
0.050	0.00	3.117	4.85	6.183	10.50	9.25	1.62
0.067	0.00	3.133	4.85	6.200	10.50	9.27	0.81
0.083	0.00	3.150	4.85	6.217	10.50	9.28	0.81
0.100	0.00	3.167	4.85	6.233	10.50	9.30	0.81
0.117	0.00	3.183	4.85	6.250	10.49	9.32	0.81
0.133	0.00	3.200	4.85	6.267	5.66	9.33	0.81
0.150	0.00	3.217	4.85	6.283	5.66	9.35	0.81
0.167	0.00	3.233	4.85	6.300	5.66	9.37	0.81
0.183	0.00	3.250	4.85	6.317	5.66	9.38	0.81
0.200	0.00	3.267	13.74	6.333	5.66	9.40	0.81
0.217	0.00	3.283	13.74	6.350	5.66	9.42	0.81
0.233	0.00	3.300	13.74	6.367	5.66	9.43	0.81
0.250	0.00	3.317	13.74	6.383	5.66	9.45	0.81
0.267	0.81	3.333	13.74	6.400	5.66	9.47	0.81
0.283	0.81	3.350	13.74	6.417	5.66	9.48	0.81
0.300	0.81	3.367	13.74	6.433	5.66	9.50	0.81
0.317	0.81	3.383	13.74	6.450	5.66	9.52	0.81
0.333	0.81	3.400	13.74	6.467	5.66	9.53	0.81
0.350	0.81	3.417	13.74	6.483	5.66	9.55	0.81
0.367	0.81	3.433	13.74	6.500	5.66	9.57	0.81
0.383	0.81	3.450	13.74	6.517	5.66	9.58	0.81
0.400	0.81	3.467	13.74	6.533	5.66	9.60	0.81
0.417	0.81	3.483	13.74	6.550	5.66	9.62	0.81
0.433	0.81	3.500	13.74	6.567	5.66	9.63	0.81
0.450	0.81	3.517	13.74	6.583	5.66	9.65	0.81
0.467	0.81	3.533	13.74	6.600	5.66	9.67	0.81
0.483	0.81	3.550	13.74	6.617	5.66	9.68	0.81
0.500	0.81	3.567	13.74	6.633	5.66	9.70	0.81
0.517	0.81	3.583	13.74	6.650	5.66	9.72	0.81
0.533	0.81	3.600	13.74	6.667	5.66	9.73	0.81
0.550	0.81	3.617	13.74	6.683	5.66	9.75	0.81
0.567	0.81	3.633	13.74	6.700	5.66	9.77	0.81
0.583	0.81	3.650	13.74	6.717	5.66	9.78	0.81
0.600	0.81	3.667	13.74	6.733	5.66	9.80	0.81
0.617	0.81	3.683	13.74	6.750	5.66	9.82	0.81
0.633	0.81	3.700	13.74	6.767	5.66	9.83	0.81
0.650	0.81	3.717	13.74	6.783	5.66	9.85	0.81
0.667	0.81	3.733	13.74	6.800	5.66	9.87	0.81
0.683	0.81	3.750	13.74	6.817	5.66	9.88	0.81
0.700	0.81	3.767	13.74	6.833	5.66	9.90	0.81
0.717	0.81	3.783	13.74	6.850	5.66	9.92	0.81
0.733	0.81	3.800	13.74	6.867	5.66	9.93	0.81
0.750	0.81	3.817	13.74	6.883	5.66	9.95	0.81
0.767	0.81	3.833	13.74	6.900	5.66	9.97	0.81
0.783	0.81	3.850	13.74	6.917	5.66	9.98	0.81
0.800	0.81	3.867	13.74	6.933	5.66	10.00	0.81
0.817	0.81	3.883	13.74	6.950	5.66	10.02	0.81
0.833	0.81	3.900	13.74	6.967	5.66	10.03	0.81
0.850	0.81	3.917	13.74	6.983	5.66	10.05	0.81
0.867	0.81	3.933	13.74	7.000	5.66	10.07	0.81
0.883	0.81	3.950	13.74	7.017	5.66	10.08	0.81
0.900	0.81	3.967	13.74	7.033	5.66	10.10	0.81
0.917	0.81	3.983	13.74	7.050	5.66	10.12	0.81
0.933	0.81	4.000	13.74	7.067	5.66	10.13	0.81
0.950	0.81	4.017	13.74	7.083	5.66	10.15	0.81
0.967	0.81	4.033	13.74	7.100	5.66	10.17	0.81
0.983	0.81	4.050	13.74	7.117	5.66	10.18	0.81
1.000	0.81	4.067	13.74	7.133	5.66	10.20	0.81
1.017	0.81	4.083	13.74	7.150	5.66	10.22	0.81
1.033	0.81	4.100	13.74	7.167	5.66	10.23	0.81
1.050	0.81	4.117	13.74	7.183	5.66	10.25	0.81
1.067	0.81	4.133	13.74	7.200	5.66	10.27	0.81
1.083	0.81	4.150	13.74	7.217	5.66	10.28	0.81
1.100	0.81	4.167	13.74	7.233	5.66	10.30	0.81
1.117	0.81	4.183	13.74	7.250	5.65	10.32	0.81
1.133	0.81	4.200	13.74	7.267	3.23	10.33	0.81
1.150	0.81	4.217	13.74	7.283	3.23	10.35	0.81
1.167	0.81	4.233	13.74	7.300	3.23	10.37	0.81
1.183	0.81	4.250	13.74	7.317	3.23	10.38	0.81
1.200	0.81	4.267	37.17	7.333	3.23	10.40	0.81
1.217	0.81	4.283	37.17	7.350	3.23	10.42	0.81
1.233	0.81	4.300	37.17	7.367	3.23	10.43	0.81
1.250	0.81	4.317	37.17	7.383	3.23	10.45	0.81
1.267	0.81	4.333	37.17	7.400	3.23	10.47	0.81
1.283	0.81	4.350	37.17	7.417	3.23	10.48	0.81
1.300	0.81	4.367	37.17	7.433	3.23	10.50	0.81
1.317	0.81	4.383	37.17	7.450	3.23	10.52	0.81
1.333	0.81	4.400	37.17	7.467	3.23	10.53	0.81
1.350	0.81	4.417	37.17	7.483	3.23	10.55	0.81
1.367	0.81	4.433	37.17	7.500	3.23	10.57	0.81
1.383	0.81	4.450	37.17	7.517	3.23	10.58	0.81
1.400	0.81	4.467	37.17	7.533	3.23	10.60	0.81
1.417	0.81	4.483	37.17	7.550	3.23	10.62	0.81
1.433	0.81	4.500	37.17	7.567	3.23	10.63	0.81
1.450	0.81	4.517	37.17	7.583	3.23	10.65	0.81
1.467	0.81	4.533	37.17	7.600	3.23	10.67	0.81
1.483	0.81	4.550	37.17	7.617	3.23	10.68	0.81
1.500	0.81	4.567	37.17	7.633	3.23	10.70	0.81
1.517	0.81	4.583	37.17	7.650	3.23	10.72	0.81
1.533	0.81	4.600	37.17	7.667	3.23	10.73	0.81
1.550	0.81	4.617	37.17	7.683	3.23	10.75	0.81
1.567	0.81	4.633	37.17	7.700	3.23	10.77	0.81
1.583	0.81	4.650	37.17	7.717	3.23	10.78	0.81
1.600	0.81	4.667	37.17	7.733	3.23	10.80	0.81
1.617	0.81	4.683	37.17	7.750	3.23	10.82	0.81
1.633	0.81	4.700	37.17	7.767	3.23	10.83	0.81
1.650	0.81	4.717	37.17	7.783	3.23	10.85	0.81
1.667	0.81	4.733	37.17	7.800	3.23	10.87	0.81
1.683	0.81	4.750	37.17	7.817	3.23	10.88	0.81
1.700	0.81	4.767	37.17	7.833	3.23	10.90	0.81
1.717	0.81	4.783	37.17	7.850	3.23	10.92	0.81
1.733	0.81	4.800	37.17	7.867	3.23	10.93	0.81
1.750	0.81	4.817	37.17	7.883	3.23	10.95	0.81
1.767	0.81	4.833	37.17	7.900	3.23	10.97	0.81
1.783	0.81	4.850	37.17	7.917	3.23	10.98	0.81
1.800	0.81	4.867	37.17	7.933	3.23	11.00	0.81
1.817	0.81	4.883	37.17	7.950	3.23	11.02	0.81
1.833	0.81	4.900	37.17	7.967	3.23	11.03	0.81
1.850	0.81	4.917	37.17	7.983	3.23	11.05	0.81
1.867	0.81	4.933	37.17	8.000	3.23	11.07	0.81
1.883	0.81	4.950	37.17	8.017	3.23	11.08	0.81
1.900	0.81	4.967	37.17	8.033	3.23	11.10	0.81
1.917	0.81	4.983	37.17	8.050	3.23	11.12	0.81
1.933	0.81	5.000	37.17	8.067	3.23	11.13	0.81
1.950	0.81	5.017	37.17	8.083	3.23	11.15	0.81
1.967	0.81	5.033	37.17	8.100	3.23	11.17	0.81
1.983	0.81	5.050	37.17	8.117	3.23	11.18	0.81
2.000	0.81	5.067	37.17	8.133	3.23	11.20	0.81
2.017	0.81	5.083	37.17	8.150	3.23	11.22	0.81
2.033	0.81	5.100	37.17	8.167	3.23	11.23	0.81
2.050	0.81	5.117	37.17	8.183	3.23	11.25	0.81
2.067	0.81	5.133	37.17	8.200	3.23	11.27	0.81
2.083	0.81	5.150	37.17	8.217	3.23	11.28	0.81
2.100	0.81	5.167	37.17	8.233	3.23	11.30	0.81
2.117	0.81	5.183	37.17	8.250	3.23	11.32	0.81
2.133	0.81	5.200	37.17	8.267	1.62	11.33	0.81
2.150	0.81	5.217	37.17	8.283	1.62	11.35	0.81
2.167	0.81	5.233	37.17	8.300	1.62	11.37	0.81
2.183	0.81	5.250	37.15	8.317	1.62	11.38	0.81
2.200	0.81	5.267	10.50	8.333	1.62	11.40	0.81
2.217	0.81	5.283	10.50	8.350	1.62	11.42	0.81
2.233	0.81	5.300	10.50	8.367	1.62	11.43	0.81
2.250	0.81	5.317	10.50	8.383	1.62	11.45	0.81
2.267	4.85	5.333	10.50	8.400	1.62	11.47	0.81
2.283	4.85	5.350	10.50	8.417	1.62	11.48	0.81
2.300	4.85	5.367	10.50	8.433	1.62	11.50	0.81
2.317	4.85	5.383	10.50	8.450	1.62	11.52	0.81
2.333	4.85	5.400	10.50	8.467	1.62	11.53	0.81
2.350	4.85	5.417	10.50	8.483	1.62	11.55	0.81
2.367	4.85	5.433	10.50	8.500	1.62	11.57	0.81
2.383	4.85	5.450	10.50	8.517	1.62	11.58	0.81
2.400	4.85	5.467	10.50	8.533	1.62	11.60	0.81
2.417	4.85	5.483	10.50	8.550	1.62	11.62	0.81
2.433	4.85	5.500	10.50	8.567	1.62	11.63	0.81
2.450	4.85	5.517	10.50	8.583	1.62	11.65	0.81
2.467	4.85	5.533	10.50	8.600	1.62	11.67	0.81
2.483	4.85	5.550	10.50	8.617	1.62	11.68	0.81

2.500	4.85	5.567	10.50	8.633	1.62	11.70	0.81
2.517	4.85	5.583	10.50	8.650	1.62	11.72	0.81
2.533	4.85	5.600	10.50	8.667	1.62	11.73	0.81
2.550	4.85	5.617	10.50	8.683	1.62	11.75	0.81
2.567	4.85	5.633	10.50	8.700	1.62	11.77	0.81
2.583	4.85	5.650	10.50	8.717	1.62	11.78	0.81
2.600	4.85	5.667	10.50	8.733	1.62	11.80	0.81
2.617	4.85	5.683	10.50	8.750	1.62	11.82	0.81
2.633	4.85	5.700	10.50	8.767	1.62	11.83	0.81
2.650	4.85	5.717	10.50	8.783	1.62	11.85	0.81
2.667	4.85	5.733	10.50	8.800	1.62	11.87	0.81
2.683	4.85	5.750	10.50	8.817	1.62	11.88	0.81
2.700	4.85	5.767	10.50	8.833	1.62	11.90	0.81
2.717	4.85	5.783	10.50	8.850	1.62	11.92	0.81
2.733	4.85	5.800	10.50	8.867	1.62	11.93	0.81
2.750	4.85	5.817	10.50	8.883	1.62	11.95	0.81
2.767	4.85	5.833	10.50	8.900	1.62	11.97	0.81
2.783	4.85	5.850	10.50	8.917	1.62	11.98	0.81
2.800	4.85	5.867	10.50	8.933	1.62	12.00	0.81
2.817	4.85	5.883	10.50	8.950	1.62	12.02	0.81
2.833	4.85	5.900	10.50	8.967	1.62	12.03	0.81
2.850	4.85	5.917	10.50	8.983	1.62	12.05	0.81
2.867	4.85	5.933	10.50	9.000	1.62	12.07	0.81
2.883	4.85	5.950	10.50	9.017	1.62	12.08	0.81
2.900	4.85	5.967	10.50	9.033	1.62	12.10	0.81
2.917	4.85	5.983	10.50	9.050	1.62	12.12	0.81
2.933	4.85	6.000	10.50	9.067	1.62	12.13	0.81
2.950	4.85	6.017	10.50	9.083	1.62	12.15	0.81
2.967	4.85	6.033	10.50	9.100	1.62	12.17	0.81
2.983	4.85	6.050	10.50	9.117	1.62	12.18	0.81
3.000	4.85	6.067	10.50	9.133	1.62	12.20	0.81
3.017	4.85	6.083	10.50	9.150	1.62	12.22	0.81
3.033	4.85	6.100	10.50	9.167	1.62	12.23	0.81
3.050	4.85	6.117	10.50	9.183	1.62	12.25	0.81
3.067	4.85	6.133	10.50	9.200	1.62		

Max.Eff.Inten.(mm/hr)=	37.17	29.32	
over (min)	5.00	8.00	
Storage Coeff. (min)=	4.54 (ii)	7.07 (ii)	
Unit Hyd. Tpeak (min)=	5.00	8.00	
Unit Hyd. peak (cms)=	0.24	0.15	
			TOTALS
PEAK FLOW (cms)=	0.28	0.00	0.280 (iii)
TIME TO PEAK (hrs)=	5.23	5.25	5.25
RUNOFF VOLUME (mm)=	79.81	50.68	79.53
TOTAL RAINFALL (mm)=	80.82	80.82	80.82
RUNOFF COEFFICIENT =	0.99	0.63	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7626)	OVERFLOW IS OFF				
IN= 2---> OUT= 1					
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)	
	0.0000	0.0000	0.0568	0.1530	
	0.0239	0.0780	0.0660	0.1730	
	0.0370	0.1040	0.0751	0.2000	
	0.0451	0.1250	0.0000	0.0000	

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7567)	2.720	0.280	5.25	79.53
OUTFLOW: ID= 1 (7626)	2.720	0.054	6.38	76.32

PEAK FLOW REDUCTION [Qout/Qin](%)= 19.26
TIME SHIFT OF PEAK FLOW (min)= 68.00
MAXIMUM STORAGE USED (ha.m.)= 0.1462

CALIB			
STANDHYD (7624)	Area (ha)= 1.80		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	1.78	0.02	
Dep. Storage (mm)=	1.00	1.50	
Average Slope (%)=	1.00	0.50	
Length (m)=	109.54	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	4.85	6.150	10.50	9.22	1.62
0.033	0.00	3.100	4.85	6.167	10.50	9.23	1.62
0.050	0.00	3.117	4.85	6.183	10.50	9.25	1.62
0.067	0.00	3.133	4.85	6.200	10.50	9.27	0.81
0.083	0.00	3.150	4.85	6.217	10.50	9.28	0.81
0.100	0.00	3.167	4.85	6.233	10.50	9.30	0.81
0.117	0.00	3.183	4.85	6.250	10.49	9.32	0.81
0.133	0.00	3.200	4.85	6.267	5.66	9.33	0.81
0.150	0.00	3.217	4.85	6.283	5.66	9.35	0.81
0.167	0.00	3.233	4.85	6.300	5.66	9.37	0.81
0.183	0.00	3.250	4.85	6.317	5.66	9.38	0.81
0.200	0.00	3.267	13.74	6.333	5.66	9.40	0.81
0.217	0.00	3.283	13.74	6.350	5.66	9.42	0.81
0.233	0.00	3.300	13.74	6.367	5.66	9.43	0.81
0.250	0.00	3.317	13.74	6.383	5.66	9.45	0.81
0.267	0.81	3.333	13.74	6.400	5.66	9.47	0.81
0.283	0.81	3.350	13.74	6.417	5.66	9.48	0.81
0.300	0.81	3.367	13.74	6.433	5.66	9.50	0.81
0.317	0.81	3.383	13.74	6.450	5.66	9.52	0.81
0.333	0.81	3.400	13.74	6.467	5.66	9.53	0.81
0.350	0.81	3.417	13.74	6.483	5.66	9.55	0.81
0.367	0.81	3.433	13.74	6.500	5.66	9.57	0.81
0.383	0.81	3.450	13.74	6.517	5.66	9.58	0.81
0.400	0.81	3.467	13.74	6.533	5.66	9.60	0.81
0.417	0.81	3.483	13.74	6.550	5.66	9.62	0.81
0.433	0.81	3.500	13.74	6.567	5.66	9.63	0.81
0.450	0.81	3.517	13.74	6.583	5.66	9.65	0.81
0.467	0.81	3.533	13.74	6.600	5.66	9.67	0.81
0.483	0.81	3.550	13.74	6.617	5.66	9.68	0.81
0.500	0.81	3.567	13.74	6.633	5.66	9.70	0.81
0.517	0.81	3.583	13.74	6.650	5.66	9.72	0.81
0.533	0.81	3.600	13.74	6.667	5.66	9.73	0.81
0.550	0.81	3.617	13.74	6.683	5.66	9.75	0.81
0.567	0.81	3.633	13.74	6.700	5.66	9.77	0.81
0.583	0.81	3.650	13.74	6.717	5.66	9.78	0.81
0.600	0.81	3.667	13.74	6.733	5.66	9.80	0.81
0.617	0.81	3.683	13.74	6.750	5.66	9.82	0.81
0.633	0.81	3.700	13.74	6.767	5.66	9.83	0.81
0.650	0.81	3.717	13.74	6.783	5.66	9.85	0.81
0.667	0.81	3.733	13.74	6.800	5.66	9.87	0.81
0.683	0.81	3.750	13.74	6.817	5.66	9.88	0.81
0.700	0.81	3.767	13.74	6.833	5.66	9.90	0.81
0.717	0.81	3.783	13.74	6.850	5.66	9.92	0.81
0.733	0.81	3.800	13.74	6.867	5.66	9.93	0.81
0.750	0.81	3.817	13.74	6.883	5.66	9.95	0.81
0.767	0.81	3.833	13.74	6.900	5.66	9.97	0.81
0.783	0.81	3.850	13.74	6.917	5.66	9.98	0.81
0.800	0.81	3.867	13.74	6.933	5.66	10.00	0.81
0.817	0.81	3.883	13.74	6.950	5.66	10.02	0.81
0.833	0.81	3.900	13.74	6.967	5.66	10.03	0.81
0.850	0.81	3.917	13.74	6.983	5.66	10.05	0.81
0.867	0.81	3.933	13.74	7.000	5.66	10.07	0.81
0.883	0.81	3.950	13.74	7.017	5.66	10.08	0.81
0.900	0.81	3.967	13.74	7.033	5.66	10.10	0.81
0.917	0.81	3.983	13.74	7.050	5.66	10.12	0.81
0.933	0.81	4.000	13.74	7.067	5.66	10.13	0.81
0.950	0.81	4.017	13.74	7.083	5.66	10.15	0.81
0.967	0.81	4.033	13.74	7.100	5.66	10.17	0.81

0.983	0.81	4.050	13.74	7.117	5.66	10.18	0.81
1.000	0.81	4.067	13.74	7.133	5.66	10.20	0.81
1.017	0.81	4.083	13.74	7.150	5.66	10.22	0.81
1.033	0.81	4.100	13.74	7.167	5.66	10.23	0.81
1.050	0.81	4.117	13.74	7.183	5.66	10.25	0.81
1.067	0.81	4.133	13.74	7.200	5.66	10.27	0.81
1.083	0.81	4.150	13.74	7.217	5.66	10.28	0.81
1.100	0.81	4.167	13.74	7.233	5.66	10.30	0.81
1.117	0.81	4.183	13.74	7.250	5.65	10.32	0.81
1.133	0.81	4.200	13.74	7.267	3.23	10.33	0.81
1.150	0.81	4.217	13.74	7.283	3.23	10.35	0.81
1.167	0.81	4.233	13.74	7.300	3.23	10.37	0.81
1.183	0.81	4.250	13.74	7.317	3.23	10.38	0.81
1.200	0.81	4.267	37.17	7.333	3.23	10.40	0.81
1.217	0.81	4.283	37.17	7.350	3.23	10.42	0.81
1.233	0.81	4.300	37.17	7.367	3.23	10.43	0.81
1.250	0.81	4.317	37.17	7.383	3.23	10.45	0.81
1.267	0.81	4.333	37.17	7.400	3.23	10.47	0.81
1.283	0.81	4.350	37.17	7.417	3.23	10.48	0.81
1.300	0.81	4.367	37.17	7.433	3.23	10.50	0.81
1.317	0.81	4.383	37.17	7.450	3.23	10.52	0.81
1.333	0.81	4.400	37.17	7.467	3.23	10.53	0.81
1.350	0.81	4.417	37.17	7.483	3.23	10.55	0.81
1.367	0.81	4.433	37.17	7.500	3.23	10.57	0.81
1.383	0.81	4.450	37.17	7.517	3.23	10.58	0.81
1.400	0.81	4.467	37.17	7.533	3.23	10.60	0.81
1.417	0.81	4.483	37.17	7.550	3.23	10.62	0.81
1.433	0.81	4.500	37.17	7.567	3.23	10.63	0.81
1.450	0.81	4.517	37.17	7.583	3.23	10.65	0.81
1.467	0.81	4.533	37.17	7.600	3.23	10.67	0.81
1.483	0.81	4.550	37.17	7.617	3.23	10.68	0.81
1.500	0.81	4.567	37.17	7.633	3.23	10.70	0.81
1.517	0.81	4.583	37.17	7.650	3.23	10.72	0.81
1.533	0.81	4.600	37.17	7.667	3.23	10.73	0.81
1.550	0.81	4.617	37.17	7.683	3.23	10.75	0.81
1.567	0.81	4.633	37.17	7.700	3.23	10.77	0.81
1.583	0.81	4.650	37.17	7.717	3.23	10.78	0.81
1.600	0.81	4.667	37.17	7.733	3.23	10.80	0.81
1.617	0.81	4.683	37.17	7.750	3.23	10.82	0.81
1.633	0.81	4.700	37.17	7.767	3.23	10.83	0.81
1.650	0.81	4.717	37.17	7.783	3.23	10.85	0.81
1.667	0.81	4.733	37.17	7.800	3.23	10.87	0.81
1.683	0.81	4.750	37.17	7.817	3.23	10.88	0.81
1.700	0.81	4.767	37.17	7.833	3.23	10.90	0.81
1.717	0.81	4.783	37.17	7.850	3.23	10.92	0.81
1.733	0.81	4.800	37.17	7.867	3.23	10.93	0.81
1.750	0.81	4.817	37.17	7.883	3.23	10.95	0.81
1.767	0.81	4.833	37.17	7.900	3.23	10.97	0.81
1.783	0.81	4.850	37.17	7.917	3.23	10.98	0.81
1.800	0.81	4.867	37.17	7.933	3.23	11.00	0.81
1.817	0.81	4.883	37.17	7.950	3.23	11.02	0.81
1.833	0.81	4.900	37.17	7.967	3.23	11.03	0.81
1.850	0.81	4.917	37.17	7.983	3.23	11.05	0.81
1.867	0.81	4.933	37.17	8.000	3.23	11.07	0.81
1.883	0.81	4.950	37.17	8.017	3.23	11.08	0.81
1.900	0.81	4.967	37.17	8.033	3.23	11.10	0.81
1.917	0.81	4.983	37.17	8.050	3.23	11.12	0.81
1.933	0.81	5.000	37.17	8.067	3.23	11.13	0.81
1.950	0.81	5.017	37.17	8.083	3.23	11.15	0.81
1.967	0.81	5.033	37.17	8.100	3.23	11.17	0.81
1.983	0.81	5.050	37.17	8.117	3.23	11.18	0.81
2.000	0.81	5.067	37.17	8.133	3.23	11.20	0.81
2.017	0.81	5.083	37.17	8.150	3.23	11.22	0.81
2.033	0.81	5.100	37.17	8.167	3.23	11.23	0.81
2.050	0.81	5.117	37.17	8.183	3.23	11.25	0.81
2.067	0.81	5.133	37.17	8.200	3.23	11.27	0.81
2.083	0.81	5.150	37.17	8.217	3.23	11.28	0.81
2.100	0.81	5.167	37.17	8.233	3.23	11.30	0.81
2.117	0.81	5.183	37.17	8.250	3.23	11.32	0.81
2.133	0.81	5.200	37.17	8.267	1.62	11.33	0.81
2.150	0.81	5.217	37.17	8.283	1.62	11.35	0.81
2.167	0.81	5.233	37.17	8.300	1.62	11.37	0.81
2.183	0.81	5.250	37.15	8.317	1.62	11.38	0.81
2.200	0.81	5.267	10.50	8.333	1.62	11.40	0.81
2.217	0.81	5.283	10.50	8.350	1.62	11.42	0.81
2.233	0.81	5.300	10.50	8.367	1.62	11.43	0.81
2.250	0.81	5.317	10.50	8.383	1.62	11.45	0.81
2.267	4.85	5.333	10.50	8.400	1.62	11.47	0.81
2.283	4.85	5.350	10.50	8.417	1.62	11.48	0.81
2.300	4.85	5.367	10.50	8.433	1.62	11.50	0.81
2.317	4.85	5.383	10.50	8.450	1.62	11.52	0.81
2.333	4.85	5.400	10.50	8.467	1.62	11.53	0.81
2.350	4.85	5.417	10.50	8.483	1.62	11.55	0.81
2.367	4.85	5.433	10.50	8.500	1.62	11.57	0.81
2.383	4.85	5.450	10.50	8.517	1.62	11.58	0.81
2.400	4.85	5.467	10.50	8.533	1.62	11.60	0.81
2.417	4.85	5.483	10.50	8.550	1.62	11.62	0.81
2.433	4.85	5.500	10.50	8.567	1.62	11.63	0.81
2.450	4.85	5.517	10.50	8.583	1.62	11.65	0.81
2.467	4.85	5.533	10.50	8.600	1.62	11.67	0.81
2.483	4.85	5.550	10.50	8.617	1.62	11.68	0.81
2.500	4.85	5.567	10.50	8.633	1.62	11.70	0.81
2.517	4.85	5.583	10.50	8.650	1.62	11.72	0.81
2.533	4.85	5.600	10.50	8.667	1.62	11.73	0.81
2.550	4.85	5.617	10.50	8.683	1.62	11.75	0.81
2.567	4.85	5.633	10.50	8.700	1.62	11.77	0.81
2.583	4.85	5.650	10.50	8.717	1.62	11.78	0.81
2.600	4.85	5.667	10.50	8.733	1.62	11.80	0.81
2.617	4.85	5.683	10.50	8.750	1.62	11.82	0.81
2.633	4.85	5.700	10.50	8.767	1.62	11.83	0.81
2.650	4.85	5.717	10.50	8.783	1.62	11.85	0.81
2.667	4.85	5.733	10.50	8.800	1.62	11.87	0.81
2.683	4.85	5.750	10.50	8.817	1.62	11.88	0.81
2.700	4.85	5.767	10.50	8.833	1.62	11.90	0.81
2.717	4.85	5.783	10.50	8.850	1.62	11.92	0.81
2.733	4.85	5.800	10.50	8.867	1.62	11.93	0.81
2.750	4.85	5.817	10.50	8.883	1.62	11.95	0.81
2.767	4.85	5.833	10.50	8.900	1.62	11.97	0.81
2.783	4.85	5.850	10.50	8.917	1.62	11.98	0.81
2.800	4.85	5.867	10.50	8.933	1.62	12.00	0.81
2.817	4.85	5.883	10.50	8.950	1.62	12.02	0.81
2.833	4.85	5.900	10.50	8.967	1.62	12.03	0.81
2.850	4.85	5.917	10.50	8.983	1.62	12.05	0.81
2.867	4.85	5.933	10.50	9.000	1.62	12.07	0.81
2.883	4.85	5.950	10.50	9.017	1.62	12.08	0.81
2.900	4.85	5.967	10.50	9.033	1.62	12.10	0.81
2.917	4.85	5.983	10.50	9.050	1.62	12.12	0.81
2.933	4.85	6.000	10.50	9.067	1.62	12.13	0.81
2.950	4.85	6.017	10.50	9.083	1.62	12.15	0.81
2.967	4.85	6.033	10.50	9.100	1.62	12.17	0.81
2.983	4.85	6.050	10.50	9.117	1.62	12.18	0.81
3.000	4.85	6.067	10.50	9.133	1.62	12.20	0.81
3.017	4.85	6.083	10.50	9.150	1.62	12.22	0.81
3.033	4.85	6.100	10.50	9.167	1.62	12.23	0.81
3.050	4.85	6.117	10.50	9.183	1.62	12.25	0.81
3.067	4.85	6.133	10.50	9.200	1.62		

Max.Eff.Inten.(mm/hr)=	37.17	32.65	
over (min)	5.00	7.00	
Storage Coeff. (min)=	4.01 (ii)	6.54 (ii)	
Unit Hyd. Tpeak (min)=	5.00	7.00	
Unit Hyd. peak (cms)=	0.26	0.17	
			TOTALS
PEAK FLOW (cms)=	0.18	0.00	0.186 (iii)
TIME TO PEAK (hrs)=	5.20	5.25	5.25
RUNOFF VOLUME (mm)=	79.82	58.50	79.60
TOTAL RAINFALL (mm)=	80.82	80.82	80.82
RUNOFF COEFFICIENT =	0.99	0.72	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 90.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7625)|	OVERFLOW IS OFF			
IN= 2---> OUT= 1 |				
DT= 1.0 min |	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)

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0.0000	0.0000	0.0389	0.1013
0.0164	0.0514	0.0456	0.1141
0.0252	0.0690	0.0514	0.1288
0.0309	0.0825	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7624)	1.800	0.186	5.25	79.60
OUTFLOW: ID= 1 (7625)	1.800	0.037	6.37	76.76

PEAK FLOW REDUCTION [Qout/Qin](%)= 19.78
TIME SHIFT OF PEAK FLOW (min)= 67.00
MAXIMUM STORAGE USED (ha.m.)= 0.0962

CALIB
STANDHYD (7623) | Area (ha)= 1.15
ID= 1 DT= 1.0 min | Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.14	0.01
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	87.56	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	4.85	6.150	10.50	9.22	1.62
0.033	0.00	3.100	4.85	6.167	10.50	9.23	1.62
0.050	0.00	3.117	4.85	6.183	10.50	9.25	1.62
0.067	0.00	3.133	4.85	6.200	10.50	9.27	0.81
0.083	0.00	3.150	4.85	6.217	10.50	9.28	0.81
0.100	0.00	3.167	4.85	6.233	10.50	9.30	0.81
0.117	0.00	3.183	4.85	6.250	10.49	9.32	0.81
0.133	0.00	3.200	4.85	6.267	5.66	9.33	0.81
0.150	0.00	3.217	4.85	6.283	5.66	9.35	0.81
0.167	0.00	3.233	4.85	6.300	5.66	9.37	0.81
0.183	0.00	3.250	4.85	6.317	5.66	9.38	0.81
0.200	0.00	3.267	13.74	6.333	5.66	9.40	0.81
0.217	0.00	3.283	13.74	6.350	5.66	9.42	0.81
0.233	0.00	3.300	13.74	6.367	5.66	9.43	0.81
0.250	0.00	3.317	13.74	6.383	5.66	9.45	0.81
0.267	0.81	3.333	13.74	6.400	5.66	9.47	0.81
0.283	0.81	3.350	13.74	6.417	5.66	9.48	0.81
0.300	0.81	3.367	13.74	6.433	5.66	9.50	0.81
0.317	0.81	3.383	13.74	6.450	5.66	9.52	0.81
0.333	0.81	3.400	13.74	6.467	5.66	9.53	0.81
0.350	0.81	3.417	13.74	6.483	5.66	9.55	0.81
0.367	0.81	3.433	13.74	6.500	5.66	9.57	0.81
0.383	0.81	3.450	13.74	6.517	5.66	9.58	0.81
0.400	0.81	3.467	13.74	6.533	5.66	9.60	0.81
0.417	0.81	3.483	13.74	6.550	5.66	9.62	0.81
0.433	0.81	3.500	13.74	6.567	5.66	9.63	0.81
0.450	0.81	3.517	13.74	6.583	5.66	9.65	0.81
0.467	0.81	3.533	13.74	6.600	5.66	9.67	0.81
0.483	0.81	3.550	13.74	6.617	5.66	9.68	0.81
0.500	0.81	3.567	13.74	6.633	5.66	9.70	0.81
0.517	0.81	3.583	13.74	6.650	5.66	9.72	0.81
0.533	0.81	3.600	13.74	6.667	5.66	9.73	0.81
0.550	0.81	3.617	13.74	6.683	5.66	9.75	0.81
0.567	0.81	3.633	13.74	6.700	5.66	9.77	0.81
0.583	0.81	3.650	13.74	6.717	5.66	9.78	0.81
0.600	0.81	3.667	13.74	6.733	5.66	9.80	0.81
0.617	0.81	3.683	13.74	6.750	5.66	9.82	0.81
0.633	0.81	3.700	13.74	6.767	5.66	9.83	0.81
0.650	0.81	3.717	13.74	6.783	5.66	9.85	0.81
0.667	0.81	3.733	13.74	6.800	5.66	9.87	0.81
0.683	0.81	3.750	13.74	6.817	5.66	9.88	0.81
0.700	0.81	3.767	13.74	6.833	5.66	9.90	0.81
0.717	0.81	3.783	13.74	6.850	5.66	9.92	0.81
0.733	0.81	3.800	13.74	6.867	5.66	9.93	0.81
0.750	0.81	3.817	13.74	6.883	5.66	9.95	0.81
0.767	0.81	3.833	13.74	6.900	5.66	9.97	0.81
0.783	0.81	3.850	13.74	6.917	5.66	9.98	0.81
0.800	0.81	3.867	13.74	6.933	5.66	10.00	0.81
0.817	0.81	3.883	13.74	6.950	5.66	10.02	0.81
0.833	0.81	3.900	13.74	6.967	5.66	10.03	0.81
0.850	0.81	3.917	13.74	6.983	5.66	10.05	0.81
0.867	0.81	3.933	13.74	7.000	5.66	10.07	0.81
0.883	0.81	3.950	13.74	7.017	5.66	10.08	0.81
0.900	0.81	3.967	13.74	7.033	5.66	10.10	0.81
0.917	0.81	3.983	13.74	7.050	5.66	10.12	0.81
0.933	0.81	4.000	13.74	7.067	5.66	10.13	0.81
0.950	0.81	4.017	13.74	7.083	5.66	10.15	0.81
0.967	0.81	4.033	13.74	7.100	5.66	10.17	0.81
0.983	0.81	4.050	13.74	7.117	5.66	10.18	0.81
1.000	0.81	4.067	13.74	7.133	5.66	10.20	0.81
1.017	0.81	4.083	13.74	7.150	5.66	10.22	0.81
1.033	0.81	4.100	13.74	7.167	5.66	10.23	0.81
1.050	0.81	4.117	13.74	7.183	5.66	10.25	0.81
1.067	0.81	4.133	13.74	7.200	5.66	10.27	0.81
1.083	0.81	4.150	13.74	7.217	5.66	10.28	0.81
1.100	0.81	4.167	13.74	7.233	5.66	10.30	0.81
1.117	0.81	4.183	13.74	7.250	5.65	10.32	0.81
1.133	0.81	4.200	13.74	7.267	3.23	10.33	0.81
1.150	0.81	4.217	13.74	7.283	3.23	10.35	0.81
1.167	0.81	4.233	13.74	7.300	3.23	10.37	0.81
1.183	0.81	4.250	13.74	7.317	3.23	10.38	0.81
1.200	0.81	4.267	37.17	7.333	3.23	10.40	0.81
1.217	0.81	4.283	37.17	7.350	3.23	10.42	0.81
1.233	0.81	4.300	37.17	7.367	3.23	10.43	0.81
1.250	0.81	4.317	37.17	7.383	3.23	10.45	0.81
1.267	0.81	4.333	37.17	7.400	3.23	10.47	0.81
1.283	0.81	4.350	37.17	7.417	3.23	10.48	0.81
1.300	0.81	4.367	37.17	7.433	3.23	10.50	0.81
1.317	0.81	4.383	37.17	7.450	3.23	10.52	0.81
1.333	0.81	4.400	37.17	7.467	3.23	10.53	0.81
1.350	0.81	4.417	37.17	7.483	3.23	10.55	0.81
1.367	0.81	4.433	37.17	7.500	3.23	10.57	0.81
1.383	0.81	4.450	37.17	7.517	3.23	10.58	0.81
1.400	0.81	4.467	37.17	7.533	3.23	10.60	0.81
1.417	0.81	4.483	37.17	7.550	3.23	10.62	0.81
1.433	0.81	4.500	37.17	7.567	3.23	10.63	0.81
1.450	0.81	4.517	37.17	7.583	3.23	10.65	0.81
1.467	0.81	4.533	37.17	7.600	3.23	10.67	0.81
1.483	0.81	4.550	37.17	7.617	3.23	10.68	0.81
1.500	0.81	4.567	37.17	7.633	3.23	10.70	0.81
1.517	0.81	4.583	37.17	7.650	3.23	10.72	0.81
1.533	0.81	4.600	37.17	7.667	3.23	10.73	0.81
1.550	0.81	4.617	37.17	7.683	3.23	10.75	0.81
1.567	0.81	4.633	37.17	7.700	3.23	10.77	0.81
1.583	0.81	4.650	37.17	7.717	3.23	10.78	0.81
1.600	0.81	4.667	37.17	7.733	3.23	10.80	0.81
1.617	0.81	4.683	37.17	7.750	3.23	10.82	0.81
1.633	0.81	4.700	37.17	7.767	3.23	10.83	0.81
1.650	0.81	4.717	37.17	7.783	3.23	10.85	0.81
1.667	0.81	4.733	37.17	7.800	3.23	10.87	0.81
1.683	0.81	4.750	37.17	7.817	3.23	10.88	0.81
1.700	0.81	4.767	37.17	7.833	3.23	10.90	0.81
1.717	0.81	4.783	37.17	7.850	3.23	10.92	0.81
1.733	0.81	4.800	37.17	7.867	3.23	10.93	0.81
1.750	0.81	4.817	37.17	7.883	3.23	10.95	0.81
1.767	0.81	4.833	37.17	7.900	3.23	10.97	0.81
1.783	0.81	4.850	37.17	7.917	3.23	10.98	0.81
1.800	0.81	4.867	37.17	7.933	3.23	11.00	0.81
1.817	0.81	4.883	37.17	7.950	3.23	11.02	0.81
1.833	0.81	4.900	37.17	7.967	3.23	11.03	0.81
1.850	0.81	4.917	37.17	7.983	3.23	11.05	0.81
1.867	0.81	4.933	37.17	8.000	3.23	11.07	0.81
1.883	0.81	4.950	37.17	8.017	3.23	11.08	0.81
1.900	0.81	4.967	37.17	8.033	3.23	11.10	0.81
1.917	0.81	4.983	37.17	8.050	3.23	11.12	0.81
1.933	0.81	5.000	37.17	8.067	3.23	11.13	0.81
1.950	0.81	5.017	37.17	8.083	3.23	11.15	0.81
1.967	0.81	5.033	37.17	8.100	3.23	11.17	0.81
1.983	0.81	5.050	37.17	8.117	3.23	11.18	0.81

2.000	0.81	5.067	37.17	8.133	3.23	11.20	0.81
2.017	0.81	5.083	37.17	8.150	3.23	11.22	0.81
2.033	0.81	5.100	37.17	8.167	3.23	11.23	0.81
2.050	0.81	5.117	37.17	8.183	3.23	11.25	0.81
2.067	0.81	5.133	37.17	8.200	3.23	11.27	0.81
2.083	0.81	5.150	37.17	8.217	3.23	11.28	0.81
2.100	0.81	5.167	37.17	8.233	3.23	11.30	0.81
2.117	0.81	5.183	37.17	8.250	3.23	11.32	0.81
2.133	0.81	5.200	37.17	8.267	1.62	11.33	0.81
2.150	0.81	5.217	37.17	8.283	1.62	11.35	0.81
2.167	0.81	5.233	37.17	8.300	1.62	11.37	0.81
2.183	0.81	5.250	37.15	8.317	1.62	11.38	0.81
2.200	0.81	5.267	10.50	8.333	1.62	11.40	0.81
2.217	0.81	5.283	10.50	8.350	1.62	11.42	0.81
2.233	0.81	5.300	10.50	8.367	1.62	11.43	0.81
2.250	0.81	5.317	10.50	8.383	1.62	11.45	0.81
2.267	4.85	5.333	10.50	8.400	1.62	11.47	0.81
2.283	4.85	5.350	10.50	8.417	1.62	11.48	0.81
2.300	4.85	5.367	10.50	8.433	1.62	11.50	0.81
2.317	4.85	5.383	10.50	8.450	1.62	11.52	0.81
2.333	4.85	5.400	10.50	8.467	1.62	11.53	0.81
2.350	4.85	5.417	10.50	8.483	1.62	11.55	0.81
2.367	4.85	5.433	10.50	8.500	1.62	11.57	0.81
2.383	4.85	5.450	10.50	8.517	1.62	11.58	0.81
2.400	4.85	5.467	10.50	8.533	1.62	11.60	0.81
2.417	4.85	5.483	10.50	8.550	1.62	11.62	0.81
2.433	4.85	5.500	10.50	8.567	1.62	11.63	0.81
2.450	4.85	5.517	10.50	8.583	1.62	11.65	0.81
2.467	4.85	5.533	10.50	8.600	1.62	11.67	0.81
2.483	4.85	5.550	10.50	8.617	1.62	11.68	0.81
2.500	4.85	5.567	10.50	8.633	1.62	11.70	0.81
2.517	4.85	5.583	10.50	8.650	1.62	11.72	0.81
2.533	4.85	5.600	10.50	8.667	1.62	11.73	0.81
2.550	4.85	5.617	10.50	8.683	1.62	11.75	0.81
2.567	4.85	5.633	10.50	8.700	1.62	11.77	0.81
2.583	4.85	5.650	10.50	8.717	1.62	11.78	0.81
2.600	4.85	5.667	10.50	8.733	1.62	11.80	0.81
2.617	4.85	5.683	10.50	8.750	1.62	11.82	0.81
2.633	4.85	5.700	10.50	8.767	1.62	11.83	0.81
2.650	4.85	5.717	10.50	8.783	1.62	11.85	0.81
2.667	4.85	5.733	10.50	8.800	1.62	11.87	0.81
2.683	4.85	5.750	10.50	8.817	1.62	11.88	0.81
2.700	4.85	5.767	10.50	8.833	1.62	11.90	0.81
2.717	4.85	5.783	10.50	8.850	1.62	11.92	0.81
2.733	4.85	5.800	10.50	8.867	1.62	11.93	0.81
2.750	4.85	5.817	10.50	8.883	1.62	11.95	0.81
2.767	4.85	5.833	10.50	8.900	1.62	11.97	0.81
2.783	4.85	5.850	10.50	8.917	1.62	11.98	0.81
2.800	4.85	5.867	10.50	8.933	1.62	12.00	0.81
2.817	4.85	5.883	10.50	8.950	1.62	12.02	0.81
2.833	4.85	5.900	10.50	8.967	1.62	12.03	0.81
2.850	4.85	5.917	10.50	8.983	1.62	12.05	0.81
2.867	4.85	5.933	10.50	9.000	1.62	12.07	0.81
2.883	4.85	5.950	10.50	9.017	1.62	12.08	0.81
2.900	4.85	5.967	10.50	9.033	1.62	12.10	0.81
2.917	4.85	5.983	10.50	9.050	1.62	12.12	0.81
2.933	4.85	6.000	10.50	9.067	1.62	12.13	0.81
2.950	4.85	6.017	10.50	9.083	1.62	12.15	0.81
2.967	4.85	6.033	10.50	9.100	1.62	12.17	0.81
2.983	4.85	6.050	10.50	9.117	1.62	12.18	0.81
3.000	4.85	6.067	10.50	9.133	1.62	12.20	0.81
3.017	4.85	6.083	10.50	9.150	1.62	12.22	0.81
3.033	4.85	6.100	10.50	9.167	1.62	12.23	0.81
3.050	4.85	6.117	10.50	9.183	1.62	12.25	0.81
3.067	4.85	6.133	10.50	9.200	1.62		

Max.Eff.Inten.(mm/hr)=	37.17	29.32	
over (min)	5.00	7.00	
Storage Coeff. (min)=	3.50 (ii)	6.03 (ii)	
Unit Hyd. Tpeak (min)=	5.00	7.00	
Unit Hyd. peak (cms)=	0.28	0.18	
			TOTALS
PEAK FLOW (cms)=	0.12	0.00	0.118 (iii)
TIME TO PEAK (hrs)=	5.07	5.25	5.25
RUNOFF VOLUME (mm)=	79.82	50.68	79.53
TOTAL RAINFALL (mm)=	80.82	80.82	80.82

RUNOFF COEFFICIENT =	0.99	0.63	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7622)| IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF			
OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0258	0.0650
0.0108	0.0330	0.0302	0.0725
0.0167	0.0440	0.0340	0.0820
0.0204	0.0525	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7623)	1.150	0.118	5.25	79.53
OUTFLOW: ID= 1 (7622)	1.150	0.024	6.35	76.92

PEAK FLOW REDUCTION [Qout/Qin](%)= 20.30
TIME SHIFT OF PEAK FLOW (min)= 66.00
MAXIMUM STORAGE USED (ha.m.)= 0.0610

CALIB | STANDHYD (7629)| ID= 1 DT= 1.0 min	Area (ha)= 4.09 Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00		
		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	4.05	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	165.13	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	4.85	6.150	10.50	9.22	1.62
0.033	0.00	3.100	4.85	6.167	10.50	9.23	1.62
0.050	0.00	3.117	4.85	6.183	10.50	9.25	1.62
0.067	0.00	3.133	4.85	6.200	10.50	9.27	0.81
0.083	0.00	3.150	4.85	6.217	10.50	9.28	0.81
0.100	0.00	3.167	4.85	6.233	10.50	9.30	0.81
0.117	0.00	3.183	4.85	6.250	10.49	9.32	0.81
0.133	0.00	3.200	4.85	6.267	5.66	9.33	0.81
0.150	0.00	3.217	4.85	6.283	5.66	9.35	0.81
0.167	0.00	3.233	4.85	6.300	5.66	9.37	0.81
0.183	0.00	3.250	4.85	6.317	5.66	9.38	0.81
0.200	0.00	3.267	13.74	6.333	5.66	9.40	0.81
0.217	0.00	3.283	13.74	6.350	5.66	9.42	0.81
0.233	0.00	3.300	13.74	6.367	5.66	9.43	0.81
0.250	0.00	3.317	13.74	6.383	5.66	9.45	0.81
0.267	0.81	3.333	13.74	6.400	5.66	9.47	0.81
0.283	0.81	3.350	13.74	6.417	5.66	9.48	0.81
0.300	0.81	3.367	13.74	6.433	5.66	9.50	0.81
0.317	0.81	3.383	13.74	6.450	5.66	9.52	0.81
0.333	0.81	3.400	13.74	6.467	5.66	9.53	0.81
0.350	0.81	3.417	13.74	6.483	5.66	9.55	0.81
0.367	0.81	3.433	13.74	6.500	5.66	9.57	0.81
0.383	0.81	3.450	13.74	6.517	5.66	9.58	0.81
0.400	0.81	3.467	13.74	6.533	5.66	9.60	0.81
0.417	0.81	3.483	13.74	6.550	5.66	9.62	0.81
0.433	0.81	3.500	13.74	6.567	5.66	9.63	0.81
0.450	0.81	3.517	13.74	6.583	5.66	9.65	0.81
0.467	0.81	3.533	13.74	6.600	5.66	9.67	0.81

0.483	0.81	3.550	13.74	6.617	5.66	9.68	0.81
0.500	0.81	3.567	13.74	6.633	5.66	9.70	0.81
0.517	0.81	3.583	13.74	6.650	5.66	9.72	0.81
0.533	0.81	3.600	13.74	6.667	5.66	9.73	0.81
0.550	0.81	3.617	13.74	6.683	5.66	9.75	0.81
0.567	0.81	3.633	13.74	6.700	5.66	9.77	0.81
0.583	0.81	3.650	13.74	6.717	5.66	9.78	0.81
0.600	0.81	3.667	13.74	6.733	5.66	9.80	0.81
0.617	0.81	3.683	13.74	6.750	5.66	9.82	0.81
0.633	0.81	3.700	13.74	6.767	5.66	9.83	0.81
0.650	0.81	3.717	13.74	6.783	5.66	9.85	0.81
0.667	0.81	3.733	13.74	6.800	5.66	9.87	0.81
0.683	0.81	3.750	13.74	6.817	5.66	9.88	0.81
0.700	0.81	3.767	13.74	6.833	5.66	9.90	0.81
0.717	0.81	3.783	13.74	6.850	5.66	9.92	0.81
0.733	0.81	3.800	13.74	6.867	5.66	9.93	0.81
0.750	0.81	3.817	13.74	6.883	5.66	9.95	0.81
0.767	0.81	3.833	13.74	6.900	5.66	9.97	0.81
0.783	0.81	3.850	13.74	6.917	5.66	9.98	0.81
0.800	0.81	3.867	13.74	6.933	5.66	10.00	0.81
0.817	0.81	3.883	13.74	6.950	5.66	10.02	0.81
0.833	0.81	3.900	13.74	6.967	5.66	10.03	0.81
0.850	0.81	3.917	13.74	6.983	5.66	10.05	0.81
0.867	0.81	3.933	13.74	7.000	5.66	10.07	0.81
0.883	0.81	3.950	13.74	7.017	5.66	10.08	0.81
0.900	0.81	3.967	13.74	7.033	5.66	10.10	0.81
0.917	0.81	3.983	13.74	7.050	5.66	10.12	0.81
0.933	0.81	4.000	13.74	7.067	5.66	10.13	0.81
0.950	0.81	4.017	13.74	7.083	5.66	10.15	0.81
0.967	0.81	4.033	13.74	7.100	5.66	10.17	0.81
0.983	0.81	4.050	13.74	7.117	5.66	10.18	0.81
1.000	0.81	4.067	13.74	7.133	5.66	10.20	0.81
1.017	0.81	4.083	13.74	7.150	5.66	10.22	0.81
1.033	0.81	4.100	13.74	7.167	5.66	10.23	0.81
1.050	0.81	4.117	13.74	7.183	5.66	10.25	0.81
1.067	0.81	4.133	13.74	7.200	5.66	10.27	0.81
1.083	0.81	4.150	13.74	7.217	5.66	10.28	0.81
1.100	0.81	4.167	13.74	7.233	5.66	10.30	0.81
1.117	0.81	4.183	13.74	7.250	5.65	10.32	0.81
1.133	0.81	4.200	13.74	7.267	3.23	10.33	0.81
1.150	0.81	4.217	13.74	7.283	3.23	10.35	0.81
1.167	0.81	4.233	13.74	7.300	3.23	10.37	0.81
1.183	0.81	4.250	13.74	7.317	3.23	10.38	0.81
1.200	0.81	4.267	37.17	7.333	3.23	10.40	0.81
1.217	0.81	4.283	37.17	7.350	3.23	10.42	0.81
1.233	0.81	4.300	37.17	7.367	3.23	10.43	0.81
1.250	0.81	4.317	37.17	7.383	3.23	10.45	0.81
1.267	0.81	4.333	37.17	7.400	3.23	10.47	0.81
1.283	0.81	4.350	37.17	7.417	3.23	10.48	0.81
1.300	0.81	4.367	37.17	7.433	3.23	10.50	0.81
1.317	0.81	4.383	37.17	7.450	3.23	10.52	0.81
1.333	0.81	4.400	37.17	7.467	3.23	10.53	0.81
1.350	0.81	4.417	37.17	7.483	3.23	10.55	0.81
1.367	0.81	4.433	37.17	7.500	3.23	10.57	0.81
1.383	0.81	4.450	37.17	7.517	3.23	10.58	0.81
1.400	0.81	4.467	37.17	7.533	3.23	10.60	0.81
1.417	0.81	4.483	37.17	7.550	3.23	10.62	0.81
1.433	0.81	4.500	37.17	7.567	3.23	10.63	0.81
1.450	0.81	4.517	37.17	7.583	3.23	10.65	0.81
1.467	0.81	4.533	37.17	7.600	3.23	10.67	0.81
1.483	0.81	4.550	37.17	7.617	3.23	10.68	0.81
1.500	0.81	4.567	37.17	7.633	3.23	10.70	0.81
1.517	0.81	4.583	37.17	7.650	3.23	10.72	0.81
1.533	0.81	4.600	37.17	7.667	3.23	10.73	0.81
1.550	0.81	4.617	37.17	7.683	3.23	10.75	0.81
1.567	0.81	4.633	37.17	7.700	3.23	10.77	0.81
1.583	0.81	4.650	37.17	7.717	3.23	10.78	0.81
1.600	0.81	4.667	37.17	7.733	3.23	10.80	0.81
1.617	0.81	4.683	37.17	7.750	3.23	10.82	0.81
1.633	0.81	4.700	37.17	7.767	3.23	10.83	0.81
1.650	0.81	4.717	37.17	7.783	3.23	10.85	0.81
1.667	0.81	4.733	37.17	7.800	3.23	10.87	0.81
1.683	0.81	4.750	37.17	7.817	3.23	10.88	0.81
1.700	0.81	4.767	37.17	7.833	3.23	10.90	0.81
1.717	0.81	4.783	37.17	7.850	3.23	10.92	0.81
1.733	0.81	4.800	37.17	7.867	3.23	10.93	0.81
1.750	0.81	4.817	37.17	7.883	3.23	10.95	0.81
1.767	0.81	4.833	37.17	7.900	3.23	10.97	0.81
1.783	0.81	4.850	37.17	7.917	3.23	10.98	0.81
1.800	0.81	4.867	37.17	7.933	3.23	11.00	0.81
1.817	0.81	4.883	37.17	7.950	3.23	11.02	0.81
1.833	0.81	4.900	37.17	7.967	3.23	11.03	0.81
1.850	0.81	4.917	37.17	7.983	3.23	11.05	0.81
1.867	0.81	4.933	37.17	8.000	3.23	11.07	0.81
1.883	0.81	4.950	37.17	8.017	3.23	11.08	0.81
1.900	0.81	4.967	37.17	8.033	3.23	11.10	0.81
1.917	0.81	4.983	37.17	8.050	3.23	11.12	0.81
1.933	0.81	5.000	37.17	8.067	3.23	11.13	0.81
1.950	0.81	5.017	37.17	8.083	3.23	11.15	0.81
1.967	0.81	5.033	37.17	8.100	3.23	11.17	0.81
1.983	0.81	5.050	37.17	8.117	3.23	11.18	0.81
2.000	0.81	5.067	37.17	8.133	3.23	11.20	0.81
2.017	0.81	5.083	37.17	8.150	3.23	11.22	0.81
2.033	0.81	5.100	37.17	8.167	3.23	11.23	0.81
2.050	0.81	5.117	37.17	8.183	3.23	11.25	0.81
2.067	0.81	5.133	37.17	8.200	3.23	11.27	0.81
2.083	0.81	5.150	37.17	8.217	3.23	11.28	0.81
2.100	0.81	5.167	37.17	8.233	3.23	11.30	0.81
2.117	0.81	5.183	37.17	8.250	3.23	11.32	0.81
2.133	0.81	5.200	37.17	8.267	1.62	11.33	0.81
2.150	0.81	5.217	37.17	8.283	1.62	11.35	0.81
2.167	0.81	5.233	37.17	8.300	1.62	11.37	0.81
2.183	0.81	5.250	37.15	8.317	1.62	11.38	0.81
2.200	0.81	5.267	10.50	8.333	1.62	11.40	0.81
2.217	0.81	5.283	10.50	8.350	1.62	11.42	0.81
2.233	0.81	5.300	10.50	8.367	1.62	11.43	0.81
2.250	0.81	5.317	10.50	8.383	1.62	11.45	0.81
2.267	4.85	5.333	10.50	8.400	1.62	11.47	0.81
2.283	4.85	5.350	10.50	8.417	1.62	11.48	0.81
2.300	4.85	5.367	10.50	8.433	1.62	11.50	0.81
2.317	4.85	5.383	10.50	8.450	1.62	11.52	0.81
2.333	4.85	5.400	10.50	8.467	1.62	11.53	0.81
2.350	4.85	5.417	10.50	8.483	1.62	11.55	0.81
2.367	4.85	5.433	10.50	8.500	1.62	11.57	0.81
2.383	4.85	5.450	10.50	8.517	1.62	11.58	0.81
2.400	4.85	5.467	10.50	8.533	1.62	11.60	0.81
2.417	4.85	5.483	10.50	8.550	1.62	11.62	0.81
2.433	4.85	5.500	10.50	8.567	1.62	11.63	0.81
2.450	4.85	5.517	10.50	8.583	1.62	11.65	0.81
2.467	4.85	5.533	10.50	8.600	1.62	11.67	0.81
2.483	4.85	5.550	10.50	8.617	1.62	11.68	0.81
2.500	4.85	5.567	10.50	8.633	1.62	11.70	0.81
2.517	4.85	5.583	10.50	8.650	1.62	11.72	0.81
2.533	4.85	5.600	10.50	8.667	1.62	11.73	0.81
2.550	4.85	5.617	10.50	8.683	1.62	11.75	0.81
2.567	4.85	5.633	10.50	8.700	1.62	11.77	0.81
2.583	4.85	5.650	10.50	8.717	1.62	11.78	0.81
2.600	4.85	5.667	10.50	8.733	1.62	11.80	0.81
2.617	4.85	5.683	10.50	8.750	1.62	11.82	0.81
2.633	4.85	5.700	10.50	8.767	1.62	11.83	0.81
2.650	4.85	5.717	10.50	8.783	1.62	11.85	0.81
2.667	4.85	5.733	10.50	8.800	1.62	11.87	0.81
2.683	4.85	5.750	10.50	8.817	1.62	11.88	0.81
2.700	4.85	5.767	10.50	8.833	1.62	11.90	0.81
2.717	4.85	5.783	10.50	8.850	1.62	11.92	0.81
2.733	4.85	5.800	10.50	8.867	1.62	11.93	0.81
2.750	4.85	5.817	10.50	8.883	1.62	11.95	0.81
2.767	4.85	5.833	10.50	8.900	1.62	11.97	0.81
2.783	4.85	5.850	10.50	8.917	1.62	11.98	0.81
2.800	4.85	5.867	10.50	8.933	1.62	12.00	0.81
2.817	4.85	5.883	10.50	8.950	1.62	12.02	0.81
2.833	4.85	5.900	10.50	8.967	1.62	12.03	0.81
2.850	4.85	5.917	10.50	8.983	1.62	12.05	0.81
2.867	4.85	5.933	10.50	9.000	1.62	12.07	0.81
2.883	4.85	5.950	10.50	9.017	1.62	12.08	0.81
2.900	4.85	5.967	10.50	9.033	1.62	12.10	0.81
2.917	4.85	5.983	10.50	9.050	1.62	12.12	0.81
2.933	4.85	6.000	10.50	9.067	1.62	12.13	0.81
2.950	4.85	6.017	10.50	9.083	1.62	12.15	0.81
2.967	4.85	6.033	10.50	9.100	1.62	12.17	0.81
2.983	4.85	6.050	10.50	9.117	1.62	12.18	0.81
3.000	4.85	6.067	10.50	9.133	1.62	12.20	0.81

3.017	4.85	6.083	10.50	9.150	1.62	12.22	0.81
3.033	4.85	6.100	10.50	9.167	1.62	12.23	0.81
3.050	4.85	6.117	10.50	9.183	1.62	12.25	0.81
3.067	4.85	6.133	10.50	9.200	1.62		

			TOTALS
Max.Eff.Inten.(mm/hr)=	37.17	29.32	
over (min)	5.00	8.00	
Storage Coeff. (min)=	5.13 (ii)	7.66 (ii)	
Unit Hyd. Tpeak (min)=	5.00	8.00	
Unit Hyd. peak (cms)=	0.22	0.15	
PEAK FLOW (cms)=	0.42	0.00	0.421 (iii)
TIME TO PEAK (hrs)=	5.23	5.25	5.25
RUNOFF VOLUME (mm)=	79.81	50.68	79.53
TOTAL RAINFALL (mm)=	80.82	80.82	80.82
RUNOFF COEFFICIENT =	0.99	0.63	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7630)	OVERFLOW IS OFF
IN= 2---> OUT= 1	
DT= 1.0 min	

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0826	0.2320
0.0347	0.1170	0.0967	0.2609
0.0534	0.1580	0.1090	0.2940
0.0655	0.1890	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7629)	4.090	0.421	5.25	79.53
OUTFLOW: ID= 1 (7630)	4.090	0.078	6.40	75.95

PEAK FLOW REDUCTION [Qout/Qin](%)= 18.63
TIME SHIFT OF PEAK FLOW (min)= 69.00
MAXIMUM STORAGE USED (ha.m.)= 0.2216

CALIB	
STANDHYD (7631)	Area (ha)= 3.91
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.87	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	161.45	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	4.85	6.150	10.50	9.22	1.62
0.033	0.00	3.100	4.85	6.167	10.50	9.23	1.62
0.050	0.00	3.117	4.85	6.183	10.50	9.25	1.62
0.067	0.00	3.133	4.85	6.200	10.50	9.27	0.81
0.083	0.00	3.150	4.85	6.217	10.50	9.28	0.81
0.100	0.00	3.167	4.85	6.233	10.50	9.30	0.81
0.117	0.00	3.183	4.85	6.250	10.49	9.32	0.81
0.133	0.00	3.200	4.85	6.267	5.66	9.33	0.81
0.150	0.00	3.217	4.85	6.283	5.66	9.35	0.81
0.167	0.00	3.233	4.85	6.300	5.66	9.37	0.81
0.183	0.00	3.250	4.85	6.317	5.66	9.38	0.81
0.200	0.00	3.267	13.74	6.333	5.66	9.40	0.81
0.217	0.00	3.283	13.74	6.350	5.66	9.42	0.81
0.233	0.00	3.300	13.74	6.367	5.66	9.43	0.81
0.250	0.00	3.317	13.74	6.383	5.66	9.45	0.81
0.267	0.81	3.333	13.74	6.400	5.66	9.47	0.81
0.283	0.81	3.350	13.74	6.417	5.66	9.48	0.81
0.300	0.81	3.367	13.74	6.433	5.66	9.50	0.81
0.317	0.81	3.383	13.74	6.450	5.66	9.52	0.81
0.333	0.81	3.400	13.74	6.467	5.66	9.53	0.81
0.350	0.81	3.417	13.74	6.483	5.66	9.55	0.81
0.367	0.81	3.433	13.74	6.500	5.66	9.57	0.81
0.383	0.81	3.450	13.74	6.517	5.66	9.58	0.81
0.400	0.81	3.467	13.74	6.533	5.66	9.60	0.81
0.417	0.81	3.483	13.74	6.550	5.66	9.62	0.81
0.433	0.81	3.500	13.74	6.567	5.66	9.63	0.81
0.450	0.81	3.517	13.74	6.583	5.66	9.65	0.81
0.467	0.81	3.533	13.74	6.600	5.66	9.67	0.81
0.483	0.81	3.550	13.74	6.617	5.66	9.68	0.81
0.500	0.81	3.567	13.74	6.633	5.66	9.70	0.81
0.517	0.81	3.583	13.74	6.650	5.66	9.72	0.81
0.533	0.81	3.600	13.74	6.667	5.66	9.73	0.81
0.550	0.81	3.617	13.74	6.683	5.66	9.75	0.81
0.567	0.81	3.633	13.74	6.700	5.66	9.77	0.81
0.583	0.81	3.650	13.74	6.717	5.66	9.78	0.81
0.600	0.81	3.667	13.74	6.733	5.66	9.80	0.81
0.617	0.81	3.683	13.74	6.750	5.66	9.82	0.81
0.633	0.81	3.700	13.74	6.767	5.66	9.83	0.81
0.650	0.81	3.717	13.74	6.783	5.66	9.85	0.81
0.667	0.81	3.733	13.74	6.800	5.66	9.87	0.81
0.683	0.81	3.750	13.74	6.817	5.66	9.88	0.81
0.700	0.81	3.767	13.74	6.833	5.66	9.90	0.81
0.717	0.81	3.783	13.74	6.850	5.66	9.92	0.81
0.733	0.81	3.800	13.74	6.867	5.66	9.93	0.81
0.750	0.81	3.817	13.74	6.883	5.66	9.95	0.81
0.767	0.81	3.833	13.74	6.900	5.66	9.97	0.81
0.783	0.81	3.850	13.74	6.917	5.66	9.98	0.81
0.800	0.81	3.867	13.74	6.933	5.66	10.00	0.81
0.817	0.81	3.883	13.74	6.950	5.66	10.02	0.81
0.833	0.81	3.900	13.74	6.967	5.66	10.03	0.81
0.850	0.81	3.917	13.74	6.983	5.66	10.05	0.81
0.867	0.81	3.933	13.74	7.000	5.66	10.07	0.81
0.883	0.81	3.950	13.74	7.017	5.66	10.08	0.81
0.900	0.81	3.967	13.74	7.033	5.66	10.10	0.81
0.917	0.81	3.983	13.74	7.050	5.66	10.12	0.81
0.933	0.81	4.000	13.74	7.067	5.66	10.13	0.81
0.950	0.81	4.017	13.74	7.083	5.66	10.15	0.81
0.967	0.81	4.033	13.74	7.100	5.66	10.17	0.81
0.983	0.81	4.050	13.74	7.117	5.66	10.18	0.81
1.000	0.81	4.067	13.74	7.133	5.66	10.20	0.81
1.017	0.81	4.083	13.74	7.150	5.66	10.22	0.81
1.033	0.81	4.100	13.74	7.167	5.66	10.23	0.81
1.050	0.81	4.117	13.74	7.183	5.66	10.25	0.81
1.067	0.81	4.133	13.74	7.200	5.66	10.27	0.81
1.083	0.81	4.150	13.74	7.217	5.66	10.28	0.81
1.100	0.81	4.167	13.74	7.233	5.66	10.30	0.81
1.117	0.81	4.183	13.74	7.250	5.65	10.32	0.81
1.133	0.81	4.200	13.74	7.267	3.23	10.33	0.81
1.150	0.81	4.217	13.74	7.283	3.23	10.35	0.81
1.167	0.81	4.233	13.74	7.300	3.23	10.37	0.81
1.183	0.81	4.250	13.74	7.317	3.23	10.38	0.81
1.200	0.81	4.267	37.17	7.333	3.23	10.40	0.81
1.217	0.81	4.283	37.17	7.350	3.23	10.42	0.81
1.233	0.81	4.300	37.17	7.367	3.23	10.43	0.81
1.250	0.81	4.317	37.17	7.383	3.23	10.45	0.81
1.267	0.81	4.333	37.17	7.400	3.23	10.47	0.81
1.283	0.81	4.350	37.17	7.417	3.23	10.48	0.81
1.300	0.81	4.367	37.17	7.433	3.23	10.50	0.81
1.317	0.81	4.383	37.17	7.450	3.23	10.52	0.81
1.333	0.81	4.400	37.17	7.467	3.23	10.53	0.81
1.350	0.81	4.417	37.17	7.483	3.23	10.55	0.81
1.367	0.81	4.433	37.17	7.500	3.23	10.57	0.81
1.383	0.81	4.450	37.17	7.517	3.23	10.58	0.81
1.400	0.81	4.467	37.17	7.533	3.23	10.60	0.81
1.417	0.81	4.483	37.17	7.550	3.23	10.62	0.81
1.433	0.81	4.500	37.17	7.567	3.23	10.63	0.81
1.450	0.81	4.517	37.17	7.583	3.23	10.65	0.81
1.467	0.81	4.533	37.17	7.600	3.23	10.67	0.81
1.483	0.81	4.550	37.17	7.617	3.23	10.68	0.81

1.500	0.81	4.567	37.17	7.633	3.23	10.70	0.81
1.517	0.81	4.583	37.17	7.650	3.23	10.72	0.81
1.533	0.81	4.600	37.17	7.667	3.23	10.73	0.81
1.550	0.81	4.617	37.17	7.683	3.23	10.75	0.81
1.567	0.81	4.633	37.17	7.700	3.23	10.77	0.81
1.583	0.81	4.650	37.17	7.717	3.23	10.78	0.81
1.600	0.81	4.667	37.17	7.733	3.23	10.80	0.81
1.617	0.81	4.683	37.17	7.750	3.23	10.82	0.81
1.633	0.81	4.700	37.17	7.767	3.23	10.83	0.81
1.650	0.81	4.717	37.17	7.783	3.23	10.85	0.81
1.667	0.81	4.733	37.17	7.800	3.23	10.87	0.81
1.683	0.81	4.750	37.17	7.817	3.23	10.88	0.81
1.700	0.81	4.767	37.17	7.833	3.23	10.90	0.81
1.717	0.81	4.783	37.17	7.850	3.23	10.92	0.81
1.733	0.81	4.800	37.17	7.867	3.23	10.93	0.81
1.750	0.81	4.817	37.17	7.883	3.23	10.95	0.81
1.767	0.81	4.833	37.17	7.900	3.23	10.97	0.81
1.783	0.81	4.850	37.17	7.917	3.23	10.98	0.81
1.800	0.81	4.867	37.17	7.933	3.23	11.00	0.81
1.817	0.81	4.883	37.17	7.950	3.23	11.02	0.81
1.833	0.81	4.900	37.17	7.967	3.23	11.03	0.81
1.850	0.81	4.917	37.17	7.983	3.23	11.05	0.81
1.867	0.81	4.933	37.17	8.000	3.23	11.07	0.81
1.883	0.81	4.950	37.17	8.017	3.23	11.08	0.81
1.900	0.81	4.967	37.17	8.033	3.23	11.10	0.81
1.917	0.81	4.983	37.17	8.050	3.23	11.12	0.81
1.933	0.81	5.000	37.17	8.067	3.23	11.13	0.81
1.950	0.81	5.017	37.17	8.083	3.23	11.15	0.81
1.967	0.81	5.033	37.17	8.100	3.23	11.17	0.81
1.983	0.81	5.050	37.17	8.117	3.23	11.18	0.81
2.000	0.81	5.067	37.17	8.133	3.23	11.20	0.81
2.017	0.81	5.083	37.17	8.150	3.23	11.22	0.81
2.033	0.81	5.100	37.17	8.167	3.23	11.23	0.81
2.050	0.81	5.117	37.17	8.183	3.23	11.25	0.81
2.067	0.81	5.133	37.17	8.200	3.23	11.27	0.81
2.083	0.81	5.150	37.17	8.217	3.23	11.28	0.81
2.100	0.81	5.167	37.17	8.233	3.23	11.30	0.81
2.117	0.81	5.183	37.17	8.250	3.23	11.32	0.81
2.133	0.81	5.200	37.17	8.267	1.62	11.33	0.81
2.150	0.81	5.217	37.17	8.283	1.62	11.35	0.81
2.167	0.81	5.233	37.17	8.300	1.62	11.37	0.81
2.183	0.81	5.250	37.15	8.317	1.62	11.38	0.81
2.200	0.81	5.267	10.50	8.333	1.62	11.40	0.81
2.217	0.81	5.283	10.50	8.350	1.62	11.42	0.81
2.233	0.81	5.300	10.50	8.367	1.62	11.43	0.81
2.250	0.81	5.317	10.50	8.383	1.62	11.45	0.81
2.267	4.85	5.333	10.50	8.400	1.62	11.47	0.81
2.283	4.85	5.350	10.50	8.417	1.62	11.48	0.81
2.300	4.85	5.367	10.50	8.433	1.62	11.50	0.81
2.317	4.85	5.383	10.50	8.450	1.62	11.52	0.81
2.333	4.85	5.400	10.50	8.467	1.62	11.53	0.81
2.350	4.85	5.417	10.50	8.483	1.62	11.55	0.81
2.367	4.85	5.433	10.50	8.500	1.62	11.57	0.81
2.383	4.85	5.450	10.50	8.517	1.62	11.58	0.81
2.400	4.85	5.467	10.50	8.533	1.62	11.60	0.81
2.417	4.85	5.483	10.50	8.550	1.62	11.62	0.81
2.433	4.85	5.500	10.50	8.567	1.62	11.63	0.81
2.450	4.85	5.517	10.50	8.583	1.62	11.65	0.81
2.467	4.85	5.533	10.50	8.600	1.62	11.67	0.81
2.483	4.85	5.550	10.50	8.617	1.62	11.68	0.81
2.500	4.85	5.567	10.50	8.633	1.62	11.70	0.81
2.517	4.85	5.583	10.50	8.650	1.62	11.72	0.81
2.533	4.85	5.600	10.50	8.667	1.62	11.73	0.81
2.550	4.85	5.617	10.50	8.683	1.62	11.75	0.81
2.567	4.85	5.633	10.50	8.700	1.62	11.77	0.81
2.583	4.85	5.650	10.50	8.717	1.62	11.78	0.81
2.600	4.85	5.667	10.50	8.733	1.62	11.80	0.81
2.617	4.85	5.683	10.50	8.750	1.62	11.82	0.81
2.633	4.85	5.700	10.50	8.767	1.62	11.83	0.81
2.650	4.85	5.717	10.50	8.783	1.62	11.85	0.81
2.667	4.85	5.733	10.50	8.800	1.62	11.87	0.81
2.683	4.85	5.750	10.50	8.817	1.62	11.88	0.81
2.700	4.85	5.767	10.50	8.833	1.62	11.90	0.81
2.717	4.85	5.783	10.50	8.850	1.62	11.92	0.81
2.733	4.85	5.800	10.50	8.867	1.62	11.93	0.81
2.750	4.85	5.817	10.50	8.883	1.62	11.95	0.81
2.767	4.85	5.833	10.50	8.900	1.62	11.97	0.81
2.783	4.85	5.850	10.50	8.917	1.62	11.98	0.81
2.800	4.85	5.867	10.50	8.933	1.62	12.00	0.81
2.817	4.85	5.883	10.50	8.950	1.62	12.02	0.81
2.833	4.85	5.900	10.50	8.967	1.62	12.03	0.81
2.850	4.85	5.917	10.50	8.983	1.62	12.05	0.81
2.867	4.85	5.933	10.50	9.000	1.62	12.07	0.81
2.883	4.85	5.950	10.50	9.017	1.62	12.08	0.81
2.900	4.85	5.967	10.50	9.033	1.62	12.10	0.81
2.917	4.85	5.983	10.50	9.050	1.62	12.12	0.81
2.933	4.85	6.000	10.50	9.067	1.62	12.13	0.81
2.950	4.85	6.017	10.50	9.083	1.62	12.15	0.81
2.967	4.85	6.033	10.50	9.100	1.62	12.17	0.81
2.983	4.85	6.050	10.50	9.117	1.62	12.18	0.81
3.000	4.85	6.067	10.50	9.133	1.62	12.20	0.81
3.017	4.85	6.083	10.50	9.150	1.62	12.22	0.81
3.033	4.85	6.100	10.50	9.167	1.62	12.23	0.81
3.050	4.85	6.117	10.50	9.183	1.62	12.25	0.81
3.067	4.85	6.133	10.50	9.200	1.62		

Max.Eff.Inten.(mm/hr)=	37.17	29.32	
over (min)	5.00	8.00	
Storage Coeff. (min)=	5.06 (ii)	7.59 (ii)	
Unit Hyd. Tpeak (min)=	5.00	8.00	
Unit Hyd. peak (cms)=	0.22	0.15	
			TOTALS
PEAK FLOW (cms)=	0.40	0.00	0.403 (iii)
TIME TO PEAK (hrs)=	5.23	5.25	5.25
RUNOFF VOLUME (mm)=	79.82	50.68	79.53
TOTAL RAINFALL (mm)=	80.82	80.82	80.82
RUNOFF COEFFICIENT =	0.99	0.63	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7632) | IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0792	0.2220
	0.0333	0.1130	0.0928	0.2500
	0.0512	0.1510	0.1046	0.2810
	0.0629	0.1810	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7631)	3.910	0.403	5.25	79.53
OUTFLOW: ID= 1 (7632)	3.910	0.075	6.40	75.90

PEAK FLOW REDUCTION [Qout/Qin](%)= 18.66
TIME SHIFT OF PEAK FLOW (min)= 69.00
MAXIMUM STORAGE USED (ha.m.)= 0.2119

CALIB | STANDHYD (7641) | ID= 1 DT= 1.0 min	Area (ha)= 2.21 Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00		
		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.19	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	121.38	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	4.85	6.150	10.50	9.22	1.62
0.033	0.00	3.100	4.85	6.167	10.50	9.23	1.62
0.050	0.00	3.117	4.85	6.183	10.50	9.25	1.62
0.067	0.00	3.133	4.85	6.200	10.50	9.27	0.81
0.083	0.00	3.150	4.85	6.217	10.50	9.28	0.81
0.100	0.00	3.167	4.85	6.233	10.50	9.30	0.81
0.117	0.00	3.183	4.85	6.250	10.49	9.32	0.81
0.133	0.00	3.200	4.85	6.267	5.66	9.33	0.81
0.150	0.00	3.217	4.85	6.283	5.66	9.35	0.81
0.167	0.00	3.233	4.85	6.300	5.66	9.37	0.81
0.183	0.00	3.250	4.85	6.317	5.66	9.38	0.81
0.200	0.00	3.267	13.74	6.333	5.66	9.40	0.81
0.217	0.00	3.283	13.74	6.350	5.66	9.42	0.81
0.233	0.00	3.300	13.74	6.367	5.66	9.43	0.81
0.250	0.00	3.317	13.74	6.383	5.66	9.45	0.81
0.267	0.81	3.333	13.74	6.400	5.66	9.47	0.81
0.283	0.81	3.350	13.74	6.417	5.66	9.48	0.81
0.300	0.81	3.367	13.74	6.433	5.66	9.50	0.81
0.317	0.81	3.383	13.74	6.450	5.66	9.52	0.81
0.333	0.81	3.400	13.74	6.467	5.66	9.53	0.81
0.350	0.81	3.417	13.74	6.483	5.66	9.55	0.81
0.367	0.81	3.433	13.74	6.500	5.66	9.57	0.81
0.383	0.81	3.450	13.74	6.517	5.66	9.58	0.81
0.400	0.81	3.467	13.74	6.533	5.66	9.60	0.81
0.417	0.81	3.483	13.74	6.550	5.66	9.62	0.81
0.433	0.81	3.500	13.74	6.567	5.66	9.63	0.81
0.450	0.81	3.517	13.74	6.583	5.66	9.65	0.81
0.467	0.81	3.533	13.74	6.600	5.66	9.67	0.81
0.483	0.81	3.550	13.74	6.617	5.66	9.68	0.81
0.500	0.81	3.567	13.74	6.633	5.66	9.70	0.81
0.517	0.81	3.583	13.74	6.650	5.66	9.72	0.81
0.533	0.81	3.600	13.74	6.667	5.66	9.73	0.81
0.550	0.81	3.617	13.74	6.683	5.66	9.75	0.81
0.567	0.81	3.633	13.74	6.700	5.66	9.77	0.81
0.583	0.81	3.650	13.74	6.717	5.66	9.78	0.81
0.600	0.81	3.667	13.74	6.733	5.66	9.80	0.81
0.617	0.81	3.683	13.74	6.750	5.66	9.82	0.81
0.633	0.81	3.700	13.74	6.767	5.66	9.83	0.81
0.650	0.81	3.717	13.74	6.783	5.66	9.85	0.81
0.667	0.81	3.733	13.74	6.800	5.66	9.87	0.81
0.683	0.81	3.750	13.74	6.817	5.66	9.88	0.81
0.700	0.81	3.767	13.74	6.833	5.66	9.90	0.81
0.717	0.81	3.783	13.74	6.850	5.66	9.92	0.81
0.733	0.81	3.800	13.74	6.867	5.66	9.93	0.81
0.750	0.81	3.817	13.74	6.883	5.66	9.95	0.81
0.767	0.81	3.833	13.74	6.900	5.66	9.97	0.81
0.783	0.81	3.850	13.74	6.917	5.66	9.98	0.81
0.800	0.81	3.867	13.74	6.933	5.66	10.00	0.81
0.817	0.81	3.883	13.74	6.950	5.66	10.02	0.81
0.833	0.81	3.900	13.74	6.967	5.66	10.03	0.81
0.850	0.81	3.917	13.74	6.983	5.66	10.05	0.81
0.867	0.81	3.933	13.74	7.000	5.66	10.07	0.81
0.883	0.81	3.950	13.74	7.017	5.66	10.08	0.81
0.900	0.81	3.967	13.74	7.033	5.66	10.10	0.81
0.917	0.81	3.983	13.74	7.050	5.66	10.12	0.81
0.933	0.81	4.000	13.74	7.067	5.66	10.13	0.81
0.950	0.81	4.017	13.74	7.083	5.66	10.15	0.81
0.967	0.81	4.033	13.74	7.100	5.66	10.17	0.81
0.983	0.81	4.050	13.74	7.117	5.66	10.18	0.81
1.000	0.81	4.067	13.74	7.133	5.66	10.20	0.81
1.017	0.81	4.083	13.74	7.150	5.66	10.22	0.81
1.033	0.81	4.100	13.74	7.167	5.66	10.23	0.81
1.050	0.81	4.117	13.74	7.183	5.66	10.25	0.81
1.067	0.81	4.133	13.74	7.200	5.66	10.27	0.81
1.083	0.81	4.150	13.74	7.217	5.66	10.28	0.81
1.100	0.81	4.167	13.74	7.233	5.66	10.30	0.81
1.117	0.81	4.183	13.74	7.250	5.65	10.32	0.81
1.133	0.81	4.200	13.74	7.267	3.23	10.33	0.81
1.150	0.81	4.217	13.74	7.283	3.23	10.35	0.81
1.167	0.81	4.233	13.74	7.300	3.23	10.37	0.81
1.183	0.81	4.250	13.74	7.317	3.23	10.38	0.81
1.200	0.81	4.267	37.17	7.333	3.23	10.40	0.81
1.217	0.81	4.283	37.17	7.350	3.23	10.42	0.81
1.233	0.81	4.300	37.17	7.367	3.23	10.43	0.81
1.250	0.81	4.317	37.17	7.383	3.23	10.45	0.81
1.267	0.81	4.333	37.17	7.400	3.23	10.47	0.81
1.283	0.81	4.350	37.17	7.417	3.23	10.48	0.81
1.300	0.81	4.367	37.17	7.433	3.23	10.50	0.81
1.317	0.81	4.383	37.17	7.450	3.23	10.52	0.81
1.333	0.81	4.400	37.17	7.467	3.23	10.53	0.81
1.350	0.81	4.417	37.17	7.483	3.23	10.55	0.81
1.367	0.81	4.433	37.17	7.500	3.23	10.57	0.81
1.383	0.81	4.450	37.17	7.517	3.23	10.58	0.81
1.400	0.81	4.467	37.17	7.533	3.23	10.60	0.81
1.417	0.81	4.483	37.17	7.550	3.23	10.62	0.81
1.433	0.81	4.500	37.17	7.567	3.23	10.63	0.81
1.450	0.81	4.517	37.17	7.583	3.23	10.65	0.81
1.467	0.81	4.533	37.17	7.600	3.23	10.67	0.81
1.483	0.81	4.550	37.17	7.617	3.23	10.68	0.81
1.500	0.81	4.567	37.17	7.633	3.23	10.70	0.81
1.517	0.81	4.583	37.17	7.650	3.23	10.72	0.81
1.533	0.81	4.600	37.17	7.667	3.23	10.73	0.81
1.550	0.81	4.617	37.17	7.683	3.23	10.75	0.81
1.567	0.81	4.633	37.17	7.700	3.23	10.77	0.81
1.583	0.81	4.650	37.17	7.717	3.23	10.78	0.81
1.600	0.81	4.667	37.17	7.733	3.23	10.80	0.81
1.617	0.81	4.683	37.17	7.750	3.23	10.82	0.81
1.633	0.81	4.700	37.17	7.767	3.23	10.83	0.81
1.650	0.81	4.717	37.17	7.783	3.23	10.85	0.81
1.667	0.81	4.733	37.17	7.800	3.23	10.87	0.81
1.683	0.81	4.750	37.17	7.817	3.23	10.88	0.81
1.700	0.81	4.767	37.17	7.833	3.23	10.90	0.81
1.717	0.81	4.783	37.17	7.850	3.23	10.92	0.81
1.733	0.81	4.800	37.17	7.867	3.23	10.93	0.81
1.750	0.81	4.817	37.17	7.883	3.23	10.95	0.81
1.767	0.81	4.833	37.17	7.900	3.23	10.97	0.81
1.783	0.81	4.850	37.17	7.917	3.23	10.98	0.81
1.800	0.81	4.867	37.17	7.933	3.23	11.00	0.81
1.817	0.81	4.883	37.17	7.950	3.23	11.02	0.81
1.833	0.81	4.900	37.17	7.967	3.23	11.03	0.81
1.850	0.81	4.917	37.17	7.983	3.23	11.05	0.81
1.867	0.81	4.933	37.17	8.000	3.23	11.07	0.81
1.883	0.81	4.950	37.17	8.017	3.23	11.08	0.81
1.900	0.81	4.967	37.17	8.033	3.23	11.10	0.81
1.917	0.81	4.983	37.17	8.050	3.23	11.12	0.81
1.933	0.81	5.000	37.17	8.067	3.23	11.13	0.81
1.950	0.81	5.017	37.17	8.083	3.23	11.15	0.81
1.967	0.81	5.033	37.17	8.100	3.23	11.17	0.81
1.983	0.81	5.050	37.17	8.117	3.23	11.18	0.81
2.000	0.81	5.067	37.17	8.133	3.23	11.20	0.81
2.017	0.81	5.083	37.17	8.150	3.23	11.22	0.81
2.033	0.81	5.100	37.17	8.167	3.23	11.23	0.81
2.050	0.81	5.117	37.17	8.183	3.23	11.25	0.81
2.067	0.81	5.133	37.17	8.200	3.23	11.27	0.81
2.083	0.81	5.150	37.17	8.217	3.23	11.28	0.81
2.100	0.81	5.167	37.17	8.233	3.23	11.30	0.81
2.117	0.81	5.183	37.17	8.250	3.23	11.32	0.81
2.133	0.81	5.200	37.17	8.267	1.62	11.33	0.81
2.150	0.81	5.217	37.17	8.283	1.62	11.35	0.81
2.167	0.81	5.233	37.17	8.300	1.62	11.37	0.81
2.183	0.81	5.250	37.15	8.317	1.62	11.38	0.81
2.200	0.81	5.267	10.50	8.333	1.62	11.40	0.81
2.217	0.81	5.283	10.50	8.350	1.62	11.42	0.81
2.233	0.81	5.300	10.50	8.367	1.62	11.43	0.81
2.250	0.81	5.317	10.50	8.383	1.62	11.45	0.81
2.267	4.85	5.333	10.50	8.400	1.62	11.47	0.81
2.283	4.85	5.350	10.50	8.417	1.62	11.48	0.81
2.300	4.85	5.367	10.50	8.433	1.62	11.50	0.81
2.317	4.85	5.383	10.50	8.450	1.62	11.52	0.81
2.333	4.85	5.400	10.50	8.467	1.62	11.53	0.81
2.350	4.85	5.417	10.50	8.483	1.62	11.55	0.81
2.367	4.85	5.433	10.50	8.500	1.62	11.57	0.81
2.383	4.85	5.450	10.50	8.517	1.62	11.58	0.81
2.400	4.85	5.467	10.50	8.533	1.62	11.60	0.81
2.417	4.85	5.483	10.50	8.550	1.62	11.62	0.81
2.433	4.85	5.500	10.50	8.567	1.62	11.63	0.81
2.450	4.85	5.517	10.50	8.583	1.62	11.65	0.81
2.467	4.85	5.533	10.50	8.600	1.62	11.67	0.81
2.483	4.85	5.550	10.50	8.617	1.62	11.68	0.81
2.500	4.85	5.567	10.50	8.633	1.62	11.70	0.81

2.517	4.85	5.583	10.50	8.650	1.62	11.72	0.81
2.533	4.85	5.600	10.50	8.667	1.62	11.73	0.81
2.550	4.85	5.617	10.50	8.683	1.62	11.75	0.81
2.567	4.85	5.633	10.50	8.700	1.62	11.77	0.81
2.583	4.85	5.650	10.50	8.717	1.62	11.78	0.81
2.600	4.85	5.667	10.50	8.733	1.62	11.80	0.81
2.617	4.85	5.683	10.50	8.750	1.62	11.82	0.81
2.633	4.85	5.700	10.50	8.767	1.62	11.83	0.81
2.650	4.85	5.717	10.50	8.783	1.62	11.85	0.81
2.667	4.85	5.733	10.50	8.800	1.62	11.87	0.81
2.683	4.85	5.750	10.50	8.817	1.62	11.88	0.81
2.700	4.85	5.767	10.50	8.833	1.62	11.90	0.81
2.717	4.85	5.783	10.50	8.850	1.62	11.92	0.81
2.733	4.85	5.800	10.50	8.867	1.62	11.93	0.81
2.750	4.85	5.817	10.50	8.883	1.62	11.95	0.81
2.767	4.85	5.833	10.50	8.900	1.62	11.97	0.81
2.783	4.85	5.850	10.50	8.917	1.62	11.98	0.81
2.800	4.85	5.867	10.50	8.933	1.62	12.00	0.81
2.817	4.85	5.883	10.50	8.950	1.62	12.02	0.81
2.833	4.85	5.900	10.50	8.967	1.62	12.03	0.81
2.850	4.85	5.917	10.50	8.983	1.62	12.05	0.81
2.867	4.85	5.933	10.50	9.000	1.62	12.07	0.81
2.883	4.85	5.950	10.50	9.017	1.62	12.08	0.81
2.900	4.85	5.967	10.50	9.033	1.62	12.10	0.81
2.917	4.85	5.983	10.50	9.050	1.62	12.12	0.81
2.933	4.85	6.000	10.50	9.067	1.62	12.13	0.81
2.950	4.85	6.017	10.50	9.083	1.62	12.15	0.81
2.967	4.85	6.033	10.50	9.100	1.62	12.17	0.81
2.983	4.85	6.050	10.50	9.117	1.62	12.18	0.81
3.000	4.85	6.067	10.50	9.133	1.62	12.20	0.81
3.017	4.85	6.083	10.50	9.150	1.62	12.22	0.81
3.033	4.85	6.100	10.50	9.167	1.62	12.23	0.81
3.050	4.85	6.117	10.50	9.183	1.62	12.25	0.81
3.067	4.85	6.133	10.50	9.200	1.62		

Max.Eff.Inten.(mm/hr)=	37.17	29.32	
over (min)	5.00	7.00	
Storage Coeff. (min)=	4.26 (ii)	6.79 (ii)	
Unit Hyd. Tpeak (min)=	5.00	7.00	
Unit Hyd. peak (cms)=	0.25	0.16	
			TOTALS
PEAK FLOW (cms)=	0.23	0.00	0.228 (iii)
TIME TO PEAK (hrs)=	5.23	5.25	5.25
RUNOFF VOLUME (mm)=	79.82	50.68	79.53
TOTAL RAINFALL (mm)=	80.82	80.82	80.82
RUNOFF COEFFICIENT =	0.99	0.63	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7642)	OVERFLOW IS OFF
IN= 2---> OUT= 1	
DT= 1.0 min	

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0470	0.1250
0.0197	0.0630	0.0551	0.1410
0.0304	0.0850	0.0620	0.1580
0.0373	0.1020	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7641)	2.210	0.228	5.25	79.53
OUTFLOW: ID= 1 (7642)	2.210	0.044	6.37	76.49

PEAK FLOW REDUCTION [Qout/Qin](%)= 19.44
TIME SHIFT OF PEAK FLOW (min)= 67.00
MAXIMUM STORAGE USED (ha.m.)= 0.1185

CALIB	
STANDHYD (7643)	Area (ha)= 2.02
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.00	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	116.05	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	4.85	6.150	10.50	9.22	1.62
0.033	0.00	3.100	4.85	6.167	10.50	9.23	1.62
0.050	0.00	3.117	4.85	6.183	10.50	9.25	1.62
0.067	0.00	3.133	4.85	6.200	10.50	9.27	0.81
0.083	0.00	3.150	4.85	6.217	10.50	9.28	0.81
0.100	0.00	3.167	4.85	6.233	10.50	9.30	0.81
0.117	0.00	3.183	4.85	6.250	10.49	9.32	0.81
0.133	0.00	3.200	4.85	6.267	5.66	9.33	0.81
0.150	0.00	3.217	4.85	6.283	5.66	9.35	0.81
0.167	0.00	3.233	4.85	6.300	5.66	9.37	0.81
0.183	0.00	3.250	4.85	6.317	5.66	9.38	0.81
0.200	0.00	3.267	13.74	6.333	5.66	9.40	0.81
0.217	0.00	3.283	13.74	6.350	5.66	9.42	0.81
0.233	0.00	3.300	13.74	6.367	5.66	9.43	0.81
0.250	0.00	3.317	13.74	6.383	5.66	9.45	0.81
0.267	0.81	3.333	13.74	6.400	5.66	9.47	0.81
0.283	0.81	3.350	13.74	6.417	5.66	9.48	0.81
0.300	0.81	3.367	13.74	6.433	5.66	9.50	0.81
0.317	0.81	3.383	13.74	6.450	5.66	9.52	0.81
0.333	0.81	3.400	13.74	6.467	5.66	9.53	0.81
0.350	0.81	3.417	13.74	6.483	5.66	9.55	0.81
0.367	0.81	3.433	13.74	6.500	5.66	9.57	0.81
0.383	0.81	3.450	13.74	6.517	5.66	9.58	0.81
0.400	0.81	3.467	13.74	6.533	5.66	9.60	0.81
0.417	0.81	3.483	13.74	6.550	5.66	9.62	0.81
0.433	0.81	3.500	13.74	6.567	5.66	9.63	0.81
0.450	0.81	3.517	13.74	6.583	5.66	9.65	0.81
0.467	0.81	3.533	13.74	6.600	5.66	9.67	0.81
0.483	0.81	3.550	13.74	6.617	5.66	9.68	0.81
0.500	0.81	3.567	13.74	6.633	5.66	9.70	0.81
0.517	0.81	3.583	13.74	6.650	5.66	9.72	0.81
0.533	0.81	3.600	13.74	6.667	5.66	9.73	0.81
0.550	0.81	3.617	13.74	6.683	5.66	9.75	0.81
0.567	0.81	3.633	13.74	6.700	5.66	9.77	0.81
0.583	0.81	3.650	13.74	6.717	5.66	9.78	0.81
0.600	0.81	3.667	13.74	6.733	5.66	9.80	0.81
0.617	0.81	3.683	13.74	6.750	5.66	9.82	0.81
0.633	0.81	3.700	13.74	6.767	5.66	9.83	0.81
0.650	0.81	3.717	13.74	6.783	5.66	9.85	0.81
0.667	0.81	3.733	13.74	6.800	5.66	9.87	0.81
0.683	0.81	3.750	13.74	6.817	5.66	9.88	0.81
0.700	0.81	3.767	13.74	6.833	5.66	9.90	0.81
0.717	0.81	3.783	13.74	6.850	5.66	9.92	0.81
0.733	0.81	3.800	13.74	6.867	5.66	9.93	0.81
0.750	0.81	3.817	13.74	6.883	5.66	9.95	0.81
0.767	0.81	3.833	13.74	6.900	5.66	9.97	0.81
0.783	0.81	3.850	13.74	6.917	5.66	9.98	0.81
0.800	0.81	3.867	13.74	6.933	5.66	10.00	0.81
0.817	0.81	3.883	13.74	6.950	5.66	10.02	0.81
0.833	0.81	3.900	13.74	6.967	5.66	10.03	0.81
0.850	0.81	3.917	13.74	6.983	5.66	10.05	0.81
0.867	0.81	3.933	13.74	7.000	5.66	10.07	0.81
0.883	0.81	3.950	13.74	7.017	5.66	10.08	0.81
0.900	0.81	3.967	13.74	7.033	5.66	10.10	0.81
0.917	0.81	3.983	13.74	7.050	5.66	10.12	0.81
0.933	0.81	4.000	13.74	7.067	5.66	10.13	0.81
0.950	0.81	4.017	13.74	7.083	5.66	10.15	0.81
0.967	0.81	4.033	13.74	7.100	5.66	10.17	0.81
0.983	0.81	4.050	13.74	7.117	5.66	10.18	0.81

1.000	0.81	4.067	13.74	7.133	5.66	10.20	0.81
1.017	0.81	4.083	13.74	7.150	5.66	10.22	0.81
1.033	0.81	4.100	13.74	7.167	5.66	10.23	0.81
1.050	0.81	4.117	13.74	7.183	5.66	10.25	0.81
1.067	0.81	4.133	13.74	7.200	5.66	10.27	0.81
1.083	0.81	4.150	13.74	7.217	5.66	10.28	0.81
1.100	0.81	4.167	13.74	7.233	5.66	10.30	0.81
1.117	0.81	4.183	13.74	7.250	5.65	10.32	0.81
1.133	0.81	4.200	13.74	7.267	3.23	10.33	0.81
1.150	0.81	4.217	13.74	7.283	3.23	10.35	0.81
1.167	0.81	4.233	13.74	7.300	3.23	10.37	0.81
1.183	0.81	4.250	13.74	7.317	3.23	10.38	0.81
1.200	0.81	4.267	37.17	7.333	3.23	10.40	0.81
1.217	0.81	4.283	37.17	7.350	3.23	10.42	0.81
1.233	0.81	4.300	37.17	7.367	3.23	10.43	0.81
1.250	0.81	4.317	37.17	7.383	3.23	10.45	0.81
1.267	0.81	4.333	37.17	7.400	3.23	10.47	0.81
1.283	0.81	4.350	37.17	7.417	3.23	10.48	0.81
1.300	0.81	4.367	37.17	7.433	3.23	10.50	0.81
1.317	0.81	4.383	37.17	7.450	3.23	10.52	0.81
1.333	0.81	4.400	37.17	7.467	3.23	10.53	0.81
1.350	0.81	4.417	37.17	7.483	3.23	10.55	0.81
1.367	0.81	4.433	37.17	7.500	3.23	10.57	0.81
1.383	0.81	4.450	37.17	7.517	3.23	10.58	0.81
1.400	0.81	4.467	37.17	7.533	3.23	10.60	0.81
1.417	0.81	4.483	37.17	7.550	3.23	10.62	0.81
1.433	0.81	4.500	37.17	7.567	3.23	10.63	0.81
1.450	0.81	4.517	37.17	7.583	3.23	10.65	0.81
1.467	0.81	4.533	37.17	7.600	3.23	10.67	0.81
1.483	0.81	4.550	37.17	7.617	3.23	10.68	0.81
1.500	0.81	4.567	37.17	7.633	3.23	10.70	0.81
1.517	0.81	4.583	37.17	7.650	3.23	10.72	0.81
1.533	0.81	4.600	37.17	7.667	3.23	10.73	0.81
1.550	0.81	4.617	37.17	7.683	3.23	10.75	0.81
1.567	0.81	4.633	37.17	7.700	3.23	10.77	0.81
1.583	0.81	4.650	37.17	7.717	3.23	10.78	0.81
1.600	0.81	4.667	37.17	7.733	3.23	10.80	0.81
1.617	0.81	4.683	37.17	7.750	3.23	10.82	0.81
1.633	0.81	4.700	37.17	7.767	3.23	10.83	0.81
1.650	0.81	4.717	37.17	7.783	3.23	10.85	0.81
1.667	0.81	4.733	37.17	7.800	3.23	10.87	0.81
1.683	0.81	4.750	37.17	7.817	3.23	10.88	0.81
1.700	0.81	4.767	37.17	7.833	3.23	10.90	0.81
1.717	0.81	4.783	37.17	7.850	3.23	10.92	0.81
1.733	0.81	4.800	37.17	7.867	3.23	10.93	0.81
1.750	0.81	4.817	37.17	7.883	3.23	10.95	0.81
1.767	0.81	4.833	37.17	7.900	3.23	10.97	0.81
1.783	0.81	4.850	37.17	7.917	3.23	10.98	0.81
1.800	0.81	4.867	37.17	7.933	3.23	11.00	0.81
1.817	0.81	4.883	37.17	7.950	3.23	11.02	0.81
1.833	0.81	4.900	37.17	7.967	3.23	11.03	0.81
1.850	0.81	4.917	37.17	7.983	3.23	11.05	0.81
1.867	0.81	4.933	37.17	8.000	3.23	11.07	0.81
1.883	0.81	4.950	37.17	8.017	3.23	11.08	0.81
1.900	0.81	4.967	37.17	8.033	3.23	11.10	0.81
1.917	0.81	4.983	37.17	8.050	3.23	11.12	0.81
1.933	0.81	5.000	37.17	8.067	3.23	11.13	0.81
1.950	0.81	5.017	37.17	8.083	3.23	11.15	0.81
1.967	0.81	5.033	37.17	8.100	3.23	11.17	0.81
1.983	0.81	5.050	37.17	8.117	3.23	11.18	0.81
2.000	0.81	5.067	37.17	8.133	3.23	11.20	0.81
2.017	0.81	5.083	37.17	8.150	3.23	11.22	0.81
2.033	0.81	5.100	37.17	8.167	3.23	11.23	0.81
2.050	0.81	5.117	37.17	8.183	3.23	11.25	0.81
2.067	0.81	5.133	37.17	8.200	3.23	11.27	0.81
2.083	0.81	5.150	37.17	8.217	3.23	11.28	0.81
2.100	0.81	5.167	37.17	8.233	3.23	11.30	0.81
2.117	0.81	5.183	37.17	8.250	3.23	11.32	0.81
2.133	0.81	5.200	37.17	8.267	1.62	11.33	0.81
2.150	0.81	5.217	37.17	8.283	1.62	11.35	0.81
2.167	0.81	5.233	37.17	8.300	1.62	11.37	0.81
2.183	0.81	5.250	37.15	8.317	1.62	11.38	0.81
2.200	0.81	5.267	10.50	8.333	1.62	11.40	0.81
2.217	0.81	5.283	10.50	8.350	1.62	11.42	0.81
2.233	0.81	5.300	10.50	8.367	1.62	11.43	0.81
2.250	0.81	5.317	10.50	8.383	1.62	11.45	0.81
2.267	4.85	5.333	10.50	8.400	1.62	11.47	0.81
2.283	4.85	5.350	10.50	8.417	1.62	11.48	0.81
2.300	4.85	5.367	10.50	8.433	1.62	11.50	0.81
2.317	4.85	5.383	10.50	8.450	1.62	11.52	0.81
2.333	4.85	5.400	10.50	8.467	1.62	11.53	0.81
2.350	4.85	5.417	10.50	8.483	1.62	11.55	0.81
2.367	4.85	5.433	10.50	8.500	1.62	11.57	0.81
2.383	4.85	5.450	10.50	8.517	1.62	11.58	0.81
2.400	4.85	5.467	10.50	8.533	1.62	11.60	0.81
2.417	4.85	5.483	10.50	8.550	1.62	11.62	0.81
2.433	4.85	5.500	10.50	8.567	1.62	11.63	0.81
2.450	4.85	5.517	10.50	8.583	1.62	11.65	0.81
2.467	4.85	5.533	10.50	8.600	1.62	11.67	0.81
2.483	4.85	5.550	10.50	8.617	1.62	11.68	0.81
2.500	4.85	5.567	10.50	8.633	1.62	11.70	0.81
2.517	4.85	5.583	10.50	8.650	1.62	11.72	0.81
2.533	4.85	5.600	10.50	8.667	1.62	11.73	0.81
2.550	4.85	5.617	10.50	8.683	1.62	11.75	0.81
2.567	4.85	5.633	10.50	8.700	1.62	11.77	0.81
2.583	4.85	5.650	10.50	8.717	1.62	11.78	0.81
2.600	4.85	5.667	10.50	8.733	1.62	11.80	0.81
2.617	4.85	5.683	10.50	8.750	1.62	11.82	0.81
2.633	4.85	5.700	10.50	8.767	1.62	11.83	0.81
2.650	4.85	5.717	10.50	8.783	1.62	11.85	0.81
2.667	4.85	5.733	10.50	8.800	1.62	11.87	0.81
2.683	4.85	5.750	10.50	8.817	1.62	11.88	0.81
2.700	4.85	5.767	10.50	8.833	1.62	11.90	0.81
2.717	4.85	5.783	10.50	8.850	1.62	11.92	0.81
2.733	4.85	5.800	10.50	8.867	1.62	11.93	0.81
2.750	4.85	5.817	10.50	8.883	1.62	11.95	0.81
2.767	4.85	5.833	10.50	8.900	1.62	11.97	0.81
2.783	4.85	5.850	10.50	8.917	1.62	11.98	0.81
2.800	4.85	5.867	10.50	8.933	1.62	12.00	0.81
2.817	4.85	5.883	10.50	8.950	1.62	12.02	0.81
2.833	4.85	5.900	10.50	8.967	1.62	12.03	0.81
2.850	4.85	5.917	10.50	8.983	1.62	12.05	0.81
2.867	4.85	5.933	10.50	9.000	1.62	12.07	0.81
2.883	4.85	5.950	10.50	9.017	1.62	12.08	0.81
2.900	4.85	5.967	10.50	9.033	1.62	12.10	0.81
2.917	4.85	5.983	10.50	9.050	1.62	12.12	0.81
2.933	4.85	6.000	10.50	9.067	1.62	12.13	0.81
2.950	4.85	6.017	10.50	9.083	1.62	12.15	0.81
2.967	4.85	6.033	10.50	9.100	1.62	12.17	0.81
2.983	4.85	6.050	10.50	9.117	1.62	12.18	0.81
3.000	4.85	6.067	10.50	9.133	1.62	12.20	0.81
3.017	4.85	6.083	10.50	9.150	1.62	12.22	0.81
3.033	4.85	6.100	10.50	9.167	1.62	12.23	0.81
3.050	4.85	6.117	10.50	9.183	1.62	12.25	0.81
3.067	4.85	6.133	10.50	9.200	1.62		

Max.Eff.Inten.(mm/hr)=	37.17	29.32	
over (min)	5.00	7.00	
Storage Coeff. (min)=	4.15 (ii)	6.68 (ii)	
Unit Hyd. Tpeak (min)=	5.00	7.00	
Unit Hyd. peak (cms)=	0.25	0.17	
			TOTALS
PEAK FLOW (cms)=	0.21	0.00	0.208 (iii)
TIME TO PEAK (hrs)=	5.23	5.25	5.25
RUNOFF VOLUME (mm)=	79.82	50.68	79.53
TOTAL RAINFALL (mm)=	80.82	80.82	80.82
RUNOFF COEFFICIENT =	0.99	0.63	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7644)| IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0433	0.1140

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                    0.0182     0.0580   |   0.0507      0.1280
                    0.0280     0.0775   |   0.0571      0.1440
                    0.0343     0.0930   |   0.0000      0.0000

                           AREA     QPEAK     TPEAK       R.V.
                           (ha)     (cms)     (hrs)       (mm)
  INFLOW : ID= 2 (  7643)      2.020     0.208      5.25      79.53
  OUTFLOW: ID= 1 (  7644)      2.020     0.041      6.37      76.53

