WILDFIELD COMMUNITY

Transportation Study

Prepared For: Wildfield Village Landowners Group Inc.

November 2024

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1.0 INTRODUCTION

1.1 Retainer

BA Group is retained by the Wildfield Village Landowners Group Inc. to provide transportation consulting services in support of the Wildfield Village Secondary Plan, a new greenfield community in Caledon, Ontario. The Wildfield Village Secondary Plan is bounded by Centreville Creek Road to the west, Mayfield Road to the south, the Planned Highway 413 Transportation Corridor to the north, and the West Humber river to the east. Figure 1 illustrates the site location.

1.2 Region of Peel Official Plan

The Region of Peel Official Plan (RPOP) was adopted on April 16, 2022 and provides a comprehensive land use policy framework to guide development in the Region to 2051. It includes policies that address housing and growth management; long-term planning for employment and infrastructure; protection of water resources, natural heritage, and rural/agricultural systems; and plan for climate change.

1.3 Town of Caledon *Future Caledon* Official Plan

The Town of Caledon's new Official Plan (OP), *Future Caledon* was adopted on March 6, 2024. It replaces a majority of the existing Town of Caledon Official Plan which was first implemented in 1978. Future phases of Official Plan Review process will continue to update the new OP, until all aspects of the previous official plan are replaced.

Future Caledon implements provincial and regional directions and outlines the Town's vision and guiding principles. Of note are the following land development and transportation related principles:

- Create Healthy and Complete Communities
  - *Plan for healthy and complete communities that offer a mix of housing and employment opportunities for all, a range of parks, open spaces and amenities, and the choice to conveniently access shopping and services without a car.*
- Create High Quality Transportation Options
  - *Create a mobility system that prioritizes people and transit through a network that supports all modes of transportation with an emphasis on creating great walking, cycling and transit infrastructure.*

1.4 Town of Caledon Multi-Modal Transportation Master Plan

The Town of Caledon's Multi-Modal Transportation Master Plan (MMTMP) was developed in conjunction with the *Future Caledon* OP and provides direction on transportation improvements within Caledon to 2051.

The MMTMP's supporting objectives include:

- Develop a future-ready transportation plan for the Town and expand the multi-modality of the transportation system including driving, transit, walking, cycling, and other emerging mobility options;
- Provide infrastructure to support and manage future land use growth and address the needs and priorities for both rural and urban communities;
- Deliver sustainable strategies that protect natural heritage assets while reducing transportation's effects on climate change;
- Build a safe and inclusive transportation system that supports age-friendly communities and promotes healthy living; and

- Develop complementary transportation solutions that supports Provincial, Regional, and Local policies and the Town's Official Plan (OP) update

The MMTMP also includes a series of planned improvements related to road widenings, a public transit strategy, and active transportation plan.

1.4.1 Road Network Improvements

The MMTMP recommends a series of road widenings to the collector road network concentrated to the southern half of Caledon. In proximity of the Site, the following roads are being widened:

- Centreville Creek Road from Mayfield Road to Healey Road, widened from 2 to 4 lanes
- Healey Road from Winston Churchill Boulevard to Airport Road, widened from 2 to 4 lanes
- Mayfield Road from Dixie Road, to east of The Gore Road, widened from 2 to 6 lanes

Figure 2 illustrates the road widenings planned in proximity of the Site and **Figure 3** illustrates the conceptual collector road layout. The conceptual road network plan proposed as part of this transportation study and development plan is discussed in **Section 2.0.** It is noted that the MMTMP does not currently show any planned road widenings along The Gore Road, but it is assumed that the road will be widened to a four-lane cross section from Healey Road to Mayfield Road, to accommodate the expected traffic volumes from the planned Highway 413 interchange on Gore Road. The potential widening of The Gore Road to 4 lanes is also recommended in Peel Region's Long Range Transportation Plan (2019) in the 2032-2041 Horizon years.

1.4.2 Public Transit Strategy

The MMTMP recommends leveraging Brampton Transit within the short-term, by 2035. Beyond 2035, the MMTMP recommends that the Town develop a transit service plan over a longer-term horizon in collaboration with developers as part of secondary plan approval processes so that it can be informed by the needs at the secondary plan level.

The MMTMP itself proposes fixed-route transit corridors on collector roads across the Town, with most of them located in the southern half of Caledon. These fixed-route transit corridors are discussed further in **Section 3.0**.

1.4.3 Active Transportation Plan

The MMTMP includes active transportation recommendations that are within the MMTMP were developed as part of the Caledon Active Transportation Master Plan process as well as new road cross-sections which accommodate for different types of cycling infrastructure.

The active transportation network proposed in the MMTMP is further discussed in **Section 4.0**.

1.5 Highway 413

Highway 413 is proposed to run through York, Peel, and Halton Region. There is an interchange proposed at the Gore Road within the site boundaries. The Highway is currently the subject of a Provincial Environmental Assessment and a Federal Impact Assessment. It is noted that no funding has currently been allocated to the Highway, and the commencement and completion of the project is dependent on the findings of the above studies. In the case that Highway 413 is not approved, any potential considerations for the community will be studied at that time, through the course of the development process.

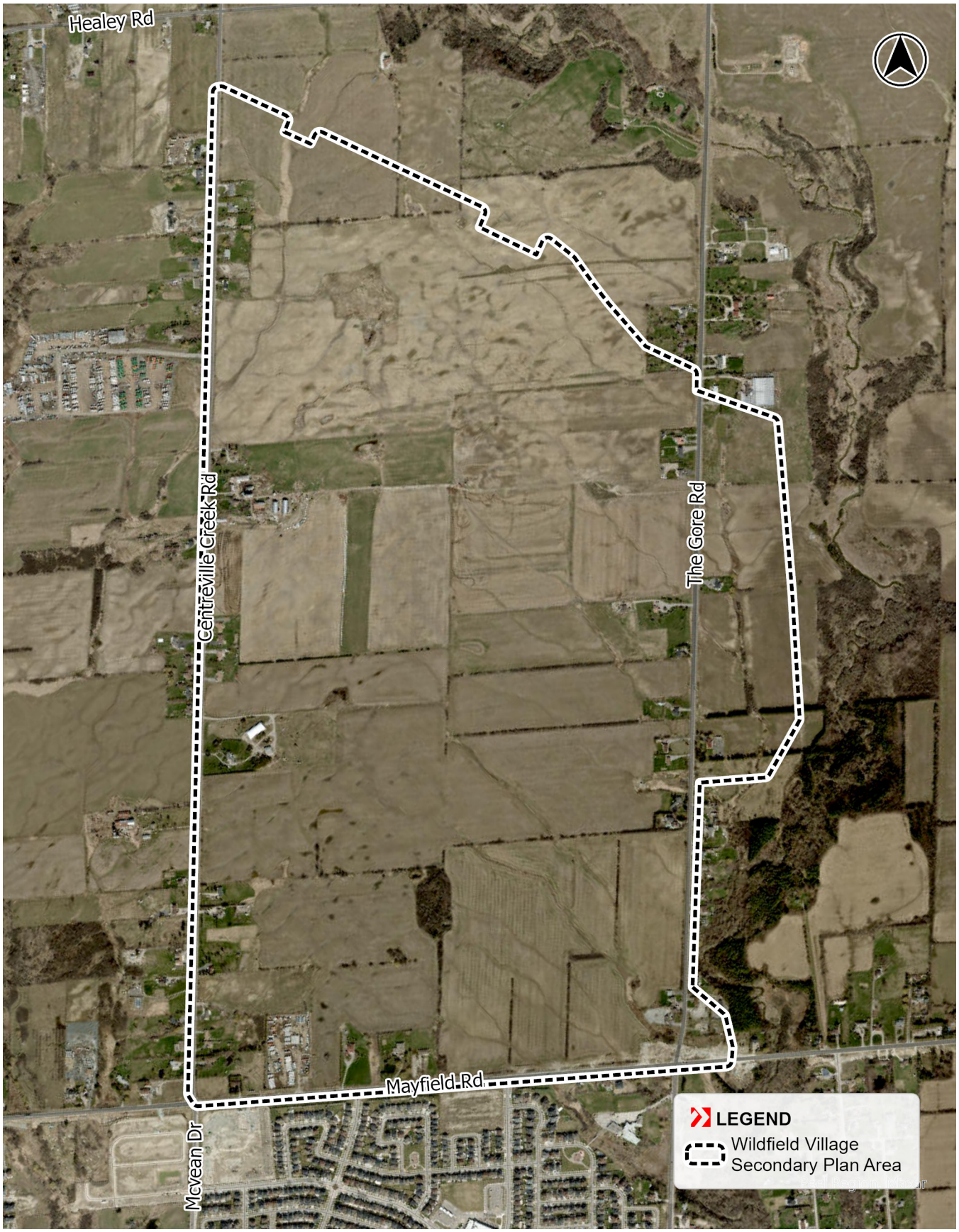

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FIGURE 1 SITE LOCATION

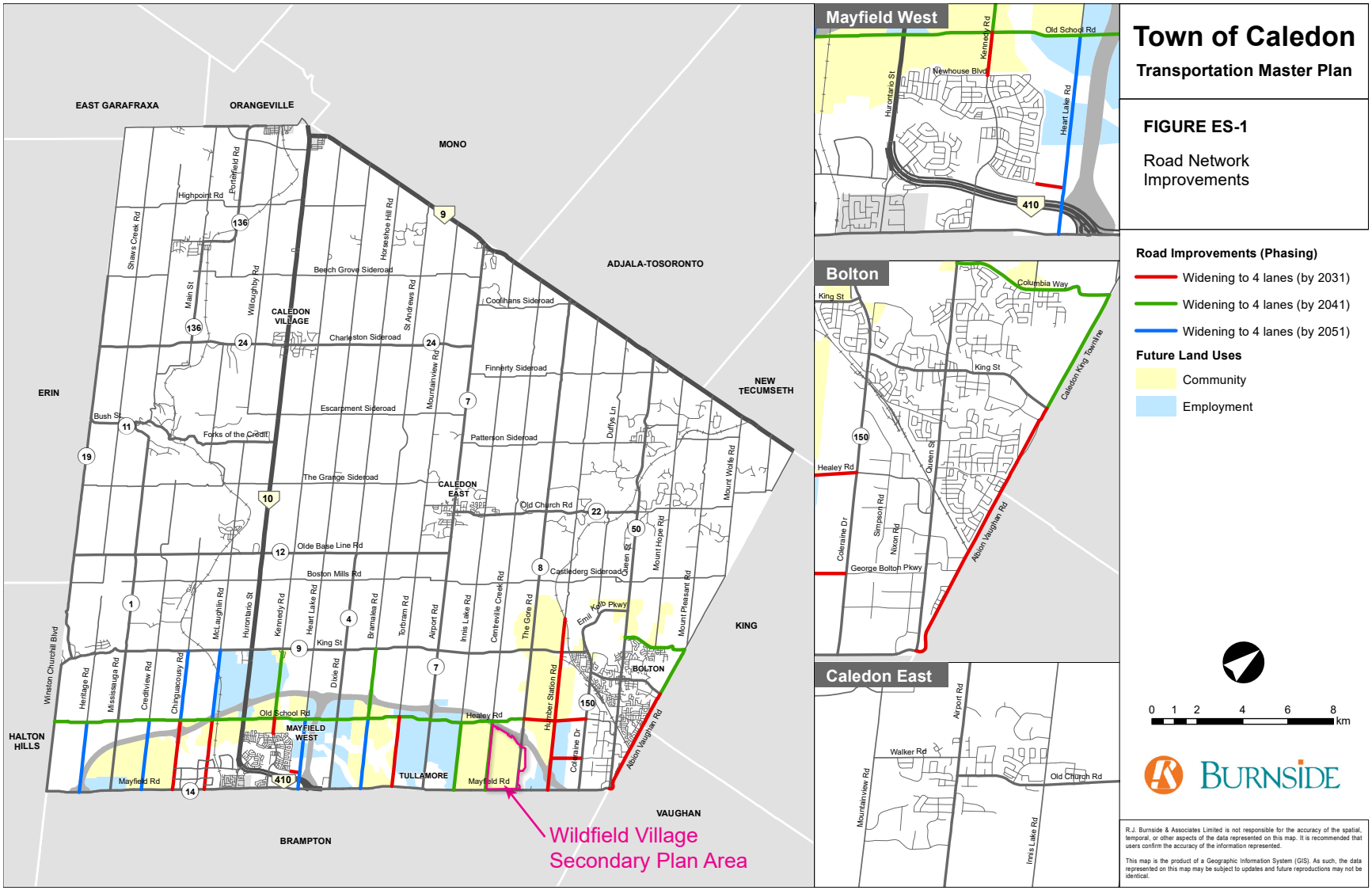

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FIGURE 2 ROAD NETWORK IMPROVEMENTS - MMTMP

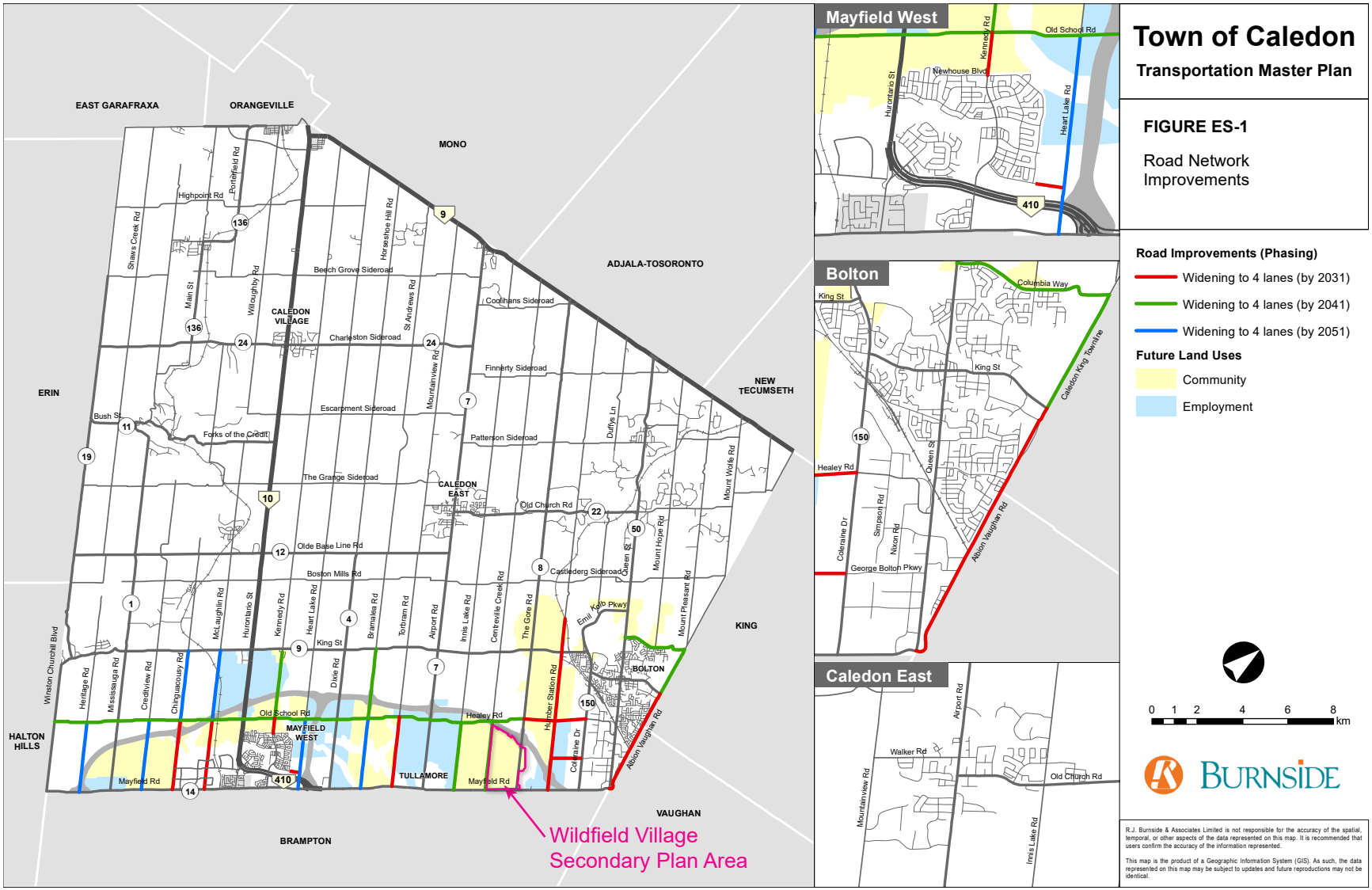

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FIGURE 3 CONCEPTUAL COLLECTOR ROAD NETWORK LAYOUT

1.6 The Proposal

The community will consist of approximately 7,000 residential units, with a mix of unit types, as well as supporting institutional, recreational and non-residential uses. As a complete community, the supporting land-uses will generally act to internalize trip-making rather than act as external generators of activity.

1.7 This Study

A terms of reference related to this study was submitted to Town of Caledon staff in addition to two transportation-focussed pre-submission meeting. The terms of reference is appended as **Appendix A**.

The proposed community will be developed over a long period of time with a series of studies providing additional details as the plan evolves. The purpose of this study is to provide an end-state (full build-out) review of the community to help confirm the basic structure of the community as a prelude to further discussions with stakeholders.

2.0 THE STRUCTURE PLAN

The transportation system planned for the community is based on the following principles:

- Use of the existing arterial road network bordering the community for transit and automobile access to and from the community. Notably, access to the area expressway system will be via The Gore Road (to Highway 413) and Mayfield Road (to Highway 410). The roads will generally be urbanized 4-6 lanes roads with supporting active transportation facilities.
- Development of a strong grid of east-west and north-south collector roads linking the external arterial road network with the community. This grid, which is generally similar to the one illustrated in the Multi-Modal Transportation Master Plan, will provide for a high degree of access, permeability, and connectivity through the community.
- Rationalization of intersections along The Gore Road and Mayfield Road. Along the Gore Road three new signalized collector road intersections are planned. These are located to meet spacing guidelines, taking into account signals at both Mayfield Road and the planned Highway 413 eastbound offramp traffic signal north of the community. Along Mayfield Road the collector roads are located opposite existing intersections at John Carrol l Drive and Martin Bryne Drive.
- Removal of the northerly collector road shown in the Multi-Modal Transportation Master Plan that followed the southern edge of Highway 413. As a boundary road, this road would not provide the internal active transportation connectivity of the other collector roads and the proposed location of the intersection on The Gore Road would make signalization impossible.
- Development of a complete community that allows for internalization of trips and active transportation connections to non-residential uses within the community.
- Construction of a new collector road network that will provide the primary vehicular access points to the boundary roads, provide supplemental public transit access to the community, and act as the primary internal cycling spine for the community. This collector road network is described in greater detail below.
- Development of a network of local roads that will provide the primary access to structure of the planned community. These streets should be designed to be accessible, low-speed, and safe for all road users.
- Creation of a cycling network based around the planned collector roads linking the residential uses with schools, non-residential uses, and community parks.

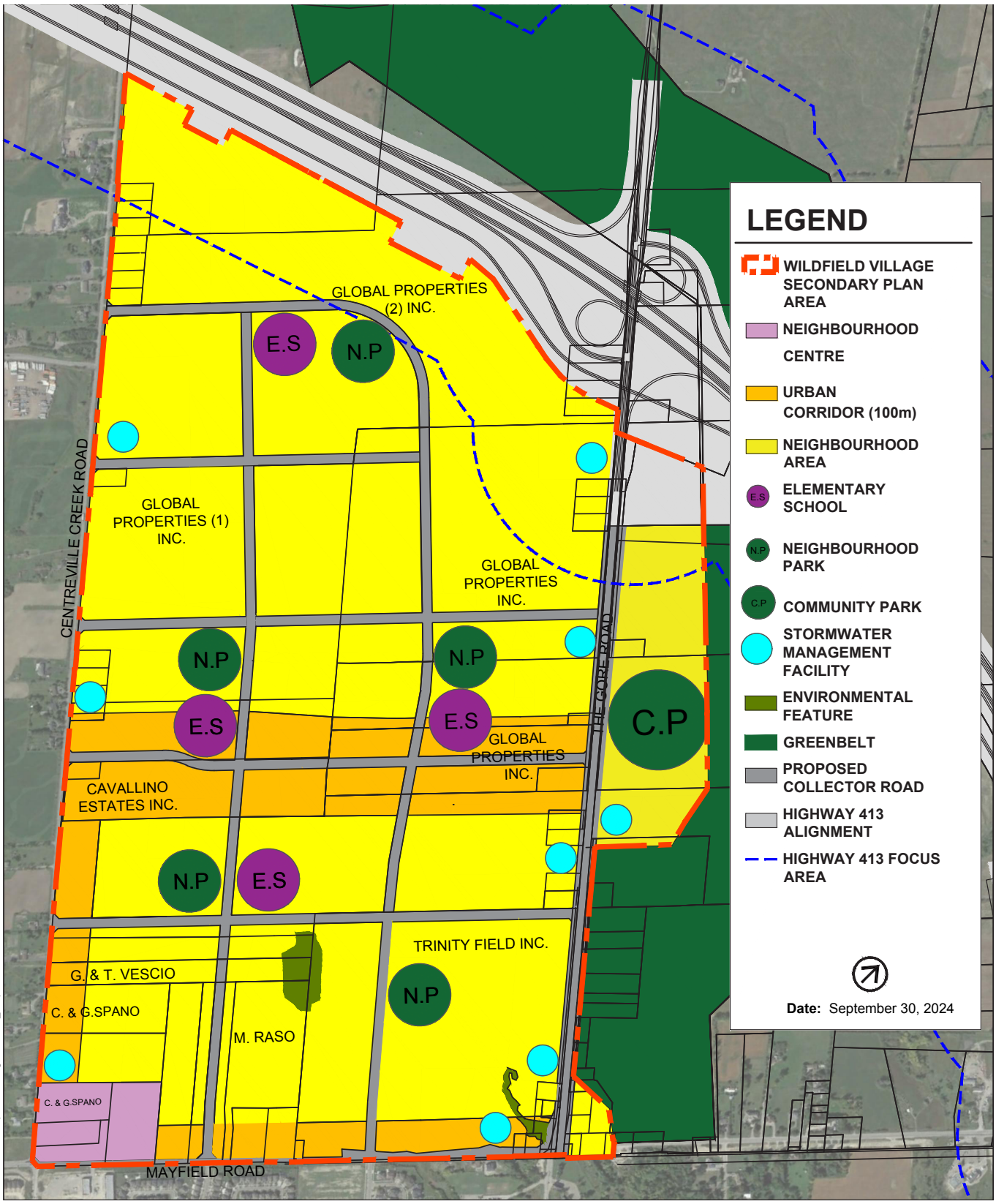

FIGURE 4 LAND USE CONCEPT PLAN

3.0 PUBLIC TRANSIT

3.1 Town of Caledon Multi-Modal Transportation Master Plan

Figure 5 illustrates the location of the proposed fixed-route corridors from the MMTMP.

3.2 Recommended Approach

It is recommended to leverage the grid style network as proposed by the MMTMP. The site is bounded by Centreville Creek Road, The Gore Road, Mayfield Road, and Healey Road all of which are proposed transit corridors. It is also bisected by the Highway 413 route, which will have a transitway running parallel to the vehicular travel lanes. Use of these corridors alone could provide a high level of transit connectivity to the community on efficient linear routes. Additional supplemental routes could be introduced on the planned new collector roads as required to provide additional connectivity to transit. The collector road network should be designed to accommodate transit access.

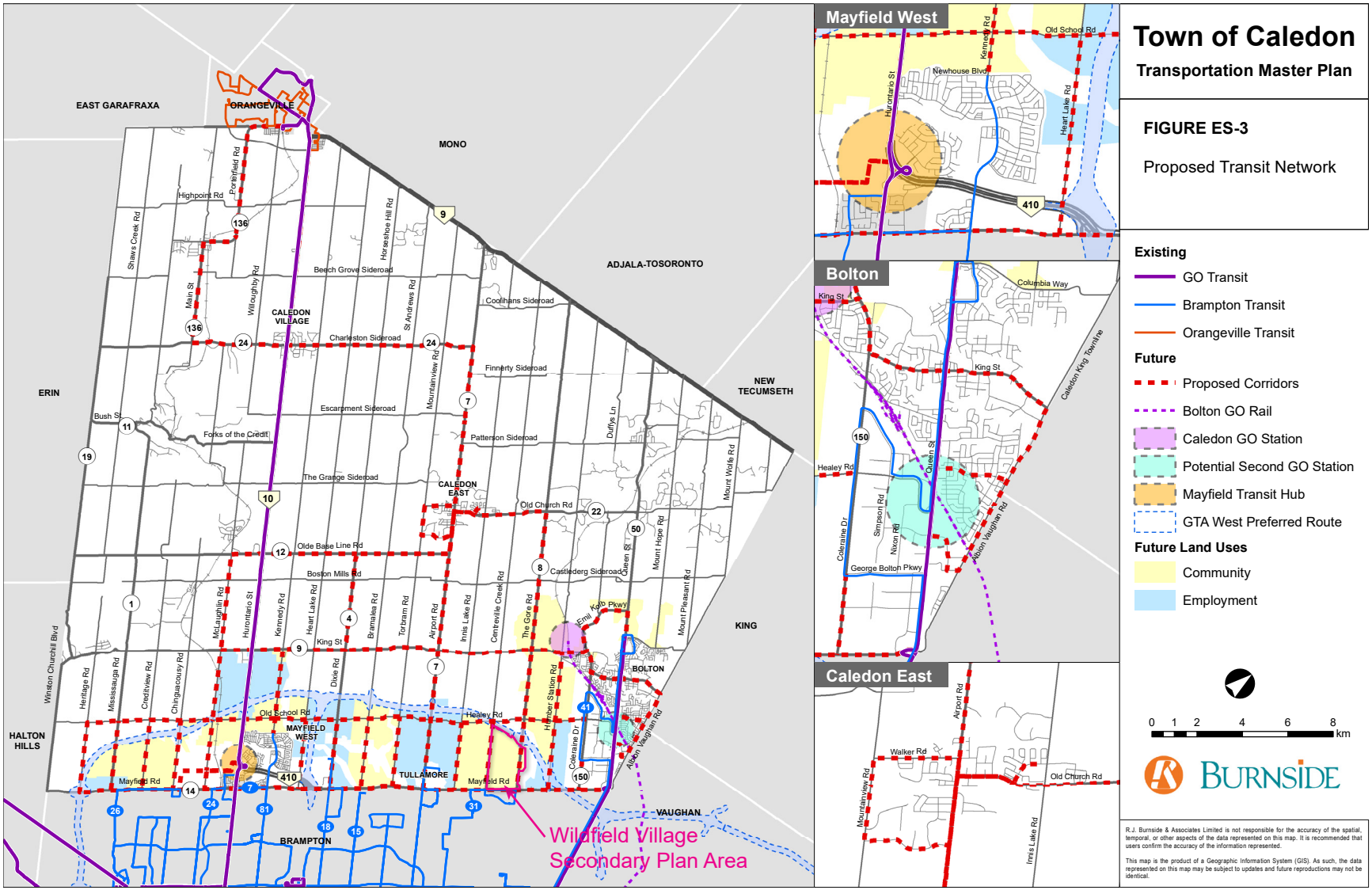

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FIGURE 5 MMTMP TRANSIT PLAN

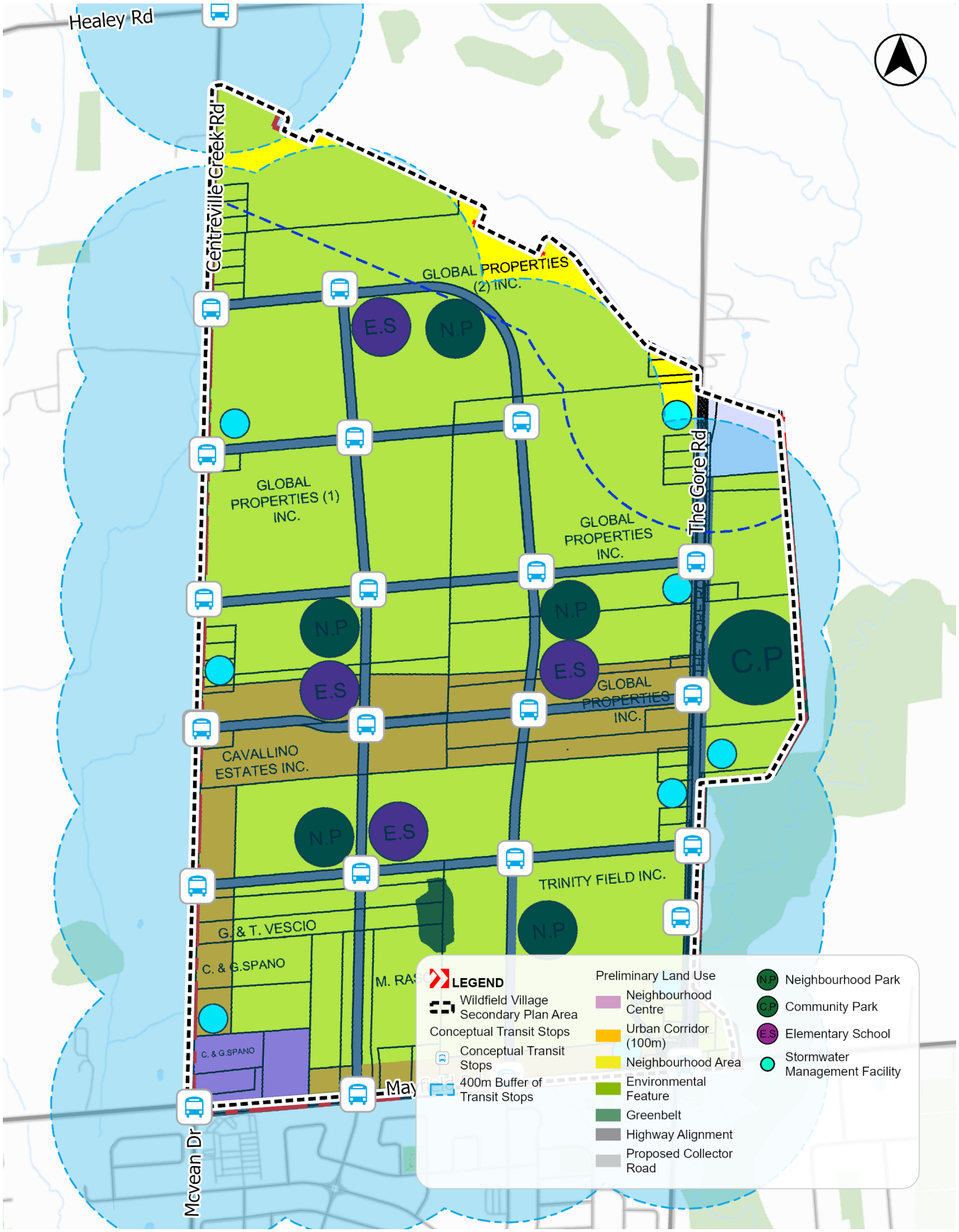

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FIGURE 6 TRANSIT NETWORK PLAN

4.0 ACTIVE TRANSPORTATION

4.1 Proposed Cross-Sections

Proposed cross-sections for the new local and collector roads are provided in **Appendix B**. Local roads will include a narrow pavements and sidewalks on both sides. These will be designed to minimize speeds, provide access, and provide pedestrian connectivity. Town of Caledon Staff were consulted through the development of the cross sections,

The collector road network will include multi-use paths on both sides of the road and wider pavement for additional parking or turn lanes.

4.2 Cycling Network

Within proximity of site, the MMTMP has proposed following improvements:

Physically Separated

- Centreville Creek Road, from Mayfield Road to north of Highway 413
- On the proposed "Urban Corridor" on the site, from Centreville Creek Road to The Gore Road
- Healey Road, from Winston Churchill Boulevard to Queen Street

Multi-use Trail

- Running parallel to The Gore Road east of the site, connecting to physically separated bike lanes on Healey Road north of Highway 413

Figure 7 illustrates the proposed active transportation network.

The 2051 cycling network will afford residents and visitors of the study area access around the entire study area via active modes. All schools and parks are all located along the collector road network which are proposed to have cycle tracks. Additional cycling priority routes on local roads will supplement the network as required.

Figure 8 illustrates the proposed cycling network in relation to the location of schools and parks in the planned development area.

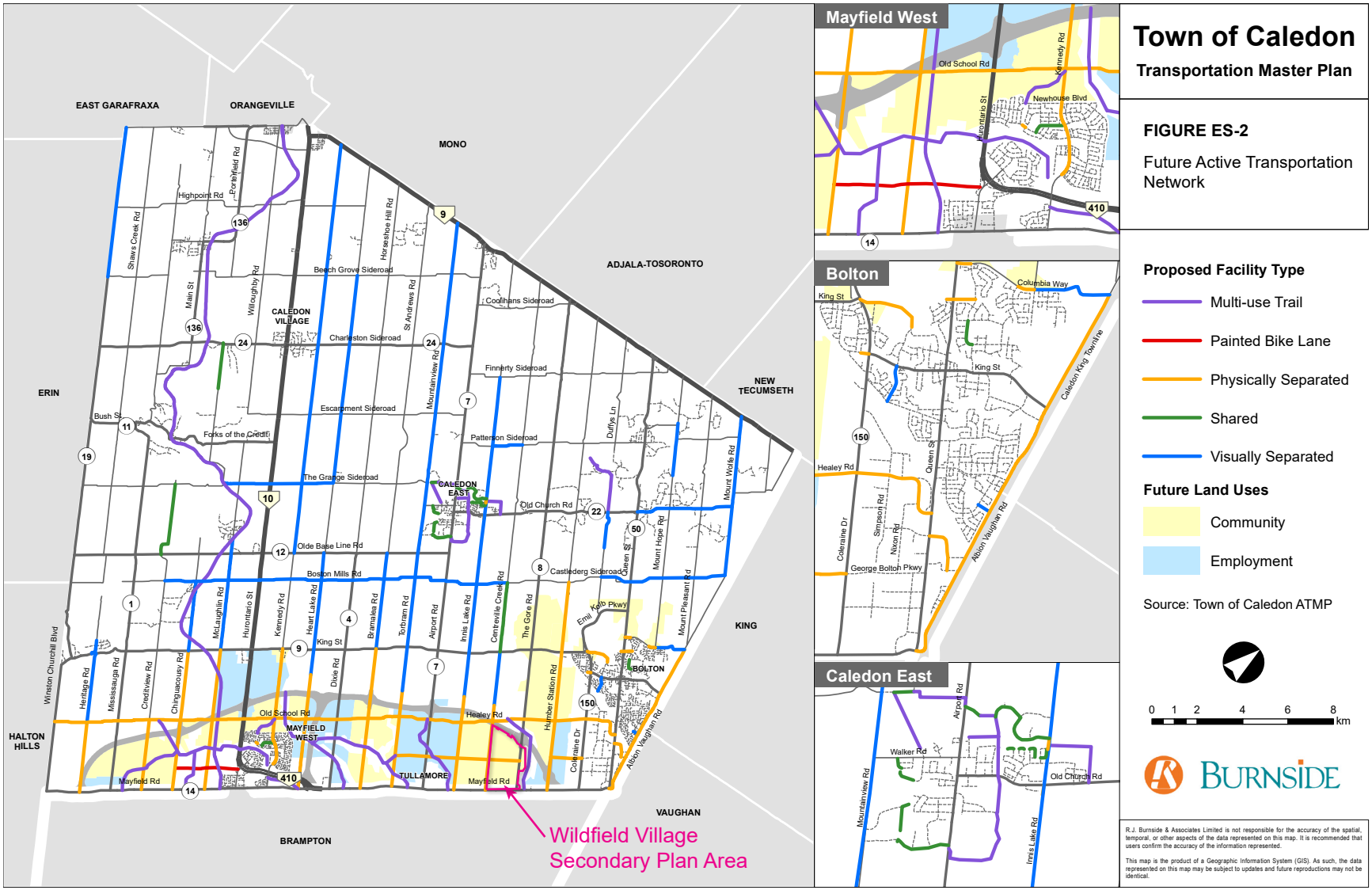

FIGURE 7 MMTMP FUTURE ACTIVE TRANSPORTATION NETWORK

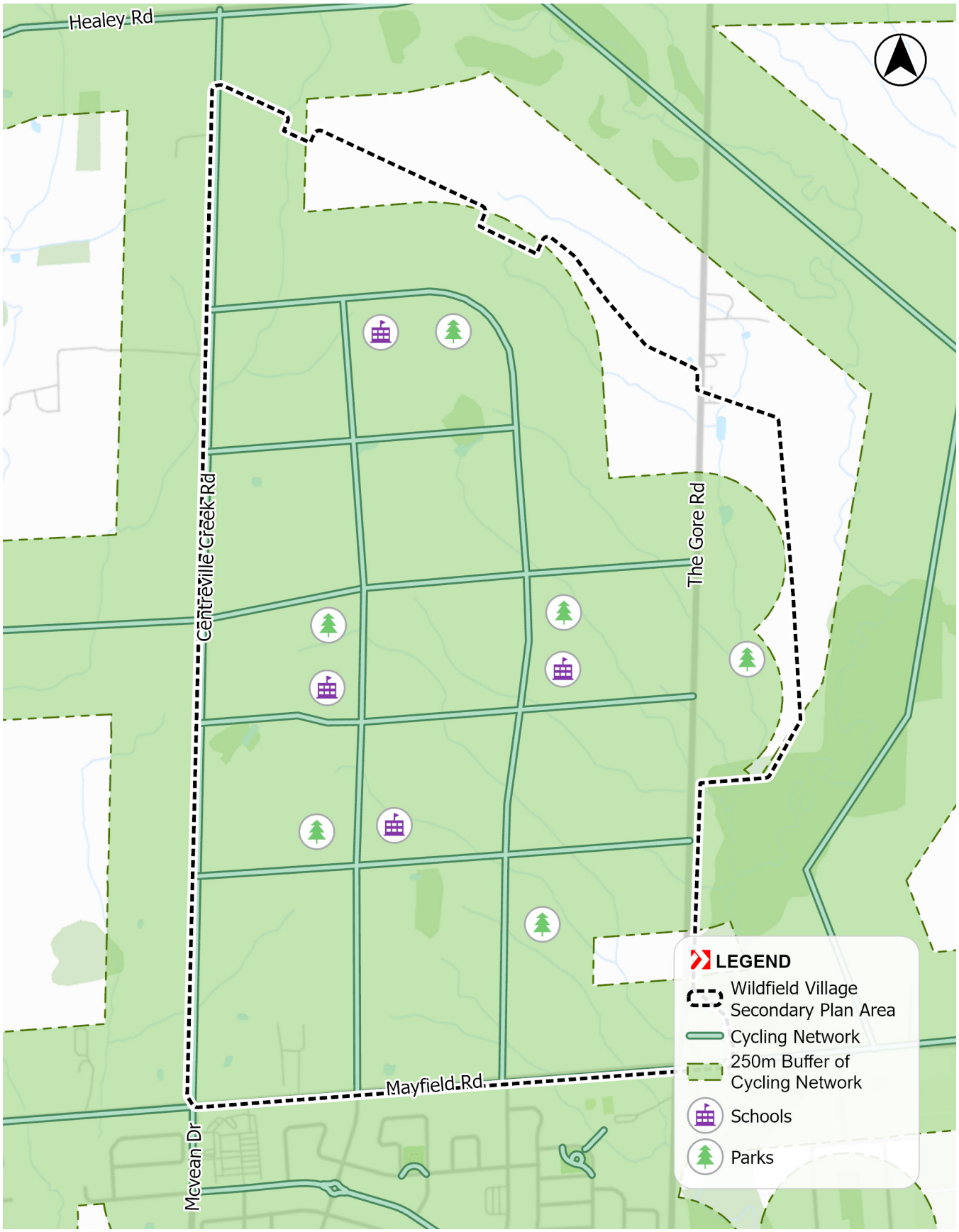

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FIGURE 8 CYCLING NETWORK AND AMENITIES