               PEAK   FLOW   REDUCTION [Qout/Qin](%)= 19.60
               TIME SHIFT OF PEAK FLOW         (min)= 67.00
               MAXIMUM  STORAGE   USED       (ha.m.)=  0.1081

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================================================================================================================
======

      V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
      V    V   I    SS     U   U   A A   L
       V  V    I     SS    U   U  AAAAA  L
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
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               *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-
a4eb17eaad57\f828700a-a330-4cfa-8385-a6ade7bdea5e\s
  Summary filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-
a4eb17eaad57\f828700a-a330-4cfa-8385-a6ade7bdea5e\s


DATE: 06/14/2024                          TIME: 12:48:40

USER:


COMMENTS: _____

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  ***********************************************
  ** SIMULATION : 991. 50 Year 24 Hour AES (Blo **
  ***********************************************


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|    READ STORM    |    Filename: C:\Users\ygollamudi\AppD
|                  |              ata\Local\Temp\
|                  |              3c3f87d5-a26e-4c6b-b2ae-56a7ba29ab7f\5dbf17e4
| Ptotal= 87.80 mm |    Comments: 50 Year 24 Hour AES (Bloor, TRCA)
--------------------
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.00    0.00 |  6.25    7.46 | 12.50    3.07 | 18.75    0.44
               0.25    0.44 |  6.50    7.46 | 12.75    3.07 | 19.00    0.44
               0.50    0.44 |  6.75    7.46 | 13.00    3.07 | 19.25    0.44
               0.75    0.44 |  7.00    7.46 | 13.25    3.07 | 19.50    0.44
               1.00    0.44 |  7.25    7.46 | 13.50    3.07 | 19.75    0.44
               1.25    0.44 |  7.50    7.46 | 13.75    3.07 | 20.00    0.44
               1.50    0.44 |  7.75    7.46 | 14.00    3.07 | 20.25    0.44
               1.75    0.44 |  8.00    7.46 | 14.25    1.76 | 20.50    0.44
               2.00    0.44 |  8.25   20.19 | 14.50    1.76 | 20.75    0.44
               2.25    0.44 |  8.50   20.19 | 14.75    1.76 | 21.00    0.44
               2.50    0.44 |  8.75   20.19 | 15.00    1.76 | 21.25    0.44
               2.75    0.44 |  9.00   20.19 | 15.25    1.76 | 21.50    0.44
               3.00    0.44 |  9.25   20.19 | 15.50    1.76 | 21.75    0.44
               3.25    0.44 |  9.50   20.19 | 15.75    1.76 | 22.00    0.44
               3.50    0.44 |  9.75   20.19 | 16.00    1.76 | 22.25    0.44
               3.75    0.44 | 10.00   20.19 | 16.25    0.88 | 22.50    0.44
               4.00    0.44 | 10.25    5.71 | 16.50    0.88 | 22.75    0.44
               4.25    2.63 | 10.50    5.71 | 16.75    0.88 | 23.00    0.44
               4.50    2.63 | 10.75    5.71 | 17.00    0.88 | 23.25    0.44
               4.75    2.63 | 11.00    5.71 | 17.25    0.88 | 23.50    0.44
               5.00    2.63 | 11.25    5.71 | 17.50    0.88 | 23.75    0.44
               5.25    2.63 | 11.50    5.71 | 17.75    0.88 | 24.00    0.44
               5.50    2.63 | 11.75    5.71 | 18.00    0.88 |
               5.75    2.63 | 12.00    5.71 | 18.25    0.44 |
               6.00    2.63 | 12.25    3.07 | 18.50    0.44 |

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| CALIB            |
| STANDHYD (  7567)|   Area    (ha)=   2.72
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.69          0.03
     Dep. Storage     (mm)=       1.00          1.50
     Average Slope     (%)=       1.00          0.50
     Length            (m)=     134.66         40.00
     Mannings n           =      0.013         0.250

     NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
0.017    0.00 | 6.083    2.63 |12.150    5.71 | 18.22    0.88
0.033    0.00 | 6.100    2.63 |12.167    5.71 | 18.23    0.88
0.050    0.00 | 6.117    2.63 |12.183    5.71 | 18.25    0.88
0.067    0.00 | 6.133    2.63 |12.200    5.71 | 18.27    0.44
0.083    0.00 | 6.150    2.63 |12.217    5.71 | 18.28    0.44
0.100    0.00 | 6.167    2.63 |12.233    5.71 | 18.30    0.44
0.117    0.00 | 6.183    2.63 |12.250    5.71 | 18.32    0.44
0.133    0.00 | 6.200    2.63 |12.267    3.07 | 18.33    0.44
0.150    0.00 | 6.217    2.63 |12.283    3.07 | 18.35    0.44
0.167    0.00 | 6.233    2.63 |12.300    3.07 | 18.37    0.44
0.183    0.00 | 6.250    2.64 |12.317    3.07 | 18.38    0.44
0.200    0.00 | 6.267    7.46 |12.333    3.07 | 18.40    0.44
0.217    0.00 | 6.283    7.46 |12.350    3.07 | 18.42    0.44
0.233    0.00 | 6.300    7.46 |12.367    3.07 | 18.43    0.44
0.250    0.00 | 6.317    7.46 |12.383    3.07 | 18.45    0.44
0.267    0.44 | 6.333    7.46 |12.400    3.07 | 18.47    0.44
0.283    0.44 | 6.350    7.46 |12.417    3.07 | 18.48    0.44
0.300    0.44 | 6.367    7.46 |12.433    3.07 | 18.50    0.44
0.317    0.44 | 6.383    7.46 |12.450    3.07 | 18.52    0.44
0.333    0.44 | 6.400    7.46 |12.467    3.07 | 18.53    0.44
0.350    0.44 | 6.417    7.46 |12.483    3.07 | 18.55    0.44
0.367    0.44 | 6.433    7.46 |12.500    3.07 | 18.57    0.44
0.383    0.44 | 6.450    7.46 |12.517    3.07 | 18.58    0.44
0.400    0.44 | 6.467    7.46 |12.533    3.07 | 18.60    0.44
0.417    0.44 | 6.483    7.46 |12.550    3.07 | 18.62    0.44
0.433    0.44 | 6.500    7.46 |12.567    3.07 | 18.63    0.44
0.450    0.44 | 6.517    7.46 |12.583    3.07 | 18.65    0.44
0.467    0.44 | 6.533    7.46 |12.600    3.07 | 18.67    0.44
0.483    0.44 | 6.550    7.46 |12.617    3.07 | 18.68    0.44
0.500    0.44 | 6.567    7.46 |12.633    3.07 | 18.70    0.44
0.517    0.44 | 6.583    7.46 |12.650    3.07 | 18.72    0.44
0.533    0.44 | 6.600    7.46 |12.667    3.07 | 18.73    0.44
0.550    0.44 | 6.617    7.46 |12.683    3.07 | 18.75    0.44
0.567    0.44 | 6.633    7.46 |12.700    3.07 | 18.77    0.44
0.583    0.44 | 6.650    7.46 |12.717    3.07 | 18.78    0.44
0.600    0.44 | 6.667    7.46 |12.733    3.07 | 18.80    0.44
0.617    0.44 | 6.683    7.46 |12.750    3.07 | 18.82    0.44
0.633    0.44 | 6.700    7.46 |12.767    3.07 | 18.83    0.44
0.650    0.44 | 6.717    7.46 |12.783    3.07 | 18.85    0.44
0.667    0.44 | 6.733    7.46 |12.800    3.07 | 18.87    0.44
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0.683	0.44	6.750	7.46	12.817	3.07	18.88	0.44
0.700	0.44	6.767	7.46	12.833	3.07	18.90	0.44
0.717	0.44	6.783	7.46	12.850	3.07	18.92	0.44
0.733	0.44	6.800	7.46	12.867	3.07	18.93	0.44
0.750	0.44	6.817	7.46	12.883	3.07	18.95	0.44
0.767	0.44	6.833	7.46	12.900	3.07	18.97	0.44
0.783	0.44	6.850	7.46	12.917	3.07	18.98	0.44
0.800	0.44	6.867	7.46	12.933	3.07	19.00	0.44
0.817	0.44	6.883	7.46	12.950	3.07	19.02	0.44
0.833	0.44	6.900	7.46	12.967	3.07	19.03	0.44
0.850	0.44	6.917	7.46	12.983	3.07	19.05	0.44
0.867	0.44	6.933	7.46	13.000	3.07	19.07	0.44
0.883	0.44	6.950	7.46	13.017	3.07	19.08	0.44
0.900	0.44	6.967	7.46	13.033	3.07	19.10	0.44
0.917	0.44	6.983	7.46	13.050	3.07	19.12	0.44
0.933	0.44	7.000	7.46	13.067	3.07	19.13	0.44
0.950	0.44	7.017	7.46	13.083	3.07	19.15	0.44
0.967	0.44	7.033	7.46	13.100	3.07	19.17	0.44
0.983	0.44	7.050	7.46	13.117	3.07	19.18	0.44
1.000	0.44	7.067	7.46	13.133	3.07	19.20	0.44
1.017	0.44	7.083	7.46	13.150	3.07	19.22	0.44
1.033	0.44	7.100	7.46	13.167	3.07	19.23	0.44
1.050	0.44	7.117	7.46	13.183	3.07	19.25	0.44
1.067	0.44	7.133	7.46	13.200	3.07	19.27	0.44
1.083	0.44	7.150	7.46	13.217	3.07	19.28	0.44
1.100	0.44	7.167	7.46	13.233	3.07	19.30	0.44
1.117	0.44	7.183	7.46	13.250	3.07	19.32	0.44
1.133	0.44	7.200	7.46	13.267	3.07	19.33	0.44
1.150	0.44	7.217	7.46	13.283	3.07	19.35	0.44
1.167	0.44	7.233	7.46	13.300	3.07	19.37	0.44
1.183	0.44	7.250	7.46	13.317	3.07	19.38	0.44
1.200	0.44	7.267	7.46	13.333	3.07	19.40	0.44
1.217	0.44	7.283	7.46	13.350	3.07	19.42	0.44
1.233	0.44	7.300	7.46	13.367	3.07	19.43	0.44
1.250	0.44	7.317	7.46	13.383	3.07	19.45	0.44
1.267	0.44	7.333	7.46	13.400	3.07	19.47	0.44
1.283	0.44	7.350	7.46	13.417	3.07	19.48	0.44
1.300	0.44	7.367	7.46	13.433	3.07	19.50	0.44
1.317	0.44	7.383	7.46	13.450	3.07	19.52	0.44
1.333	0.44	7.400	7.46	13.467	3.07	19.53	0.44
1.350	0.44	7.417	7.46	13.483	3.07	19.55	0.44
1.367	0.44	7.433	7.46	13.500	3.07	19.57	0.44
1.383	0.44	7.450	7.46	13.517	3.07	19.58	0.44
1.400	0.44	7.467	7.46	13.533	3.07	19.60	0.44
1.417	0.44	7.483	7.46	13.550	3.07	19.62	0.44
1.433	0.44	7.500	7.46	13.567	3.07	19.63	0.44
1.450	0.44	7.517	7.46	13.583	3.07	19.65	0.44
1.467	0.44	7.533	7.46	13.600	3.07	19.67	0.44
1.483	0.44	7.550	7.46	13.617	3.07	19.68	0.44
1.500	0.44	7.567	7.46	13.633	3.07	19.70	0.44
1.517	0.44	7.583	7.46	13.650	3.07	19.72	0.44
1.533	0.44	7.600	7.46	13.667	3.07	19.73	0.44
1.550	0.44	7.617	7.46	13.683	3.07	19.75	0.44
1.567	0.44	7.633	7.46	13.700	3.07	19.77	0.44
1.583	0.44	7.650	7.46	13.717	3.07	19.78	0.44
1.600	0.44	7.667	7.46	13.733	3.07	19.80	0.44
1.617	0.44	7.683	7.46	13.750	3.07	19.82	0.44
1.633	0.44	7.700	7.46	13.767	3.07	19.83	0.44
1.650	0.44	7.717	7.46	13.783	3.07	19.85	0.44
1.667	0.44	7.733	7.46	13.800	3.07	19.87	0.44
1.683	0.44	7.750	7.46	13.817	3.07	19.88	0.44
1.700	0.44	7.767	7.46	13.833	3.07	19.90	0.44
1.717	0.44	7.783	7.46	13.850	3.07	19.92	0.44
1.733	0.44	7.800	7.46	13.867	3.07	19.93	0.44
1.750	0.44	7.817	7.46	13.883	3.07	19.95	0.44
1.767	0.44	7.833	7.46	13.900	3.07	19.97	0.44
1.783	0.44	7.850	7.46	13.917	3.07	19.98	0.44
1.800	0.44	7.867	7.46	13.933	3.07	20.00	0.44
1.817	0.44	7.883	7.46	13.950	3.07	20.02	0.44
1.833	0.44	7.900	7.46	13.967	3.07	20.03	0.44
1.850	0.44	7.917	7.46	13.983	3.07	20.05	0.44
1.867	0.44	7.933	7.46	14.000	3.07	20.07	0.44
1.883	0.44	7.950	7.46	14.017	3.07	20.08	0.44
1.900	0.44	7.967	7.46	14.033	3.07	20.10	0.44
1.917	0.44	7.983	7.46	14.050	3.07	20.12	0.44
1.933	0.44	8.000	7.46	14.067	3.07	20.13	0.44
1.950	0.44	8.017	7.46	14.083	3.07	20.15	0.44
1.967	0.44	8.033	7.46	14.100	3.07	20.17	0.44
1.983	0.44	8.050	7.46	14.117	3.07	20.18	0.44
2.000	0.44	8.067	7.46	14.133	3.07	20.20	0.44
2.017	0.44	8.083	7.46	14.150	3.07	20.22	0.44
2.033	0.44	8.100	7.46	14.167	3.07	20.23	0.44
2.050	0.44	8.117	7.46	14.183	3.07	20.25	0.44
2.067	0.44	8.133	7.46	14.200	3.07	20.27	0.44
2.083	0.44	8.150	7.46	14.217	3.07	20.28	0.44
2.100	0.44	8.167	7.46	14.233	3.07	20.30	0.44
2.117	0.44	8.183	7.46	14.250	3.07	20.32	0.44
2.133	0.44	8.200	7.46	14.267	1.76	20.33	0.44
2.150	0.44	8.217	7.46	14.283	1.76	20.35	0.44
2.167	0.44	8.233	7.46	14.300	1.76	20.37	0.44
2.183	0.44	8.250	7.49	14.317	1.76	20.38	0.44
2.200	0.44	8.267	20.19	14.333	1.76	20.40	0.44
2.217	0.44	8.283	20.19	14.350	1.76	20.42	0.44
2.233	0.44	8.300	20.19	14.367	1.76	20.43	0.44
2.250	0.44	8.317	20.19	14.383	1.76	20.45	0.44
2.267	0.44	8.333	20.19	14.400	1.76	20.47	0.44
2.283	0.44	8.350	20.19	14.417	1.76	20.48	0.44
2.300	0.44	8.367	20.19	14.433	1.76	20.50	0.44
2.317	0.44	8.383	20.19	14.450	1.76	20.52	0.44
2.333	0.44	8.400	20.19	14.467	1.76	20.53	0.44
2.350	0.44	8.417	20.19	14.483	1.76	20.55	0.44
2.367	0.44	8.433	20.19	14.500	1.76	20.57	0.44
2.383	0.44	8.450	20.19	14.517	1.76	20.58	0.44
2.400	0.44	8.467	20.19	14.533	1.76	20.60	0.44
2.417	0.44	8.483	20.19	14.550	1.76	20.62	0.44
2.433	0.44	8.500	20.19	14.567	1.76	20.63	0.44
2.450	0.44	8.517	20.19	14.583	1.76	20.65	0.44
2.467	0.44	8.533	20.19	14.600	1.76	20.67	0.44
2.483	0.44	8.550	20.19	14.617	1.76	20.68	0.44
2.500	0.44	8.567	20.19	14.633	1.76	20.70	0.44
2.517	0.44	8.583	20.19	14.650	1.76	20.72	0.44
2.533	0.44	8.600	20.19	14.667	1.76	20.73	0.44
2.550	0.44	8.617	20.19	14.683	1.76	20.75	0.44
2.567	0.44	8.633	20.19	14.700	1.76	20.77	0.44
2.583	0.44	8.650	20.19	14.717	1.76	20.78	0.44
2.600	0.44	8.667	20.19	14.733	1.76	20.80	0.44
2.617	0.44	8.683	20.19	14.750	1.76	20.82	0.44
2.633	0.44	8.700	20.19	14.767	1.76	20.83	0.44
2.650	0.44	8.717	20.19	14.783	1.76	20.85	0.44
2.667	0.44	8.733	20.19	14.800	1.76	20.87	0.44
2.683	0.44	8.750	20.19	14.817	1.76	20.88	0.44
2.700	0.44	8.767	20.19	14.833	1.76	20.90	0.44
2.717	0.44	8.783	20.19	14.850	1.76	20.92	0.44
2.733	0.44	8.800	20.19	14.867	1.76	20.93	0.44
2.750	0.44	8.817	20.19	14.883	1.76	20.95	0.44
2.767	0.44	8.833	20.19	14.900	1.76	20.97	0.44
2.783	0.44	8.850	20.19	14.917	1.76	20.98	0.44
2.800	0.44	8.867	20.19	14.933	1.76	21.00	0.44
2.817	0.44	8.883	20.19	14.950	1.76	21.02	0.44
2.833	0.44	8.900	20.19	14.967	1.76	21.03	0.44
2.850	0.44	8.917	20.19	14.983	1.76	21.05	0.44
2.867	0.44	8.933	20.19	15.000	1.76	21.07	0.44
2.883	0.44	8.950	20.19	15.017	1.76	21.08	0.44
2.900	0.44	8.967	20.19	15.033	1.76	21.10	0.44
2.917	0.44	8.983	20.19	15.050	1.76	21.12	0.44
2.933	0.44	9.000	20.19	15.067	1.76	21.13	0.44
2.950	0.44	9.017	20.19	15.083	1.76	21.15	0.44
2.967	0.44	9.033	20.19	15.100	1.76	21.17	0.44
2.983	0.44	9.050	20.19	15.117	1.76	21.18	0.44
3.000	0.44	9.067	20.19	15.133	1.76	21.20	0.44
3.017	0.44	9.083	20.19	15.150	1.76	21.22	0.44
3.033	0.44	9.100	20.19	15.167	1.76	21.23	0.44
3.050	0.44	9.117	20.19	15.183	1.76	21.25	0.44
3.067	0.44	9.133	20.19	15.200	1.76	21.27	0.44
3.083	0.44	9.150	20.19	15.217	1.76	21.28	0.44
3.100	0.44	9.167	20.19	15.233	1.76	21.30	0.44
3.117	0.44	9.183	20.19	15.250	1.76	21.32	0.44
3.133	0.44	9.200	20.19	15.267	1.76	21.33	0.44
3.150	0.44	9.217	20.19	15.283	1.76	21.35	0.44
3.167	0.44	9.233	20.19	15.300	1.76	21.37	0.44
3.183	0.44	9.250	20.19	15.317	1.76	21.38	0.44
3.200	0.44	9.267	20.19	15.333	1.76	21.40	0.44

3.217	0.44	9.283	20.19	15.350	1.76	21.42	0.44
3.233	0.44	9.300	20.19	15.367	1.76	21.43	0.44
3.250	0.44	9.317	20.19	15.383	1.76	21.45	0.44
3.267	0.44	9.333	20.19	15.400	1.76	21.47	0.44
3.283	0.44	9.350	20.19	15.417	1.76	21.48	0.44
3.300	0.44	9.367	20.19	15.433	1.76	21.50	0.44
3.317	0.44	9.383	20.19	15.450	1.76	21.52	0.44
3.333	0.44	9.400	20.19	15.467	1.76	21.53	0.44
3.350	0.44	9.417	20.19	15.483	1.76	21.55	0.44
3.367	0.44	9.433	20.19	15.500	1.76	21.57	0.44
3.383	0.44	9.450	20.19	15.517	1.76	21.58	0.44
3.400	0.44	9.467	20.19	15.533	1.76	21.60	0.44
3.417	0.44	9.483	20.19	15.550	1.76	21.62	0.44
3.433	0.44	9.500	20.19	15.567	1.76	21.63	0.44
3.450	0.44	9.517	20.19	15.583	1.76	21.65	0.44
3.467	0.44	9.533	20.19	15.600	1.76	21.67	0.44
3.483	0.44	9.550	20.19	15.617	1.76	21.68	0.44
3.500	0.44	9.567	20.19	15.633	1.76	21.70	0.44
3.517	0.44	9.583	20.19	15.650	1.76	21.72	0.44
3.533	0.44	9.600	20.19	15.667	1.76	21.73	0.44
3.550	0.44	9.617	20.19	15.683	1.76	21.75	0.44
3.567	0.44	9.633	20.19	15.700	1.76	21.77	0.44
3.583	0.44	9.650	20.19	15.717	1.76	21.78	0.44
3.600	0.44	9.667	20.19	15.733	1.76	21.80	0.44
3.617	0.44	9.683	20.19	15.750	1.76	21.82	0.44
3.633	0.44	9.700	20.19	15.767	1.76	21.83	0.44
3.650	0.44	9.717	20.19	15.783	1.76	21.85	0.44
3.667	0.44	9.733	20.19	15.800	1.76	21.87	0.44
3.683	0.44	9.750	20.19	15.817	1.76	21.88	0.44
3.700	0.44	9.767	20.19	15.833	1.76	21.90	0.44
3.717	0.44	9.783	20.19	15.850	1.76	21.92	0.44
3.733	0.44	9.800	20.19	15.867	1.76	21.93	0.44
3.750	0.44	9.817	20.19	15.883	1.76	21.95	0.44
3.767	0.44	9.833	20.19	15.900	1.76	21.97	0.44
3.783	0.44	9.850	20.19	15.917	1.76	21.98	0.44
3.800	0.44	9.867	20.19	15.933	1.76	22.00	0.44
3.817	0.44	9.883	20.19	15.950	1.76	22.02	0.44
3.833	0.44	9.900	20.19	15.967	1.76	22.03	0.44
3.850	0.44	9.917	20.19	15.983	1.76	22.05	0.44
3.867	0.44	9.933	20.19	16.000	1.76	22.07	0.44
3.883	0.44	9.950	20.19	16.017	1.76	22.08	0.44
3.900	0.44	9.967	20.19	16.033	1.76	22.10	0.44
3.917	0.44	9.983	20.19	16.050	1.76	22.12	0.44
3.933	0.44	10.000	20.19	16.067	1.76	22.13	0.44
3.950	0.44	10.017	20.19	16.083	1.76	22.15	0.44
3.967	0.44	10.033	20.19	16.100	1.76	22.17	0.44
3.983	0.44	10.050	20.19	16.117	1.76	22.18	0.44
4.000	0.44	10.067	20.19	16.133	1.76	22.20	0.44
4.017	0.44	10.083	20.19	16.150	1.76	22.22	0.44
4.033	0.44	10.100	20.19	16.167	1.76	22.23	0.44
4.050	0.44	10.117	20.19	16.183	1.76	22.25	0.44
4.067	0.44	10.133	20.19	16.200	1.76	22.27	0.44
4.083	0.44	10.150	20.19	16.217	1.76	22.28	0.44
4.100	0.44	10.167	20.19	16.233	1.76	22.30	0.44
4.117	0.44	10.183	20.19	16.250	1.76	22.32	0.44
4.133	0.44	10.200	20.19	16.267	0.88	22.33	0.44
4.150	0.44	10.217	20.19	16.283	0.88	22.35	0.44
4.167	0.44	10.233	20.19	16.300	0.88	22.37	0.44
4.183	0.44	10.250	20.18	16.317	0.88	22.38	0.44
4.200	0.44	10.267	5.71	16.333	0.88	22.40	0.44
4.217	0.44	10.283	5.71	16.350	0.88	22.42	0.44
4.233	0.44	10.300	5.71	16.367	0.88	22.43	0.44
4.250	0.44	10.317	5.71	16.383	0.88	22.45	0.44
4.267	2.63	10.333	5.71	16.400	0.88	22.47	0.44
4.283	2.63	10.350	5.71	16.417	0.88	22.48	0.44
4.300	2.63	10.367	5.71	16.433	0.88	22.50	0.44
4.317	2.63	10.383	5.71	16.450	0.88	22.52	0.44
4.333	2.63	10.400	5.71	16.467	0.88	22.53	0.44
4.350	2.63	10.417	5.71	16.483	0.88	22.55	0.44
4.367	2.63	10.433	5.71	16.500	0.88	22.57	0.44
4.383	2.63	10.450	5.71	16.517	0.88	22.58	0.44
4.400	2.63	10.467	5.71	16.533	0.88	22.60	0.44
4.417	2.63	10.483	5.71	16.550	0.88	22.62	0.44
4.433	2.63	10.500	5.71	16.567	0.88	22.63	0.44
4.450	2.63	10.517	5.71	16.583	0.88	22.65	0.44
4.467	2.63	10.533	5.71	16.600	0.88	22.67	0.44
4.483	2.63	10.550	5.71	16.617	0.88	22.68	0.44
4.500	2.63	10.567	5.71	16.633	0.88	22.70	0.44
4.517	2.63	10.583	5.71	16.650	0.88	22.72	0.44
4.533	2.63	10.600	5.71	16.667	0.88	22.73	0.44
4.550	2.63	10.617	5.71	16.683	0.88	22.75	0.44
4.567	2.63	10.633	5.71	16.700	0.88	22.77	0.44
4.583	2.63	10.650	5.71	16.717	0.88	22.78	0.44
4.600	2.63	10.667	5.71	16.733	0.88	22.80	0.44
4.617	2.63	10.683	5.71	16.750	0.88	22.82	0.44
4.633	2.63	10.700	5.71	16.767	0.88	22.83	0.44
4.650	2.63	10.717	5.71	16.783	0.88	22.85	0.44
4.667	2.63	10.733	5.71	16.800	0.88	22.87	0.44
4.683	2.63	10.750	5.71	16.817	0.88	22.88	0.44
4.700	2.63	10.767	5.71	16.833	0.88	22.90	0.44
4.717	2.63	10.783	5.71	16.850	0.88	22.92	0.44
4.733	2.63	10.800	5.71	16.867	0.88	22.93	0.44
4.750	2.63	10.817	5.71	16.883	0.88	22.95	0.44
4.767	2.63	10.833	5.71	16.900	0.88	22.97	0.44
4.783	2.63	10.850	5.71	16.917	0.88	22.98	0.44
4.800	2.63	10.867	5.71	16.933	0.88	23.00	0.44
4.817	2.63	10.883	5.71	16.950	0.88	23.02	0.44
4.833	2.63	10.900	5.71	16.967	0.88	23.03	0.44
4.850	2.63	10.917	5.71	16.983	0.88	23.05	0.44
4.867	2.63	10.933	5.71	17.000	0.88	23.07	0.44
4.883	2.63	10.950	5.71	17.017	0.88	23.08	0.44
4.900	2.63	10.967	5.71	17.033	0.88	23.10	0.44
4.917	2.63	10.983	5.71	17.050	0.88	23.12	0.44
4.933	2.63	11.000	5.71	17.067	0.88	23.13	0.44
4.950	2.63	11.017	5.71	17.083	0.88	23.15	0.44
4.967	2.63	11.033	5.71	17.100	0.88	23.17	0.44
4.983	2.63	11.050	5.71	17.117	0.88	23.18	0.44
5.000	2.63	11.067	5.71	17.133	0.88	23.20	0.44
5.017	2.63	11.083	5.71	17.150	0.88	23.22	0.44
5.033	2.63	11.100	5.71	17.167	0.88	23.23	0.44
5.050	2.63	11.117	5.71	17.183	0.88	23.25	0.44
5.067	2.63	11.133	5.71	17.200	0.88	23.27	0.44
5.083	2.63	11.150	5.71	17.217	0.88	23.28	0.44
5.100	2.63	11.167	5.71	17.233	0.88	23.30	0.44
5.117	2.63	11.183	5.71	17.250	0.88	23.32	0.44
5.133	2.63	11.200	5.71	17.267	0.88	23.33	0.44
5.150	2.63	11.217	5.71	17.283	0.88	23.35	0.44
5.167	2.63	11.233	5.71	17.300	0.88	23.37	0.44
5.183	2.63	11.250	5.71	17.317	0.88	23.38	0.44
5.200	2.63	11.267	5.71	17.333	0.88	23.40	0.44
5.217	2.63	11.283	5.71	17.350	0.88	23.42	0.44
5.233	2.63	11.300	5.71	17.367	0.88	23.43	0.44
5.250	2.63	11.317	5.71	17.383	0.88	23.45	0.44
5.267	2.63	11.333	5.71	17.400	0.88	23.47	0.44
5.283	2.63	11.350	5.71	17.417	0.88	23.48	0.44
5.300	2.63	11.367	5.71	17.433	0.88	23.50	0.44
5.317	2.63	11.383	5.71	17.450	0.88	23.52	0.44
5.333	2.63	11.400	5.71	17.467	0.88	23.53	0.44
5.350	2.63	11.417	5.71	17.483	0.88	23.55	0.44
5.367	2.63	11.433	5.71	17.500	0.88	23.57	0.44
5.383	2.63	11.450	5.71	17.517	0.88	23.58	0.44
5.400	2.63	11.467	5.71	17.533	0.88	23.60	0.44
5.417	2.63	11.483	5.71	17.550	0.88	23.62	0.44
5.433	2.63	11.500	5.71	17.567	0.88	23.63	0.44
5.450	2.63	11.517	5.71	17.583	0.88	23.65	0.44
5.467	2.63	11.533	5.71	17.600	0.88	23.67	0.44
5.483	2.63	11.550	5.71	17.617	0.88	23.68	0.44
5.500	2.63	11.567	5.71	17.633	0.88	23.70	0.44
5.517	2.63	11.583	5.71	17.650	0.88	23.72	0.44
5.533	2.63	11.600	5.71	17.667	0.88	23.73	0.44
5.550	2.63	11.617	5.71	17.683	0.88	23.75	0.44
5.567	2.63	11.633	5.71	17.700	0.88	23.77	0.44
5.583	2.63	11.650	5.71	17.717	0.88	23.78	0.44
5.600	2.63	11.667	5.71	17.733	0.88	23.80	0.44
5.617	2.63	11.683	5.71	17.750	0.88	23.82	0.44
5.633	2.63	11.700	5.71	17.767	0.88	23.83	0.44
5.650	2.63	11.717	5.71	17.783	0.88	23.85	0.44
5.667	2.63	11.733	5.71	17.800	0.88	23.87	0.44
5.683	2.63	11.750	5.71	17.817	0.88	23.88	0.44
5.700	2.63	11.767	5.71	17.833	0.88	23.90	0.44
5.717	2.63	11.783	5.71	17.850	0.88	23.92	0.44
5.733	2.63	11.800	5.71	17.867	0.88	23.93	0.44

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5.750	2.63	11.817	5.71	17.883	0.88	23.95	0.44
5.767	2.63	11.833	5.71	17.900	0.88	23.97	0.44
5.783	2.63	11.850	5.71	17.917	0.88	23.98	0.44
5.800	2.63	11.867	5.71	17.933	0.88	24.00	0.44
5.817	2.63	11.883	5.71	17.950	0.88	24.02	0.44
5.833	2.63	11.900	5.71	17.967	0.88	24.03	0.44
5.850	2.63	11.917	5.71	17.983	0.88	24.05	0.44
5.867	2.63	11.933	5.71	18.000	0.88	24.07	0.44
5.883	2.63	11.950	5.71	18.017	0.88	24.08	0.44
5.900	2.63	11.967	5.71	18.033	0.88	24.10	0.44
5.917	2.63	11.983	5.71	18.050	0.88	24.12	0.44
5.933	2.63	12.000	5.71	18.067	0.88	24.13	0.44
5.950	2.63	12.017	5.71	18.083	0.88	24.15	0.44
5.967	2.63	12.033	5.71	18.100	0.88	24.17	0.44
5.983	2.63	12.050	5.71	18.117	0.88	24.18	0.44
6.000	2.63	12.067	5.71	18.133	0.88	24.20	0.44
6.017	2.63	12.083	5.71	18.150	0.88	24.22	0.44
6.033	2.63	12.100	5.71	18.167	0.88	24.23	0.44
6.050	2.63	12.117	5.71	18.183	0.88	24.25	0.44
6.067	2.63	12.133	5.71	18.200	0.88		

				TOTALS
Max.Eff.Inten.(mm/hr)=	20.19	16.43		
over (min)	6.00	10.00		
Storage Coeff. (min)=	5.79 (ii)	9.02 (ii)		
Unit Hyd. Tpeak (min)=	6.00	10.00		
Unit Hyd. peak (cms)=	0.19	0.12		
PEAK FLOW (cms)=	0.15	0.00	0.152 (iii)	
TIME TO PEAK (hrs)=	9.72	10.25	10.25	
RUNOFF VOLUME (mm)=	86.78	56.79	86.50	
TOTAL RAINFALL (mm)=	87.80	87.80	87.80	
RUNOFF COEFFICIENT =	0.99	0.65	0.99	

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7626)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0568	0.1530
	0.0239	0.0780	0.0660	0.1730
	0.0370	0.1040	0.0751	0.2000
	0.0451	0.1250	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7567)	2.720	0.152	10.25	86.50
OUTFLOW: ID= 1 (7626)	2.720	0.049	10.58	80.02

PEAK FLOW REDUCTION [Qout/Qin](%)= 32.00
TIME SHIFT OF PEAK FLOW (min)= 20.00
MAXIMUM STORAGE USED (ha.m.)= 0.1336

CALIB			
STANDHYD (7624)	Area (ha)= 1.80		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	1.78	0.02	
Dep. Storage (mm)=	1.00	1.50	
Average Slope (%)=	1.00	0.50	
Length (m)=	109.54	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	2.63	12.150	5.71	18.22	0.88
0.033	0.00	6.100	2.63	12.167	5.71	18.23	0.88
0.050	0.00	6.117	2.63	12.183	5.71	18.25	0.88
0.067	0.00	6.133	2.63	12.200	5.71	18.27	0.44
0.083	0.00	6.150	2.63	12.217	5.71	18.28	0.44
0.100	0.00	6.167	2.63	12.233	5.71	18.30	0.44
0.117	0.00	6.183	2.63	12.250	5.71	18.32	0.44
0.133	0.00	6.200	2.63	12.267	3.07	18.33	0.44
0.150	0.00	6.217	2.63	12.283	3.07	18.35	0.44
0.167	0.00	6.233	2.63	12.300	3.07	18.37	0.44
0.183	0.00	6.250	2.64	12.317	3.07	18.38	0.44
0.200	0.00	6.267	7.46	12.333	3.07	18.40	0.44
0.217	0.00	6.283	7.46	12.350	3.07	18.42	0.44
0.233	0.00	6.300	7.46	12.367	3.07	18.43	0.44
0.250	0.00	6.317	7.46	12.383	3.07	18.45	0.44
0.267	0.44	6.333	7.46	12.400	3.07	18.47	0.44
0.283	0.44	6.350	7.46	12.417	3.07	18.48	0.44
0.300	0.44	6.367	7.46	12.433	3.07	18.50	0.44
0.317	0.44	6.383	7.46	12.450	3.07	18.52	0.44
0.333	0.44	6.400	7.46	12.467	3.07	18.53	0.44
0.350	0.44	6.417	7.46	12.483	3.07	18.55	0.44
0.367	0.44	6.433	7.46	12.500	3.07	18.57	0.44
0.383	0.44	6.450	7.46	12.517	3.07	18.58	0.44
0.400	0.44	6.467	7.46	12.533	3.07	18.60	0.44
0.417	0.44	6.483	7.46	12.550	3.07	18.62	0.44
0.433	0.44	6.500	7.46	12.567	3.07	18.63	0.44
0.450	0.44	6.517	7.46	12.583	3.07	18.65	0.44
0.467	0.44	6.533	7.46	12.600	3.07	18.67	0.44
0.483	0.44	6.550	7.46	12.617	3.07	18.68	0.44
0.500	0.44	6.567	7.46	12.633	3.07	18.70	0.44
0.517	0.44	6.583	7.46	12.650	3.07	18.72	0.44
0.533	0.44	6.600	7.46	12.667	3.07	18.73	0.44
0.550	0.44	6.617	7.46	12.683	3.07	18.75	0.44
0.567	0.44	6.633	7.46	12.700	3.07	18.77	0.44
0.583	0.44	6.650	7.46	12.717	3.07	18.78	0.44
0.600	0.44	6.667	7.46	12.733	3.07	18.80	0.44
0.617	0.44	6.683	7.46	12.750	3.07	18.82	0.44
0.633	0.44	6.700	7.46	12.767	3.07	18.83	0.44
0.650	0.44	6.717	7.46	12.783	3.07	18.85	0.44
0.667	0.44	6.733	7.46	12.800	3.07	18.87	0.44
0.683	0.44	6.750	7.46	12.817	3.07	18.88	0.44
0.700	0.44	6.767	7.46	12.833	3.07	18.90	0.44
0.717	0.44	6.783	7.46	12.850	3.07	18.92	0.44
0.733	0.44	6.800	7.46	12.867	3.07	18.93	0.44
0.750	0.44	6.817	7.46	12.883	3.07	18.95	0.44
0.767	0.44	6.833	7.46	12.900	3.07	18.97	0.44
0.783	0.44	6.850	7.46	12.917	3.07	18.98	0.44
0.800	0.44	6.867	7.46	12.933	3.07	19.00	0.44
0.817	0.44	6.883	7.46	12.950	3.07	19.02	0.44
0.833	0.44	6.900	7.46	12.967	3.07	19.03	0.44
0.850	0.44	6.917	7.46	12.983	3.07	19.05	0.44
0.867	0.44	6.933	7.46	13.000	3.07	19.07	0.44
0.883	0.44	6.950	7.46	13.017	3.07	19.08	0.44
0.900	0.44	6.967	7.46	13.033	3.07	19.10	0.44
0.917	0.44	6.983	7.46	13.050	3.07	19.12	0.44
0.933	0.44	7.000	7.46	13.067	3.07	19.13	0.44
0.950	0.44	7.017	7.46	13.083	3.07	19.15	0.44
0.967	0.44	7.033	7.46	13.100	3.07	19.17	0.44
0.983	0.44	7.050	7.46	13.117	3.07	19.18	0.44
1.000	0.44	7.067	7.46	13.133	3.07	19.20	0.44
1.017	0.44	7.083	7.46	13.150	3.07	19.22	0.44
1.033	0.44	7.100	7.46	13.167	3.07	19.23	0.44
1.050	0.44	7.117	7.46	13.183	3.07	19.25	0.44
1.067	0.44	7.133	7.46	13.200	3.07	19.27	0.44
1.083	0.44	7.150	7.46	13.217	3.07	19.28	0.44
1.100	0.44	7.167	7.46	13.233	3.07	19.30	0.44
1.117	0.44	7.183	7.46	13.250	3.07	19.32	0.44
1.133	0.44	7.200	7.46	13.267	3.07	19.33	0.44
1.150	0.44	7.217	7.46	13.283	3.07	19.35	0.44
1.167	0.44	7.233	7.46	13.300	3.07	19.37	0.44
1.183	0.44	7.250	7.46	13.317	3.07	19.38	0.44
1.200	0.44	7.267	7.46	13.333	3.07	19.40	0.44
1.217	0.44	7.283	7.46	13.350	3.07	19.42	0.44

1.233	0.44	7.300	7.46	13.367	3.07	19.43	0.44	2.500	0.44	8.567	20.19	14.633	1.76	20.70	0.44
1.250	0.44	7.317	7.46	13.383	3.07	19.45	0.44	2.517	0.44	8.583	20.19	14.650	1.76	20.72	0.44
1.267	0.44	7.333	7.46	13.400	3.07	19.47	0.44	2.533	0.44	8.600	20.19	14.667	1.76	20.73	0.44
1.283	0.44	7.350	7.46	13.417	3.07	19.48	0.44	2.550	0.44	8.617	20.19	14.683	1.76	20.75	0.44
1.300	0.44	7.367	7.46	13.433	3.07	19.50	0.44	2.567	0.44	8.633	20.19	14.700	1.76	20.77	0.44
1.317	0.44	7.383	7.46	13.450	3.07	19.52	0.44	2.583	0.44	8.650	20.19	14.717	1.76	20.78	0.44
1.333	0.44	7.400	7.46	13.467	3.07	19.53	0.44	2.600	0.44	8.667	20.19	14.733	1.76	20.80	0.44
1.350	0.44	7.417	7.46	13.483	3.07	19.55	0.44	2.617	0.44	8.683	20.19	14.750	1.76	20.82	0.44
1.367	0.44	7.433	7.46	13.500	3.07	19.57	0.44	2.633	0.44	8.700	20.19	14.767	1.76	20.83	0.44
1.383	0.44	7.450	7.46	13.517	3.07	19.58	0.44	2.650	0.44	8.717	20.19	14.783	1.76	20.85	0.44
1.400	0.44	7.467	7.46	13.533	3.07	19.60	0.44	2.667	0.44	8.733	20.19	14.800	1.76	20.87	0.44
1.417	0.44	7.483	7.46	13.550	3.07	19.62	0.44	2.683	0.44	8.750	20.19	14.817	1.76	20.88	0.44
1.433	0.44	7.500	7.46	13.567	3.07	19.63	0.44	2.700	0.44	8.767	20.19	14.833	1.76	20.90	0.44
1.450	0.44	7.517	7.46	13.583	3.07	19.65	0.44	2.717	0.44	8.783	20.19	14.850	1.76	20.92	0.44
1.467	0.44	7.533	7.46	13.600	3.07	19.67	0.44	2.733	0.44	8.800	20.19	14.867	1.76	20.93	0.44
1.483	0.44	7.550	7.46	13.617	3.07	19.68	0.44	2.750	0.44	8.817	20.19	14.883	1.76	20.95	0.44
1.500	0.44	7.567	7.46	13.633	3.07	19.70	0.44	2.767	0.44	8.833	20.19	14.900	1.76	20.97	0.44
1.517	0.44	7.583	7.46	13.650	3.07	19.72	0.44	2.783	0.44	8.850	20.19	14.917	1.76	20.98	0.44
1.533	0.44	7.600	7.46	13.667	3.07	19.73	0.44	2.800	0.44	8.867	20.19	14.933	1.76	21.00	0.44
1.550	0.44	7.617	7.46	13.683	3.07	19.75	0.44	2.817	0.44	8.883	20.19	14.950	1.76	21.02	0.44
1.567	0.44	7.633	7.46	13.700	3.07	19.77	0.44	2.833	0.44	8.900	20.19	14.967	1.76	21.03	0.44
1.583	0.44	7.650	7.46	13.717	3.07	19.78	0.44	2.850	0.44	8.917	20.19	14.983	1.76	21.05	0.44
1.600	0.44	7.667	7.46	13.733	3.07	19.80	0.44	2.867	0.44	8.933	20.19	15.000	1.76	21.07	0.44
1.617	0.44	7.683	7.46	13.750	3.07	19.82	0.44	2.883	0.44	8.950	20.19	15.017	1.76	21.08	0.44
1.633	0.44	7.700	7.46	13.767	3.07	19.83	0.44	2.900	0.44	8.967	20.19	15.033	1.76	21.10	0.44
1.650	0.44	7.717	7.46	13.783	3.07	19.85	0.44	2.917	0.44	8.983	20.19	15.050	1.76	21.12	0.44
1.667	0.44	7.733	7.46	13.800	3.07	19.87	0.44	2.933	0.44	9.000	20.19	15.067	1.76	21.13	0.44
1.683	0.44	7.750	7.46	13.817	3.07	19.88	0.44	2.950	0.44	9.017	20.19	15.083	1.76	21.15	0.44
1.700	0.44	7.767	7.46	13.833	3.07	19.90	0.44	2.967	0.44	9.033	20.19	15.100	1.76	21.17	0.44
1.717	0.44	7.783	7.46	13.850	3.07	19.92	0.44	2.983	0.44	9.050	20.19	15.117	1.76	21.18	0.44
1.733	0.44	7.800	7.46	13.867	3.07	19.93	0.44	3.000	0.44	9.067	20.19	15.133	1.76	21.20	0.44
1.750	0.44	7.817	7.46	13.883	3.07	19.95	0.44	3.017	0.44	9.083	20.19	15.150	1.76	21.22	0.44
1.767	0.44	7.833	7.46	13.900	3.07	19.97	0.44	3.033	0.44	9.100	20.19	15.167	1.76	21.23	0.44
1.783	0.44	7.850	7.46	13.917	3.07	19.98	0.44	3.050	0.44	9.117	20.19	15.183	1.76	21.25	0.44
1.800	0.44	7.867	7.46	13.933	3.07	20.00	0.44	3.067	0.44	9.133	20.19	15.200	1.76	21.27	0.44
1.817	0.44	7.883	7.46	13.950	3.07	20.02	0.44	3.083	0.44	9.150	20.19	15.217	1.76	21.28	0.44
1.833	0.44	7.900	7.46	13.967	3.07	20.03	0.44	3.100	0.44	9.167	20.19	15.233	1.76	21.30	0.44
1.850	0.44	7.917	7.46	13.983	3.07	20.05	0.44	3.117	0.44	9.183	20.19	15.250	1.76	21.32	0.44
1.867	0.44	7.933	7.46	14.000	3.07	20.07	0.44	3.133	0.44	9.200	20.19	15.267	1.76	21.33	0.44
1.883	0.44	7.950	7.46	14.017	3.07	20.08	0.44	3.150	0.44	9.217	20.19	15.283	1.76	21.35	0.44
1.900	0.44	7.967	7.46	14.033	3.07	20.10	0.44	3.167	0.44	9.233	20.19	15.300	1.76	21.37	0.44
1.917	0.44	7.983	7.46	14.050	3.07	20.12	0.44	3.183	0.44	9.250	20.19	15.317	1.76	21.38	0.44
1.933	0.44	8.000	7.46	14.067	3.07	20.13	0.44	3.200	0.44	9.267	20.19	15.333	1.76	21.40	0.44
1.950	0.44	8.017	7.46	14.083	3.07	20.15	0.44	3.217	0.44	9.283	20.19	15.350	1.76	21.42	0.44
1.967	0.44	8.033	7.46	14.100	3.07	20.17	0.44	3.233	0.44	9.300	20.19	15.367	1.76	21.43	0.44
1.983	0.44	8.050	7.46	14.117	3.07	20.18	0.44	3.250	0.44	9.317	20.19	15.383	1.76	21.45	0.44
2.000	0.44	8.067	7.46	14.133	3.07	20.20	0.44	3.267	0.44	9.333	20.19	15.400	1.76	21.47	0.44
2.017	0.44	8.083	7.46	14.150	3.07	20.22	0.44	3.283	0.44	9.350	20.19	15.417	1.76	21.48	0.44
2.033	0.44	8.100	7.46	14.167	3.07	20.23	0.44	3.300	0.44	9.367	20.19	15.433	1.76	21.50	0.44
2.050	0.44	8.117	7.46	14.183	3.07	20.25	0.44	3.317	0.44	9.383	20.19	15.450	1.76	21.52	0.44
2.067	0.44	8.133	7.46	14.200	3.07	20.27	0.44	3.333	0.44	9.400	20.19	15.467	1.76	21.53	0.44
2.083	0.44	8.150	7.46	14.217	3.07	20.28	0.44	3.350	0.44	9.417	20.19	15.483	1.76	21.55	0.44
2.100	0.44	8.167	7.46	14.233	3.07	20.30	0.44	3.367	0.44	9.433	20.19	15.500	1.76	21.57	0.44
2.117	0.44	8.183	7.46	14.250	3.07	20.32	0.44	3.383	0.44	9.450	20.19	15.517	1.76	21.58	0.44
2.133	0.44	8.200	7.46	14.267	1.76	20.33	0.44	3.400	0.44	9.467	20.19	15.533	1.76	21.60	0.44
2.150	0.44	8.217	7.46	14.283	1.76	20.35	0.44	3.417	0.44	9.483	20.19	15.550	1.76	21.62	0.44
2.167	0.44	8.233	7.46	14.300	1.76	20.37	0.44	3.433	0.44	9.500	20.19	15.567	1.76	21.63	0.44
2.183	0.44	8.250	7.49	14.317	1.76	20.38	0.44	3.450	0.44	9.517	20.19	15.583	1.76	21.65	0.44
2.200	0.44	8.267	20.19	14.333	1.76	20.40	0.44	3.467	0.44	9.533	20.19	15.600	1.76	21.67	0.44
2.217	0.44	8.283	20.19	14.350	1.76	20.42	0.44	3.483	0.44	9.550	20.19	15.617	1.76	21.68	0.44
2.233	0.44	8.300	20.19	14.367	1.76	20.43	0.44	3.500	0.44	9.567	20.19	15.633	1.76	21.70	0.44
2.250	0.44	8.317	20.19	14.383	1.76	20.45	0.44	3.517	0.44	9.583	20.19	15.650	1.76	21.72	0.44
2.267	0.44	8.333	20.19	14.400	1.76	20.47	0.44	3.533	0.44	9.600	20.19	15.667	1.76	21.73	0.44
2.283	0.44	8.350	20.19	14.417	1.76	20.48	0.44	3.550	0.44	9.617	20.19	15.683	1.76	21.75	0.44
2.300	0.44	8.367	20.19	14.433	1.76	20.50	0.44	3.567	0.44	9.633	20.19	15.700	1.76	21.77	0.44
2.317	0.44	8.383	20.19	14.450	1.76	20.52	0.44	3.583	0.44	9.650	20.19	15.717	1.76	21.78	0.44
2.333	0.44	8.400	20.19	14.467	1.76	20.53	0.44	3.600	0.44	9.667	20.19	15.733	1.76	21.80	0.44
2.350	0.44	8.417	20.19	14.483	1.76	20.55	0.44	3.617	0.44	9.683	20.19	15.750	1.76	21.82	0.44
2.367	0.44	8.433	20.19	14.500	1.76	20.57	0.44	3.633	0.44	9.700	20.19	15.767	1.76	21.83	0.44
2.383	0.44	8.450	20.19	14.517	1.76	20.58	0.44	3.650	0.44	9.717	20.19	15.783	1.76	21.85	0.44
2.400	0.44	8.467	20.19	14.533	1.76	20.60	0.44	3.667	0.44	9.733	20.19	15.800	1.76	21.87	0.44
2.417	0.44	8.483	20.19	14.550	1.76	20.62	0.44	3.683	0.44	9.750	20.19	15.817	1.76	21.88	0.44
2.433	0.44	8.500	20.19	14.567	1.76	20.63	0.44	3.700	0.44	9.767	20.19	15.833	1.76	21.90	0.44
2.450	0.44	8.517	20.19	14.583	1.76	20.65	0.44	3.717	0.44	9.783	20.19	15.850	1.76	21.92	0.44
2.467	0.44	8.533	20.19	14.600	1.76	20.67	0.44	3.733	0.44	9.800	20.19	15.867	1.76	21.93	0.44
2.483	0.44	8.550	20.19	14.617	1.76	20.68	0.44	3.750	0.44	9.817	20.19	15.883	1.76	21.95	0.44

3.767	0.44	9.833	20.19	15.900	1.76	21.97	0.44
3.783	0.44	9.850	20.19	15.917	1.76	21.98	0.44
3.800	0.44	9.867	20.19	15.933	1.76	22.00	0.44
3.817	0.44	9.883	20.19	15.950	1.76	22.02	0.44
3.833	0.44	9.900	20.19	15.967	1.76	22.03	0.44
3.850	0.44	9.917	20.19	15.983	1.76	22.05	0.44
3.867	0.44	9.933	20.19	16.000	1.76	22.07	0.44
3.883	0.44	9.950	20.19	16.017	1.76	22.08	0.44
3.900	0.44	9.967	20.19	16.033	1.76	22.10	0.44
3.917	0.44	9.983	20.19	16.050	1.76	22.12	0.44
3.933	0.44	10.000	20.19	16.067	1.76	22.13	0.44
3.950	0.44	10.017	20.19	16.083	1.76	22.15	0.44
3.967	0.44	10.033	20.19	16.100	1.76	22.17	0.44
3.983	0.44	10.050	20.19	16.117	1.76	22.18	0.44
4.000	0.44	10.067	20.19	16.133	1.76	22.20	0.44
4.017	0.44	10.083	20.19	16.150	1.76	22.22	0.44
4.033	0.44	10.100	20.19	16.167	1.76	22.23	0.44
4.050	0.44	10.117	20.19	16.183	1.76	22.25	0.44
4.067	0.44	10.133	20.19	16.200	1.76	22.27	0.44
4.083	0.44	10.150	20.19	16.217	1.76	22.28	0.44
4.100	0.44	10.167	20.19	16.233	1.76	22.30	0.44
4.117	0.44	10.183	20.19	16.250	1.76	22.32	0.44
4.133	0.44	10.200	20.19	16.267	0.88	22.33	0.44
4.150	0.44	10.217	20.19	16.283	0.88	22.35	0.44
4.167	0.44	10.233	20.19	16.300	0.88	22.37	0.44
4.183	0.44	10.250	20.18	16.317	0.88	22.38	0.44
4.200	0.44	10.267	5.71	16.333	0.88	22.40	0.44
4.217	0.44	10.283	5.71	16.350	0.88	22.42	0.44
4.233	0.44	10.300	5.71	16.367	0.88	22.43	0.44
4.250	0.44	10.317	5.71	16.383	0.88	22.45	0.44
4.267	2.63	10.333	5.71	16.400	0.88	22.47	0.44
4.283	2.63	10.350	5.71	16.417	0.88	22.48	0.44
4.300	2.63	10.367	5.71	16.433	0.88	22.50	0.44
4.317	2.63	10.383	5.71	16.450	0.88	22.52	0.44
4.333	2.63	10.400	5.71	16.467	0.88	22.53	0.44
4.350	2.63	10.417	5.71	16.483	0.88	22.55	0.44
4.367	2.63	10.433	5.71	16.500	0.88	22.57	0.44
4.383	2.63	10.450	5.71	16.517	0.88	22.58	0.44
4.400	2.63	10.467	5.71	16.533	0.88	22.60	0.44
4.417	2.63	10.483	5.71	16.550	0.88	22.62	0.44
4.433	2.63	10.500	5.71	16.567	0.88	22.63	0.44
4.450	2.63	10.517	5.71	16.583	0.88	22.65	0.44
4.467	2.63	10.533	5.71	16.600	0.88	22.67	0.44
4.483	2.63	10.550	5.71	16.617	0.88	22.68	0.44
4.500	2.63	10.567	5.71	16.633	0.88	22.70	0.44
4.517	2.63	10.583	5.71	16.650	0.88	22.72	0.44
4.533	2.63	10.600	5.71	16.667	0.88	22.73	0.44
4.550	2.63	10.617	5.71	16.683	0.88	22.75	0.44
4.567	2.63	10.633	5.71	16.700	0.88	22.77	0.44
4.583	2.63	10.650	5.71	16.717	0.88	22.78	0.44
4.600	2.63	10.667	5.71	16.733	0.88	22.80	0.44
4.617	2.63	10.683	5.71	16.750	0.88	22.82	0.44
4.633	2.63	10.700	5.71	16.767	0.88	22.83	0.44
4.650	2.63	10.717	5.71	16.783	0.88	22.85	0.44
4.667	2.63	10.733	5.71	16.800	0.88	22.87	0.44
4.683	2.63	10.750	5.71	16.817	0.88	22.88	0.44
4.700	2.63	10.767	5.71	16.833	0.88	22.90	0.44
4.717	2.63	10.783	5.71	16.850	0.88	22.92	0.44
4.733	2.63	10.800	5.71	16.867	0.88	22.93	0.44
4.750	2.63	10.817	5.71	16.883	0.88	22.95	0.44
4.767	2.63	10.833	5.71	16.900	0.88	22.97	0.44
4.783	2.63	10.850	5.71	16.917	0.88	22.98	0.44
4.800	2.63	10.867	5.71	16.933	0.88	23.00	0.44
4.817	2.63	10.883	5.71	16.950	0.88	23.02	0.44
4.833	2.63	10.900	5.71	16.967	0.88	23.03	0.44
4.850	2.63	10.917	5.71	16.983	0.88	23.05	0.44
4.867	2.63	10.933	5.71	17.000	0.88	23.07	0.44
4.883	2.63	10.950	5.71	17.017	0.88	23.08	0.44
4.900	2.63	10.967	5.71	17.033	0.88	23.10	0.44
4.917	2.63	10.983	5.71	17.050	0.88	23.12	0.44
4.933	2.63	11.000	5.71	17.067	0.88	23.13	0.44
4.950	2.63	11.017	5.71	17.083	0.88	23.15	0.44
4.967	2.63	11.033	5.71	17.100	0.88	23.17	0.44
4.983	2.63	11.050	5.71	17.117	0.88	23.18	0.44
5.000	2.63	11.067	5.71	17.133	0.88	23.20	0.44
5.017	2.63	11.083	5.71	17.150	0.88	23.22	0.44
5.033	2.63	11.100	5.71	17.167	0.88	23.23	0.44
5.050	2.63	11.117	5.71	17.183	0.88	23.25	0.44
5.067	2.63	11.133	5.71	17.200	0.88	23.27	0.44
5.083	2.63	11.150	5.71	17.217	0.88	23.28	0.44
5.100	2.63	11.167	5.71	17.233	0.88	23.30	0.44
5.117	2.63	11.183	5.71	17.250	0.88	23.32	0.44
5.133	2.63	11.200	5.71	17.267	0.88	23.33	0.44
5.150	2.63	11.217	5.71	17.283	0.88	23.35	0.44
5.167	2.63	11.233	5.71	17.300	0.88	23.37	0.44
5.183	2.63	11.250	5.71	17.317	0.88	23.38	0.44
5.200	2.63	11.267	5.71	17.333	0.88	23.40	0.44
5.217	2.63	11.283	5.71	17.350	0.88	23.42	0.44
5.233	2.63	11.300	5.71	17.367	0.88	23.43	0.44
5.250	2.63	11.317	5.71	17.383	0.88	23.45	0.44
5.267	2.63	11.333	5.71	17.400	0.88	23.47	0.44
5.283	2.63	11.350	5.71	17.417	0.88	23.48	0.44
5.300	2.63	11.367	5.71	17.433	0.88	23.50	0.44
5.317	2.63	11.383	5.71	17.450	0.88	23.52	0.44
5.333	2.63	11.400	5.71	17.467	0.88	23.53	0.44
5.350	2.63	11.417	5.71	17.483	0.88	23.55	0.44
5.367	2.63	11.433	5.71	17.500	0.88	23.57	0.44
5.383	2.63	11.450	5.71	17.517	0.88	23.58	0.44
5.400	2.63	11.467	5.71	17.533	0.88	23.60	0.44
5.417	2.63	11.483	5.71	17.550	0.88	23.62	0.44
5.433	2.63	11.500	5.71	17.567	0.88	23.63	0.44
5.450	2.63	11.517	5.71	17.583	0.88	23.65	0.44
5.467	2.63	11.533	5.71	17.600	0.88	23.67	0.44
5.483	2.63	11.550	5.71	17.617	0.88	23.68	0.44
5.500	2.63	11.567	5.71	17.633	0.88	23.70	0.44
5.517	2.63	11.583	5.71	17.650	0.88	23.72	0.44
5.533	2.63	11.600	5.71	17.667	0.88	23.73	0.44
5.550	2.63	11.617	5.71	17.683	0.88	23.75	0.44
5.567	2.63	11.633	5.71	17.700	0.88	23.77	0.44
5.583	2.63	11.650	5.71	17.717	0.88	23.78	0.44
5.600	2.63	11.667	5.71	17.733	0.88	23.80	0.44
5.617	2.63	11.683	5.71	17.750	0.88	23.82	0.44
5.633	2.63	11.700	5.71	17.767	0.88	23.83	0.44
5.650	2.63	11.717	5.71	17.783	0.88	23.85	0.44
5.667	2.63	11.733	5.71	17.800	0.88	23.87	0.44
5.683	2.63	11.750	5.71	17.817	0.88	23.88	0.44
5.700	2.63	11.767	5.71	17.833	0.88	23.90	0.44
5.717	2.63	11.783	5.71	17.850	0.88	23.92	0.44
5.733	2.63	11.800	5.71	17.867	0.88	23.93	0.44
5.750	2.63	11.817	5.71	17.883	0.88	23.95	0.44
5.767	2.63	11.833	5.71	17.900	0.88	23.97	0.44
5.783	2.63	11.850	5.71	17.917	0.88	23.98	0.44
5.800	2.63	11.867	5.71	17.933	0.88	24.00	0.44
5.817	2.63	11.883	5.71	17.950	0.88	24.02	0.44
5.833	2.63	11.900	5.71	17.967	0.88	24.03	0.44
5.850	2.63	11.917	5.71	17.983	0.88	24.05	0.44
5.867	2.63	11.933	5.71	18.000	0.88	24.07	0.44
5.883	2.63	11.950	5.71	18.017	0.88	24.08	0.44
5.900	2.63	11.967	5.71	18.033	0.88	24.10	0.44
5.917	2.63	11.983	5.71	18.050	0.88	24.12	0.44
5.933	2.63	12.000	5.71	18.067	0.88	24.13	0.44
5.950	2.63	12.017	5.71	18.083	0.88	24.15	0.44
5.967	2.63	12.033	5.71	18.100	0.88	24.17	0.44
5.983	2.63	12.050	5.71	18.117	0.88	24.18	0.44
6.000	2.63	12.067	5.71	18.133	0.88	24.20	0.44
6.017	2.63	12.083	5.71	18.150	0.88	24.22	0.44
6.033	2.63	12.100	5.71	18.167	0.88	24.23	0.44
6.050	2.63	12.117	5.71	18.183	0.88	24.25	0.44
6.067	2.63	12.133	5.71	18.200	0.88		

Max.Eff.Inten.(mm/hr)=	20.19	18.08	
over (min)	5.00	9.00	
Storage Coeff. (min)=	5.12 (ii)	8.35 (ii)	
Unit Hyd. Tpeak (min)=	5.00	9.00	
Unit Hyd. peak (cms)=	0.22	0.13	
			TOTALS
PEAK FLOW (cms)=	0.10	0.00	0.101 (iii)
TIME TO PEAK (hrs)=	9.48	10.25	10.23
RUNOFF VOLUME (mm)=	86.79	65.03	86.58
TOTAL RAINFALL (mm)=	87.80	87.80	87.80
RUNOFF COEFFICIENT =	0.99	0.74	0.99

GEI Consultants

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      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  90.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| RESERVOIR(  7625)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0389      0.1013
                          0.0164     0.0514   |   0.0456      0.1141
                          0.0252     0.0690   |   0.0514      0.1288
                          0.0309     0.0825   |   0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  7624)     1.800     0.101     10.23      86.58
   OUTFLOW: ID= 1 (  7625)     1.800     0.033     10.53      80.67

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 32.92
                  TIME SHIFT OF PEAK FLOW         (min)= 18.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0879

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| CALIB           |
| STANDHYD (  7623)|   Area    (ha)=   1.15
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
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                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      1.14         0.01
     Dep. Storage     (mm)=      1.00         1.50
     Average Slope     (%)=      1.00         0.50
     Length            (m)=     87.56        40.00
     Mannings n           =     0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
  0.017    0.00 | 6.083    2.63 |12.150    5.71 | 18.22    0.88
  0.033    0.00 | 6.100    2.63 |12.167    5.71 | 18.23    0.88
  0.050    0.00 | 6.117    2.63 |12.183    5.71 | 18.25    0.88
  0.067    0.00 | 6.133    2.63 |12.200    5.71 | 18.27    0.44
  0.083    0.00 | 6.150    2.63 |12.217    5.71 | 18.28    0.44
  0.100    0.00 | 6.167    2.63 |12.233    5.71 | 18.30    0.44
  0.117    0.00 | 6.183    2.63 |12.250    5.71 | 18.32    0.44
  0.133    0.00 | 6.200    2.63 |12.267    3.07 | 18.33    0.44
  0.150    0.00 | 6.217    2.63 |12.283    3.07 | 18.35    0.44
  0.167    0.00 | 6.233    2.63 |12.300    3.07 | 18.37    0.44
  0.183    0.00 | 6.250    2.64 |12.317    3.07 | 18.38    0.44
  0.200    0.00 | 6.267    7.46 |12.333    3.07 | 18.40    0.44
  0.217    0.00 | 6.283    7.46 |12.350    3.07 | 18.42    0.44
  0.233    0.00 | 6.300    7.46 |12.367    3.07 | 18.43    0.44
  0.250    0.00 | 6.317    7.46 |12.383    3.07 | 18.45    0.44
  0.267    0.44 | 6.333    7.46 |12.400    3.07 | 18.47    0.44
  0.283    0.44 | 6.350    7.46 |12.417    3.07 | 18.48    0.44
  0.300    0.44 | 6.367    7.46 |12.433    3.07 | 18.50    0.44
  0.317    0.44 | 6.383    7.46 |12.450    3.07 | 18.52    0.44
  0.333    0.44 | 6.400    7.46 |12.467    3.07 | 18.53    0.44
  0.350    0.44 | 6.417    7.46 |12.483    3.07 | 18.55    0.44
  0.367    0.44 | 6.433    7.46 |12.500    3.07 | 18.57    0.44
  0.383    0.44 | 6.450    7.46 |12.517    3.07 | 18.58    0.44
  0.400    0.44 | 6.467    7.46 |12.533    3.07 | 18.60    0.44
  0.417    0.44 | 6.483    7.46 |12.550    3.07 | 18.62    0.44
  0.433    0.44 | 6.500    7.46 |12.567    3.07 | 18.63    0.44
  0.450    0.44 | 6.517    7.46 |12.583    3.07 | 18.65    0.44
  0.467    0.44 | 6.533    7.46 |12.600    3.07 | 18.67    0.44
  0.483    0.44 | 6.550    7.46 |12.617    3.07 | 18.68    0.44
  0.500    0.44 | 6.567    7.46 |12.633    3.07 | 18.70    0.44
  0.517    0.44 | 6.583    7.46 |12.650    3.07 | 18.72    0.44
  0.533    0.44 | 6.600    7.46 |12.667    3.07 | 18.73    0.44
  0.550    0.44 | 6.617    7.46 |12.683    3.07 | 18.75    0.44
  0.567    0.44 | 6.633    7.46 |12.700    3.07 | 18.77    0.44
  0.583    0.44 | 6.650    7.46 |12.717    3.07 | 18.78    0.44
  0.600    0.44 | 6.667    7.46 |12.733    3.07 | 18.80    0.44
  0.617    0.44 | 6.683    7.46 |12.750    3.07 | 18.82    0.44
  0.633    0.44 | 6.700    7.46 |12.767    3.07 | 18.83    0.44
  0.650    0.44 | 6.717    7.46 |12.783    3.07 | 18.85    0.44
  0.667    0.44 | 6.733    7.46 |12.800    3.07 | 18.87    0.44
  0.683    0.44 | 6.750    7.46 |12.817    3.07 | 18.88    0.44
  0.700    0.44 | 6.767    7.46 |12.833    3.07 | 18.90    0.44
  0.717    0.44 | 6.783    7.46 |12.850    3.07 | 18.92    0.44
  0.733    0.44 | 6.800    7.46 |12.867    3.07 | 18.93    0.44
  0.750    0.44 | 6.817    7.46 |12.883    3.07 | 18.95    0.44
  0.767    0.44 | 6.833    7.46 |12.900    3.07 | 18.97    0.44
  0.783    0.44 | 6.850    7.46 |12.917    3.07 | 18.98    0.44
  0.800    0.44 | 6.867    7.46 |12.933    3.07 | 19.00    0.44
  0.817    0.44 | 6.883    7.46 |12.950    3.07 | 19.02    0.44
  0.833    0.44 | 6.900    7.46 |12.967    3.07 | 19.03    0.44
  0.850    0.44 | 6.917    7.46 |12.983    3.07 | 19.05    0.44
  0.867    0.44 | 6.933    7.46 |13.000    3.07 | 19.07    0.44
  0.883    0.44 | 6.950    7.46 |13.017    3.07 | 19.08    0.44
  0.900    0.44 | 6.967    7.46 |13.033    3.07 | 19.10    0.44
  0.917    0.44 | 6.983    7.46 |13.050    3.07 | 19.12    0.44
  0.933    0.44 | 7.000    7.46 |13.067    3.07 | 19.13    0.44
  0.950    0.44 | 7.017    7.46 |13.083    3.07 | 19.15    0.44
  0.967    0.44 | 7.033    7.46 |13.100    3.07 | 19.17    0.44
  0.983    0.44 | 7.050    7.46 |13.117    3.07 | 19.18    0.44
  1.000    0.44 | 7.067    7.46 |13.133    3.07 | 19.20    0.44
  1.017    0.44 | 7.083    7.46 |13.150    3.07 | 19.22    0.44
  1.033    0.44 | 7.100    7.46 |13.167    3.07 | 19.23    0.44
  1.050    0.44 | 7.117    7.46 |13.183    3.07 | 19.25    0.44
  1.067    0.44 | 7.133    7.46 |13.200    3.07 | 19.27    0.44
  1.083    0.44 | 7.150    7.46 |13.217    3.07 | 19.28    0.44
  1.100    0.44 | 7.167    7.46 |13.233    3.07 | 19.30    0.44
  1.117    0.44 | 7.183    7.46 |13.250    3.07 | 19.32    0.44
  1.133    0.44 | 7.200    7.46 |13.267    3.07 | 19.33    0.44
  1.150    0.44 | 7.217    7.46 |13.283    3.07 | 19.35    0.44
  1.167    0.44 | 7.233    7.46 |13.300    3.07 | 19.37    0.44
  1.183    0.44 | 7.250    7.46 |13.317    3.07 | 19.38    0.44
  1.200    0.44 | 7.267    7.46 |13.333    3.07 | 19.40    0.44
  1.217    0.44 | 7.283    7.46 |13.350    3.07 | 19.42    0.44
  1.233    0.44 | 7.300    7.46 |13.367    3.07 | 19.43    0.44
  1.250    0.44 | 7.317    7.46 |13.383    3.07 | 19.45    0.44
  1.267    0.44 | 7.333    7.46 |13.400    3.07 | 19.47    0.44
  1.283    0.44 | 7.350    7.46 |13.417    3.07 | 19.48    0.44
  1.300    0.44 | 7.367    7.46 |13.433    3.07 | 19.50    0.44
  1.317    0.44 | 7.383    7.46 |13.450    3.07 | 19.52    0.44
  1.333    0.44 | 7.400    7.46 |13.467    3.07 | 19.53    0.44
  1.350    0.44 | 7.417    7.46 |13.483    3.07 | 19.55    0.44
  1.367    0.44 | 7.433    7.46 |13.500    3.07 | 19.57    0.44
  1.383    0.44 | 7.450    7.46 |13.517    3.07 | 19.58    0.44
  1.400    0.44 | 7.467    7.46 |13.533    3.07 | 19.60    0.44
  1.417    0.44 | 7.483    7.46 |13.550    3.07 | 19.62    0.44
  1.433    0.44 | 7.500    7.46 |13.567    3.07 | 19.63    0.44
  1.450    0.44 | 7.517    7.46 |13.583    3.07 | 19.65    0.44
  1.467    0.44 | 7.533    7.46 |13.600    3.07 | 19.67    0.44
  1.483    0.44 | 7.550    7.46 |13.617    3.07 | 19.68    0.44
  1.500    0.44 | 7.567    7.46 |13.633    3.07 | 19.70    0.44
  1.517    0.44 | 7.583    7.46 |13.650    3.07 | 19.72    0.44
  1.533    0.44 | 7.600    7.46 |13.667    3.07 | 19.73    0.44
  1.550    0.44 | 7.617    7.46 |13.683    3.07 | 19.75    0.44
  1.567    0.44 | 7.633    7.46 |13.700    3.07 | 19.77    0.44
  1.583    0.44 | 7.650    7.46 |13.717    3.07 | 19.78    0.44
  1.600    0.44 | 7.667    7.46 |13.733    3.07 | 19.80    0.44
  1.617    0.44 | 7.683    7.46 |13.750    3.07 | 19.82    0.44
  1.633    0.44 | 7.700    7.46 |13.767    3.07 | 19.83    0.44
  1.650    0.44 | 7.717    7.46 |13.783    3.07 | 19.85    0.44
  1.667    0.44 | 7.733    7.46 |13.800    3.07 | 19.87    0.44
  1.683    0.44 | 7.750    7.46 |13.817    3.07 | 19.88    0.44
  1.700    0.44 | 7.767    7.46 |13.833    3.07 | 19.90    0.44
  1.717    0.44 | 7.783    7.46 |13.850    3.07 | 19.92    0.44
  1.733    0.44 | 7.800    7.46 |13.867    3.07 | 19.93    0.44
  1.750    0.44 | 7.817    7.46 |13.883    3.07 | 19.95    0.44
  1.767    0.44 | 7.833    7.46 |13.900    3.07 | 19.97    0.44
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1.783	0.44	7.850	7.46	13.917	3.07	19.98	0.44
1.800	0.44	7.867	7.46	13.933	3.07	20.00	0.44
1.817	0.44	7.883	7.46	13.950	3.07	20.02	0.44
1.833	0.44	7.900	7.46	13.967	3.07	20.03	0.44
1.850	0.44	7.917	7.46	13.983	3.07	20.05	0.44
1.867	0.44	7.933	7.46	14.000	3.07	20.07	0.44
1.883	0.44	7.950	7.46	14.017	3.07	20.08	0.44
1.900	0.44	7.967	7.46	14.033	3.07	20.10	0.44
1.917	0.44	7.983	7.46	14.050	3.07	20.12	0.44
1.933	0.44	8.000	7.46	14.067	3.07	20.13	0.44
1.950	0.44	8.017	7.46	14.083	3.07	20.15	0.44
1.967	0.44	8.033	7.46	14.100	3.07	20.17	0.44
1.983	0.44	8.050	7.46	14.117	3.07	20.18	0.44
2.000	0.44	8.067	7.46	14.133	3.07	20.20	0.44
2.017	0.44	8.083	7.46	14.150	3.07	20.22	0.44
2.033	0.44	8.100	7.46	14.167	3.07	20.23	0.44
2.050	0.44	8.117	7.46	14.183	3.07	20.25	0.44
2.067	0.44	8.133	7.46	14.200	3.07	20.27	0.44
2.083	0.44	8.150	7.46	14.217	3.07	20.28	0.44
2.100	0.44	8.167	7.46	14.233	3.07	20.30	0.44
2.117	0.44	8.183	7.46	14.250	3.07	20.32	0.44
2.133	0.44	8.200	7.46	14.267	1.76	20.33	0.44
2.150	0.44	8.217	7.46	14.283	1.76	20.35	0.44
2.167	0.44	8.233	7.46	14.300	1.76	20.37	0.44
2.183	0.44	8.250	7.49	14.317	1.76	20.38	0.44
2.200	0.44	8.267	20.19	14.333	1.76	20.40	0.44
2.217	0.44	8.283	20.19	14.350	1.76	20.42	0.44
2.233	0.44	8.300	20.19	14.367	1.76	20.43	0.44
2.250	0.44	8.317	20.19	14.383	1.76	20.45	0.44
2.267	0.44	8.333	20.19	14.400	1.76	20.47	0.44
2.283	0.44	8.350	20.19	14.417	1.76	20.48	0.44
2.300	0.44	8.367	20.19	14.433	1.76	20.50	0.44
2.317	0.44	8.383	20.19	14.450	1.76	20.52	0.44
2.333	0.44	8.400	20.19	14.467	1.76	20.53	0.44
2.350	0.44	8.417	20.19	14.483	1.76	20.55	0.44
2.367	0.44	8.433	20.19	14.500	1.76	20.57	0.44
2.383	0.44	8.450	20.19	14.517	1.76	20.58	0.44
2.400	0.44	8.467	20.19	14.533	1.76	20.60	0.44
2.417	0.44	8.483	20.19	14.550	1.76	20.62	0.44
2.433	0.44	8.500	20.19	14.567	1.76	20.63	0.44
2.450	0.44	8.517	20.19	14.583	1.76	20.65	0.44
2.467	0.44	8.533	20.19	14.600	1.76	20.67	0.44
2.483	0.44	8.550	20.19	14.617	1.76	20.68	0.44
2.500	0.44	8.567	20.19	14.633	1.76	20.70	0.44
2.517	0.44	8.583	20.19	14.650	1.76	20.72	0.44
2.533	0.44	8.600	20.19	14.667	1.76	20.73	0.44
2.550	0.44	8.617	20.19	14.683	1.76	20.75	0.44
2.567	0.44	8.633	20.19	14.700	1.76	20.77	0.44
2.583	0.44	8.650	20.19	14.717	1.76	20.78	0.44
2.600	0.44	8.667	20.19	14.733	1.76	20.80	0.44
2.617	0.44	8.683	20.19	14.750	1.76	20.82	0.44
2.633	0.44	8.700	20.19	14.767	1.76	20.83	0.44
2.650	0.44	8.717	20.19	14.783	1.76	20.85	0.44
2.667	0.44	8.733	20.19	14.800	1.76	20.87	0.44
2.683	0.44	8.750	20.19	14.817	1.76	20.88	0.44
2.700	0.44	8.767	20.19	14.833	1.76	20.90	0.44
2.717	0.44	8.783	20.19	14.850	1.76	20.92	0.44
2.733	0.44	8.800	20.19	14.867	1.76	20.93	0.44
2.750	0.44	8.817	20.19	14.883	1.76	20.95	0.44
2.767	0.44	8.833	20.19	14.900	1.76	20.97	0.44
2.783	0.44	8.850	20.19	14.917	1.76	20.98	0.44
2.800	0.44	8.867	20.19	14.933	1.76	21.00	0.44
2.817	0.44	8.883	20.19	14.950	1.76	21.02	0.44
2.833	0.44	8.900	20.19	14.967	1.76	21.03	0.44
2.850	0.44	8.917	20.19	14.983	1.76	21.05	0.44
2.867	0.44	8.933	20.19	15.000	1.76	21.07	0.44
2.883	0.44	8.950	20.19	15.017	1.76	21.08	0.44
2.900	0.44	8.967	20.19	15.033	1.76	21.10	0.44
2.917	0.44	8.983	20.19	15.050	1.76	21.12	0.44
2.933	0.44	9.000	20.19	15.067	1.76	21.13	0.44
2.950	0.44	9.017	20.19	15.083	1.76	21.15	0.44
2.967	0.44	9.033	20.19	15.100	1.76	21.17	0.44
2.983	0.44	9.050	20.19	15.117	1.76	21.18	0.44
3.000	0.44	9.067	20.19	15.133	1.76	21.20	0.44
3.017	0.44	9.083	20.19	15.150	1.76	21.22	0.44
3.033	0.44	9.100	20.19	15.167	1.76	21.23	0.44
3.050	0.44	9.117	20.19	15.183	1.76	21.25	0.44
3.067	0.44	9.133	20.19	15.200	1.76	21.27	0.44
3.083	0.44	9.150	20.19	15.217	1.76	21.28	0.44
3.100	0.44	9.167	20.19	15.233	1.76	21.30	0.44
3.117	0.44	9.183	20.19	15.250	1.76	21.32	0.44
3.133	0.44	9.200	20.19	15.267	1.76	21.33	0.44
3.150	0.44	9.217	20.19	15.283	1.76	21.35	0.44
3.167	0.44	9.233	20.19	15.300	1.76	21.37	0.44
3.183	0.44	9.250	20.19	15.317	1.76	21.38	0.44
3.200	0.44	9.267	20.19	15.333	1.76	21.40	0.44
3.217	0.44	9.283	20.19	15.350	1.76	21.42	0.44
3.233	0.44	9.300	20.19	15.367	1.76	21.43	0.44
3.250	0.44	9.317	20.19	15.383	1.76	21.45	0.44
3.267	0.44	9.333	20.19	15.400	1.76	21.47	0.44
3.283	0.44	9.350	20.19	15.417	1.76	21.48	0.44
3.300	0.44	9.367	20.19	15.433	1.76	21.50	0.44
3.317	0.44	9.383	20.19	15.450	1.76	21.52	0.44
3.333	0.44	9.400	20.19	15.467	1.76	21.53	0.44
3.350	0.44	9.417	20.19	15.483	1.76	21.55	0.44
3.367	0.44	9.433	20.19	15.500	1.76	21.57	0.44
3.383	0.44	9.450	20.19	15.517	1.76	21.58	0.44
3.400	0.44	9.467	20.19	15.533	1.76	21.60	0.44
3.417	0.44	9.483	20.19	15.550	1.76	21.62	0.44
3.433	0.44	9.500	20.19	15.567	1.76	21.63	0.44
3.450	0.44	9.517	20.19	15.583	1.76	21.65	0.44
3.467	0.44	9.533	20.19	15.600	1.76	21.67	0.44
3.483	0.44	9.550	20.19	15.617	1.76	21.68	0.44
3.500	0.44	9.567	20.19	15.633	1.76	21.70	0.44
3.517	0.44	9.583	20.19	15.650	1.76	21.72	0.44
3.533	0.44	9.600	20.19	15.667	1.76	21.73	0.44
3.550	0.44	9.617	20.19	15.683	1.76	21.75	0.44
3.567	0.44	9.633	20.19	15.700	1.76	21.77	0.44
3.583	0.44	9.650	20.19	15.717	1.76	21.78	0.44
3.600	0.44	9.667	20.19	15.733	1.76	21.80	0.44
3.617	0.44	9.683	20.19	15.750	1.76	21.82	0.44
3.633	0.44	9.700	20.19	15.767	1.76	21.83	0.44
3.650	0.44	9.717	20.19	15.783	1.76	21.85	0.44
3.667	0.44	9.733	20.19	15.800	1.76	21.87	0.44
3.683	0.44	9.750	20.19	15.817	1.76	21.88	0.44
3.700	0.44	9.767	20.19	15.833	1.76	21.90	0.44
3.717	0.44	9.783	20.19	15.850	1.76	21.92	0.44
3.733	0.44	9.800	20.19	15.867	1.76	21.93	0.44
3.750	0.44	9.817	20.19	15.883	1.76	21.95	0.44
3.767	0.44	9.833	20.19	15.900	1.76	21.97	0.44
3.783	0.44	9.850	20.19	15.917	1.76	21.98	0.44
3.800	0.44	9.867	20.19	15.933	1.76	22.00	0.44
3.817	0.44	9.883	20.19	15.950	1.76	22.02	0.44
3.833	0.44	9.900	20.19	15.967	1.76	22.03	0.44
3.850	0.44	9.917	20.19	15.983	1.76	22.05	0.44
3.867	0.44	9.933	20.19	16.000	1.76	22.07	0.44
3.883	0.44	9.950	20.19	16.017	1.76	22.08	0.44
3.900	0.44	9.967	20.19	16.033	1.76	22.10	0.44
3.917	0.44	9.983	20.19	16.050	1.76	22.12	0.44
3.933	0.44	10.000	20.19	16.067	1.76	22.13	0.44
3.950	0.44	10.017	20.19	16.083	1.76	22.15	0.44
3.967	0.44	10.033	20.19	16.100	1.76	22.17	0.44
3.983	0.44	10.050	20.19	16.117	1.76	22.18	0.44
4.000	0.44	10.067	20.19	16.133	1.76	22.20	0.44
4.017	0.44	10.083	20.19	16.150	1.76	22.22	0.44
4.033	0.44	10.100	20.19	16.167	1.76	22.23	0.44
4.050	0.44	10.117	20.19	16.183	1.76	22.25	0.44
4.067	0.44	10.133	20.19	16.200	1.76	22.27	0.44
4.083	0.44	10.150	20.19	16.217	1.76	22.28	0.44
4.100	0.44	10.167	20.19	16.233	1.76	22.30	0.44
4.117	0.44	10.183	20.19	16.250	1.76	22.32	0.44
4.133	0.44	10.200	20.19	16.267	0.88	22.33	0.44
4.150	0.44	10.217	20.19	16.283	0.88	22.35	0.44
4.167	0.44	10.233	20.19	16.300	0.88	22.37	0.44
4.183	0.44	10.250	20.18	16.317	0.88	22.38	0.44
4.200	0.44	10.267	5.71	16.333	0.88	22.40	0.44
4.217	0.44	10.283	5.71	16.350	0.88	22.42	0.44
4.233	0.44	10.300	5.71	16.367	0.88	22.43	0.44
4.250	0.44	10.317	5.71	16.383	0.88	22.45	0.44
4.267	2.63	10.333	5.71	16.400	0.88	22.47	0.44
4.283	2.63	10.350	5.71	16.417	0.88	22.48	0.44
4.300	2.63	10.367	5.71	16.433	0.88	22.50	0.44

4.317	2.63	10.383	5.71	16.450	0.88	22.52	0.44
4.333	2.63	10.400	5.71	16.467	0.88	22.53	0.44
4.350	2.63	10.417	5.71	16.483	0.88	22.55	0.44
4.367	2.63	10.433	5.71	16.500	0.88	22.57	0.44
4.383	2.63	10.450	5.71	16.517	0.88	22.58	0.44
4.400	2.63	10.467	5.71	16.533	0.88	22.60	0.44
4.417	2.63	10.483	5.71	16.550	0.88	22.62	0.44
4.433	2.63	10.500	5.71	16.567	0.88	22.63	0.44
4.450	2.63	10.517	5.71	16.583	0.88	22.65	0.44
4.467	2.63	10.533	5.71	16.600	0.88	22.67	0.44
4.483	2.63	10.550	5.71	16.617	0.88	22.68	0.44
4.500	2.63	10.567	5.71	16.633	0.88	22.70	0.44
4.517	2.63	10.583	5.71	16.650	0.88	22.72	0.44
4.533	2.63	10.600	5.71	16.667	0.88	22.73	0.44
4.550	2.63	10.617	5.71	16.683	0.88	22.75	0.44
4.567	2.63	10.633	5.71	16.700	0.88	22.77	0.44
4.583	2.63	10.650	5.71	16.717	0.88	22.78	0.44
4.600	2.63	10.667	5.71	16.733	0.88	22.80	0.44
4.617	2.63	10.683	5.71	16.750	0.88	22.82	0.44
4.633	2.63	10.700	5.71	16.767	0.88	22.83	0.44
4.650	2.63	10.717	5.71	16.783	0.88	22.85	0.44
4.667	2.63	10.733	5.71	16.800	0.88	22.87	0.44
4.683	2.63	10.750	5.71	16.817	0.88	22.88	0.44
4.700	2.63	10.767	5.71	16.833	0.88	22.90	0.44
4.717	2.63	10.783	5.71	16.850	0.88	22.92	0.44
4.733	2.63	10.800	5.71	16.867	0.88	22.93	0.44
4.750	2.63	10.817	5.71	16.883	0.88	22.95	0.44
4.767	2.63	10.833	5.71	16.900	0.88	22.97	0.44
4.783	2.63	10.850	5.71	16.917	0.88	22.98	0.44
4.800	2.63	10.867	5.71	16.933	0.88	23.00	0.44
4.817	2.63	10.883	5.71	16.950	0.88	23.02	0.44
4.833	2.63	10.900	5.71	16.967	0.88	23.03	0.44
4.850	2.63	10.917	5.71	16.983	0.88	23.05	0.44
4.867	2.63	10.933	5.71	17.000	0.88	23.07	0.44
4.883	2.63	10.950	5.71	17.017	0.88	23.08	0.44
4.900	2.63	10.967	5.71	17.033	0.88	23.10	0.44
4.917	2.63	10.983	5.71	17.050	0.88	23.12	0.44
4.933	2.63	11.000	5.71	17.067	0.88	23.13	0.44
4.950	2.63	11.017	5.71	17.083	0.88	23.15	0.44
4.967	2.63	11.033	5.71	17.100	0.88	23.17	0.44
4.983	2.63	11.050	5.71	17.117	0.88	23.18	0.44
5.000	2.63	11.067	5.71	17.133	0.88	23.20	0.44
5.017	2.63	11.083	5.71	17.150	0.88	23.22	0.44
5.033	2.63	11.100	5.71	17.167	0.88	23.23	0.44
5.050	2.63	11.117	5.71	17.183	0.88	23.25	0.44
5.067	2.63	11.133	5.71	17.200	0.88	23.27	0.44
5.083	2.63	11.150	5.71	17.217	0.88	23.28	0.44
5.100	2.63	11.167	5.71	17.233	0.88	23.30	0.44
5.117	2.63	11.183	5.71	17.250	0.88	23.32	0.44
5.133	2.63	11.200	5.71	17.267	0.88	23.33	0.44
5.150	2.63	11.217	5.71	17.283	0.88	23.35	0.44
5.167	2.63	11.233	5.71	17.300	0.88	23.37	0.44
5.183	2.63	11.250	5.71	17.317	0.88	23.38	0.44
5.200	2.63	11.267	5.71	17.333	0.88	23.40	0.44
5.217	2.63	11.283	5.71	17.350	0.88	23.42	0.44
5.233	2.63	11.300	5.71	17.367	0.88	23.43	0.44
5.250	2.63	11.317	5.71	17.383	0.88	23.45	0.44
5.267	2.63	11.333	5.71	17.400	0.88	23.47	0.44
5.283	2.63	11.350	5.71	17.417	0.88	23.48	0.44
5.300	2.63	11.367	5.71	17.433	0.88	23.50	0.44
5.317	2.63	11.383	5.71	17.450	0.88	23.52	0.44
5.333	2.63	11.400	5.71	17.467	0.88	23.53	0.44
5.350	2.63	11.417	5.71	17.483	0.88	23.55	0.44
5.367	2.63	11.433	5.71	17.500	0.88	23.57	0.44
5.383	2.63	11.450	5.71	17.517	0.88	23.58	0.44
5.400	2.63	11.467	5.71	17.533	0.88	23.60	0.44
5.417	2.63	11.483	5.71	17.550	0.88	23.62	0.44
5.433	2.63	11.500	5.71	17.567	0.88	23.63	0.44
5.450	2.63	11.517	5.71	17.583	0.88	23.65	0.44
5.467	2.63	11.533	5.71	17.600	0.88	23.67	0.44
5.483	2.63	11.550	5.71	17.617	0.88	23.68	0.44
5.500	2.63	11.567	5.71	17.633	0.88	23.70	0.44
5.517	2.63	11.583	5.71	17.650	0.88	23.72	0.44
5.533	2.63	11.600	5.71	17.667	0.88	23.73	0.44
5.550	2.63	11.617	5.71	17.683	0.88	23.75	0.44
5.567	2.63	11.633	5.71	17.700	0.88	23.77	0.44
5.583	2.63	11.650	5.71	17.717	0.88	23.78	0.44
5.600	2.63	11.667	5.71	17.733	0.88	23.80	0.44
5.617	2.63	11.683	5.71	17.750	0.88	23.82	0.44
5.633	2.63	11.700	5.71	17.767	0.88	23.83	0.44
5.650	2.63	11.717	5.71	17.783	0.88	23.85	0.44
5.667	2.63	11.733	5.71	17.800	0.88	23.87	0.44
5.683	2.63	11.750	5.71	17.817	0.88	23.88	0.44
5.700	2.63	11.767	5.71	17.833	0.88	23.90	0.44
5.717	2.63	11.783	5.71	17.850	0.88	23.92	0.44
5.733	2.63	11.800	5.71	17.867	0.88	23.93	0.44
5.750	2.63	11.817	5.71	17.883	0.88	23.95	0.44
5.767	2.63	11.833	5.71	17.900	0.88	23.97	0.44
5.783	2.63	11.850	5.71	17.917	0.88	23.98	0.44
5.800	2.63	11.867	5.71	17.933	0.88	24.00	0.44
5.817	2.63	11.883	5.71	17.950	0.88	24.02	0.44
5.833	2.63	11.900	5.71	17.967	0.88	24.03	0.44
5.850	2.63	11.917	5.71	17.983	0.88	24.05	0.44
5.867	2.63	11.933	5.71	18.000	0.88	24.07	0.44
5.883	2.63	11.950	5.71	18.017	0.88	24.08	0.44
5.900	2.63	11.967	5.71	18.033	0.88	24.10	0.44
5.917	2.63	11.983	5.71	18.050	0.88	24.12	0.44
5.933	2.63	12.000	5.71	18.067	0.88	24.13	0.44
5.950	2.63	12.017	5.71	18.083	0.88	24.15	0.44
5.967	2.63	12.033	5.71	18.100	0.88	24.17	0.44
5.983	2.63	12.050	5.71	18.117	0.88	24.18	0.44
6.000	2.63	12.067	5.71	18.133	0.88	24.20	0.44
6.017	2.63	12.083	5.71	18.150	0.88	24.22	0.44
6.033	2.63	12.100	5.71	18.167	0.88	24.23	0.44
6.050	2.63	12.117	5.71	18.183	0.88	24.25	0.44
6.067	2.63	12.133	5.71	18.200	0.88		

Max.Eff.Inten.(mm/hr)=	20.19	16.43	
over (min)	5.00	8.00	
Storage Coeff. (min)=	4.47 (ii)	7.70 (ii)	
Unit Hyd. Tpeak (min)=	5.00	8.00	
Unit Hyd. peak (cms)=	0.24	0.15	
			TOTALS
PEAK FLOW (cms)=	0.06	0.00	0.064 (iii)
TIME TO PEAK (hrs)=	9.47	10.25	10.23
RUNOFF VOLUME (mm)=	86.78	56.80	86.50
TOTAL RAINFALL (mm)=	87.80	87.80	87.80
RUNOFF COEFFICIENT =	0.99	0.65	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7622)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0258	0.0650
	0.0108	0.0330	0.0302	0.0725
	0.0167	0.0440	0.0340	0.0820
	0.0204	0.0525	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7623)	1.150	0.064	10.23	86.50
OUTFLOW: ID= 1 (7622)	1.150	0.022	10.48	80.99

PEAK FLOW REDUCTION [Qout/Qin](%)= 33.86
TIME SHIFT OF PEAK FLOW (min)= 15.00
MAXIMUM STORAGE USED (ha.m.)= 0.0557

CALIB		
STANDHYD (7629)	Area (ha)= 4.09	
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00

GEI Consultants

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	4.05	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	165.13	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	2.63	12.150	5.71	18.22	0.88
0.033	0.00	6.100	2.63	12.167	5.71	18.23	0.88
0.050	0.00	6.117	2.63	12.183	5.71	18.25	0.88
0.067	0.00	6.133	2.63	12.200	5.71	18.27	0.44
0.083	0.00	6.150	2.63	12.217	5.71	18.28	0.44
0.100	0.00	6.167	2.63	12.233	5.71	18.30	0.44
0.117	0.00	6.183	2.63	12.250	5.71	18.32	0.44
0.133	0.00	6.200	2.63	12.267	3.07	18.33	0.44
0.150	0.00	6.217	2.63	12.283	3.07	18.35	0.44
0.167	0.00	6.233	2.63	12.300	3.07	18.37	0.44
0.183	0.00	6.250	2.64	12.317	3.07	18.38	0.44
0.200	0.00	6.267	7.46	12.333	3.07	18.40	0.44
0.217	0.00	6.283	7.46	12.350	3.07	18.42	0.44
0.233	0.00	6.300	7.46	12.367	3.07	18.43	0.44
0.250	0.00	6.317	7.46	12.383	3.07	18.45	0.44
0.267	0.44	6.333	7.46	12.400	3.07	18.47	0.44
0.283	0.44	6.350	7.46	12.417	3.07	18.48	0.44
0.300	0.44	6.367	7.46	12.433	3.07	18.50	0.44
0.317	0.44	6.383	7.46	12.450	3.07	18.52	0.44
0.333	0.44	6.400	7.46	12.467	3.07	18.53	0.44
0.350	0.44	6.417	7.46	12.483	3.07	18.55	0.44
0.367	0.44	6.433	7.46	12.500	3.07	18.57	0.44
0.383	0.44	6.450	7.46	12.517	3.07	18.58	0.44
0.400	0.44	6.467	7.46	12.533	3.07	18.60	0.44
0.417	0.44	6.483	7.46	12.550	3.07	18.62	0.44
0.433	0.44	6.500	7.46	12.567	3.07	18.63	0.44
0.450	0.44	6.517	7.46	12.583	3.07	18.65	0.44
0.467	0.44	6.533	7.46	12.600	3.07	18.67	0.44
0.483	0.44	6.550	7.46	12.617	3.07	18.68	0.44
0.500	0.44	6.567	7.46	12.633	3.07	18.70	0.44
0.517	0.44	6.583	7.46	12.650	3.07	18.72	0.44
0.533	0.44	6.600	7.46	12.667	3.07	18.73	0.44
0.550	0.44	6.617	7.46	12.683	3.07	18.75	0.44
0.567	0.44	6.633	7.46	12.700	3.07	18.77	0.44
0.583	0.44	6.650	7.46	12.717	3.07	18.78	0.44
0.600	0.44	6.667	7.46	12.733	3.07	18.80	0.44
0.617	0.44	6.683	7.46	12.750	3.07	18.82	0.44
0.633	0.44	6.700	7.46	12.767	3.07	18.83	0.44
0.650	0.44	6.717	7.46	12.783	3.07	18.85	0.44
0.667	0.44	6.733	7.46	12.800	3.07	18.87	0.44
0.683	0.44	6.750	7.46	12.817	3.07	18.88	0.44
0.700	0.44	6.767	7.46	12.833	3.07	18.90	0.44
0.717	0.44	6.783	7.46	12.850	3.07	18.92	0.44
0.733	0.44	6.800	7.46	12.867	3.07	18.93	0.44
0.750	0.44	6.817	7.46	12.883	3.07	18.95	0.44
0.767	0.44	6.833	7.46	12.900	3.07	18.97	0.44
0.783	0.44	6.850	7.46	12.917	3.07	18.98	0.44
0.800	0.44	6.867	7.46	12.933	3.07	19.00	0.44
0.817	0.44	6.883	7.46	12.950	3.07	19.02	0.44
0.833	0.44	6.900	7.46	12.967	3.07	19.03	0.44
0.850	0.44	6.917	7.46	12.983	3.07	19.05	0.44
0.867	0.44	6.933	7.46	13.000	3.07	19.07	0.44
0.883	0.44	6.950	7.46	13.017	3.07	19.08	0.44
0.900	0.44	6.967	7.46	13.033	3.07	19.10	0.44
0.917	0.44	6.983	7.46	13.050	3.07	19.12	0.44
0.933	0.44	7.000	7.46	13.067	3.07	19.13	0.44
0.950	0.44	7.017	7.46	13.083	3.07	19.15	0.44
0.967	0.44	7.033	7.46	13.100	3.07	19.17	0.44
0.983	0.44	7.050	7.46	13.117	3.07	19.18	0.44
1.000	0.44	7.067	7.46	13.133	3.07	19.20	0.44
1.017	0.44	7.083	7.46	13.150	3.07	19.22	0.44
1.033	0.44	7.100	7.46	13.167	3.07	19.23	0.44
1.050	0.44	7.117	7.46	13.183	3.07	19.25	0.44
1.067	0.44	7.133	7.46	13.200	3.07	19.27	0.44
1.083	0.44	7.150	7.46	13.217	3.07	19.28	0.44
1.100	0.44	7.167	7.46	13.233	3.07	19.30	0.44
1.117	0.44	7.183	7.46	13.250	3.07	19.32	0.44
1.133	0.44	7.200	7.46	13.267	3.07	19.33	0.44
1.150	0.44	7.217	7.46	13.283	3.07	19.35	0.44
1.167	0.44	7.233	7.46	13.300	3.07	19.37	0.44
1.183	0.44	7.250	7.46	13.317	3.07	19.38	0.44
1.200	0.44	7.267	7.46	13.333	3.07	19.40	0.44
1.217	0.44	7.283	7.46	13.350	3.07	19.42	0.44
1.233	0.44	7.300	7.46	13.367	3.07	19.43	0.44
1.250	0.44	7.317	7.46	13.383	3.07	19.45	0.44
1.267	0.44	7.333	7.46	13.400	3.07	19.47	0.44
1.283	0.44	7.350	7.46	13.417	3.07	19.48	0.44
1.300	0.44	7.367	7.46	13.433	3.07	19.50	0.44
1.317	0.44	7.383	7.46	13.450	3.07	19.52	0.44
1.333	0.44	7.400	7.46	13.467	3.07	19.53	0.44
1.350	0.44	7.417	7.46	13.483	3.07	19.55	0.44
1.367	0.44	7.433	7.46	13.500	3.07	19.57	0.44
1.383	0.44	7.450	7.46	13.517	3.07	19.58	0.44
1.400	0.44	7.467	7.46	13.533	3.07	19.60	0.44
1.417	0.44	7.483	7.46	13.550	3.07	19.62	0.44
1.433	0.44	7.500	7.46	13.567	3.07	19.63	0.44
1.450	0.44	7.517	7.46	13.583	3.07	19.65	0.44
1.467	0.44	7.533	7.46	13.600	3.07	19.67	0.44
1.483	0.44	7.550	7.46	13.617	3.07	19.68	0.44
1.500	0.44	7.567	7.46	13.633	3.07	19.70	0.44
1.517	0.44	7.583	7.46	13.650	3.07	19.72	0.44
1.533	0.44	7.600	7.46	13.667	3.07	19.73	0.44
1.550	0.44	7.617	7.46	13.683	3.07	19.75	0.44
1.567	0.44	7.633	7.46	13.700	3.07	19.77	0.44
1.583	0.44	7.650	7.46	13.717	3.07	19.78	0.44
1.600	0.44	7.667	7.46	13.733	3.07	19.80	0.44
1.617	0.44	7.683	7.46	13.750	3.07	19.82	0.44
1.633	0.44	7.700	7.46	13.767	3.07	19.83	0.44
1.650	0.44	7.717	7.46	13.783	3.07	19.85	0.44
1.667	0.44	7.733	7.46	13.800	3.07	19.87	0.44
1.683	0.44	7.750	7.46	13.817	3.07	19.88	0.44
1.700	0.44	7.767	7.46	13.833	3.07	19.90	0.44
1.717	0.44	7.783	7.46	13.850	3.07	19.92	0.44
1.733	0.44	7.800	7.46	13.867	3.07	19.93	0.44
1.750	0.44	7.817	7.46	13.883	3.07	19.95	0.44
1.767	0.44	7.833	7.46	13.900	3.07	19.97	0.44
1.783	0.44	7.850	7.46	13.917	3.07	19.98	0.44
1.800	0.44	7.867	7.46	13.933	3.07	20.00	0.44
1.817	0.44	7.883	7.46	13.950	3.07	20.02	0.44
1.833	0.44	7.900	7.46	13.967	3.07	20.03	0.44
1.850	0.44	7.917	7.46	13.983	3.07	20.05	0.44
1.867	0.44	7.933	7.46	14.000	3.07	20.07	0.44
1.883	0.44	7.950	7.46	14.017	3.07	20.08	0.44
1.900	0.44	7.967	7.46	14.033	3.07	20.10	0.44
1.917	0.44	7.983	7.46	14.050	3.07	20.12	0.44
1.933	0.44	8.000	7.46	14.067	3.07	20.13	0.44
1.950	0.44	8.017	7.46	14.083	3.07	20.15	0.44
1.967	0.44	8.033	7.46	14.100	3.07	20.17	0.44
1.983	0.44	8.050	7.46	14.117	3.07	20.18	0.44
2.000	0.44	8.067	7.46	14.133	3.07	20.20	0.44
2.017	0.44	8.083	7.46	14.150	3.07	20.22	0.44
2.033	0.44	8.100	7.46	14.167	3.07	20.23	0.44
2.050	0.44	8.117	7.46	14.183	3.07	20.25	0.44
2.067	0.44	8.133	7.46	14.200	3.07	20.27	0.44
2.083	0.44	8.150	7.46	14.217	3.07	20.28	0.44
2.100	0.44	8.167	7.46	14.233	3.07	20.30	0.44
2.117	0.44	8.183	7.46	14.250	3.07	20.32	0.44
2.133	0.44	8.200	7.46	14.267	1.76	20.33	0.44
2.150	0.44	8.217	7.46	14.283	1.76	20.35	0.44
2.167	0.44	8.233	7.46	14.300	1.76	20.37	0.44
2.183	0.44	8.250	7.49	14.317	1.76	20.38	0.44
2.200	0.44	8.267	20.19	14.333	1.76	20.40	0.44
2.217	0.44	8.283	20.19	14.350	1.76	20.42	0.44
2.233	0.44	8.300	20.19	14.367	1.76	20.43	0.44
2.250	0.44	8.317	20.19	14.383	1.76	20.45	0.44
2.267	0.44	8.333	20.19	14.400	1.76	20.47	0.44
2.283	0.44	8.350	20.19	14.417	1.76	20.48	0.44
2.300	0.44	8.367	20.19	14.433	1.76	20.50	0.44
2.317	0.44	8.383	20.19	14.450	1.76	20.52	0.44