5.0 TRAFFIC ANALYSIS – TRAFFIC VOLUMES

5.1 Town of Caledon 2051 Volumes

As a part of the work completed for the Town of Caledon's *Future Caledon* Official Plan and Multi-Modal Transportation Master Plan, adopted in March of 2024, the Region of Peel and the Town of Caledon undertook traffic volume projections for arterial and collector roads. Volumes projected to the 2051 horizon have been assigned to all movements of the boundary roads of the structure plan based on the through volumes provided by the Town of Caledon, with the assumption that Highway 413 and the planned interchange at The Gore Road are operational. An excerpt of the provided TMP volumes is provided in **Appendix C**.

It should be noted that the TMP modelling was only completed for the morning peak hour. For the purposes of this study, afternoon peak hour volumes were approximated by assuming that the volumes assigned to the peak travel direction in the morning peak hour would travel in the opposite direction in the afternoon peak hour, and vice-versa. Considering that afternoon peak hours typically have higher overall volumes than morning peak hours, a 10% factor has been added to the off-peak direction volumes. Assumed morning and afternoon peak hour TMP volumes for the 2051 horizon year are illustrated in **Figure 9**.

It is noted that the modelling undertaken for the TMP accounted for development on the subject lands. It is also noted that the road plan proposed for the site has undergone changes from the road plan proposed in the OP. The assignment of 2051 TMP horizon volumes may be refined throughout the development process.

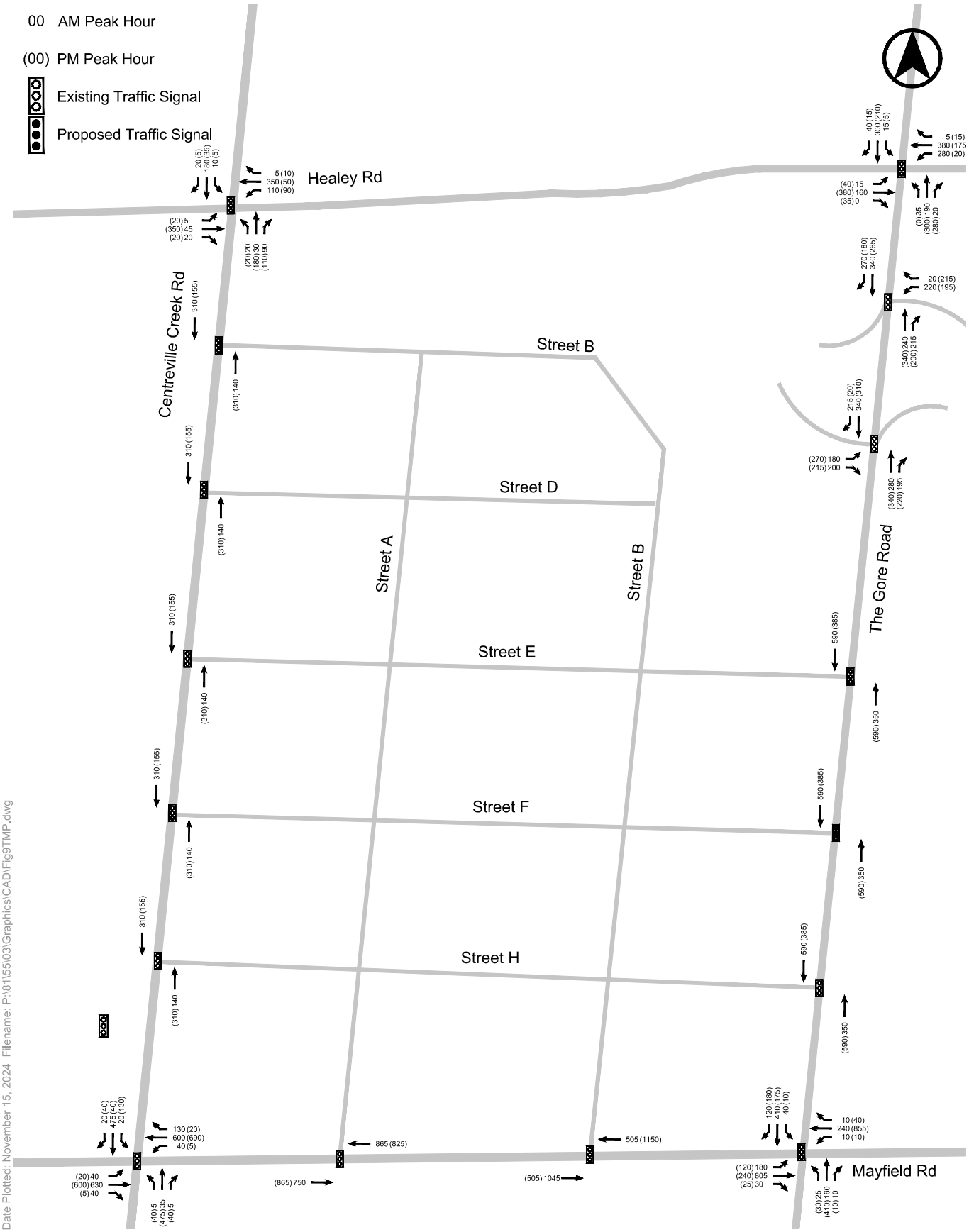


FIGURE 9 ASSIGNED TMP VOLUMES

5.2 Site Generated Traffic

5.2.1 Residential Trip Generation

To develop an understanding of expected traffic generation and trip distribution across the internal collector road network, the structure plan has been divided into zones that are generally bounded by the proposed collector road network. **Exhibit 1** illustrates the assumed zones, lettered A to K.

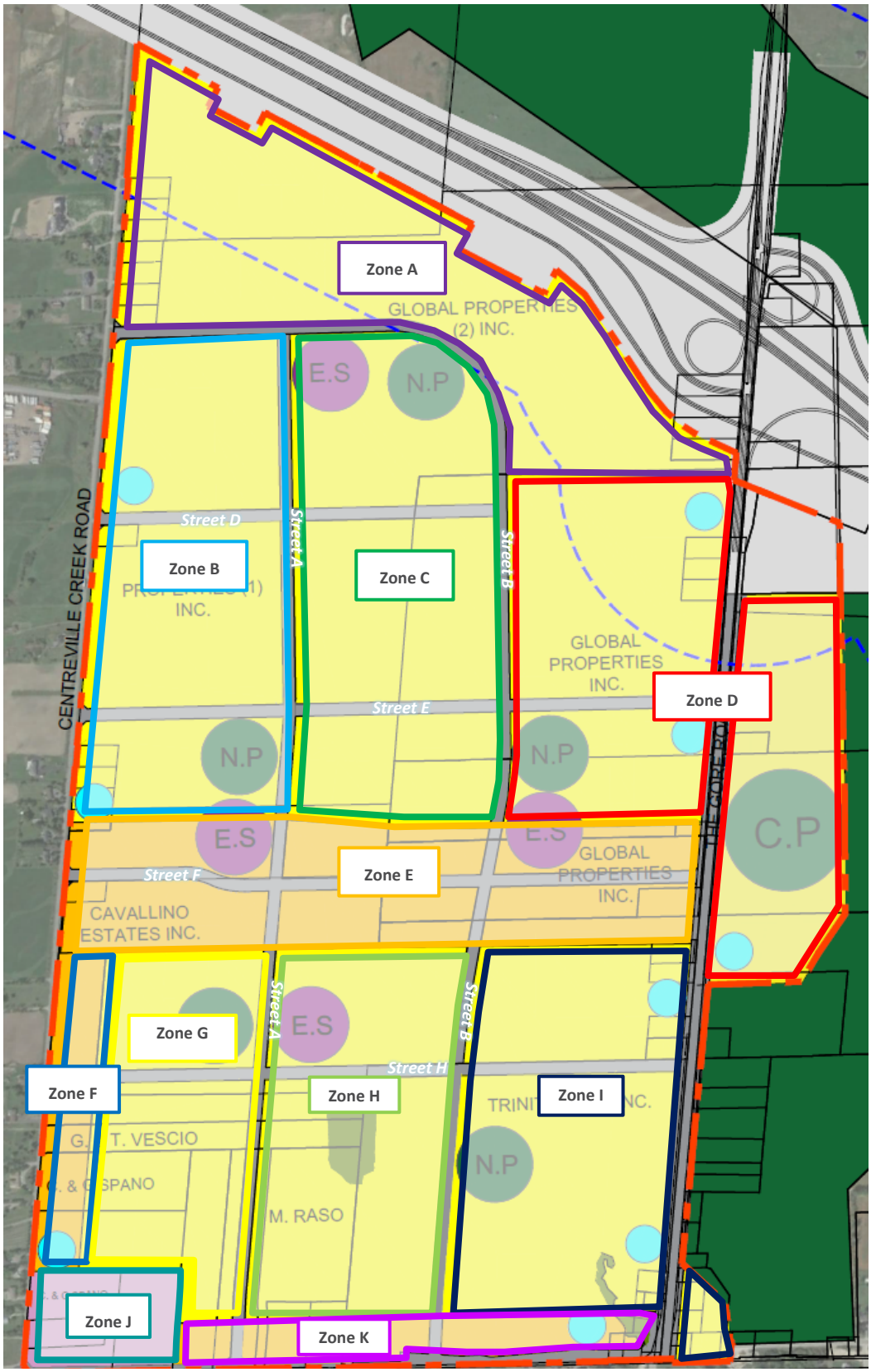


Exhibit 1: Traffic Zones

The land analysis prepared for the plan provides the number of units contained within specific ownership parcels of the plan. The ownership parcels have been amalgamated into the traffic zones shown in **Exhibit 1**. **Table 1** provides a summary of the area designation of the traffic zone, and the type and number of units contained within each letter zone.

Table 1 Neighbourhood Area - Unit Distribution by Zone

Letter Zone	Area Designation	Neighbourhood Area		Urban Corridor			Neighbourhood Centre	Total
		Singles	Townhouses	Townhouses	Stacked Townhouse	Apartments	Apartments	
A	NBA	310	270	0	0	0	0	580
B	NBA	604	89	0	0	0	0	693
C	NBA	758	123	0	0	0	0	881
D	NBA	774	133	0	0	0	0	907
E	UC	0	0	659	331	110	0	1100
F	UC	0	0	292	146	49	0	487
G	NBA	226	54	0	0	0	0	280
H	NBA	534	136	0	0	0	0	670
I	NBA	373	95	0	0	0	0	468
J	NC	0	0	0	0	0	601	601
K	UC	0	0	181	93	32	0	306
Total		**3579**	**900**	**1132**	**570**	**191**	**601**	**6973**

Notes:
1. It is assumed that 40% of the single housing units are semi-detached.
2. NBA: Neighbourhood Area; UC: Urban Corridor; NC: Neighbourhood Centre

Based on the above, vehicle trips were generated per zone based on trips rates provided in the 11th Edition of the ITE Trip Generation Manual for each type of housing unit. **Table 2** provides a summary of vehicle trip rates for each housing type.

Table 2 ITE Trip Generation by Housing Type

Plan Designation	ITE LUC	AM Peak Hour			PM Peak Hour		
		In	Out	2-Way	In	Out	2-Way
Single-Detached	210: Detached Single Family Housing	0.18	0.52	0.70	0.59	0.35	0.94
Semi-Detached / Townhouses	215: Attached Single Family Housing	0.12	0.36	0.48	0.34	0.23	0.57
Stacked Townhouse	220: Multi-Family Housing (Low Rise)	0.10	0.30	0.40	0.32	0.19	0.51
Apartments	221: Multi-Family Housing (Mid Rise)	0.09	0.28	0.37	0.24	0.15	0.39

Based on the above trip rates, **Table 3** summarizes the number of trips expected to be generated by the site, structured by zone, during the morning and afternoon peak hours.

Table 3 Residential Vehicle Trips

Letter Zone	Unit Type	Units	AM Peak Hour			PM Peak Hour		
			In	Out	2-Way	In	Out	2-Way
A	Single	186	35	95	130	110	65	175
	Semis & Townhouse	394	45	140	185	135	90	225
	Zone A Total	**580**	**80**	**235**	**315**	**245**	**155**	**400**
B	Single	362	65	190	255	215	125	340
	Semis & Townhouse	331	40	120	160	110	75	185
	Zone B Total	**693**	**105**	**310**	**415**	**325**	**200**	**525**
C	Single	455	80	235	315	270	160	430
	Semis & Townhouse	426	50	155	205	145	100	245
	Zone C Total	**881**	**130**	**390**	**520**	**415**	**260**	**675**
D	Single	464	80	240	320	275	160	435
	Semis & Townhouse	443	55	160	215	150	105	255
	Zone D Total	**907**	**135**	**400**	**535**	**425**	**265**	**690**
E	Townhouse	659	80	235	315	220	155	375
	Stacked Townhouse	331	30	100	130	105	60	165
	Apartments	110	10	30	40	25	15	40
	Zone E Total	**1100**	**120**	**365**	**485**	**350**	**230**	**580**
F	Townhouse	292	35	105	140	100	70	170
	Stacked Townhouse	146	15	45	60	45	30	75
	Apartments	49	5	15	20	10	5	15
	Zone F Total	**487**	**55**	**165**	**220**	**155**	**105**	**260**
G	Semis & Townhouse	136	25	70	95	80	45	125
	Townhouse	144	15	50	65	50	35	85
	Zone G Total	**280**	**40**	**120**	**160**	**130**	**80**	**210**
H	Semis & Townhouse	320	55	165	220	190	110	300
	Townhouse	350	40	125	165	120	80	200
	Zone H Total	**670**	**95**	**290**	**385**	**310**	**190**	**500**

Letter Zone	Unit Type	Units	AM Peak Hour			PM Peak Hour		
			In	Out	2-Way	In	Out	2-Way
I	Single	224	40	115	155	135	80	215
	Semis & Townhouse	244	30	90	120	80	55	135
	Zone I Total	**468**	**70**	**205**	**275**	**215**	**135**	**350**
J	Apartments	601	50	170	220	145	90	235
	Zone J Total	**601**	**50**	**170**	**220**	**145**	**90**	**235**
K	Townhouse	181	20	65	85	60	40	100
	Stacked Townhouse	93	10	30	40	30	20	50
	Apartments	32	5	10	15	10	5	15
	Zone K Total	**306**	**35**	**105**	**140**	**100**	**65**	**165**
Total		**6973**	**915**	**2755**	**3670**	**2815**	**1775**	**4590**
Blended Trip Rate (7806 units)			**0.13**	**0.40**	**0.53**	**0.40**	**0.25**	**0.66**

The site is expected to generate 3,670 and 4,590 two-way residential vehicle trips during the morning and afternoon peak hours, respectively.

5.2.2 Retail Trip Generation

The structure plan currently proposes approximately 68,700 m^2 of retail GFA, to be distributed across the Urban Corridors and Neighbourhood Centre on the site. Considering that the planned population of the community will total over 20,000 people, it is expected that the retail uses on site will primarily be oriented towards fulfilling the needs of the community, and the retail uses on site will not generate a significant amount of external trips.

5.2.3 Trip Distribution

Site traffic has been assigned to the area road network based on a review of travel information provided by the 2016 Transportation Tomorrow Survey (TTS) and expected road network traffic patterns and connectivity at the time of the buildout of the site. Site traffic distribution is summarized in **Table 4**. Detailed TTS output data and distribution assumptions are provided in **Appendix D**.

Table 4 Site Traffic Distribution

Direction	Outbound	Inbound
To / From the North on The Gore Road	0%	5%
To / From the South on The Gore Road	15%	15%
To / From the East on Mayfield Road	10%	5%
To / From the West on Mayfield Road	30%	25%
To / From the South on Centreville Creek Road	10%	10%
To / From the East on Highway 413	15%	10%
To / From the West on Highway 413	20%	30%
Total	**100%**	**100%**

Notes:
1. Based on TTS Zones 3443,3442, & 3469

5.3 Site Traffic Volumes

New site traffic generated by the community has been assigned to the proposed structure plan road network and the existing road network based upon the directional distribution summarized above. New site traffic volumes for the weekday morning and afternoon peak hours are illustrated in **Figure 10**.

5.4 Future Total Traffic Volumes

Future total traffic volumes, which reflect the addition of TMP volumes and new site traffic volumes are illustrated in **Figure 11**.

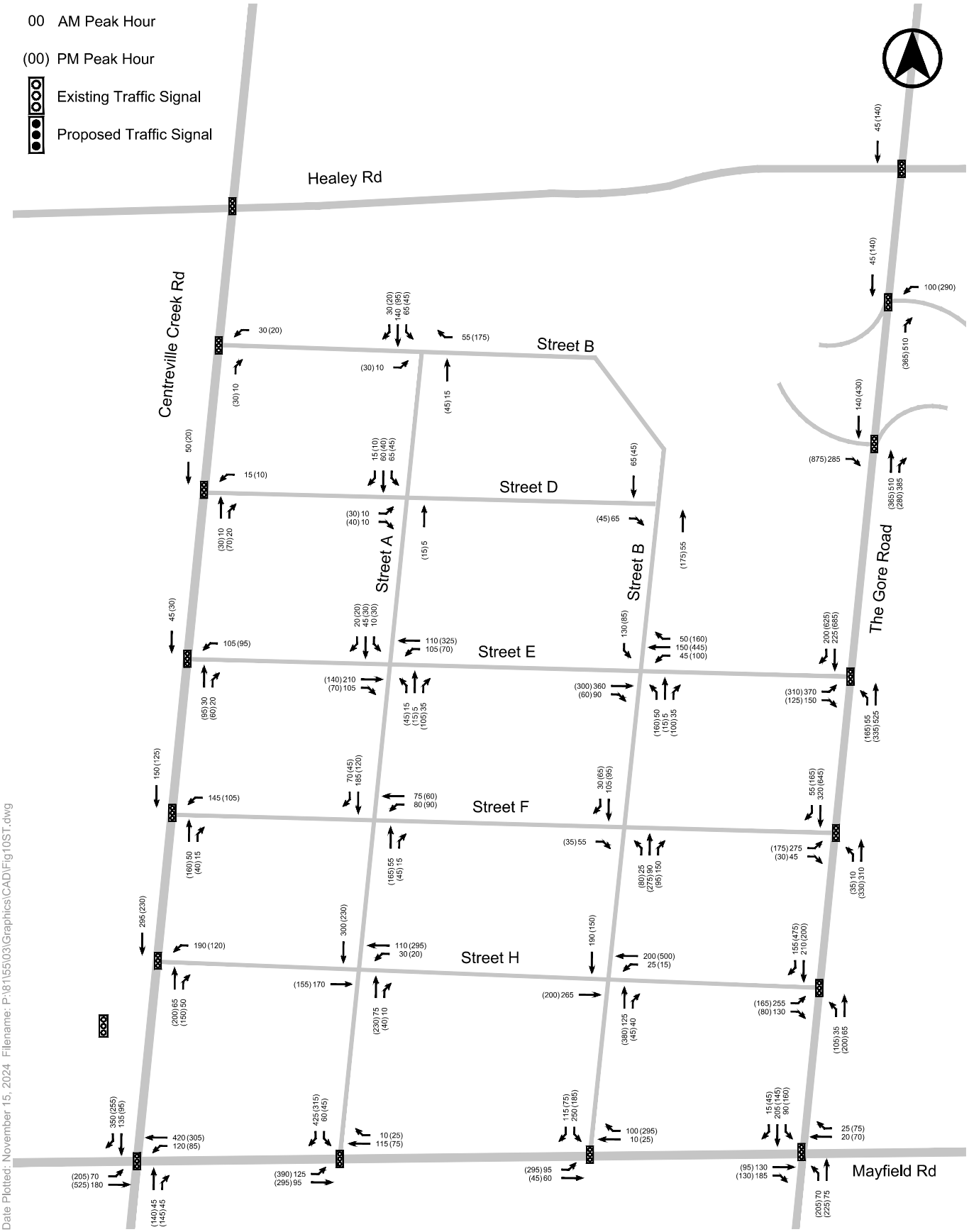


FIGURE 10 SITE TRAFFIC VOLUMES

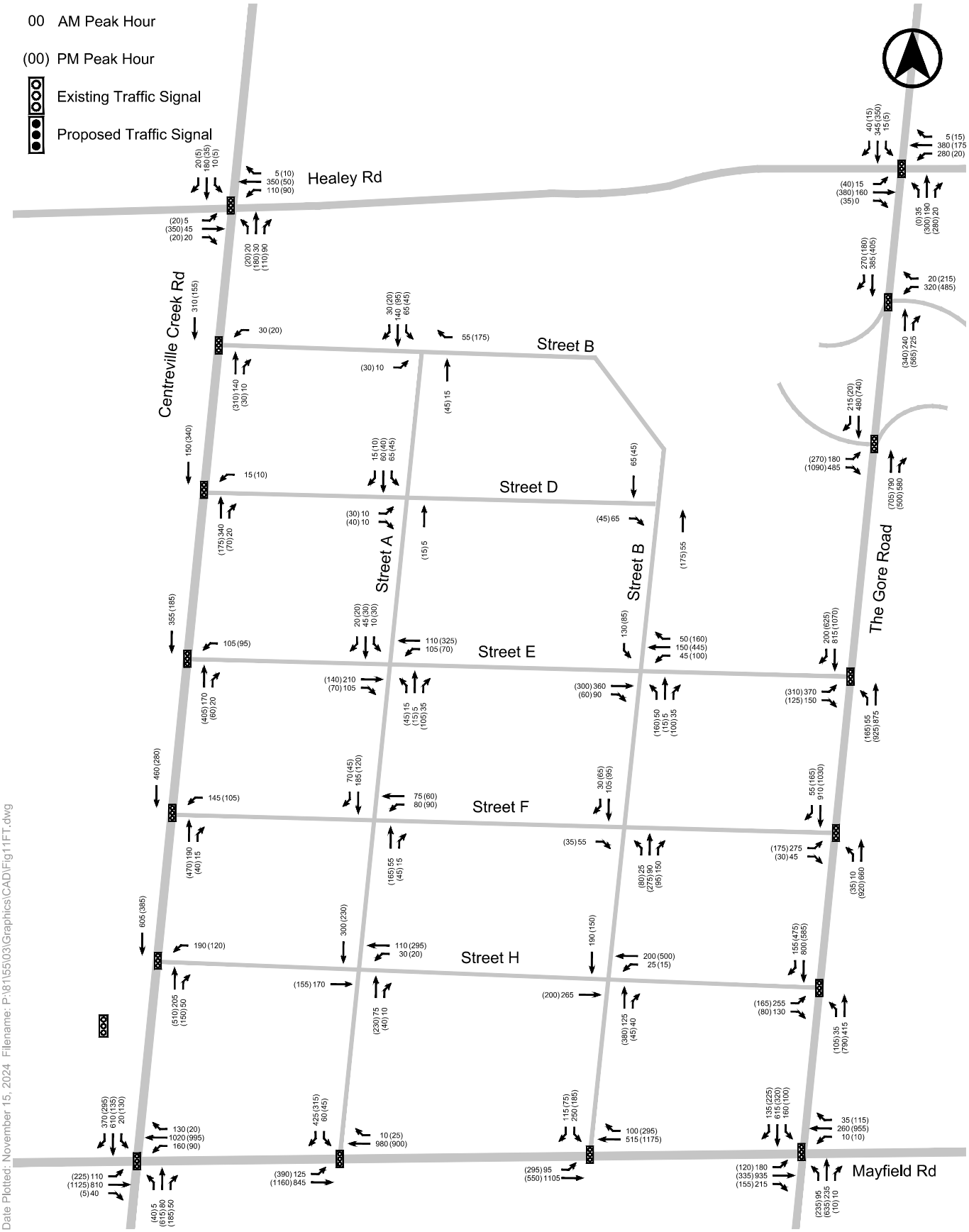


FIGURE 11 2051 FUTURE TOTAL TRAFFIC VOLUMES

6.0 TRAFFIC ANALYSIS – ANALYSIS

6.1 Analysis Methodology

Traffic operation analyses have been undertaken at the external site intersections using standard capacity analysis procedures as follows:

Signalized Intersections

Analyses undertaken at intersections operating under traffic signal control have been undertaken using the methodologies and procedures outlined in the Highway Capacity Manual (2000) and in accordance with the guidelines described in the Region of Peel's Guidelines for Using Synchro Version 7.73 Rev 8 (dated December 2010). Version 11.0 of Synchro has been used in this analysis. The product of the signalized intersection evaluation is an intersection performance index (volume to capacity ratio, "v/c"), where a v/c index of 1.00 indicates 'at or near capacity' conditions.

HCM level of service (LOS) criteria for signalized intersections are as follows:

- LOS A: Control Delay ≤ 10s
- LOS B: 10s < Control Delay ≤ 20s
- LOS C: 20s < Control Delay ≤ 35s
- LOS D: 35s < Control Delay ≤ 55s
- LOS E: 55s < Control Delay ≤ 80s
- LOS F: Control Delay > 80s

Unsignalized Intersections

Unsignalized intersection analyses have been carried out using standard capacity procedures for intersections operating under "Two-way" and "All-Way" STOP control and in accordance with the methodologies outlined in the Highway Capacity Manual 2000 (HCM 2000).

The product of these analyses is a level of service (LOS) designation, ranging from LOS A to F; which provides a relative indication of the level of delay experienced by motorists completing a turning manoeuvre at an intersection. LOS A represents conditions under which motorists would experience little delay and LOS F reflects conditions where more extended delays can be expected.

HCM level of service (LOS) criteria for unsignalized intersections are as follows:

- LOS A: Control Delay ≤ 10s
- LOS B: 10s < Control Delay ≤ 15s
- LOS C: 15s < Control Delay ≤ 25s
- LOS D: 25s < Control Delay ≤ 35s
- LOS E: 35s < Control Delay ≤ 50s
- LOS F: Control Delay > 50s

6.2 Intersection Operations Analysis

Detailed Synchro output reports are provided in **Appendix E**.

6.2.1 Mayfield Road Corridor

The intersections pertaining to the site that intersect with Mayfield Road are as follows:

- Mayfield Road and Centreville Creek Road
- Mayfield Road and Street “A”
- Mayfield Road and Street “B”
- Mayfield Road and The Gore Road

To accommodate the large number of vehicles travelling along Mayfield Road, as well as site traffic travelling to and from the west on Mayfield Road, these intersections have been assigned a cycle length of 100 seconds during the morning peak hour and 120 seconds during the afternoon peak hour. Some intersection improvements are required to accommodate the planned TMP volumes and site traffic volumes, and it is recommended that these improvements are studied and implemented in conjunction with planned road widenings along Centreville Creek Road and any potential widening of The Gore Road to accommodate highway volumes. Capacity results and discussion for the intersections along Mayfield Road are provided in the following sections. The planned widening of Mayfield Road to three lanes in each direction has been assumed for these intersections.

6.2.1.1 MAYFIELD ROAD AND CENTREVILLE CREEK ROAD

Table 5 provides a summary of the volume to capacity ratios reported for the intersection of Mayfield Road and Centreville Creek Road.

Table 5 Mayfield Road and Centreville Creek Road – Capacity Analysis Results

Lane Group	2051 Future Total	
	V/C	LOS
EBL	0.30 (0.55)	A (B)
EBT	0.32 (0.48)	B (C)
EBR	0.03 (0.00)	B (B)
WBL	0.35 (0.32)	B (C)
WBT	0.39 (0.45)	B (B)
WBR	0.08 (0.01)	C (C)
NBL	0.04 (0.14)	C (D)
NBT	0.11 (0.72)	C (D)
NBR	0.03 (0.12)	C (D)
SBL	0.06 (0.46)	C (C)
SBT	0.62 (0.11)	C (C)
SBR	0.35 (0.35)	C (B)
Overall	**0.49 (0.57)**	**B (C)**

Notes:
1. XX (XX): AM (PM)

The intersection of Mayfield Road and Centreville Creek Road will operate under very busy but acceptable conditions during the morning and afternoon peak hours, with respective overall v/c ratios of 0.49 and 0.57. To accommodate TMP volumes, it is recommended to implement dedicated northbound and southbound left lanes along Centreville Creek Road. These improvements should be further studied in conjunction with the widening of Centreville Creek Road.

6.2.1.2 MAYFIELD ROAD AND STREET "A"

Table 6 provides a summary of the volume to capacity ratios reported at the proposed intersection of Mayfield Road and Street "A".

Table 6 Mayfield Road and Street "A" – Capacity Analysis Results

Lane Group	2051 Future Total	
	V/C	LOS
EBL	0.28 (0.70)	B (C)
EBTR	0.22 (0.31)	A (B)
WBTR	0.31 (0.33)	A (C)
NBL	0.68 (0.27)	E (D)
NBTR	0.19 (0.19)	D (D)
SBL	0.27 (0.35)	D (D)
SBTR	0.68 (0.20)	D (D)
Overall	**0.38 (0.40)**	**B (C)**

Notes:
1. XX (XX): AM (PM)

The proposed intersection of Mayfield Road and Street "A" is expected to operate at an acceptable level during the morning and afternoon peak hours, with v/c ratios of 0.38 and 0.40, respectively. This intersection will align with the existing intersection of John Carroll Drive and Mayfield Road to form a four-way intersection. To accommodate site traffic, it is recommended to implement a dedicated eastbound left lane along Mayfield Road.

6.2.1.3 MAYFIELD ROAD AND STREET "B"

Table 7 provides a summary of the volume to capacity ratios reported at the proposed intersection of Mayfield Road and Street "B".

Table 7 Mayfield Road and Street "B" – Capacity Analysis Results

Lane Group	2051 Future Total	
	V/C	LOS
EBL	0.19 (0.71)	A (C)
EBTR	0.33 (0.15)	B (A)
WBL	0.18 (0.11)	B (B)
WBTR	0.18 (0.53)	A (B)
NBL	0.16 (0.19)	C (D)
NBTR	0.15 (0.20)	C (D)
SBL	0.74 (0.78)	D (E)
SBTR	0.07 (0.05)	C (D)
Overall	**0.45 (0.61)**	**B (C)**

Notes:
1. XX (XX): AM (PM)

The proposed intersection of Mayfield Road and Street "B" is expected to operate at busy but acceptable levels during the morning and afternoon peak hours, with v/c ratios of 0.45 and 0.61, respectively. This intersection will align with the existing intersection of Martin Byrne Drive and Mayfield Road to form a four-way intersection. To accommodate site traffic, it is recommended to implement a dedicated eastbound left lane along Mayfield Road.

6.2.1.4 MAYFIELD ROAD AND THE GORE ROAD

Table 8 provides a summary of the volume to capacity ratios reported for the intersection of Mayfield Road and The Gore Road.

Table 8 Mayfield Road and The Gore Road – Capacity Analysis Results

Lane Group	2051 Future Total	
	V/C	LOS
EBL	0.28 (0.31)	B (A)
EBT	0.33 (0.11)	B (A)
EBR	0.14 (0.10)	C (A)
WBL	0.05 (0.02)	B (B)
WBT	0.13 (0.38)	B (B)
WBR	0.02 (0.07)	B (B)
NBL	0.35 (0.59)	C (C)
NBT	0.18 (0.73)	C (D)
NBR	0.01 (0.01)	B (D)
SBL	0.57 (0.43)	D (D)
SBT	0.70 (0.51)	D (D)
SBR	0.09 (0.14)	C (D)
Overall	**0.45 (0.50)**	**B (C)**

Notes:
1. XX (XX): AM (PM)

The intersection of Mayfield Road and The Gore Road will operate under acceptable conditions during the morning and afternoon peak hours, with respective overall v/c ratios of 0.45 and 0.50. It is recommended to implement dedicated northbound and southbound left turn lanes along The Gore Road to accommodate TMP volumes. These improvements should be studied with the widening of The Gore Road

6.2.2 Healey Road Corridor

The intersections pertaining to the site that intersect with Healey Road are as follows:

- Healey Road and Centreville Creek Road
- Healey Road and The Gore Road

To accommodate the TMP volumes projected on Healey Road, The Gore Road, and Centreville Creek Road, these intersections have been assigned a cycle length of 80 seconds during the morning and afternoon peak hours. Some intersection improvements are required to accommodate the planned TMP volumes and site traffic volumes, and it is recommended that these improvements are studied and implemented in conjunction with planned road widenings along Healey Road and any potential widening of The Gore Road to accommodate highway volumes. Capacity results and

discussion for the intersections along Healey Road are provided in the following sections. The planned widening of Healey Road to two lanes in each direction has been assumed for this analysis.

6.2.2.1 HEALEY ROAD AND CENTREVILLE CREEK ROAD

Table 9 provides a summary of the volume to capacity ratios reported for the intersection of Healey Road and Centreville Creek Road.

Table 9 Healey Road and Centreville Creek Road – Capacity Analysis Results

Lane Group	2051 Future Total	
	V/C	LOS
EBTLR	0.03 (0.17)	A (A)
WBTLR	0.21 (0.09)	A (A)
NBL	0.12 (0.07)	C (C)
NBTR	0.15 (0.65)	D (D)
SBL	0.04 (0.04)	C (C)
SBTR	0.56 (0.09)	C (D)
Overall	**0.29 (0.30)**	**B (B)**

Notes:
1. XX (XX): AM (PM)

The intersection of Healey Road and Centreville Creek Road will operate under acceptable conditions during both the morning and afternoon peak hours, with respective overall v/c ratios of 0.29 and 0.30.

6.2.2.2 HEALEY ROAD AND THE GORE ROAD

Table 10 provides a summary of the volume to capacity ratios reported for the intersection of Healey Road and The Gore Road.

Table 10 Healey Road and The Gore Road – Capacity Analysis Results

Lane Group	2051 Future Total	
	V/C	LOS
EBTLR	0.09 (0.20)	A (C)
WBTLR	0.45 (0.09)	A (C)
NBL	0.14 (0.00)	B (A)
NBTR	0.19 (0.57)	B (B)
SBL	0.07 (0.05)	C (C)
SBTR	0.58 (0.54)	C (C)
Overall	**0.44 (0.30)**	**B (B)**

Notes:
1. XX (XX): AM (PM)

The intersection of Healey Road and The Gore Road will operate under acceptable conditions during both the morning and afternoon peak hours, with respective overall v/c ratios of 0.44 and 0.30.

6.2.3 Centreville Creek Road

The intersections pertaining to the site that intersect with Centreville Creek Road are as follows:

- Centreville Creek Road and Street “B”
- Centreville Creek Road and Street “D”
- Centreville Creek Road and Street “E”
- Centreville Creek Road and Street “F”
- Centreville Creek Road and Street “H”

These intersections have been assigned a cycle length of 80 seconds during both the morning and afternoon peak hours. Capacity results and discussion for these intersections along Centreville Creek Road are provided in the following sections. It is assumed that the planned widening of Centreville Creek Road to two lanes in each direction has been completed for this analysis.