2.333	0.44	8.400	20.19	14.467	1.76	20.53	0.44
2.350	0.44	8.417	20.19	14.483	1.76	20.55	0.44
2.367	0.44	8.433	20.19	14.500	1.76	20.57	0.44
2.383	0.44	8.450	20.19	14.517	1.76	20.58	0.44
2.400	0.44	8.467	20.19	14.533	1.76	20.60	0.44
2.417	0.44	8.483	20.19	14.550	1.76	20.62	0.44
2.433	0.44	8.500	20.19	14.567	1.76	20.63	0.44
2.450	0.44	8.517	20.19	14.583	1.76	20.65	0.44
2.467	0.44	8.533	20.19	14.600	1.76	20.67	0.44
2.483	0.44	8.550	20.19	14.617	1.76	20.68	0.44
2.500	0.44	8.567	20.19	14.633	1.76	20.70	0.44
2.517	0.44	8.583	20.19	14.650	1.76	20.72	0.44
2.533	0.44	8.600	20.19	14.667	1.76	20.73	0.44
2.550	0.44	8.617	20.19	14.683	1.76	20.75	0.44
2.567	0.44	8.633	20.19	14.700	1.76	20.77	0.44
2.583	0.44	8.650	20.19	14.717	1.76	20.78	0.44
2.600	0.44	8.667	20.19	14.733	1.76	20.80	0.44
2.617	0.44	8.683	20.19	14.750	1.76	20.82	0.44
2.633	0.44	8.700	20.19	14.767	1.76	20.83	0.44
2.650	0.44	8.717	20.19	14.783	1.76	20.85	0.44
2.667	0.44	8.733	20.19	14.800	1.76	20.87	0.44
2.683	0.44	8.750	20.19	14.817	1.76	20.88	0.44
2.700	0.44	8.767	20.19	14.833	1.76	20.90	0.44
2.717	0.44	8.783	20.19	14.850	1.76	20.92	0.44
2.733	0.44	8.800	20.19	14.867	1.76	20.93	0.44
2.750	0.44	8.817	20.19	14.883	1.76	20.95	0.44
2.767	0.44	8.833	20.19	14.900	1.76	20.97	0.44
2.783	0.44	8.850	20.19	14.917	1.76	20.98	0.44
2.800	0.44	8.867	20.19	14.933	1.76	21.00	0.44
2.817	0.44	8.883	20.19	14.950	1.76	21.02	0.44
2.833	0.44	8.900	20.19	14.967	1.76	21.03	0.44
2.850	0.44	8.917	20.19	14.983	1.76	21.05	0.44
2.867	0.44	8.933	20.19	15.000	1.76	21.07	0.44
2.883	0.44	8.950	20.19	15.017	1.76	21.08	0.44
2.900	0.44	8.967	20.19	15.033	1.76	21.10	0.44
2.917	0.44	8.983	20.19	15.050	1.76	21.12	0.44
2.933	0.44	9.000	20.19	15.067	1.76	21.13	0.44
2.950	0.44	9.017	20.19	15.083	1.76	21.15	0.44
2.967	0.44	9.033	20.19	15.100	1.76	21.17	0.44
2.983	0.44	9.050	20.19	15.117	1.76	21.18	0.44
3.000	0.44	9.067	20.19	15.133	1.76	21.20	0.44
3.017	0.44	9.083	20.19	15.150	1.76	21.22	0.44
3.033	0.44	9.100	20.19	15.167	1.76	21.23	0.44
3.050	0.44	9.117	20.19	15.183	1.76	21.25	0.44
3.067	0.44	9.133	20.19	15.200	1.76	21.27	0.44
3.083	0.44	9.150	20.19	15.217	1.76	21.28	0.44
3.100	0.44	9.167	20.19	15.233	1.76	21.30	0.44
3.117	0.44	9.183	20.19	15.250	1.76	21.32	0.44
3.133	0.44	9.200	20.19	15.267	1.76	21.33	0.44
3.150	0.44	9.217	20.19	15.283	1.76	21.35	0.44
3.167	0.44	9.233	20.19	15.300	1.76	21.37	0.44
3.183	0.44	9.250	20.19	15.317	1.76	21.38	0.44
3.200	0.44	9.267	20.19	15.333	1.76	21.40	0.44
3.217	0.44	9.283	20.19	15.350	1.76	21.42	0.44
3.233	0.44	9.300	20.19	15.367	1.76	21.43	0.44
3.250	0.44	9.317	20.19	15.383	1.76	21.45	0.44
3.267	0.44	9.333	20.19	15.400	1.76	21.47	0.44
3.283	0.44	9.350	20.19	15.417	1.76	21.48	0.44
3.300	0.44	9.367	20.19	15.433	1.76	21.50	0.44
3.317	0.44	9.383	20.19	15.450	1.76	21.52	0.44
3.333	0.44	9.400	20.19	15.467	1.76	21.53	0.44
3.350	0.44	9.417	20.19	15.483	1.76	21.55	0.44
3.367	0.44	9.433	20.19	15.500	1.76	21.57	0.44
3.383	0.44	9.450	20.19	15.517	1.76	21.58	0.44
3.400	0.44	9.467	20.19	15.533	1.76	21.60	0.44
3.417	0.44	9.483	20.19	15.550	1.76	21.62	0.44
3.433	0.44	9.500	20.19	15.567	1.76	21.63	0.44
3.450	0.44	9.517	20.19	15.583	1.76	21.65	0.44
3.467	0.44	9.533	20.19	15.600	1.76	21.67	0.44
3.483	0.44	9.550	20.19	15.617	1.76	21.68	0.44
3.500	0.44	9.567	20.19	15.633	1.76	21.70	0.44
3.517	0.44	9.583	20.19	15.650	1.76	21.72	0.44
3.533	0.44	9.600	20.19	15.667	1.76	21.73	0.44
3.550	0.44	9.617	20.19	15.683	1.76	21.75	0.44
3.567	0.44	9.633	20.19	15.700	1.76	21.77	0.44
3.583	0.44	9.650	20.19	15.717	1.76	21.78	0.44
3.600	0.44	9.667	20.19	15.733	1.76	21.80	0.44
3.617	0.44	9.683	20.19	15.750	1.76	21.82	0.44
3.633	0.44	9.700	20.19	15.767	1.76	21.83	0.44
3.650	0.44	9.717	20.19	15.783	1.76	21.85	0.44
3.667	0.44	9.733	20.19	15.800	1.76	21.87	0.44
3.683	0.44	9.750	20.19	15.817	1.76	21.88	0.44
3.700	0.44	9.767	20.19	15.833	1.76	21.90	0.44
3.717	0.44	9.783	20.19	15.850	1.76	21.92	0.44
3.733	0.44	9.800	20.19	15.867	1.76	21.93	0.44
3.750	0.44	9.817	20.19	15.883	1.76	21.95	0.44
3.767	0.44	9.833	20.19	15.900	1.76	21.97	0.44
3.783	0.44	9.850	20.19	15.917	1.76	21.98	0.44
3.800	0.44	9.867	20.19	15.933	1.76	22.00	0.44
3.817	0.44	9.883	20.19	15.950	1.76	22.02	0.44
3.833	0.44	9.900	20.19	15.967	1.76	22.03	0.44
3.850	0.44	9.917	20.19	15.983	1.76	22.05	0.44
3.867	0.44	9.933	20.19	16.000	1.76	22.07	0.44
3.883	0.44	9.950	20.19	16.017	1.76	22.08	0.44
3.900	0.44	9.967	20.19	16.033	1.76	22.10	0.44
3.917	0.44	9.983	20.19	16.050	1.76	22.12	0.44
3.933	0.44	10.000	20.19	16.067	1.76	22.13	0.44
3.950	0.44	10.017	20.19	16.083	1.76	22.15	0.44
3.967	0.44	10.033	20.19	16.100	1.76	22.17	0.44
3.983	0.44	10.050	20.19	16.117	1.76	22.18	0.44
4.000	0.44	10.067	20.19	16.133	1.76	22.20	0.44
4.017	0.44	10.083	20.19	16.150	1.76	22.22	0.44
4.033	0.44	10.100	20.19	16.167	1.76	22.23	0.44
4.050	0.44	10.117	20.19	16.183	1.76	22.25	0.44
4.067	0.44	10.133	20.19	16.200	1.76	22.27	0.44
4.083	0.44	10.150	20.19	16.217	1.76	22.28	0.44
4.100	0.44	10.167	20.19	16.233	1.76	22.30	0.44
4.117	0.44	10.183	20.19	16.250	1.76	22.32	0.44
4.133	0.44	10.200	20.19	16.267	0.88	22.33	0.44
4.150	0.44	10.217	20.19	16.283	0.88	22.35	0.44
4.167	0.44	10.233	20.19	16.300	0.88	22.37	0.44
4.183	0.44	10.250	20.18	16.317	0.88	22.38	0.44
4.200	0.44	10.267	5.71	16.333	0.88	22.40	0.44
4.217	0.44	10.283	5.71	16.350	0.88	22.42	0.44
4.233	0.44	10.300	5.71	16.367	0.88	22.43	0.44
4.250	0.44	10.317	5.71	16.383	0.88	22.45	0.44
4.267	2.63	10.333	5.71	16.400	0.88	22.47	0.44
4.283	2.63	10.350	5.71	16.417	0.88	22.48	0.44
4.300	2.63	10.367	5.71	16.433	0.88	22.50	0.44
4.317	2.63	10.383	5.71	16.450	0.88	22.52	0.44
4.333	2.63	10.400	5.71	16.467	0.88	22.53	0.44
4.350	2.63	10.417	5.71	16.483	0.88	22.55	0.44
4.367	2.63	10.433	5.71	16.500	0.88	22.57	0.44
4.383	2.63	10.450	5.71	16.517	0.88	22.58	0.44
4.400	2.63	10.467	5.71	16.533	0.88	22.60	0.44
4.417	2.63	10.483	5.71	16.550	0.88	22.62	0.44
4.433	2.63	10.500	5.71	16.567	0.88	22.63	0.44
4.450	2.63	10.517	5.71	16.583	0.88	22.65	0.44
4.467	2.63	10.533	5.71	16.600	0.88	22.67	0.44
4.483	2.63	10.550	5.71	16.617	0.88	22.68	0.44
4.500	2.63	10.567	5.71	16.633	0.88	22.70	0.44
4.517	2.63	10.583	5.71	16.650	0.88	22.72	0.44
4.533	2.63	10.600	5.71	16.667	0.88	22.73	0.44
4.550	2.63	10.617	5.71	16.683	0.88	22.75	0.44
4.567	2.63	10.633	5.71	16.700	0.88	22.77	0.44
4.583	2.63	10.650	5.71	16.717	0.88	22.78	0.44
4.600	2.63	10.667	5.71	16.733	0.88	22.80	0.44
4.617	2.63	10.683	5.71	16.750	0.88	22.82	0.44
4.633	2.63	10.700	5.71	16.767	0.88	22.83	0.44
4.650	2.63	10.717	5.71	16.783	0.88	22.85	0.44
4.667	2.63	10.733	5.71	16.800	0.88	22.87	0.44
4.683	2.63	10.750	5.71	16.817	0.88	22.88	0.44
4.700	2.63	10.767	5.71	16.833	0.88	22.90	0.44
4.717	2.63	10.783	5.71	16.850	0.88	22.92	0.44
4.733	2.63	10.800	5.71	16.867	0.88	22.93	0.44
4.750	2.63	10.817	5.71	16.883	0.88	22.95	0.44
4.767	2.63	10.833	5.71	16.900	0.88	22.97	0.44
4.783	2.63	10.850	5.71	16.917	0.88	22.98	0.44
4.800	2.63	10.867	5.71	16.933	0.88	23.00	0.44
4.817	2.63	10.883	5.71	16.950	0.88	23.02	0.44
4.833	2.63	10.900	5.71	16.967	0.88	23.03	0.44
4.850	2.63	10.917	5.71	16.983	0.88	23.05	0.44

4.867	2.63	10.933	5.71	17.000	0.88	23.07	0.44
4.883	2.63	10.950	5.71	17.017	0.88	23.08	0.44
4.900	2.63	10.967	5.71	17.033	0.88	23.10	0.44
4.917	2.63	10.983	5.71	17.050	0.88	23.12	0.44
4.933	2.63	11.000	5.71	17.067	0.88	23.13	0.44
4.950	2.63	11.017	5.71	17.083	0.88	23.15	0.44
4.967	2.63	11.033	5.71	17.100	0.88	23.17	0.44
4.983	2.63	11.050	5.71	17.117	0.88	23.18	0.44
5.000	2.63	11.067	5.71	17.133	0.88	23.20	0.44
5.017	2.63	11.083	5.71	17.150	0.88	23.22	0.44
5.033	2.63	11.100	5.71	17.167	0.88	23.23	0.44
5.050	2.63	11.117	5.71	17.183	0.88	23.25	0.44
5.067	2.63	11.133	5.71	17.200	0.88	23.27	0.44
5.083	2.63	11.150	5.71	17.217	0.88	23.28	0.44
5.100	2.63	11.167	5.71	17.233	0.88	23.30	0.44
5.117	2.63	11.183	5.71	17.250	0.88	23.32	0.44
5.133	2.63	11.200	5.71	17.267	0.88	23.33	0.44
5.150	2.63	11.217	5.71	17.283	0.88	23.35	0.44
5.167	2.63	11.233	5.71	17.300	0.88	23.37	0.44
5.183	2.63	11.250	5.71	17.317	0.88	23.38	0.44
5.200	2.63	11.267	5.71	17.333	0.88	23.40	0.44
5.217	2.63	11.283	5.71	17.350	0.88	23.42	0.44
5.233	2.63	11.300	5.71	17.367	0.88	23.43	0.44
5.250	2.63	11.317	5.71	17.383	0.88	23.45	0.44
5.267	2.63	11.333	5.71	17.400	0.88	23.47	0.44
5.283	2.63	11.350	5.71	17.417	0.88	23.48	0.44
5.300	2.63	11.367	5.71	17.433	0.88	23.50	0.44
5.317	2.63	11.383	5.71	17.450	0.88	23.52	0.44
5.333	2.63	11.400	5.71	17.467	0.88	23.53	0.44
5.350	2.63	11.417	5.71	17.483	0.88	23.55	0.44
5.367	2.63	11.433	5.71	17.500	0.88	23.57	0.44
5.383	2.63	11.450	5.71	17.517	0.88	23.58	0.44
5.400	2.63	11.467	5.71	17.533	0.88	23.60	0.44
5.417	2.63	11.483	5.71	17.550	0.88	23.62	0.44
5.433	2.63	11.500	5.71	17.567	0.88	23.63	0.44
5.450	2.63	11.517	5.71	17.583	0.88	23.65	0.44
5.467	2.63	11.533	5.71	17.600	0.88	23.67	0.44
5.483	2.63	11.550	5.71	17.617	0.88	23.68	0.44
5.500	2.63	11.567	5.71	17.633	0.88	23.70	0.44
5.517	2.63	11.583	5.71	17.650	0.88	23.72	0.44
5.533	2.63	11.600	5.71	17.667	0.88	23.73	0.44
5.550	2.63	11.617	5.71	17.683	0.88	23.75	0.44
5.567	2.63	11.633	5.71	17.700	0.88	23.77	0.44
5.583	2.63	11.650	5.71	17.717	0.88	23.78	0.44
5.600	2.63	11.667	5.71	17.733	0.88	23.80	0.44
5.617	2.63	11.683	5.71	17.750	0.88	23.82	0.44
5.633	2.63	11.700	5.71	17.767	0.88	23.83	0.44
5.650	2.63	11.717	5.71	17.783	0.88	23.85	0.44
5.667	2.63	11.733	5.71	17.800	0.88	23.87	0.44
5.683	2.63	11.750	5.71	17.817	0.88	23.88	0.44
5.700	2.63	11.767	5.71	17.833	0.88	23.90	0.44
5.717	2.63	11.783	5.71	17.850	0.88	23.92	0.44
5.733	2.63	11.800	5.71	17.867	0.88	23.93	0.44
5.750	2.63	11.817	5.71	17.883	0.88	23.95	0.44
5.767	2.63	11.833	5.71	17.900	0.88	23.97	0.44
5.783	2.63	11.850	5.71	17.917	0.88	23.98	0.44
5.800	2.63	11.867	5.71	17.933	0.88	24.00	0.44
5.817	2.63	11.883	5.71	17.950	0.88	24.02	0.44
5.833	2.63	11.900	5.71	17.967	0.88	24.03	0.44
5.850	2.63	11.917	5.71	17.983	0.88	24.05	0.44
5.867	2.63	11.933	5.71	18.000	0.88	24.07	0.44
5.883	2.63	11.950	5.71	18.017	0.88	24.08	0.44
5.900	2.63	11.967	5.71	18.033	0.88	24.10	0.44
5.917	2.63	11.983	5.71	18.050	0.88	24.12	0.44
5.933	2.63	12.000	5.71	18.067	0.88	24.13	0.44
5.950	2.63	12.017	5.71	18.083	0.88	24.15	0.44
5.967	2.63	12.033	5.71	18.100	0.88	24.17	0.44
5.983	2.63	12.050	5.71	18.117	0.88	24.18	0.44
6.000	2.63	12.067	5.71	18.133	0.88	24.20	0.44
6.017	2.63	12.083	5.71	18.150	0.88	24.22	0.44
6.033	2.63	12.100	5.71	18.167	0.88	24.23	0.44
6.050	2.63	12.117	5.71	18.183	0.88	24.25	0.44
6.067	2.63	12.133	5.71	18.200	0.88		

Max.Eff.Inten.(mm/hr)=	20.19	16.43
over (min)	7.00	10.00

Storage Coeff. (min)=	6.55 (ii)	9.77 (ii)	
Unit Hyd. Tpeak (min)=	7.00	10.00	
Unit Hyd. peak (cms)=	0.17	0.11	
			TOTALS
PEAK FLOW (cms)=	0.23	0.00	0.229 (iii)
TIME TO PEAK (hrs)=	9.98	10.25	10.25
RUNOFF VOLUME (mm)=	86.79	56.79	86.50
TOTAL RAINFALL (mm)=	87.80	87.80	87.80
RUNOFF COEFFICIENT =	0.99	0.65	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7630)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0826	0.2320
	0.0347	0.1170	0.0967	0.2609
	0.0534	0.1580	0.1090	0.2940
	0.0655	0.1890	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7629)	4.090	0.229	10.25	86.50
OUTFLOW: ID= 1 (7630)	4.090	0.071	10.67	79.44

PEAK FLOW REDUCTION [Qout/Qin](%)= 30.98
TIME SHIFT OF PEAK FLOW (min)= 25.00
MAXIMUM STORAGE USED (ha.m.)= 0.2026

CALIB			
STANDHYD (7631)	Area (ha)= 3.91		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.87	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	161.45	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	2.63	12.150	5.71	18.22	0.88
0.033	0.00	6.100	2.63	12.167	5.71	18.23	0.88
0.050	0.00	6.117	2.63	12.183	5.71	18.25	0.88
0.067	0.00	6.133	2.63	12.200	5.71	18.27	0.44
0.083	0.00	6.150	2.63	12.217	5.71	18.28	0.44
0.100	0.00	6.167	2.63	12.233	5.71	18.30	0.44
0.117	0.00	6.183	2.63	12.250	5.71	18.32	0.44
0.133	0.00	6.200	2.63	12.267	3.07	18.33	0.44
0.150	0.00	6.217	2.63	12.283	3.07	18.35	0.44
0.167	0.00	6.233	2.63	12.300	3.07	18.37	0.44
0.183	0.00	6.250	2.64	12.317	3.07	18.38	0.44
0.200	0.00	6.267	7.46	12.333	3.07	18.40	0.44
0.217	0.00	6.283	7.46	12.350	3.07	18.42	0.44
0.233	0.00	6.300	7.46	12.367	3.07	18.43	0.44
0.250	0.00	6.317	7.46	12.383	3.07	18.45	0.44
0.267	0.44	6.333	7.46	12.400	3.07	18.47	0.44
0.283	0.44	6.350	7.46	12.417	3.07	18.48	0.44
0.300	0.44	6.367	7.46	12.433	3.07	18.50	0.44
0.317	0.44	6.383	7.46	12.450	3.07	18.52	0.44
0.333	0.44	6.400	7.46	12.467	3.07	18.53	0.44

0.350	0.44	6.417	7.46	12.483	3.07	18.55	0.44
0.367	0.44	6.433	7.46	12.500	3.07	18.57	0.44
0.383	0.44	6.450	7.46	12.517	3.07	18.58	0.44
0.400	0.44	6.467	7.46	12.533	3.07	18.60	0.44
0.417	0.44	6.483	7.46	12.550	3.07	18.62	0.44
0.433	0.44	6.500	7.46	12.567	3.07	18.63	0.44
0.450	0.44	6.517	7.46	12.583	3.07	18.65	0.44
0.467	0.44	6.533	7.46	12.600	3.07	18.67	0.44
0.483	0.44	6.550	7.46	12.617	3.07	18.68	0.44
0.500	0.44	6.567	7.46	12.633	3.07	18.70	0.44
0.517	0.44	6.583	7.46	12.650	3.07	18.72	0.44
0.533	0.44	6.600	7.46	12.667	3.07	18.73	0.44
0.550	0.44	6.617	7.46	12.683	3.07	18.75	0.44
0.567	0.44	6.633	7.46	12.700	3.07	18.77	0.44
0.583	0.44	6.650	7.46	12.717	3.07	18.78	0.44
0.600	0.44	6.667	7.46	12.733	3.07	18.80	0.44
0.617	0.44	6.683	7.46	12.750	3.07	18.82	0.44
0.633	0.44	6.700	7.46	12.767	3.07	18.83	0.44
0.650	0.44	6.717	7.46	12.783	3.07	18.85	0.44
0.667	0.44	6.733	7.46	12.800	3.07	18.87	0.44
0.683	0.44	6.750	7.46	12.817	3.07	18.88	0.44
0.700	0.44	6.767	7.46	12.833	3.07	18.90	0.44
0.717	0.44	6.783	7.46	12.850	3.07	18.92	0.44
0.733	0.44	6.800	7.46	12.867	3.07	18.93	0.44
0.750	0.44	6.817	7.46	12.883	3.07	18.95	0.44
0.767	0.44	6.833	7.46	12.900	3.07	18.97	0.44
0.783	0.44	6.850	7.46	12.917	3.07	18.98	0.44
0.800	0.44	6.867	7.46	12.933	3.07	19.00	0.44
0.817	0.44	6.883	7.46	12.950	3.07	19.02	0.44
0.833	0.44	6.900	7.46	12.967	3.07	19.03	0.44
0.850	0.44	6.917	7.46	12.983	3.07	19.05	0.44
0.867	0.44	6.933	7.46	13.000	3.07	19.07	0.44
0.883	0.44	6.950	7.46	13.017	3.07	19.08	0.44
0.900	0.44	6.967	7.46	13.033	3.07	19.10	0.44
0.917	0.44	6.983	7.46	13.050	3.07	19.12	0.44
0.933	0.44	7.000	7.46	13.067	3.07	19.13	0.44
0.950	0.44	7.017	7.46	13.083	3.07	19.15	0.44
0.967	0.44	7.033	7.46	13.100	3.07	19.17	0.44
0.983	0.44	7.050	7.46	13.117	3.07	19.18	0.44
1.000	0.44	7.067	7.46	13.133	3.07	19.20	0.44
1.017	0.44	7.083	7.46	13.150	3.07	19.22	0.44
1.033	0.44	7.100	7.46	13.167	3.07	19.23	0.44
1.050	0.44	7.117	7.46	13.183	3.07	19.25	0.44
1.067	0.44	7.133	7.46	13.200	3.07	19.27	0.44
1.083	0.44	7.150	7.46	13.217	3.07	19.28	0.44
1.100	0.44	7.167	7.46	13.233	3.07	19.30	0.44
1.117	0.44	7.183	7.46	13.250	3.07	19.32	0.44
1.133	0.44	7.200	7.46	13.267	3.07	19.33	0.44
1.150	0.44	7.217	7.46	13.283	3.07	19.35	0.44
1.167	0.44	7.233	7.46	13.300	3.07	19.37	0.44
1.183	0.44	7.250	7.46	13.317	3.07	19.38	0.44
1.200	0.44	7.267	7.46	13.333	3.07	19.40	0.44
1.217	0.44	7.283	7.46	13.350	3.07	19.42	0.44
1.233	0.44	7.300	7.46	13.367	3.07	19.43	0.44
1.250	0.44	7.317	7.46	13.383	3.07	19.45	0.44
1.267	0.44	7.333	7.46	13.400	3.07	19.47	0.44
1.283	0.44	7.350	7.46	13.417	3.07	19.48	0.44
1.300	0.44	7.367	7.46	13.433	3.07	19.50	0.44
1.317	0.44	7.383	7.46	13.450	3.07	19.52	0.44
1.333	0.44	7.400	7.46	13.467	3.07	19.53	0.44
1.350	0.44	7.417	7.46	13.483	3.07	19.55	0.44
1.367	0.44	7.433	7.46	13.500	3.07	19.57	0.44
1.383	0.44	7.450	7.46	13.517	3.07	19.58	0.44
1.400	0.44	7.467	7.46	13.533	3.07	19.60	0.44
1.417	0.44	7.483	7.46	13.550	3.07	19.62	0.44
1.433	0.44	7.500	7.46	13.567	3.07	19.63	0.44
1.450	0.44	7.517	7.46	13.583	3.07	19.65	0.44
1.467	0.44	7.533	7.46	13.600	3.07	19.67	0.44
1.483	0.44	7.550	7.46	13.617	3.07	19.68	0.44
1.500	0.44	7.567	7.46	13.633	3.07	19.70	0.44
1.517	0.44	7.583	7.46	13.650	3.07	19.72	0.44
1.533	0.44	7.600	7.46	13.667	3.07	19.73	0.44
1.550	0.44	7.617	7.46	13.683	3.07	19.75	0.44
1.567	0.44	7.633	7.46	13.700	3.07	19.77	0.44
1.583	0.44	7.650	7.46	13.717	3.07	19.78	0.44
1.600	0.44	7.667	7.46	13.733	3.07	19.80	0.44
1.617	0.44	7.683	7.46	13.750	3.07	19.82	0.44
1.633	0.44	7.700	7.46	13.767	3.07	19.83	0.44
1.650	0.44	7.717	7.46	13.783	3.07	19.85	0.44
1.667	0.44	7.733	7.46	13.800	3.07	19.87	0.44
1.683	0.44	7.750	7.46	13.817	3.07	19.88	0.44
1.700	0.44	7.767	7.46	13.833	3.07	19.90	0.44
1.717	0.44	7.783	7.46	13.850	3.07	19.92	0.44
1.733	0.44	7.800	7.46	13.867	3.07	19.93	0.44
1.750	0.44	7.817	7.46	13.883	3.07	19.95	0.44
1.767	0.44	7.833	7.46	13.900	3.07	19.97	0.44
1.783	0.44	7.850	7.46	13.917	3.07	19.98	0.44
1.800	0.44	7.867	7.46	13.933	3.07	20.00	0.44
1.817	0.44	7.883	7.46	13.950	3.07	20.02	0.44
1.833	0.44	7.900	7.46	13.967	3.07	20.03	0.44
1.850	0.44	7.917	7.46	13.983	3.07	20.05	0.44
1.867	0.44	7.933	7.46	14.000	3.07	20.07	0.44
1.883	0.44	7.950	7.46	14.017	3.07	20.08	0.44
1.900	0.44	7.967	7.46	14.033	3.07	20.10	0.44
1.917	0.44	7.983	7.46	14.050	3.07	20.12	0.44
1.933	0.44	8.000	7.46	14.067	3.07	20.13	0.44
1.950	0.44	8.017	7.46	14.083	3.07	20.15	0.44
1.967	0.44	8.033	7.46	14.100	3.07	20.17	0.44
1.983	0.44	8.050	7.46	14.117	3.07	20.18	0.44
2.000	0.44	8.067	7.46	14.133	3.07	20.20	0.44
2.017	0.44	8.083	7.46	14.150	3.07	20.22	0.44
2.033	0.44	8.100	7.46	14.167	3.07	20.23	0.44
2.050	0.44	8.117	7.46	14.183	3.07	20.25	0.44
2.067	0.44	8.133	7.46	14.200	3.07	20.27	0.44
2.083	0.44	8.150	7.46	14.217	3.07	20.28	0.44
2.100	0.44	8.167	7.46	14.233	3.07	20.30	0.44
2.117	0.44	8.183	7.46	14.250	3.07	20.32	0.44
2.133	0.44	8.200	7.46	14.267	1.76	20.33	0.44
2.150	0.44	8.217	7.46	14.283	1.76	20.35	0.44
2.167	0.44	8.233	7.46	14.300	1.76	20.37	0.44
2.183	0.44	8.250	7.49	14.317	1.76	20.38	0.44
2.200	0.44	8.267	20.19	14.333	1.76	20.40	0.44
2.217	0.44	8.283	20.19	14.350	1.76	20.42	0.44
2.233	0.44	8.300	20.19	14.367	1.76	20.43	0.44
2.250	0.44	8.317	20.19	14.383	1.76	20.45	0.44
2.267	0.44	8.333	20.19	14.400	1.76	20.47	0.44
2.283	0.44	8.350	20.19	14.417	1.76	20.48	0.44
2.300	0.44	8.367	20.19	14.433	1.76	20.50	0.44
2.317	0.44	8.383	20.19	14.450	1.76	20.52	0.44
2.333	0.44	8.400	20.19	14.467	1.76	20.53	0.44
2.350	0.44	8.417	20.19	14.483	1.76	20.55	0.44
2.367	0.44	8.433	20.19	14.500	1.76	20.57	0.44
2.383	0.44	8.450	20.19	14.517	1.76	20.58	0.44
2.400	0.44	8.467	20.19	14.533	1.76	20.60	0.44
2.417	0.44	8.483	20.19	14.550	1.76	20.62	0.44
2.433	0.44	8.500	20.19	14.567	1.76	20.63	0.44
2.450	0.44	8.517	20.19	14.583	1.76	20.65	0.44
2.467	0.44	8.533	20.19	14.600	1.76	20.67	0.44
2.483	0.44	8.550	20.19	14.617	1.76	20.68	0.44
2.500	0.44	8.567	20.19	14.633	1.76	20.70	0.44
2.517	0.44	8.583	20.19	14.650	1.76	20.72	0.44
2.533	0.44	8.600	20.19	14.667	1.76	20.73	0.44
2.550	0.44	8.617	20.19	14.683	1.76	20.75	0.44
2.567	0.44	8.633	20.19	14.700	1.76	20.77	0.44
2.583	0.44	8.650	20.19	14.717	1.76	20.78	0.44
2.600	0.44	8.667	20.19	14.733	1.76	20.80	0.44
2.617	0.44	8.683	20.19	14.750	1.76	20.82	0.44
2.633	0.44	8.700	20.19	14.767	1.76	20.83	0.44
2.650	0.44	8.717	20.19	14.783	1.76	20.85	0.44
2.667	0.44	8.733	20.19	14.800	1.76	20.87	0.44
2.683	0.44	8.750	20.19	14.817	1.76	20.88	0.44
2.700	0.44	8.767	20.19	14.833	1.76	20.90	0.44
2.717	0.44	8.783	20.19	14.850	1.76	20.92	0.44
2.733	0.44	8.800	20.19	14.867	1.76	20.93	0.44
2.750	0.44	8.817	20.19	14.883	1.76	20.95	0.44
2.767	0.44	8.833	20.19	14.900	1.76	20.97	0.44
2.783	0.44	8.850	20.19	14.917	1.76	20.98	0.44
2.800	0.44	8.867	20.19	14.933	1.76	21.00	0.44
2.817	0.44	8.883	20.19	14.950	1.76	21.02	0.44
2.833	0.44	8.900	20.19	14.967	1.76	21.03	0.44
2.850	0.44	8.917	20.19	14.983	1.76	21.05	0.44
2.867	0.44	8.933	20.19	15.000	1.76	21.07	0.44

2.883	0.44	8.950	20.19	15.017	1.76	21.08	0.44
2.900	0.44	8.967	20.19	15.033	1.76	21.10	0.44
2.917	0.44	8.983	20.19	15.050	1.76	21.12	0.44
2.933	0.44	9.000	20.19	15.067	1.76	21.13	0.44
2.950	0.44	9.017	20.19	15.083	1.76	21.15	0.44
2.967	0.44	9.033	20.19	15.100	1.76	21.17	0.44
2.983	0.44	9.050	20.19	15.117	1.76	21.18	0.44
3.000	0.44	9.067	20.19	15.133	1.76	21.20	0.44
3.017	0.44	9.083	20.19	15.150	1.76	21.22	0.44
3.033	0.44	9.100	20.19	15.167	1.76	21.23	0.44
3.050	0.44	9.117	20.19	15.183	1.76	21.25	0.44
3.067	0.44	9.133	20.19	15.200	1.76	21.27	0.44
3.083	0.44	9.150	20.19	15.217	1.76	21.28	0.44
3.100	0.44	9.167	20.19	15.233	1.76	21.30	0.44
3.117	0.44	9.183	20.19	15.250	1.76	21.32	0.44
3.133	0.44	9.200	20.19	15.267	1.76	21.33	0.44
3.150	0.44	9.217	20.19	15.283	1.76	21.35	0.44
3.167	0.44	9.233	20.19	15.300	1.76	21.37	0.44
3.183	0.44	9.250	20.19	15.317	1.76	21.38	0.44
3.200	0.44	9.267	20.19	15.333	1.76	21.40	0.44
3.217	0.44	9.283	20.19	15.350	1.76	21.42	0.44
3.233	0.44	9.300	20.19	15.367	1.76	21.43	0.44
3.250	0.44	9.317	20.19	15.383	1.76	21.45	0.44
3.267	0.44	9.333	20.19	15.400	1.76	21.47	0.44
3.283	0.44	9.350	20.19	15.417	1.76	21.48	0.44
3.300	0.44	9.367	20.19	15.433	1.76	21.50	0.44
3.317	0.44	9.383	20.19	15.450	1.76	21.52	0.44
3.333	0.44	9.400	20.19	15.467	1.76	21.53	0.44
3.350	0.44	9.417	20.19	15.483	1.76	21.55	0.44
3.367	0.44	9.433	20.19	15.500	1.76	21.57	0.44
3.383	0.44	9.450	20.19	15.517	1.76	21.58	0.44
3.400	0.44	9.467	20.19	15.533	1.76	21.60	0.44
3.417	0.44	9.483	20.19	15.550	1.76	21.62	0.44
3.433	0.44	9.500	20.19	15.567	1.76	21.63	0.44
3.450	0.44	9.517	20.19	15.583	1.76	21.65	0.44
3.467	0.44	9.533	20.19	15.600	1.76	21.67	0.44
3.483	0.44	9.550	20.19	15.617	1.76	21.68	0.44
3.500	0.44	9.567	20.19	15.633	1.76	21.70	0.44
3.517	0.44	9.583	20.19	15.650	1.76	21.72	0.44
3.533	0.44	9.600	20.19	15.667	1.76	21.73	0.44
3.550	0.44	9.617	20.19	15.683	1.76	21.75	0.44
3.567	0.44	9.633	20.19	15.700	1.76	21.77	0.44
3.583	0.44	9.650	20.19	15.717	1.76	21.78	0.44
3.600	0.44	9.667	20.19	15.733	1.76	21.80	0.44
3.617	0.44	9.683	20.19	15.750	1.76	21.82	0.44
3.633	0.44	9.700	20.19	15.767	1.76	21.83	0.44
3.650	0.44	9.717	20.19	15.783	1.76	21.85	0.44
3.667	0.44	9.733	20.19	15.800	1.76	21.87	0.44
3.683	0.44	9.750	20.19	15.817	1.76	21.88	0.44
3.700	0.44	9.767	20.19	15.833	1.76	21.90	0.44
3.717	0.44	9.783	20.19	15.850	1.76	21.92	0.44
3.733	0.44	9.800	20.19	15.867	1.76	21.93	0.44
3.750	0.44	9.817	20.19	15.883	1.76	21.95	0.44
3.767	0.44	9.833	20.19	15.900	1.76	21.97	0.44
3.783	0.44	9.850	20.19	15.917	1.76	21.98	0.44
3.800	0.44	9.867	20.19	15.933	1.76	22.00	0.44
3.817	0.44	9.883	20.19	15.950	1.76	22.02	0.44
3.833	0.44	9.900	20.19	15.967	1.76	22.03	0.44
3.850	0.44	9.917	20.19	15.983	1.76	22.05	0.44
3.867	0.44	9.933	20.19	16.000	1.76	22.07	0.44
3.883	0.44	9.950	20.19	16.017	1.76	22.08	0.44
3.900	0.44	9.967	20.19	16.033	1.76	22.10	0.44
3.917	0.44	9.983	20.19	16.050	1.76	22.12	0.44
3.933	0.44	10.000	20.19	16.067	1.76	22.13	0.44
3.950	0.44	10.017	20.19	16.083	1.76	22.15	0.44
3.967	0.44	10.033	20.19	16.100	1.76	22.17	0.44
3.983	0.44	10.050	20.19	16.117	1.76	22.18	0.44
4.000	0.44	10.067	20.19	16.133	1.76	22.20	0.44
4.017	0.44	10.083	20.19	16.150	1.76	22.22	0.44
4.033	0.44	10.100	20.19	16.167	1.76	22.23	0.44
4.050	0.44	10.117	20.19	16.183	1.76	22.25	0.44
4.067	0.44	10.133	20.19	16.200	1.76	22.27	0.44
4.083	0.44	10.150	20.19	16.217	1.76	22.28	0.44
4.100	0.44	10.167	20.19	16.233	1.76	22.30	0.44
4.117	0.44	10.183	20.19	16.250	1.76	22.32	0.44
4.133	0.44	10.200	20.19	16.267	0.88	22.33	0.44
4.150	0.44	10.217	20.19	16.283	0.88	22.35	0.44
4.167	0.44	10.233	20.19	16.300	0.88	22.37	0.44
4.183	0.44	10.250	20.18	16.317	0.88	22.38	0.44
4.200	0.44	10.267	5.71	16.333	0.88	22.40	0.44
4.217	0.44	10.283	5.71	16.350	0.88	22.42	0.44
4.233	0.44	10.300	5.71	16.367	0.88	22.43	0.44
4.250	0.44	10.317	5.71	16.383	0.88	22.45	0.44
4.267	2.63	10.333	5.71	16.400	0.88	22.47	0.44
4.283	2.63	10.350	5.71	16.417	0.88	22.48	0.44
4.300	2.63	10.367	5.71	16.433	0.88	22.50	0.44
4.317	2.63	10.383	5.71	16.450	0.88	22.52	0.44
4.333	2.63	10.400	5.71	16.467	0.88	22.53	0.44
4.350	2.63	10.417	5.71	16.483	0.88	22.55	0.44
4.367	2.63	10.433	5.71	16.500	0.88	22.57	0.44
4.383	2.63	10.450	5.71	16.517	0.88	22.58	0.44
4.400	2.63	10.467	5.71	16.533	0.88	22.60	0.44
4.417	2.63	10.483	5.71	16.550	0.88	22.62	0.44
4.433	2.63	10.500	5.71	16.567	0.88	22.63	0.44
4.450	2.63	10.517	5.71	16.583	0.88	22.65	0.44
4.467	2.63	10.533	5.71	16.600	0.88	22.67	0.44
4.483	2.63	10.550	5.71	16.617	0.88	22.68	0.44
4.500	2.63	10.567	5.71	16.633	0.88	22.70	0.44
4.517	2.63	10.583	5.71	16.650	0.88	22.72	0.44
4.533	2.63	10.600	5.71	16.667	0.88	22.73	0.44
4.550	2.63	10.617	5.71	16.683	0.88	22.75	0.44
4.567	2.63	10.633	5.71	16.700	0.88	22.77	0.44
4.583	2.63	10.650	5.71	16.717	0.88	22.78	0.44
4.600	2.63	10.667	5.71	16.733	0.88	22.80	0.44
4.617	2.63	10.683	5.71	16.750	0.88	22.82	0.44
4.633	2.63	10.700	5.71	16.767	0.88	22.83	0.44
4.650	2.63	10.717	5.71	16.783	0.88	22.85	0.44
4.667	2.63	10.733	5.71	16.800	0.88	22.87	0.44
4.683	2.63	10.750	5.71	16.817	0.88	22.88	0.44
4.700	2.63	10.767	5.71	16.833	0.88	22.90	0.44
4.717	2.63	10.783	5.71	16.850	0.88	22.92	0.44
4.733	2.63	10.800	5.71	16.867	0.88	22.93	0.44
4.750	2.63	10.817	5.71	16.883	0.88	22.95	0.44
4.767	2.63	10.833	5.71	16.900	0.88	22.97	0.44
4.783	2.63	10.850	5.71	16.917	0.88	22.98	0.44
4.800	2.63	10.867	5.71	16.933	0.88	23.00	0.44
4.817	2.63	10.883	5.71	16.950	0.88	23.02	0.44
4.833	2.63	10.900	5.71	16.967	0.88	23.03	0.44
4.850	2.63	10.917	5.71	16.983	0.88	23.05	0.44
4.867	2.63	10.933	5.71	17.000	0.88	23.07	0.44
4.883	2.63	10.950	5.71	17.017	0.88	23.08	0.44
4.900	2.63	10.967	5.71	17.033	0.88	23.10	0.44
4.917	2.63	10.983	5.71	17.050	0.88	23.12	0.44
4.933	2.63	11.000	5.71	17.067	0.88	23.13	0.44
4.950	2.63	11.017	5.71	17.083	0.88	23.15	0.44
4.967	2.63	11.033	5.71	17.100	0.88	23.17	0.44
4.983	2.63	11.050	5.71	17.117	0.88	23.18	0.44
5.000	2.63	11.067	5.71	17.133	0.88	23.20	0.44
5.017	2.63	11.083	5.71	17.150	0.88	23.22	0.44
5.033	2.63	11.100	5.71	17.167	0.88	23.23	0.44
5.050	2.63	11.117	5.71	17.183	0.88	23.25	0.44
5.067	2.63	11.133	5.71	17.200	0.88	23.27	0.44
5.083	2.63	11.150	5.71	17.217	0.88	23.28	0.44
5.100	2.63	11.167	5.71	17.233	0.88	23.30	0.44
5.117	2.63	11.183	5.71	17.250	0.88	23.32	0.44
5.133	2.63	11.200	5.71	17.267	0.88	23.33	0.44
5.150	2.63	11.217	5.71	17.283	0.88	23.35	0.44
5.167	2.63	11.233	5.71	17.300	0.88	23.37	0.44
5.183	2.63	11.250	5.71	17.317	0.88	23.38	0.44
5.200	2.63	11.267	5.71	17.333	0.88	23.40	0.44
5.217	2.63	11.283	5.71	17.350	0.88	23.42	0.44
5.233	2.63	11.300	5.71	17.367	0.88	23.43	0.44
5.250	2.63	11.317	5.71	17.383	0.88	23.45	0.44
5.267	2.63	11.333	5.71	17.400	0.88	23.47	0.44
5.283	2.63	11.350	5.71	17.417	0.88	23.48	0.44
5.300	2.63	11.367	5.71	17.433	0.88	23.50	0.44
5.317	2.63	11.383	5.71	17.450	0.88	23.52	0.44
5.333	2.63	11.400	5.71	17.467	0.88	23.53	0.44
5.350	2.63	11.417	5.71	17.483	0.88	23.55	0.44
5.367	2.63	11.433	5.71	17.500	0.88	23.57	0.44
5.383	2.63	11.450	5.71	17.517	0.88	23.58	0.44
5.400	2.63	11.467	5.71	17.533	0.88	23.60	0.44

5.417	2.63	11.483	5.71	17.550	0.88	23.62	0.44
5.433	2.63	11.500	5.71	17.567	0.88	23.63	0.44
5.450	2.63	11.517	5.71	17.583	0.88	23.65	0.44
5.467	2.63	11.533	5.71	17.600	0.88	23.67	0.44
5.483	2.63	11.550	5.71	17.617	0.88	23.68	0.44
5.500	2.63	11.567	5.71	17.633	0.88	23.70	0.44
5.517	2.63	11.583	5.71	17.650	0.88	23.72	0.44
5.533	2.63	11.600	5.71	17.667	0.88	23.73	0.44
5.550	2.63	11.617	5.71	17.683	0.88	23.75	0.44
5.567	2.63	11.633	5.71	17.700	0.88	23.77	0.44
5.583	2.63	11.650	5.71	17.717	0.88	23.78	0.44
5.600	2.63	11.667	5.71	17.733	0.88	23.80	0.44
5.617	2.63	11.683	5.71	17.750	0.88	23.82	0.44
5.633	2.63	11.700	5.71	17.767	0.88	23.83	0.44
5.650	2.63	11.717	5.71	17.783	0.88	23.85	0.44
5.667	2.63	11.733	5.71	17.800	0.88	23.87	0.44
5.683	2.63	11.750	5.71	17.817	0.88	23.88	0.44
5.700	2.63	11.767	5.71	17.833	0.88	23.90	0.44
5.717	2.63	11.783	5.71	17.850	0.88	23.92	0.44
5.733	2.63	11.800	5.71	17.867	0.88	23.93	0.44
5.750	2.63	11.817	5.71	17.883	0.88	23.95	0.44
5.767	2.63	11.833	5.71	17.900	0.88	23.97	0.44
5.783	2.63	11.850	5.71	17.917	0.88	23.98	0.44
5.800	2.63	11.867	5.71	17.933	0.88	24.00	0.44
5.817	2.63	11.883	5.71	17.950	0.88	24.02	0.44
5.833	2.63	11.900	5.71	17.967	0.88	24.03	0.44
5.850	2.63	11.917	5.71	17.983	0.88	24.05	0.44
5.867	2.63	11.933	5.71	18.000	0.88	24.07	0.44
5.883	2.63	11.950	5.71	18.017	0.88	24.08	0.44
5.900	2.63	11.967	5.71	18.033	0.88	24.10	0.44
5.917	2.63	11.983	5.71	18.050	0.88	24.12	0.44
5.933	2.63	12.000	5.71	18.067	0.88	24.13	0.44
5.950	2.63	12.017	5.71	18.083	0.88	24.15	0.44
5.967	2.63	12.033	5.71	18.100	0.88	24.17	0.44
5.983	2.63	12.050	5.71	18.117	0.88	24.18	0.44
6.000	2.63	12.067	5.71	18.133	0.88	24.20	0.44
6.017	2.63	12.083	5.71	18.150	0.88	24.22	0.44
6.033	2.63	12.100	5.71	18.167	0.88	24.23	0.44
6.050	2.63	12.117	5.71	18.183	0.88	24.25	0.44
6.067	2.63	12.133	5.71	18.200	0.88		

Max.Eff.Inten.(mm/hr)=	20.19	16.43	
over (min)	6.00	10.00	
Storage Coeff. (min)=	6.46 (ii)	9.69 (ii)	
Unit Hyd. Tpeak (min)=	6.00	10.00	
Unit Hyd. peak (cms)=	0.18	0.12	
			TOTALS
PEAK FLOW (cms)=	0.22	0.00	0.219 (iii)
TIME TO PEAK (hrs)=	9.98	10.25	10.25
RUNOFF VOLUME (mm)=	86.79	56.79	86.50
TOTAL RAINFALL (mm)=	87.80	87.80	87.80
RUNOFF COEFFICIENT =	0.99	0.65	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7632) / IN= 2---> OUT= 1 / DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0792	0.2220
	0.0333	0.1130	0.0928	0.2500
	0.0512	0.1510	0.1046	0.2810
	0.0629	0.1810	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7631)	3.910	0.219	10.25	86.50
OUTFLOW: ID= 1 (7632)	3.910	0.068	10.65	79.38

PEAK FLOW REDUCTION [Qout/Qin](%)= 31.06
TIME SHIFT OF PEAK FLOW (min)= 24.00
MAXIMUM STORAGE USED (ha.m.)= 0.1938

CALIB
STANDHYD (7641) | Area (ha)= 2.21
ID= 1 DT= 1.0 min | Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.19	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	121.38	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	2.63	12.150	5.71	18.22	0.88
0.033	0.00	6.100	2.63	12.167	5.71	18.23	0.88
0.050	0.00	6.117	2.63	12.183	5.71	18.25	0.88
0.067	0.00	6.133	2.63	12.200	5.71	18.27	0.44
0.083	0.00	6.150	2.63	12.217	5.71	18.28	0.44
0.100	0.00	6.167	2.63	12.233	5.71	18.30	0.44
0.117	0.00	6.183	2.63	12.250	5.71	18.32	0.44
0.133	0.00	6.200	2.63	12.267	3.07	18.33	0.44
0.150	0.00	6.217	2.63	12.283	3.07	18.35	0.44
0.167	0.00	6.233	2.63	12.300	3.07	18.37	0.44
0.183	0.00	6.250	2.64	12.317	3.07	18.38	0.44
0.200	0.00	6.267	7.46	12.333	3.07	18.40	0.44
0.217	0.00	6.283	7.46	12.350	3.07	18.42	0.44
0.233	0.00	6.300	7.46	12.367	3.07	18.43	0.44
0.250	0.00	6.317	7.46	12.383	3.07	18.45	0.44
0.267	0.44	6.333	7.46	12.400	3.07	18.47	0.44
0.283	0.44	6.350	7.46	12.417	3.07	18.48	0.44
0.300	0.44	6.367	7.46	12.433	3.07	18.50	0.44
0.317	0.44	6.383	7.46	12.450	3.07	18.52	0.44
0.333	0.44	6.400	7.46	12.467	3.07	18.53	0.44
0.350	0.44	6.417	7.46	12.483	3.07	18.55	0.44
0.367	0.44	6.433	7.46	12.500	3.07	18.57	0.44
0.383	0.44	6.450	7.46	12.517	3.07	18.58	0.44
0.400	0.44	6.467	7.46	12.533	3.07	18.60	0.44
0.417	0.44	6.483	7.46	12.550	3.07	18.62	0.44
0.433	0.44	6.500	7.46	12.567	3.07	18.63	0.44
0.450	0.44	6.517	7.46	12.583	3.07	18.65	0.44
0.467	0.44	6.533	7.46	12.600	3.07	18.67	0.44
0.483	0.44	6.550	7.46	12.617	3.07	18.68	0.44
0.500	0.44	6.567	7.46	12.633	3.07	18.70	0.44
0.517	0.44	6.583	7.46	12.650	3.07	18.72	0.44
0.533	0.44	6.600	7.46	12.667	3.07	18.73	0.44
0.550	0.44	6.617	7.46	12.683	3.07	18.75	0.44
0.567	0.44	6.633	7.46	12.700	3.07	18.77	0.44
0.583	0.44	6.650	7.46	12.717	3.07	18.78	0.44
0.600	0.44	6.667	7.46	12.733	3.07	18.80	0.44
0.617	0.44	6.683	7.46	12.750	3.07	18.82	0.44
0.633	0.44	6.700	7.46	12.767	3.07	18.83	0.44
0.650	0.44	6.717	7.46	12.783	3.07	18.85	0.44
0.667	0.44	6.733	7.46	12.800	3.07	18.87	0.44
0.683	0.44	6.750	7.46	12.817	3.07	18.88	0.44
0.700	0.44	6.767	7.46	12.833	3.07	18.90	0.44
0.717	0.44	6.783	7.46	12.850	3.07	18.92	0.44
0.733	0.44	6.800	7.46	12.867	3.07	18.93	0.44
0.750	0.44	6.817	7.46	12.883	3.07	18.95	0.44
0.767	0.44	6.833	7.46	12.900	3.07	18.97	0.44
0.783	0.44	6.850	7.46	12.917	3.07	18.98	0.44
0.800	0.44	6.867	7.46	12.933	3.07	19.00	0.44
0.817	0.44	6.883	7.46	12.950	3.07	19.02	0.44
0.833	0.44	6.900	7.46	12.967	3.07	19.03	0.44
0.850	0.44	6.917	7.46	12.983	3.07	19.05	0.44
0.867	0.44	6.933	7.46	13.000	3.07	19.07	0.44
0.883	0.44	6.950	7.46	13.017	3.07	19.08	0.44

0.900	0.44	6.967	7.46	13.033	3.07	19.10	0.44	2.167	0.44	8.233	7.46	14.300	1.76	20.37	0.44
0.917	0.44	6.983	7.46	13.050	3.07	19.12	0.44	2.183	0.44	8.250	7.49	14.317	1.76	20.38	0.44
0.933	0.44	7.000	7.46	13.067	3.07	19.13	0.44	2.200	0.44	8.267	20.19	14.333	1.76	20.40	0.44
0.950	0.44	7.017	7.46	13.083	3.07	19.15	0.44	2.217	0.44	8.283	20.19	14.350	1.76	20.42	0.44
0.967	0.44	7.033	7.46	13.100	3.07	19.17	0.44	2.233	0.44	8.300	20.19	14.367	1.76	20.43	0.44
0.983	0.44	7.050	7.46	13.117	3.07	19.18	0.44	2.250	0.44	8.317	20.19	14.383	1.76	20.45	0.44
1.000	0.44	7.067	7.46	13.133	3.07	19.20	0.44	2.267	0.44	8.333	20.19	14.400	1.76	20.47	0.44
1.017	0.44	7.083	7.46	13.150	3.07	19.22	0.44	2.283	0.44	8.350	20.19	14.417	1.76	20.48	0.44
1.033	0.44	7.100	7.46	13.167	3.07	19.23	0.44	2.300	0.44	8.367	20.19	14.433	1.76	20.50	0.44
1.050	0.44	7.117	7.46	13.183	3.07	19.25	0.44	2.317	0.44	8.383	20.19	14.450	1.76	20.52	0.44
1.067	0.44	7.133	7.46	13.200	3.07	19.27	0.44	2.333	0.44	8.400	20.19	14.467	1.76	20.53	0.44
1.083	0.44	7.150	7.46	13.217	3.07	19.28	0.44	2.350	0.44	8.417	20.19	14.483	1.76	20.55	0.44
1.100	0.44	7.167	7.46	13.233	3.07	19.30	0.44	2.367	0.44	8.433	20.19	14.500	1.76	20.57	0.44
1.117	0.44	7.183	7.46	13.250	3.07	19.32	0.44	2.383	0.44	8.450	20.19	14.517	1.76	20.58	0.44
1.133	0.44	7.200	7.46	13.267	3.07	19.33	0.44	2.400	0.44	8.467	20.19	14.533	1.76	20.60	0.44
1.150	0.44	7.217	7.46	13.283	3.07	19.35	0.44	2.417	0.44	8.483	20.19	14.550	1.76	20.62	0.44
1.167	0.44	7.233	7.46	13.300	3.07	19.37	0.44	2.433	0.44	8.500	20.19	14.567	1.76	20.63	0.44
1.183	0.44	7.250	7.46	13.317	3.07	19.38	0.44	2.450	0.44	8.517	20.19	14.583	1.76	20.65	0.44
1.200	0.44	7.267	7.46	13.333	3.07	19.40	0.44	2.467	0.44	8.533	20.19	14.600	1.76	20.67	0.44
1.217	0.44	7.283	7.46	13.350	3.07	19.42	0.44	2.483	0.44	8.550	20.19	14.617	1.76	20.68	0.44
1.233	0.44	7.300	7.46	13.367	3.07	19.43	0.44	2.500	0.44	8.567	20.19	14.633	1.76	20.70	0.44
1.250	0.44	7.317	7.46	13.383	3.07	19.45	0.44	2.517	0.44	8.583	20.19	14.650	1.76	20.72	0.44
1.267	0.44	7.333	7.46	13.400	3.07	19.47	0.44	2.533	0.44	8.600	20.19	14.667	1.76	20.73	0.44
1.283	0.44	7.350	7.46	13.417	3.07	19.48	0.44	2.550	0.44	8.617	20.19	14.683	1.76	20.75	0.44
1.300	0.44	7.367	7.46	13.433	3.07	19.50	0.44	2.567	0.44	8.633	20.19	14.700	1.76	20.77	0.44
1.317	0.44	7.383	7.46	13.450	3.07	19.52	0.44	2.583	0.44	8.650	20.19	14.717	1.76	20.78	0.44
1.333	0.44	7.400	7.46	13.467	3.07	19.53	0.44	2.600	0.44	8.667	20.19	14.733	1.76	20.80	0.44
1.350	0.44	7.417	7.46	13.483	3.07	19.55	0.44	2.617	0.44	8.683	20.19	14.750	1.76	20.82	0.44
1.367	0.44	7.433	7.46	13.500	3.07	19.57	0.44	2.633	0.44	8.700	20.19	14.767	1.76	20.83	0.44
1.383	0.44	7.450	7.46	13.517	3.07	19.58	0.44	2.650	0.44	8.717	20.19	14.783	1.76	20.85	0.44
1.400	0.44	7.467	7.46	13.533	3.07	19.60	0.44	2.667	0.44	8.733	20.19	14.800	1.76	20.87	0.44
1.417	0.44	7.483	7.46	13.550	3.07	19.62	0.44	2.683	0.44	8.750	20.19	14.817	1.76	20.88	0.44
1.433	0.44	7.500	7.46	13.567	3.07	19.63	0.44	2.700	0.44	8.767	20.19	14.833	1.76	20.90	0.44
1.450	0.44	7.517	7.46	13.583	3.07	19.65	0.44	2.717	0.44	8.783	20.19	14.850	1.76	20.92	0.44
1.467	0.44	7.533	7.46	13.600	3.07	19.67	0.44	2.733	0.44	8.800	20.19	14.867	1.76	20.93	0.44
1.483	0.44	7.550	7.46	13.617	3.07	19.68	0.44	2.750	0.44	8.817	20.19	14.883	1.76	20.95	0.44
1.500	0.44	7.567	7.46	13.633	3.07	19.70	0.44	2.767	0.44	8.833	20.19	14.900	1.76	20.97	0.44
1.517	0.44	7.583	7.46	13.650	3.07	19.72	0.44	2.783	0.44	8.850	20.19	14.917	1.76	20.98	0.44
1.533	0.44	7.600	7.46	13.667	3.07	19.73	0.44	2.800	0.44	8.867	20.19	14.933	1.76	21.00	0.44
1.550	0.44	7.617	7.46	13.683	3.07	19.75	0.44	2.817	0.44	8.883	20.19	14.950	1.76	21.02	0.44
1.567	0.44	7.633	7.46	13.700	3.07	19.77	0.44	2.833	0.44	8.900	20.19	14.967	1.76	21.03	0.44
1.583	0.44	7.650	7.46	13.717	3.07	19.78	0.44	2.850	0.44	8.917	20.19	14.983	1.76	21.05	0.44
1.600	0.44	7.667	7.46	13.733	3.07	19.80	0.44	2.867	0.44	8.933	20.19	15.000	1.76	21.07	0.44
1.617	0.44	7.683	7.46	13.750	3.07	19.82	0.44	2.883	0.44	8.950	20.19	15.017	1.76	21.08	0.44
1.633	0.44	7.700	7.46	13.767	3.07	19.83	0.44	2.900	0.44	8.967	20.19	15.033	1.76	21.10	0.44
1.650	0.44	7.717	7.46	13.783	3.07	19.85	0.44	2.917	0.44	8.983	20.19	15.050	1.76	21.12	0.44
1.667	0.44	7.733	7.46	13.800	3.07	19.87	0.44	2.933	0.44	9.000	20.19	15.067	1.76	21.13	0.44
1.683	0.44	7.750	7.46	13.817	3.07	19.88	0.44	2.950	0.44	9.017	20.19	15.083	1.76	21.15	0.44
1.700	0.44	7.767	7.46	13.833	3.07	19.90	0.44	2.967	0.44	9.033	20.19	15.100	1.76	21.17	0.44
1.717	0.44	7.783	7.46	13.850	3.07	19.92	0.44	2.983	0.44	9.050	20.19	15.117	1.76	21.18	0.44
1.733	0.44	7.800	7.46	13.867	3.07	19.93	0.44	3.000	0.44	9.067	20.19	15.133	1.76	21.20	0.44
1.750	0.44	7.817	7.46	13.883	3.07	19.95	0.44	3.017	0.44	9.083	20.19	15.150	1.76	21.22	0.44
1.767	0.44	7.833	7.46	13.900	3.07	19.97	0.44	3.033	0.44	9.100	20.19	15.167	1.76	21.23	0.44
1.783	0.44	7.850	7.46	13.917	3.07	19.98	0.44	3.050	0.44	9.117	20.19	15.183	1.76	21.25	0.44
1.800	0.44	7.867	7.46	13.933	3.07	20.00	0.44	3.067	0.44	9.133	20.19	15.200	1.76	21.27	0.44
1.817	0.44	7.883	7.46	13.950	3.07	20.02	0.44	3.083	0.44	9.150	20.19	15.217	1.76	21.28	0.44
1.833	0.44	7.900	7.46	13.967	3.07	20.03	0.44	3.100	0.44	9.167	20.19	15.233	1.76	21.30	0.44
1.850	0.44	7.917	7.46	13.983	3.07	20.05	0.44	3.117	0.44	9.183	20.19	15.250	1.76	21.32	0.44
1.867	0.44	7.933	7.46	14.000	3.07	20.07	0.44	3.133	0.44	9.200	20.19	15.267	1.76	21.33	0.44
1.883	0.44	7.950	7.46	14.017	3.07	20.08	0.44	3.150	0.44	9.217	20.19	15.283	1.76	21.35	0.44
1.900	0.44	7.967	7.46	14.033	3.07	20.10	0.44	3.167	0.44	9.233	20.19	15.300	1.76	21.37	0.44
1.917	0.44	7.983	7.46	14.050	3.07	20.12	0.44	3.183	0.44	9.250	20.19	15.317	1.76	21.38	0.44
1.933	0.44	8.000	7.46	14.067	3.07	20.13	0.44	3.200	0.44	9.267	20.19	15.333	1.76	21.40	0.44
1.950	0.44	8.017	7.46	14.083	3.07	20.15	0.44	3.217	0.44	9.283	20.19	15.350	1.76	21.42	0.44
1.967	0.44	8.033	7.46	14.100	3.07	20.17	0.44	3.233	0.44	9.300	20.19	15.367	1.76	21.43	0.44
1.983	0.44	8.050	7.46	14.117	3.07	20.18	0.44	3.250	0.44	9.317	20.19	15.383	1.76	21.45	0.44
2.000	0.44	8.067	7.46	14.133	3.07	20.20	0.44	3.267	0.44	9.333	20.19	15.400	1.76	21.47	0.44
2.017	0.44	8.083	7.46	14.150	3.07	20.22	0.44	3.283	0.44	9.350	20.19	15.417	1.76	21.48	0.44
2.033	0.44	8.100	7.46	14.167	3.07	20.23	0.44	3.300	0.44	9.367	20.19	15.433	1.76	21.50	0.44
2.050	0.44	8.117	7.46	14.183	3.07	20.25	0.44	3.317	0.44	9.383	20.19	15.450	1.76	21.52	0.44
2.067	0.44	8.133	7.46	14.200	3.07	20.27	0.44	3.333	0.44	9.400	20.19	15.467	1.76	21.53	0.44
2.083	0.44	8.150	7.46	14.217	3.07	20.28	0.44	3.350	0.44	9.417	20.19	15.483	1.76	21.55	0.44
2.100	0.44	8.167	7.46	14.233	3.07	20.30	0.44	3.367	0.44	9.433	20.19	15.500	1.76	21.57	0.44
2.117	0.44	8.183	7.46	14.250	3.07	20.32	0.44	3.383	0.44	9.450	20.19	15.517	1.76	21.58	0.44
2.133	0.44	8.200	7.46	14.267	1.76	20.33	0.44	3.400	0.44	9.467	20.19	15.533	1.76	21.60	0.44
2.150	0.44	8.217	7.46	14.283	1.76	20.35	0.44	3.417	0.44	9.483	20.19	15.550	1.76	21.62	0.44

3.433	0.44	9.500	20.19	15.567	1.76	21.63	0.44
3.450	0.44	9.517	20.19	15.583	1.76	21.65	0.44
3.467	0.44	9.533	20.19	15.600	1.76	21.67	0.44
3.483	0.44	9.550	20.19	15.617	1.76	21.68	0.44
3.500	0.44	9.567	20.19	15.633	1.76	21.70	0.44
3.517	0.44	9.583	20.19	15.650	1.76	21.72	0.44
3.533	0.44	9.600	20.19	15.667	1.76	21.73	0.44
3.550	0.44	9.617	20.19	15.683	1.76	21.75	0.44
3.567	0.44	9.633	20.19	15.700	1.76	21.77	0.44
3.583	0.44	9.650	20.19	15.717	1.76	21.78	0.44
3.600	0.44	9.667	20.19	15.733	1.76	21.80	0.44
3.617	0.44	9.683	20.19	15.750	1.76	21.82	0.44
3.633	0.44	9.700	20.19	15.767	1.76	21.83	0.44
3.650	0.44	9.717	20.19	15.783	1.76	21.85	0.44
3.667	0.44	9.733	20.19	15.800	1.76	21.87	0.44
3.683	0.44	9.750	20.19	15.817	1.76	21.88	0.44
3.700	0.44	9.767	20.19	15.833	1.76	21.90	0.44
3.717	0.44	9.783	20.19	15.850	1.76	21.92	0.44
3.733	0.44	9.800	20.19	15.867	1.76	21.93	0.44
3.750	0.44	9.817	20.19	15.883	1.76	21.95	0.44
3.767	0.44	9.833	20.19	15.900	1.76	21.97	0.44
3.783	0.44	9.850	20.19	15.917	1.76	21.98	0.44
3.800	0.44	9.867	20.19	15.933	1.76	22.00	0.44
3.817	0.44	9.883	20.19	15.950	1.76	22.02	0.44
3.833	0.44	9.900	20.19	15.967	1.76	22.03	0.44
3.850	0.44	9.917	20.19	15.983	1.76	22.05	0.44
3.867	0.44	9.933	20.19	16.000	1.76	22.07	0.44
3.883	0.44	9.950	20.19	16.017	1.76	22.08	0.44
3.900	0.44	9.967	20.19	16.033	1.76	22.10	0.44
3.917	0.44	9.983	20.19	16.050	1.76	22.12	0.44
3.933	0.44	10.000	20.19	16.067	1.76	22.13	0.44
3.950	0.44	10.017	20.19	16.083	1.76	22.15	0.44
3.967	0.44	10.033	20.19	16.100	1.76	22.17	0.44
3.983	0.44	10.050	20.19	16.117	1.76	22.18	0.44
4.000	0.44	10.067	20.19	16.133	1.76	22.20	0.44
4.017	0.44	10.083	20.19	16.150	1.76	22.22	0.44
4.033	0.44	10.100	20.19	16.167	1.76	22.23	0.44
4.050	0.44	10.117	20.19	16.183	1.76	22.25	0.44
4.067	0.44	10.133	20.19	16.200	1.76	22.27	0.44
4.083	0.44	10.150	20.19	16.217	1.76	22.28	0.44
4.100	0.44	10.167	20.19	16.233	1.76	22.30	0.44
4.117	0.44	10.183	20.19	16.250	1.76	22.32	0.44
4.133	0.44	10.200	20.19	16.267	0.88	22.33	0.44
4.150	0.44	10.217	20.19	16.283	0.88	22.35	0.44
4.167	0.44	10.233	20.19	16.300	0.88	22.37	0.44
4.183	0.44	10.250	20.18	16.317	0.88	22.38	0.44
4.200	0.44	10.267	5.71	16.333	0.88	22.40	0.44
4.217	0.44	10.283	5.71	16.350	0.88	22.42	0.44
4.233	0.44	10.300	5.71	16.367	0.88	22.43	0.44
4.250	0.44	10.317	5.71	16.383	0.88	22.45	0.44
4.267	2.63	10.333	5.71	16.400	0.88	22.47	0.44
4.283	2.63	10.350	5.71	16.417	0.88	22.48	0.44
4.300	2.63	10.367	5.71	16.433	0.88	22.50	0.44
4.317	2.63	10.383	5.71	16.450	0.88	22.52	0.44
4.333	2.63	10.400	5.71	16.467	0.88	22.53	0.44
4.350	2.63	10.417	5.71	16.483	0.88	22.55	0.44
4.367	2.63	10.433	5.71	16.500	0.88	22.57	0.44
4.383	2.63	10.450	5.71	16.517	0.88	22.58	0.44
4.400	2.63	10.467	5.71	16.533	0.88	22.60	0.44
4.417	2.63	10.483	5.71	16.550	0.88	22.62	0.44
4.433	2.63	10.500	5.71	16.567	0.88	22.63	0.44
4.450	2.63	10.517	5.71	16.583	0.88	22.65	0.44
4.467	2.63	10.533	5.71	16.600	0.88	22.67	0.44
4.483	2.63	10.550	5.71	16.617	0.88	22.68	0.44
4.500	2.63	10.567	5.71	16.633	0.88	22.70	0.44
4.517	2.63	10.583	5.71	16.650	0.88	22.72	0.44
4.533	2.63	10.600	5.71	16.667	0.88	22.73	0.44
4.550	2.63	10.617	5.71	16.683	0.88	22.75	0.44
4.567	2.63	10.633	5.71	16.700	0.88	22.77	0.44
4.583	2.63	10.650	5.71	16.717	0.88	22.78	0.44
4.600	2.63	10.667	5.71	16.733	0.88	22.80	0.44
4.617	2.63	10.683	5.71	16.750	0.88	22.82	0.44
4.633	2.63	10.700	5.71	16.767	0.88	22.83	0.44
4.650	2.63	10.717	5.71	16.783	0.88	22.85	0.44
4.667	2.63	10.733	5.71	16.800	0.88	22.87	0.44
4.683	2.63	10.750	5.71	16.817	0.88	22.88	0.44
4.700	2.63	10.767	5.71	16.833	0.88	22.90	0.44
4.717	2.63	10.783	5.71	16.850	0.88	22.92	0.44
4.733	2.63	10.800	5.71	16.867	0.88	22.93	0.44
4.750	2.63	10.817	5.71	16.883	0.88	22.95	0.44
4.767	2.63	10.833	5.71	16.900	0.88	22.97	0.44
4.783	2.63	10.850	5.71	16.917	0.88	22.98	0.44
4.800	2.63	10.867	5.71	16.933	0.88	23.00	0.44
4.817	2.63	10.883	5.71	16.950	0.88	23.02	0.44
4.833	2.63	10.900	5.71	16.967	0.88	23.03	0.44
4.850	2.63	10.917	5.71	16.983	0.88	23.05	0.44
4.867	2.63	10.933	5.71	17.000	0.88	23.07	0.44
4.883	2.63	10.950	5.71	17.017	0.88	23.08	0.44
4.900	2.63	10.967	5.71	17.033	0.88	23.10	0.44
4.917	2.63	10.983	5.71	17.050	0.88	23.12	0.44
4.933	2.63	11.000	5.71	17.067	0.88	23.13	0.44
4.950	2.63	11.017	5.71	17.083	0.88	23.15	0.44
4.967	2.63	11.033	5.71	17.100	0.88	23.17	0.44
4.983	2.63	11.050	5.71	17.117	0.88	23.18	0.44
5.000	2.63	11.067	5.71	17.133	0.88	23.20	0.44
5.017	2.63	11.083	5.71	17.150	0.88	23.22	0.44
5.033	2.63	11.100	5.71	17.167	0.88	23.23	0.44
5.050	2.63	11.117	5.71	17.183	0.88	23.25	0.44
5.067	2.63	11.133	5.71	17.200	0.88	23.27	0.44
5.083	2.63	11.150	5.71	17.217	0.88	23.28	0.44
5.100	2.63	11.167	5.71	17.233	0.88	23.30	0.44
5.117	2.63	11.183	5.71	17.250	0.88	23.32	0.44
5.133	2.63	11.200	5.71	17.267	0.88	23.33	0.44
5.150	2.63	11.217	5.71	17.283	0.88	23.35	0.44
5.167	2.63	11.233	5.71	17.300	0.88	23.37	0.44
5.183	2.63	11.250	5.71	17.317	0.88	23.38	0.44
5.200	2.63	11.267	5.71	17.333	0.88	23.40	0.44
5.217	2.63	11.283	5.71	17.350	0.88	23.42	0.44
5.233	2.63	11.300	5.71	17.367	0.88	23.43	0.44
5.250	2.63	11.317	5.71	17.383	0.88	23.45	0.44
5.267	2.63	11.333	5.71	17.400	0.88	23.47	0.44
5.283	2.63	11.350	5.71	17.417	0.88	23.48	0.44
5.300	2.63	11.367	5.71	17.433	0.88	23.50	0.44
5.317	2.63	11.383	5.71	17.450	0.88	23.52	0.44
5.333	2.63	11.400	5.71	17.467	0.88	23.53	0.44
5.350	2.63	11.417	5.71	17.483	0.88	23.55	0.44
5.367	2.63	11.433	5.71	17.500	0.88	23.57	0.44
5.383	2.63	11.450	5.71	17.517	0.88	23.58	0.44
5.400	2.63	11.467	5.71	17.533	0.88	23.60	0.44
5.417	2.63	11.483	5.71	17.550	0.88	23.62	0.44
5.433	2.63	11.500	5.71	17.567	0.88	23.63	0.44
5.450	2.63	11.517	5.71	17.583	0.88	23.65	0.44
5.467	2.63	11.533	5.71	17.600	0.88	23.67	0.44
5.483	2.63	11.550	5.71	17.617	0.88	23.68	0.44
5.500	2.63	11.567	5.71	17.633	0.88	23.70	0.44
5.517	2.63	11.583	5.71	17.650	0.88	23.72	0.44
5.533	2.63	11.600	5.71	17.667	0.88	23.73	0.44
5.550	2.63	11.617	5.71	17.683	0.88	23.75	0.44
5.567	2.63	11.633	5.71	17.700	0.88	23.77	0.44
5.583	2.63	11.650	5.71	17.717	0.88	23.78	0.44
5.600	2.63	11.667	5.71	17.733	0.88	23.80	0.44
5.617	2.63	11.683	5.71	17.750	0.88	23.82	0.44
5.633	2.63	11.700	5.71	17.767	0.88	23.83	0.44
5.650	2.63	11.717	5.71	17.783	0.88	23.85	0.44
5.667	2.63	11.733	5.71	17.800	0.88	23.87	0.44
5.683	2.63	11.750	5.71	17.817	0.88	23.88	0.44
5.700	2.63	11.767	5.71	17.833	0.88	23.90	0.44
5.717	2.63	11.783	5.71	17.850	0.88	23.92	0.44
5.733	2.63	11.800	5.71	17.867	0.88	23.93	0.44
5.750	2.63	11.817	5.71	17.883	0.88	23.95	0.44
5.767	2.63	11.833	5.71	17.900	0.88	23.97	0.44
5.783	2.63	11.850	5.71	17.917	0.88	23.98	0.44
5.800	2.63	11.867	5.71	17.933	0.88	24.00	0.44
5.817	2.63	11.883	5.71	17.950	0.88	24.02	0.44
5.833	2.63	11.900	5.71	17.967	0.88	24.03	0.44
5.850	2.63	11.917	5.71	17.983	0.88	24.05	0.44
5.867	2.63	11.933	5.71	18.000	0.88	24.07	0.44
5.883	2.63	11.950	5.71	18.017	0.88	24.08	0.44
5.900	2.63	11.967	5.71	18.033	0.88	24.10	0.44
5.917	2.63	11.983	5.71	18.050	0.88	24.12	0.44
5.933	2.63	12.000	5.71	18.067	0.88	24.13	0.44
5.950	2.63	12.017	5.71	18.083	0.88	24.15	0.44

5.967	2.63	12.033	5.71	18.100	0.88	24.17	0.44	
5.983	2.63	12.050	5.71	18.117	0.88	24.18	0.44	
6.000	2.63	12.067	5.71	18.133	0.88	24.20	0.44	
6.017	2.63	12.083	5.71	18.150	0.88	24.22	0.44	
6.033	2.63	12.100	5.71	18.167	0.88	24.23	0.44	
6.050	2.63	12.117	5.71	18.183	0.88	24.25	0.44	
6.067	2.63	12.133	5.71	18.200	0.88			

Max.Eff.Inten.(mm/hr)=	20.19	16.43	
over (min)	5.00	9.00	
Storage Coeff. (min)=	5.44 (ii)	8.67 (ii)	
Unit Hyd. Tpeak (min)=	5.00	9.00	
Unit Hyd. peak (cms)=	0.21	0.13	
			TOTALS
PEAK FLOW (cms)=	0.12	0.00	0.124 (iii)
TIME TO PEAK (hrs)=	9.73	10.25	10.23
RUNOFF VOLUME (mm)=	86.79	56.80	86.50
TOTAL RAINFALL (mm)=	87.80	87.80	87.80
RUNOFF COEFFICIENT =	0.99	0.65	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7642)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0470	0.1250
	0.0197	0.0630	0.0551	0.1410
	0.0304	0.0850	0.0620	0.1580
	0.0373	0.1020	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7641)	2.210	0.124	10.23	86.50
OUTFLOW: ID= 1 (7642)	2.210	0.040	10.55	80.29

PEAK FLOW REDUCTION [Qout/Qin](%)= 32.30
TIME SHIFT OF PEAK FLOW (min)= 19.00
MAXIMUM STORAGE USED (ha.m.)= 0.1083

CALIB			
STANDHYD (7643)	Area (ha)= 2.02		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	2.00	0.02	
Dep. Storage (mm)=	1.00	1.50	
Average Slope (%)=	1.00	0.50	
Length (m)=	116.05	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	2.63	12.150	5.71	18.22	0.88
0.033	0.00	6.100	2.63	12.167	5.71	18.23	0.88
0.050	0.00	6.117	2.63	12.183	5.71	18.25	0.88
0.067	0.00	6.133	2.63	12.200	5.71	18.27	0.44
0.083	0.00	6.150	2.63	12.217	5.71	18.28	0.44
0.100	0.00	6.167	2.63	12.233	5.71	18.30	0.44
0.117	0.00	6.183	2.63	12.250	5.71	18.32	0.44
0.133	0.00	6.200	2.63	12.267	3.07	18.33	0.44
0.150	0.00	6.217	2.63	12.283	3.07	18.35	0.44
0.167	0.00	6.233	2.63	12.300	3.07	18.37	0.44
0.183	0.00	6.250	2.64	12.317	3.07	18.38	0.44
0.200	0.00	6.267	7.46	12.333	3.07	18.40	0.44
0.217	0.00	6.283	7.46	12.350	3.07	18.42	0.44
0.233	0.00	6.300	7.46	12.367	3.07	18.43	0.44
0.250	0.00	6.317	7.46	12.383	3.07	18.45	0.44
0.267	0.44	6.333	7.46	12.400	3.07	18.47	0.44
0.283	0.44	6.350	7.46	12.417	3.07	18.48	0.44
0.300	0.44	6.367	7.46	12.433	3.07	18.50	0.44
0.317	0.44	6.383	7.46	12.450	3.07	18.52	0.44
0.333	0.44	6.400	7.46	12.467	3.07	18.53	0.44
0.350	0.44	6.417	7.46	12.483	3.07	18.55	0.44
0.367	0.44	6.433	7.46	12.500	3.07	18.57	0.44
0.383	0.44	6.450	7.46	12.517	3.07	18.58	0.44
0.400	0.44	6.467	7.46	12.533	3.07	18.60	0.44
0.417	0.44	6.483	7.46	12.550	3.07	18.62	0.44
0.433	0.44	6.500	7.46	12.567	3.07	18.63	0.44
0.450	0.44	6.517	7.46	12.583	3.07	18.65	0.44
0.467	0.44	6.533	7.46	12.600	3.07	18.67	0.44
0.483	0.44	6.550	7.46	12.617	3.07	18.68	0.44
0.500	0.44	6.567	7.46	12.633	3.07	18.70	0.44
0.517	0.44	6.583	7.46	12.650	3.07	18.72	0.44
0.533	0.44	6.600	7.46	12.667	3.07	18.73	0.44
0.550	0.44	6.617	7.46	12.683	3.07	18.75	0.44
0.567	0.44	6.633	7.46	12.700	3.07	18.77	0.44
0.583	0.44	6.650	7.46	12.717	3.07	18.78	0.44
0.600	0.44	6.667	7.46	12.733	3.07	18.80	0.44
0.617	0.44	6.683	7.46	12.750	3.07	18.82	0.44
0.633	0.44	6.700	7.46	12.767	3.07	18.83	0.44
0.650	0.44	6.717	7.46	12.783	3.07	18.85	0.44
0.667	0.44	6.733	7.46	12.800	3.07	18.87	0.44
0.683	0.44	6.750	7.46	12.817	3.07	18.88	0.44
0.700	0.44	6.767	7.46	12.833	3.07	18.90	0.44
0.717	0.44	6.783	7.46	12.850	3.07	18.92	0.44
0.733	0.44	6.800	7.46	12.867	3.07	18.93	0.44
0.750	0.44	6.817	7.46	12.883	3.07	18.95	0.44
0.767	0.44	6.833	7.46	12.900	3.07	18.97	0.44
0.783	0.44	6.850	7.46	12.917	3.07	18.98	0.44
0.800	0.44	6.867	7.46	12.933	3.07	19.00	0.44
0.817	0.44	6.883	7.46	12.950	3.07	19.02	0.44
0.833	0.44	6.900	7.46	12.967	3.07	19.03	0.44
0.850	0.44	6.917	7.46	12.983	3.07	19.05	0.44
0.867	0.44	6.933	7.46	13.000	3.07	19.07	0.44
0.883	0.44	6.950	7.46	13.017	3.07	19.08	0.44
0.900	0.44	6.967	7.46	13.033	3.07	19.10	0.44
0.917	0.44	6.983	7.46	13.050	3.07	19.12	0.44
0.933	0.44	7.000	7.46	13.067	3.07	19.13	0.44
0.950	0.44	7.017	7.46	13.083	3.07	19.15	0.44
0.967	0.44	7.033	7.46	13.100	3.07	19.17	0.44
0.983	0.44	7.050	7.46	13.117	3.07	19.18	0.44
1.000	0.44	7.067	7.46	13.133	3.07	19.20	0.44
1.017	0.44	7.083	7.46	13.150	3.07	19.22	0.44
1.033	0.44	7.100	7.46	13.167	3.07	19.23	0.44
1.050	0.44	7.117	7.46	13.183	3.07	19.25	0.44
1.067	0.44	7.133	7.46	13.200	3.07	19.27	0.44
1.083	0.44	7.150	7.46	13.217	3.07	19.28	0.44
1.100	0.44	7.167	7.46	13.233	3.07	19.30	0.44
1.117	0.44	7.183	7.46	13.250	3.07	19.32	0.44
1.133	0.44	7.200	7.46	13.267	3.07	19.33	0.44
1.150	0.44	7.217	7.46	13.283	3.07	19.35	0.44
1.167	0.44	7.233	7.46	13.300	3.07	19.37	0.44
1.183	0.44	7.250	7.46	13.317	3.07	19.38	0.44
1.200	0.44	7.267	7.46	13.333	3.07	19.40	0.44
1.217	0.44	7.283	7.46	13.350	3.07	19.42	0.44
1.233	0.44	7.300	7.46	13.367	3.07	19.43	0.44
1.250	0.44	7.317	7.46	13.383	3.07	19.45	0.44
1.267	0.44	7.333	7.46	13.400	3.07	19.47	0.44
1.283	0.44	7.350	7.46	13.417	3.07	19.48	0.44
1.300	0.44	7.367	7.46	13.433	3.07	19.50	0.44
1.317	0.44	7.383	7.46	13.450	3.07	19.52	0.44
1.333	0.44	7.400	7.46	13.467	3.07	19.53	0.44
1.350	0.44	7.417	7.46	13.483	3.07	19.55	0.44
1.367	0.44	7.433	7.46	13.500	3.07	19.57	0.44
1.383	0.44	7.450	7.46	13.517	3.07	19.58	0.44
1.400	0.44	7.467	7.46	13.533	3.07	19.60	0.44
1.417	0.44	7.483	7.46	13.550	3.07	19.62	0.44
1.433	0.44	7.500	7.46	13.567	3.07	19.63	0.44

1.450	0.44	7.517	7.46	13.583	3.07	19.65	0.44	2.717	0.44	8.783	20.19	14.850	1.76	20.92	0.44
1.467	0.44	7.533	7.46	13.600	3.07	19.67	0.44	2.733	0.44	8.800	20.19	14.867	1.76	20.93	0.44
1.483	0.44	7.550	7.46	13.617	3.07	19.68	0.44	2.750	0.44	8.817	20.19	14.883	1.76	20.95	0.44
1.500	0.44	7.567	7.46	13.633	3.07	19.70	0.44	2.767	0.44	8.833	20.19	14.900	1.76	20.97	0.44
1.517	0.44	7.583	7.46	13.650	3.07	19.72	0.44	2.783	0.44	8.850	20.19	14.917	1.76	20.98	0.44
1.533	0.44	7.600	7.46	13.667	3.07	19.73	0.44	2.800	0.44	8.867	20.19	14.933	1.76	21.00	0.44
1.550	0.44	7.617	7.46	13.683	3.07	19.75	0.44	2.817	0.44	8.883	20.19	14.950	1.76	21.02	0.44
1.567	0.44	7.633	7.46	13.700	3.07	19.77	0.44	2.833	0.44	8.900	20.19	14.967	1.76	21.03	0.44
1.583	0.44	7.650	7.46	13.717	3.07	19.78	0.44	2.850	0.44	8.917	20.19	14.983	1.76	21.05	0.44
1.600	0.44	7.667	7.46	13.733	3.07	19.80	0.44	2.867	0.44	8.933	20.19	15.000	1.76	21.07	0.44
1.617	0.44	7.683	7.46	13.750	3.07	19.82	0.44	2.883	0.44	8.950	20.19	15.017	1.76	21.08	0.44
1.633	0.44	7.700	7.46	13.767	3.07	19.83	0.44	2.900	0.44	8.967	20.19	15.033	1.76	21.10	0.44
1.650	0.44	7.717	7.46	13.783	3.07	19.85	0.44	2.917	0.44	8.983	20.19	15.050	1.76	21.12	0.44
1.667	0.44	7.733	7.46	13.800	3.07	19.87	0.44	2.933	0.44	9.000	20.19	15.067	1.76	21.13	0.44
1.683	0.44	7.750	7.46	13.817	3.07	19.88	0.44	2.950	0.44	9.017	20.19	15.083	1.76	21.15	0.44
1.700	0.44	7.767	7.46	13.833	3.07	19.90	0.44	2.967	0.44	9.033	20.19	15.100	1.76	21.17	0.44
1.717	0.44	7.783	7.46	13.850	3.07	19.92	0.44	2.983	0.44	9.050	20.19	15.117	1.76	21.18	0.44
1.733	0.44	7.800	7.46	13.867	3.07	19.93	0.44	3.000	0.44	9.067	20.19	15.133	1.76	21.20	0.44
1.750	0.44	7.817	7.46	13.883	3.07	19.95	0.44	3.017	0.44	9.083	20.19	15.150	1.76	21.22	0.44
1.767	0.44	7.833	7.46	13.900	3.07	19.97	0.44	3.033	0.44	9.100	20.19	15.167	1.76	21.23	0.44
1.783	0.44	7.850	7.46	13.917	3.07	19.98	0.44	3.050	0.44	9.117	20.19	15.183	1.76	21.25	0.44
1.800	0.44	7.867	7.46	13.933	3.07	20.00	0.44	3.067	0.44	9.133	20.19	15.200	1.76	21.27	0.44
1.817	0.44	7.883	7.46	13.950	3.07	20.02	0.44	3.083	0.44	9.150	20.19	15.217	1.76	21.28	0.44
1.833	0.44	7.900	7.46	13.967	3.07	20.03	0.44	3.100	0.44	9.167	20.19	15.233	1.76	21.30	0.44
1.850	0.44	7.917	7.46	13.983	3.07	20.05	0.44	3.117	0.44	9.183	20.19	15.250	1.76	21.32	0.44
1.867	0.44	7.933	7.46	14.000	3.07	20.07	0.44	3.133	0.44	9.200	20.19	15.267	1.76	21.33	0.44
1.883	0.44	7.950	7.46	14.017	3.07	20.08	0.44	3.150	0.44	9.217	20.19	15.283	1.76	21.35	0.44
1.900	0.44	7.967	7.46	14.033	3.07	20.10	0.44	3.167	0.44	9.233	20.19	15.300	1.76	21.37	0.44
1.917	0.44	7.983	7.46	14.050	3.07	20.12	0.44	3.183	0.44	9.250	20.19	15.317	1.76	21.38	0.44
1.933	0.44	8.000	7.46	14.067	3.07	20.13	0.44	3.200	0.44	9.267	20.19	15.333	1.76	21.40	0.44
1.950	0.44	8.017	7.46	14.083	3.07	20.15	0.44	3.217	0.44	9.283	20.19	15.350	1.76	21.42	0.44
1.967	0.44	8.033	7.46	14.100	3.07	20.17	0.44	3.233	0.44	9.300	20.19	15.367	1.76	21.43	0.44
1.983	0.44	8.050	7.46	14.117	3.07	20.18	0.44	3.250	0.44	9.317	20.19	15.383	1.76	21.45	0.44
2.000	0.44	8.067	7.46	14.133	3.07	20.20	0.44	3.267	0.44	9.333	20.19	15.400	1.76	21.47	0.44
2.017	0.44	8.083	7.46	14.150	3.07	20.22	0.44	3.283	0.44	9.350	20.19	15.417	1.76	21.48	0.44
2.033	0.44	8.100	7.46	14.167	3.07	20.23	0.44	3.300	0.44	9.367	20.19	15.433	1.76	21.50	0.44
2.050	0.44	8.117	7.46	14.183	3.07	20.25	0.44	3.317	0.44	9.383	20.19	15.450	1.76	21.52	0.44
2.067	0.44	8.133	7.46	14.200	3.07	20.27	0.44	3.333	0.44	9.400	20.19	15.467	1.76	21.53	0.44
2.083	0.44	8.150	7.46	14.217	3.07	20.28	0.44	3.350	0.44	9.417	20.19	15.483	1.76	21.55	0.44
2.100	0.44	8.167	7.46	14.233	3.07	20.30	0.44	3.367	0.44	9.433	20.19	15.500	1.76	21.57	0.44
2.117	0.44	8.183	7.46	14.250	3.07	20.32	0.44	3.383	0.44	9.450	20.19	15.517	1.76	21.58	0.44
2.133	0.44	8.200	7.46	14.267	1.76	20.33	0.44	3.400	0.44	9.467	20.19	15.533	1.76	21.60	0.44
2.150	0.44	8.217	7.46	14.283	1.76	20.35	0.44	3.417	0.44	9.483	20.19	15.550	1.76	21.62	0.44
2.167	0.44	8.233	7.46	14.300	1.76	20.37	0.44	3.433	0.44	9.500	20.19	15.567	1.76	21.63	0.44
2.183	0.44	8.250	7.49	14.317	1.76	20.38	0.44	3.450	0.44	9.517	20.19	15.583	1.76	21.65	0.44
2.200	0.44	8.267	20.19	14.333	1.76	20.40	0.44	3.467	0.44	9.533	20.19	15.600	1.76	21.67	0.44
2.217	0.44	8.283	20.19	14.350	1.76	20.42	0.44	3.483	0.44	9.550	20.19	15.617	1.76	21.68	0.44
2.233	0.44	8.300	20.19	14.367	1.76	20.43	0.44	3.500	0.44	9.567	20.19	15.633	1.76	21.70	0.44
2.250	0.44	8.317	20.19	14.383	1.76	20.45	0.44	3.517	0.44	9.583	20.19	15.650	1.76	21.72	0.44
2.267	0.44	8.333	20.19	14.400	1.76	20.47	0.44	3.533	0.44	9.600	20.19	15.667	1.76	21.73	0.44
2.283	0.44	8.350	20.19	14.417	1.76	20.48	0.44	3.550	0.44	9.617	20.19	15.683	1.76	21.75	0.44
2.300	0.44	8.367	20.19	14.433	1.76	20.50	0.44	3.567	0.44	9.633	20.19	15.700	1.76	21.77	0.44
2.317	0.44	8.383	20.19	14.450	1.76	20.52	0.44	3.583	0.44	9.650	20.19	15.717	1.76	21.78	0.44
2.333	0.44	8.400	20.19	14.467	1.76	20.53	0.44	3.600	0.44	9.667	20.19	15.733	1.76	21.80	0.44
2.350	0.44	8.417	20.19	14.483	1.76	20.55	0.44	3.617	0.44	9.683	20.19	15.750	1.76	21.82	0.44
2.367	0.44	8.433	20.19	14.500	1.76	20.57	0.44	3.633	0.44	9.700	20.19	15.767	1.76	21.83	0.44
2.383	0.44	8.450	20.19	14.517	1.76	20.58	0.44	3.650	0.44	9.717	20.19	15.783	1.76	21.85	0.44
2.400	0.44	8.467	20.19	14.533	1.76	20.60	0.44	3.667	0.44	9.733	20.19	15.800	1.76	21.87	0.44
2.417	0.44	8.483	20.19	14.550	1.76	20.62	0.44	3.683	0.44	9.750	20.19	15.817	1.76	21.88	0.44
2.433	0.44	8.500	20.19	14.567	1.76	20.63	0.44	3.700	0.44	9.767	20.19	15.833	1.76	21.90	0.44
2.450	0.44	8.517	20.19	14.583	1.76	20.65	0.44	3.717	0.44	9.783	20.19	15.850	1.76	21.92	0.44
2.467	0.44	8.533	20.19	14.600	1.76	20.67	0.44	3.733	0.44	9.800	20.19	15.867	1.76	21.93	0.44
2.483	0.44	8.550	20.19	14.617	1.76	20.68	0.44	3.750	0.44	9.817	20.19	15.883	1.76	21.95	0.44
2.500	0.44	8.567	20.19	14.633	1.76	20.70	0.44	3.767	0.44	9.833	20.19	15.900	1.76	21.97	0.44
2.517	0.44	8.583	20.19	14.650	1.76	20.72	0.44	3.783	0.44	9.850	20.19	15.917	1.76	21.98	0.44
2.533	0.44	8.600	20.19	14.667	1.76	20.73	0.44	3.800	0.44	9.867	20.19	15.933	1.76	22.00	0.44
2.550	0.44	8.617	20.19	14.683	1.76	20.75	0.44	3.817	0.44	9.883	20.19	15.950	1.76	22.02	0.44
2.567	0.44	8.633	20.19	14.700	1.76	20.77	0.44	3.833	0.44	9.900	20.19	15.967	1.76	22.03	0.44
2.583	0.44	8.650	20.19	14.717	1.76	20.78	0.44	3.850	0.44	9.917	20.19	15.983	1.76	22.05	0.44
2.600	0.44	8.667	20.19	14.733	1.76	20.80	0.44	3.867	0.44	9.933	20.19	16.000	1.76	22.07	0.44
2.617	0.44	8.683	20.19	14.750	1.76	20.82	0.44	3.883	0.44	9.950	20.19	16.017	1.76	22.08	0.44
2.633	0.44	8.700	20.19	14.767	1.76	20.83	0.44	3.900	0.44	9.967	20.19	16.033	1.76	22.10	0.44
2.650	0.44	8.717	20.19	14.783	1.76	20.85	0.44	3.917	0.44	9.983	20.19	16.050	1.76	22.12	0.44
2.667	0.44	8.733	20.19	14.800	1.76	20.87	0.44	3.933	0.44	10.000	20.19	16.067	1.76	22.13	0.44
2.683	0.44	8.750	20.19	14.817	1.76	20.88	0.44	3.950	0.44	10.017	20.19	16.083	1.76	22.15	0.44
2.700	0.44	8.767	20.19	14.833	1.76	20.90	0.44	3.967	0.44	10.033	20.19	16.100	1.76	22.17	0.44

3.983	0.44	10.050	20.19	16.117	1.76	22.18	0.44
4.000	0.44	10.067	20.19	16.133	1.76	22.20	0.44
4.017	0.44	10.083	20.19	16.150	1.76	22.22	0.44
4.033	0.44	10.100	20.19	16.167	1.76	22.23	0.44
4.050	0.44	10.117	20.19	16.183	1.76	22.25	0.44
4.067	0.44	10.133	20.19	16.200	1.76	22.27	0.44
4.083	0.44	10.150	20.19	16.217	1.76	22.28	0.44
4.100	0.44	10.167	20.19	16.233	1.76	22.30	0.44
4.117	0.44	10.183	20.19	16.250	1.76	22.32	0.44
4.133	0.44	10.200	20.19	16.267	0.88	22.33	0.44
4.150	0.44	10.217	20.19	16.283	0.88	22.35	0.44
4.167	0.44	10.233	20.19	16.300	0.88	22.37	0.44
4.183	0.44	10.250	20.18	16.317	0.88	22.38	0.44
4.200	0.44	10.267	5.71	16.333	0.88	22.40	0.44
4.217	0.44	10.283	5.71	16.350	0.88	22.42	0.44
4.233	0.44	10.300	5.71	16.367	0.88	22.43	0.44
4.250	0.44	10.317	5.71	16.383	0.88	22.45	0.44
4.267	2.63	10.333	5.71	16.400	0.88	22.47	0.44
4.283	2.63	10.350	5.71	16.417	0.88	22.48	0.44
4.300	2.63	10.367	5.71	16.433	0.88	22.50	0.44
4.317	2.63	10.383	5.71	16.450	0.88	22.52	0.44
4.333	2.63	10.400	5.71	16.467	0.88	22.53	0.44
4.350	2.63	10.417	5.71	16.483	0.88	22.55	0.44
4.367	2.63	10.433	5.71	16.500	0.88	22.57	0.44
4.383	2.63	10.450	5.71	16.517	0.88	22.58	0.44
4.400	2.63	10.467	5.71	16.533	0.88	22.60	0.44
4.417	2.63	10.483	5.71	16.550	0.88	22.62	0.44
4.433	2.63	10.500	5.71	16.567	0.88	22.63	0.44
4.450	2.63	10.517	5.71	16.583	0.88	22.65	0.44
4.467	2.63	10.533	5.71	16.600	0.88	22.67	0.44
4.483	2.63	10.550	5.71	16.617	0.88	22.68	0.44
4.500	2.63	10.567	5.71	16.633	0.88	22.70	0.44
4.517	2.63	10.583	5.71	16.650	0.88	22.72	0.44
4.533	2.63	10.600	5.71	16.667	0.88	22.73	0.44
4.550	2.63	10.617	5.71	16.683	0.88	22.75	0.44
4.567	2.63	10.633	5.71	16.700	0.88	22.77	0.44
4.583	2.63	10.650	5.71	16.717	0.88	22.78	0.44
4.600	2.63	10.667	5.71	16.733	0.88	22.80	0.44
4.617	2.63	10.683	5.71	16.750	0.88	22.82	0.44
4.633	2.63	10.700	5.71	16.767	0.88	22.83	0.44
4.650	2.63	10.717	5.71	16.783	0.88	22.85	0.44
4.667	2.63	10.733	5.71	16.800	0.88	22.87	0.44
4.683	2.63	10.750	5.71	16.817	0.88	22.88	0.44
4.700	2.63	10.767	5.71	16.833	0.88	22.90	0.44
4.717	2.63	10.783	5.71	16.850	0.88	22.92	0.44
4.733	2.63	10.800	5.71	16.867	0.88	22.93	0.44
4.750	2.63	10.817	5.71	16.883	0.88	22.95	0.44
4.767	2.63	10.833	5.71	16.900	0.88	22.97	0.44
4.783	2.63	10.850	5.71	16.917	0.88	22.98	0.44
4.800	2.63	10.867	5.71	16.933	0.88	23.00	0.44
4.817	2.63	10.883	5.71	16.950	0.88	23.02	0.44
4.833	2.63	10.900	5.71	16.967	0.88	23.03	0.44
4.850	2.63	10.917	5.71	16.983	0.88	23.05	0.44
4.867	2.63	10.933	5.71	17.000	0.88	23.07	0.44
4.883	2.63	10.950	5.71	17.017	0.88	23.08	0.44
4.900	2.63	10.967	5.71	17.033	0.88	23.10	0.44
4.917	2.63	10.983	5.71	17.050	0.88	23.12	0.44
4.933	2.63	11.000	5.71	17.067	0.88	23.13	0.44
4.950	2.63	11.017	5.71	17.083	0.88	23.15	0.44
4.967	2.63	11.033	5.71	17.100	0.88	23.17	0.44
4.983	2.63	11.050	5.71	17.117	0.88	23.18	0.44
5.000	2.63	11.067	5.71	17.133	0.88	23.20	0.44
5.017	2.63	11.083	5.71	17.150	0.88	23.22	0.44
5.033	2.63	11.100	5.71	17.167	0.88	23.23	0.44
5.050	2.63	11.117	5.71	17.183	0.88	23.25	0.44
5.067	2.63	11.133	5.71	17.200	0.88	23.27	0.44
5.083	2.63	11.150	5.71	17.217	0.88	23.28	0.44
5.100	2.63	11.167	5.71	17.233	0.88	23.30	0.44
5.117	2.63	11.183	5.71	17.250	0.88	23.32	0.44
5.133	2.63	11.200	5.71	17.267	0.88	23.33	0.44
5.150	2.63	11.217	5.71	17.283	0.88	23.35	0.44
5.167	2.63	11.233	5.71	17.300	0.88	23.37	0.44
5.183	2.63	11.250	5.71	17.317	0.88	23.38	0.44
5.200	2.63	11.267	5.71	17.333	0.88	23.40	0.44
5.217	2.63	11.283	5.71	17.350	0.88	23.42	0.44
5.233	2.63	11.300	5.71	17.367	0.88	23.43	0.44
5.250	2.63	11.317	5.71	17.383	0.88	23.45	0.44
5.267	2.63	11.333	5.71	17.400	0.88	23.47	0.44
5.283	2.63	11.350	5.71	17.417	0.88	23.48	0.44
5.300	2.63	11.367	5.71	17.433	0.88	23.50	0.44
5.317	2.63	11.383	5.71	17.450	0.88	23.52	0.44
5.333	2.63	11.400	5.71	17.467	0.88	23.53	0.44
5.350	2.63	11.417	5.71	17.483	0.88	23.55	0.44
5.367	2.63	11.433	5.71	17.500	0.88	23.57	0.44
5.383	2.63	11.450	5.71	17.517	0.88	23.58	0.44
5.400	2.63	11.467	5.71	17.533	0.88	23.60	0.44
5.417	2.63	11.483	5.71	17.550	0.88	23.62	0.44
5.433	2.63	11.500	5.71	17.567	0.88	23.63	0.44
5.450	2.63	11.517	5.71	17.583	0.88	23.65	0.44
5.467	2.63	11.533	5.71	17.600	0.88	23.67	0.44
5.483	2.63	11.550	5.71	17.617	0.88	23.68	0.44
5.500	2.63	11.567	5.71	17.633	0.88	23.70	0.44
5.517	2.63	11.583	5.71	17.650	0.88	23.72	0.44
5.533	2.63	11.600	5.71	17.667	0.88	23.73	0.44
5.550	2.63	11.617	5.71	17.683	0.88	23.75	0.44
5.567	2.63	11.633	5.71	17.700	0.88	23.77	0.44
5.583	2.63	11.650	5.71	17.717	0.88	23.78	0.44
5.600	2.63	11.667	5.71	17.733	0.88	23.80	0.44
5.617	2.63	11.683	5.71	17.750	0.88	23.82	0.44
5.633	2.63	11.700	5.71	17.767	0.88	23.83	0.44
5.650	2.63	11.717	5.71	17.783	0.88	23.85	0.44
5.667	2.63	11.733	5.71	17.800	0.88	23.87	0.44
5.683	2.63	11.750	5.71	17.817	0.88	23.88	0.44
5.700	2.63	11.767	5.71	17.833	0.88	23.90	0.44
5.717	2.63	11.783	5.71	17.850	0.88	23.92	0.44
5.733	2.63	11.800	5.71	17.867	0.88	23.93	0.44
5.750	2.63	11.817	5.71	17.883	0.88	23.95	0.44
5.767	2.63	11.833	5.71	17.900	0.88	23.97	0.44
5.783	2.63	11.850	5.71	17.917	0.88	23.98	0.44
5.800	2.63	11.867	5.71	17.933	0.88	24.00	0.44
5.817	2.63	11.883	5.71	17.950	0.88	24.02	0.44
5.833	2.63	11.900	5.71	17.967	0.88	24.03	0.44
5.850	2.63	11.917	5.71	17.983	0.88	24.05	0.44
5.867	2.63	11.933	5.71	18.000	0.88	24.07	0.44
5.883	2.63	11.950	5.71	18.017	0.88	24.08	0.44
5.900	2.63	11.967	5.71	18.033	0.88	24.10	0.44
5.917	2.63	11.983	5.71	18.050	0.88	24.12	0.44
5.933	2.63	12.000	5.71	18.067	0.88	24.13	0.44
5.950	2.63	12.017	5.71	18.083	0.88	24.15	0.44
5.967	2.63	12.033	5.71	18.100	0.88	24.17	0.44
5.983	2.63	12.050	5.71	18.117	0.88	24.18	0.44
6.000	2.63	12.067	5.71	18.133	0.88	24.20	0.44
6.017	2.63	12.083	5.71	18.150	0.88	24.22	0.44
6.033	2.63	12.100	5.71	18.167	0.88	24.23	0.44
6.050	2.63	12.117	5.71	18.183	0.88	24.25	0.44
6.067	2.63	12.133	5.71	18.200	0.88		

Max.Eff.Inten.(mm/hr)=	20.19	16.43	
over (min)	5.00	9.00	
Storage Coeff. (min)=	5.30 (ii)	8.53 (ii)	
Unit Hyd. Tpeak (min)=	5.00	9.00	
Unit Hyd. peak (cms)=	0.22	0.13	
			TOTALS
PEAK FLOW (cms)=	0.11	0.00	0.113 (iii)
TIME TO PEAK (hrs)=	9.48	10.25	10.23
RUNOFF VOLUME (mm)=	86.79	56.79	86.50
TOTAL RAINFALL (mm)=	87.80	87.80	87.80
RUNOFF COEFFICIENT =	0.99	0.65	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7644)|	OVERFLOW IS OFF			
IN= 2---> OUT= 1 |				
DT= 1.0 min |	OUTFLOW (cms)	STORAGE (ha.m.)	| OUTFLOW (cms)	STORAGE (ha.m.)

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	0.0000	0.0000	0.0433	0.1140
	0.0182	0.0580	0.0507	0.1280
	0.0280	0.0775	0.0571	0.1440
	0.0343	0.0930	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7643)	2.020	0.113	10.23	86.50
OUTFLOW: ID= 1 (7644)	2.020	0.037	10.55	80.36

PEAK FLOW REDUCTION [Qout/Qin](%)= 32.55
TIME SHIFT OF PEAK FLOW (min)= 19.00
MAXIMUM STORAGE USED (ha.m.)= 0.0988

```
       V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
```

Developed and Distributed by Smart City Water Inc

***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-a4eb17eaad57\d2d4e2ef-648d-434d-831a-08570638092b\s
Summary filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-a4eb17eaad57\d2d4e2ef-648d-434d-831a-08570638092b\s

DATE: 06/14/2024 TIME: 12:48:40

USER:

COMMENTS: _____

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  ************************************************
  ** SIMULATION : 992. 50yr 4hr 10min Chicago   **
  ************************************************
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CHICAGO STORM	IDF curve parameters: A=3886.000
Ptotal= 80.34 mm	B= 16.000
	C= 0.949

used in: INTENSITY = A / (t + B)^C

Duration of storm = 4.00 hrs
Storm time step = 10.00 min
Time to peak ratio = 0.33

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	2.76	1.00	54.64	2.00	11.20	3.00	3.68
0.17	3.46	1.17	176.22	2.17	8.69	3.17	3.26
0.33	4.54	1.33	73.12	2.33	6.99	3.33	2.91
0.50	6.38	1.50	36.23	2.50	5.79	3.50	2.62
0.67	9.93	1.67	22.15	2.67	4.89	3.67	2.38
0.83	18.64	1.83	15.19	2.83	4.21	3.83	2.18

CALIB	
STANDHYD (7567)	Area (ha)= 2.72
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.69	0.03
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	134.66	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.76	1.017	54.63	2.017	11.20	3.02	3.68
0.033	2.76	1.033	54.64	2.033	11.20	3.03	3.68
0.050	2.76	1.050	54.64	2.050	11.20	3.05	3.68
0.067	2.76	1.067	54.64	2.067	11.20	3.07	3.68
0.083	2.76	1.083	54.64	2.083	11.20	3.08	3.68
0.100	2.76	1.100	54.64	2.100	11.20	3.10	3.68
0.117	2.76	1.117	54.64	2.117	11.20	3.12	3.68
0.133	2.76	1.133	54.64	2.133	11.20	3.13	3.68
0.150	2.76	1.150	54.64	2.150	11.20	3.15	3.68
0.167	2.76	1.167	54.64	2.167	11.20	3.17	3.68
0.183	3.46	1.183	176.22	2.183	8.69	3.18	3.26
0.200	3.46	1.200	176.22	2.200	8.69	3.20	3.26
0.217	3.46	1.217	176.22	2.217	8.69	3.22	3.26
0.233	3.46	1.233	176.22	2.233	8.69	3.23	3.26
0.250	3.46	1.250	176.22	2.250	8.69	3.25	3.26
0.267	3.46	1.267	176.22	2.267	8.69	3.27	3.26
0.283	3.46	1.283	176.22	2.283	8.69	3.28	3.26
0.300	3.46	1.300	176.22	2.300	8.69	3.30	3.26
0.317	3.46	1.317	176.22	2.317	8.69	3.32	3.26
0.333	3.46	1.333	176.22	2.333	8.69	3.33	3.26
0.350	4.54	1.350	73.12	2.350	6.99	3.35	2.91
0.367	4.54	1.367	73.12	2.367	6.99	3.37	2.91
0.383	4.54	1.383	73.12	2.383	6.99	3.38	2.91
0.400	4.54	1.400	73.12	2.400	6.99	3.40	2.91
0.417	4.54	1.417	73.12	2.417	6.99	3.42	2.91
0.433	4.54	1.433	73.12	2.433	6.99	3.43	2.91
0.450	4.54	1.450	73.12	2.450	6.99	3.45	2.91
0.467	4.54	1.467	73.12	2.467	6.99	3.47	2.91
0.483	4.54	1.483	73.12	2.483	6.99	3.48	2.91
0.500	4.54	1.500	73.12	2.500	6.99	3.50	2.91
0.517	6.38	1.517	36.24	2.517	5.79	3.52	2.62
0.533	6.38	1.533	36.23	2.533	5.79	3.53	2.62
0.550	6.38	1.550	36.23	2.550	5.79	3.55	2.62
0.567	6.38	1.567	36.23	2.567	5.79	3.57	2.62
0.583	6.38	1.583	36.23	2.583	5.79	3.58	2.62
0.600	6.38	1.600	36.23	2.600	5.79	3.60	2.62
0.617	6.38	1.617	36.23	2.617	5.79	3.62	2.62
0.633	6.38	1.633	36.23	2.633	5.79	3.63	2.62
0.650	6.38	1.650	36.23	2.650	5.79	3.65	2.62
0.667	6.38	1.667	36.23	2.667	5.79	3.67	2.62
0.683	9.93	1.683	22.15	2.683	4.89	3.68	2.38
0.700	9.93	1.700	22.15	2.700	4.89	3.70	2.38
0.717	9.93	1.717	22.15	2.717	4.89	3.72	2.38
0.733	9.93	1.733	22.15	2.733	4.89	3.73	2.38
0.750	9.93	1.750	22.15	2.750	4.89	3.75	2.38
0.767	9.93	1.767	22.15	2.767	4.89	3.77	2.38
0.783	9.93	1.783	22.15	2.783	4.89	3.78	2.38
0.800	9.93	1.800	22.15	2.800	4.89	3.80	2.38
0.817	9.93	1.817	22.15	2.817	4.89	3.82	2.38
0.833	9.93	1.833	22.15	2.833	4.89	3.83	2.38
0.850	18.64	1.850	15.19	2.850	4.21	3.85	2.18
0.867	18.64	1.867	15.19	2.867	4.21	3.87	2.18
0.883	18.64	1.883	15.19	2.883	4.21	3.88	2.18
0.900	18.64	1.900	15.19	2.900	4.21	3.90	2.18
0.917	18.64	1.917	15.19	2.917	4.21	3.92	2.18

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0.933	18.64	1.933	15.19	2.933	4.21	3.93	2.18
0.950	18.64	1.950	15.19	2.950	4.21	3.95	2.18
0.967	18.64	1.967	15.19	2.967	4.21	3.97	2.18
0.983	18.64	1.983	15.19	2.983	4.21	3.98	2.18
1.000	18.64	2.000	15.19	3.000	4.21	4.00	2.18

Max.Eff.Inten.(mm/hr)=	176.22	110.28	
over (min)	5.00	4.00	
Storage Coeff. (min)=	2.43 (ii)	3.79 (ii)	
Unit Hyd. Tpeak (min)=	5.00	4.00	
Unit Hyd. peak (cms)=	0.34	0.29	
			TOTALS
PEAK FLOW (cms)=	1.27	0.01	1.279 (iii)
TIME TO PEAK (hrs)=	1.33	1.35	1.33
RUNOFF VOLUME (mm)=	79.34	50.27	79.05
TOTAL RAINFALL (mm)=	80.34	80.34	80.34
RUNOFF COEFFICIENT =	0.99	0.63	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7626) | IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0568	0.1530
	0.0239	0.0780	0.0660	0.1730
	0.0370	0.1040	0.0751	0.2000
	0.0451	0.1250	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7567)	2.720	1.279	1.33	79.05
OUTFLOW: ID= 1 (7626)	2.720	0.066	2.35	76.99

PEAK FLOW REDUCTION [Qout/Qin](%)= 5.15
TIME SHIFT OF PEAK FLOW (min)= 61.00
MAXIMUM STORAGE USED (ha.m.)= 0.1728

CALIB | STANDHYD (7624) | ID= 1 DT= 1.0 min	Area (ha)= 1.80 Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00		
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	1.78	0.02	
Dep. Storage (mm)=	1.00	1.50	
Average Slope (%)=	1.00	0.50	
Length (m)=	109.54	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.76	1.017	54.63	2.017	11.20	3.02	3.68
0.033	2.76	1.033	54.64	2.033	11.20	3.03	3.68
0.050	2.76	1.050	54.64	2.050	11.20	3.05	3.68
0.067	2.76	1.067	54.64	2.067	11.20	3.07	3.68
0.083	2.76	1.083	54.64	2.083	11.20	3.08	3.68
0.100	2.76	1.100	54.64	2.100	11.20	3.10	3.68
0.117	2.76	1.117	54.64	2.117	11.20	3.12	3.68
0.133	2.76	1.133	54.64	2.133	11.20	3.13	3.68
0.150	2.76	1.150	54.64	2.150	11.20	3.15	3.68
0.167	2.76	1.167	54.64	2.167	11.20	3.17	3.68
0.183	3.46	1.183	176.22	2.183	8.69	3.18	3.26
0.200	3.46	1.200	176.22	2.200	8.69	3.20	3.26
0.217	3.46	1.217	176.22	2.217	8.69	3.22	3.26
0.233	3.46	1.233	176.22	2.233	8.69	3.23	3.26
0.250	3.46	1.250	176.22	2.250	8.69	3.25	3.26
0.267	3.46	1.267	176.22	2.267	8.69	3.27	3.26
0.283	3.46	1.283	176.22	2.283	8.69	3.28	3.26
0.300	3.46	1.300	176.22	2.300	8.69	3.30	3.26
0.317	3.46	1.317	176.22	2.317	8.69	3.32	3.26
0.333	3.46	1.333	176.22	2.333	8.69	3.33	3.26
0.350	4.54	1.350	73.12	2.350	6.99	3.35	2.91
0.367	4.54	1.367	73.12	2.367	6.99	3.37	2.91
0.383	4.54	1.383	73.12	2.383	6.99	3.38	2.91
0.400	4.54	1.400	73.12	2.400	6.99	3.40	2.91
0.417	4.54	1.417	73.12	2.417	6.99	3.42	2.91
0.433	4.54	1.433	73.12	2.433	6.99	3.43	2.91
0.450	4.54	1.450	73.12	2.450	6.99	3.45	2.91
0.467	4.54	1.467	73.12	2.467	6.99	3.47	2.91
0.483	4.54	1.483	73.12	2.483	6.99	3.48	2.91
0.500	4.54	1.500	73.12	2.500	6.99	3.50	2.91
0.517	6.38	1.517	36.24	2.517	5.79	3.52	2.62
0.533	6.38	1.533	36.23	2.533	5.79	3.53	2.62
0.550	6.38	1.550	36.23	2.550	5.79	3.55	2.62
0.567	6.38	1.567	36.23	2.567	5.79	3.57	2.62
0.583	6.38	1.583	36.23	2.583	5.79	3.58	2.62
0.600	6.38	1.600	36.23	2.600	5.79	3.60	2.62
0.617	6.38	1.617	36.23	2.617	5.79	3.62	2.62
0.633	6.38	1.633	36.23	2.633	5.79	3.63	2.62
0.650	6.38	1.650	36.23	2.650	5.79	3.65	2.62
0.667	6.38	1.667	36.23	2.667	5.79	3.67	2.62
0.683	9.93	1.683	22.15	2.683	4.89	3.68	2.38
0.700	9.93	1.700	22.15	2.700	4.89	3.70	2.38
0.717	9.93	1.717	22.15	2.717	4.89	3.72	2.38
0.733	9.93	1.733	22.15	2.733	4.89	3.73	2.38
0.750	9.93	1.750	22.15	2.750	4.89	3.75	2.38
0.767	9.93	1.767	22.15	2.767	4.89	3.77	2.38
0.783	9.93	1.783	22.15	2.783	4.89	3.78	2.38
0.800	9.93	1.800	22.15	2.800	4.89	3.80	2.38
0.817	9.93	1.817	22.15	2.817	4.89	3.82	2.38
0.833	9.93	1.833	22.15	2.833	4.89	3.83	2.38
0.850	18.64	1.850	15.19	2.850	4.21	3.85	2.18
0.867	18.64	1.867	15.19	2.867	4.21	3.87	2.18
0.883	18.64	1.883	15.19	2.883	4.21	3.88	2.18
0.900	18.64	1.900	15.19	2.900	4.21	3.90	2.18
0.917	18.64	1.917	15.19	2.917	4.21	3.92	2.18
0.933	18.64	1.933	15.19	2.933	4.21	3.93	2.18
0.950	18.64	1.950	15.19	2.950	4.21	3.95	2.18
0.967	18.64	1.967	15.19	2.967	4.21	3.97	2.18
0.983	18.64	1.983	15.19	2.983	4.21	3.98	2.18
1.000	18.64	2.000	15.19	3.000	4.21	4.00	2.18

Max.Eff.Inten.(mm/hr)=	176.22	131.85	
over (min)	5.00	4.00	
Storage Coeff. (min)=	2.15 (ii)	3.51 (ii)	
Unit Hyd. Tpeak (min)=	5.00	4.00	
Unit Hyd. peak (cms)=	0.36	0.31	
			TOTALS
PEAK FLOW (cms)=	0.85	0.01	0.857 (iii)
TIME TO PEAK (hrs)=	1.33	1.35	1.33
RUNOFF VOLUME (mm)=	79.34	58.06	79.13
TOTAL RAINFALL (mm)=	80.34	80.34	80.34
RUNOFF COEFFICIENT =	0.99	0.72	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 90.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7625) | IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0389	0.1013
	0.0164	0.0514	0.0456	0.1141

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0.0252	0.0690	0.0514	0.1288
0.0309	0.0825	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7624)	1.800	0.857	1.33	79.13
OUTFLOW: ID= 1 (7625)	1.800	0.046	2.28	77.34

PEAK FLOW REDUCTION [Qout/Qin](%)= 5.31
TIME SHIFT OF PEAK FLOW (min)= 57.00
MAXIMUM STORAGE USED (ha.m.)= 0.1139

CALIB	
STANDHYD (7623)	Area (ha)= 1.15
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.14	0.01
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	87.56	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.76	1.017	54.63	2.017	11.20	3.02	3.68
0.033	2.76	1.033	54.64	2.033	11.20	3.03	3.68
0.050	2.76	1.050	54.64	2.050	11.20	3.05	3.68
0.067	2.76	1.067	54.64	2.067	11.20	3.07	3.68
0.083	2.76	1.083	54.64	2.083	11.20	3.08	3.68
0.100	2.76	1.100	54.64	2.100	11.20	3.10	3.68
0.117	2.76	1.117	54.64	2.117	11.20	3.12	3.68
0.133	2.76	1.133	54.64	2.133	11.20	3.13	3.68
0.150	2.76	1.150	54.64	2.150	11.20	3.15	3.68
0.167	2.76	1.167	54.64	2.167	11.20	3.17	3.68
0.183	3.46	1.183	176.22	2.183	8.69	3.18	3.26
0.200	3.46	1.200	176.22	2.200	8.69	3.20	3.26
0.217	3.46	1.217	176.22	2.217	8.69	3.22	3.26
0.233	3.46	1.233	176.22	2.233	8.69	3.23	3.26
0.250	3.46	1.250	176.22	2.250	8.69	3.25	3.26
0.267	3.46	1.267	176.22	2.267	8.69	3.27	3.26
0.283	3.46	1.283	176.22	2.283	8.69	3.28	3.26
0.300	3.46	1.300	176.22	2.300	8.69	3.30	3.26
0.317	3.46	1.317	176.22	2.317	8.69	3.32	3.26
0.333	3.46	1.333	176.22	2.333	8.69	3.33	3.26
0.350	4.54	1.350	73.12	2.350	6.99	3.35	2.91
0.367	4.54	1.367	73.12	2.367	6.99	3.37	2.91
0.383	4.54	1.383	73.12	2.383	6.99	3.38	2.91
0.400	4.54	1.400	73.12	2.400	6.99	3.40	2.91
0.417	4.54	1.417	73.12	2.417	6.99	3.42	2.91
0.433	4.54	1.433	73.12	2.433	6.99	3.43	2.91
0.450	4.54	1.450	73.12	2.450	6.99	3.45	2.91
0.467	4.54	1.467	73.12	2.467	6.99	3.47	2.91
0.483	4.54	1.483	73.12	2.483	6.99	3.48	2.91
0.500	4.54	1.500	73.12	2.500	6.99	3.50	2.91
0.517	6.38	1.517	36.24	2.517	5.79	3.52	2.62
0.533	6.38	1.533	36.23	2.533	5.79	3.53	2.62
0.550	6.38	1.550	36.23	2.550	5.79	3.55	2.62
0.567	6.38	1.567	36.23	2.567	5.79	3.57	2.62
0.583	6.38	1.583	36.23	2.583	5.79	3.58	2.62
0.600	6.38	1.600	36.23	2.600	5.79	3.60	2.62
0.617	6.38	1.617	36.23	2.617	5.79	3.62	2.62
0.633	6.38	1.633	36.23	2.633	5.79	3.63	2.62
0.650	6.38	1.650	36.23	2.650	5.79	3.65	2.62
0.667	6.38	1.667	36.23	2.667	5.79	3.67	2.62
0.683	9.93	1.683	22.15	2.683	4.89	3.68	2.38
0.700	9.93	1.700	22.15	2.700	4.89	3.70	2.38
0.717	9.93	1.717	22.15	2.717	4.89	3.72	2.38
0.733	9.93	1.733	22.15	2.733	4.89	3.73	2.38
0.750	9.93	1.750	22.15	2.750	4.89	3.75	2.38
0.767	9.93	1.767	22.15	2.767	4.89	3.77	2.38
0.783	9.93	1.783	22.15	2.783	4.89	3.78	2.38
0.800	9.93	1.800	22.15	2.800	4.89	3.80	2.38
0.817	9.93	1.817	22.15	2.817	4.89	3.82	2.38
0.833	9.93	1.833	22.15	2.833	4.89	3.83	2.38
0.850	18.64	1.850	15.19	2.850	4.21	3.85	2.18
0.867	18.64	1.867	15.19	2.867	4.21	3.87	2.18
0.883	18.64	1.883	15.19	2.883	4.21	3.88	2.18
0.900	18.64	1.900	15.19	2.900	4.21	3.90	2.18
0.917	18.64	1.917	15.19	2.917	4.21	3.92	2.18
0.933	18.64	1.933	15.19	2.933	4.21	3.93	2.18
0.950	18.64	1.950	15.19	2.950	4.21	3.95	2.18
0.967	18.64	1.967	15.19	2.967	4.21	3.97	2.18
0.983	18.64	1.983	15.19	2.983	4.21	3.98	2.18
1.000	18.64	2.000	15.19	3.000	4.21	4.00	2.18

			TOTALS
Max.Eff.Inten.(mm/hr)=	176.22	110.28	
over (min)	5.00	4.00	
Storage Coeff. (min)=	1.88 (ii)	3.24 (ii)	
Unit Hyd. Tpeak (min)=	5.00	4.00	
Unit Hyd. peak (cms)=	0.38	0.32	
PEAK FLOW (cms)=	0.55	0.00	0.552 (iii)
TIME TO PEAK (hrs)=	1.33	1.35	1.33
RUNOFF VOLUME (mm)=	79.34	50.27	79.05
TOTAL RAINFALL (mm)=	80.34	80.34	80.34
RUNOFF COEFFICIENT =	0.99	0.63	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7622)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0258	0.0650
	0.0108	0.0330	0.0302	0.0725
	0.0167	0.0440	0.0340	0.0820
	0.0204	0.0525	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7623)	1.150	0.552	1.33	79.05
OUTFLOW: ID= 1 (7622)	1.150	0.030	2.25	77.43

PEAK FLOW REDUCTION [Qout/Qin](%)= 5.46
TIME SHIFT OF PEAK FLOW (min)= 55.00
MAXIMUM STORAGE USED (ha.m.)= 0.0724

CALIB	
STANDHYD (7629)	Area (ha)= 4.09
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	4.05	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	165.13	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.76	1.017	54.63	2.017	11.20	3.02	3.68
0.033	2.76	1.033	54.64	2.033	11.20	3.03	3.68

0.050	2.76	1.050	54.64	2.050	11.20	3.05	3.68
0.067	2.76	1.067	54.64	2.067	11.20	3.07	3.68
0.083	2.76	1.083	54.64	2.083	11.20	3.08	3.68
0.100	2.76	1.100	54.64	2.100	11.20	3.10	3.68
0.117	2.76	1.117	54.64	2.117	11.20	3.12	3.68
0.133	2.76	1.133	54.64	2.133	11.20	3.13	3.68
0.150	2.76	1.150	54.64	2.150	11.20	3.15	3.68
0.167	2.76	1.167	54.64	2.167	11.20	3.17	3.68
0.183	3.46	1.183	176.22	2.183	8.69	3.18	3.26
0.200	3.46	1.200	176.22	2.200	8.69	3.20	3.26
0.217	3.46	1.217	176.22	2.217	8.69	3.22	3.26
0.233	3.46	1.233	176.22	2.233	8.69	3.23	3.26
0.250	3.46	1.250	176.22	2.250	8.69	3.25	3.26
0.267	3.46	1.267	176.22	2.267	8.69	3.27	3.26
0.283	3.46	1.283	176.22	2.283	8.69	3.28	3.26
0.300	3.46	1.300	176.22	2.300	8.69	3.30	3.26
0.317	3.46	1.317	176.22	2.317	8.69	3.32	3.26
0.333	3.46	1.333	176.22	2.333	8.69	3.33	3.26
0.350	4.54	1.350	73.12	2.350	6.99	3.35	2.91
0.367	4.54	1.367	73.12	2.367	6.99	3.37	2.91
0.383	4.54	1.383	73.12	2.383	6.99	3.38	2.91
0.400	4.54	1.400	73.12	2.400	6.99	3.40	2.91
0.417	4.54	1.417	73.12	2.417	6.99	3.42	2.91
0.433	4.54	1.433	73.12	2.433	6.99	3.43	2.91
0.450	4.54	1.450	73.12	2.450	6.99	3.45	2.91
0.467	4.54	1.467	73.12	2.467	6.99	3.47	2.91
0.483	4.54	1.483	73.12	2.483	6.99	3.48	2.91
0.500	4.54	1.500	73.12	2.500	6.99	3.50	2.91
0.517	6.38	1.517	36.24	2.517	5.79	3.52	2.62
0.533	6.38	1.533	36.23	2.533	5.79	3.53	2.62
0.550	6.38	1.550	36.23	2.550	5.79	3.55	2.62
0.567	6.38	1.567	36.23	2.567	5.79	3.57	2.62
0.583	6.38	1.583	36.23	2.583	5.79	3.58	2.62
0.600	6.38	1.600	36.23	2.600	5.79	3.60	2.62
0.617	6.38	1.617	36.23	2.617	5.79	3.62	2.62
0.633	6.38	1.633	36.23	2.633	5.79	3.63	2.62
0.650	6.38	1.650	36.23	2.650	5.79	3.65	2.62
0.667	6.38	1.667	36.23	2.667	5.79	3.67	2.62
0.683	9.93	1.683	22.15	2.683	4.89	3.68	2.38
0.700	9.93	1.700	22.15	2.700	4.89	3.70	2.38
0.717	9.93	1.717	22.15	2.717	4.89	3.72	2.38
0.733	9.93	1.733	22.15	2.733	4.89	3.73	2.38
0.750	9.93	1.750	22.15	2.750	4.89	3.75	2.38
0.767	9.93	1.767	22.15	2.767	4.89	3.77	2.38
0.783	9.93	1.783	22.15	2.783	4.89	3.78	2.38
0.800	9.93	1.800	22.15	2.800	4.89	3.80	2.38
0.817	9.93	1.817	22.15	2.817	4.89	3.82	2.38
0.833	9.93	1.833	22.15	2.833	4.89	3.83	2.38
0.850	18.64	1.850	15.19	2.850	4.21	3.85	2.18
0.867	18.64	1.867	15.19	2.867	4.21	3.87	2.18
0.883	18.64	1.883	15.19	2.883	4.21	3.88	2.18
0.900	18.64	1.900	15.19	2.900	4.21	3.90	2.18
0.917	18.64	1.917	15.19	2.917	4.21	3.92	2.18
0.933	18.64	1.933	15.19	2.933	4.21	3.93	2.18
0.950	18.64	1.950	15.19	2.950	4.21	3.95	2.18
0.967	18.64	1.967	15.19	2.967	4.21	3.97	2.18
0.983	18.64	1.983	15.19	2.983	4.21	3.98	2.18
1.000	18.64	2.000	15.19	3.000	4.21	4.00	2.18

Max.Eff.Inten.(mm/hr)=	176.22	110.28	
over (min)	5.00	5.00	
Storage Coeff. (min)=	2.75 (ii)	4.11 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.32	0.26	
			TOTALS
PEAK FLOW (cms)=	1.89	0.01	1.896 (iii)
TIME TO PEAK (hrs)=	1.33	1.37	1.33
RUNOFF VOLUME (mm)=	79.34	50.26	79.05
TOTAL RAINFALL (mm)=	80.34	80.34	80.34
RUNOFF COEFFICIENT =	0.99	0.63	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7630)	OVERFLOW IS OFF
IN= 2---> OUT= 1	
DT= 1.0 min	

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0826	0.2320
0.0347	0.1170	0.0967	0.2609
0.0534	0.1580	0.1090	0.2940
0.0655	0.1890	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7629)	4.090	1.896	1.33	79.05
OUTFLOW: ID= 1 (7630)	4.090	0.097	2.37	76.73

PEAK FLOW REDUCTION [Qout/Qin](%)= 5.10
TIME SHIFT OF PEAK FLOW (min)= 62.00
MAXIMUM STORAGE USED (ha.m.)= 0.2610

CALIB	
STANDHYD (7631)	Area (ha)= 3.91
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.87	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	161.45	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.76	1.017	54.63	2.017	11.20	3.02	3.68
0.033	2.76	1.033	54.64	2.033	11.20	3.03	3.68
0.050	2.76	1.050	54.64	2.050	11.20	3.05	3.68
0.067	2.76	1.067	54.64	2.067	11.20	3.07	3.68
0.083	2.76	1.083	54.64	2.083	11.20	3.08	3.68
0.100	2.76	1.100	54.64	2.100	11.20	3.10	3.68
0.117	2.76	1.117	54.64	2.117	11.20	3.12	3.68
0.133	2.76	1.133	54.64	2.133	11.20	3.13	3.68
0.150	2.76	1.150	54.64	2.150	11.20	3.15	3.68
0.167	2.76	1.167	54.64	2.167	11.20	3.17	3.68
0.183	3.46	1.183	176.22	2.183	8.69	3.18	3.26
0.200	3.46	1.200	176.22	2.200	8.69	3.20	3.26
0.217	3.46	1.217	176.22	2.217	8.69	3.22	3.26
0.233	3.46	1.233	176.22	2.233	8.69	3.23	3.26
0.250	3.46	1.250	176.22	2.250	8.69	3.25	3.26
0.267	3.46	1.267	176.22	2.267	8.69	3.27	3.26
0.283	3.46	1.283	176.22	2.283	8.69	3.28	3.26
0.300	3.46	1.300	176.22	2.300	8.69	3.30	3.26
0.317	3.46	1.317	176.22	2.317	8.69	3.32	3.26
0.333	3.46	1.333	176.22	2.333	8.69	3.33	3.26
0.350	4.54	1.350	73.12	2.350	6.99	3.35	2.91
0.367	4.54	1.367	73.12	2.367	6.99	3.37	2.91
0.383	4.54	1.383	73.12	2.383	6.99	3.38	2.91
0.400	4.54	1.400	73.12	2.400	6.99	3.40	2.91
0.417	4.54	1.417	73.12	2.417	6.99	3.42	2.91
0.433	4.54	1.433	73.12	2.433	6.99	3.43	2.91
0.450	4.54	1.450	73.12	2.450	6.99	3.45	2.91
0.467	4.54	1.467	73.12	2.467	6.99	3.47	2.91
0.483	4.54	1.483	73.12	2.483	6.99	3.48	2.91
0.500	4.54	1.500	73.12	2.500	6.99	3.50	2.91
0.517	6.38	1.517	36.24	2.517	5.79	3.52	2.62
0.533	6.38	1.533	36.23	2.533	5.79	3.53	2.62
0.550	6.38	1.550	36.23	2.550	5.79	3.55	2.62
0.567	6.38	1.567	36.23	2.567	5.79	3.57	2.62
0.583	6.38	1.583	36.23	2.583	5.79	3.58	2.62

0.600	6.38	1.600	36.23	2.600	5.79	3.60	2.62
0.617	6.38	1.617	36.23	2.617	5.79	3.62	2.62
0.633	6.38	1.633	36.23	2.633	5.79	3.63	2.62
0.650	6.38	1.650	36.23	2.650	5.79	3.65	2.62
0.667	6.38	1.667	36.23	2.667	5.79	3.67	2.62
0.683	9.93	1.683	22.15	2.683	4.89	3.68	2.38
0.700	9.93	1.700	22.15	2.700	4.89	3.70	2.38
0.717	9.93	1.717	22.15	2.717	4.89	3.72	2.38
0.733	9.93	1.733	22.15	2.733	4.89	3.73	2.38
0.750	9.93	1.750	22.15	2.750	4.89	3.75	2.38
0.767	9.93	1.767	22.15	2.767	4.89	3.77	2.38
0.783	9.93	1.783	22.15	2.783	4.89	3.78	2.38
0.800	9.93	1.800	22.15	2.800	4.89	3.80	2.38
0.817	9.93	1.817	22.15	2.817	4.89	3.82	2.38
0.833	9.93	1.833	22.15	2.833	4.89	3.83	2.38
0.850	18.64	1.850	15.19	2.850	4.21	3.85	2.18
0.867	18.64	1.867	15.19	2.867	4.21	3.87	2.18
0.883	18.64	1.883	15.19	2.883	4.21	3.88	2.18
0.900	18.64	1.900	15.19	2.900	4.21	3.90	2.18
0.917	18.64	1.917	15.19	2.917	4.21	3.92	2.18
0.933	18.64	1.933	15.19	2.933	4.21	3.93	2.18
0.950	18.64	1.950	15.19	2.950	4.21	3.95	2.18
0.967	18.64	1.967	15.19	2.967	4.21	3.97	2.18
0.983	18.64	1.983	15.19	2.983	4.21	3.98	2.18
1.000	18.64	2.000	15.19	3.000	4.21	4.00	2.18

Max.Eff.Inten.(mm/hr)=	176.22	110.28	
over (min)	5.00	5.00	
Storage Coeff. (min)=	2.71 (ii)	4.07 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.32	0.26	
			TOTALS
PEAK FLOW (cms)=	1.81	0.01	1.816 (iii)
TIME TO PEAK (hrs)=	1.33	1.37	1.33
RUNOFF VOLUME (mm)=	79.34	50.26	79.05
TOTAL RAINFALL (mm)=	80.34	80.34	80.34
RUNOFF COEFFICIENT =	0.99	0.63	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7632) IN= 2---> OUT= 1 DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0792	0.2220
	0.0333	0.1130	0.0928	0.2500
	0.0512	0.1510	0.1046	0.2810
	0.0629	0.1810	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7631)	3.910	1.816	1.33	79.05
OUTFLOW: ID= 1 (7632)	3.910	0.093	2.37	76.69

PEAK FLOW REDUCTION [Qout/Qin](%)= 5.10
TIME SHIFT OF PEAK FLOW (min)= 62.00
MAXIMUM STORAGE USED (ha.m.)= 0.2495

CALIB STANDHYD (7641) ID= 1 DT= 1.0 min	Area (ha)= 2.21	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.19	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	121.38	40.00

Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.76	1.017	54.63	2.017	11.20	3.02	3.68
0.033	2.76	1.033	54.64	2.033	11.20	3.03	3.68
0.050	2.76	1.050	54.64	2.050	11.20	3.05	3.68
0.067	2.76	1.067	54.64	2.067	11.20	3.07	3.68
0.083	2.76	1.083	54.64	2.083	11.20	3.08	3.68
0.100	2.76	1.100	54.64	2.100	11.20	3.10	3.68
0.117	2.76	1.117	54.64	2.117	11.20	3.12	3.68
0.133	2.76	1.133	54.64	2.133	11.20	3.13	3.68
0.150	2.76	1.150	54.64	2.150	11.20	3.15	3.68
0.167	2.76	1.167	54.64	2.167	11.20	3.17	3.68
0.183	3.46	1.183	176.22	2.183	8.69	3.18	3.26
0.200	3.46	1.200	176.22	2.200	8.69	3.20	3.26
0.217	3.46	1.217	176.22	2.217	8.69	3.22	3.26
0.233	3.46	1.233	176.22	2.233	8.69	3.23	3.26
0.250	3.46	1.250	176.22	2.250	8.69	3.25	3.26
0.267	3.46	1.267	176.22	2.267	8.69	3.27	3.26
0.283	3.46	1.283	176.22	2.283	8.69	3.28	3.26
0.300	3.46	1.300	176.22	2.300	8.69	3.30	3.26
0.317	3.46	1.317	176.22	2.317	8.69	3.32	3.26
0.333	3.46	1.333	176.22	2.333	8.69	3.33	3.26
0.350	4.54	1.350	73.12	2.350	6.99	3.35	2.91
0.367	4.54	1.367	73.12	2.367	6.99	3.37	2.91
0.383	4.54	1.383	73.12	2.383	6.99	3.38	2.91
0.400	4.54	1.400	73.12	2.400	6.99	3.40	2.91
0.417	4.54	1.417	73.12	2.417	6.99	3.42	2.91
0.433	4.54	1.433	73.12	2.433	6.99	3.43	2.91
0.450	4.54	1.450	73.12	2.450	6.99	3.45	2.91
0.467	4.54	1.467	73.12	2.467	6.99	3.47	2.91
0.483	4.54	1.483	73.12	2.483	6.99	3.48	2.91
0.500	4.54	1.500	73.12	2.500	6.99	3.50	2.91
0.517	6.38	1.517	36.24	2.517	5.79	3.52	2.62
0.533	6.38	1.533	36.23	2.533	5.79	3.53	2.62
0.550	6.38	1.550	36.23	2.550	5.79	3.55	2.62
0.567	6.38	1.567	36.23	2.567	5.79	3.57	2.62
0.583	6.38	1.583	36.23	2.583	5.79	3.58	2.62
0.600	6.38	1.600	36.23	2.600	5.79	3.60	2.62
0.617	6.38	1.617	36.23	2.617	5.79	3.62	2.62
0.633	6.38	1.633	36.23	2.633	5.79	3.63	2.62
0.650	6.38	1.650	36.23	2.650	5.79	3.65	2.62
0.667	6.38	1.667	36.23	2.667	5.79	3.67	2.62
0.683	9.93	1.683	22.15	2.683	4.89	3.68	2.38
0.700	9.93	1.700	22.15	2.700	4.89	3.70	2.38
0.717	9.93	1.717	22.15	2.717	4.89	3.72	2.38
0.733	9.93	1.733	22.15	2.733	4.89	3.73	2.38
0.750	9.93	1.750	22.15	2.750	4.89	3.75	2.38
0.767	9.93	1.767	22.15	2.767	4.89	3.77	2.38
0.783	9.93	1.783	22.15	2.783	4.89	3.78	2.38
0.800	9.93	1.800	22.15	2.800	4.89	3.80	2.38
0.817	9.93	1.817	22.15	2.817	4.89	3.82	2.38
0.833	9.93	1.833	22.15	2.833	4.89	3.83	2.38
0.850	18.64	1.850	15.19	2.850	4.21	3.85	2.18
0.867	18.64	1.867	15.19	2.867	4.21	3.87	2.18
0.883	18.64	1.883	15.19	2.883	4.21	3.88	2.18
0.900	18.64	1.900	15.19	2.900	4.21	3.90	2.18
0.917	18.64	1.917	15.19	2.917	4.21	3.92	2.18
0.933	18.64	1.933	15.19	2.933	4.21	3.93	2.18
0.950	18.64	1.950	15.19	2.950	4.21	3.95	2.18
0.967	18.64	1.967	15.19	2.967	4.21	3.97	2.18
0.983	18.64	1.983	15.19	2.983	4.21	3.98	2.18
1.000	18.64	2.000	15.19	3.000	4.21	4.00	2.18

Max.Eff.Inten.(mm/hr)=	176.22	110.28	
over (min)	5.00	4.00	
Storage Coeff. (min)=	2.29 (ii)	3.64 (ii)	
Unit Hyd. Tpeak (min)=	5.00	4.00	
Unit Hyd. peak (cms)=	0.35	0.30	
			TOTALS
PEAK FLOW (cms)=	1.04	0.01	1.046 (iii)

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    TIME TO PEAK    (hrs)=       1.33         1.35          1.33
    RUNOFF VOLUME    (mm)=      79.34        50.27         79.05
    TOTAL RAINFALL   (mm)=      80.34        80.34         80.34
    RUNOFF COEFFICIENT   =       0.99         0.63          0.98


     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN*  =  85.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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-------------------
| RESERVOIR(  7642)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0470     0.1250
                         0.0197     0.0630   |   0.0551     0.1410
                         0.0304     0.0850   |   0.0620     0.1580
                         0.0373     0.1020   |   0.0000     0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  7641)     2.210     1.046      1.33      79.05
   OUTFLOW: ID= 1 (  7642)     2.210     0.055      2.30      77.12

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.23
                TIME SHIFT OF PEAK FLOW          (min)= 58.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.1401

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-------------------
| CALIB            |
| STANDHYD (  7643)|   Area    (ha)=   2.02
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
-------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.00         0.02
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=     116.05        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |   hrs   mm/hr |   hrs   mm/hr
 0.017    2.76 | 1.017   54.63 | 2.017   11.20 |  3.02    3.68
 0.033    2.76 | 1.033   54.64 | 2.033   11.20 |  3.03    3.68
 0.050    2.76 | 1.050   54.64 | 2.050   11.20 |  3.05    3.68
 0.067    2.76 | 1.067   54.64 | 2.067   11.20 |  3.07    3.68
 0.083    2.76 | 1.083   54.64 | 2.083   11.20 |  3.08    3.68
 0.100    2.76 | 1.100   54.64 | 2.100   11.20 |  3.10    3.68
 0.117    2.76 | 1.117   54.64 | 2.117   11.20 |  3.12    3.68
 0.133    2.76 | 1.133   54.64 | 2.133   11.20 |  3.13    3.68
 0.150    2.76 | 1.150   54.64 | 2.150   11.20 |  3.15    3.68
 0.167    2.76 | 1.167   54.64 | 2.167   11.20 |  3.17    3.68
 0.183    3.46 | 1.183  176.22 | 2.183    8.69 |  3.18    3.26
 0.200    3.46 | 1.200  176.22 | 2.200    8.69 |  3.20    3.26
 0.217    3.46 | 1.217  176.22 | 2.217    8.69 |  3.22    3.26
 0.233    3.46 | 1.233  176.22 | 2.233    8.69 |  3.23    3.26
 0.250    3.46 | 1.250  176.22 | 2.250    8.69 |  3.25    3.26
 0.267    3.46 | 1.267  176.22 | 2.267    8.69 |  3.27    3.26
 0.283    3.46 | 1.283  176.22 | 2.283    8.69 |  3.28    3.26
 0.300    3.46 | 1.300  176.22 | 2.300    8.69 |  3.30    3.26
 0.317    3.46 | 1.317  176.22 | 2.317    8.69 |  3.32    3.26
 0.333    3.46 | 1.333  176.22 | 2.333    8.69 |  3.33    3.26
 0.350    4.54 | 1.350   73.12 | 2.350    6.99 |  3.35    2.91
 0.367    4.54 | 1.367   73.12 | 2.367    6.99 |  3.37    2.91
 0.383    4.54 | 1.383   73.12 | 2.383    6.99 |  3.38    2.91
 0.400    4.54 | 1.400   73.12 | 2.400    6.99 |  3.40    2.91
 0.417    4.54 | 1.417   73.12 | 2.417    6.99 |  3.42    2.91
 0.433    4.54 | 1.433   73.12 | 2.433    6.99 |  3.43    2.91
 0.450    4.54 | 1.450   73.12 | 2.450    6.99 |  3.45    2.91
 0.467    4.54 | 1.467   73.12 | 2.467    6.99 |  3.47    2.91
 0.483    4.54 | 1.483   73.12 | 2.483    6.99 |  3.48    2.91
 0.500    4.54 | 1.500   73.12 | 2.500    6.99 |  3.50    2.91
 0.517    6.38 | 1.517   36.24 | 2.517    5.79 |  3.52    2.62
 0.533    6.38 | 1.533   36.23 | 2.533    5.79 |  3.53    2.62
 0.550    6.38 | 1.550   36.23 | 2.550    5.79 |  3.55    2.62
 0.567    6.38 | 1.567   36.23 | 2.567    5.79 |  3.57    2.62
 0.583    6.38 | 1.583   36.23 | 2.583    5.79 |  3.58    2.62
 0.600    6.38 | 1.600   36.23 | 2.600    5.79 |  3.60    2.62
 0.617    6.38 | 1.617   36.23 | 2.617    5.79 |  3.62    2.62
 0.633    6.38 | 1.633   36.23 | 2.633    5.79 |  3.63    2.62
 0.650    6.38 | 1.650   36.23 | 2.650    5.79 |  3.65    2.62
 0.667    6.38 | 1.667   36.23 | 2.667    5.79 |  3.67    2.62
 0.683    9.93 | 1.683   22.15 | 2.683    4.89 |  3.68    2.38
 0.700    9.93 | 1.700   22.15 | 2.700    4.89 |  3.70    2.38
 0.717    9.93 | 1.717   22.15 | 2.717    4.89 |  3.72    2.38
 0.733    9.93 | 1.733   22.15 | 2.733    4.89 |  3.73    2.38
 0.750    9.93 | 1.750   22.15 | 2.750    4.89 |  3.75    2.38
 0.767    9.93 | 1.767   22.15 | 2.767    4.89 |  3.77    2.38
 0.783    9.93 | 1.783   22.15 | 2.783    4.89 |  3.78    2.38
 0.800    9.93 | 1.800   22.15 | 2.800    4.89 |  3.80    2.38
 0.817    9.93 | 1.817   22.15 | 2.817    4.89 |  3.82    2.38
 0.833    9.93 | 1.833   22.15 | 2.833    4.89 |  3.83    2.38
 0.850   18.64 | 1.850   15.19 | 2.850    4.21 |  3.85    2.18
 0.867   18.64 | 1.867   15.19 | 2.867    4.21 |  3.87    2.18
 0.883   18.64 | 1.883   15.19 | 2.883    4.21 |  3.88    2.18
 0.900   18.64 | 1.900   15.19 | 2.900    4.21 |  3.90    2.18
 0.917   18.64 | 1.917   15.19 | 2.917    4.21 |  3.92    2.18
 0.933   18.64 | 1.933   15.19 | 2.933    4.21 |  3.93    2.18
 0.950   18.64 | 1.950   15.19 | 2.950    4.21 |  3.95    2.18
 0.967   18.64 | 1.967   15.19 | 2.967    4.21 |  3.97    2.18
 0.983   18.64 | 1.983   15.19 | 2.983    4.21 |  3.98    2.18
 1.000   18.64 | 2.000   15.19 | 3.000    4.21 |  4.00    2.18

    Max.Eff.Inten.(mm/hr)=     176.22       110.28
              over (min)         5.00         4.00
    Storage Coeff.  (min)=       2.23 (ii)    3.58 (ii)
    Unit Hyd. Tpeak (min)=       5.00         4.00
    Unit Hyd. peak  (cms)=       0.36         0.30
                                                      *TOTALS*
    PEAK FLOW       (cms)=       0.95         0.01        0.958 (iii)
    TIME TO PEAK    (hrs)=       1.33         1.35         1.33
    RUNOFF VOLUME    (mm)=      79.34        50.27        79.05
    TOTAL RAINFALL   (mm)=      80.34        80.34        80.34
    RUNOFF COEFFICIENT   =       0.99         0.63         0.98


      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN*  =  85.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
-------------------
| RESERVOIR(  7644)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0433     0.1140
                         0.0182     0.0580   |   0.0507     0.1280
                         0.0280     0.0775   |   0.0571     0.1440
                         0.0343     0.0930   |   0.0000     0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  7643)     2.020     0.958      1.33      79.05
   OUTFLOW: ID= 1 (  7644)     2.020     0.051      2.28      77.15

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.28
                TIME SHIFT OF PEAK FLOW          (min)= 57.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.1279

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       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-
a4eb17eaad57\40588d1e-7246-45f8-b630-4e33b0cc0bd8\s
  Summary filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-
a4eb17eaad57\40588d1e-7246-45f8-b630-4e33b0cc0bd8\s


DATE: 06/14/2024                          TIME: 12:48:41

USER:


COMMENTS: _____________________________________________________


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  ***********************************************
  ** SIMULATION : 993. 100 Year 6 Hour AES (Blo **
  ***********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\ygollamudi\AppD
|                  |              ata\Local\Temp\
|                  |              3c3f87d5-a26e-4c6b-b2ae-56a7ba29ab7f\17385e7a
| Ptotal= 80.31 mm |    Comments: 100 Year 6 Hour AES (Bloor, TRCA)
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.00    0.00 |  1.75   27.30 |  3.50   11.24 |  5.25    1.61
                0.25    1.61 |  2.00   27.30 |  3.75    6.42 |  5.50    1.61
                0.50    1.61 |  2.25   73.88 |  4.00    6.42 |  5.75    1.61
                0.75    1.61 |  2.50   73.88 |  4.25    3.21 |  6.00    1.61
                1.00    1.61 |  2.75   20.88 |  4.50    3.21 |
                1.25    9.64 |  3.00   20.88 |  4.75    1.61 |
                1.50    9.64 |  3.25   11.24 |  5.00    1.61 |

-------------------------------------------------------------------------------

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| CALIB            |
| STANDHYD (  7567)|   Area    (ha)=   2.72
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.69         0.03
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=     134.66        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	9.64	3.150	20.88	4.72	3.21
0.033	0.00	1.600	9.64	3.167	20.88	4.73	3.21
0.050	0.00	1.617	9.64	3.183	20.88	4.75	3.21
0.067	0.00	1.633	9.64	3.200	20.88	4.77	1.61
0.083	0.00	1.650	9.64	3.217	20.88	4.78	1.61
0.100	0.00	1.667	9.64	3.233	20.88	4.80	1.61
0.117	0.00	1.683	9.64	3.250	20.88	4.82	1.61
0.133	0.00	1.700	9.64	3.267	11.24	4.83	1.61
0.150	0.00	1.717	9.64	3.283	11.24	4.85	1.61
0.167	0.00	1.733	9.64	3.300	11.24	4.87	1.61
0.183	0.00	1.750	9.64	3.317	11.24	4.88	1.61
0.200	0.00	1.767	27.30	3.333	11.24	4.90	1.61
0.217	0.00	1.783	27.30	3.350	11.24	4.92	1.61
0.233	0.00	1.800	27.30	3.367	11.24	4.93	1.61
0.250	0.00	1.817	27.30	3.383	11.24	4.95	1.61
0.267	1.61	1.833	27.30	3.400	11.24	4.97	1.61
0.283	1.61	1.850	27.30	3.417	11.24	4.98	1.61
0.300	1.61	1.867	27.30	3.433	11.24	5.00	1.61
0.317	1.61	1.883	27.30	3.450	11.24	5.02	1.61
0.333	1.61	1.900	27.30	3.467	11.24	5.03	1.61
0.350	1.61	1.917	27.30	3.483	11.24	5.05	1.61
0.367	1.61	1.933	27.30	3.500	11.24	5.07	1.61
0.383	1.61	1.950	27.30	3.517	11.24	5.08	1.61
0.400	1.61	1.967	27.30	3.533	11.24	5.10	1.61
0.417	1.61	1.983	27.30	3.550	11.24	5.12	1.61
0.433	1.61	2.000	27.30	3.567	11.24	5.13	1.61
0.450	1.61	2.017	27.30	3.583	11.24	5.15	1.61
0.467	1.61	2.033	27.30	3.600	11.24	5.17	1.61
0.483	1.61	2.050	27.30	3.617	11.24	5.18	1.61
0.500	1.61	2.067	27.30	3.633	11.24	5.20	1.61
0.517	1.61	2.083	27.30	3.650	11.24	5.22	1.61
0.533	1.61	2.100	27.30	3.667	11.24	5.23	1.61
0.550	1.61	2.117	27.30	3.683	11.24	5.25	1.61
0.567	1.61	2.133	27.30	3.700	11.24	5.27	1.61
0.583	1.61	2.150	27.30	3.717	11.24	5.28	1.61
0.600	1.61	2.167	27.30	3.733	11.24	5.30	1.61
0.617	1.61	2.183	27.30	3.750	11.24	5.32	1.61
0.633	1.61	2.200	27.30	3.767	6.42	5.33	1.61
0.650	1.61	2.217	27.30	3.783	6.42	5.35	1.61
0.667	1.61	2.233	27.30	3.800	6.42	5.37	1.61
0.683	1.61	2.250	27.30	3.817	6.42	5.38	1.61
0.700	1.61	2.267	73.88	3.833	6.42	5.40	1.61
0.717	1.61	2.283	73.88	3.850	6.42	5.42	1.61
0.733	1.61	2.300	73.88	3.867	6.42	5.43	1.61
0.750	1.61	2.317	73.88	3.883	6.42	5.45	1.61
0.767	1.61	2.333	73.88	3.900	6.42	5.47	1.61
0.783	1.61	2.350	73.88	3.917	6.42	5.48	1.61
0.800	1.61	2.367	73.88	3.933	6.42	5.50	1.61
0.817	1.61	2.383	73.88	3.950	6.42	5.52	1.61
0.833	1.61	2.400	73.88	3.967	6.42	5.53	1.61
0.850	1.61	2.417	73.88	3.983	6.42	5.55	1.61
0.867	1.61	2.433	73.88	4.000	6.42	5.57	1.61
0.883	1.61	2.450	73.88	4.017	6.42	5.58	1.61
0.900	1.61	2.467	73.88	4.033	6.42	5.60	1.61
0.917	1.61	2.483	73.88	4.050	6.42	5.62	1.61
0.933	1.61	2.500	73.88	4.067	6.42	5.63	1.61
0.950	1.61	2.517	73.88	4.083	6.42	5.65	1.61
0.967	1.61	2.533	73.88	4.100	6.42	5.67	1.61
0.983	1.61	2.550	73.88	4.117	6.42	5.68	1.61
1.000	1.61	2.567	73.88	4.133	6.42	5.70	1.61
1.017	1.61	2.583	73.88	4.150	6.42	5.72	1.61
1.033	1.61	2.600	73.88	4.167	6.42	5.73	1.61
1.050	1.61	2.617	73.88	4.183	6.42	5.75	1.61
1.067	1.61	2.633	73.88	4.200	6.42	5.77	1.61
1.083	1.61	2.650	73.88	4.217	6.42	5.78	1.61
1.100	1.61	2.667	73.88	4.233	6.42	5.80	1.61
1.117	1.61	2.683	73.88	4.250	6.42	5.82	1.61
1.133	1.61	2.700	73.88	4.267	3.21	5.83	1.61
1.150	1.61	2.717	73.88	4.283	3.21	5.85	1.61
1.167	1.61	2.733	73.88	4.300	3.21	5.87	1.61
1.183	1.61	2.750	73.88	4.317	3.21	5.88	1.61
1.200	1.61	2.767	20.89	4.333	3.21	5.90	1.61

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1.217	1.61	2.783	20.88	4.350	3.21	5.92	1.61
1.233	1.61	2.800	20.88	4.367	3.21	5.93	1.61
1.250	1.61	2.817	20.88	4.383	3.21	5.95	1.61
1.267	9.64	2.833	20.88	4.400	3.21	5.97	1.61
1.283	9.64	2.850	20.88	4.417	3.21	5.98	1.61
1.300	9.64	2.867	20.88	4.433	3.21	6.00	1.61
1.317	9.64	2.883	20.88	4.450	3.21	6.02	1.61
1.333	9.64	2.900	20.88	4.467	3.21	6.03	1.61
1.350	9.64	2.917	20.88	4.483	3.21	6.05	1.61
1.367	9.64	2.933	20.88	4.500	3.21	6.07	1.61
1.383	9.64	2.950	20.88	4.517	3.21	6.08	1.61
1.400	9.64	2.967	20.88	4.533	3.21	6.10	1.61
1.417	9.64	2.983	20.88	4.550	3.21	6.12	1.61
1.433	9.64	3.000	20.88	4.567	3.21	6.13	1.61
1.450	9.64	3.017	20.88	4.583	3.21	6.15	1.61
1.467	9.64	3.033	20.88	4.600	3.21	6.17	1.61
1.483	9.64	3.050	20.88	4.617	3.21	6.18	1.61
1.500	9.64	3.067	20.88	4.633	3.21	6.20	1.61
1.517	9.64	3.083	20.88	4.650	3.21	6.22	1.61
1.533	9.64	3.100	20.88	4.667	3.21	6.23	1.61
1.550	9.64	3.117	20.88	4.683	3.21	6.25	1.61
1.567	9.64	3.133	20.88	4.700	3.21		

Max.Eff.Inten.(mm/hr)=	73.88	57.08	
over (min)	5.00	6.00	
Storage Coeff. (min)=	3.45 (ii)	5.37 (ii)	
Unit Hyd. Tpeak (min)=	5.00	6.00	
Unit Hyd. peak (cms)=	0.28	0.20	
			TOTALS
PEAK FLOW (cms)=	0.55	0.00	0.557 (iii)
TIME TO PEAK (hrs)=	2.75	2.75	2.75
RUNOFF VOLUME (mm)=	79.31	50.24	79.02
TOTAL RAINFALL (mm)=	80.31	80.31	80.31
RUNOFF COEFFICIENT =	0.99	0.63	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7626)|	OVERFLOW IS OFF			
IN= 2---> OUT= 1 |				
DT= 1.0 min |	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0568	0.1530
	0.0239	0.0780	0.0660	0.1730
	0.0370	0.1040	0.0751	0.2000
	0.0451	0.1250	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (	7567)	2.720	0.557	2.75	79.02
OUTFLOW: ID= 1 (	7626)	2.720	0.063	3.85	76.64

PEAK FLOW REDUCTION [Qout/Qin](%)= 11.23
TIME SHIFT OF PEAK FLOW (min)= 66.00
MAXIMUM STORAGE USED (ha.m.)= 0.1655

CALIB |				
STANDHYD (7624)|	Area (ha)= 1.80			
ID= 1 DT= 1.0 min |	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00		
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	1.78	0.02		
Dep. Storage (mm)=	1.00	1.50		
Average Slope (%)=	1.00	0.50		
Length (m)=	109.54	40.00		
Mannings n =	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	9.64	3.150	20.88	4.72	3.21
0.033	0.00	1.600	9.64	3.167	20.88	4.73	3.21
0.050	0.00	1.617	9.64	3.183	20.88	4.75	3.21
0.067	0.00	1.633	9.64	3.200	20.88	4.77	1.61
0.083	0.00	1.650	9.64	3.217	20.88	4.78	1.61
0.100	0.00	1.667	9.64	3.233	20.88	4.80	1.61
0.117	0.00	1.683	9.64	3.250	20.88	4.82	1.61
0.133	0.00	1.700	9.64	3.267	11.24	4.83	1.61
0.150	0.00	1.717	9.64	3.283	11.24	4.85	1.61
0.167	0.00	1.733	9.64	3.300	11.24	4.87	1.61
0.183	0.00	1.750	9.64	3.317	11.24	4.88	1.61
0.200	0.00	1.767	27.30	3.333	11.24	4.90	1.61
0.217	0.00	1.783	27.30	3.350	11.24	4.92	1.61
0.233	0.00	1.800	27.30	3.367	11.24	4.93	1.61
0.250	0.00	1.817	27.30	3.383	11.24	4.95	1.61
0.267	1.61	1.833	27.30	3.400	11.24	4.97	1.61
0.283	1.61	1.850	27.30	3.417	11.24	4.98	1.61
0.300	1.61	1.867	27.30	3.433	11.24	5.00	1.61
0.317	1.61	1.883	27.30	3.450	11.24	5.02	1.61
0.333	1.61	1.900	27.30	3.467	11.24	5.03	1.61
0.350	1.61	1.917	27.30	3.483	11.24	5.05	1.61
0.367	1.61	1.933	27.30	3.500	11.24	5.07	1.61
0.383	1.61	1.950	27.30	3.517	11.24	5.08	1.61
0.400	1.61	1.967	27.30	3.533	11.24	5.10	1.61
0.417	1.61	1.983	27.30	3.550	11.24	5.12	1.61
0.433	1.61	2.000	27.30	3.567	11.24	5.13	1.61
0.450	1.61	2.017	27.30	3.583	11.24	5.15	1.61
0.467	1.61	2.033	27.30	3.600	11.24	5.17	1.61
0.483	1.61	2.050	27.30	3.617	11.24	5.18	1.61
0.500	1.61	2.067	27.30	3.633	11.24	5.20	1.61
0.517	1.61	2.083	27.30	3.650	11.24	5.22	1.61
0.533	1.61	2.100	27.30	3.667	11.24	5.23	1.61
0.550	1.61	2.117	27.30	3.683	11.24	5.25	1.61
0.567	1.61	2.133	27.30	3.700	11.24	5.27	1.61
0.583	1.61	2.150	27.30	3.717	11.24	5.28	1.61
0.600	1.61	2.167	27.30	3.733	11.24	5.30	1.61
0.617	1.61	2.183	27.30	3.750	11.24	5.32	1.61
0.633	1.61	2.200	27.30	3.767	6.42	5.33	1.61
0.650	1.61	2.217	27.30	3.783	6.42	5.35	1.61
0.667	1.61	2.233	27.30	3.800	6.42	5.37	1.61
0.683	1.61	2.250	27.30	3.817	6.42	5.38	1.61
0.700	1.61	2.267	73.88	3.833	6.42	5.40	1.61
0.717	1.61	2.283	73.88	3.850	6.42	5.42	1.61
0.733	1.61	2.300	73.88	3.867	6.42	5.43	1.61
0.750	1.61	2.317	73.88	3.883	6.42	5.45	1.61
0.767	1.61	2.333	73.88	3.900	6.42	5.47	1.61
0.783	1.61	2.350	73.88	3.917	6.42	5.48	1.61
0.800	1.61	2.367	73.88	3.933	6.42	5.50	1.61
0.817	1.61	2.383	73.88	3.950	6.42	5.52	1.61
0.833	1.61	2.400	73.88	3.967	6.42	5.53	1.61
0.850	1.61	2.417	73.88	3.983	6.42	5.55	1.61
0.867	1.61	2.433	73.88	4.000	6.42	5.57	1.61
0.883	1.61	2.450	73.88	4.017	6.42	5.58	1.61
0.900	1.61	2.467	73.88	4.033	6.42	5.60	1.61
0.917	1.61	2.483	73.88	4.050	6.42	5.62	1.61
0.933	1.61	2.500	73.88	4.067	6.42	5.63	1.61
0.950	1.61	2.517	73.88	4.083	6.42	5.65	1.61
0.967	1.61	2.533	73.88	4.100	6.42	5.67	1.61
0.983	1.61	2.550	73.88	4.117	6.42	5.68	1.61
1.000	1.61	2.567	73.88	4.133	6.42	5.70	1.61
1.017	1.61	2.583	73.88	4.150	6.42	5.72	1.61
1.033	1.61	2.600	73.88	4.167	6.42	5.73	1.61
1.050	1.61	2.617	73.88	4.183	6.42	5.75	1.61
1.067	1.61	2.633	73.88	4.200	6.42	5.77	1.61
1.083	1.61	2.650	73.88	4.217	6.42	5.78	1.61
1.100	1.61	2.667	73.88	4.233	6.42	5.80	1.61
1.117	1.61	2.683	73.88	4.250	6.42	5.82	1.61
1.133	1.61	2.700	73.88	4.267	3.21	5.83	1.61
1.150	1.61	2.717	73.88	4.283	3.21	5.85	1.61
1.167	1.61	2.733	73.88	4.300	3.21	5.87	1.61
1.183	1.61	2.750	73.88	4.317	3.21	5.88	1.61

1.200	1.61	2.767	20.89	4.333	3.21	5.90	1.61
1.217	1.61	2.783	20.88	4.350	3.21	5.92	1.61
1.233	1.61	2.800	20.88	4.367	3.21	5.93	1.61
1.250	1.61	2.817	20.88	4.383	3.21	5.95	1.61
1.267	9.64	2.833	20.88	4.400	3.21	5.97	1.61
1.283	9.64	2.850	20.88	4.417	3.21	5.98	1.61
1.300	9.64	2.867	20.88	4.433	3.21	6.00	1.61
1.317	9.64	2.883	20.88	4.450	3.21	6.02	1.61
1.333	9.64	2.900	20.88	4.467	3.21	6.03	1.61
1.350	9.64	2.917	20.88	4.483	3.21	6.05	1.61
1.367	9.64	2.933	20.88	4.500	3.21	6.07	1.61
1.383	9.64	2.950	20.88	4.517	3.21	6.08	1.61
1.400	9.64	2.967	20.88	4.533	3.21	6.10	1.61
1.417	9.64	2.983	20.88	4.550	3.21	6.12	1.61
1.433	9.64	3.000	20.88	4.567	3.21	6.13	1.61
1.450	9.64	3.017	20.88	4.583	3.21	6.15	1.61
1.467	9.64	3.033	20.88	4.600	3.21	6.17	1.61
1.483	9.64	3.050	20.88	4.617	3.21	6.18	1.61
1.500	9.64	3.067	20.88	4.633	3.21	6.20	1.61
1.517	9.64	3.083	20.88	4.650	3.21	6.22	1.61
1.533	9.64	3.100	20.88	4.667	3.21	6.23	1.61
1.550	9.64	3.117	20.88	4.683	3.21	6.25	1.61
1.567	9.64	3.133	20.88	4.700	3.21		

Max.Eff.Inten.(mm/hr)=	73.88	64.04	
over (min)	5.00	5.00	
Storage Coeff. (min)=	3.05 (ii)	4.97 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.30	0.23	
			TOTALS
PEAK FLOW (cms)=	0.37	0.00	0.369 (iii)
TIME TO PEAK (hrs)=	2.75	2.75	2.75
RUNOFF VOLUME (mm)=	79.31	58.03	79.10
TOTAL RAINFALL (mm)=	80.31	80.31	80.31
RUNOFF COEFFICIENT =	0.99	0.72	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 90.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7625) IN= 2---> OUT= 1 DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0389	0.1013
	0.0164	0.0514	0.0456	0.1141
	0.0252	0.0690	0.0514	0.1288
	0.0309	0.0825	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (	7624)	1.800	0.369	2.75	79.10
OUTFLOW: ID= 1 (	7625)	1.800	0.043	3.83	77.02

PEAK FLOW REDUCTION [Qout/Qin](%)= 11.63
TIME SHIFT OF PEAK FLOW (min)= 65.00
MAXIMUM STORAGE USED (ha.m.)= 0.1089

CALIB STANDHYD (7623) ID= 1 DT= 1.0 min	Area (ha)= 1.15		Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	1.14	0.01		
Dep. Storage (mm)=	1.00	1.50		
Average Slope (%)=	1.00	0.50		
Length (m)=	87.56	40.00		
Mannings n =	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	9.64	3.150	20.88	4.72	3.21
0.033	0.00	1.600	9.64	3.167	20.88	4.73	3.21
0.050	0.00	1.617	9.64	3.183	20.88	4.75	3.21
0.067	0.00	1.633	9.64	3.200	20.88	4.77	1.61
0.083	0.00	1.650	9.64	3.217	20.88	4.78	1.61
0.100	0.00	1.667	9.64	3.233	20.88	4.80	1.61
0.117	0.00	1.683	9.64	3.250	20.88	4.82	1.61
0.133	0.00	1.700	9.64	3.267	11.24	4.83	1.61
0.150	0.00	1.717	9.64	3.283	11.24	4.85	1.61
0.167	0.00	1.733	9.64	3.300	11.24	4.87	1.61
0.183	0.00	1.750	9.64	3.317	11.24	4.88	1.61
0.200	0.00	1.767	27.30	3.333	11.24	4.90	1.61
0.217	0.00	1.783	27.30	3.350	11.24	4.92	1.61
0.233	0.00	1.800	27.30	3.367	11.24	4.93	1.61
0.250	0.00	1.817	27.30	3.383	11.24	4.95	1.61
0.267	1.61	1.833	27.30	3.400	11.24	4.97	1.61
0.283	1.61	1.850	27.30	3.417	11.24	4.98	1.61
0.300	1.61	1.867	27.30	3.433	11.24	5.00	1.61
0.317	1.61	1.883	27.30	3.450	11.24	5.02	1.61
0.333	1.61	1.900	27.30	3.467	11.24	5.03	1.61
0.350	1.61	1.917	27.30	3.483	11.24	5.05	1.61
0.367	1.61	1.933	27.30	3.500	11.24	5.07	1.61
0.383	1.61	1.950	27.30	3.517	11.24	5.08	1.61
0.400	1.61	1.967	27.30	3.533	11.24	5.10	1.61
0.417	1.61	1.983	27.30	3.550	11.24	5.12	1.61
0.433	1.61	2.000	27.30	3.567	11.24	5.13	1.61
0.450	1.61	2.017	27.30	3.583	11.24	5.15	1.61
0.467	1.61	2.033	27.30	3.600	11.24	5.17	1.61
0.483	1.61	2.050	27.30	3.617	11.24	5.18	1.61
0.500	1.61	2.067	27.30	3.633	11.24	5.20	1.61
0.517	1.61	2.083	27.30	3.650	11.24	5.22	1.61
0.533	1.61	2.100	27.30	3.667	11.24	5.23	1.61
0.550	1.61	2.117	27.30	3.683	11.24	5.25	1.61
0.567	1.61	2.133	27.30	3.700	11.24	5.27	1.61
0.583	1.61	2.150	27.30	3.717	11.24	5.28	1.61
0.600	1.61	2.167	27.30	3.733	11.24	5.30	1.61
0.617	1.61	2.183	27.30	3.750	11.24	5.32	1.61
0.633	1.61	2.200	27.30	3.767	6.42	5.33	1.61
0.650	1.61	2.217	27.30	3.783	6.42	5.35	1.61
0.667	1.61	2.233	27.30	3.800	6.42	5.37	1.61
0.683	1.61	2.250	27.30	3.817	6.42	5.38	1.61
0.700	1.61	2.267	73.88	3.833	6.42	5.40	1.61
0.717	1.61	2.283	73.88	3.850	6.42	5.42	1.61
0.733	1.61	2.300	73.88	3.867	6.42	5.43	1.61
0.750	1.61	2.317	73.88	3.883	6.42	5.45	1.61
0.767	1.61	2.333	73.88	3.900	6.42	5.47	1.61
0.783	1.61	2.350	73.88	3.917	6.42	5.48	1.61
0.800	1.61	2.367	73.88	3.933	6.42	5.50	1.61
0.817	1.61	2.383	73.88	3.950	6.42	5.52	1.61
0.833	1.61	2.400	73.88	3.967	6.42	5.53	1.61
0.850	1.61	2.417	73.88	3.983	6.42	5.55	1.61
0.867	1.61	2.433	73.88	4.000	6.42	5.57	1.61
0.883	1.61	2.450	73.88	4.017	6.42	5.58	1.61
0.900	1.61	2.467	73.88	4.033	6.42	5.60	1.61
0.917	1.61	2.483	73.88	4.050	6.42	5.62	1.61
0.933	1.61	2.500	73.88	4.067	6.42	5.63	1.61
0.950	1.61	2.517	73.88	4.083	6.42	5.65	1.61
0.967	1.61	2.533	73.88	4.100	6.42	5.67	1.61
0.983	1.61	2.550	73.88	4.117	6.42	5.68	1.61
1.000	1.61	2.567	73.88	4.133	6.42	5.70	1.61
1.017	1.61	2.583	73.88	4.150	6.42	5.72	1.61
1.033	1.61	2.600	73.88	4.167	6.42	5.73	1.61
1.050	1.61	2.617	73.88	4.183	6.42	5.75	1.61
1.067	1.61	2.633	73.88	4.200	6.42	5.77	1.61
1.083	1.61	2.650	73.88	4.217	6.42	5.78	1.61
1.100	1.61	2.667	73.88	4.233	6.42	5.80	1.61
1.117	1.61	2.683	73.88	4.250	6.42	5.82	1.61
1.133	1.61	2.700	73.88	4.267	3.21	5.83	1.61
1.150	1.61	2.717	73.88	4.283	3.21	5.85	1.61
1.167	1.61	2.733	73.88	4.300	3.21	5.87	1.61

1.183	1.61	2.750	73.88	4.317	3.21	5.88	1.61
1.200	1.61	2.767	20.89	4.333	3.21	5.90	1.61
1.217	1.61	2.783	20.88	4.350	3.21	5.92	1.61
1.233	1.61	2.800	20.88	4.367	3.21	5.93	1.61
1.250	1.61	2.817	20.88	4.383	3.21	5.95	1.61
1.267	9.64	2.833	20.88	4.400	3.21	5.97	1.61
1.283	9.64	2.850	20.88	4.417	3.21	5.98	1.61
1.300	9.64	2.867	20.88	4.433	3.21	6.00	1.61
1.317	9.64	2.883	20.88	4.450	3.21	6.02	1.61
1.333	9.64	2.900	20.88	4.467	3.21	6.03	1.61
1.350	9.64	2.917	20.88	4.483	3.21	6.05	1.61
1.367	9.64	2.933	20.88	4.500	3.21	6.07	1.61
1.383	9.64	2.950	20.88	4.517	3.21	6.08	1.61
1.400	9.64	2.967	20.88	4.533	3.21	6.10	1.61
1.417	9.64	2.983	20.88	4.550	3.21	6.12	1.61
1.433	9.64	3.000	20.88	4.567	3.21	6.13	1.61
1.450	9.64	3.017	20.88	4.583	3.21	6.15	1.61
1.467	9.64	3.033	20.88	4.600	3.21	6.17	1.61
1.483	9.64	3.050	20.88	4.617	3.21	6.18	1.61
1.500	9.64	3.067	20.88	4.633	3.21	6.20	1.61
1.517	9.64	3.083	20.88	4.650	3.21	6.22	1.61
1.533	9.64	3.100	20.88	4.667	3.21	6.23	1.61
1.550	9.64	3.117	20.88	4.683	3.21	6.25	1.61
1.567	9.64	3.133	20.88	4.700	3.21		

Max.Eff.Inten.(mm/hr)=	73.88	57.08	
over (min)	5.00	5.00	
Storage Coeff. (min)=	2.66 (ii)	4.58 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.33	0.24	
			TOTALS
PEAK FLOW (cms)=	0.23	0.00	0.235 (iii)
TIME TO PEAK (hrs)=	2.75	2.75	2.75
RUNOFF VOLUME (mm)=	79.31	50.24	79.02
TOTAL RAINFALL (mm)=	80.31	80.31	80.31
RUNOFF COEFFICIENT =	0.99	0.63	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7622)	OVERFLOW IS OFF				
IN= 2---> OUT= 1					
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)	
	0.0000	0.0000	0.0258	0.0650	
	0.0108	0.0330	0.0302	0.0725	
	0.0167	0.0440	0.0340	0.0820	
	0.0204	0.0525	0.0000	0.0000	

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (	7623)	1.150	0.235	2.75	79.02
OUTFLOW: ID= 1 (	7622)	1.150	0.028	3.83	77.14

PEAK FLOW REDUCTION [Qout/Qin](%)= 11.99
TIME SHIFT OF PEAK FLOW (min)= 65.00
MAXIMUM STORAGE USED (ha.m.)= 0.0692

CALIB					
STANDHYD (7629)	Area (ha)= 4.09				
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00		Dir. Conn.(%)= 99.00		
	IMPERVIOUS		PERVIOUS (i)		
Surface Area (ha)=	4.05		0.04		
Dep. Storage (mm)=	1.00		1.50		
Average Slope (%)=	1.00		0.50		
Length (m)=	165.13		40.00		
Mannings n =	0.013		0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	9.64	3.150	20.88	4.72	3.21
0.033	0.00	1.600	9.64	3.167	20.88	4.73	3.21
0.050	0.00	1.617	9.64	3.183	20.88	4.75	3.21
0.067	0.00	1.633	9.64	3.200	20.88	4.77	1.61
0.083	0.00	1.650	9.64	3.217	20.88	4.78	1.61
0.100	0.00	1.667	9.64	3.233	20.88	4.80	1.61
0.117	0.00	1.683	9.64	3.250	20.88	4.82	1.61
0.133	0.00	1.700	9.64	3.267	11.24	4.83	1.61
0.150	0.00	1.717	9.64	3.283	11.24	4.85	1.61
0.167	0.00	1.733	9.64	3.300	11.24	4.87	1.61
0.183	0.00	1.750	9.64	3.317	11.24	4.88	1.61
0.200	0.00	1.767	27.30	3.333	11.24	4.90	1.61
0.217	0.00	1.783	27.30	3.350	11.24	4.92	1.61
0.233	0.00	1.800	27.30	3.367	11.24	4.93	1.61
0.250	0.00	1.817	27.30	3.383	11.24	4.95	1.61
0.267	1.61	1.833	27.30	3.400	11.24	4.97	1.61
0.283	1.61	1.850	27.30	3.417	11.24	4.98	1.61
0.300	1.61	1.867	27.30	3.433	11.24	5.00	1.61
0.317	1.61	1.883	27.30	3.450	11.24	5.02	1.61
0.333	1.61	1.900	27.30	3.467	11.24	5.03	1.61
0.350	1.61	1.917	27.30	3.483	11.24	5.05	1.61
0.367	1.61	1.933	27.30	3.500	11.24	5.07	1.61
0.383	1.61	1.950	27.30	3.517	11.24	5.08	1.61
0.400	1.61	1.967	27.30	3.533	11.24	5.10	1.61
0.417	1.61	1.983	27.30	3.550	11.24	5.12	1.61
0.433	1.61	2.000	27.30	3.567	11.24	5.13	1.61
0.450	1.61	2.017	27.30	3.583	11.24	5.15	1.61
0.467	1.61	2.033	27.30	3.600	11.24	5.17	1.61
0.483	1.61	2.050	27.30	3.617	11.24	5.18	1.61
0.500	1.61	2.067	27.30	3.633	11.24	5.20	1.61
0.517	1.61	2.083	27.30	3.650	11.24	5.22	1.61
0.533	1.61	2.100	27.30	3.667	11.24	5.23	1.61
0.550	1.61	2.117	27.30	3.683	11.24	5.25	1.61
0.567	1.61	2.133	27.30	3.700	11.24	5.27	1.61
0.583	1.61	2.150	27.30	3.717	11.24	5.28	1.61
0.600	1.61	2.167	27.30	3.733	11.24	5.30	1.61
0.617	1.61	2.183	27.30	3.750	11.24	5.32	1.61
0.633	1.61	2.200	27.30	3.767	6.42	5.33	1.61
0.650	1.61	2.217	27.30	3.783	6.42	5.35	1.61
0.667	1.61	2.233	27.30	3.800	6.42	5.37	1.61
0.683	1.61	2.250	27.30	3.817	6.42	5.38	1.61
0.700	1.61	2.267	73.88	3.833	6.42	5.40	1.61
0.717	1.61	2.283	73.88	3.850	6.42	5.42	1.61
0.733	1.61	2.300	73.88	3.867	6.42	5.43	1.61
0.750	1.61	2.317	73.88	3.883	6.42	5.45	1.61
0.767	1.61	2.333	73.88	3.900	6.42	5.47	1.61
0.783	1.61	2.350	73.88	3.917	6.42	5.48	1.61
0.800	1.61	2.367	73.88	3.933	6.42	5.50	1.61
0.817	1.61	2.383	73.88	3.950	6.42	5.52	1.61
0.833	1.61	2.400	73.88	3.967	6.42	5.53	1.61
0.850	1.61	2.417	73.88	3.983	6.42	5.55	1.61
0.867	1.61	2.433	73.88	4.000	6.42	5.57	1.61
0.883	1.61	2.450	73.88	4.017	6.42	5.58	1.61
0.900	1.61	2.467	73.88	4.033	6.42	5.60	1.61
0.917	1.61	2.483	73.88	4.050	6.42	5.62	1.61
0.933	1.61	2.500	73.88	4.067	6.42	5.63	1.61
0.950	1.61	2.517	73.88	4.083	6.42	5.65	1.61
0.967	1.61	2.533	73.88	4.100	6.42	5.67	1.61
0.983	1.61	2.550	73.88	4.117	6.42	5.68	1.61
1.000	1.61	2.567	73.88	4.133	6.42	5.70	1.61
1.017	1.61	2.583	73.88	4.150	6.42	5.72	1.61
1.033	1.61	2.600	73.88	4.167	6.42	5.73	1.61
1.050	1.61	2.617	73.88	4.183	6.42	5.75	1.61
1.067	1.61	2.633	73.88	4.200	6.42	5.77	1.61
1.083	1.61	2.650	73.88	4.217	6.42	5.78	1.61
1.100	1.61	2.667	73.88	4.233	6.42	5.80	1.61
1.117	1.61	2.683	73.88	4.250	6.42	5.82	1.61
1.133	1.61	2.700	73.88	4.267	3.21	5.83	1.61
1.150	1.61	2.717	73.88	4.283	3.21	5.85	1.61

1.167	1.61	2.733	73.88	4.300	3.21	5.87	1.61
1.183	1.61	2.750	73.88	4.317	3.21	5.88	1.61
1.200	1.61	2.767	20.89	4.333	3.21	5.90	1.61
1.217	1.61	2.783	20.88	4.350	3.21	5.92	1.61
1.233	1.61	2.800	20.88	4.367	3.21	5.93	1.61
1.250	1.61	2.817	20.88	4.383	3.21	5.95	1.61
1.267	9.64	2.833	20.88	4.400	3.21	5.97	1.61
1.283	9.64	2.850	20.88	4.417	3.21	5.98	1.61
1.300	9.64	2.867	20.88	4.433	3.21	6.00	1.61
1.317	9.64	2.883	20.88	4.450	3.21	6.02	1.61
1.333	9.64	2.900	20.88	4.467	3.21	6.03	1.61
1.350	9.64	2.917	20.88	4.483	3.21	6.05	1.61
1.367	9.64	2.933	20.88	4.500	3.21	6.07	1.61
1.383	9.64	2.950	20.88	4.517	3.21	6.08	1.61
1.400	9.64	2.967	20.88	4.533	3.21	6.10	1.61
1.417	9.64	2.983	20.88	4.550	3.21	6.12	1.61
1.433	9.64	3.000	20.88	4.567	3.21	6.13	1.61
1.450	9.64	3.017	20.88	4.583	3.21	6.15	1.61
1.467	9.64	3.033	20.88	4.600	3.21	6.17	1.61
1.483	9.64	3.050	20.88	4.617	3.21	6.18	1.61
1.500	9.64	3.067	20.88	4.633	3.21	6.20	1.61
1.517	9.64	3.083	20.88	4.650	3.21	6.22	1.61
1.533	9.64	3.100	20.88	4.667	3.21	6.23	1.61
1.550	9.64	3.117	20.88	4.683	3.21	6.25	1.61
1.567	9.64	3.133	20.88	4.700	3.21		

Max.Eff.Inten.(mm/hr)=	73.88	57.08	
over (min)	5.00	6.00	
Storage Coeff. (min)=	3.90 (ii)	5.82 (ii)	
Unit Hyd. Tpeak (min)=	5.00	6.00	
Unit Hyd. peak (cms)=	0.26	0.19	
			TOTALS
PEAK FLOW (cms)=	0.83	0.01	0.837 (iii)
TIME TO PEAK (hrs)=	2.75	2.75	2.75
RUNOFF VOLUME (mm)=	79.31	50.24	79.02
TOTAL RAINFALL (mm)=	80.31	80.31	80.31
RUNOFF COEFFICIENT =	0.99	0.63	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7630)| IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0826	0.2320
	0.0347	0.1170	0.0967	0.2609
	0.0534	0.1580	0.1090	0.2940
	0.0655	0.1890	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (	7629)	4.090	0.837	2.75	79.02
OUTFLOW: ID= 1 (	7630)	4.090	0.092	3.87	76.35

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.94
TIME SHIFT OF PEAK FLOW (min)= 67.00
MAXIMUM STORAGE USED (ha.m.)= 0.2503

CALIB STANDHYD (7631)| ID= 1 DT= 1.0 min |	Area (ha)= 3.91			
	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00		
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	3.87	0.04		
Dep. Storage (mm)=	1.00	1.50		
Average Slope (%)=	1.00	0.50		
Length (m)=	161.45	40.00		

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	9.64	3.150	20.88	4.72	3.21
0.033	0.00	1.600	9.64	3.167	20.88	4.73	3.21
0.050	0.00	1.617	9.64	3.183	20.88	4.75	3.21
0.067	0.00	1.633	9.64	3.200	20.88	4.77	1.61
0.083	0.00	1.650	9.64	3.217	20.88	4.78	1.61
0.100	0.00	1.667	9.64	3.233	20.88	4.80	1.61
0.117	0.00	1.683	9.64	3.250	20.88	4.82	1.61
0.133	0.00	1.700	9.64	3.267	11.24	4.83	1.61
0.150	0.00	1.717	9.64	3.283	11.24	4.85	1.61
0.167	0.00	1.733	9.64	3.300	11.24	4.87	1.61
0.183	0.00	1.750	9.64	3.317	11.24	4.88	1.61
0.200	0.00	1.767	27.30	3.333	11.24	4.90	1.61
0.217	0.00	1.783	27.30	3.350	11.24	4.92	1.61
0.233	0.00	1.800	27.30	3.367	11.24	4.93	1.61
0.250	0.00	1.817	27.30	3.383	11.24	4.95	1.61
0.267	1.61	1.833	27.30	3.400	11.24	4.97	1.61
0.283	1.61	1.850	27.30	3.417	11.24	4.98	1.61
0.300	1.61	1.867	27.30	3.433	11.24	5.00	1.61
0.317	1.61	1.883	27.30	3.450	11.24	5.02	1.61
0.333	1.61	1.900	27.30	3.467	11.24	5.03	1.61
0.350	1.61	1.917	27.30	3.483	11.24	5.05	1.61
0.367	1.61	1.933	27.30	3.500	11.24	5.07	1.61
0.383	1.61	1.950	27.30	3.517	11.24	5.08	1.61
0.400	1.61	1.967	27.30	3.533	11.24	5.10	1.61
0.417	1.61	1.983	27.30	3.550	11.24	5.12	1.61
0.433	1.61	2.000	27.30	3.567	11.24	5.13	1.61
0.450	1.61	2.017	27.30	3.583	11.24	5.15	1.61
0.467	1.61	2.033	27.30	3.600	11.24	5.17	1.61
0.483	1.61	2.050	27.30	3.617	11.24	5.18	1.61
0.500	1.61	2.067	27.30	3.633	11.24	5.20	1.61
0.517	1.61	2.083	27.30	3.650	11.24	5.22	1.61
0.533	1.61	2.100	27.30	3.667	11.24	5.23	1.61
0.550	1.61	2.117	27.30	3.683	11.24	5.25	1.61
0.567	1.61	2.133	27.30	3.700	11.24	5.27	1.61
0.583	1.61	2.150	27.30	3.717	11.24	5.28	1.61
0.600	1.61	2.167	27.30	3.733	11.24	5.30	1.61
0.617	1.61	2.183	27.30	3.750	11.24	5.32	1.61
0.633	1.61	2.200	27.30	3.767	6.42	5.33	1.61
0.650	1.61	2.217	27.30	3.783	6.42	5.35	1.61
0.667	1.61	2.233	27.30	3.800	6.42	5.37	1.61
0.683	1.61	2.250	27.30	3.817	6.42	5.38	1.61
0.700	1.61	2.267	73.88	3.833	6.42	5.40	1.61
0.717	1.61	2.283	73.88	3.850	6.42	5.42	1.61
0.733	1.61	2.300	73.88	3.867	6.42	5.43	1.61
0.750	1.61	2.317	73.88	3.883	6.42	5.45	1.61
0.767	1.61	2.333	73.88	3.900	6.42	5.47	1.61
0.783	1.61	2.350	73.88	3.917	6.42	5.48	1.61
0.800	1.61	2.367	73.88	3.933	6.42	5.50	1.61
0.817	1.61	2.383	73.88	3.950	6.42	5.52	1.61
0.833	1.61	2.400	73.88	3.967	6.42	5.53	1.61
0.850	1.61	2.417	73.88	3.983	6.42	5.55	1.61
0.867	1.61	2.433	73.88	4.000	6.42	5.57	1.61
0.883	1.61	2.450	73.88	4.017	6.42	5.58	1.61
0.900	1.61	2.467	73.88	4.033	6.42	5.60	1.61
0.917	1.61	2.483	73.88	4.050	6.42	5.62	1.61
0.933	1.61	2.500	73.88	4.067	6.42	5.63	1.61
0.950	1.61	2.517	73.88	4.083	6.42	5.65	1.61
0.967	1.61	2.533	73.88	4.100	6.42	5.67	1.61
0.983	1.61	2.550	73.88	4.117	6.42	5.68	1.61
1.000	1.61	2.567	73.88	4.133	6.42	5.70	1.61
1.017	1.61	2.583	73.88	4.150	6.42	5.72	1.61
1.033	1.61	2.600	73.88	4.167	6.42	5.73	1.61
1.050	1.61	2.617	73.88	4.183	6.42	5.75	1.61
1.067	1.61	2.633	73.88	4.200	6.42	5.77	1.61
1.083	1.61	2.650	73.88	4.217	6.42	5.78	1.61
1.100	1.61	2.667	73.88	4.233	6.42	5.80	1.61
1.117	1.61	2.683	73.88	4.250	6.42	5.82	1.61
1.133	1.61	2.700	73.88	4.267	3.21	5.83	1.61

1.150	1.61	2.717	73.88	4.283	3.21	5.85	1.61
1.167	1.61	2.733	73.88	4.300	3.21	5.87	1.61
1.183	1.61	2.750	73.88	4.317	3.21	5.88	1.61
1.200	1.61	2.767	20.89	4.333	3.21	5.90	1.61
1.217	1.61	2.783	20.88	4.350	3.21	5.92	1.61
1.233	1.61	2.800	20.88	4.367	3.21	5.93	1.61
1.250	1.61	2.817	20.88	4.383	3.21	5.95	1.61
1.267	9.64	2.833	20.88	4.400	3.21	5.97	1.61
1.283	9.64	2.850	20.88	4.417	3.21	5.98	1.61
1.300	9.64	2.867	20.88	4.433	3.21	6.00	1.61
1.317	9.64	2.883	20.88	4.450	3.21	6.02	1.61
1.333	9.64	2.900	20.88	4.467	3.21	6.03	1.61
1.350	9.64	2.917	20.88	4.483	3.21	6.05	1.61
1.367	9.64	2.933	20.88	4.500	3.21	6.07	1.61
1.383	9.64	2.950	20.88	4.517	3.21	6.08	1.61
1.400	9.64	2.967	20.88	4.533	3.21	6.10	1.61
1.417	9.64	2.983	20.88	4.550	3.21	6.12	1.61
1.433	9.64	3.000	20.88	4.567	3.21	6.13	1.61
1.450	9.64	3.017	20.88	4.583	3.21	6.15	1.61
1.467	9.64	3.033	20.88	4.600	3.21	6.17	1.61
1.483	9.64	3.050	20.88	4.617	3.21	6.18	1.61
1.500	9.64	3.067	20.88	4.633	3.21	6.20	1.61
1.517	9.64	3.083	20.88	4.650	3.21	6.22	1.61
1.533	9.64	3.100	20.88	4.667	3.21	6.23	1.61
1.550	9.64	3.117	20.88	4.683	3.21	6.25	1.61
1.567	9.64	3.133	20.88	4.700	3.21		

Max.Eff.Inten.(mm/hr)=		73.88	57.08	
over (min)		5.00	6.00	
Storage Coeff. (min)=		3.84 (ii)	5.77 (ii)	
Unit Hyd. Tpeak (min)=		5.00	6.00	
Unit Hyd. peak (cms)=		0.27	0.19	
				TOTALS
PEAK FLOW	(cms)=	0.79	0.01	0.800 (iii)
TIME TO PEAK	(hrs)=	2.75	2.75	2.75
RUNOFF VOLUME	(mm)=	79.31	50.24	79.02
TOTAL RAINFALL	(mm)=	80.31	80.31	80.31
RUNOFF COEFFICIENT	=	0.99	0.63	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7632)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0792	0.2220
	0.0333	0.1130	0.0928	0.2500
	0.0512	0.1510	0.1046	0.2810
	0.0629	0.1810	0.0000	0.0000

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (	7631)	3.910	0.800	2.75	79.02
OUTFLOW: ID= 1 (	7632)	3.910	0.088	3.87	76.31

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.95
TIME SHIFT OF PEAK FLOW (min)= 67.00
MAXIMUM STORAGE USED (ha.m.)= 0.2392

CALIB					
STANDHYD (7641)	Area (ha)=	2.21			
ID= 1 DT= 1.0 min	Total Imp(%)=	99.00	Dir. Conn.(%)=	99.00	
		IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	2.19	0.02		
Dep. Storage	(mm)=	1.00	1.50		
Average Slope	(%)=	1.00	0.50		

Length	(m)=	121.38 40.00
Mannings n	=	0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	9.64	3.150	20.88	4.72	3.21
0.033	0.00	1.600	9.64	3.167	20.88	4.73	3.21
0.050	0.00	1.617	9.64	3.183	20.88	4.75	3.21
0.067	0.00	1.633	9.64	3.200	20.88	4.77	1.61
0.083	0.00	1.650	9.64	3.217	20.88	4.78	1.61
0.100	0.00	1.667	9.64	3.233	20.88	4.80	1.61
0.117	0.00	1.683	9.64	3.250	20.88	4.82	1.61
0.133	0.00	1.700	9.64	3.267	11.24	4.83	1.61
0.150	0.00	1.717	9.64	3.283	11.24	4.85	1.61
0.167	0.00	1.733	9.64	3.300	11.24	4.87	1.61
0.183	0.00	1.750	9.64	3.317	11.24	4.88	1.61
0.200	0.00	1.767	27.30	3.333	11.24	4.90	1.61
0.217	0.00	1.783	27.30	3.350	11.24	4.92	1.61
0.233	0.00	1.800	27.30	3.367	11.24	4.93	1.61
0.250	0.00	1.817	27.30	3.383	11.24	4.95	1.61
0.267	1.61	1.833	27.30	3.400	11.24	4.97	1.61
0.283	1.61	1.850	27.30	3.417	11.24	4.98	1.61
0.300	1.61	1.867	27.30	3.433	11.24	5.00	1.61
0.317	1.61	1.883	27.30	3.450	11.24	5.02	1.61
0.333	1.61	1.900	27.30	3.467	11.24	5.03	1.61
0.350	1.61	1.917	27.30	3.483	11.24	5.05	1.61
0.367	1.61	1.933	27.30	3.500	11.24	5.07	1.61
0.383	1.61	1.950	27.30	3.517	11.24	5.08	1.61
0.400	1.61	1.967	27.30	3.533	11.24	5.10	1.61
0.417	1.61	1.983	27.30	3.550	11.24	5.12	1.61
0.433	1.61	2.000	27.30	3.567	11.24	5.13	1.61
0.450	1.61	2.017	27.30	3.583	11.24	5.15	1.61
0.467	1.61	2.033	27.30	3.600	11.24	5.17	1.61
0.483	1.61	2.050	27.30	3.617	11.24	5.18	1.61
0.500	1.61	2.067	27.30	3.633	11.24	5.20	1.61
0.517	1.61	2.083	27.30	3.650	11.24	5.22	1.61
0.533	1.61	2.100	27.30	3.667	11.24	5.23	1.61
0.550	1.61	2.117	27.30	3.683	11.24	5.25	1.61
0.567	1.61	2.133	27.30	3.700	11.24	5.27	1.61
0.583	1.61	2.150	27.30	3.717	11.24	5.28	1.61
0.600	1.61	2.167	27.30	3.733	11.24	5.30	1.61
0.617	1.61	2.183	27.30	3.750	11.24	5.32	1.61
0.633	1.61	2.200	27.30	3.767	6.42	5.33	1.61
0.650	1.61	2.217	27.30	3.783	6.42	5.35	1.61
0.667	1.61	2.233	27.30	3.800	6.42	5.37	1.61
0.683	1.61	2.250	27.30	3.817	6.42	5.38	1.61
0.700	1.61	2.267	73.88	3.833	6.42	5.40	1.61
0.717	1.61	2.283	73.88	3.850	6.42	5.42	1.61
0.733	1.61	2.300	73.88	3.867	6.42	5.43	1.61
0.750	1.61	2.317	73.88	3.883	6.42	5.45	1.61
0.767	1.61	2.333	73.88	3.900	6.42	5.47	1.61
0.783	1.61	2.350	73.88	3.917	6.42	5.48	1.61
0.800	1.61	2.367	73.88	3.933	6.42	5.50	1.61
0.817	1.61	2.383	73.88	3.950	6.42	5.52	1.61
0.833	1.61	2.400	73.88	3.967	6.42	5.53	1.61
0.850	1.61	2.417	73.88	3.983	6.42	5.55	1.61
0.867	1.61	2.433	73.88	4.000	6.42	5.57	1.61
0.883	1.61	2.450	73.88	4.017	6.42	5.58	1.61
0.900	1.61	2.467	73.88	4.033	6.42	5.60	1.61
0.917	1.61	2.483	73.88	4.050	6.42	5.62	1.61
0.933	1.61	2.500	73.88	4.067	6.42	5.63	1.61
0.950	1.61	2.517	73.88	4.083	6.42	5.65	1.61
0.967	1.61	2.533	73.88	4.100	6.42	5.67	1.61
0.983	1.61	2.550	73.88	4.117	6.42	5.68	1.61
1.000	1.61	2.567	73.88	4.133	6.42	5.70	1.61
1.017	1.61	2.583	73.88	4.150	6.42	5.72	1.61
1.033	1.61	2.600	73.88	4.167	6.42	5.73	1.61
1.050	1.61	2.617	73.88	4.183	6.42	5.75	1.61
1.067	1.61	2.633	73.88	4.200	6.42	5.77	1.61
1.083	1.61	2.650	73.88	4.217	6.42	5.78	1.61
1.100	1.61	2.667	73.88	4.233	6.42	5.80	1.61
1.117	1.61	2.683	73.88	4.250	6.42	5.82	1.61

1.133	1.61	2.700	73.88	4.267	3.21	5.83	1.61
1.150	1.61	2.717	73.88	4.283	3.21	5.85	1.61
1.167	1.61	2.733	73.88	4.300	3.21	5.87	1.61
1.183	1.61	2.750	73.88	4.317	3.21	5.88	1.61
1.200	1.61	2.767	20.89	4.333	3.21	5.90	1.61
1.217	1.61	2.783	20.88	4.350	3.21	5.92	1.61
1.233	1.61	2.800	20.88	4.367	3.21	5.93	1.61
1.250	1.61	2.817	20.88	4.383	3.21	5.95	1.61
1.267	9.64	2.833	20.88	4.400	3.21	5.97	1.61
1.283	9.64	2.850	20.88	4.417	3.21	5.98	1.61
1.300	9.64	2.867	20.88	4.433	3.21	6.00	1.61
1.317	9.64	2.883	20.88	4.450	3.21	6.02	1.61
1.333	9.64	2.900	20.88	4.467	3.21	6.03	1.61
1.350	9.64	2.917	20.88	4.483	3.21	6.05	1.61
1.367	9.64	2.933	20.88	4.500	3.21	6.07	1.61
1.383	9.64	2.950	20.88	4.517	3.21	6.08	1.61
1.400	9.64	2.967	20.88	4.533	3.21	6.10	1.61
1.417	9.64	2.983	20.88	4.550	3.21	6.12	1.61
1.433	9.64	3.000	20.88	4.567	3.21	6.13	1.61
1.450	9.64	3.017	20.88	4.583	3.21	6.15	1.61
1.467	9.64	3.033	20.88	4.600	3.21	6.17	1.61
1.483	9.64	3.050	20.88	4.617	3.21	6.18	1.61
1.500	9.64	3.067	20.88	4.633	3.21	6.20	1.61
1.517	9.64	3.083	20.88	4.650	3.21	6.22	1.61
1.533	9.64	3.100	20.88	4.667	3.21	6.23	1.61
1.550	9.64	3.117	20.88	4.683	3.21	6.25	1.61
1.567	9.64	3.133	20.88	4.700	3.21		

Max.Eff.Inten.(mm/hr)=	73.88	57.08	
over (min)	5.00	6.00	
Storage Coeff. (min)=	3.24 (ii)	5.16 (ii)	
Unit Hyd. Tpeak (min)=	5.00	6.00	
Unit Hyd. peak (cms)=	0.29	0.21	
			TOTALS
PEAK FLOW (cms)=	0.45	0.00	0.452 (iii)
TIME TO PEAK (hrs)=	2.75	2.75	2.75
RUNOFF VOLUME (mm)=	79.31	50.24	79.02
TOTAL RAINFALL (mm)=	80.31	80.31	80.31
RUNOFF COEFFICIENT =	0.99	0.63	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7642)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0470	0.1250
	0.0197	0.0630	0.0551	0.1410
	0.0304	0.0850	0.0620	0.1580
	0.0373	0.1020	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7641)	2.210	0.452	2.75	79.02
OUTFLOW: ID= 1 (7642)	2.210	0.052	3.85	76.79

PEAK FLOW REDUCTION [Qout/Qin](%)= 11.41
TIME SHIFT OF PEAK FLOW (min)= 66.00
MAXIMUM STORAGE USED (ha.m.)= 0.1341

CALIB			
STANDHYD (7643)	Area (ha)= 2.02		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	2.00	0.02	
Dep. Storage (mm)=	1.00	1.50	

Average Slope (%)=	1.00	0.50
Length (m)=	116.05	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	1.583	9.64	3.150	20.88	4.72	3.21
0.033	0.00	1.600	9.64	3.167	20.88	4.73	3.21
0.050	0.00	1.617	9.64	3.183	20.88	4.75	3.21
0.067	0.00	1.633	9.64	3.200	20.88	4.77	1.61
0.083	0.00	1.650	9.64	3.217	20.88	4.78	1.61
0.100	0.00	1.667	9.64	3.233	20.88	4.80	1.61
0.117	0.00	1.683	9.64	3.250	20.88	4.82	1.61
0.133	0.00	1.700	9.64	3.267	11.24	4.83	1.61
0.150	0.00	1.717	9.64	3.283	11.24	4.85	1.61
0.167	0.00	1.733	9.64	3.300	11.24	4.87	1.61
0.183	0.00	1.750	9.64	3.317	11.24	4.88	1.61
0.200	0.00	1.767	27.30	3.333	11.24	4.90	1.61
0.217	0.00	1.783	27.30	3.350	11.24	4.92	1.61
0.233	0.00	1.800	27.30	3.367	11.24	4.93	1.61
0.250	0.00	1.817	27.30	3.383	11.24	4.95	1.61
0.267	1.61	1.833	27.30	3.400	11.24	4.97	1.61
0.283	1.61	1.850	27.30	3.417	11.24	4.98	1.61
0.300	1.61	1.867	27.30	3.433	11.24	5.00	1.61
0.317	1.61	1.883	27.30	3.450	11.24	5.02	1.61
0.333	1.61	1.900	27.30	3.467	11.24	5.03	1.61
0.350	1.61	1.917	27.30	3.483	11.24	5.05	1.61
0.367	1.61	1.933	27.30	3.500	11.24	5.07	1.61
0.383	1.61	1.950	27.30	3.517	11.24	5.08	1.61
0.400	1.61	1.967	27.30	3.533	11.24	5.10	1.61
0.417	1.61	1.983	27.30	3.550	11.24	5.12	1.61
0.433	1.61	2.000	27.30	3.567	11.24	5.13	1.61
0.450	1.61	2.017	27.30	3.583	11.24	5.15	1.61
0.467	1.61	2.033	27.30	3.600	11.24	5.17	1.61
0.483	1.61	2.050	27.30	3.617	11.24	5.18	1.61
0.500	1.61	2.067	27.30	3.633	11.24	5.20	1.61
0.517	1.61	2.083	27.30	3.650	11.24	5.22	1.61
0.533	1.61	2.100	27.30	3.667	11.24	5.23	1.61
0.550	1.61	2.117	27.30	3.683	11.24	5.25	1.61
0.567	1.61	2.133	27.30	3.700	11.24	5.27	1.61
0.583	1.61	2.150	27.30	3.717	11.24	5.28	1.61
0.600	1.61	2.167	27.30	3.733	11.24	5.30	1.61
0.617	1.61	2.183	27.30	3.750	11.24	5.32	1.61
0.633	1.61	2.200	27.30	3.767	6.42	5.33	1.61
0.650	1.61	2.217	27.30	3.783	6.42	5.35	1.61
0.667	1.61	2.233	27.30	3.800	6.42	5.37	1.61
0.683	1.61	2.250	27.30	3.817	6.42	5.38	1.61
0.700	1.61	2.267	73.88	3.833	6.42	5.40	1.61
0.717	1.61	2.283	73.88	3.850	6.42	5.42	1.61
0.733	1.61	2.300	73.88	3.867	6.42	5.43	1.61
0.750	1.61	2.317	73.88	3.883	6.42	5.45	1.61
0.767	1.61	2.333	73.88	3.900	6.42	5.47	1.61
0.783	1.61	2.350	73.88	3.917	6.42	5.48	1.61
0.800	1.61	2.367	73.88	3.933	6.42	5.50	1.61
0.817	1.61	2.383	73.88	3.950	6.42	5.52	1.61
0.833	1.61	2.400	73.88	3.967	6.42	5.53	1.61
0.850	1.61	2.417	73.88	3.983	6.42	5.55	1.61
0.867	1.61	2.433	73.88	4.000	6.42	5.57	1.61
0.883	1.61	2.450	73.88	4.017	6.42	5.58	1.61
0.900	1.61	2.467	73.88	4.033	6.42	5.60	1.61
0.917	1.61	2.483	73.88	4.050	6.42	5.62	1.61
0.933	1.61	2.500	73.88	4.067	6.42	5.63	1.61
0.950	1.61	2.517	73.88	4.083	6.42	5.65	1.61
0.967	1.61	2.533	73.88	4.100	6.42	5.67	1.61
0.983	1.61	2.550	73.88	4.117	6.42	5.68	1.61
1.000	1.61	2.567	73.88	4.133	6.42	5.70	1.61
1.017	1.61	2.583	73.88	4.150	6.42	5.72	1.61
1.033	1.61	2.600	73.88	4.167	6.42	5.73	1.61
1.050	1.61	2.617	73.88	4.183	6.42	5.75	1.61
1.067	1.61	2.633	73.88	4.200	6.42	5.77	1.61
1.083	1.61	2.650	73.88	4.217	6.42	5.78	1.61
1.100	1.61	2.667	73.88	4.233	6.42	5.80	1.61

1.117	1.61	2.683	73.88	4.250	6.42	5.82	1.61
1.133	1.61	2.700	73.88	4.267	3.21	5.83	1.61
1.150	1.61	2.717	73.88	4.283	3.21	5.85	1.61
1.167	1.61	2.733	73.88	4.300	3.21	5.87	1.61
1.183	1.61	2.750	73.88	4.317	3.21	5.88	1.61
1.200	1.61	2.767	20.89	4.333	3.21	5.90	1.61
1.217	1.61	2.783	20.88	4.350	3.21	5.92	1.61
1.233	1.61	2.800	20.88	4.367	3.21	5.93	1.61
1.250	1.61	2.817	20.88	4.383	3.21	5.95	1.61
1.267	9.64	2.833	20.88	4.400	3.21	5.97	1.61
1.283	9.64	2.850	20.88	4.417	3.21	5.98	1.61
1.300	9.64	2.867	20.88	4.433	3.21	6.00	1.61
1.317	9.64	2.883	20.88	4.450	3.21	6.02	1.61
1.333	9.64	2.900	20.88	4.467	3.21	6.03	1.61
1.350	9.64	2.917	20.88	4.483	3.21	6.05	1.61
1.367	9.64	2.933	20.88	4.500	3.21	6.07	1.61
1.383	9.64	2.950	20.88	4.517	3.21	6.08	1.61
1.400	9.64	2.967	20.88	4.533	3.21	6.10	1.61
1.417	9.64	2.983	20.88	4.550	3.21	6.12	1.61
1.433	9.64	3.000	20.88	4.567	3.21	6.13	1.61
1.450	9.64	3.017	20.88	4.583	3.21	6.15	1.61
1.467	9.64	3.033	20.88	4.600	3.21	6.17	1.61
1.483	9.64	3.050	20.88	4.617	3.21	6.18	1.61
1.500	9.64	3.067	20.88	4.633	3.21	6.20	1.61
1.517	9.64	3.083	20.88	4.650	3.21	6.22	1.61
1.533	9.64	3.100	20.88	4.667	3.21	6.23	1.61
1.550	9.64	3.117	20.88	4.683	3.21	6.25	1.61
1.567	9.64	3.133	20.88	4.700	3.21		

Max.Eff.Inten.(mm/hr)=	73.88	57.08	
over (min)	5.00	6.00	
Storage Coeff. (min)=	3.15 (ii)	5.07 (ii)	
Unit Hyd. Tpeak (min)=	5.00	6.00	
Unit Hyd. peak (cms)=	0.30	0.21	
			TOTALS
PEAK FLOW (cms)=	0.41	0.00	0.413 (iii)
TIME TO PEAK (hrs)=	2.75	2.75	2.75
RUNOFF VOLUME (mm)=	79.31	50.24	79.02
TOTAL RAINFALL (mm)=	80.31	80.31	80.31
RUNOFF COEFFICIENT =	0.99	0.63	0.98

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7644)| IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0433	0.1140
	0.0182	0.0580	0.0507	0.1280
	0.0280	0.0775	0.0571	0.1440
	0.0343	0.0930	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7643)	2.020	0.413	2.75	79.02
OUTFLOW: ID= 1 (7644)	2.020	0.048	3.83	76.82

PEAK FLOW REDUCTION [Qout/Qin](%)= 11.54
TIME SHIFT OF PEAK FLOW (min)= 65.00
MAXIMUM STORAGE USED (ha.m.)= 0.1224

V V I SSSSS U U A L (v 6.2.2015)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L

VV I SSSSS UUUUU A A LLLLL

OOO TTTTT TTTTT H H Y Y M M OOO TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
OOO T T H H Y M M OOO

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-a4eb17eaad57\294716b5-6575-4804-9e80-32329d767f99\s
Summary filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-a4eb17eaad57\294716b5-6575-4804-9e80-32329d767f99\s

DATE: 06/14/2024 TIME: 12:48:41

USER:

COMMENTS: _____

** SIMULATION : 994. 100 Year 12 Hour AES (Bl **

READ STORM | Ptotal= 88.54 mm	Filename: C:\Users\ygollamudi\AppData\Local\Temp\3c3f87d5-a26e-4c6b-b2ae-56a7ba29ab7f\a50ed48e Comments: 100 Year 12 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	3.25	15.05	6.50	6.20	9.75	0.89
0.25	0.89	3.50	15.05	6.75	6.20	10.00	0.89
0.50	0.89	3.75	15.05	7.00	6.20	10.25	0.89
0.75	0.89	4.00	15.05	7.25	3.54	10.50	0.89
1.00	0.89	4.25	40.71	7.50	3.54	10.75	0.89
1.25	0.89	4.50	40.71	7.75	3.54	11.00	0.89
1.50	0.89	4.75	40.71	8.00	3.54	11.25	0.89
1.75	0.89	5.00	40.71	8.25	1.77	11.50	0.89
2.00	0.89	5.25	11.51	8.50	1.77	11.75	0.89
2.25	5.31	5.50	11.51	8.75	1.77	12.00	0.89
2.50	5.31	5.75	11.51	9.00	1.77		
2.75	5.31	6.00	11.51	9.25	0.89		
3.00	5.31	6.25	6.20	9.50	0.89		

CALIB | STANDHYD (7567)| ID= 1 DT= 1.0 min	Area (ha)= 2.72 Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.69	0.03
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.00	0.50
Length (m)=	134.66	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