6.2.3.1 CENTREVILLE CREEK ROAD AND PROPOSED SITE ROADS

Table 11 provides a summary of the volume to capacity ratios reported for the site road intersections with Centreville Creek Road.

Table 11 Centreville Creek Road and Site Intersections – Capacity Analysis Results

Lane Group	2051 Future Total	
	V/C	LOS
Centreville Creek Road and Street "B"		
WBL	0.27 (0.18)	D (D)
NBTR	0.05 (0.12)	A (A)
SBTL	0.10 (0.05)	A (A)
Overall	**0.12 (0.12)**	**B (C)**
Centreville Creek Road and Street "D"		
WBL	0.23 (0.15)	D (D)
NBTR	0.06 (0.14)	A (A)
SBTL	0.11 (0.06)	A (A)
Overall	**0.12 (0.14)**	**B (C)**
Centreville Creek Road and Street "E"		
WBL	0.48 (0.45)	C (C)
NBTR	0.07 (0.17)	A (A)
SBTL	0.13 (0.07)	A (A)
Overall	**0.18 (0.21)**	**B (C)**
Centreville Creek Road and Street "F"		
WBL	0.49 (0.47)	C (C)
NBTR	0.08 (0.19)	A (A)
SBTL	0.18 (0.10)	A (A)
Overall	**0.24 (0.23)**	**B (C)**
Centreville Creek Road and Street "H"		
WBL	0.48 (0.42)	C (C)
NBTR	0.11 (0.26)	A (A)
SBTL	0.27 (0.15)	A (A)
Overall	**0.32 (0.29)**	**B (C)**

Notes:
1. XX (XX): AM (PM)

All proposed site road intersections with Centreville Creek Road will operate under acceptable conditions during the morning and afternoon peak hours, with no overall intersection v/c ratios reported over 0.32. All individual movements will operate with LOSC or better during both the morning and afternoon peak hours.

6.2.4 The Gore Road Corridor

The intersections pertaining to the site that intersect with The Gore Road are as follows:

- The Gore Road and Highway 413 EB On / Off-Ramp
- The Gore Road and Highway 413 WB On / Off-Ramp
- The Gore Road and Street "E"
- The Gore Road and Street "F"
- The Gore Road and Street "H"

These intersections have been assigned a cycle length of 80 seconds during both the morning and afternoon peak hours. Capacity results and discussion for these intersections along The Gore Road are provided in the following sections. It is assumed that The Gore Road has been widened to two lanes in each direction for this analysis, and that the Highway 413 interchange is a typical Parclo-4 interchange.

6.2.4.1 THE GORE ROAD AND HIGHWAY 413 EASTBOUND ON / OFF-RAMP

Table 12 provides a summary of the volume to capacity ratios reported for the intersection of The Gore Road and the Highway 413 eastbound ramps.

Table 12 The Gore Road and Highway 413 EB Ramps – Capacity Analysis Results

Lane Group	2051 Future Total	
	V/C	LOS
EBL	0.55 (0.33)	C (B)
EBR	0.40 (0.79)	C (C)
NBT	0.31 (0.45)	A (B)
NBR	0.37 (0.32)	A (A)
SBT	0.19 (0.47)	A (B)
SBR	0.14 (0.01)	A (A)
Overall	**0.43 (0.65)**	**B (C)**

Notes:
1. XX (XX): AM (PM)

The intersection of Highway 413 eastbound on and off ramps and The Gore Road will operate acceptable conditions during both the morning and afternoon peak hours, with respective overall v/c ratios of 0.43 and 0.65. To accommodate projected TMP traffic volumes making the eastbound right maneuver from Highway 413, it is recommended to design the ramp will accommodations for dual eastbound right turn lanes.

6.2.4.2 THE GORE ROAD AND HIGHWAY 413 WESTBOUND ON / OFF-RAMP

Table 10 provides a summary of the volume to capacity ratios reported for the intersection of The Gore Road and the Highway 413 westbound ramps.

Table 13 The Gore Road and Highway 413 WB Ramps – Capacity Analysis Results

Lane Group	2051 Future Total	
	V/C	LOS
WBL	0.68 (0.76)	C (C)
WBR	0.01 (0.14)	C (B)
NBT	0.11 (0.18)	A (B)
NBR	0.46 (0.36)	A (A)
SBT	0.17 (0.21)	A (A)
SBR	0.17 (0.11)	A (A)
Overall	**0.56 (0.55)**	**B (C)**

Notes:
1. XX (XX): AM (PM)

The intersection of Highway 413 eastbound on and off ramps and The Gore Road will operate under acceptable conditions during both the morning and afternoon peak hours, with respective overall v/c ratios of 0.56 and 0.55.

6.2.4.3 THE GORE ROAD AND PROPOSED SITE ROADS

Table 14 provides a summary of the volume to capacity ratios reported for the site road intersections with The Gore Road.

Table 14 The Gore Road and Site Intersections – Capacity Analysis Results

Lane Group	2051 Future Total	
	V/C	LOS
The Gore Road and Street "E"		
EBL	0.75 (0.75)	C (D)
EBR	0.09 (0.08)	C (C)
NBL	0.16 (0.44)	A (B)
NBT	0.40 (0.39)	A (A)
SBT	0.37 (0.56)	A (A)
SBR	0.13 (0.40)	A (B)
Overall	**0.51 (0.60)**	**B (C)**
The Gore Road and Street "F"		
EBL	0.68 (0.55)	C (C)
EBR	0.03 (0.02)	C (C)
NBTL	0.30 (0.43)	A (A)
SBTR	0.41 (0.47)	A (B)
Overall	**0.48 (0.49)**	**B (C)**
The Gore Road and Street "H"		
EBL	0.66 (0.53)	C (C)
EBR	0.08 (0.05)	C (C)
NBL	0.10 (0.32)	A (A)
NBT	0.17 (0.31)	A (A)
SBTR	0.40 (0.39)	A (B)
Overall	**0.46 (0.42)**	**B (C)**

Notes:
1. XX (XX): AM (PM)

All proposed site road intersections with Healey Road will operate under acceptable conditions during the morning and afternoon peak hours, with all overall intersection v/c ratios reported under 0.60. All individual movements will operate with LOS D or better during both the morning and afternoon peak hours. It is recommended to add dedicated northbound left lanes at the intersections of The Gore Road and Streets "E" and "H". It is recommended to add a dedicated southbound right lane at the intersection of The Gore Road and Street "E".

7.0 SUMMARY AND CONCLUSIONS

BA Group is retained by the Wildfield Village Landowners Group Inc to provide transportation consulting services in support of the proposed development of a new greenfield community in Caledon, Ontario. The community extends from Mayfield Road in the south to Healey Road in the north. It extends from The Gore Road in the east to Centreville Creek Road in the west.

Policy Context

1. The Town of Caledon adopted its new Official Plan (OP) titled *Future Caledon* on March 6th, 2024. The plan guides land development through two of its principles: (1) create healthy and complete communities, and (2) create high quality transportation options.

2. The Town of Caledon also developed its Multi-Modal Transportation Master Plan (MMTMP) in conjunction with the *Future Caledon* OP and provides direction on transportation improvements within Caledon to 2051. Among other objectives, the MMTMP describes a series of improvements related to road widenings, a public transit strategy, and an active transportation plan.

Proposed Development

3. The proposed community will consist of approximately 7,000 residential units, with a mix of unit types, as well as supporting institutional, recreational, and non-residential uses. The supporting land-uses will help to create a complete community and help to internalize resident trips, rather than act as external trip generators.

The Structure Plan

4. The proposed road network for the community aims to leverage the existing arterial road network that borders the community, and proposes new collector roads internal to the site that will provide access to the boundary roads, and serve as public transit and active transit spines for the community.

5. Development of a strong grid of east-west and north-south collector roads linking the external arterial road network with the community. This grid, which is generally similar to the one illustrated in the Multi-Modal Transportation Master Plan, will provide for a high degree of access, permeability, and connectivity through the community.

Proposed Public Transit

6. The MMTMP proposes Centreville Creek Road, The Gore Road, Mayfield Road, and Healey Road as fixed-route transit corridors. Use of these corridors alone will provide a high level of transit connectivity to the community on efficient linear routes, and there are additional opportunities for supplemental routes that operate on the internal collector road network to provide additional transit connectivity to residents.

Proposed Active Transit Infrastructure

7. All of the collector roads in the collector road network for the community will include multi-use paths on both sides of the roadway. The MMTMP has proposed several cycling infrastructure improvements within the vicinity of the site, which will help to provide external connectivity to the broader cycling network for community residents.

Traffic Analysis – Traffic Volumes

8. The work done for the OP and MMTMP included the projection of traffic volumes onto Caledon's existing arterial roads to the year 2051, assuming that Highway 413 is operational. The 2051 volumes were assigned to all movements on the boundary roads of the structure plan, and are considered to account for all future development traffic volumes in Caledon.

9. The community is expected to generate 3,670 and 4,590 two-way vehicle trips during the morning and afternoon peak hours, respectively. Site traffic has been assigned onto the area road network based on a review of travel information provided by the 2016 Transportation Tomorrow Survey (TTS).

Traffic Analysis – Analysis

10. Traffic analysis was undertaken using the methodologies and procedures outlined in the Highway Capacity Manual (HCM) and in the Region of Peel's Guidelines for Using Synchro Version 7.73 Rev 8 (dated December 2010).

11. Cycle lengths have been assigned to each of the site's boundary corridors. Mayfield Road intersections have been assigned a cycle length of 100 seconds in the morning peak hour and 120 seconds in the afternoon peak hour, Healey Road intersections have been assigned a cycle length of 80 seconds in both the morning and afternoon peak hours, and intersections along Centreville Creek Road and The Gore Road have been assigned cycle lengths of 80 seconds during both the morning and afternoon peak hours.

12. Any recommended intersection improvements should be further studied in conjunction with any studies that are undertaken for the widening of the boundary roads.

13. Under future total conditions, with the addition of 2051 TMP and site traffic volumes, the external site intersections will operate acceptably during both the morning and afternoon peak hours.

Appendix A:
Terms of Reference

MEMORANDUM

TO:

Kavleen Younan, P.Eng
Town of Caledon
Kavleen.younan@caledon.ca

FROM:	PROJECT:	DATE:
Steve Krossey, P.Eng	8155-03	July 26, 2024
Clara Filipetti	Wildfield VIllage	

RE: WILDFIELD VILLAGE – TERMS OF REFERENCE

BA Group has been retained by Wildfield Village Landowners Group Inc. to provide transportation advisory services in support of a proposed subdivision development located on the lands bordered by Centreville Creek Road, The Gore Road, Healey Road, and Mayfield Road, as seen in **Figure 1**.

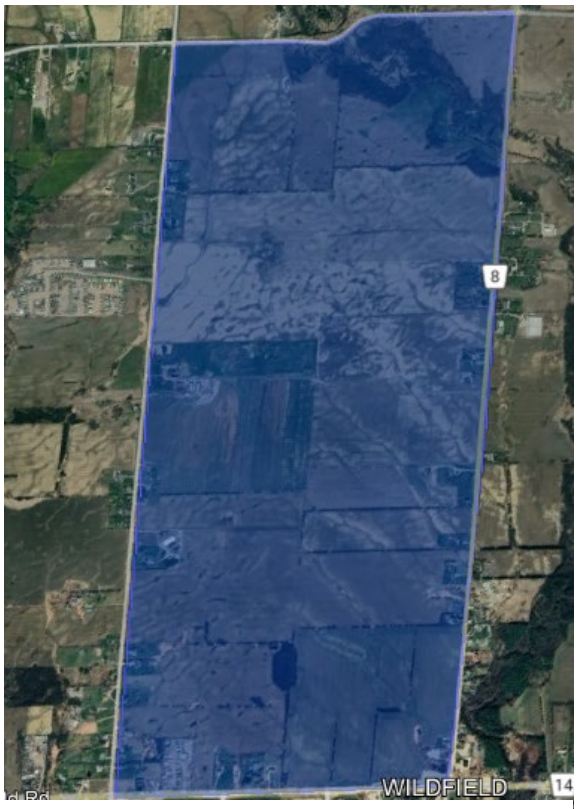


Figure 1: Subject Lands

The current preliminary concept plan proposes a mix of low, mid, and high rise residential uses, retail, school, and office uses. Vehicular access to the site is currently proposed via a new street network that is proposed to connect to the greater collector street network.

Please see below for our proposed Terms of Reference for the Traffic Impact Study (TIS). Should you have any questions or comments, please not hesitate to contact us.

Analysis Study Area

The TIS Study Area is proposed to comprise of the following intersections for the development site:

- Centreville Creek Road & Healey Road
- The Gore Road & Healey Road
- Centreville Creek Road & Mayfield Road
- The Gore Road & Mayfield Road
- The Gore Road & Highway 413 On/Off Ramps
- Major Internal Site Intersections (to be determined)

Traffic Analysis Scenarios

The following scenarios will be reviewed:

- Existing (2024)
- Future Background 2051 Conditions (with Highway 413)
- Future Total 2051 Conditions (with Highway 413)

Traffic Analysis Periods

Traffic analysis will be undertaken for weekday AM and PM peak hours.

Background Development Traffic

The Town of Caledon's EMME models will be reviewed to determine appropriate levels of general background traffic growth for the 2051 Scenario. Additionally, the Town of Caledon's and The City of Brampton's development application websites will be reviewed to evaluate the inclusion of specific background developments.

Site Trip Generation

Site trip generation will be completed for the on-site uses based on the 11th Edition of the ITE Trip Generation Manual and proxy data for similar land uses. The Transportation Tomorrow Survey (TTS) will be reviewed for mode splits.

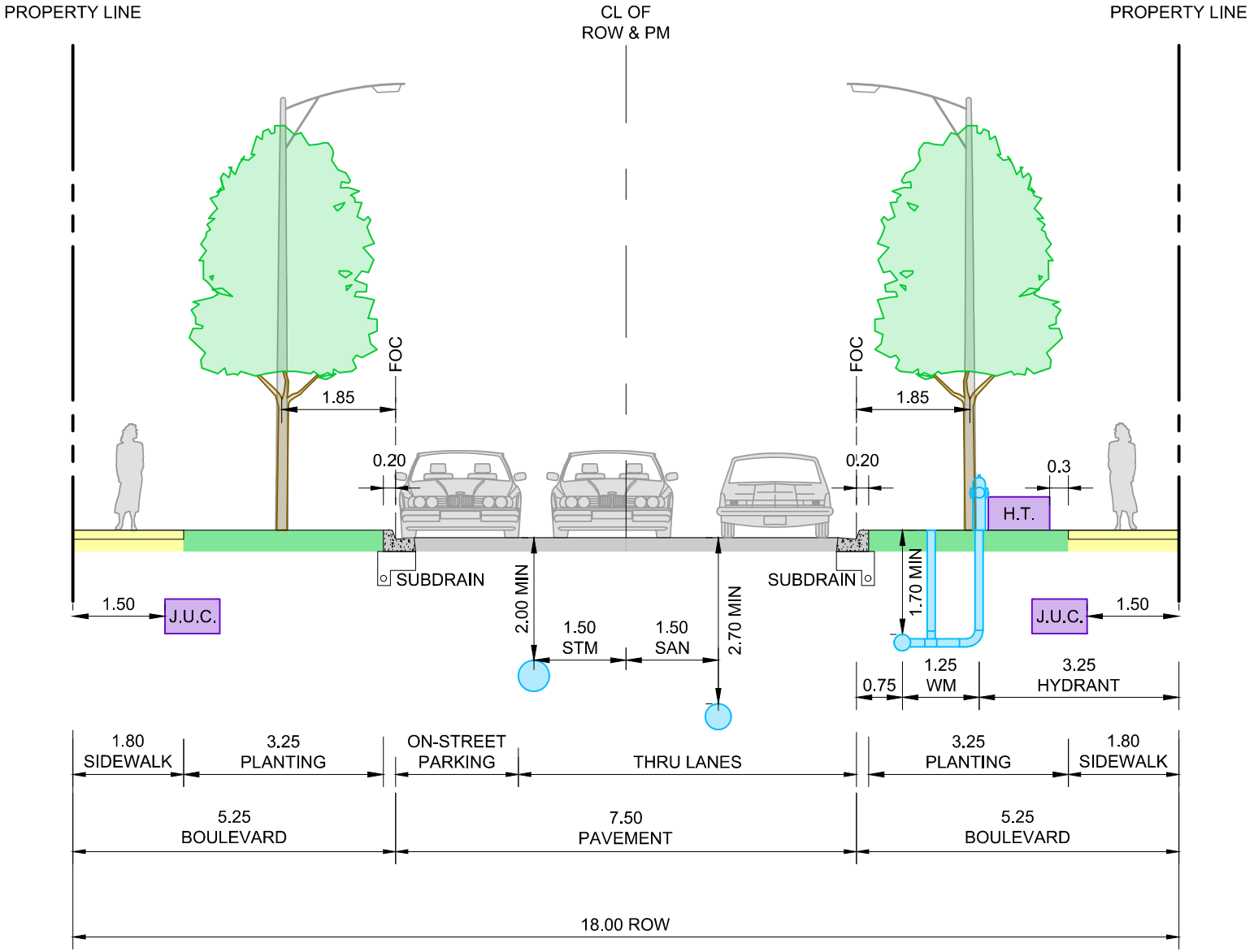
Vehicle Trip Distribution

Vehicle trip distribution will be determined based on a review of travel patterns identified in the existing traffic counts and distribution information from the TTS.

Traffic Analysis

Traffic analysis will be undertaken using Synchro 11, with analysis parameters in accordance with those outlined by the Region of Peel's Traffic Impact Study guidelines.