GEI Consultants

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	5.31	6.150	11.51	9.22	1.77
0.033	0.00	3.100	5.31	6.167	11.51	9.23	1.77
0.050	0.00	3.117	5.31	6.183	11.51	9.25	1.77
0.067	0.00	3.133	5.31	6.200	11.51	9.27	0.89
0.083	0.00	3.150	5.31	6.217	11.51	9.28	0.89
0.100	0.00	3.167	5.31	6.233	11.51	9.30	0.89
0.117	0.00	3.183	5.31	6.250	11.50	9.32	0.89
0.133	0.00	3.200	5.31	6.267	6.20	9.33	0.89
0.150	0.00	3.217	5.31	6.283	6.20	9.35	0.89
0.167	0.00	3.233	5.31	6.300	6.20	9.37	0.89
0.183	0.00	3.250	5.31	6.317	6.20	9.38	0.89
0.200	0.00	3.267	15.05	6.333	6.20	9.40	0.89
0.217	0.00	3.283	15.05	6.350	6.20	9.42	0.89
0.233	0.00	3.300	15.05	6.367	6.20	9.43	0.89
0.250	0.00	3.317	15.05	6.383	6.20	9.45	0.89
0.267	0.89	3.333	15.05	6.400	6.20	9.47	0.89
0.283	0.89	3.350	15.05	6.417	6.20	9.48	0.89
0.300	0.89	3.367	15.05	6.433	6.20	9.50	0.89
0.317	0.89	3.383	15.05	6.450	6.20	9.52	0.89
0.333	0.89	3.400	15.05	6.467	6.20	9.53	0.89
0.350	0.89	3.417	15.05	6.483	6.20	9.55	0.89
0.367	0.89	3.433	15.05	6.500	6.20	9.57	0.89
0.383	0.89	3.450	15.05	6.517	6.20	9.58	0.89
0.400	0.89	3.467	15.05	6.533	6.20	9.60	0.89
0.417	0.89	3.483	15.05	6.550	6.20	9.62	0.89
0.433	0.89	3.500	15.05	6.567	6.20	9.63	0.89
0.450	0.89	3.517	15.05	6.583	6.20	9.65	0.89
0.467	0.89	3.533	15.05	6.600	6.20	9.67	0.89
0.483	0.89	3.550	15.05	6.617	6.20	9.68	0.89
0.500	0.89	3.567	15.05	6.633	6.20	9.70	0.89
0.517	0.89	3.583	15.05	6.650	6.20	9.72	0.89
0.533	0.89	3.600	15.05	6.667	6.20	9.73	0.89
0.550	0.89	3.617	15.05	6.683	6.20	9.75	0.89
0.567	0.89	3.633	15.05	6.700	6.20	9.77	0.89
0.583	0.89	3.650	15.05	6.717	6.20	9.78	0.89
0.600	0.89	3.667	15.05	6.733	6.20	9.80	0.89
0.617	0.89	3.683	15.05	6.750	6.20	9.82	0.89
0.633	0.89	3.700	15.05	6.767	6.20	9.83	0.89
0.650	0.89	3.717	15.05	6.783	6.20	9.85	0.89
0.667	0.89	3.733	15.05	6.800	6.20	9.87	0.89
0.683	0.89	3.750	15.05	6.817	6.20	9.88	0.89
0.700	0.89	3.767	15.05	6.833	6.20	9.90	0.89
0.717	0.89	3.783	15.05	6.850	6.20	9.92	0.89
0.733	0.89	3.800	15.05	6.867	6.20	9.93	0.89
0.750	0.89	3.817	15.05	6.883	6.20	9.95	0.89
0.767	0.89	3.833	15.05	6.900	6.20	9.97	0.89
0.783	0.89	3.850	15.05	6.917	6.20	9.98	0.89
0.800	0.89	3.867	15.05	6.933	6.20	10.00	0.89
0.817	0.89	3.883	15.05	6.950	6.20	10.02	0.89
0.833	0.89	3.900	15.05	6.967	6.20	10.03	0.89
0.850	0.89	3.917	15.05	6.983	6.20	10.05	0.89
0.867	0.89	3.933	15.05	7.000	6.20	10.07	0.89
0.883	0.89	3.950	15.05	7.017	6.20	10.08	0.89
0.900	0.89	3.967	15.05	7.033	6.20	10.10	0.89
0.917	0.89	3.983	15.05	7.050	6.20	10.12	0.89
0.933	0.89	4.000	15.05	7.067	6.20	10.13	0.89
0.950	0.89	4.017	15.05	7.083	6.20	10.15	0.89
0.967	0.89	4.033	15.05	7.100	6.20	10.17	0.89
0.983	0.89	4.050	15.05	7.117	6.20	10.18	0.89
1.000	0.89	4.067	15.05	7.133	6.20	10.20	0.89
1.017	0.89	4.083	15.05	7.150	6.20	10.22	0.89
1.033	0.89	4.100	15.05	7.167	6.20	10.23	0.89
1.050	0.89	4.117	15.05	7.183	6.20	10.25	0.89
1.067	0.89	4.133	15.05	7.200	6.20	10.27	0.89
1.083	0.89	4.150	15.05	7.217	6.20	10.28	0.89
1.100	0.89	4.167	15.05	7.233	6.20	10.30	0.89
1.117	0.89	4.183	15.05	7.250	6.19	10.32	0.89
1.133	0.89	4.200	15.05	7.267	3.54	10.33	0.89
1.150	0.89	4.217	15.05	7.283	3.54	10.35	0.89
1.167	0.89	4.233	15.05	7.300	3.54	10.37	0.89
1.183	0.89	4.250	15.05	7.317	3.54	10.38	0.89
1.200	0.89	4.267	40.71	7.333	3.54	10.40	0.89
1.217	0.89	4.283	40.71	7.350	3.54	10.42	0.89
1.233	0.89	4.300	40.71	7.367	3.54	10.43	0.89
1.250	0.89	4.317	40.71	7.383	3.54	10.45	0.89
1.267	0.89	4.333	40.71	7.400	3.54	10.47	0.89
1.283	0.89	4.350	40.71	7.417	3.54	10.48	0.89
1.300	0.89	4.367	40.71	7.433	3.54	10.50	0.89
1.317	0.89	4.383	40.71	7.450	3.54	10.52	0.89
1.333	0.89	4.400	40.71	7.467	3.54	10.53	0.89
1.350	0.89	4.417	40.71	7.483	3.54	10.55	0.89
1.367	0.89	4.433	40.71	7.500	3.54	10.57	0.89
1.383	0.89	4.450	40.71	7.517	3.54	10.58	0.89
1.400	0.89	4.467	40.71	7.533	3.54	10.60	0.89
1.417	0.89	4.483	40.71	7.550	3.54	10.62	0.89
1.433	0.89	4.500	40.71	7.567	3.54	10.63	0.89
1.450	0.89	4.517	40.71	7.583	3.54	10.65	0.89
1.467	0.89	4.533	40.71	7.600	3.54	10.67	0.89
1.483	0.89	4.550	40.71	7.617	3.54	10.68	0.89
1.500	0.89	4.567	40.71	7.633	3.54	10.70	0.89
1.517	0.89	4.583	40.71	7.650	3.54	10.72	0.89
1.533	0.89	4.600	40.71	7.667	3.54	10.73	0.89
1.550	0.89	4.617	40.71	7.683	3.54	10.75	0.89
1.567	0.89	4.633	40.71	7.700	3.54	10.77	0.89
1.583	0.89	4.650	40.71	7.717	3.54	10.78	0.89
1.600	0.89	4.667	40.71	7.733	3.54	10.80	0.89
1.617	0.89	4.683	40.71	7.750	3.54	10.82	0.89
1.633	0.89	4.700	40.71	7.767	3.54	10.83	0.89
1.650	0.89	4.717	40.71	7.783	3.54	10.85	0.89
1.667	0.89	4.733	40.71	7.800	3.54	10.87	0.89
1.683	0.89	4.750	40.71	7.817	3.54	10.88	0.89
1.700	0.89	4.767	40.71	7.833	3.54	10.90	0.89
1.717	0.89	4.783	40.71	7.850	3.54	10.92	0.89
1.733	0.89	4.800	40.71	7.867	3.54	10.93	0.89
1.750	0.89	4.817	40.71	7.883	3.54	10.95	0.89
1.767	0.89	4.833	40.71	7.900	3.54	10.97	0.89
1.783	0.89	4.850	40.71	7.917	3.54	10.98	0.89
1.800	0.89	4.867	40.71	7.933	3.54	11.00	0.89
1.817	0.89	4.883	40.71	7.950	3.54	11.02	0.89
1.833	0.89	4.900	40.71	7.967	3.54	11.03	0.89
1.850	0.89	4.917	40.71	7.983	3.54	11.05	0.89
1.867	0.89	4.933	40.71	8.000	3.54	11.07	0.89
1.883	0.89	4.950	40.71	8.017	3.54	11.08	0.89
1.900	0.89	4.967	40.71	8.033	3.54	11.10	0.89
1.917	0.89	4.983	40.71	8.050	3.54	11.12	0.89
1.933	0.89	5.000	40.71	8.067	3.54	11.13	0.89
1.950	0.89	5.017	40.71	8.083	3.54	11.15	0.89
1.967	0.89	5.033	40.71	8.100	3.54	11.17	0.89
1.983	0.89	5.050	40.71	8.117	3.54	11.18	0.89
2.000	0.89	5.067	40.71	8.133	3.54	11.20	0.89
2.017	0.89	5.083	40.71	8.150	3.54	11.22	0.89
2.033	0.89	5.100	40.71	8.167	3.54	11.23	0.89
2.050	0.89	5.117	40.71	8.183	3.54	11.25	0.89
2.067	0.89	5.133	40.71	8.200	3.54	11.27	0.89
2.083	0.89	5.150	40.71	8.217	3.54	11.28	0.89
2.100	0.89	5.167	40.71	8.233	3.54	11.30	0.89
2.117	0.89	5.183	40.71	8.250	3.54	11.32	0.89
2.133	0.89	5.200	40.71	8.267	1.77	11.33	0.89
2.150	0.89	5.217	40.71	8.283	1.77	11.35	0.89
2.167	0.89	5.233	40.71	8.300	1.77	11.37	0.89
2.183	0.89	5.250	40.69	8.317	1.77	11.38	0.89
2.200	0.89	5.267	11.51	8.333	1.77	11.40	0.89
2.217	0.89	5.283	11.51	8.350	1.77	11.42	0.89
2.233	0.89	5.300	11.51	8.367	1.77	11.43	0.89
2.250	0.89	5.317	11.51	8.383	1.77	11.45	0.89
2.267	5.31	5.333	11.51	8.400	1.77	11.47	0.89
2.283	5.31	5.350	11.51	8.417	1.77	11.48	0.89
2.300	5.31	5.367	11.51	8.433	1.77	11.50	0.89
2.317	5.31	5.383	11.51	8.450	1.77	11.52	0.89
2.333	5.31	5.400	11.51	8.467	1.77	11.53	0.89
2.350	5.31	5.417	11.51	8.483	1.77	11.55	0.89
2.367	5.31	5.433	11.51	8.500	1.77	11.57	0.89
2.383	5.31	5.450	11.51	8.517	1.77	11.58	0.89
2.400	5.31	5.467	11.51	8.533	1.77	11.60	0.89
2.417	5.31	5.483	11.51	8.550	1.77	11.62	0.89
2.433	5.31	5.500	11.51	8.567	1.77	11.63	0.89
2.450	5.31	5.517	11.51	8.583	1.77	11.65	0.89
2.467	5.31	5.533	11.51	8.600	1.77	11.67	0.89
2.483	5.31	5.550	11.51	8.617	1.77	11.68	0.89

2.500	5.31	5.567	11.51	8.633	1.77	11.70	0.89
2.517	5.31	5.583	11.51	8.650	1.77	11.72	0.89
2.533	5.31	5.600	11.51	8.667	1.77	11.73	0.89
2.550	5.31	5.617	11.51	8.683	1.77	11.75	0.89
2.567	5.31	5.633	11.51	8.700	1.77	11.77	0.89
2.583	5.31	5.650	11.51	8.717	1.77	11.78	0.89
2.600	5.31	5.667	11.51	8.733	1.77	11.80	0.89
2.617	5.31	5.683	11.51	8.750	1.77	11.82	0.89
2.633	5.31	5.700	11.51	8.767	1.77	11.83	0.89
2.650	5.31	5.717	11.51	8.783	1.77	11.85	0.89
2.667	5.31	5.733	11.51	8.800	1.77	11.87	0.89
2.683	5.31	5.750	11.51	8.817	1.77	11.88	0.89
2.700	5.31	5.767	11.51	8.833	1.77	11.90	0.89
2.717	5.31	5.783	11.51	8.850	1.77	11.92	0.89
2.733	5.31	5.800	11.51	8.867	1.77	11.93	0.89
2.750	5.31	5.817	11.51	8.883	1.77	11.95	0.89
2.767	5.31	5.833	11.51	8.900	1.77	11.97	0.89
2.783	5.31	5.850	11.51	8.917	1.77	11.98	0.89
2.800	5.31	5.867	11.51	8.933	1.77	12.00	0.89
2.817	5.31	5.883	11.51	8.950	1.77	12.02	0.89
2.833	5.31	5.900	11.51	8.967	1.77	12.03	0.89
2.850	5.31	5.917	11.51	8.983	1.77	12.05	0.89
2.867	5.31	5.933	11.51	9.000	1.77	12.07	0.89
2.883	5.31	5.950	11.51	9.017	1.77	12.08	0.89
2.900	5.31	5.967	11.51	9.033	1.77	12.10	0.89
2.917	5.31	5.983	11.51	9.050	1.77	12.12	0.89
2.933	5.31	6.000	11.51	9.067	1.77	12.13	0.89
2.950	5.31	6.017	11.51	9.083	1.77	12.15	0.89
2.967	5.31	6.033	11.51	9.100	1.77	12.17	0.89
2.983	5.31	6.050	11.51	9.117	1.77	12.18	0.89
3.000	5.31	6.067	11.51	9.133	1.77	12.20	0.89
3.017	5.31	6.083	11.51	9.150	1.77	12.22	0.89
3.033	5.31	6.100	11.51	9.167	1.77	12.23	0.89
3.050	5.31	6.117	11.51	9.183	1.77	12.25	0.89
3.067	5.31	6.133	11.51	9.200	1.77		

Max.Eff.Inten.(mm/hr)=	40.71	32.96	
over (min)	5.00	7.00	
Storage Coeff. (min)=	4.38 (ii)	6.81 (ii)	
Unit Hyd. Tpeak (min)=	5.00	7.00	
Unit Hyd. peak (cms)=	0.25	0.16	
			TOTALS
PEAK FLOW (cms)=	0.30	0.00	0.307 (iii)
TIME TO PEAK (hrs)=	5.23	5.25	5.25
RUNOFF VOLUME (mm)=	87.53	57.45	87.24
TOTAL RAINFALL (mm)=	88.54	88.54	88.54
RUNOFF COEFFICIENT =	0.99	0.65	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7626)	OVERFLOW IS OFF
IN= 2---> OUT= 1	
DT= 1.0 min	

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0568	0.1530
0.0239	0.0780	0.0660	0.1730
0.0370	0.1040	0.0751	0.2000
0.0451	0.1250	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7567)	2.720	0.307	5.25	87.24
OUTFLOW: ID= 1 (7626)	2.720	0.060	6.37	83.79

PEAK FLOW REDUCTION [Qout/Qin](%)= 19.54
TIME SHIFT OF PEAK FLOW (min)= 67.00
MAXIMUM STORAGE USED (ha.m.)= 0.1599

CALIB	
STANDHYD (7624)	Area (ha)= 1.80
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.78	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	109.54	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	5.31	6.150	11.51	9.22	1.77
0.033	0.00	3.100	5.31	6.167	11.51	9.23	1.77
0.050	0.00	3.117	5.31	6.183	11.51	9.25	1.77
0.067	0.00	3.133	5.31	6.200	11.51	9.27	0.89
0.083	0.00	3.150	5.31	6.217	11.51	9.28	0.89
0.100	0.00	3.167	5.31	6.233	11.51	9.30	0.89
0.117	0.00	3.183	5.31	6.250	11.50	9.32	0.89
0.133	0.00	3.200	5.31	6.267	6.20	9.33	0.89
0.150	0.00	3.217	5.31	6.283	6.20	9.35	0.89
0.167	0.00	3.233	5.31	6.300	6.20	9.37	0.89
0.183	0.00	3.250	5.31	6.317	6.20	9.38	0.89
0.200	0.00	3.267	15.05	6.333	6.20	9.40	0.89
0.217	0.00	3.283	15.05	6.350	6.20	9.42	0.89
0.233	0.00	3.300	15.05	6.367	6.20	9.43	0.89
0.250	0.00	3.317	15.05	6.383	6.20	9.45	0.89
0.267	0.89	3.333	15.05	6.400	6.20	9.47	0.89
0.283	0.89	3.350	15.05	6.417	6.20	9.48	0.89
0.300	0.89	3.367	15.05	6.433	6.20	9.50	0.89
0.317	0.89	3.383	15.05	6.450	6.20	9.52	0.89
0.333	0.89	3.400	15.05	6.467	6.20	9.53	0.89
0.350	0.89	3.417	15.05	6.483	6.20	9.55	0.89
0.367	0.89	3.433	15.05	6.500	6.20	9.57	0.89
0.383	0.89	3.450	15.05	6.517	6.20	9.58	0.89
0.400	0.89	3.467	15.05	6.533	6.20	9.60	0.89
0.417	0.89	3.483	15.05	6.550	6.20	9.62	0.89
0.433	0.89	3.500	15.05	6.567	6.20	9.63	0.89
0.450	0.89	3.517	15.05	6.583	6.20	9.65	0.89
0.467	0.89	3.533	15.05	6.600	6.20	9.67	0.89
0.483	0.89	3.550	15.05	6.617	6.20	9.68	0.89
0.500	0.89	3.567	15.05	6.633	6.20	9.70	0.89
0.517	0.89	3.583	15.05	6.650	6.20	9.72	0.89
0.533	0.89	3.600	15.05	6.667	6.20	9.73	0.89
0.550	0.89	3.617	15.05	6.683	6.20	9.75	0.89
0.567	0.89	3.633	15.05	6.700	6.20	9.77	0.89
0.583	0.89	3.650	15.05	6.717	6.20	9.78	0.89
0.600	0.89	3.667	15.05	6.733	6.20	9.80	0.89
0.617	0.89	3.683	15.05	6.750	6.20	9.82	0.89
0.633	0.89	3.700	15.05	6.767	6.20	9.83	0.89
0.650	0.89	3.717	15.05	6.783	6.20	9.85	0.89
0.667	0.89	3.733	15.05	6.800	6.20	9.87	0.89
0.683	0.89	3.750	15.05	6.817	6.20	9.88	0.89
0.700	0.89	3.767	15.05	6.833	6.20	9.90	0.89
0.717	0.89	3.783	15.05	6.850	6.20	9.92	0.89
0.733	0.89	3.800	15.05	6.867	6.20	9.93	0.89
0.750	0.89	3.817	15.05	6.883	6.20	9.95	0.89
0.767	0.89	3.833	15.05	6.900	6.20	9.97	0.89
0.783	0.89	3.850	15.05	6.917	6.20	9.98	0.89
0.800	0.89	3.867	15.05	6.933	6.20	10.00	0.89
0.817	0.89	3.883	15.05	6.950	6.20	10.02	0.89
0.833	0.89	3.900	15.05	6.967	6.20	10.03	0.89
0.850	0.89	3.917	15.05	6.983	6.20	10.05	0.89
0.867	0.89	3.933	15.05	7.000	6.20	10.07	0.89
0.883	0.89	3.950	15.05	7.017	6.20	10.08	0.89
0.900	0.89	3.967	15.05	7.033	6.20	10.10	0.89
0.917	0.89	3.983	15.05	7.050	6.20	10.12	0.89
0.933	0.89	4.000	15.05	7.067	6.20	10.13	0.89
0.950	0.89	4.017	15.05	7.083	6.20	10.15	0.89
0.967	0.89	4.033	15.05	7.100	6.20	10.17	0.89

0.983	0.89	4.050	15.05	7.117	6.20	10.18	0.89
1.000	0.89	4.067	15.05	7.133	6.20	10.20	0.89
1.017	0.89	4.083	15.05	7.150	6.20	10.22	0.89
1.033	0.89	4.100	15.05	7.167	6.20	10.23	0.89
1.050	0.89	4.117	15.05	7.183	6.20	10.25	0.89
1.067	0.89	4.133	15.05	7.200	6.20	10.27	0.89
1.083	0.89	4.150	15.05	7.217	6.20	10.28	0.89
1.100	0.89	4.167	15.05	7.233	6.20	10.30	0.89
1.117	0.89	4.183	15.05	7.250	6.19	10.32	0.89
1.133	0.89	4.200	15.05	7.267	3.54	10.33	0.89
1.150	0.89	4.217	15.05	7.283	3.54	10.35	0.89
1.167	0.89	4.233	15.05	7.300	3.54	10.37	0.89
1.183	0.89	4.250	15.05	7.317	3.54	10.38	0.89
1.200	0.89	4.267	40.71	7.333	3.54	10.40	0.89
1.217	0.89	4.283	40.71	7.350	3.54	10.42	0.89
1.233	0.89	4.300	40.71	7.367	3.54	10.43	0.89
1.250	0.89	4.317	40.71	7.383	3.54	10.45	0.89
1.267	0.89	4.333	40.71	7.400	3.54	10.47	0.89
1.283	0.89	4.350	40.71	7.417	3.54	10.48	0.89
1.300	0.89	4.367	40.71	7.433	3.54	10.50	0.89
1.317	0.89	4.383	40.71	7.450	3.54	10.52	0.89
1.333	0.89	4.400	40.71	7.467	3.54	10.53	0.89
1.350	0.89	4.417	40.71	7.483	3.54	10.55	0.89
1.367	0.89	4.433	40.71	7.500	3.54	10.57	0.89
1.383	0.89	4.450	40.71	7.517	3.54	10.58	0.89
1.400	0.89	4.467	40.71	7.533	3.54	10.60	0.89
1.417	0.89	4.483	40.71	7.550	3.54	10.62	0.89
1.433	0.89	4.500	40.71	7.567	3.54	10.63	0.89
1.450	0.89	4.517	40.71	7.583	3.54	10.65	0.89
1.467	0.89	4.533	40.71	7.600	3.54	10.67	0.89
1.483	0.89	4.550	40.71	7.617	3.54	10.68	0.89
1.500	0.89	4.567	40.71	7.633	3.54	10.70	0.89
1.517	0.89	4.583	40.71	7.650	3.54	10.72	0.89
1.533	0.89	4.600	40.71	7.667	3.54	10.73	0.89
1.550	0.89	4.617	40.71	7.683	3.54	10.75	0.89
1.567	0.89	4.633	40.71	7.700	3.54	10.77	0.89
1.583	0.89	4.650	40.71	7.717	3.54	10.78	0.89
1.600	0.89	4.667	40.71	7.733	3.54	10.80	0.89
1.617	0.89	4.683	40.71	7.750	3.54	10.82	0.89
1.633	0.89	4.700	40.71	7.767	3.54	10.83	0.89
1.650	0.89	4.717	40.71	7.783	3.54	10.85	0.89
1.667	0.89	4.733	40.71	7.800	3.54	10.87	0.89
1.683	0.89	4.750	40.71	7.817	3.54	10.88	0.89
1.700	0.89	4.767	40.71	7.833	3.54	10.90	0.89
1.717	0.89	4.783	40.71	7.850	3.54	10.92	0.89
1.733	0.89	4.800	40.71	7.867	3.54	10.93	0.89
1.750	0.89	4.817	40.71	7.883	3.54	10.95	0.89
1.767	0.89	4.833	40.71	7.900	3.54	10.97	0.89
1.783	0.89	4.850	40.71	7.917	3.54	10.98	0.89
1.800	0.89	4.867	40.71	7.933	3.54	11.00	0.89
1.817	0.89	4.883	40.71	7.950	3.54	11.02	0.89
1.833	0.89	4.900	40.71	7.967	3.54	11.03	0.89
1.850	0.89	4.917	40.71	7.983	3.54	11.05	0.89
1.867	0.89	4.933	40.71	8.000	3.54	11.07	0.89
1.883	0.89	4.950	40.71	8.017	3.54	11.08	0.89
1.900	0.89	4.967	40.71	8.033	3.54	11.10	0.89
1.917	0.89	4.983	40.71	8.050	3.54	11.12	0.89
1.933	0.89	5.000	40.71	8.067	3.54	11.13	0.89
1.950	0.89	5.017	40.71	8.083	3.54	11.15	0.89
1.967	0.89	5.033	40.71	8.100	3.54	11.17	0.89
1.983	0.89	5.050	40.71	8.117	3.54	11.18	0.89
2.000	0.89	5.067	40.71	8.133	3.54	11.20	0.89
2.017	0.89	5.083	40.71	8.150	3.54	11.22	0.89
2.033	0.89	5.100	40.71	8.167	3.54	11.23	0.89
2.050	0.89	5.117	40.71	8.183	3.54	11.25	0.89
2.067	0.89	5.133	40.71	8.200	3.54	11.27	0.89
2.083	0.89	5.150	40.71	8.217	3.54	11.28	0.89
2.100	0.89	5.167	40.71	8.233	3.54	11.30	0.89
2.117	0.89	5.183	40.71	8.250	3.54	11.32	0.89
2.133	0.89	5.200	40.71	8.267	1.77	11.33	0.89
2.150	0.89	5.217	40.71	8.283	1.77	11.35	0.89
2.167	0.89	5.233	40.71	8.300	1.77	11.37	0.89
2.183	0.89	5.250	40.69	8.317	1.77	11.38	0.89
2.200	0.89	5.267	11.51	8.333	1.77	11.40	0.89
2.217	0.89	5.283	11.51	8.350	1.77	11.42	0.89
2.233	0.89	5.300	11.51	8.367	1.77	11.43	0.89
2.250	0.89	5.317	11.51	8.383	1.77	11.45	0.89
2.267	5.31	5.333	11.51	8.400	1.77	11.47	0.89
2.283	5.31	5.350	11.51	8.417	1.77	11.48	0.89
2.300	5.31	5.367	11.51	8.433	1.77	11.50	0.89
2.317	5.31	5.383	11.51	8.450	1.77	11.52	0.89
2.333	5.31	5.400	11.51	8.467	1.77	11.53	0.89
2.350	5.31	5.417	11.51	8.483	1.77	11.55	0.89
2.367	5.31	5.433	11.51	8.500	1.77	11.57	0.89
2.383	5.31	5.450	11.51	8.517	1.77	11.58	0.89
2.400	5.31	5.467	11.51	8.533	1.77	11.60	0.89
2.417	5.31	5.483	11.51	8.550	1.77	11.62	0.89
2.433	5.31	5.500	11.51	8.567	1.77	11.63	0.89
2.450	5.31	5.517	11.51	8.583	1.77	11.65	0.89
2.467	5.31	5.533	11.51	8.600	1.77	11.67	0.89
2.483	5.31	5.550	11.51	8.617	1.77	11.68	0.89
2.500	5.31	5.567	11.51	8.633	1.77	11.70	0.89
2.517	5.31	5.583	11.51	8.650	1.77	11.72	0.89
2.533	5.31	5.600	11.51	8.667	1.77	11.73	0.89
2.550	5.31	5.617	11.51	8.683	1.77	11.75	0.89
2.567	5.31	5.633	11.51	8.700	1.77	11.77	0.89
2.583	5.31	5.650	11.51	8.717	1.77	11.78	0.89
2.600	5.31	5.667	11.51	8.733	1.77	11.80	0.89
2.617	5.31	5.683	11.51	8.750	1.77	11.82	0.89
2.633	5.31	5.700	11.51	8.767	1.77	11.83	0.89
2.650	5.31	5.717	11.51	8.783	1.77	11.85	0.89
2.667	5.31	5.733	11.51	8.800	1.77	11.87	0.89
2.683	5.31	5.750	11.51	8.817	1.77	11.88	0.89
2.700	5.31	5.767	11.51	8.833	1.77	11.90	0.89
2.717	5.31	5.783	11.51	8.850	1.77	11.92	0.89
2.733	5.31	5.800	11.51	8.867	1.77	11.93	0.89
2.750	5.31	5.817	11.51	8.883	1.77	11.95	0.89
2.767	5.31	5.833	11.51	8.900	1.77	11.97	0.89
2.783	5.31	5.850	11.51	8.917	1.77	11.98	0.89
2.800	5.31	5.867	11.51	8.933	1.77	12.00	0.89
2.817	5.31	5.883	11.51	8.950	1.77	12.02	0.89
2.833	5.31	5.900	11.51	8.967	1.77	12.03	0.89
2.850	5.31	5.917	11.51	8.983	1.77	12.05	0.89
2.867	5.31	5.933	11.51	9.000	1.77	12.07	0.89
2.883	5.31	5.950	11.51	9.017	1.77	12.08	0.89
2.900	5.31	5.967	11.51	9.033	1.77	12.10	0.89
2.917	5.31	5.983	11.51	9.050	1.77	12.12	0.89
2.933	5.31	6.000	11.51	9.067	1.77	12.13	0.89
2.950	5.31	6.017	11.51	9.083	1.77	12.15	0.89
2.967	5.31	6.033	11.51	9.100	1.77	12.17	0.89
2.983	5.31	6.050	11.51	9.117	1.77	12.18	0.89
3.000	5.31	6.067	11.51	9.133	1.77	12.20	0.89
3.017	5.31	6.083	11.51	9.150	1.77	12.22	0.89
3.033	5.31	6.100	11.51	9.167	1.77	12.23	0.89
3.050	5.31	6.117	11.51	9.183	1.77	12.25	0.89
3.067	5.31	6.133	11.51	9.200	1.77		

Max.Eff.Inten.(mm/hr)=	40.71	36.34	
over (min)	5.00	7.00	
Storage Coeff. (min)=	3.87 (ii)	6.30 (ii)	
Unit Hyd. Tpeak (min)=	5.00	7.00	
Unit Hyd. peak (cms)=	0.27	0.17	
			TOTALS
PEAK FLOW (cms)=	0.20	0.00	0.203 (iii)
TIME TO PEAK (hrs)=	5.17	5.25	5.25
RUNOFF VOLUME (mm)=	87.53	65.72	87.32
TOTAL RAINFALL (mm)=	88.54	88.54	88.54
RUNOFF COEFFICIENT =	0.99	0.74	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 90.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7625)|	OVERFLOW IS OFF			
IN= 2---> OUT= 1 |				
DT= 1.0 min |	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)

GEI Consultants

0.0000	0.0000	0.0389	0.1013
0.0164	0.0514	0.0456	0.1141
0.0252	0.0690	0.0514	0.1288
0.0309	0.0825	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7624)	1.800	0.203	5.25	87.32
OUTFLOW: ID= 1 (7625)	1.800	0.041	6.35	84.26

PEAK FLOW REDUCTION [Qout/Qin](%)= 20.13
TIME SHIFT OF PEAK FLOW (min)= 66.00
MAXIMUM STORAGE USED (ha.m.)= 0.1052

CALIB
STANDHYD (7623) Area (ha)= 1.15
ID= 1 DT= 1.0 min Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.14	0.01
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	87.56	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	5.31	6.150	11.51	9.22	1.77
0.033	0.00	3.100	5.31	6.167	11.51	9.23	1.77
0.050	0.00	3.117	5.31	6.183	11.51	9.25	1.77
0.067	0.00	3.133	5.31	6.200	11.51	9.27	0.89
0.083	0.00	3.150	5.31	6.217	11.51	9.28	0.89
0.100	0.00	3.167	5.31	6.233	11.51	9.30	0.89
0.117	0.00	3.183	5.31	6.250	11.50	9.32	0.89
0.133	0.00	3.200	5.31	6.267	6.20	9.33	0.89
0.150	0.00	3.217	5.31	6.283	6.20	9.35	0.89
0.167	0.00	3.233	5.31	6.300	6.20	9.37	0.89
0.183	0.00	3.250	5.31	6.317	6.20	9.38	0.89
0.200	0.00	3.267	15.05	6.333	6.20	9.40	0.89
0.217	0.00	3.283	15.05	6.350	6.20	9.42	0.89
0.233	0.00	3.300	15.05	6.367	6.20	9.43	0.89
0.250	0.00	3.317	15.05	6.383	6.20	9.45	0.89
0.267	0.89	3.333	15.05	6.400	6.20	9.47	0.89
0.283	0.89	3.350	15.05	6.417	6.20	9.48	0.89
0.300	0.89	3.367	15.05	6.433	6.20	9.50	0.89
0.317	0.89	3.383	15.05	6.450	6.20	9.52	0.89
0.333	0.89	3.400	15.05	6.467	6.20	9.53	0.89
0.350	0.89	3.417	15.05	6.483	6.20	9.55	0.89
0.367	0.89	3.433	15.05	6.500	6.20	9.57	0.89
0.383	0.89	3.450	15.05	6.517	6.20	9.58	0.89
0.400	0.89	3.467	15.05	6.533	6.20	9.60	0.89
0.417	0.89	3.483	15.05	6.550	6.20	9.62	0.89
0.433	0.89	3.500	15.05	6.567	6.20	9.63	0.89
0.450	0.89	3.517	15.05	6.583	6.20	9.65	0.89
0.467	0.89	3.533	15.05	6.600	6.20	9.67	0.89
0.483	0.89	3.550	15.05	6.617	6.20	9.68	0.89
0.500	0.89	3.567	15.05	6.633	6.20	9.70	0.89
0.517	0.89	3.583	15.05	6.650	6.20	9.72	0.89
0.533	0.89	3.600	15.05	6.667	6.20	9.73	0.89
0.550	0.89	3.617	15.05	6.683	6.20	9.75	0.89
0.567	0.89	3.633	15.05	6.700	6.20	9.77	0.89
0.583	0.89	3.650	15.05	6.717	6.20	9.78	0.89
0.600	0.89	3.667	15.05	6.733	6.20	9.80	0.89
0.617	0.89	3.683	15.05	6.750	6.20	9.82	0.89
0.633	0.89	3.700	15.05	6.767	6.20	9.83	0.89
0.650	0.89	3.717	15.05	6.783	6.20	9.85	0.89
0.667	0.89	3.733	15.05	6.800	6.20	9.87	0.89
0.683	0.89	3.750	15.05	6.817	6.20	9.88	0.89
0.700	0.89	3.767	15.05	6.833	6.20	9.90	0.89
0.717	0.89	3.783	15.05	6.850	6.20	9.92	0.89
0.733	0.89	3.800	15.05	6.867	6.20	9.93	0.89
0.750	0.89	3.817	15.05	6.883	6.20	9.95	0.89
0.767	0.89	3.833	15.05	6.900	6.20	9.97	0.89
0.783	0.89	3.850	15.05	6.917	6.20	9.98	0.89
0.800	0.89	3.867	15.05	6.933	6.20	10.00	0.89
0.817	0.89	3.883	15.05	6.950	6.20	10.02	0.89
0.833	0.89	3.900	15.05	6.967	6.20	10.03	0.89
0.850	0.89	3.917	15.05	6.983	6.20	10.05	0.89
0.867	0.89	3.933	15.05	7.000	6.20	10.07	0.89
0.883	0.89	3.950	15.05	7.017	6.20	10.08	0.89
0.900	0.89	3.967	15.05	7.033	6.20	10.10	0.89
0.917	0.89	3.983	15.05	7.050	6.20	10.12	0.89
0.933	0.89	4.000	15.05	7.067	6.20	10.13	0.89
0.950	0.89	4.017	15.05	7.083	6.20	10.15	0.89
0.967	0.89	4.033	15.05	7.100	6.20	10.17	0.89
0.983	0.89	4.050	15.05	7.117	6.20	10.18	0.89
1.000	0.89	4.067	15.05	7.133	6.20	10.20	0.89
1.017	0.89	4.083	15.05	7.150	6.20	10.22	0.89
1.033	0.89	4.100	15.05	7.167	6.20	10.23	0.89
1.050	0.89	4.117	15.05	7.183	6.20	10.25	0.89
1.067	0.89	4.133	15.05	7.200	6.20	10.27	0.89
1.083	0.89	4.150	15.05	7.217	6.20	10.28	0.89
1.100	0.89	4.167	15.05	7.233	6.20	10.30	0.89
1.117	0.89	4.183	15.05	7.250	6.19	10.32	0.89
1.133	0.89	4.200	15.05	7.267	3.54	10.33	0.89
1.150	0.89	4.217	15.05	7.283	3.54	10.35	0.89
1.167	0.89	4.233	15.05	7.300	3.54	10.37	0.89
1.183	0.89	4.250	15.05	7.317	3.54	10.38	0.89
1.200	0.89	4.267	40.71	7.333	3.54	10.40	0.89
1.217	0.89	4.283	40.71	7.350	3.54	10.42	0.89
1.233	0.89	4.300	40.71	7.367	3.54	10.43	0.89
1.250	0.89	4.317	40.71	7.383	3.54	10.45	0.89
1.267	0.89	4.333	40.71	7.400	3.54	10.47	0.89
1.283	0.89	4.350	40.71	7.417	3.54	10.48	0.89
1.300	0.89	4.367	40.71	7.433	3.54	10.50	0.89
1.317	0.89	4.383	40.71	7.450	3.54	10.52	0.89
1.333	0.89	4.400	40.71	7.467	3.54	10.53	0.89
1.350	0.89	4.417	40.71	7.483	3.54	10.55	0.89
1.367	0.89	4.433	40.71	7.500	3.54	10.57	0.89
1.383	0.89	4.450	40.71	7.517	3.54	10.58	0.89
1.400	0.89	4.467	40.71	7.533	3.54	10.60	0.89
1.417	0.89	4.483	40.71	7.550	3.54	10.62	0.89
1.433	0.89	4.500	40.71	7.567	3.54	10.63	0.89
1.450	0.89	4.517	40.71	7.583	3.54	10.65	0.89
1.467	0.89	4.533	40.71	7.600	3.54	10.67	0.89
1.483	0.89	4.550	40.71	7.617	3.54	10.68	0.89
1.500	0.89	4.567	40.71	7.633	3.54	10.70	0.89
1.517	0.89	4.583	40.71	7.650	3.54	10.72	0.89
1.533	0.89	4.600	40.71	7.667	3.54	10.73	0.89
1.550	0.89	4.617	40.71	7.683	3.54	10.75	0.89
1.567	0.89	4.633	40.71	7.700	3.54	10.77	0.89
1.583	0.89	4.650	40.71	7.717	3.54	10.78	0.89
1.600	0.89	4.667	40.71	7.733	3.54	10.80	0.89
1.617	0.89	4.683	40.71	7.750	3.54	10.82	0.89
1.633	0.89	4.700	40.71	7.767	3.54	10.83	0.89
1.650	0.89	4.717	40.71	7.783	3.54	10.85	0.89
1.667	0.89	4.733	40.71	7.800	3.54	10.87	0.89
1.683	0.89	4.750	40.71	7.817	3.54	10.88	0.89
1.700	0.89	4.767	40.71	7.833	3.54	10.90	0.89
1.717	0.89	4.783	40.71	7.850	3.54	10.92	0.89
1.733	0.89	4.800	40.71	7.867	3.54	10.93	0.89
1.750	0.89	4.817	40.71	7.883	3.54	10.95	0.89
1.767	0.89	4.833	40.71	7.900	3.54	10.97	0.89
1.783	0.89	4.850	40.71	7.917	3.54	10.98	0.89
1.800	0.89	4.867	40.71	7.933	3.54	11.00	0.89
1.817	0.89	4.883	40.71	7.950	3.54	11.02	0.89
1.833	0.89	4.900	40.71	7.967	3.54	11.03	0.89
1.850	0.89	4.917	40.71	7.983	3.54	11.05	0.89
1.867	0.89	4.933	40.71	8.000	3.54	11.07	0.89
1.883	0.89	4.950	40.71	8.017	3.54	11.08	0.89
1.900	0.89	4.967	40.71	8.033	3.54	11.10	0.89
1.917	0.89	4.983	40.71	8.050	3.54	11.12	0.89
1.933	0.89	5.000	40.71	8.067	3.54	11.13	0.89
1.950	0.89	5.017	40.71	8.083	3.54	11.15	0.89
1.967	0.89	5.033	40.71	8.100	3.54	11.17	0.89
1.983	0.89	5.050	40.71	8.117	3.54	11.18	0.89

2.000	0.89	5.067	40.71	8.133	3.54	11.20	0.89
2.017	0.89	5.083	40.71	8.150	3.54	11.22	0.89
2.033	0.89	5.100	40.71	8.167	3.54	11.23	0.89
2.050	0.89	5.117	40.71	8.183	3.54	11.25	0.89
2.067	0.89	5.133	40.71	8.200	3.54	11.27	0.89
2.083	0.89	5.150	40.71	8.217	3.54	11.28	0.89
2.100	0.89	5.167	40.71	8.233	3.54	11.30	0.89
2.117	0.89	5.183	40.71	8.250	3.54	11.32	0.89
2.133	0.89	5.200	40.71	8.267	1.77	11.33	0.89
2.150	0.89	5.217	40.71	8.283	1.77	11.35	0.89
2.167	0.89	5.233	40.71	8.300	1.77	11.37	0.89
2.183	0.89	5.250	40.69	8.317	1.77	11.38	0.89
2.200	0.89	5.267	11.51	8.333	1.77	11.40	0.89
2.217	0.89	5.283	11.51	8.350	1.77	11.42	0.89
2.233	0.89	5.300	11.51	8.367	1.77	11.43	0.89
2.250	0.89	5.317	11.51	8.383	1.77	11.45	0.89
2.267	5.31	5.333	11.51	8.400	1.77	11.47	0.89
2.283	5.31	5.350	11.51	8.417	1.77	11.48	0.89
2.300	5.31	5.367	11.51	8.433	1.77	11.50	0.89
2.317	5.31	5.383	11.51	8.450	1.77	11.52	0.89
2.333	5.31	5.400	11.51	8.467	1.77	11.53	0.89
2.350	5.31	5.417	11.51	8.483	1.77	11.55	0.89
2.367	5.31	5.433	11.51	8.500	1.77	11.57	0.89
2.383	5.31	5.450	11.51	8.517	1.77	11.58	0.89
2.400	5.31	5.467	11.51	8.533	1.77	11.60	0.89
2.417	5.31	5.483	11.51	8.550	1.77	11.62	0.89
2.433	5.31	5.500	11.51	8.567	1.77	11.63	0.89
2.450	5.31	5.517	11.51	8.583	1.77	11.65	0.89
2.467	5.31	5.533	11.51	8.600	1.77	11.67	0.89
2.483	5.31	5.550	11.51	8.617	1.77	11.68	0.89
2.500	5.31	5.567	11.51	8.633	1.77	11.70	0.89
2.517	5.31	5.583	11.51	8.650	1.77	11.72	0.89
2.533	5.31	5.600	11.51	8.667	1.77	11.73	0.89
2.550	5.31	5.617	11.51	8.683	1.77	11.75	0.89
2.567	5.31	5.633	11.51	8.700	1.77	11.77	0.89
2.583	5.31	5.650	11.51	8.717	1.77	11.78	0.89
2.600	5.31	5.667	11.51	8.733	1.77	11.80	0.89
2.617	5.31	5.683	11.51	8.750	1.77	11.82	0.89
2.633	5.31	5.700	11.51	8.767	1.77	11.83	0.89
2.650	5.31	5.717	11.51	8.783	1.77	11.85	0.89
2.667	5.31	5.733	11.51	8.800	1.77	11.87	0.89
2.683	5.31	5.750	11.51	8.817	1.77	11.88	0.89
2.700	5.31	5.767	11.51	8.833	1.77	11.90	0.89
2.717	5.31	5.783	11.51	8.850	1.77	11.92	0.89
2.733	5.31	5.800	11.51	8.867	1.77	11.93	0.89
2.750	5.31	5.817	11.51	8.883	1.77	11.95	0.89
2.767	5.31	5.833	11.51	8.900	1.77	11.97	0.89
2.783	5.31	5.850	11.51	8.917	1.77	11.98	0.89
2.800	5.31	5.867	11.51	8.933	1.77	12.00	0.89
2.817	5.31	5.883	11.51	8.950	1.77	12.02	0.89
2.833	5.31	5.900	11.51	8.967	1.77	12.03	0.89
2.850	5.31	5.917	11.51	8.983	1.77	12.05	0.89
2.867	5.31	5.933	11.51	9.000	1.77	12.07	0.89
2.883	5.31	5.950	11.51	9.017	1.77	12.08	0.89
2.900	5.31	5.967	11.51	9.033	1.77	12.10	0.89
2.917	5.31	5.983	11.51	9.050	1.77	12.12	0.89
2.933	5.31	6.000	11.51	9.067	1.77	12.13	0.89
2.950	5.31	6.017	11.51	9.083	1.77	12.15	0.89
2.967	5.31	6.033	11.51	9.100	1.77	12.17	0.89
2.983	5.31	6.050	11.51	9.117	1.77	12.18	0.89
3.000	5.31	6.067	11.51	9.133	1.77	12.20	0.89
3.017	5.31	6.083	11.51	9.150	1.77	12.22	0.89
3.033	5.31	6.100	11.51	9.167	1.77	12.23	0.89
3.050	5.31	6.117	11.51	9.183	1.77	12.25	0.89
3.067	5.31	6.133	11.51	9.200	1.77		

Max.Eff.Inten.(mm/hr)=	40.71	32.96	
over (min)	5.00	6.00	
Storage Coeff. (min)=	3.38 (ii)	5.82 (ii)	
Unit Hyd. Tpeak (min)=	5.00	6.00	
Unit Hyd. peak (cms)=	0.29	0.19	
			TOTALS
PEAK FLOW (cms)=	0.13	0.00	0.130 (iii)
TIME TO PEAK (hrs)=	5.07	5.25	5.25
RUNOFF VOLUME (mm)=	87.53	57.45	87.24
TOTAL RAINFALL (mm)=	88.54	88.54	88.54

RUNOFF COEFFICIENT = 0.99 0.65 0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7622)| IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0258	0.0650
	0.0108	0.0330	0.0302	0.0725
	0.0167	0.0440	0.0340	0.0820
	0.0204	0.0525	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7623)	1.150	0.130	5.25	87.24
OUTFLOW: ID= 1 (7622)	1.150	0.027	6.35	84.44

PEAK FLOW REDUCTION [Qout/Qin](%)= 20.64
TIME SHIFT OF PEAK FLOW (min)= 66.00
MAXIMUM STORAGE USED (ha.m.)= 0.0667

CALIB | STANDHYD (7629)| ID= 1 DT= 1.0 min |	Area (ha)= 4.09 Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00		
		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	4.05	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	165.13	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	5.31	6.150	11.51	9.22	1.77
0.033	0.00	3.100	5.31	6.167	11.51	9.23	1.77
0.050	0.00	3.117	5.31	6.183	11.51	9.25	1.77
0.067	0.00	3.133	5.31	6.200	11.51	9.27	0.89
0.083	0.00	3.150	5.31	6.217	11.51	9.28	0.89
0.100	0.00	3.167	5.31	6.233	11.51	9.30	0.89
0.117	0.00	3.183	5.31	6.250	11.50	9.32	0.89
0.133	0.00	3.200	5.31	6.267	6.20	9.33	0.89
0.150	0.00	3.217	5.31	6.283	6.20	9.35	0.89
0.167	0.00	3.233	5.31	6.300	6.20	9.37	0.89
0.183	0.00	3.250	5.31	6.317	6.20	9.38	0.89
0.200	0.00	3.267	15.05	6.333	6.20	9.40	0.89
0.217	0.00	3.283	15.05	6.350	6.20	9.42	0.89
0.233	0.00	3.300	15.05	6.367	6.20	9.43	0.89
0.250	0.00	3.317	15.05	6.383	6.20	9.45	0.89
0.267	0.89	3.333	15.05	6.400	6.20	9.47	0.89
0.283	0.89	3.350	15.05	6.417	6.20	9.48	0.89
0.300	0.89	3.367	15.05	6.433	6.20	9.50	0.89
0.317	0.89	3.383	15.05	6.450	6.20	9.52	0.89
0.333	0.89	3.400	15.05	6.467	6.20	9.53	0.89
0.350	0.89	3.417	15.05	6.483	6.20	9.55	0.89
0.367	0.89	3.433	15.05	6.500	6.20	9.57	0.89
0.383	0.89	3.450	15.05	6.517	6.20	9.58	0.89
0.400	0.89	3.467	15.05	6.533	6.20	9.60	0.89
0.417	0.89	3.483	15.05	6.550	6.20	9.62	0.89
0.433	0.89	3.500	15.05	6.567	6.20	9.63	0.89
0.450	0.89	3.517	15.05	6.583	6.20	9.65	0.89
0.467	0.89	3.533	15.05	6.600	6.20	9.67	0.89

0.483	0.89	3.550	15.05	6.617	6.20	9.68	0.89
0.500	0.89	3.567	15.05	6.633	6.20	9.70	0.89
0.517	0.89	3.583	15.05	6.650	6.20	9.72	0.89
0.533	0.89	3.600	15.05	6.667	6.20	9.73	0.89
0.550	0.89	3.617	15.05	6.683	6.20	9.75	0.89
0.567	0.89	3.633	15.05	6.700	6.20	9.77	0.89
0.583	0.89	3.650	15.05	6.717	6.20	9.78	0.89
0.600	0.89	3.667	15.05	6.733	6.20	9.80	0.89
0.617	0.89	3.683	15.05	6.750	6.20	9.82	0.89
0.633	0.89	3.700	15.05	6.767	6.20	9.83	0.89
0.650	0.89	3.717	15.05	6.783	6.20	9.85	0.89
0.667	0.89	3.733	15.05	6.800	6.20	9.87	0.89
0.683	0.89	3.750	15.05	6.817	6.20	9.88	0.89
0.700	0.89	3.767	15.05	6.833	6.20	9.90	0.89
0.717	0.89	3.783	15.05	6.850	6.20	9.92	0.89
0.733	0.89	3.800	15.05	6.867	6.20	9.93	0.89
0.750	0.89	3.817	15.05	6.883	6.20	9.95	0.89
0.767	0.89	3.833	15.05	6.900	6.20	9.97	0.89
0.783	0.89	3.850	15.05	6.917	6.20	9.98	0.89
0.800	0.89	3.867	15.05	6.933	6.20	10.00	0.89
0.817	0.89	3.883	15.05	6.950	6.20	10.02	0.89
0.833	0.89	3.900	15.05	6.967	6.20	10.03	0.89
0.850	0.89	3.917	15.05	6.983	6.20	10.05	0.89
0.867	0.89	3.933	15.05	7.000	6.20	10.07	0.89
0.883	0.89	3.950	15.05	7.017	6.20	10.08	0.89
0.900	0.89	3.967	15.05	7.033	6.20	10.10	0.89
0.917	0.89	3.983	15.05	7.050	6.20	10.12	0.89
0.933	0.89	4.000	15.05	7.067	6.20	10.13	0.89
0.950	0.89	4.017	15.05	7.083	6.20	10.15	0.89
0.967	0.89	4.033	15.05	7.100	6.20	10.17	0.89
0.983	0.89	4.050	15.05	7.117	6.20	10.18	0.89
1.000	0.89	4.067	15.05	7.133	6.20	10.20	0.89
1.017	0.89	4.083	15.05	7.150	6.20	10.22	0.89
1.033	0.89	4.100	15.05	7.167	6.20	10.23	0.89
1.050	0.89	4.117	15.05	7.183	6.20	10.25	0.89
1.067	0.89	4.133	15.05	7.200	6.20	10.27	0.89
1.083	0.89	4.150	15.05	7.217	6.20	10.28	0.89
1.100	0.89	4.167	15.05	7.233	6.20	10.30	0.89
1.117	0.89	4.183	15.05	7.250	6.19	10.32	0.89
1.133	0.89	4.200	15.05	7.267	3.54	10.33	0.89
1.150	0.89	4.217	15.05	7.283	3.54	10.35	0.89
1.167	0.89	4.233	15.05	7.300	3.54	10.37	0.89
1.183	0.89	4.250	15.05	7.317	3.54	10.38	0.89
1.200	0.89	4.267	40.71	7.333	3.54	10.40	0.89
1.217	0.89	4.283	40.71	7.350	3.54	10.42	0.89
1.233	0.89	4.300	40.71	7.367	3.54	10.43	0.89
1.250	0.89	4.317	40.71	7.383	3.54	10.45	0.89
1.267	0.89	4.333	40.71	7.400	3.54	10.47	0.89
1.283	0.89	4.350	40.71	7.417	3.54	10.48	0.89
1.300	0.89	4.367	40.71	7.433	3.54	10.50	0.89
1.317	0.89	4.383	40.71	7.450	3.54	10.52	0.89
1.333	0.89	4.400	40.71	7.467	3.54	10.53	0.89
1.350	0.89	4.417	40.71	7.483	3.54	10.55	0.89
1.367	0.89	4.433	40.71	7.500	3.54	10.57	0.89
1.383	0.89	4.450	40.71	7.517	3.54	10.58	0.89
1.400	0.89	4.467	40.71	7.533	3.54	10.60	0.89
1.417	0.89	4.483	40.71	7.550	3.54	10.62	0.89
1.433	0.89	4.500	40.71	7.567	3.54	10.63	0.89
1.450	0.89	4.517	40.71	7.583	3.54	10.65	0.89
1.467	0.89	4.533	40.71	7.600	3.54	10.67	0.89
1.483	0.89	4.550	40.71	7.617	3.54	10.68	0.89
1.500	0.89	4.567	40.71	7.633	3.54	10.70	0.89
1.517	0.89	4.583	40.71	7.650	3.54	10.72	0.89
1.533	0.89	4.600	40.71	7.667	3.54	10.73	0.89
1.550	0.89	4.617	40.71	7.683	3.54	10.75	0.89
1.567	0.89	4.633	40.71	7.700	3.54	10.77	0.89
1.583	0.89	4.650	40.71	7.717	3.54	10.78	0.89
1.600	0.89	4.667	40.71	7.733	3.54	10.80	0.89
1.617	0.89	4.683	40.71	7.750	3.54	10.82	0.89
1.633	0.89	4.700	40.71	7.767	3.54	10.83	0.89
1.650	0.89	4.717	40.71	7.783	3.54	10.85	0.89
1.667	0.89	4.733	40.71	7.800	3.54	10.87	0.89
1.683	0.89	4.750	40.71	7.817	3.54	10.88	0.89
1.700	0.89	4.767	40.71	7.833	3.54	10.90	0.89
1.717	0.89	4.783	40.71	7.850	3.54	10.92	0.89
1.733	0.89	4.800	40.71	7.867	3.54	10.93	0.89
1.750	0.89	4.817	40.71	7.883	3.54	10.95	0.89
1.767	0.89	4.833	40.71	7.900	3.54	10.97	0.89
1.783	0.89	4.850	40.71	7.917	3.54	10.98	0.89
1.800	0.89	4.867	40.71	7.933	3.54	11.00	0.89
1.817	0.89	4.883	40.71	7.950	3.54	11.02	0.89
1.833	0.89	4.900	40.71	7.967	3.54	11.03	0.89
1.850	0.89	4.917	40.71	7.983	3.54	11.05	0.89
1.867	0.89	4.933	40.71	8.000	3.54	11.07	0.89
1.883	0.89	4.950	40.71	8.017	3.54	11.08	0.89
1.900	0.89	4.967	40.71	8.033	3.54	11.10	0.89
1.917	0.89	4.983	40.71	8.050	3.54	11.12	0.89
1.933	0.89	5.000	40.71	8.067	3.54	11.13	0.89
1.950	0.89	5.017	40.71	8.083	3.54	11.15	0.89
1.967	0.89	5.033	40.71	8.100	3.54	11.17	0.89
1.983	0.89	5.050	40.71	8.117	3.54	11.18	0.89
2.000	0.89	5.067	40.71	8.133	3.54	11.20	0.89
2.017	0.89	5.083	40.71	8.150	3.54	11.22	0.89
2.033	0.89	5.100	40.71	8.167	3.54	11.23	0.89
2.050	0.89	5.117	40.71	8.183	3.54	11.25	0.89
2.067	0.89	5.133	40.71	8.200	3.54	11.27	0.89
2.083	0.89	5.150	40.71	8.217	3.54	11.28	0.89
2.100	0.89	5.167	40.71	8.233	3.54	11.30	0.89
2.117	0.89	5.183	40.71	8.250	3.54	11.32	0.89
2.133	0.89	5.200	40.71	8.267	1.77	11.33	0.89
2.150	0.89	5.217	40.71	8.283	1.77	11.35	0.89
2.167	0.89	5.233	40.71	8.300	1.77	11.37	0.89
2.183	0.89	5.250	40.69	8.317	1.77	11.38	0.89
2.200	0.89	5.267	11.51	8.333	1.77	11.40	0.89
2.217	0.89	5.283	11.51	8.350	1.77	11.42	0.89
2.233	0.89	5.300	11.51	8.367	1.77	11.43	0.89
2.250	0.89	5.317	11.51	8.383	1.77	11.45	0.89
2.267	5.31	5.333	11.51	8.400	1.77	11.47	0.89
2.283	5.31	5.350	11.51	8.417	1.77	11.48	0.89
2.300	5.31	5.367	11.51	8.433	1.77	11.50	0.89
2.317	5.31	5.383	11.51	8.450	1.77	11.52	0.89
2.333	5.31	5.400	11.51	8.467	1.77	11.53	0.89
2.350	5.31	5.417	11.51	8.483	1.77	11.55	0.89
2.367	5.31	5.433	11.51	8.500	1.77	11.57	0.89
2.383	5.31	5.450	11.51	8.517	1.77	11.58	0.89
2.400	5.31	5.467	11.51	8.533	1.77	11.60	0.89
2.417	5.31	5.483	11.51	8.550	1.77	11.62	0.89
2.433	5.31	5.500	11.51	8.567	1.77	11.63	0.89
2.450	5.31	5.517	11.51	8.583	1.77	11.65	0.89
2.467	5.31	5.533	11.51	8.600	1.77	11.67	0.89
2.483	5.31	5.550	11.51	8.617	1.77	11.68	0.89
2.500	5.31	5.567	11.51	8.633	1.77	11.70	0.89
2.517	5.31	5.583	11.51	8.650	1.77	11.72	0.89
2.533	5.31	5.600	11.51	8.667	1.77	11.73	0.89
2.550	5.31	5.617	11.51	8.683	1.77	11.75	0.89
2.567	5.31	5.633	11.51	8.700	1.77	11.77	0.89
2.583	5.31	5.650	11.51	8.717	1.77	11.78	0.89
2.600	5.31	5.667	11.51	8.733	1.77	11.80	0.89
2.617	5.31	5.683	11.51	8.750	1.77	11.82	0.89
2.633	5.31	5.700	11.51	8.767	1.77	11.83	0.89
2.650	5.31	5.717	11.51	8.783	1.77	11.85	0.89
2.667	5.31	5.733	11.51	8.800	1.77	11.87	0.89
2.683	5.31	5.750	11.51	8.817	1.77	11.88	0.89
2.700	5.31	5.767	11.51	8.833	1.77	11.90	0.89
2.717	5.31	5.783	11.51	8.850	1.77	11.92	0.89
2.733	5.31	5.800	11.51	8.867	1.77	11.93	0.89
2.750	5.31	5.817	11.51	8.883	1.77	11.95	0.89
2.767	5.31	5.833	11.51	8.900	1.77	11.97	0.89
2.783	5.31	5.850	11.51	8.917	1.77	11.98	0.89
2.800	5.31	5.867	11.51	8.933	1.77	12.00	0.89
2.817	5.31	5.883	11.51	8.950	1.77	12.02	0.89
2.833	5.31	5.900	11.51	8.967	1.77	12.03	0.89
2.850	5.31	5.917	11.51	8.983	1.77	12.05	0.89
2.867	5.31	5.933	11.51	9.000	1.77	12.07	0.89
2.883	5.31	5.950	11.51	9.017	1.77	12.08	0.89
2.900	5.31	5.967	11.51	9.033	1.77	12.10	0.89
2.917	5.31	5.983	11.51	9.050	1.77	12.12	0.89
2.933	5.31	6.000	11.51	9.067	1.77	12.13	0.89
2.950	5.31	6.017	11.51	9.083	1.77	12.15	0.89
2.967	5.31	6.033	11.51	9.100	1.77	12.17	0.89
2.983	5.31	6.050	11.51	9.117	1.77	12.18	0.89
3.000	5.31	6.067	11.51	9.133	1.77	12.20	0.89

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3.017	5.31	6.083	11.51	9.150	1.77	12.22	0.89
3.033	5.31	6.100	11.51	9.167	1.77	12.23	0.89
3.050	5.31	6.117	11.51	9.183	1.77	12.25	0.89
3.067	5.31	6.133	11.51	9.200	1.77		

Max.Eff.Inten.(mm/hr)=	40.71	32.96	
over (min)	5.00	8.00	
Storage Coeff. (min)=	4.94 (ii)	7.38 (ii)	
Unit Hyd. Tpeak (min)=	5.00	8.00	
Unit Hyd. peak (cms)=	0.23	0.15	
			TOTALS
PEAK FLOW (cms)=	0.46	0.00	0.462 (iii)
TIME TO PEAK (hrs)=	5.23	5.25	5.25
RUNOFF VOLUME (mm)=	87.53	57.45	87.24
TOTAL RAINFALL (mm)=	88.54	88.54	88.54
RUNOFF COEFFICIENT =	0.99	0.65	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7630)	OVERFLOW IS OFF
IN= 2---> OUT= 1	
DT= 1.0 min	

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0826	0.2320
0.0347	0.1170	0.0967	0.2609
0.0534	0.1580	0.1090	0.2940
0.0655	0.1890	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7629)	4.090	0.462	5.25	87.24
OUTFLOW: ID= 1 (7630)	4.090	0.088	6.40	83.40

PEAK FLOW REDUCTION [Qout/Qin](%)= 19.00
TIME SHIFT OF PEAK FLOW (min)= 69.00
MAXIMUM STORAGE USED (ha.m.)= 0.2424

CALIB	
STANDHYD (7631)	Area (ha)= 3.91
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.87	0.04
Dep. Storage (mm)=	1.00	1.50
Average Slope (%)=	1.00	0.50
Length (m)=	161.45	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	5.31	6.150	11.51	9.22	1.77
0.033	0.00	3.100	5.31	6.167	11.51	9.23	1.77
0.050	0.00	3.117	5.31	6.183	11.51	9.25	1.77
0.067	0.00	3.133	5.31	6.200	11.51	9.27	0.89
0.083	0.00	3.150	5.31	6.217	11.51	9.28	0.89
0.100	0.00	3.167	5.31	6.233	11.51	9.30	0.89
0.117	0.00	3.183	5.31	6.250	11.50	9.32	0.89
0.133	0.00	3.200	5.31	6.267	6.20	9.33	0.89
0.150	0.00	3.217	5.31	6.283	6.20	9.35	0.89
0.167	0.00	3.233	5.31	6.300	6.20	9.37	0.89
0.183	0.00	3.250	5.31	6.317	6.20	9.38	0.89
0.200	0.00	3.267	15.05	6.333	6.20	9.40	0.89
0.217	0.00	3.283	15.05	6.350	6.20	9.42	0.89
0.233	0.00	3.300	15.05	6.367	6.20	9.43	0.89
0.250	0.00	3.317	15.05	6.383	6.20	9.45	0.89
0.267	0.89	3.333	15.05	6.400	6.20	9.47	0.89
0.283	0.89	3.350	15.05	6.417	6.20	9.48	0.89
0.300	0.89	3.367	15.05	6.433	6.20	9.50	0.89
0.317	0.89	3.383	15.05	6.450	6.20	9.52	0.89
0.333	0.89	3.400	15.05	6.467	6.20	9.53	0.89
0.350	0.89	3.417	15.05	6.483	6.20	9.55	0.89
0.367	0.89	3.433	15.05	6.500	6.20	9.57	0.89
0.383	0.89	3.450	15.05	6.517	6.20	9.58	0.89
0.400	0.89	3.467	15.05	6.533	6.20	9.60	0.89
0.417	0.89	3.483	15.05	6.550	6.20	9.62	0.89
0.433	0.89	3.500	15.05	6.567	6.20	9.63	0.89
0.450	0.89	3.517	15.05	6.583	6.20	9.65	0.89
0.467	0.89	3.533	15.05	6.600	6.20	9.67	0.89
0.483	0.89	3.550	15.05	6.617	6.20	9.68	0.89
0.500	0.89	3.567	15.05	6.633	6.20	9.70	0.89
0.517	0.89	3.583	15.05	6.650	6.20	9.72	0.89
0.533	0.89	3.600	15.05	6.667	6.20	9.73	0.89
0.550	0.89	3.617	15.05	6.683	6.20	9.75	0.89
0.567	0.89	3.633	15.05	6.700	6.20	9.77	0.89
0.583	0.89	3.650	15.05	6.717	6.20	9.78	0.89
0.600	0.89	3.667	15.05	6.733	6.20	9.80	0.89
0.617	0.89	3.683	15.05	6.750	6.20	9.82	0.89
0.633	0.89	3.700	15.05	6.767	6.20	9.83	0.89
0.650	0.89	3.717	15.05	6.783	6.20	9.85	0.89
0.667	0.89	3.733	15.05	6.800	6.20	9.87	0.89
0.683	0.89	3.750	15.05	6.817	6.20	9.88	0.89
0.700	0.89	3.767	15.05	6.833	6.20	9.90	0.89
0.717	0.89	3.783	15.05	6.850	6.20	9.92	0.89
0.733	0.89	3.800	15.05	6.867	6.20	9.93	0.89
0.750	0.89	3.817	15.05	6.883	6.20	9.95	0.89
0.767	0.89	3.833	15.05	6.900	6.20	9.97	0.89
0.783	0.89	3.850	15.05	6.917	6.20	9.98	0.89
0.800	0.89	3.867	15.05	6.933	6.20	10.00	0.89
0.817	0.89	3.883	15.05	6.950	6.20	10.02	0.89
0.833	0.89	3.900	15.05	6.967	6.20	10.03	0.89
0.850	0.89	3.917	15.05	6.983	6.20	10.05	0.89
0.867	0.89	3.933	15.05	7.000	6.20	10.07	0.89
0.883	0.89	3.950	15.05	7.017	6.20	10.08	0.89
0.900	0.89	3.967	15.05	7.033	6.20	10.10	0.89
0.917	0.89	3.983	15.05	7.050	6.20	10.12	0.89
0.933	0.89	4.000	15.05	7.067	6.20	10.13	0.89
0.950	0.89	4.017	15.05	7.083	6.20	10.15	0.89
0.967	0.89	4.033	15.05	7.100	6.20	10.17	0.89
0.983	0.89	4.050	15.05	7.117	6.20	10.18	0.89
1.000	0.89	4.067	15.05	7.133	6.20	10.20	0.89
1.017	0.89	4.083	15.05	7.150	6.20	10.22	0.89
1.033	0.89	4.100	15.05	7.167	6.20	10.23	0.89
1.050	0.89	4.117	15.05	7.183	6.20	10.25	0.89
1.067	0.89	4.133	15.05	7.200	6.20	10.27	0.89
1.083	0.89	4.150	15.05	7.217	6.20	10.28	0.89
1.100	0.89	4.167	15.05	7.233	6.20	10.30	0.89
1.117	0.89	4.183	15.05	7.250	6.19	10.32	0.89
1.133	0.89	4.200	15.05	7.267	3.54	10.33	0.89
1.150	0.89	4.217	15.05	7.283	3.54	10.35	0.89
1.167	0.89	4.233	15.05	7.300	3.54	10.37	0.89
1.183	0.89	4.250	15.05	7.317	3.54	10.38	0.89
1.200	0.89	4.267	40.71	7.333	3.54	10.40	0.89
1.217	0.89	4.283	40.71	7.350	3.54	10.42	0.89
1.233	0.89	4.300	40.71	7.367	3.54	10.43	0.89
1.250	0.89	4.317	40.71	7.383	3.54	10.45	0.89
1.267	0.89	4.333	40.71	7.400	3.54	10.47	0.89
1.283	0.89	4.350	40.71	7.417	3.54	10.48	0.89
1.300	0.89	4.367	40.71	7.433	3.54	10.50	0.89
1.317	0.89	4.383	40.71	7.450	3.54	10.52	0.89
1.333	0.89	4.400	40.71	7.467	3.54	10.53	0.89
1.350	0.89	4.417	40.71	7.483	3.54	10.55	0.89
1.367	0.89	4.433	40.71	7.500	3.54	10.57	0.89
1.383	0.89	4.450	40.71	7.517	3.54	10.58	0.89
1.400	0.89	4.467	40.71	7.533	3.54	10.60	0.89
1.417	0.89	4.483	40.71	7.550	3.54	10.62	0.89
1.433	0.89	4.500	40.71	7.567	3.54	10.63	0.89
1.450	0.89	4.517	40.71	7.583	3.54	10.65	0.89
1.467	0.89	4.533	40.71	7.600	3.54	10.67	0.89
1.483	0.89	4.550	40.71	7.617	3.54	10.68	0.89

1.500	0.89	4.567	40.71	7.633	3.54	10.70	0.89
1.517	0.89	4.583	40.71	7.650	3.54	10.72	0.89
1.533	0.89	4.600	40.71	7.667	3.54	10.73	0.89
1.550	0.89	4.617	40.71	7.683	3.54	10.75	0.89
1.567	0.89	4.633	40.71	7.700	3.54	10.77	0.89
1.583	0.89	4.650	40.71	7.717	3.54	10.78	0.89
1.600	0.89	4.667	40.71	7.733	3.54	10.80	0.89
1.617	0.89	4.683	40.71	7.750	3.54	10.82	0.89
1.633	0.89	4.700	40.71	7.767	3.54	10.83	0.89
1.650	0.89	4.717	40.71	7.783	3.54	10.85	0.89
1.667	0.89	4.733	40.71	7.800	3.54	10.87	0.89
1.683	0.89	4.750	40.71	7.817	3.54	10.88	0.89
1.700	0.89	4.767	40.71	7.833	3.54	10.90	0.89
1.717	0.89	4.783	40.71	7.850	3.54	10.92	0.89
1.733	0.89	4.800	40.71	7.867	3.54	10.93	0.89
1.750	0.89	4.817	40.71	7.883	3.54	10.95	0.89
1.767	0.89	4.833	40.71	7.900	3.54	10.97	0.89
1.783	0.89	4.850	40.71	7.917	3.54	10.98	0.89
1.800	0.89	4.867	40.71	7.933	3.54	11.00	0.89
1.817	0.89	4.883	40.71	7.950	3.54	11.02	0.89
1.833	0.89	4.900	40.71	7.967	3.54	11.03	0.89
1.850	0.89	4.917	40.71	7.983	3.54	11.05	0.89
1.867	0.89	4.933	40.71	8.000	3.54	11.07	0.89
1.883	0.89	4.950	40.71	8.017	3.54	11.08	0.89
1.900	0.89	4.967	40.71	8.033	3.54	11.10	0.89
1.917	0.89	4.983	40.71	8.050	3.54	11.12	0.89
1.933	0.89	5.000	40.71	8.067	3.54	11.13	0.89
1.950	0.89	5.017	40.71	8.083	3.54	11.15	0.89
1.967	0.89	5.033	40.71	8.100	3.54	11.17	0.89
1.983	0.89	5.050	40.71	8.117	3.54	11.18	0.89
2.000	0.89	5.067	40.71	8.133	3.54	11.20	0.89
2.017	0.89	5.083	40.71	8.150	3.54	11.22	0.89
2.033	0.89	5.100	40.71	8.167	3.54	11.23	0.89
2.050	0.89	5.117	40.71	8.183	3.54	11.25	0.89
2.067	0.89	5.133	40.71	8.200	3.54	11.27	0.89
2.083	0.89	5.150	40.71	8.217	3.54	11.28	0.89
2.100	0.89	5.167	40.71	8.233	3.54	11.30	0.89
2.117	0.89	5.183	40.71	8.250	3.54	11.32	0.89
2.133	0.89	5.200	40.71	8.267	1.77	11.33	0.89
2.150	0.89	5.217	40.71	8.283	1.77	11.35	0.89
2.167	0.89	5.233	40.71	8.300	1.77	11.37	0.89
2.183	0.89	5.250	40.69	8.317	1.77	11.38	0.89
2.200	0.89	5.267	11.51	8.333	1.77	11.40	0.89
2.217	0.89	5.283	11.51	8.350	1.77	11.42	0.89
2.233	0.89	5.300	11.51	8.367	1.77	11.43	0.89
2.250	0.89	5.317	11.51	8.383	1.77	11.45	0.89
2.267	5.31	5.333	11.51	8.400	1.77	11.47	0.89
2.283	5.31	5.350	11.51	8.417	1.77	11.48	0.89
2.300	5.31	5.367	11.51	8.433	1.77	11.50	0.89
2.317	5.31	5.383	11.51	8.450	1.77	11.52	0.89
2.333	5.31	5.400	11.51	8.467	1.77	11.53	0.89
2.350	5.31	5.417	11.51	8.483	1.77	11.55	0.89
2.367	5.31	5.433	11.51	8.500	1.77	11.57	0.89
2.383	5.31	5.450	11.51	8.517	1.77	11.58	0.89
2.400	5.31	5.467	11.51	8.533	1.77	11.60	0.89
2.417	5.31	5.483	11.51	8.550	1.77	11.62	0.89
2.433	5.31	5.500	11.51	8.567	1.77	11.63	0.89
2.450	5.31	5.517	11.51	8.583	1.77	11.65	0.89
2.467	5.31	5.533	11.51	8.600	1.77	11.67	0.89
2.483	5.31	5.550	11.51	8.617	1.77	11.68	0.89
2.500	5.31	5.567	11.51	8.633	1.77	11.70	0.89
2.517	5.31	5.583	11.51	8.650	1.77	11.72	0.89
2.533	5.31	5.600	11.51	8.667	1.77	11.73	0.89
2.550	5.31	5.617	11.51	8.683	1.77	11.75	0.89
2.567	5.31	5.633	11.51	8.700	1.77	11.77	0.89
2.583	5.31	5.650	11.51	8.717	1.77	11.78	0.89
2.600	5.31	5.667	11.51	8.733	1.77	11.80	0.89
2.617	5.31	5.683	11.51	8.750	1.77	11.82	0.89
2.633	5.31	5.700	11.51	8.767	1.77	11.83	0.89
2.650	5.31	5.717	11.51	8.783	1.77	11.85	0.89
2.667	5.31	5.733	11.51	8.800	1.77	11.87	0.89
2.683	5.31	5.750	11.51	8.817	1.77	11.88	0.89
2.700	5.31	5.767	11.51	8.833	1.77	11.90	0.89
2.717	5.31	5.783	11.51	8.850	1.77	11.92	0.89
2.733	5.31	5.800	11.51	8.867	1.77	11.93	0.89
2.750	5.31	5.817	11.51	8.883	1.77	11.95	0.89
2.767	5.31	5.833	11.51	8.900	1.77	11.97	0.89
2.783	5.31	5.850	11.51	8.917	1.77	11.98	0.89
2.800	5.31	5.867	11.51	8.933	1.77	12.00	0.89
2.817	5.31	5.883	11.51	8.950	1.77	12.02	0.89
2.833	5.31	5.900	11.51	8.967	1.77	12.03	0.89
2.850	5.31	5.917	11.51	8.983	1.77	12.05	0.89
2.867	5.31	5.933	11.51	9.000	1.77	12.07	0.89
2.883	5.31	5.950	11.51	9.017	1.77	12.08	0.89
2.900	5.31	5.967	11.51	9.033	1.77	12.10	0.89
2.917	5.31	5.983	11.51	9.050	1.77	12.12	0.89
2.933	5.31	6.000	11.51	9.067	1.77	12.13	0.89
2.950	5.31	6.017	11.51	9.083	1.77	12.15	0.89
2.967	5.31	6.033	11.51	9.100	1.77	12.17	0.89
2.983	5.31	6.050	11.51	9.117	1.77	12.18	0.89
3.000	5.31	6.067	11.51	9.133	1.77	12.20	0.89
3.017	5.31	6.083	11.51	9.150	1.77	12.22	0.89
3.033	5.31	6.100	11.51	9.167	1.77	12.23	0.89
3.050	5.31	6.117	11.51	9.183	1.77	12.25	0.89
3.067	5.31	6.133	11.51	9.200	1.77		

Max.Eff.Inten.(mm/hr)=	40.71	32.96	
over (min)	5.00	8.00	
Storage Coeff. (min)=	4.88 (ii)	7.32 (ii)	
Unit Hyd. Tpeak (min)=	5.00	8.00	
Unit Hyd. peak (cms)=	0.23	0.15	
			TOTALS
PEAK FLOW (cms)=	0.44	0.00	0.441 (iii)
TIME TO PEAK (hrs)=	5.23	5.25	5.25
RUNOFF VOLUME (mm)=	87.53	57.45	87.24
TOTAL RAINFALL (mm)=	88.54	88.54	88.54
RUNOFF COEFFICIENT =	0.99	0.65	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7632)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0792	0.2220
	0.0333	0.1130	0.0928	0.2500
	0.0512	0.1510	0.1046	0.2810
	0.0629	0.1810	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7631)	3.910	0.441	5.25	87.24
OUTFLOW: ID= 1 (7632)	3.910	0.084	6.40	83.35

PEAK FLOW REDUCTION [Qout/Qin](%)= 19.02
TIME SHIFT OF PEAK FLOW (min)= 69.00
MAXIMUM STORAGE USED (ha.m.)= 0.2317

CALIB			
STANDHYD (7641)	Area (ha)= 2.21		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	2.19	0.02	
Dep. Storage (mm)=	1.00	1.50	
Average Slope (%)=	1.00	0.50	
Length (m)=	121.38	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	5.31	6.150	11.51	9.22	1.77
0.033	0.00	3.100	5.31	6.167	11.51	9.23	1.77
0.050	0.00	3.117	5.31	6.183	11.51	9.25	1.77
0.067	0.00	3.133	5.31	6.200	11.51	9.27	0.89
0.083	0.00	3.150	5.31	6.217	11.51	9.28	0.89
0.100	0.00	3.167	5.31	6.233	11.51	9.30	0.89
0.117	0.00	3.183	5.31	6.250	11.50	9.32	0.89
0.133	0.00	3.200	5.31	6.267	6.20	9.33	0.89
0.150	0.00	3.217	5.31	6.283	6.20	9.35	0.89
0.167	0.00	3.233	5.31	6.300	6.20	9.37	0.89
0.183	0.00	3.250	5.31	6.317	6.20	9.38	0.89
0.200	0.00	3.267	15.05	6.333	6.20	9.40	0.89
0.217	0.00	3.283	15.05	6.350	6.20	9.42	0.89
0.233	0.00	3.300	15.05	6.367	6.20	9.43	0.89
0.250	0.00	3.317	15.05	6.383	6.20	9.45	0.89
0.267	0.89	3.333	15.05	6.400	6.20	9.47	0.89
0.283	0.89	3.350	15.05	6.417	6.20	9.48	0.89
0.300	0.89	3.367	15.05	6.433	6.20	9.50	0.89
0.317	0.89	3.383	15.05	6.450	6.20	9.52	0.89
0.333	0.89	3.400	15.05	6.467	6.20	9.53	0.89
0.350	0.89	3.417	15.05	6.483	6.20	9.55	0.89
0.367	0.89	3.433	15.05	6.500	6.20	9.57	0.89
0.383	0.89	3.450	15.05	6.517	6.20	9.58	0.89
0.400	0.89	3.467	15.05	6.533	6.20	9.60	0.89
0.417	0.89	3.483	15.05	6.550	6.20	9.62	0.89
0.433	0.89	3.500	15.05	6.567	6.20	9.63	0.89
0.450	0.89	3.517	15.05	6.583	6.20	9.65	0.89
0.467	0.89	3.533	15.05	6.600	6.20	9.67	0.89
0.483	0.89	3.550	15.05	6.617	6.20	9.68	0.89
0.500	0.89	3.567	15.05	6.633	6.20	9.70	0.89
0.517	0.89	3.583	15.05	6.650	6.20	9.72	0.89
0.533	0.89	3.600	15.05	6.667	6.20	9.73	0.89
0.550	0.89	3.617	15.05	6.683	6.20	9.75	0.89
0.567	0.89	3.633	15.05	6.700	6.20	9.77	0.89
0.583	0.89	3.650	15.05	6.717	6.20	9.78	0.89
0.600	0.89	3.667	15.05	6.733	6.20	9.80	0.89
0.617	0.89	3.683	15.05	6.750	6.20	9.82	0.89
0.633	0.89	3.700	15.05	6.767	6.20	9.83	0.89
0.650	0.89	3.717	15.05	6.783	6.20	9.85	0.89
0.667	0.89	3.733	15.05	6.800	6.20	9.87	0.89
0.683	0.89	3.750	15.05	6.817	6.20	9.88	0.89
0.700	0.89	3.767	15.05	6.833	6.20	9.90	0.89
0.717	0.89	3.783	15.05	6.850	6.20	9.92	0.89
0.733	0.89	3.800	15.05	6.867	6.20	9.93	0.89
0.750	0.89	3.817	15.05	6.883	6.20	9.95	0.89
0.767	0.89	3.833	15.05	6.900	6.20	9.97	0.89
0.783	0.89	3.850	15.05	6.917	6.20	9.98	0.89
0.800	0.89	3.867	15.05	6.933	6.20	10.00	0.89
0.817	0.89	3.883	15.05	6.950	6.20	10.02	0.89
0.833	0.89	3.900	15.05	6.967	6.20	10.03	0.89
0.850	0.89	3.917	15.05	6.983	6.20	10.05	0.89
0.867	0.89	3.933	15.05	7.000	6.20	10.07	0.89
0.883	0.89	3.950	15.05	7.017	6.20	10.08	0.89
0.900	0.89	3.967	15.05	7.033	6.20	10.10	0.89
0.917	0.89	3.983	15.05	7.050	6.20	10.12	0.89
0.933	0.89	4.000	15.05	7.067	6.20	10.13	0.89
0.950	0.89	4.017	15.05	7.083	6.20	10.15	0.89
0.967	0.89	4.033	15.05	7.100	6.20	10.17	0.89
0.983	0.89	4.050	15.05	7.117	6.20	10.18	0.89
1.000	0.89	4.067	15.05	7.133	6.20	10.20	0.89
1.017	0.89	4.083	15.05	7.150	6.20	10.22	0.89
1.033	0.89	4.100	15.05	7.167	6.20	10.23	0.89
1.050	0.89	4.117	15.05	7.183	6.20	10.25	0.89
1.067	0.89	4.133	15.05	7.200	6.20	10.27	0.89
1.083	0.89	4.150	15.05	7.217	6.20	10.28	0.89
1.100	0.89	4.167	15.05	7.233	6.20	10.30	0.89
1.117	0.89	4.183	15.05	7.250	6.19	10.32	0.89
1.133	0.89	4.200	15.05	7.267	3.54	10.33	0.89
1.150	0.89	4.217	15.05	7.283	3.54	10.35	0.89
1.167	0.89	4.233	15.05	7.300	3.54	10.37	0.89
1.183	0.89	4.250	15.05	7.317	3.54	10.38	0.89
1.200	0.89	4.267	40.71	7.333	3.54	10.40	0.89
1.217	0.89	4.283	40.71	7.350	3.54	10.42	0.89
1.233	0.89	4.300	40.71	7.367	3.54	10.43	0.89
1.250	0.89	4.317	40.71	7.383	3.54	10.45	0.89
1.267	0.89	4.333	40.71	7.400	3.54	10.47	0.89
1.283	0.89	4.350	40.71	7.417	3.54	10.48	0.89
1.300	0.89	4.367	40.71	7.433	3.54	10.50	0.89
1.317	0.89	4.383	40.71	7.450	3.54	10.52	0.89
1.333	0.89	4.400	40.71	7.467	3.54	10.53	0.89
1.350	0.89	4.417	40.71	7.483	3.54	10.55	0.89
1.367	0.89	4.433	40.71	7.500	3.54	10.57	0.89
1.383	0.89	4.450	40.71	7.517	3.54	10.58	0.89
1.400	0.89	4.467	40.71	7.533	3.54	10.60	0.89
1.417	0.89	4.483	40.71	7.550	3.54	10.62	0.89
1.433	0.89	4.500	40.71	7.567	3.54	10.63	0.89
1.450	0.89	4.517	40.71	7.583	3.54	10.65	0.89
1.467	0.89	4.533	40.71	7.600	3.54	10.67	0.89
1.483	0.89	4.550	40.71	7.617	3.54	10.68	0.89
1.500	0.89	4.567	40.71	7.633	3.54	10.70	0.89
1.517	0.89	4.583	40.71	7.650	3.54	10.72	0.89
1.533	0.89	4.600	40.71	7.667	3.54	10.73	0.89
1.550	0.89	4.617	40.71	7.683	3.54	10.75	0.89
1.567	0.89	4.633	40.71	7.700	3.54	10.77	0.89
1.583	0.89	4.650	40.71	7.717	3.54	10.78	0.89
1.600	0.89	4.667	40.71	7.733	3.54	10.80	0.89
1.617	0.89	4.683	40.71	7.750	3.54	10.82	0.89
1.633	0.89	4.700	40.71	7.767	3.54	10.83	0.89
1.650	0.89	4.717	40.71	7.783	3.54	10.85	0.89
1.667	0.89	4.733	40.71	7.800	3.54	10.87	0.89
1.683	0.89	4.750	40.71	7.817	3.54	10.88	0.89
1.700	0.89	4.767	40.71	7.833	3.54	10.90	0.89
1.717	0.89	4.783	40.71	7.850	3.54	10.92	0.89
1.733	0.89	4.800	40.71	7.867	3.54	10.93	0.89
1.750	0.89	4.817	40.71	7.883	3.54	10.95	0.89
1.767	0.89	4.833	40.71	7.900	3.54	10.97	0.89
1.783	0.89	4.850	40.71	7.917	3.54	10.98	0.89
1.800	0.89	4.867	40.71	7.933	3.54	11.00	0.89
1.817	0.89	4.883	40.71	7.950	3.54	11.02	0.89
1.833	0.89	4.900	40.71	7.967	3.54	11.03	0.89
1.850	0.89	4.917	40.71	7.983	3.54	11.05	0.89
1.867	0.89	4.933	40.71	8.000	3.54	11.07	0.89
1.883	0.89	4.950	40.71	8.017	3.54	11.08	0.89
1.900	0.89	4.967	40.71	8.033	3.54	11.10	0.89
1.917	0.89	4.983	40.71	8.050	3.54	11.12	0.89
1.933	0.89	5.000	40.71	8.067	3.54	11.13	0.89
1.950	0.89	5.017	40.71	8.083	3.54	11.15	0.89
1.967	0.89	5.033	40.71	8.100	3.54	11.17	0.89
1.983	0.89	5.050	40.71	8.117	3.54	11.18	0.89
2.000	0.89	5.067	40.71	8.133	3.54	11.20	0.89
2.017	0.89	5.083	40.71	8.150	3.54	11.22	0.89
2.033	0.89	5.100	40.71	8.167	3.54	11.23	0.89
2.050	0.89	5.117	40.71	8.183	3.54	11.25	0.89
2.067	0.89	5.133	40.71	8.200	3.54	11.27	0.89
2.083	0.89	5.150	40.71	8.217	3.54	11.28	0.89
2.100	0.89	5.167	40.71	8.233	3.54	11.30	0.89
2.117	0.89	5.183	40.71	8.250	3.54	11.32	0.89
2.133	0.89	5.200	40.71	8.267	1.77	11.33	0.89
2.150	0.89	5.217	40.71	8.283	1.77	11.35	0.89
2.167	0.89	5.233	40.71	8.300	1.77	11.37	0.89
2.183	0.89	5.250	40.69	8.317	1.77	11.38	0.89
2.200	0.89	5.267	11.51	8.333	1.77	11.40	0.89
2.217	0.89	5.283	11.51	8.350	1.77	11.42	0.89
2.233	0.89	5.300	11.51	8.367	1.77	11.43	0.89
2.250	0.89	5.317	11.51	8.383	1.77	11.45	0.89
2.267	5.31	5.333	11.51	8.400	1.77	11.47	0.89
2.283	5.31	5.350	11.51	8.417	1.77	11.48	0.89
2.300	5.31	5.367	11.51	8.433	1.77	11.50	0.89
2.317	5.31	5.383	11.51	8.450	1.77	11.52	0.89
2.333	5.31	5.400	11.51	8.467	1.77	11.53	0.89
2.350	5.31	5.417	11.51	8.483	1.77	11.55	0.89
2.367	5.31	5.433	11.51	8.500	1.77	11.57	0.89
2.383	5.31	5.450	11.51	8.517	1.77	11.58	0.89
2.400	5.31	5.467	11.51	8.533	1.77	11.60	0.89
2.417	5.31	5.483	11.51	8.550	1.77	11.62	0.89
2.433	5.31	5.500	11.51	8.567	1.77	11.63	0.89
2.450	5.31	5.517	11.51	8.583	1.77	11.65	0.89
2.467	5.31	5.533	11.51	8.600	1.77	11.67	0.89
2.483	5.31	5.550	11.51	8.617	1.77	11.68	0.89
2.500	5.31	5.567	11.51	8.633	1.77	11.70	0.89

2.517	5.31	5.583	11.51	8.650	1.77	11.72	0.89
2.533	5.31	5.600	11.51	8.667	1.77	11.73	0.89
2.550	5.31	5.617	11.51	8.683	1.77	11.75	0.89
2.567	5.31	5.633	11.51	8.700	1.77	11.77	0.89
2.583	5.31	5.650	11.51	8.717	1.77	11.78	0.89
2.600	5.31	5.667	11.51	8.733	1.77	11.80	0.89
2.617	5.31	5.683	11.51	8.750	1.77	11.82	0.89
2.633	5.31	5.700	11.51	8.767	1.77	11.83	0.89
2.650	5.31	5.717	11.51	8.783	1.77	11.85	0.89
2.667	5.31	5.733	11.51	8.800	1.77	11.87	0.89
2.683	5.31	5.750	11.51	8.817	1.77	11.88	0.89
2.700	5.31	5.767	11.51	8.833	1.77	11.90	0.89
2.717	5.31	5.783	11.51	8.850	1.77	11.92	0.89
2.733	5.31	5.800	11.51	8.867	1.77	11.93	0.89
2.750	5.31	5.817	11.51	8.883	1.77	11.95	0.89
2.767	5.31	5.833	11.51	8.900	1.77	11.97	0.89
2.783	5.31	5.850	11.51	8.917	1.77	11.98	0.89
2.800	5.31	5.867	11.51	8.933	1.77	12.00	0.89
2.817	5.31	5.883	11.51	8.950	1.77	12.02	0.89
2.833	5.31	5.900	11.51	8.967	1.77	12.03	0.89
2.850	5.31	5.917	11.51	8.983	1.77	12.05	0.89
2.867	5.31	5.933	11.51	9.000	1.77	12.07	0.89
2.883	5.31	5.950	11.51	9.017	1.77	12.08	0.89
2.900	5.31	5.967	11.51	9.033	1.77	12.10	0.89
2.917	5.31	5.983	11.51	9.050	1.77	12.12	0.89
2.933	5.31	6.000	11.51	9.067	1.77	12.13	0.89
2.950	5.31	6.017	11.51	9.083	1.77	12.15	0.89
2.967	5.31	6.033	11.51	9.100	1.77	12.17	0.89
2.983	5.31	6.050	11.51	9.117	1.77	12.18	0.89
3.000	5.31	6.067	11.51	9.133	1.77	12.20	0.89
3.017	5.31	6.083	11.51	9.150	1.77	12.22	0.89
3.033	5.31	6.100	11.51	9.167	1.77	12.23	0.89
3.050	5.31	6.117	11.51	9.183	1.77	12.25	0.89
3.067	5.31	6.133	11.51	9.200	1.77		

Max.Eff.Inten.(mm/hr)=	40.71	32.96	
over (min)	5.00	7.00	
Storage Coeff. (min)=	4.11 (ii)	6.55 (ii)	
Unit Hyd. Tpeak (min)=	5.00	7.00	
Unit Hyd. peak (cms)=	0.26	0.17	
			TOTALS
PEAK FLOW (cms)=	0.25	0.00	0.249 (iii)
TIME TO PEAK (hrs)=	5.23	5.25	5.25
RUNOFF VOLUME (mm)=	87.54	57.45	87.24
TOTAL RAINFALL (mm)=	88.54	88.54	88.54
RUNOFF COEFFICIENT =	0.99	0.65	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7642)| IN= 2---> OUT= 1	DT= 1.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0470	0.1250
0.0197	0.0630	0.0551	0.1410
0.0304	0.0850	0.0620	0.1580
0.0373	0.1020	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7641)	2.210	0.249	5.25	87.24
OUTFLOW: ID= 1 (7642)	2.210	0.049	6.37	83.97

PEAK FLOW REDUCTION [Qout/Qin](%)= 19.78
TIME SHIFT OF PEAK FLOW (min)= 67.00
MAXIMUM STORAGE USED (ha.m.)= 0.1296

CALIB	STANDHYD (7643)	ID= 1 DT= 1.0 min

Area (ha)= 2.02
Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.00	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	116.05	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	3.083	5.31	6.150	11.51	9.22	1.77
0.033	0.00	3.100	5.31	6.167	11.51	9.23	1.77
0.050	0.00	3.117	5.31	6.183	11.51	9.25	1.77
0.067	0.00	3.133	5.31	6.200	11.51	9.27	0.89
0.083	0.00	3.150	5.31	6.217	11.51	9.28	0.89
0.100	0.00	3.167	5.31	6.233	11.51	9.30	0.89
0.117	0.00	3.183	5.31	6.250	11.50	9.32	0.89
0.133	0.00	3.200	5.31	6.267	6.20	9.33	0.89
0.150	0.00	3.217	5.31	6.283	6.20	9.35	0.89
0.167	0.00	3.233	5.31	6.300	6.20	9.37	0.89
0.183	0.00	3.250	5.31	6.317	6.20	9.38	0.89
0.200	0.00	3.267	15.05	6.333	6.20	9.40	0.89
0.217	0.00	3.283	15.05	6.350	6.20	9.42	0.89
0.233	0.00	3.300	15.05	6.367	6.20	9.43	0.89
0.250	0.00	3.317	15.05	6.383	6.20	9.45	0.89
0.267	0.89	3.333	15.05	6.400	6.20	9.47	0.89
0.283	0.89	3.350	15.05	6.417	6.20	9.48	0.89
0.300	0.89	3.367	15.05	6.433	6.20	9.50	0.89
0.317	0.89	3.383	15.05	6.450	6.20	9.52	0.89
0.333	0.89	3.400	15.05	6.467	6.20	9.53	0.89
0.350	0.89	3.417	15.05	6.483	6.20	9.55	0.89
0.367	0.89	3.433	15.05	6.500	6.20	9.57	0.89
0.383	0.89	3.450	15.05	6.517	6.20	9.58	0.89
0.400	0.89	3.467	15.05	6.533	6.20	9.60	0.89
0.417	0.89	3.483	15.05	6.550	6.20	9.62	0.89
0.433	0.89	3.500	15.05	6.567	6.20	9.63	0.89
0.450	0.89	3.517	15.05	6.583	6.20	9.65	0.89
0.467	0.89	3.533	15.05	6.600	6.20	9.67	0.89
0.483	0.89	3.550	15.05	6.617	6.20	9.68	0.89
0.500	0.89	3.567	15.05	6.633	6.20	9.70	0.89
0.517	0.89	3.583	15.05	6.650	6.20	9.72	0.89
0.533	0.89	3.600	15.05	6.667	6.20	9.73	0.89
0.550	0.89	3.617	15.05	6.683	6.20	9.75	0.89
0.567	0.89	3.633	15.05	6.700	6.20	9.77	0.89
0.583	0.89	3.650	15.05	6.717	6.20	9.78	0.89
0.600	0.89	3.667	15.05	6.733	6.20	9.80	0.89
0.617	0.89	3.683	15.05	6.750	6.20	9.82	0.89
0.633	0.89	3.700	15.05	6.767	6.20	9.83	0.89
0.650	0.89	3.717	15.05	6.783	6.20	9.85	0.89
0.667	0.89	3.733	15.05	6.800	6.20	9.87	0.89
0.683	0.89	3.750	15.05	6.817	6.20	9.88	0.89
0.700	0.89	3.767	15.05	6.833	6.20	9.90	0.89
0.717	0.89	3.783	15.05	6.850	6.20	9.92	0.89
0.733	0.89	3.800	15.05	6.867	6.20	9.93	0.89
0.750	0.89	3.817	15.05	6.883	6.20	9.95	0.89
0.767	0.89	3.833	15.05	6.900	6.20	9.97	0.89
0.783	0.89	3.850	15.05	6.917	6.20	9.98	0.89
0.800	0.89	3.867	15.05	6.933	6.20	10.00	0.89
0.817	0.89	3.883	15.05	6.950	6.20	10.02	0.89
0.833	0.89	3.900	15.05	6.967	6.20	10.03	0.89
0.850	0.89	3.917	15.05	6.983	6.20	10.05	0.89
0.867	0.89	3.933	15.05	7.000	6.20	10.07	0.89
0.883	0.89	3.950	15.05	7.017	6.20	10.08	0.89
0.900	0.89	3.967	15.05	7.033	6.20	10.10	0.89
0.917	0.89	3.983	15.05	7.050	6.20	10.12	0.89
0.933	0.89	4.000	15.05	7.067	6.20	10.13	0.89
0.950	0.89	4.017	15.05	7.083	6.20	10.15	0.89
0.967	0.89	4.033	15.05	7.100	6.20	10.17	0.89
0.983	0.89	4.050	15.05	7.117	6.20	10.18	0.89

1.000	0.89	4.067	15.05	7.133	6.20	10.20	0.89
1.017	0.89	4.083	15.05	7.150	6.20	10.22	0.89
1.033	0.89	4.100	15.05	7.167	6.20	10.23	0.89
1.050	0.89	4.117	15.05	7.183	6.20	10.25	0.89
1.067	0.89	4.133	15.05	7.200	6.20	10.27	0.89
1.083	0.89	4.150	15.05	7.217	6.20	10.28	0.89
1.100	0.89	4.167	15.05	7.233	6.20	10.30	0.89
1.117	0.89	4.183	15.05	7.250	6.19	10.32	0.89
1.133	0.89	4.200	15.05	7.267	3.54	10.33	0.89
1.150	0.89	4.217	15.05	7.283	3.54	10.35	0.89
1.167	0.89	4.233	15.05	7.300	3.54	10.37	0.89
1.183	0.89	4.250	15.05	7.317	3.54	10.38	0.89
1.200	0.89	4.267	40.71	7.333	3.54	10.40	0.89
1.217	0.89	4.283	40.71	7.350	3.54	10.42	0.89
1.233	0.89	4.300	40.71	7.367	3.54	10.43	0.89
1.250	0.89	4.317	40.71	7.383	3.54	10.45	0.89
1.267	0.89	4.333	40.71	7.400	3.54	10.47	0.89
1.283	0.89	4.350	40.71	7.417	3.54	10.48	0.89
1.300	0.89	4.367	40.71	7.433	3.54	10.50	0.89
1.317	0.89	4.383	40.71	7.450	3.54	10.52	0.89
1.333	0.89	4.400	40.71	7.467	3.54	10.53	0.89
1.350	0.89	4.417	40.71	7.483	3.54	10.55	0.89
1.367	0.89	4.433	40.71	7.500	3.54	10.57	0.89
1.383	0.89	4.450	40.71	7.517	3.54	10.58	0.89
1.400	0.89	4.467	40.71	7.533	3.54	10.60	0.89
1.417	0.89	4.483	40.71	7.550	3.54	10.62	0.89
1.433	0.89	4.500	40.71	7.567	3.54	10.63	0.89
1.450	0.89	4.517	40.71	7.583	3.54	10.65	0.89
1.467	0.89	4.533	40.71	7.600	3.54	10.67	0.89
1.483	0.89	4.550	40.71	7.617	3.54	10.68	0.89
1.500	0.89	4.567	40.71	7.633	3.54	10.70	0.89
1.517	0.89	4.583	40.71	7.650	3.54	10.72	0.89
1.533	0.89	4.600	40.71	7.667	3.54	10.73	0.89
1.550	0.89	4.617	40.71	7.683	3.54	10.75	0.89
1.567	0.89	4.633	40.71	7.700	3.54	10.77	0.89
1.583	0.89	4.650	40.71	7.717	3.54	10.78	0.89
1.600	0.89	4.667	40.71	7.733	3.54	10.80	0.89
1.617	0.89	4.683	40.71	7.750	3.54	10.82	0.89
1.633	0.89	4.700	40.71	7.767	3.54	10.83	0.89
1.650	0.89	4.717	40.71	7.783	3.54	10.85	0.89
1.667	0.89	4.733	40.71	7.800	3.54	10.87	0.89
1.683	0.89	4.750	40.71	7.817	3.54	10.88	0.89
1.700	0.89	4.767	40.71	7.833	3.54	10.90	0.89
1.717	0.89	4.783	40.71	7.850	3.54	10.92	0.89
1.733	0.89	4.800	40.71	7.867	3.54	10.93	0.89
1.750	0.89	4.817	40.71	7.883	3.54	10.95	0.89
1.767	0.89	4.833	40.71	7.900	3.54	10.97	0.89
1.783	0.89	4.850	40.71	7.917	3.54	10.98	0.89
1.800	0.89	4.867	40.71	7.933	3.54	11.00	0.89
1.817	0.89	4.883	40.71	7.950	3.54	11.02	0.89
1.833	0.89	4.900	40.71	7.967	3.54	11.03	0.89
1.850	0.89	4.917	40.71	7.983	3.54	11.05	0.89
1.867	0.89	4.933	40.71	8.000	3.54	11.07	0.89
1.883	0.89	4.950	40.71	8.017	3.54	11.08	0.89
1.900	0.89	4.967	40.71	8.033	3.54	11.10	0.89
1.917	0.89	4.983	40.71	8.050	3.54	11.12	0.89
1.933	0.89	5.000	40.71	8.067	3.54	11.13	0.89
1.950	0.89	5.017	40.71	8.083	3.54	11.15	0.89
1.967	0.89	5.033	40.71	8.100	3.54	11.17	0.89
1.983	0.89	5.050	40.71	8.117	3.54	11.18	0.89
2.000	0.89	5.067	40.71	8.133	3.54	11.20	0.89
2.017	0.89	5.083	40.71	8.150	3.54	11.22	0.89
2.033	0.89	5.100	40.71	8.167	3.54	11.23	0.89
2.050	0.89	5.117	40.71	8.183	3.54	11.25	0.89
2.067	0.89	5.133	40.71	8.200	3.54	11.27	0.89
2.083	0.89	5.150	40.71	8.217	3.54	11.28	0.89
2.100	0.89	5.167	40.71	8.233	3.54	11.30	0.89
2.117	0.89	5.183	40.71	8.250	3.54	11.32	0.89
2.133	0.89	5.200	40.71	8.267	1.77	11.33	0.89
2.150	0.89	5.217	40.71	8.283	1.77	11.35	0.89
2.167	0.89	5.233	40.71	8.300	1.77	11.37	0.89
2.183	0.89	5.250	40.69	8.317	1.77	11.38	0.89
2.200	0.89	5.267	11.51	8.333	1.77	11.40	0.89
2.217	0.89	5.283	11.51	8.350	1.77	11.42	0.89
2.233	0.89	5.300	11.51	8.367	1.77	11.43	0.89
2.250	0.89	5.317	11.51	8.383	1.77	11.45	0.89
2.267	5.31	5.333	11.51	8.400	1.77	11.47	0.89
2.283	5.31	5.350	11.51	8.417	1.77	11.48	0.89
2.300	5.31	5.367	11.51	8.433	1.77	11.50	0.89
2.317	5.31	5.383	11.51	8.450	1.77	11.52	0.89
2.333	5.31	5.400	11.51	8.467	1.77	11.53	0.89
2.350	5.31	5.417	11.51	8.483	1.77	11.55	0.89
2.367	5.31	5.433	11.51	8.500	1.77	11.57	0.89
2.383	5.31	5.450	11.51	8.517	1.77	11.58	0.89
2.400	5.31	5.467	11.51	8.533	1.77	11.60	0.89
2.417	5.31	5.483	11.51	8.550	1.77	11.62	0.89
2.433	5.31	5.500	11.51	8.567	1.77	11.63	0.89
2.450	5.31	5.517	11.51	8.583	1.77	11.65	0.89
2.467	5.31	5.533	11.51	8.600	1.77	11.67	0.89
2.483	5.31	5.550	11.51	8.617	1.77	11.68	0.89
2.500	5.31	5.567	11.51	8.633	1.77	11.70	0.89
2.517	5.31	5.583	11.51	8.650	1.77	11.72	0.89
2.533	5.31	5.600	11.51	8.667	1.77	11.73	0.89
2.550	5.31	5.617	11.51	8.683	1.77	11.75	0.89
2.567	5.31	5.633	11.51	8.700	1.77	11.77	0.89
2.583	5.31	5.650	11.51	8.717	1.77	11.78	0.89
2.600	5.31	5.667	11.51	8.733	1.77	11.80	0.89
2.617	5.31	5.683	11.51	8.750	1.77	11.82	0.89
2.633	5.31	5.700	11.51	8.767	1.77	11.83	0.89
2.650	5.31	5.717	11.51	8.783	1.77	11.85	0.89
2.667	5.31	5.733	11.51	8.800	1.77	11.87	0.89
2.683	5.31	5.750	11.51	8.817	1.77	11.88	0.89
2.700	5.31	5.767	11.51	8.833	1.77	11.90	0.89
2.717	5.31	5.783	11.51	8.850	1.77	11.92	0.89
2.733	5.31	5.800	11.51	8.867	1.77	11.93	0.89
2.750	5.31	5.817	11.51	8.883	1.77	11.95	0.89
2.767	5.31	5.833	11.51	8.900	1.77	11.97	0.89
2.783	5.31	5.850	11.51	8.917	1.77	11.98	0.89
2.800	5.31	5.867	11.51	8.933	1.77	12.00	0.89
2.817	5.31	5.883	11.51	8.950	1.77	12.02	0.89
2.833	5.31	5.900	11.51	8.967	1.77	12.03	0.89
2.850	5.31	5.917	11.51	8.983	1.77	12.05	0.89
2.867	5.31	5.933	11.51	9.000	1.77	12.07	0.89
2.883	5.31	5.950	11.51	9.017	1.77	12.08	0.89
2.900	5.31	5.967	11.51	9.033	1.77	12.10	0.89
2.917	5.31	5.983	11.51	9.050	1.77	12.12	0.89
2.933	5.31	6.000	11.51	9.067	1.77	12.13	0.89
2.950	5.31	6.017	11.51	9.083	1.77	12.15	0.89
2.967	5.31	6.033	11.51	9.100	1.77	12.17	0.89
2.983	5.31	6.050	11.51	9.117	1.77	12.18	0.89
3.000	5.31	6.067	11.51	9.133	1.77	12.20	0.89
3.017	5.31	6.083	11.51	9.150	1.77	12.22	0.89
3.033	5.31	6.100	11.51	9.167	1.77	12.23	0.89
3.050	5.31	6.117	11.51	9.183	1.77	12.25	0.89
3.067	5.31	6.133	11.51	9.200	1.77		

Max.Eff.Inten.(mm/hr)=	40.71	32.96	
over (min)	5.00	7.00	
Storage Coeff. (min)=	4.00 (ii)	6.44 (ii)	
Unit Hyd. Tpeak (min)=	5.00	7.00	
Unit Hyd. peak (cms)=	0.26	0.17	
			TOTALS
PEAK FLOW (cms)=	0.23	0.00	0.228 (iii)
TIME TO PEAK (hrs)=	5.20	5.25	5.25
RUNOFF VOLUME (mm)=	87.54	57.45	87.24
TOTAL RAINFALL (mm)=	88.54	88.54	88.54
RUNOFF COEFFICIENT =	0.99	0.65	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7644)| IN= 2---> OUT= 1 | DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0433	0.1140

GEI Consultants

	0.0182	0.0580	0.0507	0.1280
	0.0280	0.0775	0.0571	0.1440
	0.0343	0.0930	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7643)	2.020	0.228	5.25	87.24
OUTFLOW: ID= 1 (7644)	2.020	0.046	6.37	84.03

PEAK FLOW REDUCTION [Qout/Qin](%)= 19.97
TIME SHIFT OF PEAK FLOW (min)= 67.00
MAXIMUM STORAGE USED (ha.m.)= 0.1182

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       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-a4eb17eaad57\3a94d594-78ec-4bcc-bb63-19afe9082126\s
Summary filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-a4eb17eaad57\3a94d594-78ec-4bcc-bb63-19afe9082126\s

DATE: 06/14/2024 TIME: 12:48:41

USER:

COMMENTS: _____

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  ************************************************
  ** SIMULATION : 995. 100 Year 24 Hour AES (Bl **
  ************************************************
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READ STORM	Filename: C:\Users\ygollamudi\AppData\Local\Temp\3c3f87d5-a26e-4c6b-b2ae-56a7ba29ab7f\4de59420
Ptotal= 95.92 mm	Comments: 100 Year 24 Hour AES (Bloor, TRCA)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	6.25	8.15	12.50	3.36	18.75	0.48
0.25	0.48	6.50	8.15	12.75	3.36	19.00	0.48
0.50	0.48	6.75	8.15	13.00	3.36	19.25	0.48
0.75	0.48	7.00	8.15	13.25	3.36	19.50	0.48
1.00	0.48	7.25	8.15	13.50	3.36	19.75	0.48
1.25	0.48	7.50	8.15	13.75	3.36	20.00	0.48
1.50	0.48	7.75	8.15	14.00	3.36	20.25	0.48
1.75	0.48	8.00	8.15	14.25	1.92	20.50	0.48
2.00	0.48	8.25	22.06	14.50	1.92	20.75	0.48
2.25	0.48	8.50	22.06	14.75	1.92	21.00	0.48
2.50	0.48	8.75	22.06	15.00	1.92	21.25	0.48
2.75	0.48	9.00	22.06	15.25	1.92	21.50	0.48
3.00	0.48	9.25	22.06	15.50	1.92	21.75	0.48
3.25	0.48	9.50	22.06	15.75	1.92	22.00	0.48
3.50	0.48	9.75	22.06	16.00	1.92	22.25	0.48
3.75	0.48	10.00	22.06	16.25	0.96	22.50	0.48
4.00	0.48	10.25	6.23	16.50	0.96	22.75	0.48
4.25	2.88	10.50	6.23	16.75	0.96	23.00	0.48
4.50	2.88	10.75	6.23	17.00	0.96	23.25	0.48
4.75	2.88	11.00	6.23	17.25	0.96	23.50	0.48
5.00	2.88	11.25	6.23	17.50	0.96	23.75	0.48
5.25	2.88	11.50	6.23	17.75	0.96	24.00	0.48
5.50	2.88	11.75	6.23	18.00	0.96		
5.75	2.88	12.00	6.23	18.25	0.48		
6.00	2.88	12.25	3.36	18.50	0.48		

CALIB	
STANDHYD (7567)	Area (ha)= 2.72
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.69	0.03
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	134.66	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	2.88	12.150	6.23	18.22	0.96
0.033	0.00	6.100	2.88	12.167	6.23	18.23	0.96
0.050	0.00	6.117	2.88	12.183	6.23	18.25	0.96
0.067	0.00	6.133	2.88	12.200	6.23	18.27	0.48
0.083	0.00	6.150	2.88	12.217	6.23	18.28	0.48
0.100	0.00	6.167	2.88	12.233	6.23	18.30	0.48
0.117	0.00	6.183	2.88	12.250	6.23	18.32	0.48
0.133	0.00	6.200	2.88	12.267	3.36	18.33	0.48
0.150	0.00	6.217	2.88	12.283	3.36	18.35	0.48
0.167	0.00	6.233	2.88	12.300	3.36	18.37	0.48
0.183	0.00	6.250	2.89	12.317	3.36	18.38	0.48
0.200	0.00	6.267	8.15	12.333	3.36	18.40	0.48
0.217	0.00	6.283	8.15	12.350	3.36	18.42	0.48
0.233	0.00	6.300	8.15	12.367	3.36	18.43	0.48
0.250	0.00	6.317	8.15	12.383	3.36	18.45	0.48
0.267	0.48	6.333	8.15	12.400	3.36	18.47	0.48
0.283	0.48	6.350	8.15	12.417	3.36	18.48	0.48
0.300	0.48	6.367	8.15	12.433	3.36	18.50	0.48
0.317	0.48	6.383	8.15	12.450	3.36	18.52	0.48
0.333	0.48	6.400	8.15	12.467	3.36	18.53	0.48
0.350	0.48	6.417	8.15	12.483	3.36	18.55	0.48
0.367	0.48	6.433	8.15	12.500	3.36	18.57	0.48
0.383	0.48	6.450	8.15	12.517	3.36	18.58	0.48
0.400	0.48	6.467	8.15	12.533	3.36	18.60	0.48
0.417	0.48	6.483	8.15	12.550	3.36	18.62	0.48
0.433	0.48	6.500	8.15	12.567	3.36	18.63	0.48
0.450	0.48	6.517	8.15	12.583	3.36	18.65	0.48
0.467	0.48	6.533	8.15	12.600	3.36	18.67	0.48
0.483	0.48	6.550	8.15	12.617	3.36	18.68	0.48
0.500	0.48	6.567	8.15	12.633	3.36	18.70	0.48
0.517	0.48	6.583	8.15	12.650	3.36	18.72	0.48
0.533	0.48	6.600	8.15	12.667	3.36	18.73	0.48
0.550	0.48	6.617	8.15	12.683	3.36	18.75	0.48
0.567	0.48	6.633	8.15	12.700	3.36	18.77	0.48
0.583	0.48	6.650	8.15	12.717	3.36	18.78	0.48
0.600	0.48	6.667	8.15	12.733	3.36	18.80	0.48
0.617	0.48	6.683	8.15	12.750	3.36	18.82	0.48
0.633	0.48	6.700	8.15	12.767	3.36	18.83	0.48
0.650	0.48	6.717	8.15	12.783	3.36	18.85	0.48
0.667	0.48	6.733	8.15	12.800	3.36	18.87	0.48