Appendix B:
Proposed Cross Sections



J.U.C. - JOINT USE UTILITY CORRIDOR
H.T. - HYDRO TRANSFORMER

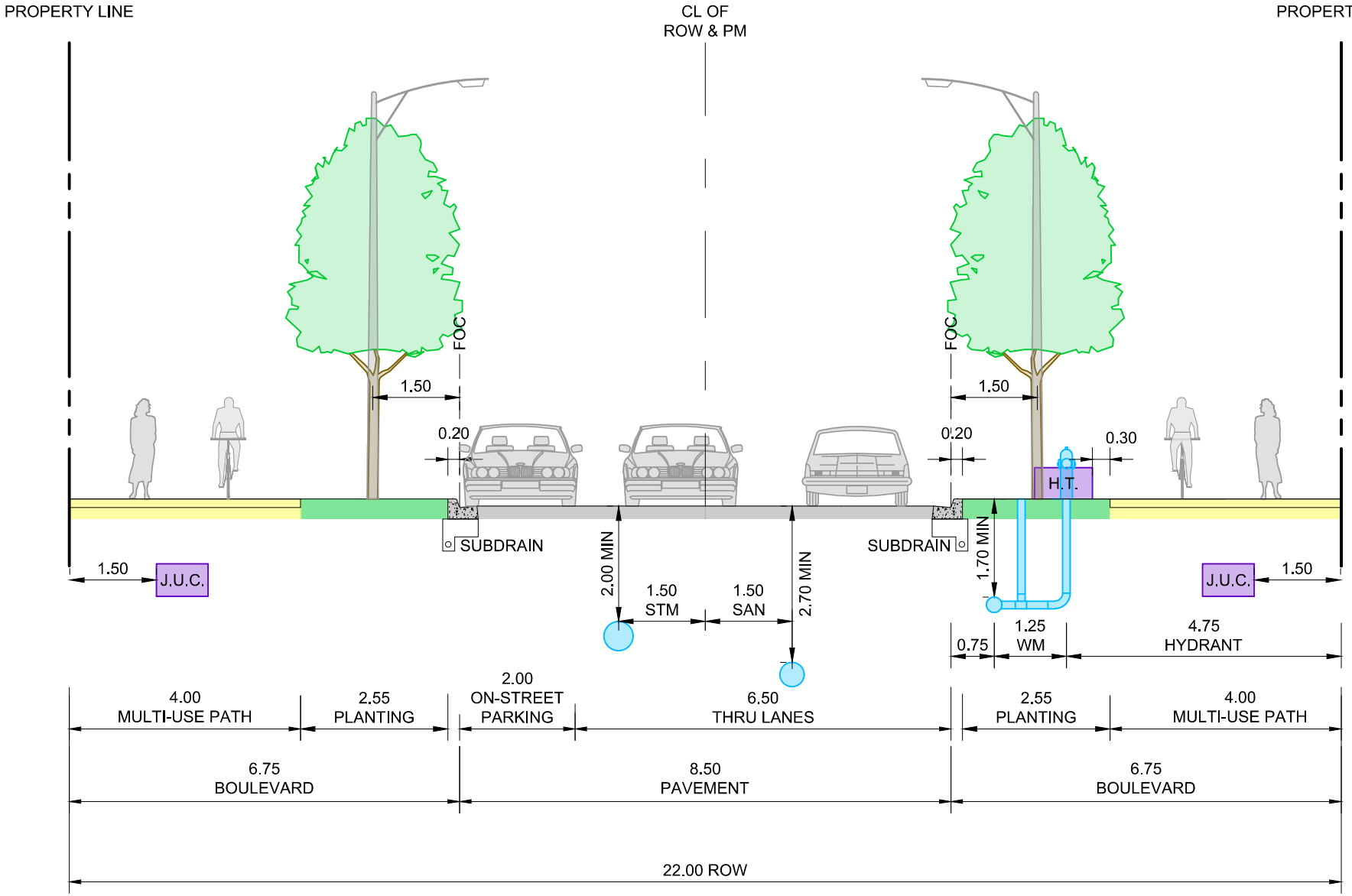
BA Group

CALEDON CROSS-SECTION

18.0m R.O.W.
Local Road

Project:	Caledon
Project No.	8155-03
Date:	March 20, 2024
Revised:	June 26, 2024
Drawing No.	XS-1

Date Plotted: June 26, 2024 Filename: J:\8155-03\BA\Cross-Sections\03 - June 26, 2024\BA-Generic Caledon-XSEC-R03-815503.dwg



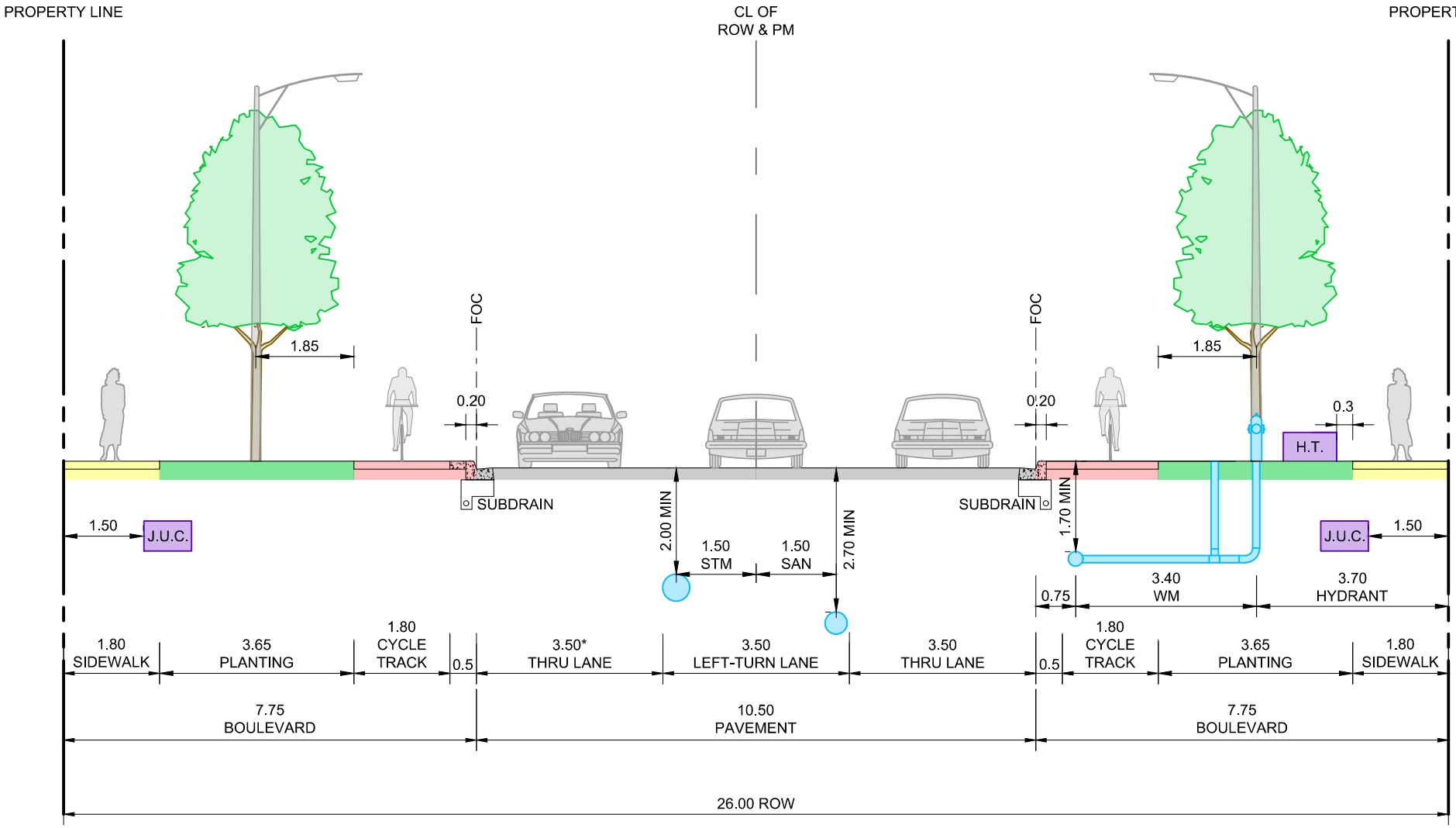
J.U.C. - JOINT USE UTILITY CORRIDOR
H.T. - HYDRO TRANSFORMER

BA Group

CALEDON CROSS-SECTION

22.0m R.O.W.
Collector

Project:	Caledon
Project No.	8155-03
Date:	March 20, 2024
Revised:	November 4, 2024
Drawing No.	XS-2



J.U.C. - JOINT USE UTILITY CORRIDOR
H.T. - HYDRO TRANSFORMER
* RECEIVING LANES AT INTERSECTIONS TO BE WIDENED

BA Group

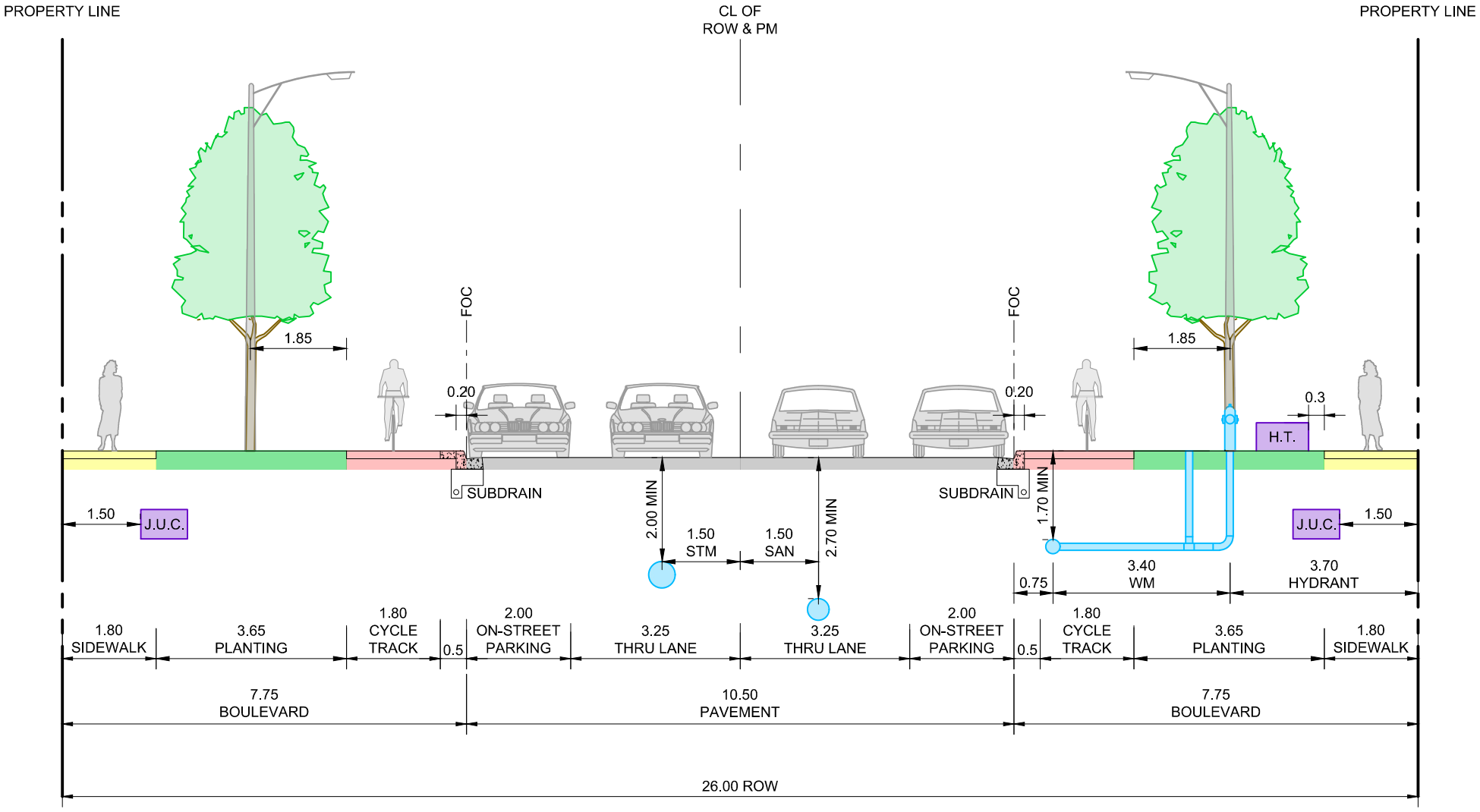
CALEDON CROSS-SECTION

26.0m R.O.W.

Urban Corridor (Intersection)

Project:	Caledon
Project No.	8155-03
Date:	March 20, 2024
Revised:	June 26, 2024
Drawing No.	XS-3A

Date Plotted: June 26, 2024 Filename: J:\8155-03\BA\Cross-Sections\03 - June 26, 2024\BA-Generic Caledon-XSEC-R03-815503.dwg



J.U.C. - JOINT USE UTILITY CORRIDOR
H.T. - HYDRO TRANSFORMER

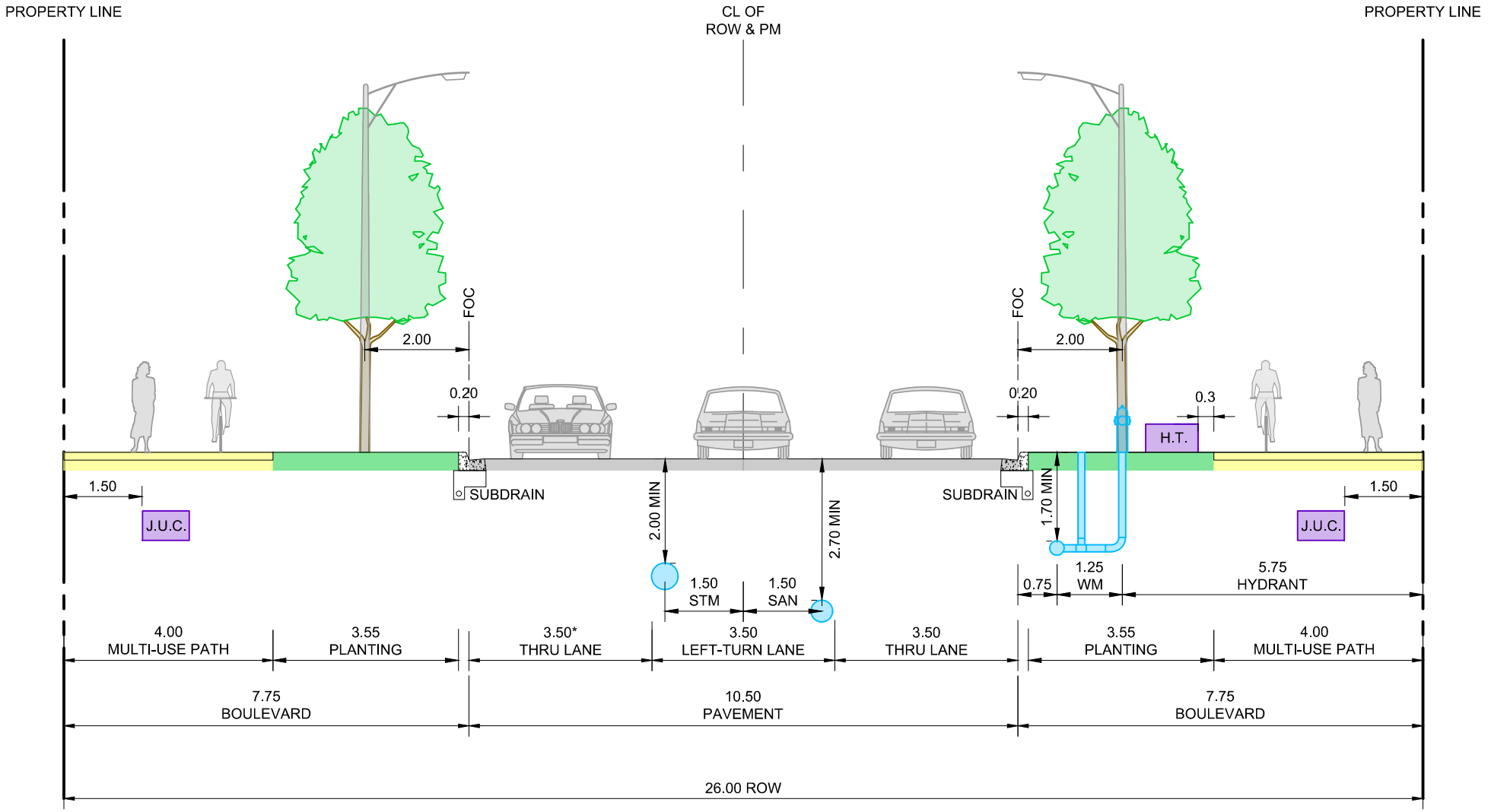
BA Group

CALEDON CROSS-SECTION

26.0m R.O.W.

Urban Corridor (Mid-Section)

Project:	Caledon
Project No.	8155-03
Date:	March 20, 2024
Revised:	June 26, 2024
Drawing No.	XS-3B



J.U.C. - JOINT USE UTILITY CORRIDOR
H.T. - HYDRO TRANSFORMER
* RECEIVING LANES AT INTERSECTIONS TO BE WIDENED

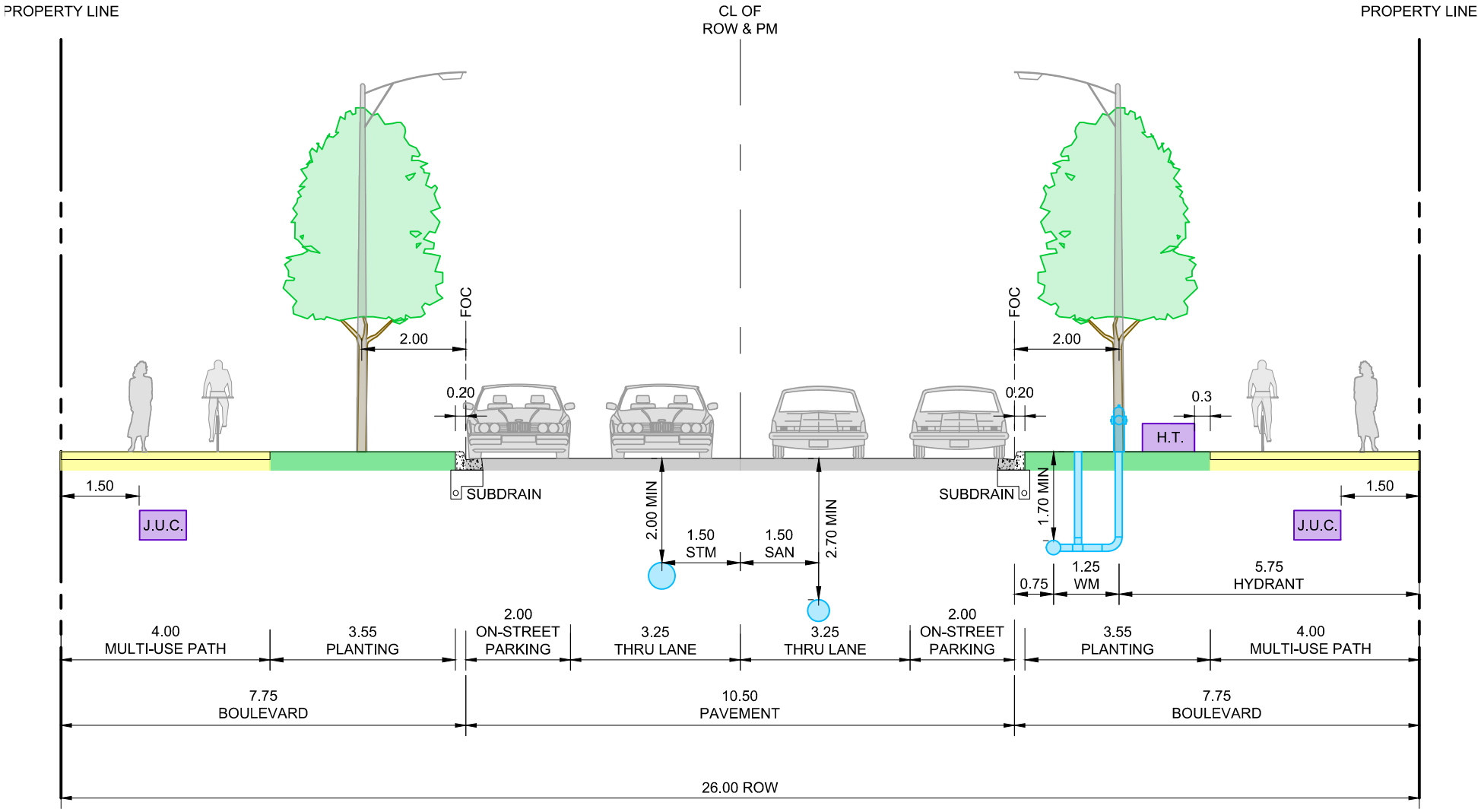
BA Group

CALEDON CROSS-SECTION

26.0m R.O.W.