0.683	0.48	6.750	8.15	12.817	3.36	18.88	0.48
0.700	0.48	6.767	8.15	12.833	3.36	18.90	0.48
0.717	0.48	6.783	8.15	12.850	3.36	18.92	0.48
0.733	0.48	6.800	8.15	12.867	3.36	18.93	0.48
0.750	0.48	6.817	8.15	12.883	3.36	18.95	0.48
0.767	0.48	6.833	8.15	12.900	3.36	18.97	0.48
0.783	0.48	6.850	8.15	12.917	3.36	18.98	0.48
0.800	0.48	6.867	8.15	12.933	3.36	19.00	0.48
0.817	0.48	6.883	8.15	12.950	3.36	19.02	0.48
0.833	0.48	6.900	8.15	12.967	3.36	19.03	0.48
0.850	0.48	6.917	8.15	12.983	3.36	19.05	0.48
0.867	0.48	6.933	8.15	13.000	3.36	19.07	0.48
0.883	0.48	6.950	8.15	13.017	3.36	19.08	0.48
0.900	0.48	6.967	8.15	13.033	3.36	19.10	0.48
0.917	0.48	6.983	8.15	13.050	3.36	19.12	0.48
0.933	0.48	7.000	8.15	13.067	3.36	19.13	0.48
0.950	0.48	7.017	8.15	13.083	3.36	19.15	0.48
0.967	0.48	7.033	8.15	13.100	3.36	19.17	0.48
0.983	0.48	7.050	8.15	13.117	3.36	19.18	0.48
1.000	0.48	7.067	8.15	13.133	3.36	19.20	0.48
1.017	0.48	7.083	8.15	13.150	3.36	19.22	0.48
1.033	0.48	7.100	8.15	13.167	3.36	19.23	0.48
1.050	0.48	7.117	8.15	13.183	3.36	19.25	0.48
1.067	0.48	7.133	8.15	13.200	3.36	19.27	0.48
1.083	0.48	7.150	8.15	13.217	3.36	19.28	0.48
1.100	0.48	7.167	8.15	13.233	3.36	19.30	0.48
1.117	0.48	7.183	8.15	13.250	3.36	19.32	0.48
1.133	0.48	7.200	8.15	13.267	3.36	19.33	0.48
1.150	0.48	7.217	8.15	13.283	3.36	19.35	0.48
1.167	0.48	7.233	8.15	13.300	3.36	19.37	0.48
1.183	0.48	7.250	8.15	13.317	3.36	19.38	0.48
1.200	0.48	7.267	8.15	13.333	3.36	19.40	0.48
1.217	0.48	7.283	8.15	13.350	3.36	19.42	0.48
1.233	0.48	7.300	8.15	13.367	3.36	19.43	0.48
1.250	0.48	7.317	8.15	13.383	3.36	19.45	0.48
1.267	0.48	7.333	8.15	13.400	3.36	19.47	0.48
1.283	0.48	7.350	8.15	13.417	3.36	19.48	0.48
1.300	0.48	7.367	8.15	13.433	3.36	19.50	0.48
1.317	0.48	7.383	8.15	13.450	3.36	19.52	0.48
1.333	0.48	7.400	8.15	13.467	3.36	19.53	0.48
1.350	0.48	7.417	8.15	13.483	3.36	19.55	0.48
1.367	0.48	7.433	8.15	13.500	3.36	19.57	0.48
1.383	0.48	7.450	8.15	13.517	3.36	19.58	0.48
1.400	0.48	7.467	8.15	13.533	3.36	19.60	0.48
1.417	0.48	7.483	8.15	13.550	3.36	19.62	0.48
1.433	0.48	7.500	8.15	13.567	3.36	19.63	0.48
1.450	0.48	7.517	8.15	13.583	3.36	19.65	0.48
1.467	0.48	7.533	8.15	13.600	3.36	19.67	0.48
1.483	0.48	7.550	8.15	13.617	3.36	19.68	0.48
1.500	0.48	7.567	8.15	13.633	3.36	19.70	0.48
1.517	0.48	7.583	8.15	13.650	3.36	19.72	0.48
1.533	0.48	7.600	8.15	13.667	3.36	19.73	0.48
1.550	0.48	7.617	8.15	13.683	3.36	19.75	0.48
1.567	0.48	7.633	8.15	13.700	3.36	19.77	0.48
1.583	0.48	7.650	8.15	13.717	3.36	19.78	0.48
1.600	0.48	7.667	8.15	13.733	3.36	19.80	0.48
1.617	0.48	7.683	8.15	13.750	3.36	19.82	0.48
1.633	0.48	7.700	8.15	13.767	3.36	19.83	0.48
1.650	0.48	7.717	8.15	13.783	3.36	19.85	0.48
1.667	0.48	7.733	8.15	13.800	3.36	19.87	0.48
1.683	0.48	7.750	8.15	13.817	3.36	19.88	0.48
1.700	0.48	7.767	8.15	13.833	3.36	19.90	0.48
1.717	0.48	7.783	8.15	13.850	3.36	19.92	0.48
1.733	0.48	7.800	8.15	13.867	3.36	19.93	0.48
1.750	0.48	7.817	8.15	13.883	3.36	19.95	0.48
1.767	0.48	7.833	8.15	13.900	3.36	19.97	0.48
1.783	0.48	7.850	8.15	13.917	3.36	19.98	0.48
1.800	0.48	7.867	8.15	13.933	3.36	20.00	0.48
1.817	0.48	7.883	8.15	13.950	3.36	20.02	0.48
1.833	0.48	7.900	8.15	13.967	3.36	20.03	0.48
1.850	0.48	7.917	8.15	13.983	3.36	20.05	0.48
1.867	0.48	7.933	8.15	14.000	3.36	20.07	0.48
1.883	0.48	7.950	8.15	14.017	3.36	20.08	0.48
1.900	0.48	7.967	8.15	14.033	3.36	20.10	0.48
1.917	0.48	7.983	8.15	14.050	3.36	20.12	0.48
1.933	0.48	8.000	8.15	14.067	3.36	20.13	0.48
1.950	0.48	8.017	8.15	14.083	3.36	20.15	0.48
1.967	0.48	8.033	8.15	14.100	3.36	20.17	0.48
1.983	0.48	8.050	8.15	14.117	3.36	20.18	0.48
2.000	0.48	8.067	8.15	14.133	3.36	20.20	0.48
2.017	0.48	8.083	8.15	14.150	3.36	20.22	0.48
2.033	0.48	8.100	8.15	14.167	3.36	20.23	0.48
2.050	0.48	8.117	8.15	14.183	3.36	20.25	0.48
2.067	0.48	8.133	8.15	14.200	3.36	20.27	0.48
2.083	0.48	8.150	8.15	14.217	3.36	20.28	0.48
2.100	0.48	8.167	8.15	14.233	3.36	20.30	0.48
2.117	0.48	8.183	8.15	14.250	3.36	20.32	0.48
2.133	0.48	8.200	8.15	14.267	1.92	20.33	0.48
2.150	0.48	8.217	8.15	14.283	1.92	20.35	0.48
2.167	0.48	8.233	8.15	14.300	1.92	20.37	0.48
2.183	0.48	8.250	8.19	14.317	1.92	20.38	0.48
2.200	0.48	8.267	22.06	14.333	1.92	20.40	0.48
2.217	0.48	8.283	22.06	14.350	1.92	20.42	0.48
2.233	0.48	8.300	22.06	14.367	1.92	20.43	0.48
2.250	0.48	8.317	22.06	14.383	1.92	20.45	0.48
2.267	0.48	8.333	22.06	14.400	1.92	20.47	0.48
2.283	0.48	8.350	22.06	14.417	1.92	20.48	0.48
2.300	0.48	8.367	22.06	14.433	1.92	20.50	0.48
2.317	0.48	8.383	22.06	14.450	1.92	20.52	0.48
2.333	0.48	8.400	22.06	14.467	1.92	20.53	0.48
2.350	0.48	8.417	22.06	14.483	1.92	20.55	0.48
2.367	0.48	8.433	22.06	14.500	1.92	20.57	0.48
2.383	0.48	8.450	22.06	14.517	1.92	20.58	0.48
2.400	0.48	8.467	22.06	14.533	1.92	20.60	0.48
2.417	0.48	8.483	22.06	14.550	1.92	20.62	0.48
2.433	0.48	8.500	22.06	14.567	1.92	20.63	0.48
2.450	0.48	8.517	22.06	14.583	1.92	20.65	0.48
2.467	0.48	8.533	22.06	14.600	1.92	20.67	0.48
2.483	0.48	8.550	22.06	14.617	1.92	20.68	0.48
2.500	0.48	8.567	22.06	14.633	1.92	20.70	0.48
2.517	0.48	8.583	22.06	14.650	1.92	20.72	0.48
2.533	0.48	8.600	22.06	14.667	1.92	20.73	0.48
2.550	0.48	8.617	22.06	14.683	1.92	20.75	0.48
2.567	0.48	8.633	22.06	14.700	1.92	20.77	0.48
2.583	0.48	8.650	22.06	14.717	1.92	20.78	0.48
2.600	0.48	8.667	22.06	14.733	1.92	20.80	0.48
2.617	0.48	8.683	22.06	14.750	1.92	20.82	0.48
2.633	0.48	8.700	22.06	14.767	1.92	20.83	0.48
2.650	0.48	8.717	22.06	14.783	1.92	20.85	0.48
2.667	0.48	8.733	22.06	14.800	1.92	20.87	0.48
2.683	0.48	8.750	22.06	14.817	1.92	20.88	0.48
2.700	0.48	8.767	22.06	14.833	1.92	20.90	0.48
2.717	0.48	8.783	22.06	14.850	1.92	20.92	0.48
2.733	0.48	8.800	22.06	14.867	1.92	20.93	0.48
2.750	0.48	8.817	22.06	14.883	1.92	20.95	0.48
2.767	0.48	8.833	22.06	14.900	1.92	20.97	0.48
2.783	0.48	8.850	22.06	14.917	1.92	20.98	0.48
2.800	0.48	8.867	22.06	14.933	1.92	21.00	0.48
2.817	0.48	8.883	22.06	14.950	1.92	21.02	0.48
2.833	0.48	8.900	22.06	14.967	1.92	21.03	0.48
2.850	0.48	8.917	22.06	14.983	1.92	21.05	0.48
2.867	0.48	8.933	22.06	15.000	1.92	21.07	0.48
2.883	0.48	8.950	22.06	15.017	1.92	21.08	0.48
2.900	0.48	8.967	22.06	15.033	1.92	21.10	0.48
2.917	0.48	8.983	22.06	15.050	1.92	21.12	0.48
2.933	0.48	9.000	22.06	15.067	1.92	21.13	0.48
2.950	0.48	9.017	22.06	15.083	1.92	21.15	0.48
2.967	0.48	9.033	22.06	15.100	1.92	21.17	0.48
2.983	0.48	9.050	22.06	15.117	1.92	21.18	0.48
3.000	0.48	9.067	22.06	15.133	1.92	21.20	0.48
3.017	0.48	9.083	22.06	15.150	1.92	21.22	0.48
3.033	0.48	9.100	22.06	15.167	1.92	21.23	0.48
3.050	0.48	9.117	22.06	15.183	1.92	21.25	0.48
3.067	0.48	9.133	22.06	15.200	1.92	21.27	0.48
3.083	0.48	9.150	22.06	15.217	1.92	21.28	0.48
3.100	0.48	9.167	22.06	15.233	1.92	21.30	0.48
3.117	0.48	9.183	22.06	15.250	1.92	21.32	0.48
3.133	0.48	9.200	22.06	15.267	1.92	21.33	0.48
3.150	0.48	9.217	22.06	15.283	1.92	21.35	0.48
3.167	0.48	9.233	22.06	15.300	1.92	21.37	0.48
3.183	0.48	9.250	22.06	15.317	1.92	21.38	0.48
3.200	0.48	9.267	22.06	15.333	1.92	21.40	0.48

3.217	0.48	9.283	22.06	15.350	1.92	21.42	0.48		4.483	2.88	10.550	6.23	16.617	0.96	22.68	0.48
3.233	0.48	9.300	22.06	15.367	1.92	21.43	0.48		4.500	2.88	10.567	6.23	16.633	0.96	22.70	0.48
3.250	0.48	9.317	22.06	15.383	1.92	21.45	0.48		4.517	2.88	10.583	6.23	16.650	0.96	22.72	0.48
3.267	0.48	9.333	22.06	15.400	1.92	21.47	0.48		4.533	2.88	10.600	6.23	16.667	0.96	22.73	0.48
3.283	0.48	9.350	22.06	15.417	1.92	21.48	0.48		4.550	2.88	10.617	6.23	16.683	0.96	22.75	0.48
3.300	0.48	9.367	22.06	15.433	1.92	21.50	0.48		4.567	2.88	10.633	6.23	16.700	0.96	22.77	0.48
3.317	0.48	9.383	22.06	15.450	1.92	21.52	0.48		4.583	2.88	10.650	6.23	16.717	0.96	22.78	0.48
3.333	0.48	9.400	22.06	15.467	1.92	21.53	0.48		4.600	2.88	10.667	6.23	16.733	0.96	22.80	0.48
3.350	0.48	9.417	22.06	15.483	1.92	21.55	0.48		4.617	2.88	10.683	6.23	16.750	0.96	22.82	0.48
3.367	0.48	9.433	22.06	15.500	1.92	21.57	0.48		4.633	2.88	10.700	6.23	16.767	0.96	22.83	0.48
3.383	0.48	9.450	22.06	15.517	1.92	21.58	0.48		4.650	2.88	10.717	6.23	16.783	0.96	22.85	0.48
3.400	0.48	9.467	22.06	15.533	1.92	21.60	0.48		4.667	2.88	10.733	6.23	16.800	0.96	22.87	0.48
3.417	0.48	9.483	22.06	15.550	1.92	21.62	0.48		4.683	2.88	10.750	6.23	16.817	0.96	22.88	0.48
3.433	0.48	9.500	22.06	15.567	1.92	21.63	0.48		4.700	2.88	10.767	6.23	16.833	0.96	22.90	0.48
3.450	0.48	9.517	22.06	15.583	1.92	21.65	0.48		4.717	2.88	10.783	6.23	16.850	0.96	22.92	0.48
3.467	0.48	9.533	22.06	15.600	1.92	21.67	0.48		4.733	2.88	10.800	6.23	16.867	0.96	22.93	0.48
3.483	0.48	9.550	22.06	15.617	1.92	21.68	0.48		4.750	2.88	10.817	6.23	16.883	0.96	22.95	0.48
3.500	0.48	9.567	22.06	15.633	1.92	21.70	0.48		4.767	2.88	10.833	6.23	16.900	0.96	22.97	0.48
3.517	0.48	9.583	22.06	15.650	1.92	21.72	0.48		4.783	2.88	10.850	6.23	16.917	0.96	22.98	0.48
3.533	0.48	9.600	22.06	15.667	1.92	21.73	0.48		4.800	2.88	10.867	6.23	16.933	0.96	23.00	0.48
3.550	0.48	9.617	22.06	15.683	1.92	21.75	0.48		4.817	2.88	10.883	6.23	16.950	0.96	23.02	0.48
3.567	0.48	9.633	22.06	15.700	1.92	21.77	0.48		4.833	2.88	10.900	6.23	16.967	0.96	23.03	0.48
3.583	0.48	9.650	22.06	15.717	1.92	21.78	0.48		4.850	2.88	10.917	6.23	16.983	0.96	23.05	0.48
3.600	0.48	9.667	22.06	15.733	1.92	21.80	0.48		4.867	2.88	10.933	6.23	17.000	0.96	23.07	0.48
3.617	0.48	9.683	22.06	15.750	1.92	21.82	0.48		4.883	2.88	10.950	6.23	17.017	0.96	23.08	0.48
3.633	0.48	9.700	22.06	15.767	1.92	21.83	0.48		4.900	2.88	10.967	6.23	17.033	0.96	23.10	0.48
3.650	0.48	9.717	22.06	15.783	1.92	21.85	0.48		4.917	2.88	10.983	6.23	17.050	0.96	23.12	0.48
3.667	0.48	9.733	22.06	15.800	1.92	21.87	0.48		4.933	2.88	11.000	6.23	17.067	0.96	23.13	0.48
3.683	0.48	9.750	22.06	15.817	1.92	21.88	0.48		4.950	2.88	11.017	6.23	17.083	0.96	23.15	0.48
3.700	0.48	9.767	22.06	15.833	1.92	21.90	0.48		4.967	2.88	11.033	6.23	17.100	0.96	23.17	0.48
3.717	0.48	9.783	22.06	15.850	1.92	21.92	0.48		4.983	2.88	11.050	6.23	17.117	0.96	23.18	0.48
3.733	0.48	9.800	22.06	15.867	1.92	21.93	0.48		5.000	2.88	11.067	6.23	17.133	0.96	23.20	0.48
3.750	0.48	9.817	22.06	15.883	1.92	21.95	0.48		5.017	2.88	11.083	6.23	17.150	0.96	23.22	0.48
3.767	0.48	9.833	22.06	15.900	1.92	21.97	0.48		5.033	2.88	11.100	6.23	17.167	0.96	23.23	0.48
3.783	0.48	9.850	22.06	15.917	1.92	21.98	0.48		5.050	2.88	11.117	6.23	17.183	0.96	23.25	0.48
3.800	0.48	9.867	22.06	15.933	1.92	22.00	0.48		5.067	2.88	11.133	6.23	17.200	0.96	23.27	0.48
3.817	0.48	9.883	22.06	15.950	1.92	22.02	0.48		5.083	2.88	11.150	6.23	17.217	0.96	23.28	0.48
3.833	0.48	9.900	22.06	15.967	1.92	22.03	0.48		5.100	2.88	11.167	6.23	17.233	0.96	23.30	0.48
3.850	0.48	9.917	22.06	15.983	1.92	22.05	0.48		5.117	2.88	11.183	6.23	17.250	0.96	23.32	0.48
3.867	0.48	9.933	22.06	16.000	1.92	22.07	0.48		5.133	2.88	11.200	6.23	17.267	0.96	23.33	0.48
3.883	0.48	9.950	22.06	16.017	1.92	22.08	0.48		5.150	2.88	11.217	6.23	17.283	0.96	23.35	0.48
3.900	0.48	9.967	22.06	16.033	1.92	22.10	0.48		5.167	2.88	11.233	6.23	17.300	0.96	23.37	0.48
3.917	0.48	9.983	22.06	16.050	1.92	22.12	0.48		5.183	2.88	11.250	6.23	17.317	0.96	23.38	0.48
3.933	0.48	10.000	22.06	16.067	1.92	22.13	0.48		5.200	2.88	11.267	6.23	17.333	0.96	23.40	0.48
3.950	0.48	10.017	22.06	16.083	1.92	22.15	0.48		5.217	2.88	11.283	6.23	17.350	0.96	23.42	0.48
3.967	0.48	10.033	22.06	16.100	1.92	22.17	0.48		5.233	2.88	11.300	6.23	17.367	0.96	23.43	0.48
3.983	0.48	10.050	22.06	16.117	1.92	22.18	0.48		5.250	2.88	11.317	6.23	17.383	0.96	23.45	0.48
4.000	0.48	10.067	22.06	16.133	1.92	22.20	0.48		5.267	2.88	11.333	6.23	17.400	0.96	23.47	0.48
4.017	0.48	10.083	22.06	16.150	1.92	22.22	0.48		5.283	2.88	11.350	6.23	17.417	0.96	23.48	0.48
4.033	0.48	10.100	22.06	16.167	1.92	22.23	0.48		5.300	2.88	11.367	6.23	17.433	0.96	23.50	0.48
4.050	0.48	10.117	22.06	16.183	1.92	22.25	0.48		5.317	2.88	11.383	6.23	17.450	0.96	23.52	0.48
4.067	0.48	10.133	22.06	16.200	1.92	22.27	0.48		5.333	2.88	11.400	6.23	17.467	0.96	23.53	0.48
4.083	0.48	10.150	22.06	16.217	1.92	22.28	0.48		5.350	2.88	11.417	6.23	17.483	0.96	23.55	0.48
4.100	0.48	10.167	22.06	16.233	1.92	22.30	0.48		5.367	2.88	11.433	6.23	17.500	0.96	23.57	0.48
4.117	0.48	10.183	22.06	16.250	1.92	22.32	0.48		5.383	2.88	11.450	6.23	17.517	0.96	23.58	0.48
4.133	0.48	10.200	22.06	16.267	0.96	22.33	0.48		5.400	2.88	11.467	6.23	17.533	0.96	23.60	0.48
4.150	0.48	10.217	22.06	16.283	0.96	22.35	0.48		5.417	2.88	11.483	6.23	17.550	0.96	23.62	0.48
4.167	0.48	10.233	22.06	16.300	0.96	22.37	0.48		5.433	2.88	11.500	6.23	17.567	0.96	23.63	0.48
4.183	0.48	10.250	22.05	16.317	0.96	22.38	0.48		5.450	2.88	11.517	6.23	17.583	0.96	23.65	0.48
4.200	0.48	10.267	6.23	16.333	0.96	22.40	0.48		5.467	2.88	11.533	6.23	17.600	0.96	23.67	0.48
4.217	0.48	10.283	6.23	16.350	0.96	22.42	0.48		5.483	2.88	11.550	6.23	17.617	0.96	23.68	0.48
4.233	0.48	10.300	6.23	16.367	0.96	22.43	0.48		5.500	2.88	11.567	6.23	17.633	0.96	23.70	0.48
4.250	0.48	10.317	6.23	16.383	0.96	22.45	0.48		5.517	2.88	11.583	6.23	17.650	0.96	23.72	0.48
4.267	2.88	10.333	6.23	16.400	0.96	22.47	0.48		5.533	2.88	11.600	6.23	17.667	0.96	23.73	0.48
4.283	2.88	10.350	6.23	16.417	0.96	22.48	0.48		5.550	2.88	11.617	6.23	17.683	0.96	23.75	0.48
4.300	2.88	10.367	6.23	16.433	0.96	22.50	0.48		5.567	2.88	11.633	6.23	17.700	0.96	23.77	0.48
4.317	2.88	10.383	6.23	16.450	0.96	22.52	0.48		5.583	2.88	11.650	6.23	17.717	0.96	23.78	0.48
4.333	2.88	10.400	6.23	16.467	0.96	22.53	0.48		5.600	2.88	11.667	6.23	17.733	0.96	23.80	0.48
4.350	2.88	10.417	6.23	16.483	0.96	22.55	0.48		5.617	2.88	11.683	6.23	17.750	0.96	23.82	0.48
4.367	2.88	10.433	6.23	16.500	0.96	22.57	0.48		5.633	2.88	11.700	6.23	17.767	0.96	23.83	0.48
4.383	2.88	10.450	6.23	16.517	0.96	22.58	0.48		5.650	2.88	11.717	6.23	17.783	0.96	23.85	0.48
4.400	2.88	10.467	6.23	16.533	0.96	22.60	0.48		5.667	2.88	11.733	6.23	17.800	0.96	23.87	0.48
4.417	2.88	10.483	6.23	16.550	0.96	22.62	0.48		5.683	2.88	11.750	6.23	17.817	0.96	23.88	0.48
4.433	2.88	10.500	6.23	16.567	0.96	22.63	0.48		5.700	2.88	11.767	6.23	17.833	0.96	23.90	0.48
4.450	2.88	10.517	6.23	16.583	0.96	22.65	0.48		5.717	2.88	11.783	6.23	17.850	0.96	23.92	0.48
4.467	2.88	10.533	6.23	16.600	0.96	22.67	0.48		5.733	2.88	11.800	6.23	17.867	0.96	23.93	0.48

5.750	2.88	11.817	6.23	17.883	0.96	23.95	0.48
5.767	2.88	11.833	6.23	17.900	0.96	23.97	0.48
5.783	2.88	11.850	6.23	17.917	0.96	23.98	0.48
5.800	2.88	11.867	6.23	17.933	0.96	24.00	0.48
5.817	2.88	11.883	6.23	17.950	0.96	24.02	0.48
5.833	2.88	11.900	6.23	17.967	0.96	24.03	0.48
5.850	2.88	11.917	6.23	17.983	0.96	24.05	0.48
5.867	2.88	11.933	6.23	18.000	0.96	24.07	0.48
5.883	2.88	11.950	6.23	18.017	0.96	24.08	0.48
5.900	2.88	11.967	6.23	18.033	0.96	24.10	0.48
5.917	2.88	11.983	6.23	18.050	0.96	24.12	0.48
5.933	2.88	12.000	6.23	18.067	0.96	24.13	0.48
5.950	2.88	12.017	6.23	18.083	0.96	24.15	0.48
5.967	2.88	12.033	6.23	18.100	0.96	24.17	0.48
5.983	2.88	12.050	6.23	18.117	0.96	24.18	0.48
6.000	2.88	12.067	6.23	18.133	0.96	24.20	0.48
6.017	2.88	12.083	6.23	18.150	0.96	24.22	0.48
6.033	2.88	12.100	6.23	18.167	0.96	24.23	0.48
6.050	2.88	12.117	6.23	18.183	0.96	24.25	0.48
6.067	2.88	12.133	6.23	18.200	0.96		

Max.Eff.Inten.(mm/hr)=	22.06	18.37	
over (min)	6.00	9.00	
Storage Coeff. (min)=	5.59 (ii)	8.71 (ii)	
Unit Hyd. Tpeak (min)=	6.00	9.00	
Unit Hyd. peak (cms)=	0.20	0.13	
			TOTALS
PEAK FLOW (cms)=	0.17	0.00	0.166 (iii)
TIME TO PEAK (hrs)=	9.73	10.25	10.23
RUNOFF VOLUME (mm)=	94.91	64.01	94.61
TOTAL RAINFALL (mm)=	95.92	95.92	95.92
RUNOFF COEFFICIENT =	0.99	0.67	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7626)|	OVERFLOW IS OFF				
IN= 2---> OUT= 1					
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)	
	0.0000	0.0000	0.0568	0.1530	
	0.0239	0.0780	0.0660	0.1730	
	0.0370	0.1040	0.0751	0.2000	
	0.0451	0.1250	0.0000	0.0000	

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7567)	2.720	0.166	10.23	94.61
OUTFLOW: ID= 1 (7626)	2.720	0.054	10.57	87.66

PEAK FLOW REDUCTION [Qout/Qin](%)= 32.32
TIME SHIFT OF PEAK FLOW (min)= 20.00
MAXIMUM STORAGE USED (ha.m.)= 0.1458

CALIB |				
STANDHYD (7624)|	Area (ha)= 1.80			
ID= 1 DT= 1.0 min |	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00		
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	1.78	0.02		
Dep. Storage (mm)=	1.00	1.50		
Average Slope (%)=	1.00	0.50		
Length (m)=	109.54	40.00		
Mannings n =	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	2.88	12.150	6.23	18.22	0.96
0.033	0.00	6.100	2.88	12.167	6.23	18.23	0.96
0.050	0.00	6.117	2.88	12.183	6.23	18.25	0.96
0.067	0.00	6.133	2.88	12.200	6.23	18.27	0.48
0.083	0.00	6.150	2.88	12.217	6.23	18.28	0.48
0.100	0.00	6.167	2.88	12.233	6.23	18.30	0.48
0.117	0.00	6.183	2.88	12.250	6.23	18.32	0.48
0.133	0.00	6.200	2.88	12.267	3.36	18.33	0.48
0.150	0.00	6.217	2.88	12.283	3.36	18.35	0.48
0.167	0.00	6.233	2.88	12.300	3.36	18.37	0.48
0.183	0.00	6.250	2.89	12.317	3.36	18.38	0.48
0.200	0.00	6.267	8.15	12.333	3.36	18.40	0.48
0.217	0.00	6.283	8.15	12.350	3.36	18.42	0.48
0.233	0.00	6.300	8.15	12.367	3.36	18.43	0.48
0.250	0.00	6.317	8.15	12.383	3.36	18.45	0.48
0.267	0.48	6.333	8.15	12.400	3.36	18.47	0.48
0.283	0.48	6.350	8.15	12.417	3.36	18.48	0.48
0.300	0.48	6.367	8.15	12.433	3.36	18.50	0.48
0.317	0.48	6.383	8.15	12.450	3.36	18.52	0.48
0.333	0.48	6.400	8.15	12.467	3.36	18.53	0.48
0.350	0.48	6.417	8.15	12.483	3.36	18.55	0.48
0.367	0.48	6.433	8.15	12.500	3.36	18.57	0.48
0.383	0.48	6.450	8.15	12.517	3.36	18.58	0.48
0.400	0.48	6.467	8.15	12.533	3.36	18.60	0.48
0.417	0.48	6.483	8.15	12.550	3.36	18.62	0.48
0.433	0.48	6.500	8.15	12.567	3.36	18.63	0.48
0.450	0.48	6.517	8.15	12.583	3.36	18.65	0.48
0.467	0.48	6.533	8.15	12.600	3.36	18.67	0.48
0.483	0.48	6.550	8.15	12.617	3.36	18.68	0.48
0.500	0.48	6.567	8.15	12.633	3.36	18.70	0.48
0.517	0.48	6.583	8.15	12.650	3.36	18.72	0.48
0.533	0.48	6.600	8.15	12.667	3.36	18.73	0.48
0.550	0.48	6.617	8.15	12.683	3.36	18.75	0.48
0.567	0.48	6.633	8.15	12.700	3.36	18.77	0.48
0.583	0.48	6.650	8.15	12.717	3.36	18.78	0.48
0.600	0.48	6.667	8.15	12.733	3.36	18.80	0.48
0.617	0.48	6.683	8.15	12.750	3.36	18.82	0.48
0.633	0.48	6.700	8.15	12.767	3.36	18.83	0.48
0.650	0.48	6.717	8.15	12.783	3.36	18.85	0.48
0.667	0.48	6.733	8.15	12.800	3.36	18.87	0.48
0.683	0.48	6.750	8.15	12.817	3.36	18.88	0.48
0.700	0.48	6.767	8.15	12.833	3.36	18.90	0.48
0.717	0.48	6.783	8.15	12.850	3.36	18.92	0.48
0.733	0.48	6.800	8.15	12.867	3.36	18.93	0.48
0.750	0.48	6.817	8.15	12.883	3.36	18.95	0.48
0.767	0.48	6.833	8.15	12.900	3.36	18.97	0.48
0.783	0.48	6.850	8.15	12.917	3.36	18.98	0.48
0.800	0.48	6.867	8.15	12.933	3.36	19.00	0.48
0.817	0.48	6.883	8.15	12.950	3.36	19.02	0.48
0.833	0.48	6.900	8.15	12.967	3.36	19.03	0.48
0.850	0.48	6.917	8.15	12.983	3.36	19.05	0.48
0.867	0.48	6.933	8.15	13.000	3.36	19.07	0.48
0.883	0.48	6.950	8.15	13.017	3.36	19.08	0.48
0.900	0.48	6.967	8.15	13.033	3.36	19.10	0.48
0.917	0.48	6.983	8.15	13.050	3.36	19.12	0.48
0.933	0.48	7.000	8.15	13.067	3.36	19.13	0.48
0.950	0.48	7.017	8.15	13.083	3.36	19.15	0.48
0.967	0.48	7.033	8.15	13.100	3.36	19.17	0.48
0.983	0.48	7.050	8.15	13.117	3.36	19.18	0.48
1.000	0.48	7.067	8.15	13.133	3.36	19.20	0.48
1.017	0.48	7.083	8.15	13.150	3.36	19.22	0.48
1.033	0.48	7.100	8.15	13.167	3.36	19.23	0.48
1.050	0.48	7.117	8.15	13.183	3.36	19.25	0.48
1.067	0.48	7.133	8.15	13.200	3.36	19.27	0.48
1.083	0.48	7.150	8.15	13.217	3.36	19.28	0.48
1.100	0.48	7.167	8.15	13.233	3.36	19.30	0.48
1.117	0.48	7.183	8.15	13.250	3.36	19.32	0.48
1.133	0.48	7.200	8.15	13.267	3.36	19.33	0.48
1.150	0.48	7.217	8.15	13.283	3.36	19.35	0.48
1.167	0.48	7.233	8.15	13.300	3.36	19.37	0.48
1.183	0.48	7.250	8.15	13.317	3.36	19.38	0.48
1.200	0.48	7.267	8.15	13.333	3.36	19.40	0.48
1.217	0.48	7.283	8.15	13.350	3.36	19.42	0.48

1.233	0.48	7.300	8.15	13.367	3.36	19.43	0.48
1.250	0.48	7.317	8.15	13.383	3.36	19.45	0.48
1.267	0.48	7.333	8.15	13.400	3.36	19.47	0.48
1.283	0.48	7.350	8.15	13.417	3.36	19.48	0.48
1.300	0.48	7.367	8.15	13.433	3.36	19.50	0.48
1.317	0.48	7.383	8.15	13.450	3.36	19.52	0.48
1.333	0.48	7.400	8.15	13.467	3.36	19.53	0.48
1.350	0.48	7.417	8.15	13.483	3.36	19.55	0.48
1.367	0.48	7.433	8.15	13.500	3.36	19.57	0.48
1.383	0.48	7.450	8.15	13.517	3.36	19.58	0.48
1.400	0.48	7.467	8.15	13.533	3.36	19.60	0.48
1.417	0.48	7.483	8.15	13.550	3.36	19.62	0.48
1.433	0.48	7.500	8.15	13.567	3.36	19.63	0.48
1.450	0.48	7.517	8.15	13.583	3.36	19.65	0.48
1.467	0.48	7.533	8.15	13.600	3.36	19.67	0.48
1.483	0.48	7.550	8.15	13.617	3.36	19.68	0.48
1.500	0.48	7.567	8.15	13.633	3.36	19.70	0.48
1.517	0.48	7.583	8.15	13.650	3.36	19.72	0.48
1.533	0.48	7.600	8.15	13.667	3.36	19.73	0.48
1.550	0.48	7.617	8.15	13.683	3.36	19.75	0.48
1.567	0.48	7.633	8.15	13.700	3.36	19.77	0.48
1.583	0.48	7.650	8.15	13.717	3.36	19.78	0.48
1.600	0.48	7.667	8.15	13.733	3.36	19.80	0.48
1.617	0.48	7.683	8.15	13.750	3.36	19.82	0.48
1.633	0.48	7.700	8.15	13.767	3.36	19.83	0.48
1.650	0.48	7.717	8.15	13.783	3.36	19.85	0.48
1.667	0.48	7.733	8.15	13.800	3.36	19.87	0.48
1.683	0.48	7.750	8.15	13.817	3.36	19.88	0.48
1.700	0.48	7.767	8.15	13.833	3.36	19.90	0.48
1.717	0.48	7.783	8.15	13.850	3.36	19.92	0.48
1.733	0.48	7.800	8.15	13.867	3.36	19.93	0.48
1.750	0.48	7.817	8.15	13.883	3.36	19.95	0.48
1.767	0.48	7.833	8.15	13.900	3.36	19.97	0.48
1.783	0.48	7.850	8.15	13.917	3.36	19.98	0.48
1.800	0.48	7.867	8.15	13.933	3.36	20.00	0.48
1.817	0.48	7.883	8.15	13.950	3.36	20.02	0.48
1.833	0.48	7.900	8.15	13.967	3.36	20.03	0.48
1.850	0.48	7.917	8.15	13.983	3.36	20.05	0.48
1.867	0.48	7.933	8.15	14.000	3.36	20.07	0.48
1.883	0.48	7.950	8.15	14.017	3.36	20.08	0.48
1.900	0.48	7.967	8.15	14.033	3.36	20.10	0.48
1.917	0.48	7.983	8.15	14.050	3.36	20.12	0.48
1.933	0.48	8.000	8.15	14.067	3.36	20.13	0.48
1.950	0.48	8.017	8.15	14.083	3.36	20.15	0.48
1.967	0.48	8.033	8.15	14.100	3.36	20.17	0.48
1.983	0.48	8.050	8.15	14.117	3.36	20.18	0.48
2.000	0.48	8.067	8.15	14.133	3.36	20.20	0.48
2.017	0.48	8.083	8.15	14.150	3.36	20.22	0.48
2.033	0.48	8.100	8.15	14.167	3.36	20.23	0.48
2.050	0.48	8.117	8.15	14.183	3.36	20.25	0.48
2.067	0.48	8.133	8.15	14.200	3.36	20.27	0.48
2.083	0.48	8.150	8.15	14.217	3.36	20.28	0.48
2.100	0.48	8.167	8.15	14.233	3.36	20.30	0.48
2.117	0.48	8.183	8.15	14.250	3.36	20.32	0.48
2.133	0.48	8.200	8.15	14.267	1.92	20.33	0.48
2.150	0.48	8.217	8.15	14.283	1.92	20.35	0.48
2.167	0.48	8.233	8.15	14.300	1.92	20.37	0.48
2.183	0.48	8.250	8.19	14.317	1.92	20.38	0.48
2.200	0.48	8.267	22.06	14.333	1.92	20.40	0.48
2.217	0.48	8.283	22.06	14.350	1.92	20.42	0.48
2.233	0.48	8.300	22.06	14.367	1.92	20.43	0.48
2.250	0.48	8.317	22.06	14.383	1.92	20.45	0.48
2.267	0.48	8.333	22.06	14.400	1.92	20.47	0.48
2.283	0.48	8.350	22.06	14.417	1.92	20.48	0.48
2.300	0.48	8.367	22.06	14.433	1.92	20.50	0.48
2.317	0.48	8.383	22.06	14.450	1.92	20.52	0.48
2.333	0.48	8.400	22.06	14.467	1.92	20.53	0.48
2.350	0.48	8.417	22.06	14.483	1.92	20.55	0.48
2.367	0.48	8.433	22.06	14.500	1.92	20.57	0.48
2.383	0.48	8.450	22.06	14.517	1.92	20.58	0.48
2.400	0.48	8.467	22.06	14.533	1.92	20.60	0.48
2.417	0.48	8.483	22.06	14.550	1.92	20.62	0.48
2.433	0.48	8.500	22.06	14.567	1.92	20.63	0.48
2.450	0.48	8.517	22.06	14.583	1.92	20.65	0.48
2.467	0.48	8.533	22.06	14.600	1.92	20.67	0.48
2.483	0.48	8.550	22.06	14.617	1.92	20.68	0.48
2.500	0.48	8.567	22.06	14.633	1.92	20.70	0.48
2.517	0.48	8.583	22.06	14.650	1.92	20.72	0.48
2.533	0.48	8.600	22.06	14.667	1.92	20.73	0.48
2.550	0.48	8.617	22.06	14.683	1.92	20.75	0.48
2.567	0.48	8.633	22.06	14.700	1.92	20.77	0.48
2.583	0.48	8.650	22.06	14.717	1.92	20.78	0.48
2.600	0.48	8.667	22.06	14.733	1.92	20.80	0.48
2.617	0.48	8.683	22.06	14.750	1.92	20.82	0.48
2.633	0.48	8.700	22.06	14.767	1.92	20.83	0.48
2.650	0.48	8.717	22.06	14.783	1.92	20.85	0.48
2.667	0.48	8.733	22.06	14.800	1.92	20.87	0.48
2.683	0.48	8.750	22.06	14.817	1.92	20.88	0.48
2.700	0.48	8.767	22.06	14.833	1.92	20.90	0.48
2.717	0.48	8.783	22.06	14.850	1.92	20.92	0.48
2.733	0.48	8.800	22.06	14.867	1.92	20.93	0.48
2.750	0.48	8.817	22.06	14.883	1.92	20.95	0.48
2.767	0.48	8.833	22.06	14.900	1.92	20.97	0.48
2.783	0.48	8.850	22.06	14.917	1.92	20.98	0.48
2.800	0.48	8.867	22.06	14.933	1.92	21.00	0.48
2.817	0.48	8.883	22.06	14.950	1.92	21.02	0.48
2.833	0.48	8.900	22.06	14.967	1.92	21.03	0.48
2.850	0.48	8.917	22.06	14.983	1.92	21.05	0.48
2.867	0.48	8.933	22.06	15.000	1.92	21.07	0.48
2.883	0.48	8.950	22.06	15.017	1.92	21.08	0.48
2.900	0.48	8.967	22.06	15.033	1.92	21.10	0.48
2.917	0.48	8.983	22.06	15.050	1.92	21.12	0.48
2.933	0.48	9.000	22.06	15.067	1.92	21.13	0.48
2.950	0.48	9.017	22.06	15.083	1.92	21.15	0.48
2.967	0.48	9.033	22.06	15.100	1.92	21.17	0.48
2.983	0.48	9.050	22.06	15.117	1.92	21.18	0.48
3.000	0.48	9.067	22.06	15.133	1.92	21.20	0.48
3.017	0.48	9.083	22.06	15.150	1.92	21.22	0.48
3.033	0.48	9.100	22.06	15.167	1.92	21.23	0.48
3.050	0.48	9.117	22.06	15.183	1.92	21.25	0.48
3.067	0.48	9.133	22.06	15.200	1.92	21.27	0.48
3.083	0.48	9.150	22.06	15.217	1.92	21.28	0.48
3.100	0.48	9.167	22.06	15.233	1.92	21.30	0.48
3.117	0.48	9.183	22.06	15.250	1.92	21.32	0.48
3.133	0.48	9.200	22.06	15.267	1.92	21.33	0.48
3.150	0.48	9.217	22.06	15.283	1.92	21.35	0.48
3.167	0.48	9.233	22.06	15.300	1.92	21.37	0.48
3.183	0.48	9.250	22.06	15.317	1.92	21.38	0.48
3.200	0.48	9.267	22.06	15.333	1.92	21.40	0.48
3.217	0.48	9.283	22.06	15.350	1.92	21.42	0.48
3.233	0.48	9.300	22.06	15.367	1.92	21.43	0.48
3.250	0.48	9.317	22.06	15.383	1.92	21.45	0.48
3.267	0.48	9.333	22.06	15.400	1.92	21.47	0.48
3.283	0.48	9.350	22.06	15.417	1.92	21.48	0.48
3.300	0.48	9.367	22.06	15.433	1.92	21.50	0.48
3.317	0.48	9.383	22.06	15.450	1.92	21.52	0.48
3.333	0.48	9.400	22.06	15.467	1.92	21.53	0.48
3.350	0.48	9.417	22.06	15.483	1.92	21.55	0.48
3.367	0.48	9.433	22.06	15.500	1.92	21.57	0.48
3.383	0.48	9.450	22.06	15.517	1.92	21.58	0.48
3.400	0.48	9.467	22.06	15.533	1.92	21.60	0.48
3.417	0.48	9.483	22.06	15.550	1.92	21.62	0.48
3.433	0.48	9.500	22.06	15.567	1.92	21.63	0.48
3.450	0.48	9.517	22.06	15.583	1.92	21.65	0.48
3.467	0.48	9.533	22.06	15.600	1.92	21.67	0.48
3.483	0.48	9.550	22.06	15.617	1.92	21.68	0.48
3.500	0.48	9.567	22.06	15.633	1.92	21.70	0.48
3.517	0.48	9.583	22.06	15.650	1.92	21.72	0.48
3.533	0.48	9.600	22.06	15.667	1.92	21.73	0.48
3.550	0.48	9.617	22.06	15.683	1.92	21.75	0.48
3.567	0.48	9.633	22.06	15.700	1.92	21.77	0.48
3.583	0.48	9.650	22.06	15.717	1.92	21.78	0.48
3.600	0.48	9.667	22.06	15.733	1.92	21.80	0.48
3.617	0.48	9.683	22.06	15.750	1.92	21.82	0.48
3.633	0.48	9.700	22.06	15.767	1.92	21.83	0.48
3.650	0.48	9.717	22.06	15.783	1.92	21.85	0.48
3.667	0.48	9.733	22.06	15.800	1.92	21.87	0.48
3.683	0.48	9.750	22.06	15.817	1.92	21.88	0.48
3.700	0.48	9.767	22.06	15.833	1.92	21.90	0.48
3.717	0.48	9.783	22.06	15.850	1.92	21.92	0.48
3.733	0.48	9.800	22.06	15.867	1.92	21.93	0.48
3.750	0.48	9.817	22.06	15.883	1.92	21.95	0.48

3.767	0.48	9.833	22.06	15.900	1.92	21.97	0.48
3.783	0.48	9.850	22.06	15.917	1.92	21.98	0.48
3.800	0.48	9.867	22.06	15.933	1.92	22.00	0.48
3.817	0.48	9.883	22.06	15.950	1.92	22.02	0.48
3.833	0.48	9.900	22.06	15.967	1.92	22.03	0.48
3.850	0.48	9.917	22.06	15.983	1.92	22.05	0.48
3.867	0.48	9.933	22.06	16.000	1.92	22.07	0.48
3.883	0.48	9.950	22.06	16.017	1.92	22.08	0.48
3.900	0.48	9.967	22.06	16.033	1.92	22.10	0.48
3.917	0.48	9.983	22.06	16.050	1.92	22.12	0.48
3.933	0.48	10.000	22.06	16.067	1.92	22.13	0.48
3.950	0.48	10.017	22.06	16.083	1.92	22.15	0.48
3.967	0.48	10.033	22.06	16.100	1.92	22.17	0.48
3.983	0.48	10.050	22.06	16.117	1.92	22.18	0.48
4.000	0.48	10.067	22.06	16.133	1.92	22.20	0.48
4.017	0.48	10.083	22.06	16.150	1.92	22.22	0.48
4.033	0.48	10.100	22.06	16.167	1.92	22.23	0.48
4.050	0.48	10.117	22.06	16.183	1.92	22.25	0.48
4.067	0.48	10.133	22.06	16.200	1.92	22.27	0.48
4.083	0.48	10.150	22.06	16.217	1.92	22.28	0.48
4.100	0.48	10.167	22.06	16.233	1.92	22.30	0.48
4.117	0.48	10.183	22.06	16.250	1.92	22.32	0.48
4.133	0.48	10.200	22.06	16.267	0.96	22.33	0.48
4.150	0.48	10.217	22.06	16.283	0.96	22.35	0.48
4.167	0.48	10.233	22.06	16.300	0.96	22.37	0.48
4.183	0.48	10.250	22.05	16.317	0.96	22.38	0.48
4.200	0.48	10.267	6.23	16.333	0.96	22.40	0.48
4.217	0.48	10.283	6.23	16.350	0.96	22.42	0.48
4.233	0.48	10.300	6.23	16.367	0.96	22.43	0.48
4.250	0.48	10.317	6.23	16.383	0.96	22.45	0.48
4.267	2.88	10.333	6.23	16.400	0.96	22.47	0.48
4.283	2.88	10.350	6.23	16.417	0.96	22.48	0.48
4.300	2.88	10.367	6.23	16.433	0.96	22.50	0.48
4.317	2.88	10.383	6.23	16.450	0.96	22.52	0.48
4.333	2.88	10.400	6.23	16.467	0.96	22.53	0.48
4.350	2.88	10.417	6.23	16.483	0.96	22.55	0.48
4.367	2.88	10.433	6.23	16.500	0.96	22.57	0.48
4.383	2.88	10.450	6.23	16.517	0.96	22.58	0.48
4.400	2.88	10.467	6.23	16.533	0.96	22.60	0.48
4.417	2.88	10.483	6.23	16.550	0.96	22.62	0.48
4.433	2.88	10.500	6.23	16.567	0.96	22.63	0.48
4.450	2.88	10.517	6.23	16.583	0.96	22.65	0.48
4.467	2.88	10.533	6.23	16.600	0.96	22.67	0.48
4.483	2.88	10.550	6.23	16.617	0.96	22.68	0.48
4.500	2.88	10.567	6.23	16.633	0.96	22.70	0.48
4.517	2.88	10.583	6.23	16.650	0.96	22.72	0.48
4.533	2.88	10.600	6.23	16.667	0.96	22.73	0.48
4.550	2.88	10.617	6.23	16.683	0.96	22.75	0.48
4.567	2.88	10.633	6.23	16.700	0.96	22.77	0.48
4.583	2.88	10.650	6.23	16.717	0.96	22.78	0.48
4.600	2.88	10.667	6.23	16.733	0.96	22.80	0.48
4.617	2.88	10.683	6.23	16.750	0.96	22.82	0.48
4.633	2.88	10.700	6.23	16.767	0.96	22.83	0.48
4.650	2.88	10.717	6.23	16.783	0.96	22.85	0.48
4.667	2.88	10.733	6.23	16.800	0.96	22.87	0.48
4.683	2.88	10.750	6.23	16.817	0.96	22.88	0.48
4.700	2.88	10.767	6.23	16.833	0.96	22.90	0.48
4.717	2.88	10.783	6.23	16.850	0.96	22.92	0.48
4.733	2.88	10.800	6.23	16.867	0.96	22.93	0.48
4.750	2.88	10.817	6.23	16.883	0.96	22.95	0.48
4.767	2.88	10.833	6.23	16.900	0.96	22.97	0.48
4.783	2.88	10.850	6.23	16.917	0.96	22.98	0.48
4.800	2.88	10.867	6.23	16.933	0.96	23.00	0.48
4.817	2.88	10.883	6.23	16.950	0.96	23.02	0.48
4.833	2.88	10.900	6.23	16.967	0.96	23.03	0.48
4.850	2.88	10.917	6.23	16.983	0.96	23.05	0.48
4.867	2.88	10.933	6.23	17.000	0.96	23.07	0.48
4.883	2.88	10.950	6.23	17.017	0.96	23.08	0.48
4.900	2.88	10.967	6.23	17.033	0.96	23.10	0.48
4.917	2.88	10.983	6.23	17.050	0.96	23.12	0.48
4.933	2.88	11.000	6.23	17.067	0.96	23.13	0.48
4.950	2.88	11.017	6.23	17.083	0.96	23.15	0.48
4.967	2.88	11.033	6.23	17.100	0.96	23.17	0.48
4.983	2.88	11.050	6.23	17.117	0.96	23.18	0.48
5.000	2.88	11.067	6.23	17.133	0.96	23.20	0.48
5.017	2.88	11.083	6.23	17.150	0.96	23.22	0.48
5.033	2.88	11.100	6.23	17.167	0.96	23.23	0.48
5.050	2.88	11.117	6.23	17.183	0.96	23.25	0.48
5.067	2.88	11.133	6.23	17.200	0.96	23.27	0.48
5.083	2.88	11.150	6.23	17.217	0.96	23.28	0.48
5.100	2.88	11.167	6.23	17.233	0.96	23.30	0.48
5.117	2.88	11.183	6.23	17.250	0.96	23.32	0.48
5.133	2.88	11.200	6.23	17.267	0.96	23.33	0.48
5.150	2.88	11.217	6.23	17.283	0.96	23.35	0.48
5.167	2.88	11.233	6.23	17.300	0.96	23.37	0.48
5.183	2.88	11.250	6.23	17.317	0.96	23.38	0.48
5.200	2.88	11.267	6.23	17.333	0.96	23.40	0.48
5.217	2.88	11.283	6.23	17.350	0.96	23.42	0.48
5.233	2.88	11.300	6.23	17.367	0.96	23.43	0.48
5.250	2.88	11.317	6.23	17.383	0.96	23.45	0.48
5.267	2.88	11.333	6.23	17.400	0.96	23.47	0.48
5.283	2.88	11.350	6.23	17.417	0.96	23.48	0.48
5.300	2.88	11.367	6.23	17.433	0.96	23.50	0.48
5.317	2.88	11.383	6.23	17.450	0.96	23.52	0.48
5.333	2.88	11.400	6.23	17.467	0.96	23.53	0.48
5.350	2.88	11.417	6.23	17.483	0.96	23.55	0.48
5.367	2.88	11.433	6.23	17.500	0.96	23.57	0.48
5.383	2.88	11.450	6.23	17.517	0.96	23.58	0.48
5.400	2.88	11.467	6.23	17.533	0.96	23.60	0.48
5.417	2.88	11.483	6.23	17.550	0.96	23.62	0.48
5.433	2.88	11.500	6.23	17.567	0.96	23.63	0.48
5.450	2.88	11.517	6.23	17.583	0.96	23.65	0.48
5.467	2.88	11.533	6.23	17.600	0.96	23.67	0.48
5.483	2.88	11.550	6.23	17.617	0.96	23.68	0.48
5.500	2.88	11.567	6.23	17.633	0.96	23.70	0.48
5.517	2.88	11.583	6.23	17.650	0.96	23.72	0.48
5.533	2.88	11.600	6.23	17.667	0.96	23.73	0.48
5.550	2.88	11.617	6.23	17.683	0.96	23.75	0.48
5.567	2.88	11.633	6.23	17.700	0.96	23.77	0.48
5.583	2.88	11.650	6.23	17.717	0.96	23.78	0.48
5.600	2.88	11.667	6.23	17.733	0.96	23.80	0.48
5.617	2.88	11.683	6.23	17.750	0.96	23.82	0.48
5.633	2.88	11.700	6.23	17.767	0.96	23.83	0.48
5.650	2.88	11.717	6.23	17.783	0.96	23.85	0.48
5.667	2.88	11.733	6.23	17.800	0.96	23.87	0.48
5.683	2.88	11.750	6.23	17.817	0.96	23.88	0.48
5.700	2.88	11.767	6.23	17.833	0.96	23.90	0.48
5.717	2.88	11.783	6.23	17.850	0.96	23.92	0.48
5.733	2.88	11.800	6.23	17.867	0.96	23.93	0.48
5.750	2.88	11.817	6.23	17.883	0.96	23.95	0.48
5.767	2.88	11.833	6.23	17.900	0.96	23.97	0.48
5.783	2.88	11.850	6.23	17.917	0.96	23.98	0.48
5.800	2.88	11.867	6.23	17.933	0.96	24.00	0.48
5.817	2.88	11.883	6.23	17.950	0.96	24.02	0.48
5.833	2.88	11.900	6.23	17.967	0.96	24.03	0.48
5.850	2.88	11.917	6.23	17.983	0.96	24.05	0.48
5.867	2.88	11.933	6.23	18.000	0.96	24.07	0.48
5.883	2.88	11.950	6.23	18.017	0.96	24.08	0.48
5.900	2.88	11.967	6.23	18.033	0.96	24.10	0.48
5.917	2.88	11.983	6.23	18.050	0.96	24.12	0.48
5.933	2.88	12.000	6.23	18.067	0.96	24.13	0.48
5.950	2.88	12.017	6.23	18.083	0.96	24.15	0.48
5.967	2.88	12.033	6.23	18.100	0.96	24.17	0.48
5.983	2.88	12.050	6.23	18.117	0.96	24.18	0.48
6.000	2.88	12.067	6.23	18.133	0.96	24.20	0.48
6.017	2.88	12.083	6.23	18.150	0.96	24.22	0.48
6.033	2.88	12.100	6.23	18.167	0.96	24.23	0.48
6.050	2.88	12.117	6.23	18.183	0.96	24.25	0.48
6.067	2.88	12.133	6.23	18.200	0.96		