Major Collector (Intersection)

Project:	Caledon
Project No.	8155-03
Date:	March 20, 2024
Revised:	June 26, 2024
Drawing No.	XS-4A



J.U.C. - JOINT USE UTILITY CORRIDOR
H.T. - HYDRO TRANSFORMER

BA Group

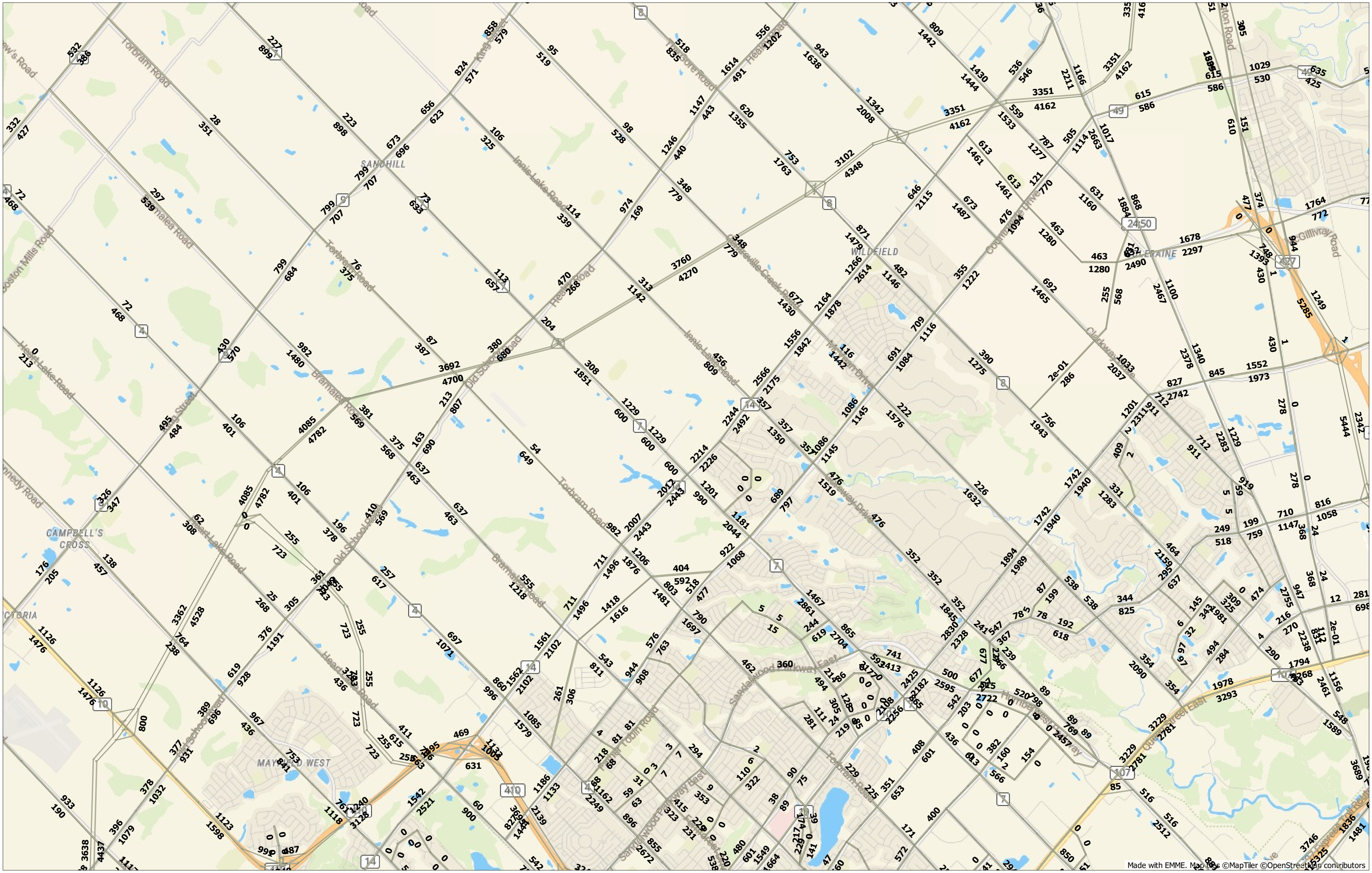
CALEDON CROSS-SECTION

26.0m R.O.W.

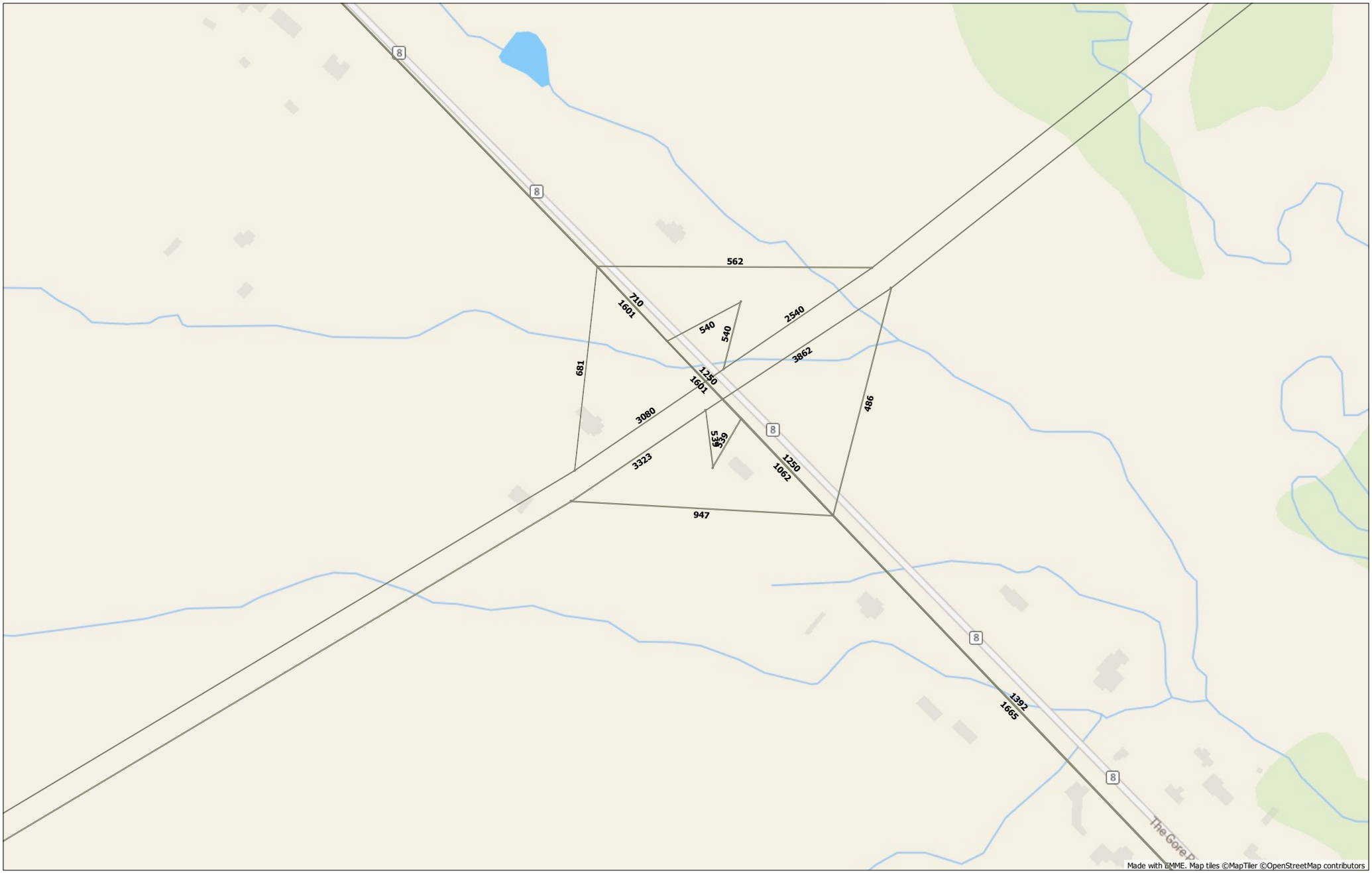
Major Collector (Mid-Section)

Project:	Caledon
Project No.	8155-03
Date:	March 20, 2024
Revised:	June 26, 2024
Drawing No.	XS-4B

Appendix C:
TMP Volumes



SANDHILL
WILDFIELD
CAMPBELL'S CROSS
MAYFIELD WEST
Torbram Road
Innis Lake Road
Heart Lake Road
Bramalea Road
Old School Road
Coleraine
Mayfield Road
Sandalwood Parkway East
Countryside Drive
Clarkway Drive
Humber Station Road
Made with EMME. Map tiles ©MapTiler ©OpenStreetMap contributors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5359
3323
1250
1062
947
1392
1665
Made with EMME. Map tiles ©MapTiler ©OpenStreetMap contributors

Appendix D:
TTS Data

Wildfield

8155-03

Residential Vehicular Site Traffic Distribution (AM Peak Hour)

Outbound (NO 413)

BA Group - COF

2024-11-15

To the

			Traffic Volume Allocation										
			NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	EAST	WEST	TOTAL
Zone	Trips	%	The Gore Rd	The Gore Rd	Mayfield Rd	Mayfield Rd	Centreville Creek Rd	Centreville Creek Rd	Highway 413	Highway 413	Healey Rd	Healey Rd	
PD 1 of Toronto	27	1%		40%				10%	50%				100%
PD 3 of Toronto	52	1%		50%					50%				100%
PD 4 of Toronto	9	0%		50%					50%				100%
PD 7 of Toronto	24	1%		50%		10%			40%				100%
PD 8 of Toronto	54	1%		40%				20%	40%				100%
PD 9 of Toronto	180	5%		40%				40%	20%				100%
PD 10 of Toronto	146	4%		80%					20%				100%
PD 13 of Toronto	21	1%		40%		10%			50%				100%
Richmond Hill	98	3%	20%	40%					40%				100%
Markham	44	1%		80%					20%				100%
Vaughan	508	13%		20%					80%				100%
Caledon	100	3%	30%				40%					30%	100%
Brampton	1743	45%			20%	60%		10%		10%			100%
Mississauga	767	20%		5%		20%		5%		70%			100%
Oakville	19	0%		25%					25%	50%			100%
Burlington	19	0%		15%					25%	60%			100%
Cambridge	55	1%				20%	20%			60%			100%
Shelburne	24	1%	50%				50%						100%
TOTAL TRIPS	3890	100%											

	Route Split Totals										
	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	EAST	WEST	TOTAL
	The Gore Rd	The Gore Rd	Mayfield Rd	Mayfield Rd	Centreville Creek Rd	Centreville Creek Rd	Highway 413	Highway 413	Healey Rd	Healey Rd	
PD 1 of Toronto	0.00%	0.28%	0.00%	0.00%	0.00%	0.07%	0.35%	0.00%	0.00%	0.00%	0.7%
PD 3 of Toronto	0.00%	0.67%	0.00%	0.00%	0.00%	0.00%	0.67%	0.00%	0.00%	0.00%	1.3%
PD 4 of Toronto	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.12%	0.00%	0.00%	0.00%	0.2%
PD 7 of Toronto	0.00%	0.31%	0.00%	0.06%	0.00%	0.00%	0.25%	0.00%	0.00%	0.00%	0.6%
PD 8 of Toronto	0.00%	0.56%	0.00%	0.00%	0.00%	0.28%	0.56%	0.00%	0.00%	0.00%	1.4%
PD 9 of Toronto	0.00%	1.85%	0.00%	0.00%	0.00%	1.85%	0.93%	0.00%	0.00%	0.00%	4.6%
PD 10 of Toronto	0.00%	3.00%	0.00%	0.00%	0.00%	0.00%	0.75%	0.00%	0.00%	0.00%	3.8%
PD 13 of Toronto	0.00%	0.22%	0.00%	0.05%	0.00%	0.00%	0.27%	0.00%	0.00%	0.00%	0.5%
Richmond Hill	0.50%	1.01%	0.00%	0.00%	0.00%	0.00%	1.01%	0.00%	0.00%	0.00%	2.5%
Markham	0.00%	0.90%	0.00%	0.00%	0.00%	0.00%	0.23%	0.00%	0.00%	0.00%	1.1%
Vaughan	0.00%	2.61%	0.00%	0.00%	0.00%	0.00%	10.45%	0.00%	0.00%	0.00%	13.1%
Caledon	0.77%	0.00%	0.00%	0.00%	1.03%	0.00%	0.00%	0.00%	0.00%	0.77%	2.6%
Brampton	0.00%	0.00%	8.96%	26.88%	0.00%	4.48%	0.00%	4.48%	0.00%	0.00%	44.8%
Mississauga	0.00%	0.99%	0.00%	3.94%	0.00%	0.99%	0.00%	13.80%	0.00%	0.00%	19.7%
Oakville	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.12%	0.24%	0.00%	0.00%	0.5%
Burlington	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.12%	0.29%	0.00%	0.00%	0.5%
Cambridge	0.00%	0.00%	0.00%	0.28%	0.28%	0.00%	0.00%	0.85%	0.00%	0.00%	1.4%
Shelburne	0.31%	0.00%	0.00%	0.00%	0.31%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6%
TOTAL TRIPS	**1.6%**	**12.7%**	**9.0%**	**31.2%**	**1.6%**	**7.7%**	**15.8%**	**19.7%**	**0.0%**	**0.8%**	100.0%
Assumed Split	**0%**	**15%**	**10%**	**30%**	**0%**	**10%**	**15%**	**20%**	**0%**	**0%**	**100%**

Wildfield

8155-03

Residential Vehicular Site Traffic Distribution (AM Peak Hour)

Inbound (NO 413)

BA Group - COF

2024-11-15

from

			Traffic Volume Allocation										
Zone	Trips	%	NORTH The Gore Rd	SOUTH The Gore Rd	EAST Mayfield Rd	WEST Mayfield Rd	NORTH Centreville Creek Rd	SOUTH Centreville Creek Rd	EAST Highway 413	WEST Highway 413	EAST Healey Rd	WEST Healey Rd	TOTAL
PD 1 of Toronto	79	2%		30%		10%			60%				100%
PD 3 of Toronto	11	0%		20%					80%				100%
PD 4 of Toronto	32	1%		30%		10%			60%				100%
PD 7 of Toronto	24	1%		40%					60%				100%
PD 8 of Toronto	96	3%		40%					60%				100%
PD 9 of Toronto	119	3%		50%					50%				100%
PD 10 of Toronto	104	3%		70%					30%				100%
PD 13 of Toronto	16	0%		30%					70%				100%
Richmond Hill	21	1%		40%					60%				100%
Markham	98	3%		80%					20%				100%
Vaughan	90	2%		30%					70%				100%
Caledon	450	12%	10%		25%		40%					25%	100%
Brampton	132	4%				60%		40%					100%
Mississauga	1592	44%		10%		30%		20%		40%			100%
Oakville	638	18%		5%		30%			5%	60%			100%
Burlington	11	0%		5%		30%			5%	60%			100%
Cambridge	38	1%				10%				80%		10%	100%
Shelburne	55	2%	70%				30%						100%
TOTAL TRIPS	3606	100%											

	Route Split Totals										
	NORTH The Gore Rd	SOUTH The Gore Rd	EAST Mayfield Rd	WEST Mayfield Rd	NORTH Centreville Creek Rd	SOUTH Centreville Creek Rd	EAST Highway 413	WEST Highway 413	EAST Healey Rd	WEST Healey Rd	TOTAL
	0.00%	0.66%	0.00%	0.22%	0.00%	0.00%	1.31%	0.00%	0.00%	0.00%	2.2%
	0.00%	0.06%	0.00%	0.00%	0.00%	0.00%	0.24%	0.00%	0.00%	0.00%	0.3%
	0.00%	0.27%	0.00%	0.09%	0.00%	0.00%	0.53%	0.00%	0.00%	0.00%	0.9%
	0.00%	0.27%	0.00%	0.00%	0.00%	0.00%	0.40%	0.00%	0.00%	0.00%	0.7%
	0.00%	1.06%	0.00%	0.00%	0.00%	0.00%	1.60%	0.00%	0.00%	0.00%	2.7%
	0.00%	1.65%	0.00%	0.00%	0.00%	0.00%	1.65%	0.00%	0.00%	0.00%	3.3%
	0.00%	2.02%	0.00%	0.00%	0.00%	0.00%	0.87%	0.00%	0.00%	0.00%	2.9%
	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.31%	0.00%	0.00%	0.00%	0.4%
	0.00%	0.23%	0.00%	0.00%	0.00%	0.00%	0.35%	0.00%	0.00%	0.00%	0.6%
	0.00%	2.17%	0.00%	0.00%	0.00%	0.00%	0.54%	0.00%	0.00%	0.00%	2.7%
	0.00%	0.75%	0.00%	0.00%	0.00%	0.00%	1.75%	0.00%	0.00%	0.00%	2.5%
	1.25%	0.00%	3.12%	0.00%	4.99%	0.00%	0.00%	0.00%	0.00%	3.12%	12.5%
	0.00%	0.00%	0.00%	2.20%	0.00%	1.46%	0.00%	0.00%	0.00%	0.00%	3.7%
	0.00%	4.41%	0.00%	13.24%	0.00%	8.83%	0.00%	17.66%	0.00%	0.00%	44.1%
	0.00%	0.88%	0.00%	5.31%	0.00%	0.00%	0.88%	10.62%	0.00%	0.00%	17.7%
	0.00%	0.02%	0.00%	0.09%	0.00%	0.00%	0.02%	0.18%	0.00%	0.00%	0.3%
	0.00%	0.00%	0.00%	0.11%	0.00%	0.00%	0.00%	0.84%	0.00%	0.11%	1.1%
	1.07%	0.00%	0.00%	0.00%	0.46%	0.00%	0.00%	0.00%	0.00%	0.00%	1.5%
	2.3%	**14.6%**	**3.1%**	**21.3%**	**5.4%**	**10.3%**	**10.5%**	**29.3%**	**0.0%**	**3.2%**	100.0%
Assumed Split	**0%**	**15%**	**5%**	**20%**	**5%**	**10%**	**10%**	**30%**	**0%**	**5%**	**100%**