Max.Eff.Inten.(mm/hr)=	22.06	20.03	
over (min)	5.00	9.00	
Storage Coeff. (min)=	4.94 (ii)	8.05 (ii)	
Unit Hyd. Tpeak (min)=	5.00	9.00	
Unit Hyd. peak (cms)=	0.23	0.14	
			TOTALS
PEAK FLOW (cms)=	0.11	0.00	0.110 (iii)
TIME TO PEAK (hrs)=	9.48	10.25	10.23
RUNOFF VOLUME (mm)=	94.92	72.69	94.70
TOTAL RAINFALL (mm)=	95.92	95.92	95.92
RUNOFF COEFFICIENT =	0.99	0.76	0.99

```
      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  90.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  7625)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0389      0.1013
                          0.0164     0.0514   |   0.0456      0.1141
                          0.0252     0.0690   |   0.0514      0.1288
                          0.0309     0.0825   |   0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  7624)     1.800     0.110     10.23      94.70
   OUTFLOW: ID= 1 (  7625)     1.800     0.037     10.52      88.36

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 33.20
                  TIME SHIFT OF PEAK FLOW         (min)= 17.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0959

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--------------------
| CALIB            |
| STANDHYD (  7623)|   Area    (ha)=   1.15
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------

                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.14         0.01
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=      87.56        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.017    0.00 | 6.083    2.88 |12.150    6.23 | 18.22    0.96
               0.033    0.00 | 6.100    2.88 |12.167    6.23 | 18.23    0.96
               0.050    0.00 | 6.117    2.88 |12.183    6.23 | 18.25    0.96
               0.067    0.00 | 6.133    2.88 |12.200    6.23 | 18.27    0.48
               0.083    0.00 | 6.150    2.88 |12.217    6.23 | 18.28    0.48
               0.100    0.00 | 6.167    2.88 |12.233    6.23 | 18.30    0.48
               0.117    0.00 | 6.183    2.88 |12.250    6.23 | 18.32    0.48
               0.133    0.00 | 6.200    2.88 |12.267    3.36 | 18.33    0.48
               0.150    0.00 | 6.217    2.88 |12.283    3.36 | 18.35    0.48
               0.167    0.00 | 6.233    2.88 |12.300    3.36 | 18.37    0.48
               0.183    0.00 | 6.250    2.89 |12.317    3.36 | 18.38    0.48
               0.200    0.00 | 6.267    8.15 |12.333    3.36 | 18.40    0.48
               0.217    0.00 | 6.283    8.15 |12.350    3.36 | 18.42    0.48
               0.233    0.00 | 6.300    8.15 |12.367    3.36 | 18.43    0.48
               0.250    0.00 | 6.317    8.15 |12.383    3.36 | 18.45    0.48
               0.267    0.48 | 6.333    8.15 |12.400    3.36 | 18.47    0.48
               0.283    0.48 | 6.350    8.15 |12.417    3.36 | 18.48    0.48
               0.300    0.48 | 6.367    8.15 |12.433    3.36 | 18.50    0.48
               0.317    0.48 | 6.383    8.15 |12.450    3.36 | 18.52    0.48
               0.333    0.48 | 6.400    8.15 |12.467    3.36 | 18.53    0.48
               0.350    0.48 | 6.417    8.15 |12.483    3.36 | 18.55    0.48
               0.367    0.48 | 6.433    8.15 |12.500    3.36 | 18.57    0.48
               0.383    0.48 | 6.450    8.15 |12.517    3.36 | 18.58    0.48
               0.400    0.48 | 6.467    8.15 |12.533    3.36 | 18.60    0.48
               0.417    0.48 | 6.483    8.15 |12.550    3.36 | 18.62    0.48
               0.433    0.48 | 6.500    8.15 |12.567    3.36 | 18.63    0.48
               0.450    0.48 | 6.517    8.15 |12.583    3.36 | 18.65    0.48
               0.467    0.48 | 6.533    8.15 |12.600    3.36 | 18.67    0.48
               0.483    0.48 | 6.550    8.15 |12.617    3.36 | 18.68    0.48
               0.500    0.48 | 6.567    8.15 |12.633    3.36 | 18.70    0.48
               0.517    0.48 | 6.583    8.15 |12.650    3.36 | 18.72    0.48
               0.533    0.48 | 6.600    8.15 |12.667    3.36 | 18.73    0.48
               0.550    0.48 | 6.617    8.15 |12.683    3.36 | 18.75    0.48
               0.567    0.48 | 6.633    8.15 |12.700    3.36 | 18.77    0.48
               0.583    0.48 | 6.650    8.15 |12.717    3.36 | 18.78    0.48
               0.600    0.48 | 6.667    8.15 |12.733    3.36 | 18.80    0.48
               0.617    0.48 | 6.683    8.15 |12.750    3.36 | 18.82    0.48
               0.633    0.48 | 6.700    8.15 |12.767    3.36 | 18.83    0.48
               0.650    0.48 | 6.717    8.15 |12.783    3.36 | 18.85    0.48
               0.667    0.48 | 6.733    8.15 |12.800    3.36 | 18.87    0.48
               0.683    0.48 | 6.750    8.15 |12.817    3.36 | 18.88    0.48
               0.700    0.48 | 6.767    8.15 |12.833    3.36 | 18.90    0.48
               0.717    0.48 | 6.783    8.15 |12.850    3.36 | 18.92    0.48
               0.733    0.48 | 6.800    8.15 |12.867    3.36 | 18.93    0.48
               0.750    0.48 | 6.817    8.15 |12.883    3.36 | 18.95    0.48
               0.767    0.48 | 6.833    8.15 |12.900    3.36 | 18.97    0.48
               0.783    0.48 | 6.850    8.15 |12.917    3.36 | 18.98    0.48
               0.800    0.48 | 6.867    8.15 |12.933    3.36 | 19.00    0.48
               0.817    0.48 | 6.883    8.15 |12.950    3.36 | 19.02    0.48
               0.833    0.48 | 6.900    8.15 |12.967    3.36 | 19.03    0.48
               0.850    0.48 | 6.917    8.15 |12.983    3.36 | 19.05    0.48
               0.867    0.48 | 6.933    8.15 |13.000    3.36 | 19.07    0.48
               0.883    0.48 | 6.950    8.15 |13.017    3.36 | 19.08    0.48
               0.900    0.48 | 6.967    8.15 |13.033    3.36 | 19.10    0.48
               0.917    0.48 | 6.983    8.15 |13.050    3.36 | 19.12    0.48
               0.933    0.48 | 7.000    8.15 |13.067    3.36 | 19.13    0.48
               0.950    0.48 | 7.017    8.15 |13.083    3.36 | 19.15    0.48
               0.967    0.48 | 7.033    8.15 |13.100    3.36 | 19.17    0.48
               0.983    0.48 | 7.050    8.15 |13.117    3.36 | 19.18    0.48
               1.000    0.48 | 7.067    8.15 |13.133    3.36 | 19.20    0.48
               1.017    0.48 | 7.083    8.15 |13.150    3.36 | 19.22    0.48
               1.033    0.48 | 7.100    8.15 |13.167    3.36 | 19.23    0.48
               1.050    0.48 | 7.117    8.15 |13.183    3.36 | 19.25    0.48
               1.067    0.48 | 7.133    8.15 |13.200    3.36 | 19.27    0.48
               1.083    0.48 | 7.150    8.15 |13.217    3.36 | 19.28    0.48
               1.100    0.48 | 7.167    8.15 |13.233    3.36 | 19.30    0.48
               1.117    0.48 | 7.183    8.15 |13.250    3.36 | 19.32    0.48
               1.133    0.48 | 7.200    8.15 |13.267    3.36 | 19.33    0.48
               1.150    0.48 | 7.217    8.15 |13.283    3.36 | 19.35    0.48
               1.167    0.48 | 7.233    8.15 |13.300    3.36 | 19.37    0.48
               1.183    0.48 | 7.250    8.15 |13.317    3.36 | 19.38    0.48
               1.200    0.48 | 7.267    8.15 |13.333    3.36 | 19.40    0.48
               1.217    0.48 | 7.283    8.15 |13.350    3.36 | 19.42    0.48
               1.233    0.48 | 7.300    8.15 |13.367    3.36 | 19.43    0.48
               1.250    0.48 | 7.317    8.15 |13.383    3.36 | 19.45    0.48
               1.267    0.48 | 7.333    8.15 |13.400    3.36 | 19.47    0.48
               1.283    0.48 | 7.350    8.15 |13.417    3.36 | 19.48    0.48
               1.300    0.48 | 7.367    8.15 |13.433    3.36 | 19.50    0.48
               1.317    0.48 | 7.383    8.15 |13.450    3.36 | 19.52    0.48
               1.333    0.48 | 7.400    8.15 |13.467    3.36 | 19.53    0.48
               1.350    0.48 | 7.417    8.15 |13.483    3.36 | 19.55    0.48
               1.367    0.48 | 7.433    8.15 |13.500    3.36 | 19.57    0.48
               1.383    0.48 | 7.450    8.15 |13.517    3.36 | 19.58    0.48
               1.400    0.48 | 7.467    8.15 |13.533    3.36 | 19.60    0.48
               1.417    0.48 | 7.483    8.15 |13.550    3.36 | 19.62    0.48
               1.433    0.48 | 7.500    8.15 |13.567    3.36 | 19.63    0.48
               1.450    0.48 | 7.517    8.15 |13.583    3.36 | 19.65    0.48
               1.467    0.48 | 7.533    8.15 |13.600    3.36 | 19.67    0.48
               1.483    0.48 | 7.550    8.15 |13.617    3.36 | 19.68    0.48
               1.500    0.48 | 7.567    8.15 |13.633    3.36 | 19.70    0.48
               1.517    0.48 | 7.583    8.15 |13.650    3.36 | 19.72    0.48
               1.533    0.48 | 7.600    8.15 |13.667    3.36 | 19.73    0.48
               1.550    0.48 | 7.617    8.15 |13.683    3.36 | 19.75    0.48
               1.567    0.48 | 7.633    8.15 |13.700    3.36 | 19.77    0.48
               1.583    0.48 | 7.650    8.15 |13.717    3.36 | 19.78    0.48
               1.600    0.48 | 7.667    8.15 |13.733    3.36 | 19.80    0.48
               1.617    0.48 | 7.683    8.15 |13.750    3.36 | 19.82    0.48
               1.633    0.48 | 7.700    8.15 |13.767    3.36 | 19.83    0.48
               1.650    0.48 | 7.717    8.15 |13.783    3.36 | 19.85    0.48
               1.667    0.48 | 7.733    8.15 |13.800    3.36 | 19.87    0.48
               1.683    0.48 | 7.750    8.15 |13.817    3.36 | 19.88    0.48
               1.700    0.48 | 7.767    8.15 |13.833    3.36 | 19.90    0.48
               1.717    0.48 | 7.783    8.15 |13.850    3.36 | 19.92    0.48
               1.733    0.48 | 7.800    8.15 |13.867    3.36 | 19.93    0.48
               1.750    0.48 | 7.817    8.15 |13.883    3.36 | 19.95    0.48
               1.767    0.48 | 7.833    8.15 |13.900    3.36 | 19.97    0.48
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1.783	0.48	7.850	8.15	13.917	3.36	19.98	0.48	3.050	0.48	9.117	22.06	15.183	1.92	21.25	0.48
1.800	0.48	7.867	8.15	13.933	3.36	20.00	0.48	3.067	0.48	9.133	22.06	15.200	1.92	21.27	0.48
1.817	0.48	7.883	8.15	13.950	3.36	20.02	0.48	3.083	0.48	9.150	22.06	15.217	1.92	21.28	0.48
1.833	0.48	7.900	8.15	13.967	3.36	20.03	0.48	3.100	0.48	9.167	22.06	15.233	1.92	21.30	0.48
1.850	0.48	7.917	8.15	13.983	3.36	20.05	0.48	3.117	0.48	9.183	22.06	15.250	1.92	21.32	0.48
1.867	0.48	7.933	8.15	14.000	3.36	20.07	0.48	3.133	0.48	9.200	22.06	15.267	1.92	21.33	0.48
1.883	0.48	7.950	8.15	14.017	3.36	20.08	0.48	3.150	0.48	9.217	22.06	15.283	1.92	21.35	0.48
1.900	0.48	7.967	8.15	14.033	3.36	20.10	0.48	3.167	0.48	9.233	22.06	15.300	1.92	21.37	0.48
1.917	0.48	7.983	8.15	14.050	3.36	20.12	0.48	3.183	0.48	9.250	22.06	15.317	1.92	21.38	0.48
1.933	0.48	8.000	8.15	14.067	3.36	20.13	0.48	3.200	0.48	9.267	22.06	15.333	1.92	21.40	0.48
1.950	0.48	8.017	8.15	14.083	3.36	20.15	0.48	3.217	0.48	9.283	22.06	15.350	1.92	21.42	0.48
1.967	0.48	8.033	8.15	14.100	3.36	20.17	0.48	3.233	0.48	9.300	22.06	15.367	1.92	21.43	0.48
1.983	0.48	8.050	8.15	14.117	3.36	20.18	0.48	3.250	0.48	9.317	22.06	15.383	1.92	21.45	0.48
2.000	0.48	8.067	8.15	14.133	3.36	20.20	0.48	3.267	0.48	9.333	22.06	15.400	1.92	21.47	0.48
2.017	0.48	8.083	8.15	14.150	3.36	20.22	0.48	3.283	0.48	9.350	22.06	15.417	1.92	21.48	0.48
2.033	0.48	8.100	8.15	14.167	3.36	20.23	0.48	3.300	0.48	9.367	22.06	15.433	1.92	21.50	0.48
2.050	0.48	8.117	8.15	14.183	3.36	20.25	0.48	3.317	0.48	9.383	22.06	15.450	1.92	21.52	0.48
2.067	0.48	8.133	8.15	14.200	3.36	20.27	0.48	3.333	0.48	9.400	22.06	15.467	1.92	21.53	0.48
2.083	0.48	8.150	8.15	14.217	3.36	20.28	0.48	3.350	0.48	9.417	22.06	15.483	1.92	21.55	0.48
2.100	0.48	8.167	8.15	14.233	3.36	20.30	0.48	3.367	0.48	9.433	22.06	15.500	1.92	21.57	0.48
2.117	0.48	8.183	8.15	14.250	3.36	20.32	0.48	3.383	0.48	9.450	22.06	15.517	1.92	21.58	0.48
2.133	0.48	8.200	8.15	14.267	1.92	20.33	0.48	3.400	0.48	9.467	22.06	15.533	1.92	21.60	0.48
2.150	0.48	8.217	8.15	14.283	1.92	20.35	0.48	3.417	0.48	9.483	22.06	15.550	1.92	21.62	0.48
2.167	0.48	8.233	8.15	14.300	1.92	20.37	0.48	3.433	0.48	9.500	22.06	15.567	1.92	21.63	0.48
2.183	0.48	8.250	8.19	14.317	1.92	20.38	0.48	3.450	0.48	9.517	22.06	15.583	1.92	21.65	0.48
2.200	0.48	8.267	22.06	14.333	1.92	20.40	0.48	3.467	0.48	9.533	22.06	15.600	1.92	21.67	0.48
2.217	0.48	8.283	22.06	14.350	1.92	20.42	0.48	3.483	0.48	9.550	22.06	15.617	1.92	21.68	0.48
2.233	0.48	8.300	22.06	14.367	1.92	20.43	0.48	3.500	0.48	9.567	22.06	15.633	1.92	21.70	0.48
2.250	0.48	8.317	22.06	14.383	1.92	20.45	0.48	3.517	0.48	9.583	22.06	15.650	1.92	21.72	0.48
2.267	0.48	8.333	22.06	14.400	1.92	20.47	0.48	3.533	0.48	9.600	22.06	15.667	1.92	21.73	0.48
2.283	0.48	8.350	22.06	14.417	1.92	20.48	0.48	3.550	0.48	9.617	22.06	15.683	1.92	21.75	0.48
2.300	0.48	8.367	22.06	14.433	1.92	20.50	0.48	3.567	0.48	9.633	22.06	15.700	1.92	21.77	0.48
2.317	0.48	8.383	22.06	14.450	1.92	20.52	0.48	3.583	0.48	9.650	22.06	15.717	1.92	21.78	0.48
2.333	0.48	8.400	22.06	14.467	1.92	20.53	0.48	3.600	0.48	9.667	22.06	15.733	1.92	21.80	0.48
2.350	0.48	8.417	22.06	14.483	1.92	20.55	0.48	3.617	0.48	9.683	22.06	15.750	1.92	21.82	0.48
2.367	0.48	8.433	22.06	14.500	1.92	20.57	0.48	3.633	0.48	9.700	22.06	15.767	1.92	21.83	0.48
2.383	0.48	8.450	22.06	14.517	1.92	20.58	0.48	3.650	0.48	9.717	22.06	15.783	1.92	21.85	0.48
2.400	0.48	8.467	22.06	14.533	1.92	20.60	0.48	3.667	0.48	9.733	22.06	15.800	1.92	21.87	0.48
2.417	0.48	8.483	22.06	14.550	1.92	20.62	0.48	3.683	0.48	9.750	22.06	15.817	1.92	21.88	0.48
2.433	0.48	8.500	22.06	14.567	1.92	20.63	0.48	3.700	0.48	9.767	22.06	15.833	1.92	21.90	0.48
2.450	0.48	8.517	22.06	14.583	1.92	20.65	0.48	3.717	0.48	9.783	22.06	15.850	1.92	21.92	0.48
2.467	0.48	8.533	22.06	14.600	1.92	20.67	0.48	3.733	0.48	9.800	22.06	15.867	1.92	21.93	0.48
2.483	0.48	8.550	22.06	14.617	1.92	20.68	0.48	3.750	0.48	9.817	22.06	15.883	1.92	21.95	0.48
2.500	0.48	8.567	22.06	14.633	1.92	20.70	0.48	3.767	0.48	9.833	22.06	15.900	1.92	21.97	0.48
2.517	0.48	8.583	22.06	14.650	1.92	20.72	0.48	3.783	0.48	9.850	22.06	15.917	1.92	21.98	0.48
2.533	0.48	8.600	22.06	14.667	1.92	20.73	0.48	3.800	0.48	9.867	22.06	15.933	1.92	22.00	0.48
2.550	0.48	8.617	22.06	14.683	1.92	20.75	0.48	3.817	0.48	9.883	22.06	15.950	1.92	22.02	0.48
2.567	0.48	8.633	22.06	14.700	1.92	20.77	0.48	3.833	0.48	9.900	22.06	15.967	1.92	22.03	0.48
2.583	0.48	8.650	22.06	14.717	1.92	20.78	0.48	3.850	0.48	9.917	22.06	15.983	1.92	22.05	0.48
2.600	0.48	8.667	22.06	14.733	1.92	20.80	0.48	3.867	0.48	9.933	22.06	16.000	1.92	22.07	0.48
2.617	0.48	8.683	22.06	14.750	1.92	20.82	0.48	3.883	0.48	9.950	22.06	16.017	1.92	22.08	0.48
2.633	0.48	8.700	22.06	14.767	1.92	20.83	0.48	3.900	0.48	9.967	22.06	16.033	1.92	22.10	0.48
2.650	0.48	8.717	22.06	14.783	1.92	20.85	0.48	3.917	0.48	9.983	22.06	16.050	1.92	22.12	0.48
2.667	0.48	8.733	22.06	14.800	1.92	20.87	0.48	3.933	0.48	10.000	22.06	16.067	1.92	22.13	0.48
2.683	0.48	8.750	22.06	14.817	1.92	20.88	0.48	3.950	0.48	10.017	22.06	16.083	1.92	22.15	0.48
2.700	0.48	8.767	22.06	14.833	1.92	20.90	0.48	3.967	0.48	10.033	22.06	16.100	1.92	22.17	0.48
2.717	0.48	8.783	22.06	14.850	1.92	20.92	0.48	3.983	0.48	10.050	22.06	16.117	1.92	22.18	0.48
2.733	0.48	8.800	22.06	14.867	1.92	20.93	0.48	4.000	0.48	10.067	22.06	16.133	1.92	22.20	0.48
2.750	0.48	8.817	22.06	14.883	1.92	20.95	0.48	4.017	0.48	10.083	22.06	16.150	1.92	22.22	0.48
2.767	0.48	8.833	22.06	14.900	1.92	20.97	0.48	4.033	0.48	10.100	22.06	16.167	1.92	22.23	0.48
2.783	0.48	8.850	22.06	14.917	1.92	20.98	0.48	4.050	0.48	10.117	22.06	16.183	1.92	22.25	0.48
2.800	0.48	8.867	22.06	14.933	1.92	21.00	0.48	4.067	0.48	10.133	22.06	16.200	1.92	22.27	0.48
2.817	0.48	8.883	22.06	14.950	1.92	21.02	0.48	4.083	0.48	10.150	22.06	16.217	1.92	22.28	0.48
2.833	0.48	8.900	22.06	14.967	1.92	21.03	0.48	4.100	0.48	10.167	22.06	16.233	1.92	22.30	0.48
2.850	0.48	8.917	22.06	14.983	1.92	21.05	0.48	4.117	0.48	10.183	22.06	16.250	1.92	22.32	0.48
2.867	0.48	8.933	22.06	15.000	1.92	21.07	0.48	4.133	0.48	10.200	22.06	16.267	0.96	22.33	0.48
2.883	0.48	8.950	22.06	15.017	1.92	21.08	0.48	4.150	0.48	10.217	22.06	16.283	0.96	22.35	0.48
2.900	0.48	8.967	22.06	15.033	1.92	21.10	0.48	4.167	0.48	10.233	22.06	16.300	0.96	22.37	0.48
2.917	0.48	8.983	22.06	15.050	1.92	21.12	0.48	4.183	0.48	10.250	22.05	16.317	0.96	22.38	0.48
2.933	0.48	9.000	22.06	15.067	1.92	21.13	0.48	4.200	0.48	10.267	6.23	16.333	0.96	22.40	0.48
2.950	0.48	9.017	22.06	15.083	1.92	21.15	0.48	4.217	0.48	10.283	6.23	16.350	0.96	22.42	0.48
2.967	0.48	9.033	22.06	15.100	1.92	21.17	0.48	4.233	0.48	10.300	6.23	16.367	0.96	22.43	0.48
2.983	0.48	9.050	22.06	15.117	1.92	21.18	0.48	4.250	0.48	10.317	6.23	16.383	0.96	22.45	0.48
3.000	0.48	9.067	22.06	15.133	1.92	21.20	0.48	4.267	2.88	10.333	6.23	16.400	0.96	22.47	0.48
3.017	0.48	9.083	22.06	15.150	1.92	21.22	0.48	4.283	2.88	10.350	6.23	16.417	0.96	22.48	0.48
3.033	0.48	9.100	22.06	15.167	1.92	21.23	0.48	4.300	2.88	10.367	6.23	16.433	0.96	22.50	0.48

4.317	2.88	10.383	6.23	16.450	0.96	22.52	0.48
4.333	2.88	10.400	6.23	16.467	0.96	22.53	0.48
4.350	2.88	10.417	6.23	16.483	0.96	22.55	0.48
4.367	2.88	10.433	6.23	16.500	0.96	22.57	0.48
4.383	2.88	10.450	6.23	16.517	0.96	22.58	0.48
4.400	2.88	10.467	6.23	16.533	0.96	22.60	0.48
4.417	2.88	10.483	6.23	16.550	0.96	22.62	0.48
4.433	2.88	10.500	6.23	16.567	0.96	22.63	0.48
4.450	2.88	10.517	6.23	16.583	0.96	22.65	0.48
4.467	2.88	10.533	6.23	16.600	0.96	22.67	0.48
4.483	2.88	10.550	6.23	16.617	0.96	22.68	0.48
4.500	2.88	10.567	6.23	16.633	0.96	22.70	0.48
4.517	2.88	10.583	6.23	16.650	0.96	22.72	0.48
4.533	2.88	10.600	6.23	16.667	0.96	22.73	0.48
4.550	2.88	10.617	6.23	16.683	0.96	22.75	0.48
4.567	2.88	10.633	6.23	16.700	0.96	22.77	0.48
4.583	2.88	10.650	6.23	16.717	0.96	22.78	0.48
4.600	2.88	10.667	6.23	16.733	0.96	22.80	0.48
4.617	2.88	10.683	6.23	16.750	0.96	22.82	0.48
4.633	2.88	10.700	6.23	16.767	0.96	22.83	0.48
4.650	2.88	10.717	6.23	16.783	0.96	22.85	0.48
4.667	2.88	10.733	6.23	16.800	0.96	22.87	0.48
4.683	2.88	10.750	6.23	16.817	0.96	22.88	0.48
4.700	2.88	10.767	6.23	16.833	0.96	22.90	0.48
4.717	2.88	10.783	6.23	16.850	0.96	22.92	0.48
4.733	2.88	10.800	6.23	16.867	0.96	22.93	0.48
4.750	2.88	10.817	6.23	16.883	0.96	22.95	0.48
4.767	2.88	10.833	6.23	16.900	0.96	22.97	0.48
4.783	2.88	10.850	6.23	16.917	0.96	22.98	0.48
4.800	2.88	10.867	6.23	16.933	0.96	23.00	0.48
4.817	2.88	10.883	6.23	16.950	0.96	23.02	0.48
4.833	2.88	10.900	6.23	16.967	0.96	23.03	0.48
4.850	2.88	10.917	6.23	16.983	0.96	23.05	0.48
4.867	2.88	10.933	6.23	17.000	0.96	23.07	0.48
4.883	2.88	10.950	6.23	17.017	0.96	23.08	0.48
4.900	2.88	10.967	6.23	17.033	0.96	23.10	0.48
4.917	2.88	10.983	6.23	17.050	0.96	23.12	0.48
4.933	2.88	11.000	6.23	17.067	0.96	23.13	0.48
4.950	2.88	11.017	6.23	17.083	0.96	23.15	0.48
4.967	2.88	11.033	6.23	17.100	0.96	23.17	0.48
4.983	2.88	11.050	6.23	17.117	0.96	23.18	0.48
5.000	2.88	11.067	6.23	17.133	0.96	23.20	0.48
5.017	2.88	11.083	6.23	17.150	0.96	23.22	0.48
5.033	2.88	11.100	6.23	17.167	0.96	23.23	0.48
5.050	2.88	11.117	6.23	17.183	0.96	23.25	0.48
5.067	2.88	11.133	6.23	17.200	0.96	23.27	0.48
5.083	2.88	11.150	6.23	17.217	0.96	23.28	0.48
5.100	2.88	11.167	6.23	17.233	0.96	23.30	0.48
5.117	2.88	11.183	6.23	17.250	0.96	23.32	0.48
5.133	2.88	11.200	6.23	17.267	0.96	23.33	0.48
5.150	2.88	11.217	6.23	17.283	0.96	23.35	0.48
5.167	2.88	11.233	6.23	17.300	0.96	23.37	0.48
5.183	2.88	11.250	6.23	17.317	0.96	23.38	0.48
5.200	2.88	11.267	6.23	17.333	0.96	23.40	0.48
5.217	2.88	11.283	6.23	17.350	0.96	23.42	0.48
5.233	2.88	11.300	6.23	17.367	0.96	23.43	0.48
5.250	2.88	11.317	6.23	17.383	0.96	23.45	0.48
5.267	2.88	11.333	6.23	17.400	0.96	23.47	0.48
5.283	2.88	11.350	6.23	17.417	0.96	23.48	0.48
5.300	2.88	11.367	6.23	17.433	0.96	23.50	0.48
5.317	2.88	11.383	6.23	17.450	0.96	23.52	0.48
5.333	2.88	11.400	6.23	17.467	0.96	23.53	0.48
5.350	2.88	11.417	6.23	17.483	0.96	23.55	0.48
5.367	2.88	11.433	6.23	17.500	0.96	23.57	0.48
5.383	2.88	11.450	6.23	17.517	0.96	23.58	0.48
5.400	2.88	11.467	6.23	17.533	0.96	23.60	0.48
5.417	2.88	11.483	6.23	17.550	0.96	23.62	0.48
5.433	2.88	11.500	6.23	17.567	0.96	23.63	0.48
5.450	2.88	11.517	6.23	17.583	0.96	23.65	0.48
5.467	2.88	11.533	6.23	17.600	0.96	23.67	0.48
5.483	2.88	11.550	6.23	17.617	0.96	23.68	0.48
5.500	2.88	11.567	6.23	17.633	0.96	23.70	0.48
5.517	2.88	11.583	6.23	17.650	0.96	23.72	0.48
5.533	2.88	11.600	6.23	17.667	0.96	23.73	0.48
5.550	2.88	11.617	6.23	17.683	0.96	23.75	0.48
5.567	2.88	11.633	6.23	17.700	0.96	23.77	0.48
5.583	2.88	11.650	6.23	17.717	0.96	23.78	0.48
5.600	2.88	11.667	6.23	17.733	0.96	23.80	0.48
5.617	2.88	11.683	6.23	17.750	0.96	23.82	0.48
5.633	2.88	11.700	6.23	17.767	0.96	23.83	0.48
5.650	2.88	11.717	6.23	17.783	0.96	23.85	0.48
5.667	2.88	11.733	6.23	17.800	0.96	23.87	0.48
5.683	2.88	11.750	6.23	17.817	0.96	23.88	0.48
5.700	2.88	11.767	6.23	17.833	0.96	23.90	0.48
5.717	2.88	11.783	6.23	17.850	0.96	23.92	0.48
5.733	2.88	11.800	6.23	17.867	0.96	23.93	0.48
5.750	2.88	11.817	6.23	17.883	0.96	23.95	0.48
5.767	2.88	11.833	6.23	17.900	0.96	23.97	0.48
5.783	2.88	11.850	6.23	17.917	0.96	23.98	0.48
5.800	2.88	11.867	6.23	17.933	0.96	24.00	0.48
5.817	2.88	11.883	6.23	17.950	0.96	24.02	0.48
5.833	2.88	11.900	6.23	17.967	0.96	24.03	0.48
5.850	2.88	11.917	6.23	17.983	0.96	24.05	0.48
5.867	2.88	11.933	6.23	18.000	0.96	24.07	0.48
5.883	2.88	11.950	6.23	18.017	0.96	24.08	0.48
5.900	2.88	11.967	6.23	18.033	0.96	24.10	0.48
5.917	2.88	11.983	6.23	18.050	0.96	24.12	0.48
5.933	2.88	12.000	6.23	18.067	0.96	24.13	0.48
5.950	2.88	12.017	6.23	18.083	0.96	24.15	0.48
5.967	2.88	12.033	6.23	18.100	0.96	24.17	0.48
5.983	2.88	12.050	6.23	18.117	0.96	24.18	0.48
6.000	2.88	12.067	6.23	18.133	0.96	24.20	0.48
6.017	2.88	12.083	6.23	18.150	0.96	24.22	0.48
6.033	2.88	12.100	6.23	18.167	0.96	24.23	0.48
6.050	2.88	12.117	6.23	18.183	0.96	24.25	0.48
6.067	2.88	12.133	6.23	18.200	0.96		

Max.Eff.Inten.(mm/hr)=	22.06	18.37	
over (min)	5.00	8.00	
Storage Coeff. (min)=	4.32 (ii)	7.43 (ii)	
Unit Hyd. Tpeak (min)=	5.00	8.00	
Unit Hyd. peak (cms)=	0.25	0.15	
			TOTALS
PEAK FLOW (cms)=	0.07	0.00	0.070 (iii)
TIME TO PEAK (hrs)=	9.23	10.25	10.23
RUNOFF VOLUME (mm)=	94.91	64.02	94.61
TOTAL RAINFALL (mm)=	95.92	95.92	95.92
RUNOFF COEFFICIENT =	0.99	0.67	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7622)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0258	0.0650
	0.0108	0.0330	0.0302	0.0725
	0.0167	0.0440	0.0340	0.0820
	0.0204	0.0525	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7623)	1.150	0.070	10.23	94.61
OUTFLOW: ID= 1 (7622)	1.150	0.024	10.47	88.70

PEAK FLOW REDUCTION [Qout/Qin](%)= 34.09
TIME SHIFT OF PEAK FLOW (min)= 14.00
MAXIMUM STORAGE USED (ha.m.)= 0.0608

CALIB			
STANDHYD (7629)	Area (ha)= 4.09		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	

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		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	4.05	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	165.13	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	2.88	12.150	6.23	18.22	0.96
0.033	0.00	6.100	2.88	12.167	6.23	18.23	0.96
0.050	0.00	6.117	2.88	12.183	6.23	18.25	0.96
0.067	0.00	6.133	2.88	12.200	6.23	18.27	0.48
0.083	0.00	6.150	2.88	12.217	6.23	18.28	0.48
0.100	0.00	6.167	2.88	12.233	6.23	18.30	0.48
0.117	0.00	6.183	2.88	12.250	6.23	18.32	0.48
0.133	0.00	6.200	2.88	12.267	3.36	18.33	0.48
0.150	0.00	6.217	2.88	12.283	3.36	18.35	0.48
0.167	0.00	6.233	2.88	12.300	3.36	18.37	0.48
0.183	0.00	6.250	2.89	12.317	3.36	18.38	0.48
0.200	0.00	6.267	8.15	12.333	3.36	18.40	0.48
0.217	0.00	6.283	8.15	12.350	3.36	18.42	0.48
0.233	0.00	6.300	8.15	12.367	3.36	18.43	0.48
0.250	0.00	6.317	8.15	12.383	3.36	18.45	0.48
0.267	0.48	6.333	8.15	12.400	3.36	18.47	0.48
0.283	0.48	6.350	8.15	12.417	3.36	18.48	0.48
0.300	0.48	6.367	8.15	12.433	3.36	18.50	0.48
0.317	0.48	6.383	8.15	12.450	3.36	18.52	0.48
0.333	0.48	6.400	8.15	12.467	3.36	18.53	0.48
0.350	0.48	6.417	8.15	12.483	3.36	18.55	0.48
0.367	0.48	6.433	8.15	12.500	3.36	18.57	0.48
0.383	0.48	6.450	8.15	12.517	3.36	18.58	0.48
0.400	0.48	6.467	8.15	12.533	3.36	18.60	0.48
0.417	0.48	6.483	8.15	12.550	3.36	18.62	0.48
0.433	0.48	6.500	8.15	12.567	3.36	18.63	0.48
0.450	0.48	6.517	8.15	12.583	3.36	18.65	0.48
0.467	0.48	6.533	8.15	12.600	3.36	18.67	0.48
0.483	0.48	6.550	8.15	12.617	3.36	18.68	0.48
0.500	0.48	6.567	8.15	12.633	3.36	18.70	0.48
0.517	0.48	6.583	8.15	12.650	3.36	18.72	0.48
0.533	0.48	6.600	8.15	12.667	3.36	18.73	0.48
0.550	0.48	6.617	8.15	12.683	3.36	18.75	0.48
0.567	0.48	6.633	8.15	12.700	3.36	18.77	0.48
0.583	0.48	6.650	8.15	12.717	3.36	18.78	0.48
0.600	0.48	6.667	8.15	12.733	3.36	18.80	0.48
0.617	0.48	6.683	8.15	12.750	3.36	18.82	0.48
0.633	0.48	6.700	8.15	12.767	3.36	18.83	0.48
0.650	0.48	6.717	8.15	12.783	3.36	18.85	0.48
0.667	0.48	6.733	8.15	12.800	3.36	18.87	0.48
0.683	0.48	6.750	8.15	12.817	3.36	18.88	0.48
0.700	0.48	6.767	8.15	12.833	3.36	18.90	0.48
0.717	0.48	6.783	8.15	12.850	3.36	18.92	0.48
0.733	0.48	6.800	8.15	12.867	3.36	18.93	0.48
0.750	0.48	6.817	8.15	12.883	3.36	18.95	0.48
0.767	0.48	6.833	8.15	12.900	3.36	18.97	0.48
0.783	0.48	6.850	8.15	12.917	3.36	18.98	0.48
0.800	0.48	6.867	8.15	12.933	3.36	19.00	0.48
0.817	0.48	6.883	8.15	12.950	3.36	19.02	0.48
0.833	0.48	6.900	8.15	12.967	3.36	19.03	0.48
0.850	0.48	6.917	8.15	12.983	3.36	19.05	0.48
0.867	0.48	6.933	8.15	13.000	3.36	19.07	0.48
0.883	0.48	6.950	8.15	13.017	3.36	19.08	0.48
0.900	0.48	6.967	8.15	13.033	3.36	19.10	0.48
0.917	0.48	6.983	8.15	13.050	3.36	19.12	0.48
0.933	0.48	7.000	8.15	13.067	3.36	19.13	0.48
0.950	0.48	7.017	8.15	13.083	3.36	19.15	0.48
0.967	0.48	7.033	8.15	13.100	3.36	19.17	0.48
0.983	0.48	7.050	8.15	13.117	3.36	19.18	0.48
1.000	0.48	7.067	8.15	13.133	3.36	19.20	0.48
1.017	0.48	7.083	8.15	13.150	3.36	19.22	0.48
1.033	0.48	7.100	8.15	13.167	3.36	19.23	0.48
1.050	0.48	7.117	8.15	13.183	3.36	19.25	0.48
1.067	0.48	7.133	8.15	13.200	3.36	19.27	0.48
1.083	0.48	7.150	8.15	13.217	3.36	19.28	0.48
1.100	0.48	7.167	8.15	13.233	3.36	19.30	0.48
1.117	0.48	7.183	8.15	13.250	3.36	19.32	0.48
1.133	0.48	7.200	8.15	13.267	3.36	19.33	0.48
1.150	0.48	7.217	8.15	13.283	3.36	19.35	0.48
1.167	0.48	7.233	8.15	13.300	3.36	19.37	0.48
1.183	0.48	7.250	8.15	13.317	3.36	19.38	0.48
1.200	0.48	7.267	8.15	13.333	3.36	19.40	0.48
1.217	0.48	7.283	8.15	13.350	3.36	19.42	0.48
1.233	0.48	7.300	8.15	13.367	3.36	19.43	0.48
1.250	0.48	7.317	8.15	13.383	3.36	19.45	0.48
1.267	0.48	7.333	8.15	13.400	3.36	19.47	0.48
1.283	0.48	7.350	8.15	13.417	3.36	19.48	0.48
1.300	0.48	7.367	8.15	13.433	3.36	19.50	0.48
1.317	0.48	7.383	8.15	13.450	3.36	19.52	0.48
1.333	0.48	7.400	8.15	13.467	3.36	19.53	0.48
1.350	0.48	7.417	8.15	13.483	3.36	19.55	0.48
1.367	0.48	7.433	8.15	13.500	3.36	19.57	0.48
1.383	0.48	7.450	8.15	13.517	3.36	19.58	0.48
1.400	0.48	7.467	8.15	13.533	3.36	19.60	0.48
1.417	0.48	7.483	8.15	13.550	3.36	19.62	0.48
1.433	0.48	7.500	8.15	13.567	3.36	19.63	0.48
1.450	0.48	7.517	8.15	13.583	3.36	19.65	0.48
1.467	0.48	7.533	8.15	13.600	3.36	19.67	0.48
1.483	0.48	7.550	8.15	13.617	3.36	19.68	0.48
1.500	0.48	7.567	8.15	13.633	3.36	19.70	0.48
1.517	0.48	7.583	8.15	13.650	3.36	19.72	0.48
1.533	0.48	7.600	8.15	13.667	3.36	19.73	0.48
1.550	0.48	7.617	8.15	13.683	3.36	19.75	0.48
1.567	0.48	7.633	8.15	13.700	3.36	19.77	0.48
1.583	0.48	7.650	8.15	13.717	3.36	19.78	0.48
1.600	0.48	7.667	8.15	13.733	3.36	19.80	0.48
1.617	0.48	7.683	8.15	13.750	3.36	19.82	0.48
1.633	0.48	7.700	8.15	13.767	3.36	19.83	0.48
1.650	0.48	7.717	8.15	13.783	3.36	19.85	0.48
1.667	0.48	7.733	8.15	13.800	3.36	19.87	0.48
1.683	0.48	7.750	8.15	13.817	3.36	19.88	0.48
1.700	0.48	7.767	8.15	13.833	3.36	19.90	0.48
1.717	0.48	7.783	8.15	13.850	3.36	19.92	0.48
1.733	0.48	7.800	8.15	13.867	3.36	19.93	0.48
1.750	0.48	7.817	8.15	13.883	3.36	19.95	0.48
1.767	0.48	7.833	8.15	13.900	3.36	19.97	0.48
1.783	0.48	7.850	8.15	13.917	3.36	19.98	0.48
1.800	0.48	7.867	8.15	13.933	3.36	20.00	0.48
1.817	0.48	7.883	8.15	13.950	3.36	20.02	0.48
1.833	0.48	7.900	8.15	13.967	3.36	20.03	0.48
1.850	0.48	7.917	8.15	13.983	3.36	20.05	0.48
1.867	0.48	7.933	8.15	14.000	3.36	20.07	0.48
1.883	0.48	7.950	8.15	14.017	3.36	20.08	0.48
1.900	0.48	7.967	8.15	14.033	3.36	20.10	0.48
1.917	0.48	7.983	8.15	14.050	3.36	20.12	0.48
1.933	0.48	8.000	8.15	14.067	3.36	20.13	0.48
1.950	0.48	8.017	8.15	14.083	3.36	20.15	0.48
1.967	0.48	8.033	8.15	14.100	3.36	20.17	0.48
1.983	0.48	8.050	8.15	14.117	3.36	20.18	0.48
2.000	0.48	8.067	8.15	14.133	3.36	20.20	0.48
2.017	0.48	8.083	8.15	14.150	3.36	20.22	0.48
2.033	0.48	8.100	8.15	14.167	3.36	20.23	0.48
2.050	0.48	8.117	8.15	14.183	3.36	20.25	0.48
2.067	0.48	8.133	8.15	14.200	3.36	20.27	0.48
2.083	0.48	8.150	8.15	14.217	3.36	20.28	0.48
2.100	0.48	8.167	8.15	14.233	3.36	20.30	0.48
2.117	0.48	8.183	8.15	14.250	3.36	20.32	0.48
2.133	0.48	8.200	8.15	14.267	1.92	20.33	0.48
2.150	0.48	8.217	8.15	14.283	1.92	20.35	0.48
2.167	0.48	8.233	8.15	14.300	1.92	20.37	0.48
2.183	0.48	8.250	8.19	14.317	1.92	20.38	0.48
2.200	0.48	8.267	22.06	14.333	1.92	20.40	0.48
2.217	0.48	8.283	22.06	14.350	1.92	20.42	0.48
2.233	0.48	8.300	22.06	14.367	1.92	20.43	0.48
2.250	0.48	8.317	22.06	14.383	1.92	20.45	0.48
2.267	0.48	8.333	22.06	14.400	1.92	20.47	0.48
2.283	0.48	8.350	22.06	14.417	1.92	20.48	0.48
2.300	0.48	8.367	22.06	14.433	1.92	20.50	0.48
2.317	0.48	8.383	22.06	14.450	1.92	20.52	0.48

2.333	0.48	8.400	22.06	14.467	1.92	20.53	0.48	3.600	0.48	9.667	22.06	15.733	1.92	21.80	0.48
2.350	0.48	8.417	22.06	14.483	1.92	20.55	0.48	3.617	0.48	9.683	22.06	15.750	1.92	21.82	0.48
2.367	0.48	8.433	22.06	14.500	1.92	20.57	0.48	3.633	0.48	9.700	22.06	15.767	1.92	21.83	0.48
2.383	0.48	8.450	22.06	14.517	1.92	20.58	0.48	3.650	0.48	9.717	22.06	15.783	1.92	21.85	0.48
2.400	0.48	8.467	22.06	14.533	1.92	20.60	0.48	3.667	0.48	9.733	22.06	15.800	1.92	21.87	0.48
2.417	0.48	8.483	22.06	14.550	1.92	20.62	0.48	3.683	0.48	9.750	22.06	15.817	1.92	21.88	0.48
2.433	0.48	8.500	22.06	14.567	1.92	20.63	0.48	3.700	0.48	9.767	22.06	15.833	1.92	21.90	0.48
2.450	0.48	8.517	22.06	14.583	1.92	20.65	0.48	3.717	0.48	9.783	22.06	15.850	1.92	21.92	0.48
2.467	0.48	8.533	22.06	14.600	1.92	20.67	0.48	3.733	0.48	9.800	22.06	15.867	1.92	21.93	0.48
2.483	0.48	8.550	22.06	14.617	1.92	20.68	0.48	3.750	0.48	9.817	22.06	15.883	1.92	21.95	0.48
2.500	0.48	8.567	22.06	14.633	1.92	20.70	0.48	3.767	0.48	9.833	22.06	15.900	1.92	21.97	0.48
2.517	0.48	8.583	22.06	14.650	1.92	20.72	0.48	3.783	0.48	9.850	22.06	15.917	1.92	21.98	0.48
2.533	0.48	8.600	22.06	14.667	1.92	20.73	0.48	3.800	0.48	9.867	22.06	15.933	1.92	22.00	0.48
2.550	0.48	8.617	22.06	14.683	1.92	20.75	0.48	3.817	0.48	9.883	22.06	15.950	1.92	22.02	0.48
2.567	0.48	8.633	22.06	14.700	1.92	20.77	0.48	3.833	0.48	9.900	22.06	15.967	1.92	22.03	0.48
2.583	0.48	8.650	22.06	14.717	1.92	20.78	0.48	3.850	0.48	9.917	22.06	15.983	1.92	22.05	0.48
2.600	0.48	8.667	22.06	14.733	1.92	20.80	0.48	3.867	0.48	9.933	22.06	16.000	1.92	22.07	0.48
2.617	0.48	8.683	22.06	14.750	1.92	20.82	0.48	3.883	0.48	9.950	22.06	16.017	1.92	22.08	0.48
2.633	0.48	8.700	22.06	14.767	1.92	20.83	0.48	3.900	0.48	9.967	22.06	16.033	1.92	22.10	0.48
2.650	0.48	8.717	22.06	14.783	1.92	20.85	0.48	3.917	0.48	9.983	22.06	16.050	1.92	22.12	0.48
2.667	0.48	8.733	22.06	14.800	1.92	20.87	0.48	3.933	0.48	10.000	22.06	16.067	1.92	22.13	0.48
2.683	0.48	8.750	22.06	14.817	1.92	20.88	0.48	3.950	0.48	10.017	22.06	16.083	1.92	22.15	0.48
2.700	0.48	8.767	22.06	14.833	1.92	20.90	0.48	3.967	0.48	10.033	22.06	16.100	1.92	22.17	0.48
2.717	0.48	8.783	22.06	14.850	1.92	20.92	0.48	3.983	0.48	10.050	22.06	16.117	1.92	22.18	0.48
2.733	0.48	8.800	22.06	14.867	1.92	20.93	0.48	4.000	0.48	10.067	22.06	16.133	1.92	22.20	0.48
2.750	0.48	8.817	22.06	14.883	1.92	20.95	0.48	4.017	0.48	10.083	22.06	16.150	1.92	22.22	0.48
2.767	0.48	8.833	22.06	14.900	1.92	20.97	0.48	4.033	0.48	10.100	22.06	16.167	1.92	22.23	0.48
2.783	0.48	8.850	22.06	14.917	1.92	20.98	0.48	4.050	0.48	10.117	22.06	16.183	1.92	22.25	0.48
2.800	0.48	8.867	22.06	14.933	1.92	21.00	0.48	4.067	0.48	10.133	22.06	16.200	1.92	22.27	0.48
2.817	0.48	8.883	22.06	14.950	1.92	21.02	0.48	4.083	0.48	10.150	22.06	16.217	1.92	22.28	0.48
2.833	0.48	8.900	22.06	14.967	1.92	21.03	0.48	4.100	0.48	10.167	22.06	16.233	1.92	22.30	0.48
2.850	0.48	8.917	22.06	14.983	1.92	21.05	0.48	4.117	0.48	10.183	22.06	16.250	1.92	22.32	0.48
2.867	0.48	8.933	22.06	15.000	1.92	21.07	0.48	4.133	0.48	10.200	22.06	16.267	0.96	22.33	0.48
2.883	0.48	8.950	22.06	15.017	1.92	21.08	0.48	4.150	0.48	10.217	22.06	16.283	0.96	22.35	0.48
2.900	0.48	8.967	22.06	15.033	1.92	21.10	0.48	4.167	0.48	10.233	22.06	16.300	0.96	22.37	0.48
2.917	0.48	8.983	22.06	15.050	1.92	21.12	0.48	4.183	0.48	10.250	22.05	16.317	0.96	22.38	0.48
2.933	0.48	9.000	22.06	15.067	1.92	21.13	0.48	4.200	0.48	10.267	6.23	16.333	0.96	22.40	0.48
2.950	0.48	9.017	22.06	15.083	1.92	21.15	0.48	4.217	0.48	10.283	6.23	16.350	0.96	22.42	0.48
2.967	0.48	9.033	22.06	15.100	1.92	21.17	0.48	4.233	0.48	10.300	6.23	16.367	0.96	22.43	0.48
2.983	0.48	9.050	22.06	15.117	1.92	21.18	0.48	4.250	0.48	10.317	6.23	16.383	0.96	22.45	0.48
3.000	0.48	9.067	22.06	15.133	1.92	21.20	0.48	4.267	2.88	10.333	6.23	16.400	0.96	22.47	0.48
3.017	0.48	9.083	22.06	15.150	1.92	21.22	0.48	4.283	2.88	10.350	6.23	16.417	0.96	22.48	0.48
3.033	0.48	9.100	22.06	15.167	1.92	21.23	0.48	4.300	2.88	10.367	6.23	16.433	0.96	22.50	0.48
3.050	0.48	9.117	22.06	15.183	1.92	21.25	0.48	4.317	2.88	10.383	6.23	16.450	0.96	22.52	0.48
3.067	0.48	9.133	22.06	15.200	1.92	21.27	0.48	4.333	2.88	10.400	6.23	16.467	0.96	22.53	0.48
3.083	0.48	9.150	22.06	15.217	1.92	21.28	0.48	4.350	2.88	10.417	6.23	16.483	0.96	22.55	0.48
3.100	0.48	9.167	22.06	15.233	1.92	21.30	0.48	4.367	2.88	10.433	6.23	16.500	0.96	22.57	0.48
3.117	0.48	9.183	22.06	15.250	1.92	21.32	0.48	4.383	2.88	10.450	6.23	16.517	0.96	22.58	0.48
3.133	0.48	9.200	22.06	15.267	1.92	21.33	0.48	4.400	2.88	10.467	6.23	16.533	0.96	22.60	0.48
3.150	0.48	9.217	22.06	15.283	1.92	21.35	0.48	4.417	2.88	10.483	6.23	16.550	0.96	22.62	0.48
3.167	0.48	9.233	22.06	15.300	1.92	21.37	0.48	4.433	2.88	10.500	6.23	16.567	0.96	22.63	0.48
3.183	0.48	9.250	22.06	15.317	1.92	21.38	0.48	4.450	2.88	10.517	6.23	16.583	0.96	22.65	0.48
3.200	0.48	9.267	22.06	15.333	1.92	21.40	0.48	4.467	2.88	10.533	6.23	16.600	0.96	22.67	0.48
3.217	0.48	9.283	22.06	15.350	1.92	21.42	0.48	4.483	2.88	10.550	6.23	16.617	0.96	22.68	0.48
3.233	0.48	9.300	22.06	15.367	1.92	21.43	0.48	4.500	2.88	10.567	6.23	16.633	0.96	22.70	0.48
3.250	0.48	9.317	22.06	15.383	1.92	21.45	0.48	4.517	2.88	10.583	6.23	16.650	0.96	22.72	0.48
3.267	0.48	9.333	22.06	15.400	1.92	21.47	0.48	4.533	2.88	10.600	6.23	16.667	0.96	22.73	0.48
3.283	0.48	9.350	22.06	15.417	1.92	21.48	0.48	4.550	2.88	10.617	6.23	16.683	0.96	22.75	0.48
3.300	0.48	9.367	22.06	15.433	1.92	21.50	0.48	4.567	2.88	10.633	6.23	16.700	0.96	22.77	0.48
3.317	0.48	9.383	22.06	15.450	1.92	21.52	0.48	4.583	2.88	10.650	6.23	16.717	0.96	22.78	0.48
3.333	0.48	9.400	22.06	15.467	1.92	21.53	0.48	4.600	2.88	10.667	6.23	16.733	0.96	22.80	0.48
3.350	0.48	9.417	22.06	15.483	1.92	21.55	0.48	4.617	2.88	10.683	6.23	16.750	0.96	22.82	0.48
3.367	0.48	9.433	22.06	15.500	1.92	21.57	0.48	4.633	2.88	10.700	6.23	16.767	0.96	22.83	0.48
3.383	0.48	9.450	22.06	15.517	1.92	21.58	0.48	4.650	2.88	10.717	6.23	16.783	0.96	22.85	0.48
3.400	0.48	9.467	22.06	15.533	1.92	21.60	0.48	4.667	2.88	10.733	6.23	16.800	0.96	22.87	0.48
3.417	0.48	9.483	22.06	15.550	1.92	21.62	0.48	4.683	2.88	10.750	6.23	16.817	0.96	22.88	0.48
3.433	0.48	9.500	22.06	15.567	1.92	21.63	0.48	4.700	2.88	10.767	6.23	16.833	0.96	22.90	0.48
3.450	0.48	9.517	22.06	15.583	1.92	21.65	0.48	4.717	2.88	10.783	6.23	16.850	0.96	22.92	0.48
3.467	0.48	9.533	22.06	15.600	1.92	21.67	0.48	4.733	2.88	10.800	6.23	16.867	0.96	22.93	0.48
3.483	0.48	9.550	22.06	15.617	1.92	21.68	0.48	4.750	2.88	10.817	6.23	16.883	0.96	22.95	0.48
3.500	0.48	9.567	22.06	15.633	1.92	21.70	0.48	4.767	2.88	10.833	6.23	16.900	0.96	22.97	0.48
3.517	0.48	9.583	22.06	15.650	1.92	21.72	0.48	4.783	2.88	10.850	6.23	16.917	0.96	22.98	0.48
3.533	0.48	9.600	22.06	15.667	1.92	21.73	0.48	4.800	2.88	10.867	6.23	16.933	0.96	23.00	0.48
3.550	0.48	9.617	22.06	15.683	1.92	21.75	0.48	4.817	2.88	10.883	6.23	16.950	0.96	23.02	0.48
3.567	0.48	9.633	22.06	15.700	1.92	21.77	0.48	4.833	2.88	10.900	6.23	16.967	0.96	23.03	0.48
3.583	0.48	9.650	22.06	15.717	1.92	21.78	0.48	4.850	2.88	10.917	6.23	16.983	0.96	23.05	0.48

4.867	2.88	10.933	6.23	17.000	0.96	23.07	0.48
4.883	2.88	10.950	6.23	17.017	0.96	23.08	0.48
4.900	2.88	10.967	6.23	17.033	0.96	23.10	0.48
4.917	2.88	10.983	6.23	17.050	0.96	23.12	0.48
4.933	2.88	11.000	6.23	17.067	0.96	23.13	0.48
4.950	2.88	11.017	6.23	17.083	0.96	23.15	0.48
4.967	2.88	11.033	6.23	17.100	0.96	23.17	0.48
4.983	2.88	11.050	6.23	17.117	0.96	23.18	0.48
5.000	2.88	11.067	6.23	17.133	0.96	23.20	0.48
5.017	2.88	11.083	6.23	17.150	0.96	23.22	0.48
5.033	2.88	11.100	6.23	17.167	0.96	23.23	0.48
5.050	2.88	11.117	6.23	17.183	0.96	23.25	0.48
5.067	2.88	11.133	6.23	17.200	0.96	23.27	0.48
5.083	2.88	11.150	6.23	17.217	0.96	23.28	0.48
5.100	2.88	11.167	6.23	17.233	0.96	23.30	0.48
5.117	2.88	11.183	6.23	17.250	0.96	23.32	0.48
5.133	2.88	11.200	6.23	17.267	0.96	23.33	0.48
5.150	2.88	11.217	6.23	17.283	0.96	23.35	0.48
5.167	2.88	11.233	6.23	17.300	0.96	23.37	0.48
5.183	2.88	11.250	6.23	17.317	0.96	23.38	0.48
5.200	2.88	11.267	6.23	17.333	0.96	23.40	0.48
5.217	2.88	11.283	6.23	17.350	0.96	23.42	0.48
5.233	2.88	11.300	6.23	17.367	0.96	23.43	0.48
5.250	2.88	11.317	6.23	17.383	0.96	23.45	0.48
5.267	2.88	11.333	6.23	17.400	0.96	23.47	0.48
5.283	2.88	11.350	6.23	17.417	0.96	23.48	0.48
5.300	2.88	11.367	6.23	17.433	0.96	23.50	0.48
5.317	2.88	11.383	6.23	17.450	0.96	23.52	0.48
5.333	2.88	11.400	6.23	17.467	0.96	23.53	0.48
5.350	2.88	11.417	6.23	17.483	0.96	23.55	0.48
5.367	2.88	11.433	6.23	17.500	0.96	23.57	0.48
5.383	2.88	11.450	6.23	17.517	0.96	23.58	0.48
5.400	2.88	11.467	6.23	17.533	0.96	23.60	0.48
5.417	2.88	11.483	6.23	17.550	0.96	23.62	0.48
5.433	2.88	11.500	6.23	17.567	0.96	23.63	0.48
5.450	2.88	11.517	6.23	17.583	0.96	23.65	0.48
5.467	2.88	11.533	6.23	17.600	0.96	23.67	0.48
5.483	2.88	11.550	6.23	17.617	0.96	23.68	0.48
5.500	2.88	11.567	6.23	17.633	0.96	23.70	0.48
5.517	2.88	11.583	6.23	17.650	0.96	23.72	0.48
5.533	2.88	11.600	6.23	17.667	0.96	23.73	0.48
5.550	2.88	11.617	6.23	17.683	0.96	23.75	0.48
5.567	2.88	11.633	6.23	17.700	0.96	23.77	0.48
5.583	2.88	11.650	6.23	17.717	0.96	23.78	0.48
5.600	2.88	11.667	6.23	17.733	0.96	23.80	0.48
5.617	2.88	11.683	6.23	17.750	0.96	23.82	0.48
5.633	2.88	11.700	6.23	17.767	0.96	23.83	0.48
5.650	2.88	11.717	6.23	17.783	0.96	23.85	0.48
5.667	2.88	11.733	6.23	17.800	0.96	23.87	0.48
5.683	2.88	11.750	6.23	17.817	0.96	23.88	0.48
5.700	2.88	11.767	6.23	17.833	0.96	23.90	0.48
5.717	2.88	11.783	6.23	17.850	0.96	23.92	0.48
5.733	2.88	11.800	6.23	17.867	0.96	23.93	0.48
5.750	2.88	11.817	6.23	17.883	0.96	23.95	0.48
5.767	2.88	11.833	6.23	17.900	0.96	23.97	0.48
5.783	2.88	11.850	6.23	17.917	0.96	23.98	0.48
5.800	2.88	11.867	6.23	17.933	0.96	24.00	0.48
5.817	2.88	11.883	6.23	17.950	0.96	24.02	0.48
5.833	2.88	11.900	6.23	17.967	0.96	24.03	0.48
5.850	2.88	11.917	6.23	17.983	0.96	24.05	0.48
5.867	2.88	11.933	6.23	18.000	0.96	24.07	0.48
5.883	2.88	11.950	6.23	18.017	0.96	24.08	0.48
5.900	2.88	11.967	6.23	18.033	0.96	24.10	0.48
5.917	2.88	11.983	6.23	18.050	0.96	24.12	0.48
5.933	2.88	12.000	6.23	18.067	0.96	24.13	0.48
5.950	2.88	12.017	6.23	18.083	0.96	24.15	0.48
5.967	2.88	12.033	6.23	18.100	0.96	24.17	0.48
5.983	2.88	12.050	6.23	18.117	0.96	24.18	0.48
6.000	2.88	12.067	6.23	18.133	0.96	24.20	0.48
6.017	2.88	12.083	6.23	18.150	0.96	24.22	0.48
6.033	2.88	12.100	6.23	18.167	0.96	24.23	0.48
6.050	2.88	12.117	6.23	18.183	0.96	24.25	0.48
6.067	2.88	12.133	6.23	18.200	0.96		

Max.Eff.Inten.(mm/hr)=	22.06	18.37
over (min)	6.00	10.00

Storage Coeff. (min)=	6.32 (ii)	9.43 (ii)	
Unit Hyd. Tpeak (min)=	6.00	10.00	
Unit Hyd. peak (cms)=	0.18	0.12	
			TOTALS
PEAK FLOW (cms)=	0.25	0.00	0.250 (iii)
TIME TO PEAK (hrs)=	9.98	10.25	10.25
RUNOFF VOLUME (mm)=	94.91	64.02	94.61
TOTAL RAINFALL (mm)=	95.92	95.92	95.92
RUNOFF COEFFICIENT =	0.99	0.67	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7630)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0826	0.2320
	0.0347	0.1170	0.0967	0.2609
	0.0534	0.1580	0.1090	0.2940
	0.0655	0.1890	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7629)	4.090	0.250	10.25	94.61
OUTFLOW: ID= 1 (7630)	4.090	0.078	10.63	87.05

PEAK FLOW REDUCTION [Qout/Qin](%)= 31.27
TIME SHIFT OF PEAK FLOW (min)= 23.00
MAXIMUM STORAGE USED (ha.m.)= 0.2210

CALIB			
STANDHYD (7631)	Area (ha)= 3.91		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.87	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	161.45	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	2.88	12.150	6.23	18.22	0.96
0.033	0.00	6.100	2.88	12.167	6.23	18.23	0.96
0.050	0.00	6.117	2.88	12.183	6.23	18.25	0.96
0.067	0.00	6.133	2.88	12.200	6.23	18.27	0.48
0.083	0.00	6.150	2.88	12.217	6.23	18.28	0.48
0.100	0.00	6.167	2.88	12.233	6.23	18.30	0.48
0.117	0.00	6.183	2.88	12.250	6.23	18.32	0.48
0.133	0.00	6.200	2.88	12.267	3.36	18.33	0.48
0.150	0.00	6.217	2.88	12.283	3.36	18.35	0.48
0.167	0.00	6.233	2.88	12.300	3.36	18.37	0.48
0.183	0.00	6.250	2.89	12.317	3.36	18.38	0.48
0.200	0.00	6.267	8.15	12.333	3.36	18.40	0.48
0.217	0.00	6.283	8.15	12.350	3.36	18.42	0.48
0.233	0.00	6.300	8.15	12.367	3.36	18.43	0.48
0.250	0.00	6.317	8.15	12.383	3.36	18.45	0.48
0.267	0.48	6.333	8.15	12.400	3.36	18.47	0.48
0.283	0.48	6.350	8.15	12.417	3.36	18.48	0.48
0.300	0.48	6.367	8.15	12.433	3.36	18.50	0.48
0.317	0.48	6.383	8.15	12.450	3.36	18.52	0.48
0.333	0.48	6.400	8.15	12.467	3.36	18.53	0.48

0.350	0.48	6.417	8.15	12.483	3.36	18.55	0.48
0.367	0.48	6.433	8.15	12.500	3.36	18.57	0.48
0.383	0.48	6.450	8.15	12.517	3.36	18.58	0.48
0.400	0.48	6.467	8.15	12.533	3.36	18.60	0.48
0.417	0.48	6.483	8.15	12.550	3.36	18.62	0.48
0.433	0.48	6.500	8.15	12.567	3.36	18.63	0.48
0.450	0.48	6.517	8.15	12.583	3.36	18.65	0.48
0.467	0.48	6.533	8.15	12.600	3.36	18.67	0.48
0.483	0.48	6.550	8.15	12.617	3.36	18.68	0.48
0.500	0.48	6.567	8.15	12.633	3.36	18.70	0.48
0.517	0.48	6.583	8.15	12.650	3.36	18.72	0.48
0.533	0.48	6.600	8.15	12.667	3.36	18.73	0.48
0.550	0.48	6.617	8.15	12.683	3.36	18.75	0.48
0.567	0.48	6.633	8.15	12.700	3.36	18.77	0.48
0.583	0.48	6.650	8.15	12.717	3.36	18.78	0.48
0.600	0.48	6.667	8.15	12.733	3.36	18.80	0.48
0.617	0.48	6.683	8.15	12.750	3.36	18.82	0.48
0.633	0.48	6.700	8.15	12.767	3.36	18.83	0.48
0.650	0.48	6.717	8.15	12.783	3.36	18.85	0.48
0.667	0.48	6.733	8.15	12.800	3.36	18.87	0.48
0.683	0.48	6.750	8.15	12.817	3.36	18.88	0.48
0.700	0.48	6.767	8.15	12.833	3.36	18.90	0.48
0.717	0.48	6.783	8.15	12.850	3.36	18.92	0.48
0.733	0.48	6.800	8.15	12.867	3.36	18.93	0.48
0.750	0.48	6.817	8.15	12.883	3.36	18.95	0.48
0.767	0.48	6.833	8.15	12.900	3.36	18.97	0.48
0.783	0.48	6.850	8.15	12.917	3.36	18.98	0.48
0.800	0.48	6.867	8.15	12.933	3.36	19.00	0.48
0.817	0.48	6.883	8.15	12.950	3.36	19.02	0.48
0.833	0.48	6.900	8.15	12.967	3.36	19.03	0.48
0.850	0.48	6.917	8.15	12.983	3.36	19.05	0.48
0.867	0.48	6.933	8.15	13.000	3.36	19.07	0.48
0.883	0.48	6.950	8.15	13.017	3.36	19.08	0.48
0.900	0.48	6.967	8.15	13.033	3.36	19.10	0.48
0.917	0.48	6.983	8.15	13.050	3.36	19.12	0.48
0.933	0.48	7.000	8.15	13.067	3.36	19.13	0.48
0.950	0.48	7.017	8.15	13.083	3.36	19.15	0.48
0.967	0.48	7.033	8.15	13.100	3.36	19.17	0.48
0.983	0.48	7.050	8.15	13.117	3.36	19.18	0.48
1.000	0.48	7.067	8.15	13.133	3.36	19.20	0.48
1.017	0.48	7.083	8.15	13.150	3.36	19.22	0.48
1.033	0.48	7.100	8.15	13.167	3.36	19.23	0.48
1.050	0.48	7.117	8.15	13.183	3.36	19.25	0.48
1.067	0.48	7.133	8.15	13.200	3.36	19.27	0.48
1.083	0.48	7.150	8.15	13.217	3.36	19.28	0.48
1.100	0.48	7.167	8.15	13.233	3.36	19.30	0.48
1.117	0.48	7.183	8.15	13.250	3.36	19.32	0.48
1.133	0.48	7.200	8.15	13.267	3.36	19.33	0.48
1.150	0.48	7.217	8.15	13.283	3.36	19.35	0.48
1.167	0.48	7.233	8.15	13.300	3.36	19.37	0.48
1.183	0.48	7.250	8.15	13.317	3.36	19.38	0.48
1.200	0.48	7.267	8.15	13.333	3.36	19.40	0.48
1.217	0.48	7.283	8.15	13.350	3.36	19.42	0.48
1.233	0.48	7.300	8.15	13.367	3.36	19.43	0.48
1.250	0.48	7.317	8.15	13.383	3.36	19.45	0.48
1.267	0.48	7.333	8.15	13.400	3.36	19.47	0.48
1.283	0.48	7.350	8.15	13.417	3.36	19.48	0.48
1.300	0.48	7.367	8.15	13.433	3.36	19.50	0.48
1.317	0.48	7.383	8.15	13.450	3.36	19.52	0.48
1.333	0.48	7.400	8.15	13.467	3.36	19.53	0.48
1.350	0.48	7.417	8.15	13.483	3.36	19.55	0.48
1.367	0.48	7.433	8.15	13.500	3.36	19.57	0.48
1.383	0.48	7.450	8.15	13.517	3.36	19.58	0.48
1.400	0.48	7.467	8.15	13.533	3.36	19.60	0.48
1.417	0.48	7.483	8.15	13.550	3.36	19.62	0.48
1.433	0.48	7.500	8.15	13.567	3.36	19.63	0.48
1.450	0.48	7.517	8.15	13.583	3.36	19.65	0.48
1.467	0.48	7.533	8.15	13.600	3.36	19.67	0.48
1.483	0.48	7.550	8.15	13.617	3.36	19.68	0.48
1.500	0.48	7.567	8.15	13.633	3.36	19.70	0.48
1.517	0.48	7.583	8.15	13.650	3.36	19.72	0.48
1.533	0.48	7.600	8.15	13.667	3.36	19.73	0.48
1.550	0.48	7.617	8.15	13.683	3.36	19.75	0.48
1.567	0.48	7.633	8.15	13.700	3.36	19.77	0.48
1.583	0.48	7.650	8.15	13.717	3.36	19.78	0.48
1.600	0.48	7.667	8.15	13.733	3.36	19.80	0.48
1.617	0.48	7.683	8.15	13.750	3.36	19.82	0.48
1.633	0.48	7.700	8.15	13.767	3.36	19.83	0.48
1.650	0.48	7.717	8.15	13.783	3.36	19.85	0.48
1.667	0.48	7.733	8.15	13.800	3.36	19.87	0.48
1.683	0.48	7.750	8.15	13.817	3.36	19.88	0.48
1.700	0.48	7.767	8.15	13.833	3.36	19.90	0.48
1.717	0.48	7.783	8.15	13.850	3.36	19.92	0.48
1.733	0.48	7.800	8.15	13.867	3.36	19.93	0.48
1.750	0.48	7.817	8.15	13.883	3.36	19.95	0.48
1.767	0.48	7.833	8.15	13.900	3.36	19.97	0.48
1.783	0.48	7.850	8.15	13.917	3.36	19.98	0.48
1.800	0.48	7.867	8.15	13.933	3.36	20.00	0.48
1.817	0.48	7.883	8.15	13.950	3.36	20.02	0.48
1.833	0.48	7.900	8.15	13.967	3.36	20.03	0.48
1.850	0.48	7.917	8.15	13.983	3.36	20.05	0.48
1.867	0.48	7.933	8.15	14.000	3.36	20.07	0.48
1.883	0.48	7.950	8.15	14.017	3.36	20.08	0.48
1.900	0.48	7.967	8.15	14.033	3.36	20.10	0.48
1.917	0.48	7.983	8.15	14.050	3.36	20.12	0.48
1.933	0.48	8.000	8.15	14.067	3.36	20.13	0.48
1.950	0.48	8.017	8.15	14.083	3.36	20.15	0.48
1.967	0.48	8.033	8.15	14.100	3.36	20.17	0.48
1.983	0.48	8.050	8.15	14.117	3.36	20.18	0.48
2.000	0.48	8.067	8.15	14.133	3.36	20.20	0.48
2.017	0.48	8.083	8.15	14.150	3.36	20.22	0.48
2.033	0.48	8.100	8.15	14.167	3.36	20.23	0.48
2.050	0.48	8.117	8.15	14.183	3.36	20.25	0.48
2.067	0.48	8.133	8.15	14.200	3.36	20.27	0.48
2.083	0.48	8.150	8.15	14.217	3.36	20.28	0.48
2.100	0.48	8.167	8.15	14.233	3.36	20.30	0.48
2.117	0.48	8.183	8.15	14.250	3.36	20.32	0.48
2.133	0.48	8.200	8.15	14.267	1.92	20.33	0.48
2.150	0.48	8.217	8.15	14.283	1.92	20.35	0.48
2.167	0.48	8.233	8.15	14.300	1.92	20.37	0.48
2.183	0.48	8.250	8.19	14.317	1.92	20.38	0.48
2.200	0.48	8.267	22.06	14.333	1.92	20.40	0.48
2.217	0.48	8.283	22.06	14.350	1.92	20.42	0.48
2.233	0.48	8.300	22.06	14.367	1.92	20.43	0.48
2.250	0.48	8.317	22.06	14.383	1.92	20.45	0.48
2.267	0.48	8.333	22.06	14.400	1.92	20.47	0.48
2.283	0.48	8.350	22.06	14.417	1.92	20.48	0.48
2.300	0.48	8.367	22.06	14.433	1.92	20.50	0.48
2.317	0.48	8.383	22.06	14.450	1.92	20.52	0.48
2.333	0.48	8.400	22.06	14.467	1.92	20.53	0.48
2.350	0.48	8.417	22.06	14.483	1.92	20.55	0.48
2.367	0.48	8.433	22.06	14.500	1.92	20.57	0.48
2.383	0.48	8.450	22.06	14.517	1.92	20.58	0.48
2.400	0.48	8.467	22.06	14.533	1.92	20.60	0.48
2.417	0.48	8.483	22.06	14.550	1.92	20.62	0.48
2.433	0.48	8.500	22.06	14.567	1.92	20.63	0.48
2.450	0.48	8.517	22.06	14.583	1.92	20.65	0.48
2.467	0.48	8.533	22.06	14.600	1.92	20.67	0.48
2.483	0.48	8.550	22.06	14.617	1.92	20.68	0.48
2.500	0.48	8.567	22.06	14.633	1.92	20.70	0.48
2.517	0.48	8.583	22.06	14.650	1.92	20.72	0.48
2.533	0.48	8.600	22.06	14.667	1.92	20.73	0.48
2.550	0.48	8.617	22.06	14.683	1.92	20.75	0.48
2.567	0.48	8.633	22.06	14.700	1.92	20.77	0.48
2.583	0.48	8.650	22.06	14.717	1.92	20.78	0.48
2.600	0.48	8.667	22.06	14.733	1.92	20.80	0.48
2.617	0.48	8.683	22.06	14.750	1.92	20.82	0.48
2.633	0.48	8.700	22.06	14.767	1.92	20.83	0.48
2.650	0.48	8.717	22.06	14.783	1.92	20.85	0.48
2.667	0.48	8.733	22.06	14.800	1.92	20.87	0.48
2.683	0.48	8.750	22.06	14.817	1.92	20.88	0.48
2.700	0.48	8.767	22.06	14.833	1.92	20.90	0.48
2.717	0.48	8.783	22.06	14.850	1.92	20.92	0.48
2.733	0.48	8.800	22.06	14.867	1.92	20.93	0.48
2.750	0.48	8.817	22.06	14.883	1.92	20.95	0.48
2.767	0.48	8.833	22.06	14.900	1.92	20.97	0.48
2.783	0.48	8.850	22.06	14.917	1.92	20.98	0.48
2.800	0.48	8.867	22.06	14.933	1.92	21.00	0.48
2.817	0.48	8.883	22.06	14.950	1.92	21.02	0.48
2.833	0.48	8.900	22.06	14.967	1.92	21.03	0.48
2.850	0.48	8.917	22.06	14.983	1.92	21.05	0.48
2.867	0.48	8.933	22.06	15.000	1.92	21.07	0.48

2.883	0.48	8.950	22.06	15.017	1.92	21.08	0.48
2.900	0.48	8.967	22.06	15.033	1.92	21.10	0.48
2.917	0.48	8.983	22.06	15.050	1.92	21.12	0.48
2.933	0.48	9.000	22.06	15.067	1.92	21.13	0.48
2.950	0.48	9.017	22.06	15.083	1.92	21.15	0.48
2.967	0.48	9.033	22.06	15.100	1.92	21.17	0.48
2.983	0.48	9.050	22.06	15.117	1.92	21.18	0.48
3.000	0.48	9.067	22.06	15.133	1.92	21.20	0.48
3.017	0.48	9.083	22.06	15.150	1.92	21.22	0.48
3.033	0.48	9.100	22.06	15.167	1.92	21.23	0.48
3.050	0.48	9.117	22.06	15.183	1.92	21.25	0.48
3.067	0.48	9.133	22.06	15.200	1.92	21.27	0.48
3.083	0.48	9.150	22.06	15.217	1.92	21.28	0.48
3.100	0.48	9.167	22.06	15.233	1.92	21.30	0.48
3.117	0.48	9.183	22.06	15.250	1.92	21.32	0.48
3.133	0.48	9.200	22.06	15.267	1.92	21.33	0.48
3.150	0.48	9.217	22.06	15.283	1.92	21.35	0.48
3.167	0.48	9.233	22.06	15.300	1.92	21.37	0.48
3.183	0.48	9.250	22.06	15.317	1.92	21.38	0.48
3.200	0.48	9.267	22.06	15.333	1.92	21.40	0.48
3.217	0.48	9.283	22.06	15.350	1.92	21.42	0.48
3.233	0.48	9.300	22.06	15.367	1.92	21.43	0.48
3.250	0.48	9.317	22.06	15.383	1.92	21.45	0.48
3.267	0.48	9.333	22.06	15.400	1.92	21.47	0.48
3.283	0.48	9.350	22.06	15.417	1.92	21.48	0.48
3.300	0.48	9.367	22.06	15.433	1.92	21.50	0.48
3.317	0.48	9.383	22.06	15.450	1.92	21.52	0.48
3.333	0.48	9.400	22.06	15.467	1.92	21.53	0.48
3.350	0.48	9.417	22.06	15.483	1.92	21.55	0.48
3.367	0.48	9.433	22.06	15.500	1.92	21.57	0.48
3.383	0.48	9.450	22.06	15.517	1.92	21.58	0.48
3.400	0.48	9.467	22.06	15.533	1.92	21.60	0.48
3.417	0.48	9.483	22.06	15.550	1.92	21.62	0.48
3.433	0.48	9.500	22.06	15.567	1.92	21.63	0.48
3.450	0.48	9.517	22.06	15.583	1.92	21.65	0.48
3.467	0.48	9.533	22.06	15.600	1.92	21.67	0.48
3.483	0.48	9.550	22.06	15.617	1.92	21.68	0.48
3.500	0.48	9.567	22.06	15.633	1.92	21.70	0.48
3.517	0.48	9.583	22.06	15.650	1.92	21.72	0.48
3.533	0.48	9.600	22.06	15.667	1.92	21.73	0.48
3.550	0.48	9.617	22.06	15.683	1.92	21.75	0.48
3.567	0.48	9.633	22.06	15.700	1.92	21.77	0.48
3.583	0.48	9.650	22.06	15.717	1.92	21.78	0.48
3.600	0.48	9.667	22.06	15.733	1.92	21.80	0.48
3.617	0.48	9.683	22.06	15.750	1.92	21.82	0.48
3.633	0.48	9.700	22.06	15.767	1.92	21.83	0.48
3.650	0.48	9.717	22.06	15.783	1.92	21.85	0.48
3.667	0.48	9.733	22.06	15.800	1.92	21.87	0.48
3.683	0.48	9.750	22.06	15.817	1.92	21.88	0.48
3.700	0.48	9.767	22.06	15.833	1.92	21.90	0.48
3.717	0.48	9.783	22.06	15.850	1.92	21.92	0.48
3.733	0.48	9.800	22.06	15.867	1.92	21.93	0.48
3.750	0.48	9.817	22.06	15.883	1.92	21.95	0.48
3.767	0.48	9.833	22.06	15.900	1.92	21.97	0.48
3.783	0.48	9.850	22.06	15.917	1.92	21.98	0.48
3.800	0.48	9.867	22.06	15.933	1.92	22.00	0.48
3.817	0.48	9.883	22.06	15.950	1.92	22.02	0.48
3.833	0.48	9.900	22.06	15.967	1.92	22.03	0.48
3.850	0.48	9.917	22.06	15.983	1.92	22.05	0.48
3.867	0.48	9.933	22.06	16.000	1.92	22.07	0.48
3.883	0.48	9.950	22.06	16.017	1.92	22.08	0.48
3.900	0.48	9.967	22.06	16.033	1.92	22.10	0.48
3.917	0.48	9.983	22.06	16.050	1.92	22.12	0.48
3.933	0.48	10.000	22.06	16.067	1.92	22.13	0.48
3.950	0.48	10.017	22.06	16.083	1.92	22.15	0.48
3.967	0.48	10.033	22.06	16.100	1.92	22.17	0.48
3.983	0.48	10.050	22.06	16.117	1.92	22.18	0.48
4.000	0.48	10.067	22.06	16.133	1.92	22.20	0.48
4.017	0.48	10.083	22.06	16.150	1.92	22.22	0.48
4.033	0.48	10.100	22.06	16.167	1.92	22.23	0.48
4.050	0.48	10.117	22.06	16.183	1.92	22.25	0.48
4.067	0.48	10.133	22.06	16.200	1.92	22.27	0.48
4.083	0.48	10.150	22.06	16.217	1.92	22.28	0.48
4.100	0.48	10.167	22.06	16.233	1.92	22.30	0.48
4.117	0.48	10.183	22.06	16.250	1.92	22.32	0.48
4.133	0.48	10.200	22.06	16.267	0.96	22.33	0.48
4.150	0.48	10.217	22.06	16.283	0.96	22.35	0.48
4.167	0.48	10.233	22.06	16.300	0.96	22.37	0.48
4.183	0.48	10.250	22.05	16.317	0.96	22.38	0.48
4.200	0.48	10.267	6.23	16.333	0.96	22.40	0.48
4.217	0.48	10.283	6.23	16.350	0.96	22.42	0.48
4.233	0.48	10.300	6.23	16.367	0.96	22.43	0.48
4.250	0.48	10.317	6.23	16.383	0.96	22.45	0.48
4.267	2.88	10.333	6.23	16.400	0.96	22.47	0.48
4.283	2.88	10.350	6.23	16.417	0.96	22.48	0.48
4.300	2.88	10.367	6.23	16.433	0.96	22.50	0.48
4.317	2.88	10.383	6.23	16.450	0.96	22.52	0.48
4.333	2.88	10.400	6.23	16.467	0.96	22.53	0.48
4.350	2.88	10.417	6.23	16.483	0.96	22.55	0.48
4.367	2.88	10.433	6.23	16.500	0.96	22.57	0.48
4.383	2.88	10.450	6.23	16.517	0.96	22.58	0.48
4.400	2.88	10.467	6.23	16.533	0.96	22.60	0.48
4.417	2.88	10.483	6.23	16.550	0.96	22.62	0.48
4.433	2.88	10.500	6.23	16.567	0.96	22.63	0.48
4.450	2.88	10.517	6.23	16.583	0.96	22.65	0.48
4.467	2.88	10.533	6.23	16.600	0.96	22.67	0.48
4.483	2.88	10.550	6.23	16.617	0.96	22.68	0.48
4.500	2.88	10.567	6.23	16.633	0.96	22.70	0.48
4.517	2.88	10.583	6.23	16.650	0.96	22.72	0.48
4.533	2.88	10.600	6.23	16.667	0.96	22.73	0.48
4.550	2.88	10.617	6.23	16.683	0.96	22.75	0.48
4.567	2.88	10.633	6.23	16.700	0.96	22.77	0.48
4.583	2.88	10.650	6.23	16.717	0.96	22.78	0.48
4.600	2.88	10.667	6.23	16.733	0.96	22.80	0.48
4.617	2.88	10.683	6.23	16.750	0.96	22.82	0.48
4.633	2.88	10.700	6.23	16.767	0.96	22.83	0.48
4.650	2.88	10.717	6.23	16.783	0.96	22.85	0.48
4.667	2.88	10.733	6.23	16.800	0.96	22.87	0.48
4.683	2.88	10.750	6.23	16.817	0.96	22.88	0.48
4.700	2.88	10.767	6.23	16.833	0.96	22.90	0.48
4.717	2.88	10.783	6.23	16.850	0.96	22.92	0.48
4.733	2.88	10.800	6.23	16.867	0.96	22.93	0.48
4.750	2.88	10.817	6.23	16.883	0.96	22.95	0.48
4.767	2.88	10.833	6.23	16.900	0.96	22.97	0.48
4.783	2.88	10.850	6.23	16.917	0.96	22.98	0.48
4.800	2.88	10.867	6.23	16.933	0.96	23.00	0.48
4.817	2.88	10.883	6.23	16.950	0.96	23.02	0.48
4.833	2.88	10.900	6.23	16.967	0.96	23.03	0.48
4.850	2.88	10.917	6.23	16.983	0.96	23.05	0.48
4.867	2.88	10.933	6.23	17.000	0.96	23.07	0.48
4.883	2.88	10.950	6.23	17.017	0.96	23.08	0.48
4.900	2.88	10.967	6.23	17.033	0.96	23.10	0.48
4.917	2.88	10.983	6.23	17.050	0.96	23.12	0.48
4.933	2.88	11.000	6.23	17.067	0.96	23.13	0.48
4.950	2.88	11.017	6.23	17.083	0.96	23.15	0.48
4.967	2.88	11.033	6.23	17.100	0.96	23.17	0.48
4.983	2.88	11.050	6.23	17.117	0.96	23.18	0.48
5.000	2.88	11.067	6.23	17.133	0.96	23.20	0.48
5.017	2.88	11.083	6.23	17.150	0.96	23.22	0.48
5.033	2.88	11.100	6.23	17.167	0.96	23.23	0.48
5.050	2.88	11.117	6.23	17.183	0.96	23.25	0.48
5.067	2.88	11.133	6.23	17.200	0.96	23.27	0.48
5.083	2.88	11.150	6.23	17.217	0.96	23.28	0.48
5.100	2.88	11.167	6.23	17.233	0.96	23.30	0.48
5.117	2.88	11.183	6.23	17.250	0.96	23.32	0.48
5.133	2.88	11.200	6.23	17.267	0.96	23.33	0.48
5.150	2.88	11.217	6.23	17.283	0.96	23.35	0.48
5.167	2.88	11.233	6.23	17.300	0.96	23.37	0.48
5.183	2.88	11.250	6.23	17.317	0.96	23.38	0.48
5.200	2.88	11.267	6.23	17.333	0.96	23.40	0.48
5.217	2.88	11.283	6.23	17.350	0.96	23.42	0.48
5.233	2.88	11.300	6.23	17.367	0.96	23.43	0.48
5.250	2.88	11.317	6.23	17.383	0.96	23.45	0.48
5.267	2.88	11.333	6.23	17.400	0.96	23.47	0.48
5.283	2.88	11.350	6.23	17.417	0.96	23.48	0.48
5.300	2.88	11.367	6.23	17.433	0.96	23.50	0.48
5.317	2.88	11.383	6.23	17.450	0.96	23.52	0.48
5.333	2.88	11.400	6.23	17.467	0.96	23.53	0.48
5.350	2.88	11.417	6.23	17.483	0.96	23.55	0.48
5.367	2.88	11.433	6.23	17.500	0.96	23.57	0.48
5.383	2.88	11.450	6.23	17.517	0.96	23.58	0.48
5.400	2.88	11.467	6.23	17.533	0.96	23.60	0.48

5.417	2.88	11.483	6.23	17.550	0.96	23.62	0.48
5.433	2.88	11.500	6.23	17.567	0.96	23.63	0.48
5.450	2.88	11.517	6.23	17.583	0.96	23.65	0.48
5.467	2.88	11.533	6.23	17.600	0.96	23.67	0.48
5.483	2.88	11.550	6.23	17.617	0.96	23.68	0.48
5.500	2.88	11.567	6.23	17.633	0.96	23.70	0.48
5.517	2.88	11.583	6.23	17.650	0.96	23.72	0.48
5.533	2.88	11.600	6.23	17.667	0.96	23.73	0.48
5.550	2.88	11.617	6.23	17.683	0.96	23.75	0.48
5.567	2.88	11.633	6.23	17.700	0.96	23.77	0.48
5.583	2.88	11.650	6.23	17.717	0.96	23.78	0.48
5.600	2.88	11.667	6.23	17.733	0.96	23.80	0.48
5.617	2.88	11.683	6.23	17.750	0.96	23.82	0.48
5.633	2.88	11.700	6.23	17.767	0.96	23.83	0.48
5.650	2.88	11.717	6.23	17.783	0.96	23.85	0.48
5.667	2.88	11.733	6.23	17.800	0.96	23.87	0.48
5.683	2.88	11.750	6.23	17.817	0.96	23.88	0.48
5.700	2.88	11.767	6.23	17.833	0.96	23.90	0.48
5.717	2.88	11.783	6.23	17.850	0.96	23.92	0.48
5.733	2.88	11.800	6.23	17.867	0.96	23.93	0.48
5.750	2.88	11.817	6.23	17.883	0.96	23.95	0.48
5.767	2.88	11.833	6.23	17.900	0.96	23.97	0.48
5.783	2.88	11.850	6.23	17.917	0.96	23.98	0.48
5.800	2.88	11.867	6.23	17.933	0.96	24.00	0.48
5.817	2.88	11.883	6.23	17.950	0.96	24.02	0.48
5.833	2.88	11.900	6.23	17.967	0.96	24.03	0.48
5.850	2.88	11.917	6.23	17.983	0.96	24.05	0.48
5.867	2.88	11.933	6.23	18.000	0.96	24.07	0.48
5.883	2.88	11.950	6.23	18.017	0.96	24.08	0.48
5.900	2.88	11.967	6.23	18.033	0.96	24.10	0.48
5.917	2.88	11.983	6.23	18.050	0.96	24.12	0.48
5.933	2.88	12.000	6.23	18.067	0.96	24.13	0.48
5.950	2.88	12.017	6.23	18.083	0.96	24.15	0.48
5.967	2.88	12.033	6.23	18.100	0.96	24.17	0.48
5.983	2.88	12.050	6.23	18.117	0.96	24.18	0.48
6.000	2.88	12.067	6.23	18.133	0.96	24.20	0.48
6.017	2.88	12.083	6.23	18.150	0.96	24.22	0.48
6.033	2.88	12.100	6.23	18.167	0.96	24.23	0.48
6.050	2.88	12.117	6.23	18.183	0.96	24.25	0.48
6.067	2.88	12.133	6.23	18.200	0.96		

Max.Eff.Inten.(mm/hr)=	22.06	18.37	
over (min)	6.00	10.00	
Storage Coeff. (min)=	6.23 (ii)	9.35 (ii)	
Unit Hyd. Tpeak (min)=	6.00	10.00	
Unit Hyd. peak (cms)=	0.18	0.12	
			TOTALS
PEAK FLOW (cms)=	0.24	0.00	0.239 (iii)
TIME TO PEAK (hrs)=	9.73	10.25	10.25
RUNOFF VOLUME (mm)=	94.90	64.01	94.61
TOTAL RAINFALL (mm)=	95.92	95.92	95.92
RUNOFF COEFFICIENT =	0.99	0.67	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7632) IN= 2---> OUT= 1 DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0792	0.2220
	0.0333	0.1130	0.0928	0.2500
	0.0512	0.1510	0.1046	0.2810
	0.0629	0.1810	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7631)	3.910	0.239	10.25	94.61
OUTFLOW: ID= 1 (7632)	3.910	0.075	10.63	86.98

PEAK FLOW REDUCTION [Qout/Qin](%)= 31.34
TIME SHIFT OF PEAK FLOW (min)= 23.00
MAXIMUM STORAGE USED (ha.m.)= 0.2113

CALIB
STANDHYD (7641) Area (ha)= 2.21
ID= 1 DT= 1.0 min Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.19	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	121.38	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	2.88	12.150	6.23	18.22	0.96
0.033	0.00	6.100	2.88	12.167	6.23	18.23	0.96
0.050	0.00	6.117	2.88	12.183	6.23	18.25	0.96
0.067	0.00	6.133	2.88	12.200	6.23	18.27	0.48
0.083	0.00	6.150	2.88	12.217	6.23	18.28	0.48
0.100	0.00	6.167	2.88	12.233	6.23	18.30	0.48
0.117	0.00	6.183	2.88	12.250	6.23	18.32	0.48
0.133	0.00	6.200	2.88	12.267	3.36	18.33	0.48
0.150	0.00	6.217	2.88	12.283	3.36	18.35	0.48
0.167	0.00	6.233	2.88	12.300	3.36	18.37	0.48
0.183	0.00	6.250	2.89	12.317	3.36	18.38	0.48
0.200	0.00	6.267	8.15	12.333	3.36	18.40	0.48
0.217	0.00	6.283	8.15	12.350	3.36	18.42	0.48
0.233	0.00	6.300	8.15	12.367	3.36	18.43	0.48
0.250	0.00	6.317	8.15	12.383	3.36	18.45	0.48
0.267	0.48	6.333	8.15	12.400	3.36	18.47	0.48
0.283	0.48	6.350	8.15	12.417	3.36	18.48	0.48
0.300	0.48	6.367	8.15	12.433	3.36	18.50	0.48
0.317	0.48	6.383	8.15	12.450	3.36	18.52	0.48
0.333	0.48	6.400	8.15	12.467	3.36	18.53	0.48
0.350	0.48	6.417	8.15	12.483	3.36	18.55	0.48
0.367	0.48	6.433	8.15	12.500	3.36	18.57	0.48
0.383	0.48	6.450	8.15	12.517	3.36	18.58	0.48
0.400	0.48	6.467	8.15	12.533	3.36	18.60	0.48
0.417	0.48	6.483	8.15	12.550	3.36	18.62	0.48
0.433	0.48	6.500	8.15	12.567	3.36	18.63	0.48
0.450	0.48	6.517	8.15	12.583	3.36	18.65	0.48
0.467	0.48	6.533	8.15	12.600	3.36	18.67	0.48
0.483	0.48	6.550	8.15	12.617	3.36	18.68	0.48
0.500	0.48	6.567	8.15	12.633	3.36	18.70	0.48
0.517	0.48	6.583	8.15	12.650	3.36	18.72	0.48
0.533	0.48	6.600	8.15	12.667	3.36	18.73	0.48
0.550	0.48	6.617	8.15	12.683	3.36	18.75	0.48
0.567	0.48	6.633	8.15	12.700	3.36	18.77	0.48
0.583	0.48	6.650	8.15	12.717	3.36	18.78	0.48
0.600	0.48	6.667	8.15	12.733	3.36	18.80	0.48
0.617	0.48	6.683	8.15	12.750	3.36	18.82	0.48
0.633	0.48	6.700	8.15	12.767	3.36	18.83	0.48
0.650	0.48	6.717	8.15	12.783	3.36	18.85	0.48
0.667	0.48	6.733	8.15	12.800	3.36	18.87	0.48
0.683	0.48	6.750	8.15	12.817	3.36	18.88	0.48
0.700	0.48	6.767	8.15	12.833	3.36	18.90	0.48
0.717	0.48	6.783	8.15	12.850	3.36	18.92	0.48
0.733	0.48	6.800	8.15	12.867	3.36	18.93	0.48
0.750	0.48	6.817	8.15	12.883	3.36	18.95	0.48
0.767	0.48	6.833	8.15	12.900	3.36	18.97	0.48
0.783	0.48	6.850	8.15	12.917	3.36	18.98	0.48
0.800	0.48	6.867	8.15	12.933	3.36	19.00	0.48
0.817	0.48	6.883	8.15	12.950	3.36	19.02	0.48
0.833	0.48	6.900	8.15	12.967	3.36	19.03	0.48
0.850	0.48	6.917	8.15	12.983	3.36	19.05	0.48
0.867	0.48	6.933	8.15	13.000	3.36	19.07	0.48
0.883	0.48	6.950	8.15	13.017	3.36	19.08	0.48

0.900	0.48	6.967	8.15	13.033	3.36	19.10	0.48
0.917	0.48	6.983	8.15	13.050	3.36	19.12	0.48
0.933	0.48	7.000	8.15	13.067	3.36	19.13	0.48
0.950	0.48	7.017	8.15	13.083	3.36	19.15	0.48
0.967	0.48	7.033	8.15	13.100	3.36	19.17	0.48
0.983	0.48	7.050	8.15	13.117	3.36	19.18	0.48
1.000	0.48	7.067	8.15	13.133	3.36	19.20	0.48
1.017	0.48	7.083	8.15	13.150	3.36	19.22	0.48
1.033	0.48	7.100	8.15	13.167	3.36	19.23	0.48
1.050	0.48	7.117	8.15	13.183	3.36	19.25	0.48
1.067	0.48	7.133	8.15	13.200	3.36	19.27	0.48
1.083	0.48	7.150	8.15	13.217	3.36	19.28	0.48
1.100	0.48	7.167	8.15	13.233	3.36	19.30	0.48
1.117	0.48	7.183	8.15	13.250	3.36	19.32	0.48
1.133	0.48	7.200	8.15	13.267	3.36	19.33	0.48
1.150	0.48	7.217	8.15	13.283	3.36	19.35	0.48
1.167	0.48	7.233	8.15	13.300	3.36	19.37	0.48
1.183	0.48	7.250	8.15	13.317	3.36	19.38	0.48
1.200	0.48	7.267	8.15	13.333	3.36	19.40	0.48
1.217	0.48	7.283	8.15	13.350	3.36	19.42	0.48
1.233	0.48	7.300	8.15	13.367	3.36	19.43	0.48
1.250	0.48	7.317	8.15	13.383	3.36	19.45	0.48
1.267	0.48	7.333	8.15	13.400	3.36	19.47	0.48
1.283	0.48	7.350	8.15	13.417	3.36	19.48	0.48
1.300	0.48	7.367	8.15	13.433	3.36	19.50	0.48
1.317	0.48	7.383	8.15	13.450	3.36	19.52	0.48
1.333	0.48	7.400	8.15	13.467	3.36	19.53	0.48
1.350	0.48	7.417	8.15	13.483	3.36	19.55	0.48
1.367	0.48	7.433	8.15	13.500	3.36	19.57	0.48
1.383	0.48	7.450	8.15	13.517	3.36	19.58	0.48
1.400	0.48	7.467	8.15	13.533	3.36	19.60	0.48
1.417	0.48	7.483	8.15	13.550	3.36	19.62	0.48
1.433	0.48	7.500	8.15	13.567	3.36	19.63	0.48
1.450	0.48	7.517	8.15	13.583	3.36	19.65	0.48
1.467	0.48	7.533	8.15	13.600	3.36	19.67	0.48
1.483	0.48	7.550	8.15	13.617	3.36	19.68	0.48
1.500	0.48	7.567	8.15	13.633	3.36	19.70	0.48
1.517	0.48	7.583	8.15	13.650	3.36	19.72	0.48
1.533	0.48	7.600	8.15	13.667	3.36	19.73	0.48
1.550	0.48	7.617	8.15	13.683	3.36	19.75	0.48
1.567	0.48	7.633	8.15	13.700	3.36	19.77	0.48
1.583	0.48	7.650	8.15	13.717	3.36	19.78	0.48
1.600	0.48	7.667	8.15	13.733	3.36	19.80	0.48
1.617	0.48	7.683	8.15	13.750	3.36	19.82	0.48
1.633	0.48	7.700	8.15	13.767	3.36	19.83	0.48
1.650	0.48	7.717	8.15	13.783	3.36	19.85	0.48
1.667	0.48	7.733	8.15	13.800	3.36	19.87	0.48
1.683	0.48	7.750	8.15	13.817	3.36	19.88	0.48
1.700	0.48	7.767	8.15	13.833	3.36	19.90	0.48
1.717	0.48	7.783	8.15	13.850	3.36	19.92	0.48
1.733	0.48	7.800	8.15	13.867	3.36	19.93	0.48
1.750	0.48	7.817	8.15	13.883	3.36	19.95	0.48
1.767	0.48	7.833	8.15	13.900	3.36	19.97	0.48
1.783	0.48	7.850	8.15	13.917	3.36	19.98	0.48
1.800	0.48	7.867	8.15	13.933	3.36	20.00	0.48
1.817	0.48	7.883	8.15	13.950	3.36	20.02	0.48
1.833	0.48	7.900	8.15	13.967	3.36	20.03	0.48
1.850	0.48	7.917	8.15	13.983	3.36	20.05	0.48
1.867	0.48	7.933	8.15	14.000	3.36	20.07	0.48
1.883	0.48	7.950	8.15	14.017	3.36	20.08	0.48
1.900	0.48	7.967	8.15	14.033	3.36	20.10	0.48
1.917	0.48	7.983	8.15	14.050	3.36	20.12	0.48
1.933	0.48	8.000	8.15	14.067	3.36	20.13	0.48
1.950	0.48	8.017	8.15	14.083	3.36	20.15	0.48
1.967	0.48	8.033	8.15	14.100	3.36	20.17	0.48
1.983	0.48	8.050	8.15	14.117	3.36	20.18	0.48
2.000	0.48	8.067	8.15	14.133	3.36	20.20	0.48
2.017	0.48	8.083	8.15	14.150	3.36	20.22	0.48
2.033	0.48	8.100	8.15	14.167	3.36	20.23	0.48
2.050	0.48	8.117	8.15	14.183	3.36	20.25	0.48
2.067	0.48	8.133	8.15	14.200	3.36	20.27	0.48
2.083	0.48	8.150	8.15	14.217	3.36	20.28	0.48
2.100	0.48	8.167	8.15	14.233	3.36	20.30	0.48
2.117	0.48	8.183	8.15	14.250	3.36	20.32	0.48
2.133	0.48	8.200	8.15	14.267	1.92	20.33	0.48
2.150	0.48	8.217	8.15	14.283	1.92	20.35	0.48
2.167	0.48	8.233	8.15	14.300	1.92	20.37	0.48
2.183	0.48	8.250	8.19	14.317	1.92	20.38	0.48
2.200	0.48	8.267	22.06	14.333	1.92	20.40	0.48
2.217	0.48	8.283	22.06	14.350	1.92	20.42	0.48
2.233	0.48	8.300	22.06	14.367	1.92	20.43	0.48
2.250	0.48	8.317	22.06	14.383	1.92	20.45	0.48
2.267	0.48	8.333	22.06	14.400	1.92	20.47	0.48
2.283	0.48	8.350	22.06	14.417	1.92	20.48	0.48
2.300	0.48	8.367	22.06	14.433	1.92	20.50	0.48
2.317	0.48	8.383	22.06	14.450	1.92	20.52	0.48
2.333	0.48	8.400	22.06	14.467	1.92	20.53	0.48
2.350	0.48	8.417	22.06	14.483	1.92	20.55	0.48
2.367	0.48	8.433	22.06	14.500	1.92	20.57	0.48
2.383	0.48	8.450	22.06	14.517	1.92	20.58	0.48
2.400	0.48	8.467	22.06	14.533	1.92	20.60	0.48
2.417	0.48	8.483	22.06	14.550	1.92	20.62	0.48
2.433	0.48	8.500	22.06	14.567	1.92	20.63	0.48
2.450	0.48	8.517	22.06	14.583	1.92	20.65	0.48
2.467	0.48	8.533	22.06	14.600	1.92	20.67	0.48
2.483	0.48	8.550	22.06	14.617	1.92	20.68	0.48
2.500	0.48	8.567	22.06	14.633	1.92	20.70	0.48
2.517	0.48	8.583	22.06	14.650	1.92	20.72	0.48
2.533	0.48	8.600	22.06	14.667	1.92	20.73	0.48
2.550	0.48	8.617	22.06	14.683	1.92	20.75	0.48
2.567	0.48	8.633	22.06	14.700	1.92	20.77	0.48
2.583	0.48	8.650	22.06	14.717	1.92	20.78	0.48
2.600	0.48	8.667	22.06	14.733	1.92	20.80	0.48
2.617	0.48	8.683	22.06	14.750	1.92	20.82	0.48
2.633	0.48	8.700	22.06	14.767	1.92	20.83	0.48
2.650	0.48	8.717	22.06	14.783	1.92	20.85	0.48
2.667	0.48	8.733	22.06	14.800	1.92	20.87	0.48
2.683	0.48	8.750	22.06	14.817	1.92	20.88	0.48
2.700	0.48	8.767	22.06	14.833	1.92	20.90	0.48
2.717	0.48	8.783	22.06	14.850	1.92	20.92	0.48
2.733	0.48	8.800	22.06	14.867	1.92	20.93	0.48
2.750	0.48	8.817	22.06	14.883	1.92	20.95	0.48
2.767	0.48	8.833	22.06	14.900	1.92	20.97	0.48
2.783	0.48	8.850	22.06	14.917	1.92	20.98	0.48
2.800	0.48	8.867	22.06	14.933	1.92	21.00	0.48
2.817	0.48	8.883	22.06	14.950	1.92	21.02	0.48
2.833	0.48	8.900	22.06	14.967	1.92	21.03	0.48
2.850	0.48	8.917	22.06	14.983	1.92	21.05	0.48
2.867	0.48	8.933	22.06	15.000	1.92	21.07	0.48
2.883	0.48	8.950	22.06	15.017	1.92	21.08	0.48
2.900	0.48	8.967	22.06	15.033	1.92	21.10	0.48
2.917	0.48	8.983	22.06	15.050	1.92	21.12	0.48
2.933	0.48	9.000	22.06	15.067	1.92	21.13	0.48
2.950	0.48	9.017	22.06	15.083	1.92	21.15	0.48
2.967	0.48	9.033	22.06	15.100	1.92	21.17	0.48
2.983	0.48	9.050	22.06	15.117	1.92	21.18	0.48
3.000	0.48	9.067	22.06	15.133	1.92	21.20	0.48
3.017	0.48	9.083	22.06	15.150	1.92	21.22	0.48
3.033	0.48	9.100	22.06	15.167	1.92	21.23	0.48
3.050	0.48	9.117	22.06	15.183	1.92	21.25	0.48
3.067	0.48	9.133	22.06	15.200	1.92	21.27	0.48
3.083	0.48	9.150	22.06	15.217	1.92	21.28	0.48
3.100	0.48	9.167	22.06	15.233	1.92	21.30	0.48
3.117	0.48	9.183	22.06	15.250	1.92	21.32	0.48
3.133	0.48	9.200	22.06	15.267	1.92	21.33	0.48
3.150	0.48	9.217	22.06	15.283	1.92	21.35	0.48
3.167	0.48	9.233	22.06	15.300	1.92	21.37	0.48
3.183	0.48	9.250	22.06	15.317	1.92	21.38	0.48
3.200	0.48	9.267	22.06	15.333	1.92	21.40	0.48
3.217	0.48	9.283	22.06	15.350	1.92	21.42	0.48
3.233	0.48	9.300	22.06	15.367	1.92	21.43	0.48
3.250	0.48	9.317	22.06	15.383	1.92	21.45	0.48
3.267	0.48	9.333	22.06	15.400	1.92	21.47	0.48
3.283	0.48	9.350	22.06	15.417	1.92	21.48	0.48
3.300	0.48	9.367	22.06	15.433	1.92	21.50	0.48
3.317	0.48	9.383	22.06	15.450	1.92	21.52	0.48
3.333	0.48	9.400	22.06	15.467	1.92	21.53	0.48
3.350	0.48	9.417	22.06	15.483	1.92	21.55	0.48
3.367	0.48	9.433	22.06	15.500	1.92	21.57	0.48
3.383	0.48	9.450	22.06	15.517	1.92	21.58	0.48
3.400	0.48	9.467	22.06	15.533	1.92	21.60	0.48
3.417	0.48	9.483	22.06	15.550	1.92	21.62	0.48

3.433	0.48	9.500	22.06	15.567	1.92	21.63	0.48
3.450	0.48	9.517	22.06	15.583	1.92	21.65	0.48
3.467	0.48	9.533	22.06	15.600	1.92	21.67	0.48
3.483	0.48	9.550	22.06	15.617	1.92	21.68	0.48
3.500	0.48	9.567	22.06	15.633	1.92	21.70	0.48
3.517	0.48	9.583	22.06	15.650	1.92	21.72	0.48
3.533	0.48	9.600	22.06	15.667	1.92	21.73	0.48
3.550	0.48	9.617	22.06	15.683	1.92	21.75	0.48
3.567	0.48	9.633	22.06	15.700	1.92	21.77	0.48
3.583	0.48	9.650	22.06	15.717	1.92	21.78	0.48
3.600	0.48	9.667	22.06	15.733	1.92	21.80	0.48
3.617	0.48	9.683	22.06	15.750	1.92	21.82	0.48
3.633	0.48	9.700	22.06	15.767	1.92	21.83	0.48
3.650	0.48	9.717	22.06	15.783	1.92	21.85	0.48
3.667	0.48	9.733	22.06	15.800	1.92	21.87	0.48
3.683	0.48	9.750	22.06	15.817	1.92	21.88	0.48
3.700	0.48	9.767	22.06	15.833	1.92	21.90	0.48
3.717	0.48	9.783	22.06	15.850	1.92	21.92	0.48
3.733	0.48	9.800	22.06	15.867	1.92	21.93	0.48
3.750	0.48	9.817	22.06	15.883	1.92	21.95	0.48
3.767	0.48	9.833	22.06	15.900	1.92	21.97	0.48
3.783	0.48	9.850	22.06	15.917	1.92	21.98	0.48
3.800	0.48	9.867	22.06	15.933	1.92	22.00	0.48
3.817	0.48	9.883	22.06	15.950	1.92	22.02	0.48
3.833	0.48	9.900	22.06	15.967	1.92	22.03	0.48
3.850	0.48	9.917	22.06	15.983	1.92	22.05	0.48
3.867	0.48	9.933	22.06	16.000	1.92	22.07	0.48
3.883	0.48	9.950	22.06	16.017	1.92	22.08	0.48
3.900	0.48	9.967	22.06	16.033	1.92	22.10	0.48
3.917	0.48	9.983	22.06	16.050	1.92	22.12	0.48
3.933	0.48	10.000	22.06	16.067	1.92	22.13	0.48
3.950	0.48	10.017	22.06	16.083	1.92	22.15	0.48
3.967	0.48	10.033	22.06	16.100	1.92	22.17	0.48
3.983	0.48	10.050	22.06	16.117	1.92	22.18	0.48
4.000	0.48	10.067	22.06	16.133	1.92	22.20	0.48
4.017	0.48	10.083	22.06	16.150	1.92	22.22	0.48
4.033	0.48	10.100	22.06	16.167	1.92	22.23	0.48
4.050	0.48	10.117	22.06	16.183	1.92	22.25	0.48
4.067	0.48	10.133	22.06	16.200	1.92	22.27	0.48
4.083	0.48	10.150	22.06	16.217	1.92	22.28	0.48
4.100	0.48	10.167	22.06	16.233	1.92	22.30	0.48
4.117	0.48	10.183	22.06	16.250	1.92	22.32	0.48
4.133	0.48	10.200	22.06	16.267	0.96	22.33	0.48
4.150	0.48	10.217	22.06	16.283	0.96	22.35	0.48
4.167	0.48	10.233	22.06	16.300	0.96	22.37	0.48
4.183	0.48	10.250	22.05	16.317	0.96	22.38	0.48
4.200	0.48	10.267	6.23	16.333	0.96	22.40	0.48
4.217	0.48	10.283	6.23	16.350	0.96	22.42	0.48
4.233	0.48	10.300	6.23	16.367	0.96	22.43	0.48
4.250	0.48	10.317	6.23	16.383	0.96	22.45	0.48
4.267	2.88	10.333	6.23	16.400	0.96	22.47	0.48
4.283	2.88	10.350	6.23	16.417	0.96	22.48	0.48
4.300	2.88	10.367	6.23	16.433	0.96	22.50	0.48
4.317	2.88	10.383	6.23	16.450	0.96	22.52	0.48
4.333	2.88	10.400	6.23	16.467	0.96	22.53	0.48
4.350	2.88	10.417	6.23	16.483	0.96	22.55	0.48
4.367	2.88	10.433	6.23	16.500	0.96	22.57	0.48
4.383	2.88	10.450	6.23	16.517	0.96	22.58	0.48
4.400	2.88	10.467	6.23	16.533	0.96	22.60	0.48
4.417	2.88	10.483	6.23	16.550	0.96	22.62	0.48
4.433	2.88	10.500	6.23	16.567	0.96	22.63	0.48
4.450	2.88	10.517	6.23	16.583	0.96	22.65	0.48
4.467	2.88	10.533	6.23	16.600	0.96	22.67	0.48
4.483	2.88	10.550	6.23	16.617	0.96	22.68	0.48
4.500	2.88	10.567	6.23	16.633	0.96	22.70	0.48
4.517	2.88	10.583	6.23	16.650	0.96	22.72	0.48
4.533	2.88	10.600	6.23	16.667	0.96	22.73	0.48
4.550	2.88	10.617	6.23	16.683	0.96	22.75	0.48
4.567	2.88	10.633	6.23	16.700	0.96	22.77	0.48
4.583	2.88	10.650	6.23	16.717	0.96	22.78	0.48
4.600	2.88	10.667	6.23	16.733	0.96	22.80	0.48
4.617	2.88	10.683	6.23	16.750	0.96	22.82	0.48
4.633	2.88	10.700	6.23	16.767	0.96	22.83	0.48
4.650	2.88	10.717	6.23	16.783	0.96	22.85	0.48
4.667	2.88	10.733	6.23	16.800	0.96	22.87	0.48
4.683	2.88	10.750	6.23	16.817	0.96	22.88	0.48
4.700	2.88	10.767	6.23	16.833	0.96	22.90	0.48
4.717	2.88	10.783	6.23	16.850	0.96	22.92	0.48
4.733	2.88	10.800	6.23	16.867	0.96	22.93	0.48
4.750	2.88	10.817	6.23	16.883	0.96	22.95	0.48
4.767	2.88	10.833	6.23	16.900	0.96	22.97	0.48
4.783	2.88	10.850	6.23	16.917	0.96	22.98	0.48
4.800	2.88	10.867	6.23	16.933	0.96	23.00	0.48
4.817	2.88	10.883	6.23	16.950	0.96	23.02	0.48
4.833	2.88	10.900	6.23	16.967	0.96	23.03	0.48
4.850	2.88	10.917	6.23	16.983	0.96	23.05	0.48
4.867	2.88	10.933	6.23	17.000	0.96	23.07	0.48
4.883	2.88	10.950	6.23	17.017	0.96	23.08	0.48
4.900	2.88	10.967	6.23	17.033	0.96	23.10	0.48
4.917	2.88	10.983	6.23	17.050	0.96	23.12	0.48
4.933	2.88	11.000	6.23	17.067	0.96	23.13	0.48
4.950	2.88	11.017	6.23	17.083	0.96	23.15	0.48
4.967	2.88	11.033	6.23	17.100	0.96	23.17	0.48
4.983	2.88	11.050	6.23	17.117	0.96	23.18	0.48
5.000	2.88	11.067	6.23	17.133	0.96	23.20	0.48
5.017	2.88	11.083	6.23	17.150	0.96	23.22	0.48
5.033	2.88	11.100	6.23	17.167	0.96	23.23	0.48
5.050	2.88	11.117	6.23	17.183	0.96	23.25	0.48
5.067	2.88	11.133	6.23	17.200	0.96	23.27	0.48
5.083	2.88	11.150	6.23	17.217	0.96	23.28	0.48
5.100	2.88	11.167	6.23	17.233	0.96	23.30	0.48
5.117	2.88	11.183	6.23	17.250	0.96	23.32	0.48
5.133	2.88	11.200	6.23	17.267	0.96	23.33	0.48
5.150	2.88	11.217	6.23	17.283	0.96	23.35	0.48
5.167	2.88	11.233	6.23	17.300	0.96	23.37	0.48
5.183	2.88	11.250	6.23	17.317	0.96	23.38	0.48
5.200	2.88	11.267	6.23	17.333	0.96	23.40	0.48
5.217	2.88	11.283	6.23	17.350	0.96	23.42	0.48
5.233	2.88	11.300	6.23	17.367	0.96	23.43	0.48
5.250	2.88	11.317	6.23	17.383	0.96	23.45	0.48
5.267	2.88	11.333	6.23	17.400	0.96	23.47	0.48
5.283	2.88	11.350	6.23	17.417	0.96	23.48	0.48
5.300	2.88	11.367	6.23	17.433	0.96	23.50	0.48
5.317	2.88	11.383	6.23	17.450	0.96	23.52	0.48
5.333	2.88	11.400	6.23	17.467	0.96	23.53	0.48
5.350	2.88	11.417	6.23	17.483	0.96	23.55	0.48
5.367	2.88	11.433	6.23	17.500	0.96	23.57	0.48
5.383	2.88	11.450	6.23	17.517	0.96	23.58	0.48
5.400	2.88	11.467	6.23	17.533	0.96	23.60	0.48
5.417	2.88	11.483	6.23	17.550	0.96	23.62	0.48
5.433	2.88	11.500	6.23	17.567	0.96	23.63	0.48
5.450	2.88	11.517	6.23	17.583	0.96	23.65	0.48
5.467	2.88	11.533	6.23	17.600	0.96	23.67	0.48
5.483	2.88	11.550	6.23	17.617	0.96	23.68	0.48
5.500	2.88	11.567	6.23	17.633	0.96	23.70	0.48
5.517	2.88	11.583	6.23	17.650	0.96	23.72	0.48
5.533	2.88	11.600	6.23	17.667	0.96	23.73	0.48
5.550	2.88	11.617	6.23	17.683	0.96	23.75	0.48
5.567	2.88	11.633	6.23	17.700	0.96	23.77	0.48
5.583	2.88	11.650	6.23	17.717	0.96	23.78	0.48
5.600	2.88	11.667	6.23	17.733	0.96	23.80	0.48
5.617	2.88	11.683	6.23	17.750	0.96	23.82	0.48
5.633	2.88	11.700	6.23	17.767	0.96	23.83	0.48
5.650	2.88	11.717	6.23	17.783	0.96	23.85	0.48
5.667	2.88	11.733	6.23	17.800	0.96	23.87	0.48
5.683	2.88	11.750	6.23	17.817	0.96	23.88	0.48
5.700	2.88	11.767	6.23	17.833	0.96	23.90	0.48
5.717	2.88	11.783	6.23	17.850	0.96	23.92	0.48
5.733	2.88	11.800	6.23	17.867	0.96	23.93	0.48
5.750	2.88	11.817	6.23	17.883	0.96	23.95	0.48
5.767	2.88	11.833	6.23	17.900	0.96	23.97	0.48
5.783	2.88	11.850	6.23	17.917	0.96	23.98	0.48
5.800	2.88	11.867	6.23	17.933	0.96	24.00	0.48
5.817	2.88	11.883	6.23	17.950	0.96	24.02	0.48
5.833	2.88	11.900	6.23	17.967	0.96	24.03	0.48
5.850	2.88	11.917	6.23	17.983	0.96	24.05	0.48
5.867	2.88	11.933	6.23	18.000	0.96	24.07	0.48
5.883	2.88	11.950	6.23	18.017	0.96	24.08	0.48
5.900	2.88	11.967	6.23	18.033	0.96	24.10	0.48
5.917	2.88	11.983	6.23	18.050	0.96	24.12	0.48
5.933	2.88	12.000	6.23	18.067	0.96	24.13	0.48
5.950	2.88	12.017	6.23	18.083	0.96	24.15	0.48

5.967	2.88	12.033	6.23	18.100	0.96	24.17	0.48	
5.983	2.88	12.050	6.23	18.117	0.96	24.18	0.48	
6.000	2.88	12.067	6.23	18.133	0.96	24.20	0.48	
6.017	2.88	12.083	6.23	18.150	0.96	24.22	0.48	
6.033	2.88	12.100	6.23	18.167	0.96	24.23	0.48	
6.050	2.88	12.117	6.23	18.183	0.96	24.25	0.48	
6.067	2.88	12.133	6.23	18.200	0.96			

Max.Eff.Inten.(mm/hr)=	22.06	18.37	
over (min)	5.00	9.00	
Storage Coeff. (min)=	5.25 (ii)	8.37 (ii)	
Unit Hyd. Tpeak (min)=	5.00	9.00	
Unit Hyd. peak (cms)=	0.22	0.13	
			TOTALS
PEAK FLOW (cms)=	0.13	0.00	0.135 (iii)
TIME TO PEAK (hrs)=	9.48	10.25	10.23
RUNOFF VOLUME (mm)=	94.91	64.02	94.61
TOTAL RAINFALL (mm)=	95.92	95.92	95.92
RUNOFF COEFFICIENT =	0.99	0.67	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7642)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0470	0.1250
	0.0197	0.0630	0.0551	0.1410
	0.0304	0.0850	0.0620	0.1580
	0.0373	0.1020	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7641)	2.210	0.135	10.23	94.61
OUTFLOW: ID= 1 (7642)	2.210	0.044	10.53	87.95

PEAK FLOW REDUCTION [Qout/Qin](%)= 32.62
TIME SHIFT OF PEAK FLOW (min)= 18.00
MAXIMUM STORAGE USED (ha.m.)= 0.1181

CALIB			
STANDHYD (7643)	Area (ha)= 2.02		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	2.00	0.02	
Dep. Storage (mm)=	1.00	1.50	
Average Slope (%)=	1.00	0.50	
Length (m)=	116.05	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.00	6.083	2.88	12.150	6.23	18.22	0.96
0.033	0.00	6.100	2.88	12.167	6.23	18.23	0.96
0.050	0.00	6.117	2.88	12.183	6.23	18.25	0.96
0.067	0.00	6.133	2.88	12.200	6.23	18.27	0.48
0.083	0.00	6.150	2.88	12.217	6.23	18.28	0.48
0.100	0.00	6.167	2.88	12.233	6.23	18.30	0.48
0.117	0.00	6.183	2.88	12.250	6.23	18.32	0.48
0.133	0.00	6.200	2.88	12.267	3.36	18.33	0.48
0.150	0.00	6.217	2.88	12.283	3.36	18.35	0.48
0.167	0.00	6.233	2.88	12.300	3.36	18.37	0.48
0.183	0.00	6.250	2.89	12.317	3.36	18.38	0.48
0.200	0.00	6.267	8.15	12.333	3.36	18.40	0.48
0.217	0.00	6.283	8.15	12.350	3.36	18.42	0.48
0.233	0.00	6.300	8.15	12.367	3.36	18.43	0.48
0.250	0.00	6.317	8.15	12.383	3.36	18.45	0.48
0.267	0.48	6.333	8.15	12.400	3.36	18.47	0.48
0.283	0.48	6.350	8.15	12.417	3.36	18.48	0.48
0.300	0.48	6.367	8.15	12.433	3.36	18.50	0.48
0.317	0.48	6.383	8.15	12.450	3.36	18.52	0.48
0.333	0.48	6.400	8.15	12.467	3.36	18.53	0.48
0.350	0.48	6.417	8.15	12.483	3.36	18.55	0.48
0.367	0.48	6.433	8.15	12.500	3.36	18.57	0.48
0.383	0.48	6.450	8.15	12.517	3.36	18.58	0.48
0.400	0.48	6.467	8.15	12.533	3.36	18.60	0.48
0.417	0.48	6.483	8.15	12.550	3.36	18.62	0.48
0.433	0.48	6.500	8.15	12.567	3.36	18.63	0.48
0.450	0.48	6.517	8.15	12.583	3.36	18.65	0.48
0.467	0.48	6.533	8.15	12.600	3.36	18.67	0.48
0.483	0.48	6.550	8.15	12.617	3.36	18.68	0.48
0.500	0.48	6.567	8.15	12.633	3.36	18.70	0.48
0.517	0.48	6.583	8.15	12.650	3.36	18.72	0.48
0.533	0.48	6.600	8.15	12.667	3.36	18.73	0.48
0.550	0.48	6.617	8.15	12.683	3.36	18.75	0.48
0.567	0.48	6.633	8.15	12.700	3.36	18.77	0.48
0.583	0.48	6.650	8.15	12.717	3.36	18.78	0.48
0.600	0.48	6.667	8.15	12.733	3.36	18.80	0.48
0.617	0.48	6.683	8.15	12.750	3.36	18.82	0.48
0.633	0.48	6.700	8.15	12.767	3.36	18.83	0.48
0.650	0.48	6.717	8.15	12.783	3.36	18.85	0.48
0.667	0.48	6.733	8.15	12.800	3.36	18.87	0.48
0.683	0.48	6.750	8.15	12.817	3.36	18.88	0.48
0.700	0.48	6.767	8.15	12.833	3.36	18.90	0.48
0.717	0.48	6.783	8.15	12.850	3.36	18.92	0.48
0.733	0.48	6.800	8.15	12.867	3.36	18.93	0.48
0.750	0.48	6.817	8.15	12.883	3.36	18.95	0.48
0.767	0.48	6.833	8.15	12.900	3.36	18.97	0.48
0.783	0.48	6.850	8.15	12.917	3.36	18.98	0.48
0.800	0.48	6.867	8.15	12.933	3.36	19.00	0.48
0.817	0.48	6.883	8.15	12.950	3.36	19.02	0.48
0.833	0.48	6.900	8.15	12.967	3.36	19.03	0.48
0.850	0.48	6.917	8.15	12.983	3.36	19.05	0.48
0.867	0.48	6.933	8.15	13.000	3.36	19.07	0.48
0.883	0.48	6.950	8.15	13.017	3.36	19.08	0.48
0.900	0.48	6.967	8.15	13.033	3.36	19.10	0.48
0.917	0.48	6.983	8.15	13.050	3.36	19.12	0.48
0.933	0.48	7.000	8.15	13.067	3.36	19.13	0.48
0.950	0.48	7.017	8.15	13.083	3.36	19.15	0.48
0.967	0.48	7.033	8.15	13.100	3.36	19.17	0.48
0.983	0.48	7.050	8.15	13.117	3.36	19.18	0.48
1.000	0.48	7.067	8.15	13.133	3.36	19.20	0.48
1.017	0.48	7.083	8.15	13.150	3.36	19.22	0.48
1.033	0.48	7.100	8.15	13.167	3.36	19.23	0.48
1.050	0.48	7.117	8.15	13.183	3.36	19.25	0.48
1.067	0.48	7.133	8.15	13.200	3.36	19.27	0.48
1.083	0.48	7.150	8.15	13.217	3.36	19.28	0.48
1.100	0.48	7.167	8.15	13.233	3.36	19.30	0.48
1.117	0.48	7.183	8.15	13.250	3.36	19.32	0.48
1.133	0.48	7.200	8.15	13.267	3.36	19.33	0.48
1.150	0.48	7.217	8.15	13.283	3.36	19.35	0.48
1.167	0.48	7.233	8.15	13.300	3.36	19.37	0.48
1.183	0.48	7.250	8.15	13.317	3.36	19.38	0.48
1.200	0.48	7.267	8.15	13.333	3.36	19.40	0.48
1.217	0.48	7.283	8.15	13.350	3.36	19.42	0.48
1.233	0.48	7.300	8.15	13.367	3.36	19.43	0.48
1.250	0.48	7.317	8.15	13.383	3.36	19.45	0.48
1.267	0.48	7.333	8.15	13.400	3.36	19.47	0.48
1.283	0.48	7.350	8.15	13.417	3.36	19.48	0.48
1.300	0.48	7.367	8.15	13.433	3.36	19.50	0.48
1.317	0.48	7.383	8.15	13.450	3.36	19.52	0.48
1.333	0.48	7.400	8.15	13.467	3.36	19.53	0.48
1.350	0.48	7.417	8.15	13.483	3.36	19.55	0.48
1.367	0.48	7.433	8.15	13.500	3.36	19.57	0.48
1.383	0.48	7.450	8.15	13.517	3.36	19.58	0.48
1.400	0.48	7.467	8.15	13.533	3.36	19.60	0.48
1.417	0.48	7.483	8.15	13.550	3.36	19.62	0.48
1.433	0.48	7.500	8.15	13.567	3.36	19.63	0.48

1.450	0.48	7.517	8.15	13.583	3.36	19.65	0.48		2.717	0.48	8.783	22.06	14.850	1.92	20.92	0.48
1.467	0.48	7.533	8.15	13.600	3.36	19.67	0.48		2.733	0.48	8.800	22.06	14.867	1.92	20.93	0.48
1.483	0.48	7.550	8.15	13.617	3.36	19.68	0.48		2.750	0.48	8.817	22.06	14.883	1.92	20.95	0.48
1.500	0.48	7.567	8.15	13.633	3.36	19.70	0.48		2.767	0.48	8.833	22.06	14.900	1.92	20.97	0.48
1.517	0.48	7.583	8.15	13.650	3.36	19.72	0.48		2.783	0.48	8.850	22.06	14.917	1.92	20.98	0.48
1.533	0.48	7.600	8.15	13.667	3.36	19.73	0.48		2.800	0.48	8.867	22.06	14.933	1.92	21.00	0.48
1.550	0.48	7.617	8.15	13.683	3.36	19.75	0.48		2.817	0.48	8.883	22.06	14.950	1.92	21.02	0.48
1.567	0.48	7.633	8.15	13.700	3.36	19.77	0.48		2.833	0.48	8.900	22.06	14.967	1.92	21.03	0.48
1.583	0.48	7.650	8.15	13.717	3.36	19.78	0.48		2.850	0.48	8.917	22.06	14.983	1.92	21.05	0.48
1.600	0.48	7.667	8.15	13.733	3.36	19.80	0.48		2.867	0.48	8.933	22.06	15.000	1.92	21.07	0.48
1.617	0.48	7.683	8.15	13.750	3.36	19.82	0.48		2.883	0.48	8.950	22.06	15.017	1.92	21.08	0.48
1.633	0.48	7.700	8.15	13.767	3.36	19.83	0.48		2.900	0.48	8.967	22.06	15.033	1.92	21.10	0.48
1.650	0.48	7.717	8.15	13.783	3.36	19.85	0.48		2.917	0.48	8.983	22.06	15.050	1.92	21.12	0.48
1.667	0.48	7.733	8.15	13.800	3.36	19.87	0.48		2.933	0.48	9.000	22.06	15.067	1.92	21.13	0.48
1.683	0.48	7.750	8.15	13.817	3.36	19.88	0.48		2.950	0.48	9.017	22.06	15.083	1.92	21.15	0.48
1.700	0.48	7.767	8.15	13.833	3.36	19.90	0.48		2.967	0.48	9.033	22.06	15.100	1.92	21.17	0.48
1.717	0.48	7.783	8.15	13.850	3.36	19.92	0.48		2.983	0.48	9.050	22.06	15.117	1.92	21.18	0.48
1.733	0.48	7.800	8.15	13.867	3.36	19.93	0.48		3.000	0.48	9.067	22.06	15.133	1.92	21.20	0.48
1.750	0.48	7.817	8.15	13.883	3.36	19.95	0.48		3.017	0.48	9.083	22.06	15.150	1.92	21.22	0.48
1.767	0.48	7.833	8.15	13.900	3.36	19.97	0.48		3.033	0.48	9.100	22.06	15.167	1.92	21.23	0.48
1.783	0.48	7.850	8.15	13.917	3.36	19.98	0.48		3.050	0.48	9.117	22.06	15.183	1.92	21.25	0.48
1.800	0.48	7.867	8.15	13.933	3.36	20.00	0.48		3.067	0.48	9.133	22.06	15.200	1.92	21.27	0.48
1.817	0.48	7.883	8.15	13.950	3.36	20.02	0.48		3.083	0.48	9.150	22.06	15.217	1.92	21.28	0.48
1.833	0.48	7.900	8.15	13.967	3.36	20.03	0.48		3.100	0.48	9.167	22.06	15.233	1.92	21.30	0.48
1.850	0.48	7.917	8.15	13.983	3.36	20.05	0.48		3.117	0.48	9.183	22.06	15.250	1.92	21.32	0.48
1.867	0.48	7.933	8.15	14.000	3.36	20.07	0.48		3.133	0.48	9.200	22.06	15.267	1.92	21.33	0.48
1.883	0.48	7.950	8.15	14.017	3.36	20.08	0.48		3.150	0.48	9.217	22.06	15.283	1.92	21.35	0.48
1.900	0.48	7.967	8.15	14.033	3.36	20.10	0.48		3.167	0.48	9.233	22.06	15.300	1.92	21.37	0.48
1.917	0.48	7.983	8.15	14.050	3.36	20.12	0.48		3.183	0.48	9.250	22.06	15.317	1.92	21.38	0.48
1.933	0.48	8.000	8.15	14.067	3.36	20.13	0.48		3.200	0.48	9.267	22.06	15.333	1.92	21.40	0.48
1.950	0.48	8.017	8.15	14.083	3.36	20.15	0.48		3.217	0.48	9.283	22.06	15.350	1.92	21.42	0.48
1.967	0.48	8.033	8.15	14.100	3.36	20.17	0.48		3.233	0.48	9.300	22.06	15.367	1.92	21.43	0.48
1.983	0.48	8.050	8.15	14.117	3.36	20.18	0.48		3.250	0.48	9.317	22.06	15.383	1.92	21.45	0.48
2.000	0.48	8.067	8.15	14.133	3.36	20.20	0.48		3.267	0.48	9.333	22.06	15.400	1.92	21.47	0.48
2.017	0.48	8.083	8.15	14.150	3.36	20.22	0.48		3.283	0.48	9.350	22.06	15.417	1.92	21.48	0.48
2.033	0.48	8.100	8.15	14.167	3.36	20.23	0.48		3.300	0.48	9.367	22.06	15.433	1.92	21.50	0.48
2.050	0.48	8.117	8.15	14.183	3.36	20.25	0.48		3.317	0.48	9.383	22.06	15.450	1.92	21.52	0.48
2.067	0.48	8.133	8.15	14.200	3.36	20.27	0.48		3.333	0.48	9.400	22.06	15.467	1.92	21.53	0.48
2.083	0.48	8.150	8.15	14.217	3.36	20.28	0.48		3.350	0.48	9.417	22.06	15.483	1.92	21.55	0.48
2.100	0.48	8.167	8.15	14.233	3.36	20.30	0.48		3.367	0.48	9.433	22.06	15.500	1.92	21.57	0.48
2.117	0.48	8.183	8.15	14.250	3.36	20.32	0.48		3.383	0.48	9.450	22.06	15.517	1.92	21.58	0.48
2.133	0.48	8.200	8.15	14.267	1.92	20.33	0.48		3.400	0.48	9.467	22.06	15.533	1.92	21.60	0.48
2.150	0.48	8.217	8.15	14.283	1.92	20.35	0.48		3.417	0.48	9.483	22.06	15.550	1.92	21.62	0.48
2.167	0.48	8.233	8.15	14.300	1.92	20.37	0.48		3.433	0.48	9.500	22.06	15.567	1.92	21.63	0.48
2.183	0.48	8.250	8.19	14.317	1.92	20.38	0.48		3.450	0.48	9.517	22.06	15.583	1.92	21.65	0.48
2.200	0.48	8.267	22.06	14.333	1.92	20.40	0.48		3.467	0.48	9.533	22.06	15.600	1.92	21.67	0.48
2.217	0.48	8.283	22.06	14.350	1.92	20.42	0.48		3.483	0.48	9.550	22.06	15.617	1.92	21.68	0.48
2.233	0.48	8.300	22.06	14.367	1.92	20.43	0.48		3.500	0.48	9.567	22.06	15.633	1.92	21.70	0.48
2.250	0.48	8.317	22.06	14.383	1.92	20.45	0.48		3.517	0.48	9.583	22.06	15.650	1.92	21.72	0.48
2.267	0.48	8.333	22.06	14.400	1.92	20.47	0.48		3.533	0.48	9.600	22.06	15.667	1.92	21.73	0.48
2.283	0.48	8.350	22.06	14.417	1.92	20.48	0.48		3.550	0.48	9.617	22.06	15.683	1.92	21.75	0.48
2.300	0.48	8.367	22.06	14.433	1.92	20.50	0.48		3.567	0.48	9.633	22.06	15.700	1.92	21.77	0.48
2.317	0.48	8.383	22.06	14.450	1.92	20.52	0.48		3.583	0.48	9.650	22.06	15.717	1.92	21.78	0.48
2.333	0.48	8.400	22.06	14.467	1.92	20.53	0.48		3.600	0.48	9.667	22.06	15.733	1.92	21.80	0.48
2.350	0.48	8.417	22.06	14.483	1.92	20.55	0.48		3.617	0.48	9.683	22.06	15.750	1.92	21.82	0.48
2.367	0.48	8.433	22.06	14.500	1.92	20.57	0.48		3.633	0.48	9.700	22.06	15.767	1.92	21.83	0.48
2.383	0.48	8.450	22.06	14.517	1.92	20.58	0.48		3.650	0.48	9.717	22.06	15.783	1.92	21.85	0.48
2.400	0.48	8.467	22.06	14.533	1.92	20.60	0.48		3.667	0.48	9.733	22.06	15.800	1.92	21.87	0.48
2.417	0.48	8.483	22.06	14.550	1.92	20.62	0.48		3.683	0.48	9.750	22.06	15.817	1.92	21.88	0.48
2.433	0.48	8.500	22.06	14.567	1.92	20.63	0.48		3.700	0.48	9.767	22.06	15.833	1.92	21.90	0.48
2.450	0.48	8.517	22.06	14.583	1.92	20.65	0.48		3.717	0.48	9.783	22.06	15.850	1.92	21.92	0.48
2.467	0.48	8.533	22.06	14.600	1.92	20.67	0.48		3.733	0.48	9.800	22.06	15.867	1.92	21.93	0.48
2.483	0.48	8.550	22.06	14.617	1.92	20.68	0.48		3.750	0.48	9.817	22.06	15.883	1.92	21.95	0.48
2.500	0.48	8.567	22.06	14.633	1.92	20.70	0.48		3.767	0.48	9.833	22.06	15.900	1.92	21.97	0.48
2.517	0.48	8.583	22.06	14.650	1.92	20.72	0.48		3.783	0.48	9.850	22.06	15.917	1.92	21.98	0.48
2.533	0.48	8.600	22.06	14.667	1.92	20.73	0.48		3.800	0.48	9.867	22.06	15.933	1.92	22.00	0.48
2.550	0.48	8.617	22.06	14.683	1.92	20.75	0.48		3.817	0.48	9.883	22.06	15.950	1.92	22.02	0.48
2.567	0.48	8.633	22.06	14.700	1.92	20.77	0.48		3.833	0.48	9.900	22.06	15.967	1.92	22.03	0.48
2.583	0.48	8.650	22.06	14.717	1.92	20.78	0.48		3.850	0.48	9.917	22.06	15.983	1.92	22.05	0.48
2.600	0.48	8.667	22.06	14.733	1.92	20.80	0.48		3.867	0.48	9.933	22.06	16.000	1.92	22.07	0.48
2.617	0.48	8.683	22.06	14.750	1.92	20.82	0.48		3.883	0.48	9.950	22.06	16.017	1.92	22.08	0.48
2.633	0.48	8.700	22.06	14.767	1.92	20.83	0.48		3.900	0.48	9.967	22.06	16.033	1.92	22.10	0.48
2.650	0.48	8.717	22.06	14.783	1.92	20.85	0.48		3.917	0.48	9.983	22.06	16.050	1.92	22.12	0.48
2.667	0.48	8.733	22.06	14.800	1.92	20.87	0.48		3.933	0.48	10.000	22.06	16.067	1.92	22.13	0.48
2.683	0.48	8.750	22.06	14.817	1.92	20.88	0.48		3.950	0.48	10.017	22.06	16.083	1.92	22.15	0.48
2.700	0.48	8.767	22.06	14.833	1.92	20.90	0.48		3.967	0.48	10.033	22.06	16.100	1.92	22.17	0.48

3.983	0.48	10.050	22.06	16.117	1.92	22.18	0.48
4.000	0.48	10.067	22.06	16.133	1.92	22.20	0.48
4.017	0.48	10.083	22.06	16.150	1.92	22.22	0.48
4.033	0.48	10.100	22.06	16.167	1.92	22.23	0.48
4.050	0.48	10.117	22.06	16.183	1.92	22.25	0.48
4.067	0.48	10.133	22.06	16.200	1.92	22.27	0.48
4.083	0.48	10.150	22.06	16.217	1.92	22.28	0.48
4.100	0.48	10.167	22.06	16.233	1.92	22.30	0.48
4.117	0.48	10.183	22.06	16.250	1.92	22.32	0.48
4.133	0.48	10.200	22.06	16.267	0.96	22.33	0.48
4.150	0.48	10.217	22.06	16.283	0.96	22.35	0.48
4.167	0.48	10.233	22.06	16.300	0.96	22.37	0.48
4.183	0.48	10.250	22.05	16.317	0.96	22.38	0.48
4.200	0.48	10.267	6.23	16.333	0.96	22.40	0.48
4.217	0.48	10.283	6.23	16.350	0.96	22.42	0.48
4.233	0.48	10.300	6.23	16.367	0.96	22.43	0.48
4.250	0.48	10.317	6.23	16.383	0.96	22.45	0.48
4.267	2.88	10.333	6.23	16.400	0.96	22.47	0.48
4.283	2.88	10.350	6.23	16.417	0.96	22.48	0.48
4.300	2.88	10.367	6.23	16.433	0.96	22.50	0.48
4.317	2.88	10.383	6.23	16.450	0.96	22.52	0.48
4.333	2.88	10.400	6.23	16.467	0.96	22.53	0.48
4.350	2.88	10.417	6.23	16.483	0.96	22.55	0.48
4.367	2.88	10.433	6.23	16.500	0.96	22.57	0.48
4.383	2.88	10.450	6.23	16.517	0.96	22.58	0.48
4.400	2.88	10.467	6.23	16.533	0.96	22.60	0.48
4.417	2.88	10.483	6.23	16.550	0.96	22.62	0.48
4.433	2.88	10.500	6.23	16.567	0.96	22.63	0.48
4.450	2.88	10.517	6.23	16.583	0.96	22.65	0.48
4.467	2.88	10.533	6.23	16.600	0.96	22.67	0.48
4.483	2.88	10.550	6.23	16.617	0.96	22.68	0.48
4.500	2.88	10.567	6.23	16.633	0.96	22.70	0.48
4.517	2.88	10.583	6.23	16.650	0.96	22.72	0.48
4.533	2.88	10.600	6.23	16.667	0.96	22.73	0.48
4.550	2.88	10.617	6.23	16.683	0.96	22.75	0.48
4.567	2.88	10.633	6.23	16.700	0.96	22.77	0.48
4.583	2.88	10.650	6.23	16.717	0.96	22.78	0.48
4.600	2.88	10.667	6.23	16.733	0.96	22.80	0.48
4.617	2.88	10.683	6.23	16.750	0.96	22.82	0.48
4.633	2.88	10.700	6.23	16.767	0.96	22.83	0.48
4.650	2.88	10.717	6.23	16.783	0.96	22.85	0.48
4.667	2.88	10.733	6.23	16.800	0.96	22.87	0.48
4.683	2.88	10.750	6.23	16.817	0.96	22.88	0.48
4.700	2.88	10.767	6.23	16.833	0.96	22.90	0.48
4.717	2.88	10.783	6.23	16.850	0.96	22.92	0.48
4.733	2.88	10.800	6.23	16.867	0.96	22.93	0.48
4.750	2.88	10.817	6.23	16.883	0.96	22.95	0.48
4.767	2.88	10.833	6.23	16.900	0.96	22.97	0.48
4.783	2.88	10.850	6.23	16.917	0.96	22.98	0.48
4.800	2.88	10.867	6.23	16.933	0.96	23.00	0.48
4.817	2.88	10.883	6.23	16.950	0.96	23.02	0.48
4.833	2.88	10.900	6.23	16.967	0.96	23.03	0.48
4.850	2.88	10.917	6.23	16.983	0.96	23.05	0.48
4.867	2.88	10.933	6.23	17.000	0.96	23.07	0.48
4.883	2.88	10.950	6.23	17.017	0.96	23.08	0.48
4.900	2.88	10.967	6.23	17.033	0.96	23.10	0.48
4.917	2.88	10.983	6.23	17.050	0.96	23.12	0.48
4.933	2.88	11.000	6.23	17.067	0.96	23.13	0.48
4.950	2.88	11.017	6.23	17.083	0.96	23.15	0.48
4.967	2.88	11.033	6.23	17.100	0.96	23.17	0.48
4.983	2.88	11.050	6.23	17.117	0.96	23.18	0.48
5.000	2.88	11.067	6.23	17.133	0.96	23.20	0.48
5.017	2.88	11.083	6.23	17.150	0.96	23.22	0.48
5.033	2.88	11.100	6.23	17.167	0.96	23.23	0.48
5.050	2.88	11.117	6.23	17.183	0.96	23.25	0.48
5.067	2.88	11.133	6.23	17.200	0.96	23.27	0.48
5.083	2.88	11.150	6.23	17.217	0.96	23.28	0.48
5.100	2.88	11.167	6.23	17.233	0.96	23.30	0.48
5.117	2.88	11.183	6.23	17.250	0.96	23.32	0.48
5.133	2.88	11.200	6.23	17.267	0.96	23.33	0.48
5.150	2.88	11.217	6.23	17.283	0.96	23.35	0.48
5.167	2.88	11.233	6.23	17.300	0.96	23.37	0.48
5.183	2.88	11.250	6.23	17.317	0.96	23.38	0.48
5.200	2.88	11.267	6.23	17.333	0.96	23.40	0.48
5.217	2.88	11.283	6.23	17.350	0.96	23.42	0.48
5.233	2.88	11.300	6.23	17.367	0.96	23.43	0.48
5.250	2.88	11.317	6.23	17.383	0.96	23.45	0.48
5.267	2.88	11.333	6.23	17.400	0.96	23.47	0.48
5.283	2.88	11.350	6.23	17.417	0.96	23.48	0.48
5.300	2.88	11.367	6.23	17.433	0.96	23.50	0.48
5.317	2.88	11.383	6.23	17.450	0.96	23.52	0.48
5.333	2.88	11.400	6.23	17.467	0.96	23.53	0.48
5.350	2.88	11.417	6.23	17.483	0.96	23.55	0.48
5.367	2.88	11.433	6.23	17.500	0.96	23.57	0.48
5.383	2.88	11.450	6.23	17.517	0.96	23.58	0.48
5.400	2.88	11.467	6.23	17.533	0.96	23.60	0.48
5.417	2.88	11.483	6.23	17.550	0.96	23.62	0.48
5.433	2.88	11.500	6.23	17.567	0.96	23.63	0.48
5.450	2.88	11.517	6.23	17.583	0.96	23.65	0.48
5.467	2.88	11.533	6.23	17.600	0.96	23.67	0.48
5.483	2.88	11.550	6.23	17.617	0.96	23.68	0.48
5.500	2.88	11.567	6.23	17.633	0.96	23.70	0.48
5.517	2.88	11.583	6.23	17.650	0.96	23.72	0.48
5.533	2.88	11.600	6.23	17.667	0.96	23.73	0.48
5.550	2.88	11.617	6.23	17.683	0.96	23.75	0.48
5.567	2.88	11.633	6.23	17.700	0.96	23.77	0.48
5.583	2.88	11.650	6.23	17.717	0.96	23.78	0.48
5.600	2.88	11.667	6.23	17.733	0.96	23.80	0.48
5.617	2.88	11.683	6.23	17.750	0.96	23.82	0.48
5.633	2.88	11.700	6.23	17.767	0.96	23.83	0.48
5.650	2.88	11.717	6.23	17.783	0.96	23.85	0.48
5.667	2.88	11.733	6.23	17.800	0.96	23.87	0.48
5.683	2.88	11.750	6.23	17.817	0.96	23.88	0.48
5.700	2.88	11.767	6.23	17.833	0.96	23.90	0.48
5.717	2.88	11.783	6.23	17.850	0.96	23.92	0.48
5.733	2.88	11.800	6.23	17.867	0.96	23.93	0.48
5.750	2.88	11.817	6.23	17.883	0.96	23.95	0.48
5.767	2.88	11.833	6.23	17.900	0.96	23.97	0.48
5.783	2.88	11.850	6.23	17.917	0.96	23.98	0.48
5.800	2.88	11.867	6.23	17.933	0.96	24.00	0.48
5.817	2.88	11.883	6.23	17.950	0.96	24.02	0.48
5.833	2.88	11.900	6.23	17.967	0.96	24.03	0.48
5.850	2.88	11.917	6.23	17.983	0.96	24.05	0.48
5.867	2.88	11.933	6.23	18.000	0.96	24.07	0.48
5.883	2.88	11.950	6.23	18.017	0.96	24.08	0.48
5.900	2.88	11.967	6.23	18.033	0.96	24.10	0.48
5.917	2.88	11.983	6.23	18.050	0.96	24.12	0.48
5.933	2.88	12.000	6.23	18.067	0.96	24.13	0.48
5.950	2.88	12.017	6.23	18.083	0.96	24.15	0.48
5.967	2.88	12.033	6.23	18.100	0.96	24.17	0.48
5.983	2.88	12.050	6.23	18.117	0.96	24.18	0.48
6.000	2.88	12.067	6.23	18.133	0.96	24.20	0.48
6.017	2.88	12.083	6.23	18.150	0.96	24.22	0.48
6.033	2.88	12.100	6.23	18.167	0.96	24.23	0.48
6.050	2.88	12.117	6.23	18.183	0.96	24.25	0.48
6.067	2.88	12.133	6.23	18.200	0.96		

Max.Eff.Inten.(mm/hr)=	22.06	18.37	
over (min)	5.00	9.00	
Storage Coeff. (min)=	5.11 (ii)	8.23 (ii)	
Unit Hyd. Tpeak (min)=	5.00	9.00	
Unit Hyd. peak (cms)=	0.22	0.13	
			TOTALS
PEAK FLOW (cms)=	0.12	0.00	0.124 (iii)
TIME TO PEAK (hrs)=	9.47	10.25	10.23
RUNOFF VOLUME (mm)=	94.90	64.03	94.61
TOTAL RAINFALL (mm)=	95.92	95.92	95.92
RUNOFF COEFFICIENT =	0.99	0.67	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7644)|	OVERFLOW IS OFF			
IN= 2---> OUT= 1 |				
DT= 1.0 min |	OUTFLOW (cms)	STORAGE (ha.m.)	| OUTFLOW (cms)	STORAGE (ha.m.)

0.0000	0.0000	0.0433	0.1140
0.0182	0.0580	0.0507	0.1280
0.0280	0.0775	0.0571	0.1440
0.0343	0.0930	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7643)	2.020	0.124	10.23	94.61
OUTFLOW: ID= 1 (7644)	2.020	0.041	10.53	88.03

PEAK FLOW REDUCTION [Qout/Qin](%)= 32.89
TIME SHIFT OF PEAK FLOW (min)= 18.00
MAXIMUM STORAGE USED (ha.m.)= 0.1078

```
       V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
```

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
Output filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-a4eb17eaad57\2dd1bf5d-5e52-4b0e-a7d9-c74f7d6de2a3\s
Summary filename: C:\Users\ygollamudi\AppData\Local\Civica\VH5\40fcb7f5-f544-4d5a-b245-a4eb17eaad57\2dd1bf5d-5e52-4b0e-a7d9-c74f7d6de2a3\s

DATE: 06/14/2024 TIME: 12:48:42

USER:

COMMENTS: _____

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  ************************************************
  ** SIMULATION : 996. 100yr 4hr 10min Chicago  **
  ************************************************
```

CHICAGO STORM
Ptotal= 89.87 mm

IDF curve parameters: A=4688.000
B= 17.000
C= 0.962
used in: INTENSITY = A / (t + B)^C

Duration of storm = 4.00 hrs
Storm time step = 10.00 min
Time to peak ratio = 0.33

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	2.89	1.00	62.12	2.00	12.48	3.00	3.91
0.17	3.67	1.17	196.54	2.17	9.60	3.17	3.44
0.33	4.88	1.33	83.09	2.33	7.66	3.33	3.05
0.50	6.96	1.50	41.25	2.50	6.29	3.50	2.73
0.67	11.02	1.67	25.07	2.67	5.28	3.67	2.47
0.83	21.03	1.83	17.06	2.83	4.51	3.83	2.24

CALIB
STANDHYD (7567)
ID= 1 DT= 1.0 min

Area (ha)= 2.72
Total Imp(%)= 99.00 Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.69	0.03
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	134.66	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.89	1.017	62.12	2.017	12.48	3.02	3.91
0.033	2.89	1.033	62.12	2.033	12.48	3.03	3.91
0.050	2.89	1.050	62.12	2.050	12.48	3.05	3.91
0.067	2.89	1.067	62.12	2.067	12.48	3.07	3.91
0.083	2.89	1.083	62.12	2.083	12.48	3.08	3.91
0.100	2.89	1.100	62.12	2.100	12.48	3.10	3.91
0.117	2.89	1.117	62.12	2.117	12.48	3.12	3.91
0.133	2.89	1.133	62.12	2.133	12.48	3.13	3.91
0.150	2.89	1.150	62.12	2.150	12.48	3.15	3.91
0.167	2.89	1.167	62.12	2.167	12.48	3.17	3.91
0.183	3.67	1.183	196.53	2.183	9.60	3.18	3.44
0.200	3.67	1.200	196.54	2.200	9.60	3.20	3.44
0.217	3.67	1.217	196.54	2.217	9.60	3.22	3.44
0.233	3.67	1.233	196.54	2.233	9.60	3.23	3.44
0.250	3.67	1.250	196.54	2.250	9.60	3.25	3.44
0.267	3.67	1.267	196.54	2.267	9.60	3.27	3.44
0.283	3.67	1.283	196.54	2.283	9.60	3.28	3.44
0.300	3.67	1.300	196.54	2.300	9.60	3.30	3.44
0.317	3.67	1.317	196.54	2.317	9.60	3.32	3.44
0.333	3.67	1.333	196.54	2.333	9.60	3.33	3.44
0.350	4.88	1.350	83.10	2.350	7.66	3.35	3.05
0.367	4.88	1.367	83.09	2.367	7.66	3.37	3.05
0.383	4.88	1.383	83.09	2.383	7.66	3.38	3.05
0.400	4.88	1.400	83.09	2.400	7.66	3.40	3.05
0.417	4.88	1.417	83.09	2.417	7.66	3.42	3.05
0.433	4.88	1.433	83.09	2.433	7.66	3.43	3.05
0.450	4.88	1.450	83.09	2.450	7.66	3.45	3.05
0.467	4.88	1.467	83.09	2.467	7.66	3.47	3.05
0.483	4.88	1.483	83.09	2.483	7.66	3.48	3.05
0.500	4.88	1.500	83.09	2.500	7.66	3.50	3.05
0.517	6.96	1.517	41.25	2.517	6.29	3.52	2.73
0.533	6.96	1.533	41.25	2.533	6.29	3.53	2.73
0.550	6.96	1.550	41.25	2.550	6.29	3.55	2.73
0.567	6.96	1.567	41.25	2.567	6.29	3.57	2.73
0.583	6.96	1.583	41.25	2.583	6.29	3.58	2.73
0.600	6.96	1.600	41.25	2.600	6.29	3.60	2.73
0.617	6.96	1.617	41.25	2.617	6.29	3.62	2.73
0.633	6.96	1.633	41.25	2.633	6.29	3.63	2.73
0.650	6.96	1.650	41.25	2.650	6.29	3.65	2.73
0.667	6.96	1.667	41.25	2.667	6.29	3.67	2.73
0.683	11.02	1.683	25.07	2.683	5.28	3.68	2.47
0.700	11.02	1.700	25.07	2.700	5.28	3.70	2.47
0.717	11.02	1.717	25.07	2.717	5.28	3.72	2.47
0.733	11.02	1.733	25.07	2.733	5.28	3.73	2.47
0.750	11.02	1.750	25.07	2.750	5.28	3.75	2.47
0.767	11.02	1.767	25.07	2.767	5.28	3.77	2.47
0.783	11.02	1.783	25.07	2.783	5.28	3.78	2.47
0.800	11.02	1.800	25.07	2.800	5.28	3.80	2.47
0.817	11.02	1.817	25.07	2.817	5.28	3.82	2.47
0.833	11.02	1.833	25.07	2.833	5.28	3.83	2.47
0.850	21.03	1.850	17.06	2.850	4.51	3.85	2.24
0.867	21.03	1.867	17.06	2.867	4.51	3.87	2.24
0.883	21.03	1.883	17.06	2.883	4.51	3.88	2.24
0.900	21.03	1.900	17.06	2.900	4.51	3.90	2.24
0.917	21.03	1.917	17.06	2.917	4.51	3.92	2.24

0.933	21.03	1.933	17.06	2.933	4.51	3.93	2.24
0.950	21.03	1.950	17.06	2.950	4.51	3.95	2.24
0.967	21.03	1.967	17.06	2.967	4.51	3.97	2.24
0.983	21.03	1.983	17.06	2.983	4.51	3.98	2.24
1.000	21.03	2.000	17.06	3.000	4.51	4.00	2.24

Max.Eff.Inten.(mm/hr)=	196.54	129.47	
over (min)	5.00	4.00	
Storage Coeff. (min)=	2.33 (ii)	3.63 (ii)	
Unit Hyd. Tpeak (min)=	5.00	4.00	
Unit Hyd. peak (cms)=	0.35	0.30	
			TOTALS
PEAK FLOW (cms)=	1.42	0.01	1.434 (iii)
TIME TO PEAK (hrs)=	1.33	1.35	1.33
RUNOFF VOLUME (mm)=	88.87	58.63	88.57
TOTAL RAINFALL (mm)=	89.87	89.87	89.87
RUNOFF COEFFICIENT =	0.99	0.65	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7626)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0568	0.1530
	0.0239	0.0780	0.0660	0.1730
	0.0370	0.1040	0.0751	0.2000
	0.0451	0.1250	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7567)	2.720	1.434	1.33	88.57
OUTFLOW: ID= 1 (7626)	2.720	0.073	2.33	86.31

PEAK FLOW REDUCTION [Qout/Qin](%)= 5.11
TIME SHIFT OF PEAK FLOW (min)= 60.00
MAXIMUM STORAGE USED (ha.m.)= 0.1944

CALIB			
STANDHYD (7624)	Area (ha)= 1.80		
ID= 1 DT= 1.0 min	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	1.78	0.02	
Dep. Storage (mm)=	1.00	1.50	
Average Slope (%)=	1.00	0.50	
Length (m)=	109.54	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.89	1.017	62.12	2.017	12.48	3.02	3.91
0.033	2.89	1.033	62.12	2.033	12.48	3.03	3.91
0.050	2.89	1.050	62.12	2.050	12.48	3.05	3.91
0.067	2.89	1.067	62.12	2.067	12.48	3.07	3.91
0.083	2.89	1.083	62.12	2.083	12.48	3.08	3.91
0.100	2.89	1.100	62.12	2.100	12.48	3.10	3.91
0.117	2.89	1.117	62.12	2.117	12.48	3.12	3.91
0.133	2.89	1.133	62.12	2.133	12.48	3.13	3.91
0.150	2.89	1.150	62.12	2.150	12.48	3.15	3.91
0.167	2.89	1.167	62.12	2.167	12.48	3.17	3.91
0.183	3.67	1.183	196.53	2.183	9.60	3.18	3.44
0.200	3.67	1.200	196.54	2.200	9.60	3.20	3.44
0.217	3.67	1.217	196.54	2.217	9.60	3.22	3.44
0.233	3.67	1.233	196.54	2.233	9.60	3.23	3.44
0.250	3.67	1.250	196.54	2.250	9.60	3.25	3.44
0.267	3.67	1.267	196.54	2.267	9.60	3.27	3.44
0.283	3.67	1.283	196.54	2.283	9.60	3.28	3.44
0.300	3.67	1.300	196.54	2.300	9.60	3.30	3.44
0.317	3.67	1.317	196.54	2.317	9.60	3.32	3.44
0.333	3.67	1.333	196.54	2.333	9.60	3.33	3.44
0.350	4.88	1.350	83.10	2.350	7.66	3.35	3.05
0.367	4.88	1.367	83.09	2.367	7.66	3.37	3.05
0.383	4.88	1.383	83.09	2.383	7.66	3.38	3.05
0.400	4.88	1.400	83.09	2.400	7.66	3.40	3.05
0.417	4.88	1.417	83.09	2.417	7.66	3.42	3.05
0.433	4.88	1.433	83.09	2.433	7.66	3.43	3.05
0.450	4.88	1.450	83.09	2.450	7.66	3.45	3.05
0.467	4.88	1.467	83.09	2.467	7.66	3.47	3.05
0.483	4.88	1.483	83.09	2.483	7.66	3.48	3.05
0.500	4.88	1.500	83.09	2.500	7.66	3.50	3.05
0.517	6.96	1.517	41.25	2.517	6.29	3.52	2.73
0.533	6.96	1.533	41.25	2.533	6.29	3.53	2.73
0.550	6.96	1.550	41.25	2.550	6.29	3.55	2.73
0.567	6.96	1.567	41.25	2.567	6.29	3.57	2.73
0.583	6.96	1.583	41.25	2.583	6.29	3.58	2.73
0.600	6.96	1.600	41.25	2.600	6.29	3.60	2.73
0.617	6.96	1.617	41.25	2.617	6.29	3.62	2.73
0.633	6.96	1.633	41.25	2.633	6.29	3.63	2.73
0.650	6.96	1.650	41.25	2.650	6.29	3.65	2.73
0.667	6.96	1.667	41.25	2.667	6.29	3.67	2.73
0.683	11.02	1.683	25.07	2.683	5.28	3.68	2.47
0.700	11.02	1.700	25.07	2.700	5.28	3.70	2.47
0.717	11.02	1.717	25.07	2.717	5.28	3.72	2.47
0.733	11.02	1.733	25.07	2.733	5.28	3.73	2.47
0.750	11.02	1.750	25.07	2.750	5.28	3.75	2.47
0.767	11.02	1.767	25.07	2.767	5.28	3.77	2.47
0.783	11.02	1.783	25.07	2.783	5.28	3.78	2.47
0.800	11.02	1.800	25.07	2.800	5.28	3.80	2.47
0.817	11.02	1.817	25.07	2.817	5.28	3.82	2.47
0.833	11.02	1.833	25.07	2.833	5.28	3.83	2.47
0.850	21.03	1.850	17.06	2.850	4.51	3.85	2.24
0.867	21.03	1.867	17.06	2.867	4.51	3.87	2.24
0.883	21.03	1.883	17.06	2.883	4.51	3.88	2.24
0.900	21.03	1.900	17.06	2.900	4.51	3.90	2.24
0.917	21.03	1.917	17.06	2.917	4.51	3.92	2.24
0.933	21.03	1.933	17.06	2.933	4.51	3.93	2.24
0.950	21.03	1.950	17.06	2.950	4.51	3.95	2.24
0.967	21.03	1.967	17.06	2.967	4.51	3.97	2.24
0.983	21.03	1.983	17.06	2.983	4.51	3.98	2.24
1.000	21.03	2.000	17.06	3.000	4.51	4.00	2.24

Max.Eff.Inten.(mm/hr)=	196.54	152.55	
over (min)	5.00	4.00	
Storage Coeff. (min)=	2.06 (ii)	3.36 (ii)	
Unit Hyd. Tpeak (min)=	5.00	4.00	
Unit Hyd. peak (cms)=	0.37	0.32	
			TOTALS
PEAK FLOW (cms)=	0.95	0.01	0.960 (iii)
TIME TO PEAK (hrs)=	1.33	1.35	1.33
RUNOFF VOLUME (mm)=	88.87	66.98	88.65
TOTAL RAINFALL (mm)=	89.87	89.87	89.87
RUNOFF COEFFICIENT =	0.99	0.75	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 90.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7625)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0389	0.1013
	0.0164	0.0514	0.0456	0.1141

```
                      0.0252     0.0690   |   0.0514      0.1288
                      0.0309     0.0825   |   0.0000      0.0000

                                 AREA      QPEAK     TPEAK       R.V.
                                 (ha)      (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (   7624)      1.800      0.960      1.33       88.65
   OUTFLOW: ID= 1 (   7625)      1.800      0.051      2.27       86.69

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.32
                TIME SHIFT OF PEAK FLOW         (min)= 56.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.1280

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (   7623)|   Area    (ha)=   1.15
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
--------------------

                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.14         0.01
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=      87.56        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.


                    ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.017    2.89 | 1.017   62.12 | 2.017   12.48 |  3.02    3.91
 0.033    2.89 | 1.033   62.12 | 2.033   12.48 |  3.03    3.91
 0.050    2.89 | 1.050   62.12 | 2.050   12.48 |  3.05    3.91
 0.067    2.89 | 1.067   62.12 | 2.067   12.48 |  3.07    3.91
 0.083    2.89 | 1.083   62.12 | 2.083   12.48 |  3.08    3.91
 0.100    2.89 | 1.100   62.12 | 2.100   12.48 |  3.10    3.91
 0.117    2.89 | 1.117   62.12 | 2.117   12.48 |  3.12    3.91
 0.133    2.89 | 1.133   62.12 | 2.133   12.48 |  3.13    3.91
 0.150    2.89 | 1.150   62.12 | 2.150   12.48 |  3.15    3.91
 0.167    2.89 | 1.167   62.12 | 2.167   12.48 |  3.17    3.91
 0.183    3.67 | 1.183  196.53 | 2.183    9.60 |  3.18    3.44
 0.200    3.67 | 1.200  196.54 | 2.200    9.60 |  3.20    3.44
 0.217    3.67 | 1.217  196.54 | 2.217    9.60 |  3.22    3.44
 0.233    3.67 | 1.233  196.54 | 2.233    9.60 |  3.23    3.44
 0.250    3.67 | 1.250  196.54 | 2.250    9.60 |  3.25    3.44
 0.267    3.67 | 1.267  196.54 | 2.267    9.60 |  3.27    3.44
 0.283    3.67 | 1.283  196.54 | 2.283    9.60 |  3.28    3.44
 0.300    3.67 | 1.300  196.54 | 2.300    9.60 |  3.30    3.44
 0.317    3.67 | 1.317  196.54 | 2.317    9.60 |  3.32    3.44
 0.333    3.67 | 1.333  196.54 | 2.333    9.60 |  3.33    3.44
 0.350    4.88 | 1.350   83.10 | 2.350    7.66 |  3.35    3.05
 0.367    4.88 | 1.367   83.09 | 2.367    7.66 |  3.37    3.05
 0.383    4.88 | 1.383   83.09 | 2.383    7.66 |  3.38    3.05
 0.400    4.88 | 1.400   83.09 | 2.400    7.66 |  3.40    3.05
 0.417    4.88 | 1.417   83.09 | 2.417    7.66 |  3.42    3.05
 0.433    4.88 | 1.433   83.09 | 2.433    7.66 |  3.43    3.05
 0.450    4.88 | 1.450   83.09 | 2.450    7.66 |  3.45    3.05
 0.467    4.88 | 1.467   83.09 | 2.467    7.66 |  3.47    3.05
 0.483    4.88 | 1.483   83.09 | 2.483    7.66 |  3.48    3.05
 0.500    4.88 | 1.500   83.09 | 2.500    7.66 |  3.50    3.05
 0.517    6.96 | 1.517   41.25 | 2.517    6.29 |  3.52    2.73
 0.533    6.96 | 1.533   41.25 | 2.533    6.29 |  3.53    2.73
 0.550    6.96 | 1.550   41.25 | 2.550    6.29 |  3.55    2.73
 0.567    6.96 | 1.567   41.25 | 2.567    6.29 |  3.57    2.73
 0.583    6.96 | 1.583   41.25 | 2.583    6.29 |  3.58    2.73
 0.600    6.96 | 1.600   41.25 | 2.600    6.29 |  3.60    2.73
 0.617    6.96 | 1.617   41.25 | 2.617    6.29 |  3.62    2.73
 0.633    6.96 | 1.633   41.25 | 2.633    6.29 |  3.63    2.73
 0.650    6.96 | 1.650   41.25 | 2.650    6.29 |  3.65    2.73
 0.667    6.96 | 1.667   41.25 | 2.667    6.29 |  3.67    2.73
 0.683   11.02 | 1.683   25.07 | 2.683    5.28 |  3.68    2.47
 0.700   11.02 | 1.700   25.07 | 2.700    5.28 |  3.70    2.47
 0.717   11.02 | 1.717   25.07 | 2.717    5.28 |  3.72    2.47
 0.733   11.02 | 1.733   25.07 | 2.733    5.28 |  3.73    2.47
 0.750   11.02 | 1.750   25.07 | 2.750    5.28 |  3.75    2.47
 0.767   11.02 | 1.767   25.07 | 2.767    5.28 |  3.77    2.47
 0.783   11.02 | 1.783   25.07 | 2.783    5.28 |  3.78    2.47
 0.800   11.02 | 1.800   25.07 | 2.800    5.28 |  3.80    2.47
 0.817   11.02 | 1.817   25.07 | 2.817    5.28 |  3.82    2.47
 0.833   11.02 | 1.833   25.07 | 2.833    5.28 |  3.83    2.47
 0.850   21.03 | 1.850   17.06 | 2.850    4.51 |  3.85    2.24
 0.867   21.03 | 1.867   17.06 | 2.867    4.51 |  3.87    2.24
 0.883   21.03 | 1.883   17.06 | 2.883    4.51 |  3.88    2.24
 0.900   21.03 | 1.900   17.06 | 2.900    4.51 |  3.90    2.24
 0.917   21.03 | 1.917   17.06 | 2.917    4.51 |  3.92    2.24
 0.933   21.03 | 1.933   17.06 | 2.933    4.51 |  3.93    2.24
 0.950   21.03 | 1.950   17.06 | 2.950    4.51 |  3.95    2.24
 0.967   21.03 | 1.967   17.06 | 2.967    4.51 |  3.97    2.24
 0.983   21.03 | 1.983   17.06 | 2.983    4.51 |  3.98    2.24
 1.000   21.03 | 2.000   17.06 | 3.000    4.51 |  4.00    2.24

     Max.Eff.Inten.(mm/hr)=     196.54       129.47
                   over (min)        5.00         4.00
     Storage Coeff.  (min)=       1.80 (ii)    3.10 (ii)
     Unit Hyd. Tpeak (min)=       5.00         4.00
     Unit Hyd. peak  (cms)=       0.39         0.33
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.61         0.00       0.617 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.35        1.33
     RUNOFF VOLUME    (mm)=      88.87        58.63       88.57
     TOTAL RAINFALL   (mm)=      89.87        89.87       89.87
     RUNOFF COEFFICIENT   =       0.99         0.65        0.99

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  85.0     Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| RESERVOIR(  7622)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0258      0.0650
                          0.0108     0.0330   |   0.0302      0.0725
                          0.0167     0.0440   |   0.0340      0.0820
                          0.0204     0.0525   |   0.0000      0.0000

                                 AREA      QPEAK     TPEAK       R.V.
                                 (ha)      (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (   7623)      1.150      0.617      1.33       88.57
   OUTFLOW: ID= 1 (   7622)      1.150      0.034      2.25       86.80

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.46
                TIME SHIFT OF PEAK FLOW         (min)= 55.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.0813

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| CALIB            |
| STANDHYD (   7629)|   Area    (ha)=   4.09
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
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                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       4.05         0.04
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=     165.13        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.


                    ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.017    2.89 | 1.017   62.12 | 2.017   12.48 |  3.02    3.91
 0.033    2.89 | 1.033   62.12 | 2.033   12.48 |  3.03    3.91
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0.050	2.89	1.050	62.12	2.050	12.48	3.05	3.91
0.067	2.89	1.067	62.12	2.067	12.48	3.07	3.91
0.083	2.89	1.083	62.12	2.083	12.48	3.08	3.91
0.100	2.89	1.100	62.12	2.100	12.48	3.10	3.91
0.117	2.89	1.117	62.12	2.117	12.48	3.12	3.91
0.133	2.89	1.133	62.12	2.133	12.48	3.13	3.91
0.150	2.89	1.150	62.12	2.150	12.48	3.15	3.91
0.167	2.89	1.167	62.12	2.167	12.48	3.17	3.91
0.183	3.67	1.183	196.53	2.183	9.60	3.18	3.44
0.200	3.67	1.200	196.54	2.200	9.60	3.20	3.44
0.217	3.67	1.217	196.54	2.217	9.60	3.22	3.44
0.233	3.67	1.233	196.54	2.233	9.60	3.23	3.44
0.250	3.67	1.250	196.54	2.250	9.60	3.25	3.44
0.267	3.67	1.267	196.54	2.267	9.60	3.27	3.44
0.283	3.67	1.283	196.54	2.283	9.60	3.28	3.44
0.300	3.67	1.300	196.54	2.300	9.60	3.30	3.44
0.317	3.67	1.317	196.54	2.317	9.60	3.32	3.44
0.333	3.67	1.333	196.54	2.333	9.60	3.33	3.44
0.350	4.88	1.350	83.10	2.350	7.66	3.35	3.05
0.367	4.88	1.367	83.09	2.367	7.66	3.37	3.05
0.383	4.88	1.383	83.09	2.383	7.66	3.38	3.05
0.400	4.88	1.400	83.09	2.400	7.66	3.40	3.05
0.417	4.88	1.417	83.09	2.417	7.66	3.42	3.05
0.433	4.88	1.433	83.09	2.433	7.66	3.43	3.05
0.450	4.88	1.450	83.09	2.450	7.66	3.45	3.05
0.467	4.88	1.467	83.09	2.467	7.66	3.47	3.05
0.483	4.88	1.483	83.09	2.483	7.66	3.48	3.05
0.500	4.88	1.500	83.09	2.500	7.66	3.50	3.05
0.517	6.96	1.517	41.25	2.517	6.29	3.52	2.73
0.533	6.96	1.533	41.25	2.533	6.29	3.53	2.73
0.550	6.96	1.550	41.25	2.550	6.29	3.55	2.73
0.567	6.96	1.567	41.25	2.567	6.29	3.57	2.73
0.583	6.96	1.583	41.25	2.583	6.29	3.58	2.73
0.600	6.96	1.600	41.25	2.600	6.29	3.60	2.73
0.617	6.96	1.617	41.25	2.617	6.29	3.62	2.73
0.633	6.96	1.633	41.25	2.633	6.29	3.63	2.73
0.650	6.96	1.650	41.25	2.650	6.29	3.65	2.73
0.667	6.96	1.667	41.25	2.667	6.29	3.67	2.73
0.683	11.02	1.683	25.07	2.683	5.28	3.68	2.47
0.700	11.02	1.700	25.07	2.700	5.28	3.70	2.47
0.717	11.02	1.717	25.07	2.717	5.28	3.72	2.47
0.733	11.02	1.733	25.07	2.733	5.28	3.73	2.47
0.750	11.02	1.750	25.07	2.750	5.28	3.75	2.47
0.767	11.02	1.767	25.07	2.767	5.28	3.77	2.47
0.783	11.02	1.783	25.07	2.783	5.28	3.78	2.47
0.800	11.02	1.800	25.07	2.800	5.28	3.80	2.47
0.817	11.02	1.817	25.07	2.817	5.28	3.82	2.47
0.833	11.02	1.833	25.07	2.833	5.28	3.83	2.47
0.850	21.03	1.850	17.06	2.850	4.51	3.85	2.24
0.867	21.03	1.867	17.06	2.867	4.51	3.87	2.24
0.883	21.03	1.883	17.06	2.883	4.51	3.88	2.24
0.900	21.03	1.900	17.06	2.900	4.51	3.90	2.24
0.917	21.03	1.917	17.06	2.917	4.51	3.92	2.24
0.933	21.03	1.933	17.06	2.933	4.51	3.93	2.24
0.950	21.03	1.950	17.06	2.950	4.51	3.95	2.24
0.967	21.03	1.967	17.06	2.967	4.51	3.97	2.24
0.983	21.03	1.983	17.06	2.983	4.51	3.98	2.24
1.000	21.03	2.000	17.06	3.000	4.51	4.00	2.24

Max.Eff.Inten.(mm/hr)=	196.54	129.47	
over (min)	5.00	4.00	
Storage Coeff. (min)=	2.63 (ii)	3.93 (ii)	
Unit Hyd. Tpeak (min)=	5.00	4.00	
Unit Hyd. peak (cms)=	0.33	0.29	
			TOTALS
PEAK FLOW (cms)=	2.11	0.01	2.129 (iii)
TIME TO PEAK (hrs)=	1.33	1.35	1.33
RUNOFF VOLUME (mm)=	88.87	58.63	88.57
TOTAL RAINFALL (mm)=	89.87	89.87	89.87
RUNOFF COEFFICIENT =	0.99	0.65	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7630)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0826	0.2320
	0.0347	0.1170	0.0967	0.2609
	0.0534	0.1580	0.1090	0.2940
	0.0655	0.1890	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7629)	4.090	2.129	1.33	88.57
OUTFLOW: ID= 1 (7630)	4.090	0.109	2.35	86.03

PEAK FLOW REDUCTION [Qout/Qin](%)= 5.11
TIME SHIFT OF PEAK FLOW (min)= 61.00
MAXIMUM STORAGE USED (ha.m.)= 0.2932

CALIB			
STANDHYD (7631)	Area (ha)=	3.91	
ID= 1 DT= 1.0 min	Total Imp(%)=	99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.87	0.04
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	161.45	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.89	1.017	62.12	2.017	12.48	3.02	3.91
0.033	2.89	1.033	62.12	2.033	12.48	3.03	3.91
0.050	2.89	1.050	62.12	2.050	12.48	3.05	3.91
0.067	2.89	1.067	62.12	2.067	12.48	3.07	3.91
0.083	2.89	1.083	62.12	2.083	12.48	3.08	3.91
0.100	2.89	1.100	62.12	2.100	12.48	3.10	3.91
0.117	2.89	1.117	62.12	2.117	12.48	3.12	3.91
0.133	2.89	1.133	62.12	2.133	12.48	3.13	3.91
0.150	2.89	1.150	62.12	2.150	12.48	3.15	3.91
0.167	2.89	1.167	62.12	2.167	12.48	3.17	3.91
0.183	3.67	1.183	196.53	2.183	9.60	3.18	3.44
0.200	3.67	1.200	196.54	2.200	9.60	3.20	3.44
0.217	3.67	1.217	196.54	2.217	9.60	3.22	3.44
0.233	3.67	1.233	196.54	2.233	9.60	3.23	3.44
0.250	3.67	1.250	196.54	2.250	9.60	3.25	3.44
0.267	3.67	1.267	196.54	2.267	9.60	3.27	3.44
0.283	3.67	1.283	196.54	2.283	9.60	3.28	3.44
0.300	3.67	1.300	196.54	2.300	9.60	3.30	3.44
0.317	3.67	1.317	196.54	2.317	9.60	3.32	3.44
0.333	3.67	1.333	196.54	2.333	9.60	3.33	3.44
0.350	4.88	1.350	83.10	2.350	7.66	3.35	3.05
0.367	4.88	1.367	83.09	2.367	7.66	3.37	3.05
0.383	4.88	1.383	83.09	2.383	7.66	3.38	3.05
0.400	4.88	1.400	83.09	2.400	7.66	3.40	3.05
0.417	4.88	1.417	83.09	2.417	7.66	3.42	3.05
0.433	4.88	1.433	83.09	2.433	7.66	3.43	3.05
0.450	4.88	1.450	83.09	2.450	7.66	3.45	3.05
0.467	4.88	1.467	83.09	2.467	7.66	3.47	3.05
0.483	4.88	1.483	83.09	2.483	7.66	3.48	3.05
0.500	4.88	1.500	83.09	2.500	7.66	3.50	3.05
0.517	6.96	1.517	41.25	2.517	6.29	3.52	2.73
0.533	6.96	1.533	41.25	2.533	6.29	3.53	2.73
0.550	6.96	1.550	41.25	2.550	6.29	3.55	2.73
0.567	6.96	1.567	41.25	2.567	6.29	3.57	2.73
0.583	6.96	1.583	41.25	2.583	6.29	3.58	2.73

0.600	6.96	1.600	41.25	2.600	6.29	3.60	2.73
0.617	6.96	1.617	41.25	2.617	6.29	3.62	2.73
0.633	6.96	1.633	41.25	2.633	6.29	3.63	2.73
0.650	6.96	1.650	41.25	2.650	6.29	3.65	2.73
0.667	6.96	1.667	41.25	2.667	6.29	3.67	2.73
0.683	11.02	1.683	25.07	2.683	5.28	3.68	2.47
0.700	11.02	1.700	25.07	2.700	5.28	3.70	2.47
0.717	11.02	1.717	25.07	2.717	5.28	3.72	2.47
0.733	11.02	1.733	25.07	2.733	5.28	3.73	2.47
0.750	11.02	1.750	25.07	2.750	5.28	3.75	2.47
0.767	11.02	1.767	25.07	2.767	5.28	3.77	2.47
0.783	11.02	1.783	25.07	2.783	5.28	3.78	2.47
0.800	11.02	1.800	25.07	2.800	5.28	3.80	2.47
0.817	11.02	1.817	25.07	2.817	5.28	3.82	2.47
0.833	11.02	1.833	25.07	2.833	5.28	3.83	2.47
0.850	21.03	1.850	17.06	2.850	4.51	3.85	2.24
0.867	21.03	1.867	17.06	2.867	4.51	3.87	2.24
0.883	21.03	1.883	17.06	2.883	4.51	3.88	2.24
0.900	21.03	1.900	17.06	2.900	4.51	3.90	2.24
0.917	21.03	1.917	17.06	2.917	4.51	3.92	2.24
0.933	21.03	1.933	17.06	2.933	4.51	3.93	2.24
0.950	21.03	1.950	17.06	2.950	4.51	3.95	2.24
0.967	21.03	1.967	17.06	2.967	4.51	3.97	2.24
0.983	21.03	1.983	17.06	2.983	4.51	3.98	2.24
1.000	21.03	2.000	17.06	3.000	4.51	4.00	2.24

Max.Eff.Inten.(mm/hr)=	196.54	129.47	
over (min)	5.00	4.00	
Storage Coeff. (min)=	2.60 (ii)	3.90 (ii)	
Unit Hyd. Tpeak (min)=	5.00	4.00	
Unit Hyd. peak (cms)=	0.33	0.29	
			TOTALS
PEAK FLOW (cms)=	2.03	0.01	2.038 (iii)
TIME TO PEAK (hrs)=	1.33	1.35	1.33
RUNOFF VOLUME (mm)=	88.87	58.63	88.57
TOTAL RAINFALL (mm)=	89.87	89.87	89.87
RUNOFF COEFFICIENT =	0.99	0.65	0.99

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 85.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(7632) IN= 2---> OUT= 1 DT= 1.0 min	OVERFLOW IS OFF			
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0792	0.2220
	0.0333	0.1130	0.0928	0.2500
	0.0512	0.1510	0.1046	0.2810
	0.0629	0.1810	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (7631)	3.910	2.038	1.33	88.57
OUTFLOW: ID= 1 (7632)	3.910	0.104	2.35	85.99

PEAK FLOW REDUCTION [Qout/Qin](%)= 5.12
TIME SHIFT OF PEAK FLOW (min)= 61.00
MAXIMUM STORAGE USED (ha.m.)= 0.2802

CALIB STANDHYD (7641) ID= 1 DT= 1.0 min	Area (ha)= 2.21	Total Imp(%)= 99.00	Dir. Conn.(%)= 99.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.19	0.02
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	0.50
Length	(m)=	121.38	40.00

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.89	1.017	62.12	2.017	12.48	3.02	3.91
0.033	2.89	1.033	62.12	2.033	12.48	3.03	3.91
0.050	2.89	1.050	62.12	2.050	12.48	3.05	3.91
0.067	2.89	1.067	62.12	2.067	12.48	3.07	3.91
0.083	2.89	1.083	62.12	2.083	12.48	3.08	3.91
0.100	2.89	1.100	62.12	2.100	12.48	3.10	3.91
0.117	2.89	1.117	62.12	2.117	12.48	3.12	3.91
0.133	2.89	1.133	62.12	2.133	12.48	3.13	3.91
0.150	2.89	1.150	62.12	2.150	12.48	3.15	3.91
0.167	2.89	1.167	62.12	2.167	12.48	3.17	3.91
0.183	3.67	1.183	196.53	2.183	9.60	3.18	3.44
0.200	3.67	1.200	196.54	2.200	9.60	3.20	3.44
0.217	3.67	1.217	196.54	2.217	9.60	3.22	3.44
0.233	3.67	1.233	196.54	2.233	9.60	3.23	3.44
0.250	3.67	1.250	196.54	2.250	9.60	3.25	3.44
0.267	3.67	1.267	196.54	2.267	9.60	3.27	3.44
0.283	3.67	1.283	196.54	2.283	9.60	3.28	3.44
0.300	3.67	1.300	196.54	2.300	9.60	3.30	3.44
0.317	3.67	1.317	196.54	2.317	9.60	3.32	3.44
0.333	3.67	1.333	196.54	2.333	9.60	3.33	3.44
0.350	4.88	1.350	83.10	2.350	7.66	3.35	3.05
0.367	4.88	1.367	83.09	2.367	7.66	3.37	3.05
0.383	4.88	1.383	83.09	2.383	7.66	3.38	3.05
0.400	4.88	1.400	83.09	2.400	7.66	3.40	3.05
0.417	4.88	1.417	83.09	2.417	7.66	3.42	3.05
0.433	4.88	1.433	83.09	2.433	7.66	3.43	3.05
0.450	4.88	1.450	83.09	2.450	7.66	3.45	3.05
0.467	4.88	1.467	83.09	2.467	7.66	3.47	3.05
0.483	4.88	1.483	83.09	2.483	7.66	3.48	3.05
0.500	4.88	1.500	83.09	2.500	7.66	3.50	3.05
0.517	6.96	1.517	41.25	2.517	6.29	3.52	2.73
0.533	6.96	1.533	41.25	2.533	6.29	3.53	2.73
0.550	6.96	1.550	41.25	2.550	6.29	3.55	2.73
0.567	6.96	1.567	41.25	2.567	6.29	3.57	2.73
0.583	6.96	1.583	41.25	2.583	6.29	3.58	2.73
0.600	6.96	1.600	41.25	2.600	6.29	3.60	2.73
0.617	6.96	1.617	41.25	2.617	6.29	3.62	2.73
0.633	6.96	1.633	41.25	2.633	6.29	3.63	2.73
0.650	6.96	1.650	41.25	2.650	6.29	3.65	2.73
0.667	6.96	1.667	41.25	2.667	6.29	3.67	2.73
0.683	11.02	1.683	25.07	2.683	5.28	3.68	2.47
0.700	11.02	1.700	25.07	2.700	5.28	3.70	2.47
0.717	11.02	1.717	25.07	2.717	5.28	3.72	2.47
0.733	11.02	1.733	25.07	2.733	5.28	3.73	2.47
0.750	11.02	1.750	25.07	2.750	5.28	3.75	2.47
0.767	11.02	1.767	25.07	2.767	5.28	3.77	2.47
0.783	11.02	1.783	25.07	2.783	5.28	3.78	2.47
0.800	11.02	1.800	25.07	2.800	5.28	3.80	2.47
0.817	11.02	1.817	25.07	2.817	5.28	3.82	2.47
0.833	11.02	1.833	25.07	2.833	5.28	3.83	2.47
0.850	21.03	1.850	17.06	2.850	4.51	3.85	2.24
0.867	21.03	1.867	17.06	2.867	4.51	3.87	2.24
0.883	21.03	1.883	17.06	2.883	4.51	3.88	2.24
0.900	21.03	1.900	17.06	2.900	4.51	3.90	2.24
0.917	21.03	1.917	17.06	2.917	4.51	3.92	2.24
0.933	21.03	1.933	17.06	2.933	4.51	3.93	2.24
0.950	21.03	1.950	17.06	2.950	4.51	3.95	2.24
0.967	21.03	1.967	17.06	2.967	4.51	3.97	2.24
0.983	21.03	1.983	17.06	2.983	4.51	3.98	2.24
1.000	21.03	2.000	17.06	3.000	4.51	4.00	2.24

Max.Eff.Inten.(mm/hr)=	196.54	129.47	
over (min)	5.00	4.00	
Storage Coeff. (min)=	2.19 (ii)	3.49 (ii)	
Unit Hyd. Tpeak (min)=	5.00	4.00	
Unit Hyd. peak (cms)=	0.36	0.31	
			TOTALS
PEAK FLOW (cms)=	1.16	0.01	1.171 (iii)

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    TIME TO PEAK    (hrs)=       1.33         1.35          1.33
    RUNOFF VOLUME    (mm)=      88.87        58.63         88.57
    TOTAL RAINFALL   (mm)=      89.87        89.87         89.87
    RUNOFF COEFFICIENT   =       0.99         0.65          0.99


      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN*  =  85.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| RESERVOIR(  7642)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0470     0.1250
                         0.0197     0.0630   |   0.0551     0.1410
                         0.0304     0.0850   |   0.0620     0.1580
                         0.0373     0.1020   |   0.0000     0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  7641)     2.210     1.171      1.33      88.57
   OUTFLOW: ID= 1 (  7642)     2.210     0.062      2.28      86.46

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.27
                TIME SHIFT OF PEAK FLOW          (min)= 57.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.1574

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| CALIB            |
| STANDHYD (  7643)|   Area    (ha)=   2.02
|ID= 1 DT= 1.0 min |   Total Imp(%)=  99.00   Dir. Conn.(%)=  99.00
-------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.00         0.02
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         0.50
     Length            (m)=     116.05        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.017    2.89 | 1.017   62.12 | 2.017   12.48 |  3.02    3.91
     0.033    2.89 | 1.033   62.12 | 2.033   12.48 |  3.03    3.91
     0.050    2.89 | 1.050   62.12 | 2.050   12.48 |  3.05    3.91
     0.067    2.89 | 1.067   62.12 | 2.067   12.48 |  3.07    3.91
     0.083    2.89 | 1.083   62.12 | 2.083   12.48 |  3.08    3.91
     0.100    2.89 | 1.100   62.12 | 2.100   12.48 |  3.10    3.91
     0.117    2.89 | 1.117   62.12 | 2.117   12.48 |  3.12    3.91
     0.133    2.89 | 1.133   62.12 | 2.133   12.48 |  3.13    3.91
     0.150    2.89 | 1.150   62.12 | 2.150   12.48 |  3.15    3.91
     0.167    2.89 | 1.167   62.12 | 2.167   12.48 |  3.17    3.91
     0.183    3.67 | 1.183  196.53 | 2.183    9.60 |  3.18    3.44
     0.200    3.67 | 1.200  196.54 | 2.200    9.60 |  3.20    3.44
     0.217    3.67 | 1.217  196.54 | 2.217    9.60 |  3.22    3.44
     0.233    3.67 | 1.233  196.54 | 2.233    9.60 |  3.23    3.44
     0.250    3.67 | 1.250  196.54 | 2.250    9.60 |  3.25    3.44
     0.267    3.67 | 1.267  196.54 | 2.267    9.60 |  3.27    3.44
     0.283    3.67 | 1.283  196.54 | 2.283    9.60 |  3.28    3.44
     0.300    3.67 | 1.300  196.54 | 2.300    9.60 |  3.30    3.44
     0.317    3.67 | 1.317  196.54 | 2.317    9.60 |  3.32    3.44
     0.333    3.67 | 1.333  196.54 | 2.333    9.60 |  3.33    3.44
     0.350    4.88 | 1.350   83.10 | 2.350    7.66 |  3.35    3.05
     0.367    4.88 | 1.367   83.09 | 2.367    7.66 |  3.37    3.05
     0.383    4.88 | 1.383   83.09 | 2.383    7.66 |  3.38    3.05
     0.400    4.88 | 1.400   83.09 | 2.400    7.66 |  3.40    3.05
     0.417    4.88 | 1.417   83.09 | 2.417    7.66 |  3.42    3.05
     0.433    4.88 | 1.433   83.09 | 2.433    7.66 |  3.43    3.05
     0.450    4.88 | 1.450   83.09 | 2.450    7.66 |  3.45    3.05
     0.467    4.88 | 1.467   83.09 | 2.467    7.66 |  3.47    3.05
     0.483    4.88 | 1.483   83.09 | 2.483    7.66 |  3.48    3.05
     0.500    4.88 | 1.500   83.09 | 2.500    7.66 |  3.50    3.05
     0.517    6.96 | 1.517   41.25 | 2.517    6.29 |  3.52    2.73
     0.533    6.96 | 1.533   41.25 | 2.533    6.29 |  3.53    2.73
     0.550    6.96 | 1.550   41.25 | 2.550    6.29 |  3.55    2.73
     0.567    6.96 | 1.567   41.25 | 2.567    6.29 |  3.57    2.73
     0.583    6.96 | 1.583   41.25 | 2.583    6.29 |  3.58    2.73
     0.600    6.96 | 1.600   41.25 | 2.600    6.29 |  3.60    2.73
     0.617    6.96 | 1.617   41.25 | 2.617    6.29 |  3.62    2.73
     0.633    6.96 | 1.633   41.25 | 2.633    6.29 |  3.63    2.73
     0.650    6.96 | 1.650   41.25 | 2.650    6.29 |  3.65    2.73
     0.667    6.96 | 1.667   41.25 | 2.667    6.29 |  3.67    2.73
     0.683   11.02 | 1.683   25.07 | 2.683    5.28 |  3.68    2.47
     0.700   11.02 | 1.700   25.07 | 2.700    5.28 |  3.70    2.47
     0.717   11.02 | 1.717   25.07 | 2.717    5.28 |  3.72    2.47
     0.733   11.02 | 1.733   25.07 | 2.733    5.28 |  3.73    2.47
     0.750   11.02 | 1.750   25.07 | 2.750    5.28 |  3.75    2.47
     0.767   11.02 | 1.767   25.07 | 2.767    5.28 |  3.77    2.47
     0.783   11.02 | 1.783   25.07 | 2.783    5.28 |  3.78    2.47
     0.800   11.02 | 1.800   25.07 | 2.800    5.28 |  3.80    2.47
     0.817   11.02 | 1.817   25.07 | 2.817    5.28 |  3.82    2.47
     0.833   11.02 | 1.833   25.07 | 2.833    5.28 |  3.83    2.47
     0.850   21.03 | 1.850   17.06 | 2.850    4.51 |  3.85    2.24
     0.867   21.03 | 1.867   17.06 | 2.867    4.51 |  3.87    2.24
     0.883   21.03 | 1.883   17.06 | 2.883    4.51 |  3.88    2.24
     0.900   21.03 | 1.900   17.06 | 2.900    4.51 |  3.90    2.24
     0.917   21.03 | 1.917   17.06 | 2.917    4.51 |  3.92    2.24
     0.933   21.03 | 1.933   17.06 | 2.933    4.51 |  3.93    2.24
     0.950   21.03 | 1.950   17.06 | 2.950    4.51 |  3.95    2.24
     0.967   21.03 | 1.967   17.06 | 2.967    4.51 |  3.97    2.24
     0.983   21.03 | 1.983   17.06 | 2.983    4.51 |  3.98    2.24
     1.000   21.03 | 2.000   17.06 | 3.000    4.51 |  4.00    2.24

    Max.Eff.Inten.(mm/hr)=     196.54       129.47
              over (min)          5.00         4.00
    Storage Coeff.  (min)=       2.13 (ii)    3.43 (ii)
    Unit Hyd. Tpeak (min)=       5.00         4.00
    Unit Hyd. peak  (cms)=       0.36         0.31
                                                      *TOTALS*
    PEAK FLOW       (cms)=       1.07         0.01       1.073 (iii)
    TIME TO PEAK    (hrs)=       1.33         1.35        1.33
    RUNOFF VOLUME    (mm)=      88.87        58.63       88.57
    TOTAL RAINFALL   (mm)=      89.87        89.87       89.87
    RUNOFF COEFFICIENT   =       0.99         0.65        0.99


      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN*  =  85.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| RESERVOIR(  7644)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0433     0.1140
                         0.0182     0.0580   |   0.0507     0.1280
                         0.0280     0.0775   |   0.0571     0.1440
                         0.0343     0.0930   |   0.0000     0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  7643)     2.020     1.073      1.33      88.57
   OUTFLOW: ID= 1 (  7644)     2.020     0.057      2.27      86.50

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.31
                TIME SHIFT OF PEAK FLOW          (min)= 56.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.1437

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D.4. Draining To Existing Storm Sewer System

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KS/YG

Rational Method
Pre-Development Flow Calculation
Simpson Road
Project #: 2301130
Jun-24

Input Parameters

Catchment ID	Area (ha)	C, 2 - 10 Year	C, 25 Year	C, 50 Year	C, 100 Year	Tc (min.)
C6 Pre	0.19	0.25	0.28	0.30	0.31	10
C7 Pre	0.21	0.25	0.28	0.30	0.31	10
C8 Pre	0.23	0.25	0.28	0.30	0.31	10
C9 Pre	0.45	0.25	0.28	0.30	0.31	10
C12 Pre	1.12	0.25	0.28	0.30	0.31	46

Catchment C12 Pre
Area 1.12ha
Length (m) 185
Slope (%) 0.54
Runoff Coefficient 0.25
Time of Concentration (Airport Method)(min) 46

IDF Data Set: Region of Peel
Event 10-Year
a = 2221.00
b = 12.000
c = 0.9080

Catchment ID	Area (ha)	A/2 (ha)	C	AC	Tc (min.)	I (mm/h)	Q (m^3/s)	Q (L/s)
C6 Pre	0.19	0.10	0.25	0.02	10	134.2	0.009	**8.9**
C7 Pre	0.21	0.11	0.25	0.03	10	134.2	0.010	**9.8**
C8 Pre	0.23	0.12	0.25	0.03	10	134.2	0.011	**10.7**
C9 Pre	0.45	0.23	0.25	0.06	10	134.2	0.021	**21.0**
C12 Pre	1.12	0.56	0.25	0.14	46	55.6	0.022	**21.6**

Modified Rational Method - 100-Year Storm
Site Flow and Storage Summary

Simpson Road
Project #: 2301130
Jun-24

Drainage Area:	C6 Post	
Area =	0.19	ha
"C" =	0.90	
AC =	0.17	
Tc =	10.0	min
Time Increment =	5.0	min
Allowable Flow =	**8.9**	L/s
Release rate via orifice =	**8.9**	**L/s**
Max. Required Storage Volume =	**90.93**	**m^3**

100-Year Design Storm	
A =	4688.00
B =	0.962
C=	17.000
I =	I = A/(T+C)^B

(1)	(2)	3	4	5	6
Time (min)	**Rainfall Intensity (mm/hr)**	**Storm Runoff (m^3/s)**	**Storm Volume (m^3)**	**Allowable Release Volume to STM (m^3)**	**Storage Volume (m^3)**
		3 = AC3*(2) / 360	**4 = 60*(1)* 3**	**5 = 60*(1)*(R3)/1000**	**6 = 4 - 5**
10	196.8	0.093	56.1	5.3	50.8
15	167.1	0.079	71.4	8.0	63.5
20	145.3	0.069	82.8	10.6	72.2
25	128.7	0.061	91.7	13.3	78.4
30	115.5	0.055	98.7	15.9	82.8
35	104.8	0.050	104.5	18.6	85.9
40	95.9	0.046	109.3	21.2	88.1
45	88.5	0.042	113.4	23.9	89.5
50	82.1	0.039	117.0	26.6	90.4
55	76.6	0.036	120.1	29.2	90.9
60	71.8	0.034	122.8	31.9	90.9
65	67.6	0.032	125.2	34.5	90.7
70	63.9	0.030	127.4	37.2	90.2
75	60.5	0.029	129.3	39.8	89.5
80	57.5	0.027	131.1	42.5	88.6
85	54.8	0.026	132.7	45.1	87.6
90	52.3	0.025	134.2	47.8	86.4
95	50.1	0.024	135.6	50.5	85.1
100	48.0	0.023	136.8	53.1	83.7
105	46.1	0.022	138.0	55.8	82.3
110	44.4	0.021	139.1	58.4	80.7
115	42.8	0.020	140.1	61.1	79.1
120	41.3	0.020	141.1	63.7	77.4
125	39.9	0.019	142.0	66.4	75.6
130	38.6	0.018	142.8	69.0	73.8
135	37.3	0.018	143.6	71.7	71.9
140	36.2	0.017	144.4	74.3	70.0
145	35.1	0.017	145.1	77.0	68.1
150	34.1	0.016	145.8	79.7	66.1
155	33.1	0.016	146.4	82.3	64.1
160	32.2	0.015	147.0	85.0	62.1
165	31.4	0.015	147.6	87.6	60.0
170	30.6	0.015	148.2	90.3	57.9
175	29.8	0.014	148.7	92.9	55.8
180	29.1	0.014	149.2	95.6	53.6
185	28.4	0.013	149.7	98.2	51.5
190	27.7	0.013	150.2	100.9	49.3
195	27.1	0.013	150.6	103.6	47.1
200	26.5	0.013	151.1	106.2	44.9
205	25.9	0.012	151.5	108.9	42.6
210	25.4	0.012	151.9	111.5	40.4
215	24.9	0.012	152.3	114.2	38.1
220	24.3	0.012	152.7	116.8	35.8
225	23.9	0.011	153.0	119.5	33.5
230	23.4	0.011	153.4	122.1	31.2
235	23.0	0.011	153.7	124.8	28.9
240	22.5	0.011	154.1	127.5	26.6
245	22.1	0.011	154.4	130.1	24.3
250	21.7	0.010	154.7	132.8	21.9
255	21.3	0.010	155.0	135.4	19.6
260	21.0	0.010	155.3	138.1	17.2
265	20.6	0.010	155.6	140.7	14.8
270	20.3	0.010	155.9	143.4	12.5
275	19.9	0.009	156.1	146.0	10.1

Modified Rational Method - 100-Year Storm
Site Flow and Storage Summary

Simpson Road
Project #: 2301130
Jun-24

Drainage Area:	C6 Post	
Area =	0.21	ha
"C" =	0.90	
AC =	0.19	
Tc =	10.0	min
Time Increment =	5.0	min
Allowable Flow =	**9.8**	L/s
Release rate via orifice =	**9.8**	**L/s**
Max. Required Storage Volume =	**100.5**	**m^3**

100-Year Design Storm	
A =	4688.00
B =	0.962
C=	17.000
I =	I = A/(T+C)^B

(1)	(2)	3	4	5	6
Time (min)	**Rainfall Intensity (mm/hr)**	**Storm Runoff (m^3/s)**	**Storm Volume (m^3)**	**Allowable Release Volume to STM (m^3)**	**Storage Volume (m^3)**
		3 = AC3*(2) / 360	**4 = 60*(1)* 3**	**5 = 60*(1)*(R3)/1000**	**6 = 4 - 5**
10	196.8	0.103	62.0	5.9	56.1
15	167.1	0.088	79.0	8.8	70.2
20	145.3	0.076	91.6	11.7	79.8
25	128.7	0.068	101.3	14.7	86.6
30	115.5	0.061	109.1	17.6	91.5
35	104.8	0.055	115.5	20.5	95.0
40	95.9	0.050	120.8	23.5	97.4
45	88.5	0.046	125.4	26.4	99.0
50	82.1	0.043	129.3	29.3	99.9
55	76.6	0.040	132.7	32.3	100.4
60	71.8	0.038	135.7	35.2	100.5
65	67.6	0.035	138.4	38.2	100.2
70	63.9	0.034	140.8	41.1	99.7
75	60.5	0.032	143.0	44.0	98.9
80	57.5	0.030	144.9	47.0	98.0
85	54.8	0.029	146.7	49.9	96.8
90	52.3	0.027	148.3	52.8	95.5
95	50.1	0.026	149.9	55.8	94.1
100	48.0	0.025	151.3	58.7	92.6
105	46.1	0.024	152.5	61.6	90.9
110	44.4	0.023	153.8	64.6	89.2
115	42.8	0.022	154.9	67.5	87.4
120	41.3	0.022	155.9	70.4	85.5
125	39.9	0.021	156.9	73.4	83.6
130	38.6	0.020	157.9	76.3	81.6
135	37.3	0.020	158.7	79.2	79.5
140	36.2	0.019	159.6	82.2	77.4
145	35.1	0.018	160.4	85.1	75.3
150	34.1	0.018	161.1	88.0	73.1
155	33.1	0.017	161.8	91.0	70.8
160	32.2	0.017	162.5	93.9	68.6
165	31.4	0.016	163.2	96.8	66.3
170	30.6	0.016	163.8	99.8	64.0
175	29.8	0.016	164.4	102.7	61.6
180	29.1	0.015	164.9	105.7	59.3
185	28.4	0.015	165.5	108.6	56.9
190	27.7	0.015	166.0	111.5	54.5
195	27.1	0.014	166.5	114.5	52.0
200	26.5	0.014	167.0	117.4	49.6
205	25.9	0.014	167.4	120.3	47.1
210	25.4	0.013	167.9	123.3	44.6
215	24.9	0.013	168.3	126.2	42.1
220	24.3	0.013	168.7	129.1	39.6
225	23.9	0.013	169.1	132.1	37.1
230	23.4	0.012	169.5	135.0	34.5
235	23.0	0.012	169.9	137.9	32.0
240	22.5	0.012	170.3	140.9	29.4
245	22.1	0.012	170.6	143.8	26.8
250	21.7	0.011	171.0	146.7	24.2
255	21.3	0.011	171.3	149.7	21.6
260	21.0	0.011	171.6	152.6	19.0
265	20.6	0.011	172.0	155.5	16.4
270	20.3	0.011	172.3	158.5	13.8
275	19.9	0.010	172.6	161.4	11.1

Modified Rational Method - 100-Year Storm
Site Flow and Storage Summary

Simpson Road
Project #: 2301130
Jun-24

Drainage Area:	C8 Post	
Area =	0.23	ha
"C" =	0.90	
AC =	0.21	
Tc =	10.0	min
Time Increment =	5.0	min
Allowable Flow =	**10.7**	L/s
Release rate via orifice =	**10.7**	**L/s**
Max. Required Storage Volume =	**110.1**	**m^3**

100-Year Design Storm	
A =	4688.00
B =	0.962
C=	17.000
I =	I = A/(T+C)^B

(1)	(2)	3	4	5	6
Time (min)	**Rainfall Intensity (mm/hr)**	**Storm Runoff (m^3/s)**	**Storm Volume (m^3)**	**Allowable Release Volume to STM (m^3)**	**Storage Volume (m^3)**
		3 = AC3*(2) / 360	**4 = 60*(1)* 3**	**5 = 60*(1)*(R3)/1000**	**6 = 4 - 5**
10	196.8	0.113	67.9	6.4	61.5
15	167.1	0.096	86.5	9.6	76.8
20	145.3	0.084	100.3	12.9	87.4
25	128.7	0.074	111.0	16.1	94.9
30	115.5	0.066	119.5	19.3	100.2
35	104.8	0.060	126.5	22.5	104.0
40	95.9	0.055	132.3	25.7	106.6
45	88.5	0.051	137.3	28.9	108.4
50	82.1	0.047	141.6	32.1	109.5
55	76.6	0.044	145.4	35.4	110.0
60	71.8	0.041	148.6	38.6	110.1
65	67.6	0.039	151.6	41.8	109.8
70	63.9	0.037	154.2	45.0	109.2
75	60.5	0.035	156.6	48.2	108.4
80	57.5	0.033	158.7	51.4	107.3
85	54.8	0.032	160.7	54.6	106.0
90	52.3	0.030	162.5	57.9	104.6
95	50.1	0.029	164.1	61.1	103.1
100	48.0	0.028	165.7	64.3	101.4
105	46.1	0.027	167.1	67.5	99.6
110	44.4	0.026	168.4	70.7	97.7
115	42.8	0.025	169.6	73.9	95.7
120	41.3	0.024	170.8	77.1	93.6
125	39.9	0.023	171.9	80.4	91.5
130	38.6	0.022	172.9	83.6	89.3
135	37.3	0.021	173.9	86.8	87.1
140	36.2	0.021	174.8	90.0	84.8
145	35.1	0.020	175.6	93.2	82.4
150	34.1	0.020	176.5	96.4	80.0
155	33.1	0.019	177.2	99.6	77.6
160	32.2	0.019	178.0	102.9	75.1
165	31.4	0.018	178.7	106.1	72.6
170	30.6	0.018	179.4	109.3	70.1
175	29.8	0.017	180.0	112.5	67.5
180	29.1	0.017	180.6	115.7	64.9
185	28.4	0.016	181.2	118.9	62.3
190	27.7	0.016	181.8	122.1	59.7
195	27.1	0.016	182.4	125.4	57.0
200	26.5	0.015	182.9	128.6	54.3
205	25.9	0.015	183.4	131.8	51.6
210	25.4	0.015	183.9	135.0	48.9
215	24.9	0.014	184.4	138.2	46.1
220	24.3	0.014	184.8	141.4	43.4
225	23.9	0.014	185.3	144.6	40.6
230	23.4	0.013	185.7	147.9	37.8
235	23.0	0.013	186.1	151.1	35.0
240	22.5	0.013	186.5	154.3	32.2
245	22.1	0.013	186.9	157.5	29.4
250	21.7	0.012	187.3	160.7	26.5
255	21.3	0.012	187.6	163.9	23.7
260	21.0	0.012	188.0	167.1	20.8
265	20.6	0.012	188.3	170.4	18.0
270	20.3	0.012	188.7	173.6	15.1
275	19.9	0.011	189.0	176.8	12.2

GEI Consultants

Modified Rational Method - 100-Year Storm
Site Flow and Storage Summary

Simpson Road
Project #: 2301130
Jun-24

Drainage Area:	C9 Post	
Area =	0.45	ha
"C" =	0.90	
AC =	0.41	
Tc =	10.0	min
Time Increment =	5.0	min
Allowable Flow =	**21.0**	L/s
Release rate via orifice =	**21.0**	**L/s**
Max. Required Storage Volume =	**215.4**	**m^3**

100-Year Design Storm	
A =	4688.00
B =	0.962
C=	17.000
I =	I = A/(T+C)^B

(1)	(2)	3	4	5	6
Time (min)	**Rainfall Intensity (mm/hr)**	**Storm Runoff (m^3/s)**	**Storm Volume (m^3)**	**Allowable Release Volume to STM (m^3)**	**Storage Volume (m^3)**
	3 = AC3*(2) / 360		**4 = 60*(1)* 3**	**5 = 60*(1)*(R3)/1000**	**6 = 4 - 5**
10	196.8	0.221	132.8	12.6	120.3
15	167.1	0.188	169.2	18.9	150.3
20	145.3	0.164	196.2	25.2	171.1
25	128.7	0.145	217.1	31.4	185.7
30	115.5	0.130	233.8	37.7	196.1
35	104.8	0.118	247.5	44.0	203.5
40	95.9	0.108	258.9	50.3	208.6
45	88.5	0.100	268.7	56.6	212.1
50	82.1	0.092	277.1	62.9	214.2
55	76.6	0.086	284.4	69.2	215.2
60	71.8	0.081	290.8	75.5	215.4
65	67.6	0.076	296.6	81.8	214.8
70	63.9	0.072	301.7	88.0	213.7
75	60.5	0.068	306.3	94.3	212.0
80	57.5	0.065	310.5	100.6	209.9
85	54.8	0.062	314.4	106.9	207.5
90	52.3	0.059	317.9	113.2	204.7
95	50.1	0.056	321.1	119.5	201.6
100	48.0	0.054	324.1	125.8	198.3
105	46.1	0.052	326.9	132.1	194.8
110	44.4	0.050	329.5	138.4	191.1
115	42.8	0.048	331.9	144.6	187.2
120	41.3	0.046	334.2	150.9	183.2
125	39.9	0.045	336.3	157.2	179.1
130	38.6	0.043	338.3	163.5	174.8
135	37.3	0.042	340.2	169.8	170.4
140	36.2	0.041	342.0	176.1	165.9
145	35.1	0.039	343.6	182.4	161.3
150	34.1	0.038	345.2	188.7	156.6
155	33.1	0.037	346.8	195.0	151.8
160	32.2	0.036	348.2	201.2	147.0
165	31.4	0.035	349.6	207.5	142.1
170	30.6	0.034	350.9	213.8	137.1
175	29.8	0.034	352.2	220.1	132.1
180	29.1	0.033	353.4	226.4	127.0
185	28.4	0.032	354.6	232.7	121.9
190	27.7	0.031	355.7	239.0	116.7
195	27.1	0.030	356.8	245.3	111.5
200	26.5	0.030	357.8	251.6	106.3
205	25.9	0.029	358.8	257.8	101.0
210	25.4	0.029	359.8	264.1	95.6
215	24.9	0.028	360.7	270.4	90.3
220	24.3	0.027	361.6	276.7	84.9
225	23.9	0.027	362.4	283.0	79.4
230	23.4	0.026	363.3	289.3	74.0
235	23.0	0.026	364.1	295.6	68.5
240	22.5	0.025	364.9	301.9	63.0
245	22.1	0.025	365.6	308.2	57.5
250	21.7	0.024	366.4	314.4	51.9
255	21.3	0.024	367.1	320.7	46.4
260	21.0	0.024	367.8	327.0	40.8
265	20.6	0.023	368.5	333.3	35.2
270	20.3	0.023	369.1	339.6	29.5
275	19.9	0.022	369.8	345.9	23.9

Modified Rational Method - 100-Year Storm
Site Flow and Storage Summary

Simpson Road
Project #: 2301130
Jun-24

Drainage Area:	C12 Post	
Area =	1.12	ha
"C" =	0.90	
AC =	1.01	
Tc =	10.0	min
Time Increment =	5.0	min
Allowable Flow =	**21.6**	L/s
Release rate via vortex =	**21.6**	**L/s**
Max. Required Storage Volume =	**677.3**	**m^3**

100-Year Design Storm	
A =	4688.00
B =	0.962
C=	17.000
I =	I = A/(T+C)^B

(1)	(2)	3	4	5	6
Time (min)	**Rainfall Intensity (mm/hr)**	**Storm Runoff (m^3/s)**	**Storm Volume (m^3)**	**Allowable Release Volume to STM (m^3)**	**Storage Volume (m^3)**
		3 = AC3*(2) / 360	**4 = 60*(1)* 3**	**5 = 60*(1)*(R3)/1000**	**6 = 4 - 5**
10	196.8	0.551	330.6	13.0	317.6
15	167.1	0.468	421.1	19.5	401.7
20	145.3	0.407	488.3	26.0	462.4
25	128.7	0.360	540.3	32.5	507.9
30	115.5	0.323	581.9	38.9	543.0
35	104.8	0.293	616.0	45.4	570.5
40	95.9	0.269	644.5	51.9	592.5
45	88.5	0.248	668.7	58.4	610.3
50	82.1	0.230	689.6	64.9	624.7
55	76.6	0.214	707.8	71.4	636.4
60	71.8	0.201	723.8	77.9	646.0
65	67.6	0.189	738.1	84.4	653.7
70	63.9	0.179	750.9	90.9	660.0
75	60.5	0.169	762.4	97.4	665.1
80	57.5	0.161	772.9	103.9	669.0
85	54.8	0.153	782.4	110.3	672.1
90	52.3	0.147	791.2	116.8	674.3
95	50.1	0.140	799.2	123.3	675.9
100	48.0	0.134	806.7	129.8	676.9
105	46.1	0.129	813.6	136.3	677.3
110	44.4	0.124	820.0	142.8	677.2
115	42.8	0.120	826.0	149.3	676.8
120	41.3	0.116	831.7	155.8	675.9
125	39.9	0.112	837.0	162.3	674.7
130	38.6	0.108	841.9	168.8	673.2
135	37.3	0.105	846.6	175.3	671.4
140	36.2	0.101	851.1	181.7	669.3
145	35.1	0.098	855.3	188.2	667.1
150	34.1	0.095	859.3	194.7	664.6
155	33.1	0.093	863.1	201.2	661.9
160	32.2	0.090	866.7	207.7	659.0
165	31.4	0.088	870.1	214.2	655.9
170	30.6	0.086	873.4	220.7	652.8
175	29.8	0.083	876.6	227.2	649.4
180	29.1	0.081	879.6	233.7	645.9
185	28.4	0.080	882.5	240.2	642.3
190	27.7	0.078	885.3	246.7	638.6
195	27.1	0.076	888.0	253.1	634.8
200	26.5	0.074	890.5	259.6	630.9
205	25.9	0.073	893.0	266.1	626.9
210	25.4	0.071	895.4	272.6	622.8
215	24.9	0.070	897.7	279.1	618.6
220	24.3	0.068	899.9	285.6	614.3
225	23.9	0.067	902.1	292.1	610.0
230	23.4	0.066	904.2	298.6	605.6
235	23.0	0.064	906.2	305.1	601.1
240	22.5	0.063	908.1	311.6	596.6

D.5. Draining To Existing Pond

GEI Consultants

KS/YG

Rational Method

Storage Calculations for Catchments draining to Equity Prestige Buisness Park

Simpson Road

Project #: 2301130

Jun-24

Catchment ID	Area (ha)	Q (m^3/s)	Q (L/s)	Storage required (m^3)
C2.2.1	0.71	0.128	**127.8**	**156.2**
C2.2.2	1.26	0.227	**226.8**	**277.2**
C3.2.1	0.24	0.043	**43.2**	**52.8**
C3.2.2	1.03	0.185	**185.4**	**226.6**

Modified Rational Method - 100-Year Storm
Site Flow and Storage Summary

Simpson Road
Project #: 2301130
Jun-24

Drainage Area:	C2.2.1	
Area =	0.71	ha
"C" =	0.90	
AC =	0.64	
Tc =	10.0	min
Time Increment =	5.0	min
Allowable Flow =	**127.8**	L/s
Release rate via orifice =	**127.8**	**L/s**
Max. Required Storage Volume =	**156.21**	**m^3**

100-Year Design Storm	
A =	4688.00
B =	0.962
C=	17.000
I =	I = A/(T+C)^B

(1)	(2)	3	4	5	6
Time (min)	**Rainfall Intensity (mm/hr)**	**Storm Runoff (m^3/s)**	**Storm Volume (m^3)**	**Allowable Release Volume to STM (m^3)**	**Storage Volume (m^3)**
		3 = AC3*(2) / 360	**4 = 60*(1)* 3**	**5 = 60*(1)*(R3)/1000**	**6 = 4 - 5**
10	196.8	0.349	209.6	76.7	132.9
15	167.1	0.297	267.0	115.0	152.0
20	145.3	0.258	309.6	153.4	156.2
25	128.7	0.228	342.5	191.7	150.8
30	115.5	0.205	368.9	230.0	138.9
35	104.8	0.186	390.5	268.4	122.1
40	95.9	0.170	408.6	306.7	101.8
45	88.5	0.157	423.9	345.1	78.8
50	82.1	0.146	437.1	383.4	53.7
55	76.6	0.136	448.7	421.7	26.9
60	71.8	0.127	458.9	460.1	0.0
65	67.6	0.120	467.9	498.4	0.0
70	63.9	0.113	476.0	536.8	0.0
75	60.5	0.107	483.3	575.1	0.0
80	57.5	0.102	490.0	613.4	0.0
85	54.8	0.097	496.0	651.8	0.0
90	52.3	0.093	501.5	690.1	0.0
95	50.1	0.089	506.7	728.5	0.0
100	48.0	0.085	511.4	766.8	0.0
105	46.1	0.082	515.8	805.1	0.0
110	44.4	0.079	519.8	843.5	0.0
115	42.8	0.076	523.7	881.8	0.0
120	41.3	0.073	527.2	920.2	0.0
125	39.9	0.071	530.6	958.5	0.0
130	38.6	0.068	533.7	996.8	0.0
135	37.3	0.066	536.7	1035.2	0.0
140	36.2	0.064	539.5	1073.5	0.0
145	35.1	0.062	542.2	1111.9	0.0
150	34.1	0.061	544.7	1150.2	0.0
155	33.1	0.059	547.1	1188.5	0.0
160	32.2	0.057	549.4	1226.9	0.0
165	31.4	0.056	551.6	1265.2	0.0
170	30.6	0.054	553.7	1303.6	0.0
175	29.8	0.053	555.7	1341.9	0.0
180	29.1	0.052	557.6	1380.2	0.0
185	28.4	0.050	559.4	1418.6	0.0
190	27.7	0.049	561.2	1456.9	0.0
195	27.1	0.048	562.9	1495.3	0.0
200	26.5	0.047	564.5	1533.6	0.0
205	25.9	0.046	566.1	1571.9	0.0
210	25.4	0.045	567.6	1610.3	0.0
215	24.9	0.044	569.1	1648.6	0.0
220	24.3	0.043	570.5	1687.0	0.0
225	23.9	0.042	571.9	1725.3	0.0
230	23.4	0.042	573.2	1763.6	0.0
235	23.0	0.041	574.5	1802.0	0.0
240	22.5	0.040	575.7	1840.3	0.0
245	22.1	0.039	576.9	1878.7	0.0
250	21.7	0.039	578.1	1917.0	0.0
255	21.3	0.038	579.2	1955.3	0.0
260	21.0	0.037	580.3	1993.7	0.0
265	20.6	0.037	581.4	2032.0	0.0
270	20.3	0.036	582.4	2070.4	0.0
275	19.9	0.035	583.4	2108.7	0.0

Modified Rational Method - 100-Year Storm
Site Flow and Storage Summary

Simpson Road
Project #: 2301130
Jun-24

Drainage Area:	C2.2.2	
Area =	1.26	ha
"C" =	0.90	
AC =	1.13	
Tc =	10.0	min
Time Increment =	5.0	min
Allowable Flow =	**226.8**	L/s
Release rate via orifice =	**226.8**	**L/s**
Max. Required Storage Volume =	**277.2**	**m^3**

100-Year Design Storm	
A =	4688.00
B =	0.962
C=	17.000
I =	I = A/(T+C)^B

(1)	(2)	3	4	5	6
Time (min)	**Rainfall Intensity (mm/hr)**	**Storm Runoff (m^3/s)**	**Storm Volume (m^3)**	**Allowable Release Volume to STM (m^3)**	**Storage Volume (m^3)**
		3 = AC3*(2) / 360	**4 = 60*(1)* 3**	**5 = 60*(1)*(R3)/1000**	**6 = 4 - 5**
10	196.8	0.620	371.9	136.1	235.9
15	167.1	0.526	473.8	204.1	269.7
20	145.3	0.458	549.4	272.2	277.2
25	128.7	0.405	607.9	340.2	267.7
30	115.5	0.364	654.7	408.2	246.4
35	104.8	0.330	693.0	476.3	216.7
40	95.9	0.302	725.0	544.3	180.7
45	88.5	0.279	752.3	612.4	139.9
50	82.1	0.259	775.8	680.4	95.4
55	76.6	0.241	796.3	748.4	47.8
60	71.8	0.226	814.3	816.5	0.0
65	67.6	0.213	830.4	884.5	0.0
70	63.9	0.201	844.8	952.6	0.0
75	60.5	0.191	857.7	1020.6	0.0
80	57.5	0.181	869.5	1088.6	0.0
85	54.8	0.173	880.2	1156.7	0.0
90	52.3	0.165	890.1	1224.7	0.0
95	50.1	0.158	899.1	1292.8	0.0
100	48.0	0.151	907.5	1360.8	0.0
105	46.1	0.145	915.3	1428.8	0.0
110	44.4	0.140	922.5	1496.9	0.0
115	42.8	0.135	929.3	1564.9	0.0
120	41.3	0.130	935.6	1633.0	0.0
125	39.9	0.126	941.6	1701.0	0.0
130	38.6	0.121	947.2	1769.0	0.0
135	37.3	0.118	952.5	1837.1	0.0
140	36.2	0.114	957.5	1905.1	0.0
145	35.1	0.111	962.2	1973.2	0.0
150	34.1	0.107	966.7	2041.2	0.0
155	33.1	0.104	971.0	2109.2	0.0
160	32.2	0.102	975.0	2177.3	0.0
165	31.4	0.099	978.9	2245.3	0.0
170	30.6	0.096	982.6	2313.4	0.0
175	29.8	0.094	986.2	2381.4	0.0
180	29.1	0.092	989.6	2449.4	0.0
185	28.4	0.089	992.8	2517.5	0.0
190	27.7	0.087	996.0	2585.5	0.0
195	27.1	0.085	999.0	2653.6	0.0
200	26.5	0.083	1001.9	2721.6	0.0
205	25.9	0.082	1004.6	2789.6	0.0
210	25.4	0.080	1007.3	2857.7	0.0
215	24.9	0.078	1009.9	2925.7	0.0
220	24.3	0.077	1012.4	2993.8	0.0
225	23.9	0.075	1014.8	3061.8	0.0
230	23.4	0.074	1017.2	3129.8	0.0
235	23.0	0.072	1019.5	3197.9	0.0
240	22.5	0.071	1021.7	3265.9	0.0
245	22.1	0.070	1023.8	3334.0	0.0
250	21.7	0.068	1025.9	3402.0	0.0
255	21.3	0.067	1027.9	3470.0	0.0
260	21.0	0.066	1029.8	3538.1	0.0
265	20.6	0.065	1031.7	3606.1	0.0
270	20.3	0.064	1033.5	3674.2	0.0
275	19.9	0.063	1035.3	3742.2	0.0

Modified Rational Method - 100-Year Storm
Site Flow and Storage Summary

Simpson Road
Project #: 2301130
Jun-24

Drainage Area:	C3.2.1	
Area =	0.24	ha
"C" =	0.90	
AC =	0.22	
Tc =	10.0	min
Time Increment =	5.0	min
Allowable Flow =	**43.2**	L/s
Release rate via orifice =	**43.2**	**L/s**
Max. Required Storage Volume =	**52.8**	**m^3**

100-Year Design Storm	
A =	4688.00
B =	0.962
C=	17.000
I =	I = A/(T+C)^B

(1)	(2)	3	4	5	6
Time (min)	**Rainfall Intensity (mm/hr)**	**Storm Runoff (m^3/s)**	**Storm Volume (m^3)**	**Allowable Release Volume to STM (m^3)**	**Storage Volume (m^3)**
		3 = AC3*(2) / 360	**4 = 60*(1)* 3**	**5 = 60*(1)*(R3)/1000**	**6 = 4 - 5**
10	196.8	0.118	70.8	25.9	44.9
15	167.1	0.100	90.2	38.9	51.4
20	145.3	0.087	104.6	51.8	52.8
25	128.7	0.077	115.8	64.8	51.0
30	115.5	0.069	124.7	77.8	46.9
35	104.8	0.063	132.0	90.7	41.3
40	95.9	0.058	138.1	103.7	34.4
45	88.5	0.053	143.3	116.6	26.7
50	82.1	0.049	147.8	129.6	18.2
55	76.6	0.046	151.7	142.6	9.1
60	71.8	0.043	155.1	155.5	0.0
65	67.6	0.041	158.2	168.5	0.0
70	63.9	0.038	160.9	181.4	0.0
75	60.5	0.036	163.4	194.4	0.0
80	57.5	0.035	165.6	207.4	0.0
85	54.8	0.033	167.7	220.3	0.0
90	52.3	0.031	169.5	233.3	0.0
95	50.1	0.030	171.3	246.2	0.0
100	48.0	0.029	172.9	259.2	0.0
105	46.1	0.028	174.3	272.2	0.0
110	44.4	0.027	175.7	285.1	0.0
115	42.8	0.026	177.0	298.1	0.0
120	41.3	0.025	178.2	311.0	0.0
125	39.9	0.024	179.3	324.0	0.0
130	38.6	0.023	180.4	337.0	0.0
135	37.3	0.022	181.4	349.9	0.0
140	36.2	0.022	182.4	362.9	0.0
145	35.1	0.021	183.3	375.8	0.0
150	34.1	0.020	184.1	388.8	0.0
155	33.1	0.020	184.9	401.8	0.0
160	32.2	0.019	185.7	414.7	0.0
165	31.4	0.019	186.5	427.7	0.0
170	30.6	0.018	187.2	440.6	0.0
175	29.8	0.018	187.8	453.6	0.0
180	29.1	0.017	188.5	466.6	0.0
185	28.4	0.017	189.1	479.5	0.0
190	27.7	0.017	189.7	492.5	0.0
195	27.1	0.016	190.3	505.4	0.0
200	26.5	0.016	190.8	518.4	0.0
205	25.9	0.016	191.4	531.4	0.0
210	25.4	0.015	191.9	544.3	0.0
215	24.9	0.015	192.4	557.3	0.0
220	24.3	0.015	192.8	570.2	0.0
225	23.9	0.014	193.3	583.2	0.0
230	23.4	0.014	193.8	596.2	0.0
235	23.0	0.014	194.2	609.1	0.0
240	22.5	0.014	194.6	622.1	0.0
245	22.1	0.013	195.0	635.0	0.0
250	21.7	0.013	195.4	648.0	0.0
255	21.3	0.013	195.8	661.0	0.0
260	21.0	0.013	196.2	673.9	0.0
265	20.6	0.012	196.5	686.9	0.0
270	20.3	0.012	196.9	699.8	0.0
275	19.9	0.012	197.2	712.8	0.0

Modified Rational Method - 100-Year Storm
Site Flow and Storage Summary

Simpson Road
Project #: 2301130
Jun-24

Drainage Area:	C3.2.2	
Area =	1.03	ha
"C" =	0.90	
AC =	0.93	
Tc =	10.0	min
Time Increment =	5.0	min
Allowable Flow =	**185.4**	L/s
Release rate via orifice =	**185.4**	**L/s**
Max. Required Storage Volume =	**226.6**	**m^3**

100-Year Design Storm	
A =	4688.00
B =	0.962
C=	17.000
I =	I = A/(T+C)^B

(1)	(2)	3	4	5	6
Time (min)	**Rainfall Intensity (mm/hr)**	**Storm Runoff (m^3/s)**	**Storm Volume (m^3)**	**Allowable Release Volume to STM (m^3)**	**Storage Volume (m^3)**
	3 = AC3*(2) / 360		**4 = 60*(1)* 3**	**5 = 60*(1)*(R3)/1000**	**6 = 4 - 5**
10	196.8	0.507	304.0	111.2	192.8
15	167.1	0.430	387.3	166.9	220.4
20	145.3	0.374	449.1	222.5	226.6
25	128.7	0.331	496.9	278.1	218.8
30	115.5	0.297	535.2	333.7	201.4
35	104.8	0.270	566.5	389.3	177.1
40	95.9	0.247	592.7	445.0	147.7
45	88.5	0.228	615.0	500.6	114.4
50	82.1	0.211	634.2	556.2	78.0
55	76.6	0.197	650.9	611.8	39.1
60	71.8	0.185	665.7	667.4	0.0
65	67.6	0.174	678.8	723.1	0.0
70	63.9	0.164	690.6	778.7	0.0
75	60.5	0.156	701.2	834.3	0.0
80	57.5	0.148	710.8	889.9	0.0
85	54.8	0.141	719.6	945.5	0.0
90	52.3	0.135	727.6	1001.2	0.0
95	50.1	0.129	735.0	1056.8	0.0
100	48.0	0.124	741.9	1112.4	0.0
105	46.1	0.119	748.2	1168.0	0.0
110	44.4	0.114	754.1	1223.6	0.0
115	42.8	0.110	759.7	1279.3	0.0
120	41.3	0.106	764.8	1334.9	0.0
125	39.9	0.103	769.7	1390.5	0.0
130	38.6	0.099	774.3	1446.1	0.0
135	37.3	0.096	778.6	1501.7	0.0
140	36.2	0.093	782.7	1557.4	0.0
145	35.1	0.090	786.6	1613.0	0.0
150	34.1	0.088	790.2	1668.6	0.0
155	33.1	0.085	793.7	1724.2	0.0
160	32.2	0.083	797.1	1779.8	0.0
165	31.4	0.081	800.2	1835.5	0.0
170	30.6	0.079	803.3	1891.1	0.0
175	29.8	0.077	806.2	1946.7	0.0
180	29.1	0.075	808.9	2002.3	0.0
185	28.4	0.073	811.6	2057.9	0.0
190	27.7	0.071	814.2	2113.6	0.0
195	27.1	0.070	816.6	2169.2	0.0
200	26.5	0.068	819.0	2224.8	0.0
205	25.9	0.067	821.3	2280.4	0.0
210	25.4	0.065	823.5	2336.0	0.0
215	24.9	0.064	825.6	2391.7	0.0
220	24.3	0.063	827.6	2447.3	0.0
225	23.9	0.061	829.6	2502.9	0.0
230	23.4	0.060	831.5	2558.5	0.0
235	23.0	0.059	833.4	2614.1	0.0
240	22.5	0.058	835.2	2669.8	0.0
245	22.1	0.057	836.9	2725.4	0.0
250	21.7	0.056	838.6	2781.0	0.0
255	21.3	0.055	840.2	2836.6	0.0
260	21.0	0.054	841.8	2892.2	0.0
265	20.6	0.053	843.4	2947.9	0.0
270	20.3	0.052	844.9	3003.5	0.0
275	19.9	0.051	846.4	3059.1	0.0

STORMWATER MANAGEMENT POND REPORT

SIMPSON ROAD EXTENSION

PROPOSED SWM POND

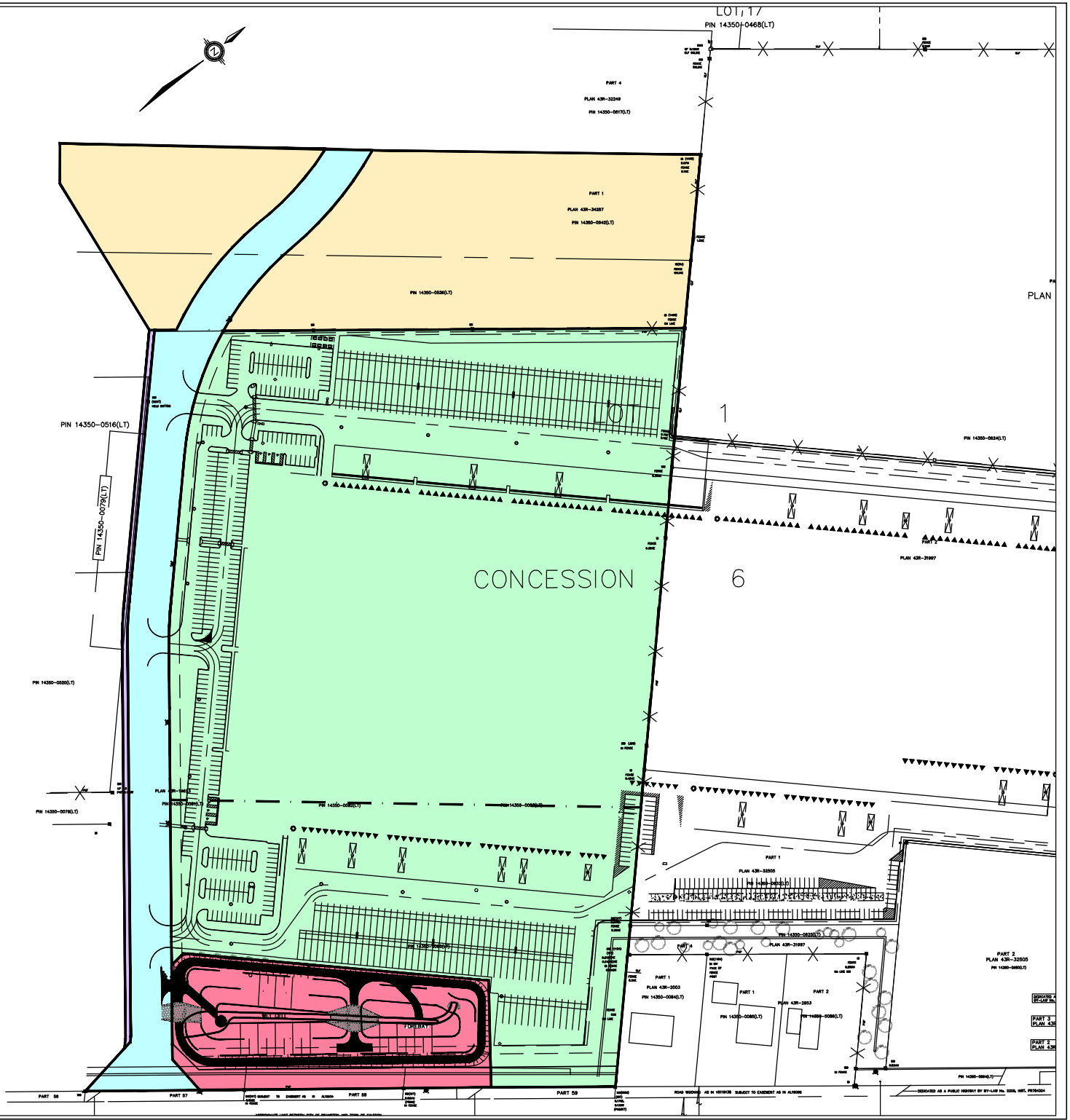
TOWN OF CALEDON

PROJECT 2019-4841 **AUGUST 2020**

Revision	Description	Prepared		Checked	
		By	Date	By	Date
2.0	Revised Report as per Agency comments	M. Ventresca	August 2020	K. Shahbikian	August 2020
1.0	Revised Report as per Agency comments	M. Ventresca K. Swain	April 2020	K. Shahbikian	April 2020
0.0	Original Report	M. Ventresca	Jan. 2020	K. Shahbikian	Jan. 2020

SCHAEFFERS
CONSULTING ENGINEERS
6 Ronrose Drive
Concord, Ontario L4K 4R3

Michael Ventresca



SIMPSON ROAD EXTENSION
SWM POND DESIGN
TOWN OF CALEDON

LEGEND

- CONTROLLED SIMPSON ROAD EXTENSION AREA
  A = 14500m² TIMP = 80%
- CONTROLLED NORTHERN SITE PLAN AREA
  A = 32200m² TIMP = 92.4%
- CONTROLLED SOUTHERN SITE PLAN AREA
  A = 105700m² TIMP = 90.5%
- CONTROLLED SWM POND AREA
  A = 12700m TIMP = 50%

TOTAL CONTROLLED SWM POND TRIBUTARY AREA
A = 165100m²

- UNCONTROLLED SIMPSON ROAD EXTENSION AREA
  A = 1250m² CN = 82, I_A = 5

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FIGURE 2-1
PROPOSED STORMWATER
DRAINAGE PLAN

2019-4841	AUGUST 2020	SCALE: N.T.S.

Proposed Conditio Hydrological Modelling Parameters

Catch ID	*Description*	Hydrograph Method	Area, A (ha)	Perv. CN	Perv. Ia (mm)	Imperviousness (%) TIMP	Imperviousness (%) XIMP	A*TIMP	A*XIMP	Peak (Tp (hrs)
1. Controlled Area										
201	South Site Plan Roof Area	STANDHYD	5.27	82	5	*99*	*99*	5.22	5.22	
202	South Site Plan Parking and Landscape	STANDHYD	6.57	82	5	*81*	*81*	5.32	5.32	
203	North Site plan Parking and Landscape	STANDHYD	2.10	82	5	*80*	*80*	1.68	1.68	
204	Simpson Road Extension	STANDHYD	1.45	82	5	*80*	*80*	1.16	1.16	
205	North Siteplan Roff Area (35% of NorthSite Plan Area)	STANDHYD	1.125	82	5	*99*	*99*	1.11	1.11	
	Sub Total		**16.51**					**14.49**	**14.49**	
1. Uncontrolled Area										
206	External Area	NASHYD	0.125	82	5	0		0		0.25
	Sub Total		**0.125**							
	Total		**16.635**							

0.877574

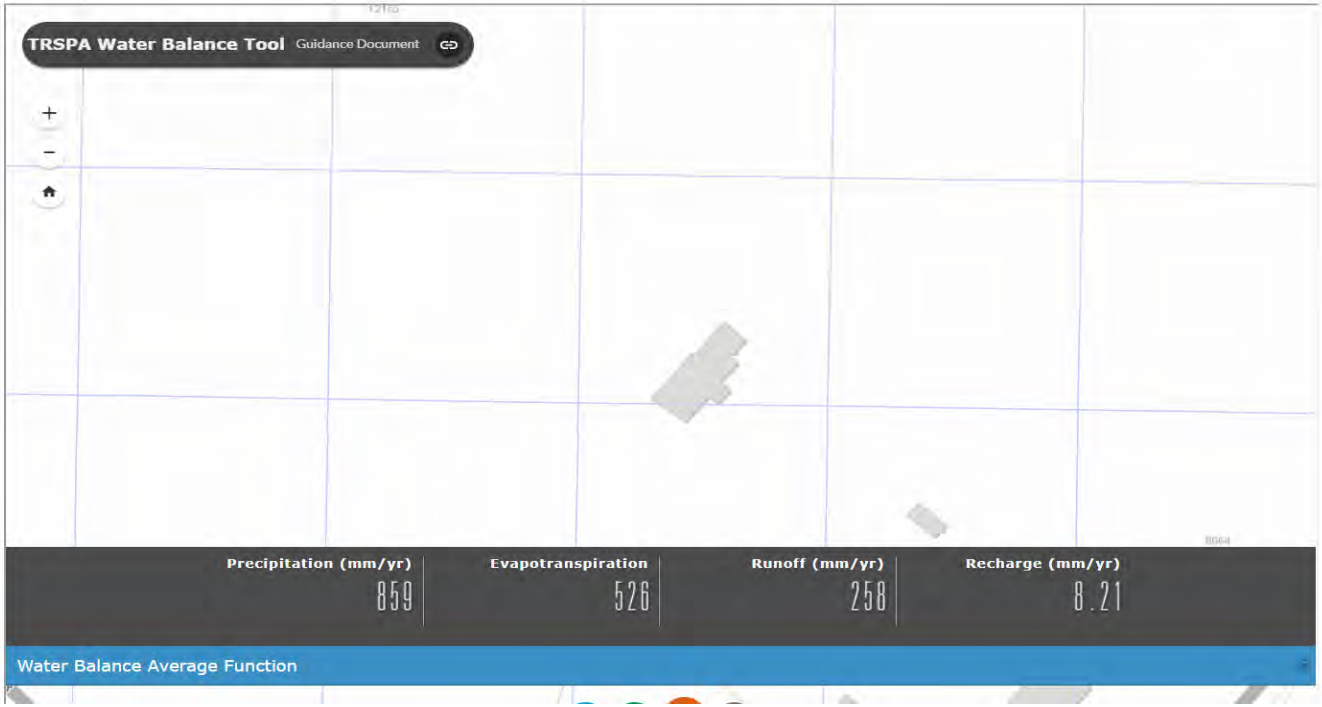
NB:

Parameters adopted from:

100 Pillsworth Road Phase 3 Addition, Functional Servicing and Stormwater Management Report, dated March 1, 2009 and Simpson Road Extension Stormwater Management Facility Memo, dated August 31, 2017.

D.6. Water Balance Calculations

TRSPA WATER BALANCE TOOL



	mm/year	%
Input:		
Precip	859	100%
Output:		
Evavp	526	66%
Runoff	258	33%
Recharge	8.21	1%
Total Output	792.21	100%

	mm/year	%
Input:		
Precip	859	100%
Output:		
Evavp	570	66%
Runoff	280	33%
Recharge	9	1%
Total Output	859	100%

GEI Consultants

Prepared By: Kevin Surja

Total Site Water Balance - Post to Pre

Simpson Road MESP
2301130
Jan-24

Water Balance Calculations

Based on MOE Table 3.1

Pre-Development Site Data

Hydrologic Soil group:	-
Vegetation Cover:	-
Precipitation Data:	TRCA Watershed Tool

Pre-Development Infiltration Factor

Topography	-
Soils	-
Cover	-
Total	-

Pre-Development Water Balance

	Pervious Area	Impervious Area	Total
Development Area (ha)	6.39	18.36	24.75
Precipitation (mm)	859	859	
ET (mm)	570	86	
Surplus (mm)	289	773	
Infiltration (mm)	9	0	
Runoff (mm)	280	773	
ET (m^3)	36440	15769	52209
Infiltration (m^3)	575	0	575
Runoff (m^3)	17900	141918	159818

Post-Development Site Data

Hydrologic Soil group:	-
Vegetation Cover:	-
Precipitation Data:	TRCA Watershed Tool

Post-Development Infiltration Factor

Topography	-
Soils	-
Cover	-
Total	-

Post-Development Water Balance (No Mitigation)

	Pervious Area	Impervious Area	Total
Development Area (ha)	0.28	24.47	24.75
Precipitation (mm)	859	859	
ET (mm)	570	129	
Surplus (mm)	289	730	
Infiltration (mm)	9	0	
Runoff (mm)	280	730	
ET (m^3)	1607	31527	33134
Infiltration (m^3)	25	0	25
Runoff (m^3)	790	178653	179443

Annual Infiltration Volume Deficit = **550** **m^3/year**

SUMMARY

	ET	Infiltration	Runoff
	m^3		
Pre	52209	575	159818
w/o Mitigation	33134 -37%	25 -96%	179443 12%

EXISTING IMPERVIOUSNESS

Subject Site	Total Area	Impervious Area	Pervious Area	
C1	1.15	1.047	0.103	91%
C2.1	1.8	0	1.8	0%
C2.2.1	0.71	0.65	0.06	92%
C2.2.2	1.26	1.26	0	100%
C3.1	2.72	2.61	0.11	96%
C3.2.1	0.24	0.24	0	100%
C3.2.2	1.03	0.91	0.12	88%
C4	4.09	3.91	0.18	96%
C5	3.91	3.81	0.1	97%
C6	0.19	0.02	0.17	11%
C7	0.21	0.09	0.12	43%
C8	0.23	0.12	0.11	52%
C9	0.45	0.18	0.27	40%
C10	2.21	2.04	0.17	92%
C11	2.02	0.04	1.98	2%
C12	1.12	0.87	0.25	78%
R1	1.41	0.56	0.85	40%
	24.75	18.357	6.393	66%

PROPOSED IMPERVIOUSNESS

Subject Site	Total Area	Impervious Area	Pervious Area
C1	1.15	1.15	0
C2.1	1.8	1.8	0
C2.2.1	0.71	0.71	0
C2.2.2	1.26	1.26	0
C3.1	2.72	2.72	0
C3.2.1	0.24	0.24	0
C3.2.2	1.03	1.03	0
C4	4.09	4.09	0
C5	3.91	3.91	0
C6	0.19	0.19	0
C7	0.21	0.21	0
C8	0.23	0.23	0
C9	0.45	0.45	0
C10	2.21	2.21	0
C11	2.02	2.02	0
C12	1.12	1.12	0
R1	1.41	1.128	0.282
	24.75	24.468	0.282

Appendix E

Sanitary Servicing

Town of Caledon
Region of Peel

Department of Operations and Engineering

Sanitary Calculations to Simpson Road

Simpson Road

For Parts 1, 2, 3, 4, 5, 10

Sheet: 1 of 2

Project Name:

Project No.: 2301130

Prepared By: PS

Date: Feb-24

Residential Population Density:

Single Family Detached Dwelling:	50	Persons/ha	Extraneous:	0.200	L/s/ha
Semi-Detached Dwellings:	70	Persons/ha	Commercial:	50	pp/ha
ROW dwellings	175	Persons/ha	Industrial:	70	pp/ha
Apartments:	475	Persons/ha	Institutional:	90	pp/ha
q = average daily flow per person	302.8	L/cap/d	Q (ind) = industrial peak flow (L/s)		
M(r) = Peaking Factor (Residential)			Q (c) = commercial peak flow (L/s)		
M(r) = 1 + 14/(4+P^.5)			Q (ins) = institutional peak flow (L/s)		
where P = population in 1000's			Q (r) = population peak flow (L/s)		
			Q (i) = peak extraneous flow (L/s)		
			Q (d) = Total Peak flow (L/s)		

Location					Individual Values										Cumulative Values					Flow Data								Sewer Data								
						ICI			Residential							ICI			Residential																
Street/ Area number	From		To		Section Area	Industrial Area	Commercial GFA	Institutional Area	Single Detached Units	Semi Detached Units	Townhouse Units	Apartment Units	Residential Population	Total Accum. Population	Section Area (ha)	Industrial Population	Commercial Population	Institutional Population	Residential Population	Industrial Peak Flow (L/s)	Harmon Peaking Factor	Commercial Peak Flow (L/s)	Institutional Peak Flow (L/s)	Res. Population Peak Flow (L/s)	Peak Extraneous Flow (L/s)	Total Design Flow (L/s)	Length	Pipe Size	Pipe Material	Roughness	Grade	Full Flow Capacity	% of Design Capacity	Full Flow Velocity	Actual Velocity at Design Flow
	MH#	Invert	MH#	Invert	(ha.)	(ha.)	(ha.)	(ha.)	#	#	#	#	Capita	Capita	A	A(ind)	$A(c_o)$	A(ins)	P	Q(ind)		Q(c)	Q(ins)	Q(r)	Q(i)	Q(d)	(m)	(mm)			(%)	(L/s)	(%)	(m/s)	(m/s)
Part 1A, Part 1B					4.01	0.73	0	0.00	0	0	0	0	0	51	4.01	51.30	0.00	0.0	0	0.78	4.31	0.00	**0.00**	**0.00**	0.80	1.58	12.00	200	PVC	0.013	2.00	46.38	3.4%	1.48	0.05
Simpson Road-A1	MH4A		MH5A		0.15	0.00	0	0.00	0	0	0	0	0	51	4.16	0.00	0.00	0.0	0	0.78	4.31	0.00	**0.00**	**0.00**	0.83	1.61	62.00	250	PVC	0.013	1.00	59.47	2.7%	1.21	0.03
Part2A, Part2B					4.16	0.20	0	0.00	0	0	0	0	0	14	4.16	13.97	0.00	0.0	0	0.22	4.40	0.00	**0.00**	**0.00**	0.83	1.05	14.60	200	PVC	0.013	2.00	46.38	2.3%	1.48	0.03
Simpson Road-A2	MH5A		MH6A		0.14	0.00	0	0.00	0	0	0	0	0	65	8.46	0.00	0.00	0.0	0	0.98	4.29	0.00	**0.00**	**0.00**	1.69	2.67	63.60	250	PVC	0.013	0.50	42.05	6.4%	0.86	0.05
Part 3					3.97	1.99	0	0.00	0	0	0	0	0	139	3.97	139.11	0.00	0.0	0	2.05	4.20	0.00	**0.00**	**0.00**	0.79	2.84	32.00	200	PVC	0.013	2.00	46.38	6.1%	1.48	0.09
Simpson Road-A3	MH6A		MH7A		0.50	0.00	0	0.00	0	0	0	0	0	204	12.93	0.00	0.00	0.0	0	2.97	4.14	0.00	**0.00**	**0.00**	2.59	5.55	120.40	250	PVC	0.013	0.50	42.05	13.2%	0.86	0.11
Part 4					3.83	1.91	0	0.00	0	0	0	0	0	134	3.83	133.97	0.00	0.0	0	1.98	4.21	0.00	**0.00**	**0.00**	0.77	2.74	30.50	200	PVC	0.013	2.00	46.38	5.9%	1.48	0.09
Simpson Road-A4	MH7A		MH8A		0.32	0.00	0	0.00	0	0	0	0	0	338	17.08	0.00	0.00	0.0	0	4.81	4.06	0.00	**0.00**	**0.00**	3.42	8.23	82.20	250	PVC	0.013	0.50	42.05	19.6%	0.86	0.17
Part 10					2.32	1.16	0	0.00	0	0	0	0	0	81	2.32	81.30	0.00	0.0	0	1.22	4.27	0.00	**0.00**	**0.00**	0.46	1.68	30.50	200	PVC	0.013	2.00	46.38	3.6%	1.48	0.05
Simpson Road-A5	MH8A		MH9A		0.28	0.00	0	0.00	0	0	0	0	0	420	19.68	0.00	0.00	0.0	0	5.90	4.01	0.00	**0.00**	**0.00**	3.94	9.84	100.00	250	PVC	0.013	0.50	42.05	23.4%	0.86	0.20
Part 5					1.94	0.73	0	0.00	0	0	0	0	0	51	1.94	50.86	0.00	0.0	0	0.77	4.31	0.00	**0.00**	**0.00**	0.39	1.16	14.90	200	PVC	0.013	2.00	46.38	2.5%	1.48	0.04
Simpson Road-A6	MH9A		MH10A		0.26	0.00	0	0.00	0	0	0	0	0	471	21.88	0.00	0.00	0.0	0	6.58	3.99	0.00	**0.00**	**0.00**	4.38	10.95	107.80	250	PVC	0.013	0.55	44.10	24.8%	0.90	0.22

*** No GFA has been provided for Part B. An assumtion of 40% of site area is considerd for GFA

Town of Caledon
Region of Peel

Department of Operations and Engineering

Sanitary Calculations for Coleraine Drive

Simpson Road

For Sites 6, 7, 8, 9,11,12

Sheet: 2 of 2

Project Name:

Project No.: 2301130

Prepared By: PS

Date: Feb-24

Residential Population Density:

Single Family Detached Dwelling:	50	Persons/ha	Extraneous:	0.200	L/s/ha
Semi-Detached Dwellings:	70	Persons/ha	Commercial:	50	pp/ha
ROW dwellings	175	Persons/ha	Industrial:	70	pp/ha
Apartments:	475	Persons/ha	Institutional:	90	pp/ha
q = average daily flow per person	302.8	L/cap/d	Q (ind) = industrial peak flow (L/s)		
M(r) = Peaking Factor (Residential)			Q (c) = commercial peak flow (L/s)		
M(r) = 1 + 14/(4+P^.5)			Q (ins) = institutional peak flow (L/s)		
where P = population in 1000's			Q (r) = population peak flow (L/s)		
			Q (i) = peak extraneous flow (L/s)		
			Q (d) = Total Peak flow (L/s)		

Location					Individual Values										Cumulative Values					Flow Data								Sewer Data								
						ICI			Residential							ICI			Residential																	
Street/ Area number	From		To		Section Area	Industrial Area	Commercial GFA	Institutional Area	Single Detached Units	Semi Detached Units	Townhouse Units	Apartment Units	Residential Population	Total Accum. Population	Section Area (ha)	Industrial Population	Commercial Population	Institutional Population	Residential Population	Industrial Peak Flow (L/s)	Harmon Peaking Factor	Commercial Peak Flow (L/s)	Institutional Peak Flow (L/s)	Res. Population Peak Flow (L/s)	Peak Extraneous Flow (L/s)	Total Design Flow (L/s)	Length	Pipe Size	Pipe Material	Roughness	Grade	Full Flow Capacity	% of Design Capacity	Full Flow Velocity	Actual Velocity at Design Flow
	MH#	Invert	MH#	Invert	(ha.)	(ha.)	(ha.)	(ha.)	#	#	#	#	Capita	Capita	A	A(ind)	$A(c_o)$	A(ins)	P	Q(ind)		Q(c)	Q(ins)	Q(r)	Q(i)	Q(d)	(m)	(mm)			(%)	(L/s)	(%)	(m/s)	(m/s)
Part 6					1.14	0.27	0	0.00	0	0	0	0	0	18.64	1.14	18.64	0.00	0.0	0	0.29	4.38	0.00	**0.00**	**0.00**	0.23	0.51	10.00	200	PVC	0.013	2.00	46.38	1.1%	1.48	0.02
Coleraine Drive,B1	EXMH28		EXMH27		0.48	0.00	0	0.00	0	0	0	0	0	18.64	1.62	0.00	0.00	0.0	0	0.29	4.38	0.00	**0.00**	**0.00**	0.32	0.61	150.20	750	PVC	0.013	0.32	629.76	0.1%	1.43	0.00
Coleraine Drive,B2	EXMH27		EXMH26		0.48	0.00	0	0.00	0	0	0	0	0	18.64	2.10	0.00	0.00	0.0	0	0.29	4.38	0.00	**0.00**	**0.00**	0.42	0.71	150.10	750	PVC	0.013	0.28	589.09	0.1%	1.33	0.00
Site 11					0.20	0.10	0	0.00	0	0	0	0	0	7.03	0.20	7.03	0.00	0.0	0	0.11	4.43	0.00	**0.00**	**0.00**	0.04	0.15	10.00	200	PVC	0.013	2.00	46.38	0.3%	1.48	0.00
Site 7					0.22	0.12	0	0.00	0	0	0	0	0	8.24	0.22	8.24	0.00	0.0	0	0.13	4.42	0.00	**0.00**	**0.00**	0.04	0.17	10.00	200	PVC	0.013	2.00	46.38	0.4%	1.48	0.01
Coleraine Drive,B3	EXMH26		EXMH25		0.49	0.00	0	0.00	0	0	0	0	0	33.91	3.01	0.00	0.00	0.0	0	0.52	4.35	0.00	**0.00**	**0.00**	0.60	1.12	145.90	750	PVC	0.013	0.30	609.77	0.2%	1.38	0.00
Site 8					0.24	0.12	0	0.00	0	0	0	0	0	8.26	0.24	8.26	0.00	0.0	0	0.13	4.42	0.00	**0.00**	**0.00**	0.05	0.18	10.00	200	PVC	0.013	2.00	46.38	0.4%	1.48	0.01
Site 9					0.49	0.24	0	0.00	0	0	0	0	0	16.53	0.49	16.53	0.00	0.0	0	0.25	4.39	0.00	**0.00**	**0.00**	0.10	0.35	10.00	200	PVC	0.013	2.00	46.38	0.8%	1.48	0.01
Coleraine Drive,B4	EXMH25		EXMH24		0.52	0.00	0	0.00	0	0	0	0	0	58.70	4.26	0.00	0.00	0.0	0	0.88	4.30	0.00	**0.00**	**0.00**	0.85	1.74	153.20	750	PVC	0.013	0.76	970.53	0.2%	2.20	0.00
Site 12* **					1.15	0.46	0	0.00	0	0	0	0	0	32.20	1.15	32.20	0.00	0.0	0	0.49	4.35	0.00	**0.00**	**0.00**	0.23	0.72	10.00	200	PVC	0.013	2.00	46.38	1.6%	1.48	0.02
Coleraine Drive,B5	EXMH24		EXMH23		0.21	0.00	0	0.00	0	0	0	0	0	90.90	5.62	0.00	0.00	0.0	0	1.36	4.25	0.00	**0.00**	**0.00**	1.12	2.48	69.30	750	PVC	0.013	0.55	825.63	0.3%	1.87	0.01
*** No GFA has been provided for Part 12. An assumtion of 40% of site area is considerd for GFA																								**Flows from sites only**		2.08									

Appendix F

Water Servicing

DOMESTIC WATER DEMAND

GEI Consultants

Project Name:	Simpson road	Project No.	2301130
Prepared by:	Preston Simard		
Date:	Feb-24		

Note:
Based on the Region of Peel Design Criteria and Ontario Building Code

Fronting Simpson Road

	Site Component	PART 1	PART 2	PART 3	PART 4	PART 5	PART 10		
Industrial Occupancy Data		0.73	0.20	1.99	1.91	0.07	1.16		
		70.00	*70.00*	*70.00*	*70.00*	*70.00*	*70.00*		
Commercial Occupancy Data									

Unit Quantity by Site Component	Water Demand	Units	Equivalent Population (persons)							
Industrail Occupancies										
Apartments, Condominiums, Other Multi-family Dwellings	300	L/person/day	51.3	14.0	139.1	134.0	5.1	81.3	-	-
Not used	-	-								
Not used	-	-								
Other Occupancies			Flow Rates (L/d)							
Not used	-	-	-		-		-	-	-	-
Not used	-	-	-		-		-	-	-	-
Not used	-	-	-		-		-	-	-	-

Daily Flow Rate (L/d)										
Industrail Occupancies										
Apartments, Condominiums, Other Multi-family Dwellings		127,424.30	15,390.90	4,190.70	41,733.72	40,192.01	1,526.53	24,390.45	0	0
Not used										
Not used										
Other Occupancies										
Not used										
Not used										
Not used										

	Total Flow							
Average day (L/d)	**127,424**	15,391	4,191	41,734	40,192	1,527	24,390	0	0
Average day (L/s)	**1.47**	0.18	0.05	0.48	0.47	0.02	0.28	0.00	0.00
Max. day (L/d)	**178,394**	21,547	5,867	58,427	56,269	2,137	34,147	0	0
Min. hour (L/hr)	**3,451**	417	113	1,130	1,089	41	661	0	0
Peak hour (L/hr)	**15,928**	1,924	524	5,217	5,024	191	3,049	0	0
Peak hour (L/s)	**4.42**	0.53	0.15	1.45	1.40	0.05	0.85	0.00	0.00

Peaking Factors			
Land Use	Minimum Hour	Peak Hour	Maximum Day
Commercial / Retail	0.65	3.00	1.40
Residential	0.65	3.00	2.00

DOMESTIC WATER DEMAND

GEI Consultants

Project Name:	Simpson road	Project No.	2301130
Prepared by:	Preston Simard		
Date:	Feb-24		

Fronting Coleraine Drive

Note:
Based on the Region of Peel Design Criteria and Ontario Building Code

	Site Component	Part 6	Part 7	Part 8	Part 9	Part 11			
Industrial Occupancy Data		0.57	0.12	0.12	0.24	0.10			
		70.00	*70.00*	*70.00*	*70.00*	*70.00*			
Commercial Occupancy Data									

Unit Quantity by Site Component	Water Demand	Units	Equivalent Population (persons)							
Industrail Occupancies										
Apartments, Condominiums, Other Multi-family Dwellings	300	L/person/day	39.6	8.2	8.3	16.5	7.0	-	-	-
Not used	-	-								
Not used	-	-								
Other Occupancies			Flow Rates (L/d)							
Not used	-	-	-		-		-	-	-	-
Not used	-	-	-		-		-	-	-	-
Not used	-	-	-		-		-	-	-	-

Daily Flow Rate (L/d)										
Industrail Occupancies										
Apartments, Condominiums, Other Multi-family Dwellings		23,909.76	11,892.93	2,471.70	2,478.00	4,958.00	2,109.14			
Not used										
Not used										
Other Occupancies										
Not used										
Not used										
Not used										

	Total Flow							
Average day (L/d)	**23,910**	11,893	2,472	2,478	4,958	2,109			
Average day (L/s)	**0.28**	0.14	0.03	0.03	0.06	0.02			
Max. day (L/d)	**33,474**	16,650	3,460	3,469	6,941	2,953			
Min. hour (L/hr)	**648**	322	67	67	134	57			
Peak hour (L/hr)	**2,989**	1,487	309	310	620	264			
Peak hour (L/s)	**0.83**	0.41	0.09	0.09	0.17	0.07			

Peaking Factors			
Land Use	Minimum Hour	Peak Hour	Maximum Day
Commercial / Retail	0.65	3.00	1.40
Residential	0.65	3.00	2.00

DOMESTIC WATER DEMAND

GEI Consultants

Project Name:	Simpson road	Project No.	2301130
Prepared by:	Preston Simard		
Date:	Feb-24		

Fronting Coleraine Drive

Note:
Based on the Region of Peel Design Criteria and Ontario Building Code

	Site Component	Part 12							
Industrial Occupancy Data		0.46							
		70.00							
Commercial Occupancy Data									

Unit Quantity by Site Component	Water Demand	Units	Equivalent Population (persons)							
Industrail Occupancies										
Apartments, Condominiums, Other Multi-family Dwellings	300	L/person/day	32.3	-	-	-	-	-	-	-
Not used	-	-								
Not used	-	-								
Other Occupancies			**Flow Rates (L/d)**							
Not used	-	-	-		-		-	-	-	-
Not used	-	-	-		-		-	-	-	-
Not used	-	-	-		-		-	-	-	-

Daily Flow Rate (L/d)										
Industrail Occupancies										
Apartments, Condominiums, Other Multi-family Dwellings		9,681.84	9,681.84							
Not used										
Not used										
Other Occupancies										
Not used										
Not used										
Not used										

	Total Flow								
Average day (L/d)	**9,682**	9,682							
Average day (L/s)	**0.11**	0.11							
Max. day (L/d)	**13,555**	13,555							
Min. hour (L/hr)	**262**	262							
Peak hour (L/hr)	**1,210**	1,210							
Peak hour (L/s)	**0.34**	0.34							

Peaking Factors			
Land Use	Minimum Hour	Peak Hour	Maximum Day
Commercial / Retail	0.65	3.00	1.40
Residential	0.65	3.00	2.00

GEI Consultants

	Fire Flow + Max Day Demand		
	WaterCAD Modelling Results		
Project Name:	Simpson road	Project No.	2301130
Prepared by:	Helen Peng		
Date:	Feburary 2024		

ID	Schematic Label	Elevation (m)	Total Demand (L/s)	Gydraulic Grade (m)	Pressure (psi)	Notes
861	J-383	234	200.03	293.63	85	Site 1 Connection
793	J-382	233	100.51	294.49	87	Site 2 Connection
748	J-377	232.5	200	291.89	84	HD 1
833	J-376	231.5	333.65	284.61	75	Site 3 Connection
749	J-373	231.5	333	287.96	80	HD 2
829	J-369	231	317.25	284.95	77	Site 4 Connection
932	J-368	231	250.4	287.71	81	Site 10 Connection
775	J-365	231	250	289.9	84	HD 3
831	J-364	231	67.03	291.37	86	Site 5 Connection

GEI Consultants

	Max Day Demand		
	WaterCAD Modelling Results		
Project Name:	Simpson road	Project No	2301130
Prepared by:	Helen Peng		
Date:	Feburary 2024		

Schematic Label	Eleveation (m)	Demand (L/s)	Gydraulic Grade (m)	Pressure (psi)	Notes
J-360	230	0	291.07	87	
J-362	230.5	0	291.64	87	
J-361	230	0	291.32	87	
J-364	231	0.02	292.63	87	Site 5 Connection
J-363	231	0	292.63	87	
J-365	231	0	293.16	88	HD 3
J-366	231	0	293.16	88	
J-368	231	0.4	293.3	88	Site 10 Connection
J-367	231	0	293.3	88	
J-369	231	0.65	293.79	89	Site 4 Connection
J-372	231	0	293.79	89	
J-387	235	0	298.12	90	
J-373	231.5	0	294.84	90	HD 2
J-374	231.5	0	294.84	90	
J-383	234	0.25	297.5	90	Site 1 Connection
J-384	234	0	297.5	90	
J-386	234	0	297.51	90	
J-385	234	0	297.51	90	
J-376	231.5	0.68	295.24	90	Site 3 Connection
J-375	231.5	0	295.24	90	
J-379	233	0	296.77	91	
J-380	233	0	296.77	91	
J-382	233	0.07	296.79	91	Site 2 Connection
J-381	233	0	296.79	91	
J-377	232.5	0	296.58	91	HD 1
J-378	232.5	0	296.58	91	

GEI Consultants

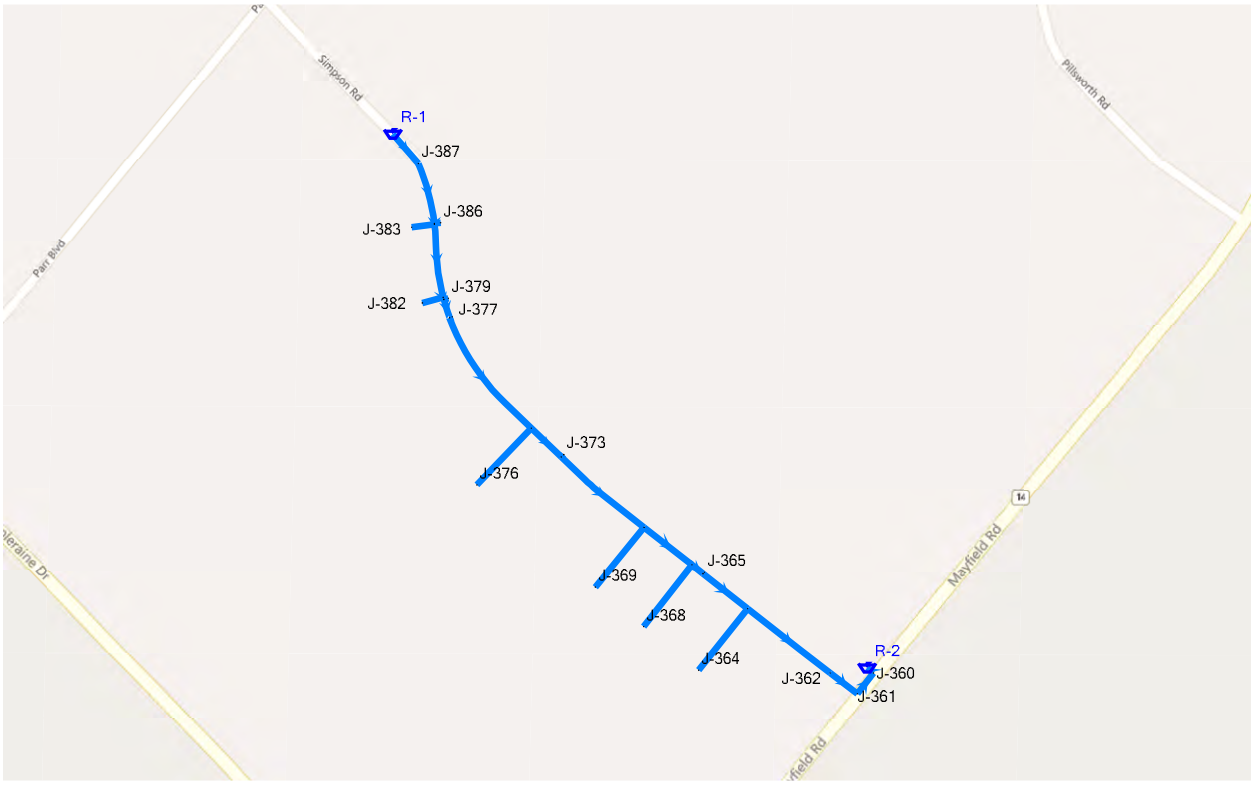
Project Name:	Simpson road — Project No 2301130
Prepared by:	Helen Peng
Date:	Feburary 2024

Peak Hour Demand

WaterCAD Modelling Results

Schematic Label	Eleveation (m)	Demand (L/s)	Gydraulic Grade (m)	Pressure (psi)	Notes
J-360	230	0	291.07	87	
J-362	230.5	0	291.63	87	
J-361	230	0	291.31	87	
J-364	231	0.05	292.6	87	Site 5 Connection
J-363	231	0	292.6	87	
J-365	231	0	293.13	88	HD 3
J-366	231	0	293.13	88	
J-368	231	0.85	293.26	88	Site 10 Connection
J-367	231	0	293.26	88	
J-369	231	1.4	293.75	89	Site 4 Connection
J-372	231	0	293.75	89	
J-387	235	0	298.11	90	
J-373	231.5	0	294.79	90	HD 2
J-374	231.5	0	294.79	90	
J-383	234	0.53	297.49	90	Site 1 Connection
J-384	234	0	297.49	90	
J-386	234	0	297.5	90	
J-385	234	0	297.5	90	
J-376	231.5	1.45	295.19	90	Site 3 Connection
J-375	231.5	0	295.19	90	
J-379	233	0	296.74	90	
J-380	233	0	296.74	90	
J-382	233	0.15	296.76	91	Site 2 Connection
J-381	233	0	296.76	91	
J-377	232.5	0	296.55	91	HD 1
J-378	232.5	0	296.55	91	

Scenario: Base



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