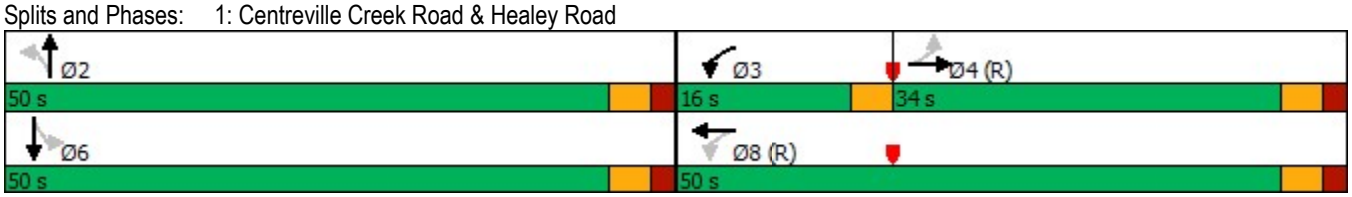
Appendix E:
Synchro Report

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	45	20	110	350	5	20	30	90	10	180	20
Future Volume (vph)	5	45	20	110	350	5	20	30	90	10	180	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.954			0.998			0.887			0.985	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3376	0	1770	3532	0	1770	1652	0	1770	1835	0
Flt Permitted	0.539			0.691			0.399			0.604		
Satd. Flow (perm)	1004	3376	0	1287	3532	0	743	1652	0	1125	1835	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			2			90			7	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		203.0			1430.7			316.7			404.1	
Travel Time (s)		14.6			103.0			22.8			29.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	5	45	20	110	350	5	20	30	90	10	180	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	65	0	110	355	0	20	120	0	10	200	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		

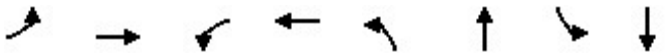
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	23.0	23.0		10.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	34.0	34.0		16.0	50.0		50.0	50.0		50.0	50.0	
Total Split (%)	34.0%	34.0%		16.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	29.0	29.0		13.0	45.0		45.0	45.0		45.0	45.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.0	4.0		2.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)	64.7	64.7		76.8	74.8		17.2	17.2		17.2	17.2	
Actuated g/C Ratio	0.65	0.65		0.77	0.75		0.17	0.17		0.17	0.17	
v/c Ratio	0.01	0.03		0.11	0.13		0.16	0.34		0.05	0.62	
Control Delay	8.6	6.0		2.1	2.4		35.8	13.9		32.2	45.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	8.6	6.0		2.1	2.4		35.8	13.9		32.2	45.1	
LOS	A	A		A	A		D	B		C	D	
Approach Delay		6.2			2.3			17.1			44.5	
Approach LOS		A			A			B			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 15.0		Intersection LOS: B	
Intersection Capacity Utilization 36.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Centreville Creek Road & Healey Road



1: Centreville Creek Road & Healey Road



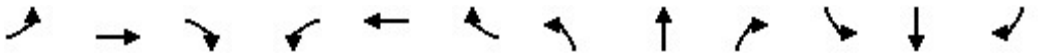
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	5	65	110	355	20	120	10	200
v/c Ratio	0.01	0.03	0.11	0.13	0.16	0.34	0.05	0.62
Control Delay	8.6	6.0	2.1	2.4	35.8	13.9	32.2	45.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.6	6.0	2.1	2.4	35.8	13.9	32.2	45.1
Queue Length 50th (m)	0.3	1.5	1.9	4.2	3.5	5.2	1.7	36.9
Queue Length 95th (m)	2.1	5.0	4.6	7.1	9.9	19.4	6.0	56.2
Internal Link Dist (m)		179.0		1406.7		292.7		380.1
Turn Bay Length (m)	50.0		50.0					
Base Capacity (vph)	649	2190	1056	2643	341	808	517	847
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.03	0.10	0.13	0.06	0.15	0.02	0.24

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	45	20	110	350	5	20	30	90	10	180	20
Future Volume (vph)	5	45	20	110	350	5	20	30	90	10	180	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		2.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	1.00		1.00	0.89		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3376		1770	3532		1770	1653		1770	1835	
Flt Permitted	0.54	1.00		0.69	1.00		0.40	1.00		0.60	1.00	
Satd. Flow (perm)	1005	3376		1287	3532		743	1653		1125	1835	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	5	45	20	110	350	5	20	30	90	10	180	20
RTOR Reduction (vph)	0	7	0	0	1	0	0	75	0	0	6	0
Lane Group Flow (vph)	5	58	0	110	354	0	20	45	0	10	194	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	63.6	63.6		73.8	73.8		16.2	16.2		16.2	16.2	
Effective Green, g (s)	64.6	64.6		74.8	74.8		17.2	17.2		17.2	17.2	
Actuated g/C Ratio	0.65	0.65		0.75	0.75		0.17	0.17		0.17	0.17	
Clearance Time (s)	5.0	5.0		3.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	649	2180		1002	2641		127	284		193	315	
v/s Ratio Prot		0.02		0.01	c0.10			0.03			c0.11	
v/s Ratio Perm	0.00			0.07			0.03			0.01		
v/c Ratio	0.01	0.03		0.11	0.13		0.16	0.16		0.05	0.62	
Uniform Delay, d1	6.3	6.4		3.4	3.5		35.2	35.3		34.6	38.3	
Progression Factor	1.00	1.00		0.52	0.57		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.0		0.0	0.1		0.6	0.3		0.1	3.6	
Delay (s)	6.3	6.4		1.8	2.1		35.8	35.5		34.7	41.9	
Level of Service	A	A		A	A		D	D		C	D	
Approach Delay (s)		6.4			2.0			35.6			41.6	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	36.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

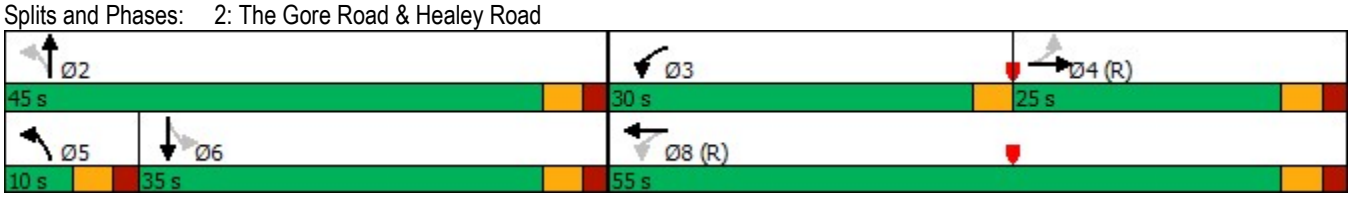


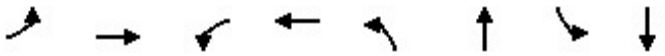
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	160	0	280	380	5	35	190	20	15	345	40
Future Volume (vph)	15	160	0	280	380	5	35	190	20	15	345	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	50.0		0.0	50.0		0.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt					0.998			0.986			0.984	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	0	1770	3532	0	1770	3490	0	1770	3483	0
Flt Permitted	0.524			0.644			0.263			0.620		
Satd. Flow (perm)	976	3539	0	1200	3532	0	490	3490	0	1155	3483	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					2			13			13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		1430.7			145.4			653.5			353.7	
Travel Time (s)		103.0			10.5			47.1			25.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	160	0	280	380	5	35	190	20	15	345	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	160	0	280	385	0	35	210	0	15	385	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		3	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	10.0		5.0	10.0		10.0	10.0	
Minimum Split (s)	23.0	23.0		10.0	23.0		10.0	23.0		23.0	23.0	
Total Split (s)	25.0	25.0		30.0	55.0		10.0	45.0		35.0	35.0	
Total Split (%)	25.0%	25.0%		30.0%	55.0%		10.0%	45.0%		35.0%	35.0%	
Maximum Green (s)	20.0	20.0		27.0	50.0		5.0	40.0		30.0	30.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-2.5	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.0	4.0		0.5	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lag	Lag		Lead			Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0			11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0			0		0	0	
Act Effct Green (s)	52.2	52.2		70.4	66.9		25.1	25.1		17.1	17.1	
Actuated g/C Ratio	0.52	0.52		0.70	0.67		0.25	0.25		0.17	0.17	
v/c Ratio	0.03	0.09		0.30	0.16		0.15	0.24		0.08	0.64	
Control Delay	26.4	21.5		7.8	7.7		25.6	26.5		33.9	41.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	26.4	21.5		7.8	7.7		25.6	26.5		33.9	41.9	
LOS	C	C		A	A		C	C		C	D	
Approach Delay		21.9			7.8			26.4			41.6	
Approach LOS		C			A			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 21.6		Intersection LOS: C	
Intersection Capacity Utilization 53.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: The Gore Road & Healey Road





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	15	160	280	385	35	210	15	385
v/c Ratio	0.03	0.09	0.30	0.16	0.15	0.24	0.08	0.64
Control Delay	26.4	21.5	7.8	7.7	25.6	26.5	33.9	41.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.4	21.5	7.8	7.7	25.6	26.5	33.9	41.9
Queue Length 50th (m)	1.9	10.8	20.6	15.7	5.1	15.7	2.6	37.5
Queue Length 95th (m)	8.0	23.0	39.8	27.0	11.4	22.6	8.1	50.6
Internal Link Dist (m)		1406.7		121.4		629.5		329.7
Turn Bay Length (m)	50.0		50.0		50.0		50.0	
Base Capacity (vph)	509	1846	1013	2365	229	1438	358	1088
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.09	0.28	0.16	0.15	0.15	0.04	0.35

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	160	0	280	380	5	35	190	20	15	345	40
Future Volume (vph)	15	160	0	280	380	5	35	190	20	15	345	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		0.5	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539		1770	3532		1770	3489		1770	3484	
Flt Permitted	0.52	1.00		0.64	1.00		0.26	1.00		0.62	1.00	
Satd. Flow (perm)	976	3539		1200	3532		490	3489		1155	3484	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	160	0	280	380	5	35	190	20	15	345	40
RTOR Reduction (vph)	0	0	0	0	1	0	0	9	0	0	11	0
Lane Group Flow (vph)	15	160	0	280	384	0	35	201	0	15	374	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	49.1	49.1		63.9	63.9		26.1	26.1		16.1	16.1	
Effective Green, g (s)	50.1	50.1		66.4	64.9		27.1	27.1		17.1	17.1	
Actuated g/C Ratio	0.50	0.50		0.66	0.65		0.27	0.27		0.17	0.17	
Clearance Time (s)	5.0	5.0		3.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	488	1773		878	2292		209	945		197	595	
v/s Ratio Prot		0.05		c0.05	0.11		0.01	c0.06			c0.11	
v/s Ratio Perm	0.02			0.17			0.04			0.01		
v/c Ratio	0.03	0.09		0.32	0.17		0.17	0.21		0.08	0.63	
Uniform Delay, d1	12.6	13.0		6.7	6.9		27.7	28.2		34.8	38.5	
Progression Factor	1.43	1.36		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.1		0.2	0.2		0.4	0.1		0.2	2.1	
Delay (s)	18.2	17.9		6.9	7.1		28.1	28.3		35.0	40.6	
Level of Service	B	B		A	A		C	C		C	D	
Approach Delay (s)		17.9			7.0			28.3			40.4	
Approach LOS		B			A			C			D	

Intersection Summary			
HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	30	0	140	10	0	310
Future Volume (vph)	30	0	140	10	0	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt			0.990			
Flt Protected	0.950					
Satd. Flow (prot)	1770	1863	3504	0	0	3539
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1863	3504	0	0	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)			10			
Link Speed (k/h)	50		50			50
Link Distance (m)	464.8		609.7			316.7
Travel Time (s)	33.5		43.9			22.8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	0	140	10	0	310
Shared Lane Traffic (%)						
Lane Group Flow (vph)	30	0	150	0	0	310
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.6		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.8		4.8			4.8
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15		15	25	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	2.0	2.0	10.0		2.0	10.0
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	2.0	2.0	0.6		2.0	0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			9.4			9.4
Detector 2 Size(m)			0.6			0.6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Detector Phase	8	8	2		6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	23.0	23.0	23.0		23.0	23.0
Total Split (s)	27.0	27.0	53.0		53.0	53.0
Total Split (%)	33.8%	33.8%	66.3%		66.3%	66.3%
Maximum Green (s)	22.0	22.0	48.0		48.0	48.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0			-1.0
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Min		C-Min	C-Min
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0
Act Effct Green (s)	11.0		72.4			72.4
Actuated g/C Ratio	0.14		0.90			0.90
v/c Ratio	0.12		0.05			0.10
Control Delay	31.7		1.7			1.4
Queue Delay	0.0		0.0			0.0
Total Delay	31.7		1.7			1.4
LOS	C		A			A
Approach Delay	31.7		1.7			1.4
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.12			
Intersection Signal Delay: 3.4		Intersection LOS: A	
Intersection Capacity Utilization 23.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: Centreville Creek Road & Street B

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	30	150	310
v/c Ratio	0.12	0.05	0.10
Control Delay	31.7	1.7	1.4
Queue Delay	0.0	0.0	0.0
Total Delay	31.7	1.7	1.4
Queue Length 50th (m)	4.3	0.0	0.0
Queue Length 95th (m)	11.9	7.4	7.9
Internal Link Dist (m)	440.8	585.7	292.7
Turn Bay Length (m)			
Base Capacity (vph)	508	3172	3203
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.06	0.05	0.10

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	30	0	140	10	0	310
Future Volume (vph)	30	0	140	10	0	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frt	1.00		0.99			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1770		3504			3539
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1770		3504			3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	0	140	10	0	310
RTOR Reduction (vph)	0	0	2	0	0	0
Lane Group Flow (vph)	30	0	148	0	0	310
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	4.0		66.0			66.0
Effective Green, g (s)	5.0		67.0			67.0
Actuated g/C Ratio	0.06		0.84			0.84
Clearance Time (s)	5.0		5.0			5.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	110		2934			2963
v/s Ratio Prot	c0.02		0.04			c0.09
v/s Ratio Perm						
v/c Ratio	0.27		0.05			0.10
Uniform Delay, d1	35.8		1.1			1.2
Progression Factor	1.00		1.20			1.00
Incremental Delay, d2	1.3		0.0			0.1
Delay (s)	37.1		1.4			1.2
Level of Service	D		A			A
Approach Delay (s)	37.1		1.4			1.2
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay	3.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.12		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	23.6%	ICU Level of Service	A
Analysis Period (min)	15		

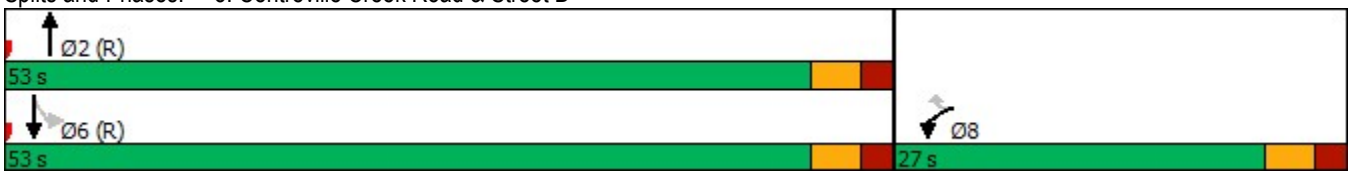
c Critical Lane Group

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	15	0	150	20	0	340
Future Volume (vph)	15	0	150	20	0	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0	0.0		0.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt			0.982			
Flt Protected	0.950					
Satd. Flow (prot)	1770	1863	3476	0	0	3539
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1863	3476	0	0	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)			20			
Link Speed (k/h)	50		50			50
Link Distance (m)	487.8		354.1			609.7
Travel Time (s)	35.1		25.5			43.9
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	0	150	20	0	340
Shared Lane Traffic (%)						
Lane Group Flow (vph)	15	0	170	0	0	340
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.6		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.8		4.8			4.8
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15		15	25	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	2.0	2.0	10.0		2.0	10.0
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	2.0	2.0	0.6		2.0	0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			9.4			9.4
Detector 2 Size(m)			0.6			0.6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8			6	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8	8	2		6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	23.0	23.0	23.0		23.0	23.0
Total Split (s)	27.0	27.0	53.0		53.0	53.0
Total Split (%)	33.8%	33.8%	66.3%		66.3%	66.3%
Maximum Green (s)	22.0	22.0	48.0		48.0	48.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0			-1.0
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Min		C-Min	C-Min
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0
Act Effct Green (s)	11.0		76.2			76.2
Actuated g/C Ratio	0.14		0.95			0.95
v/c Ratio	0.06		0.05			0.10
Control Delay	30.9		2.3			0.8
Queue Delay	0.0		0.0			0.0
Total Delay	30.9		2.3			0.8
LOS	C		A			A
Approach Delay	30.9		2.3			0.8
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.10			
Intersection Signal Delay: 2.1		Intersection LOS: A	
Intersection Capacity Utilization 24.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 5: Centreville Creek Road & Street D



Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	15	170	340
v/c Ratio	0.06	0.05	0.10
Control Delay	30.9	2.3	0.8
Queue Delay	0.0	0.0	0.0
Total Delay	30.9	2.3	0.8
Queue Length 50th (m)	2.1	0.0	0.0
Queue Length 95th (m)	7.5	12.1	7.8
Internal Link Dist (m)	463.8	330.1	585.7
Turn Bay Length (m)	50.0		
Base Capacity (vph)	508	3312	3371
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.03	0.05	0.10

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	15	0	150	20	0	340
Future Volume (vph)	15	0	150	20	0	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frt	1.00		0.98			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1770		3477			3539
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1770		3477			3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	0	150	20	0	340
RTOR Reduction (vph)	0	0	3	0	0	0
Lane Group Flow (vph)	15	0	167	0	0	340
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	2.0		68.0			68.0
Effective Green, g (s)	3.0		69.0			69.0
Actuated g/C Ratio	0.04		0.86			0.86
Clearance Time (s)	5.0		5.0			5.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	66		2998			3052
v/s Ratio Prot	c0.01		0.05			c0.10
v/s Ratio Perm						
v/c Ratio	0.23		0.06			0.11
Uniform Delay, d1	37.4		0.8			0.8
Progression Factor	1.00		3.05			0.90
Incremental Delay, d2	1.8		0.0			0.1
Delay (s)	39.1		2.5			0.8
Level of Service	D		A			A
Approach Delay (s)	39.1		2.5			0.8
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay	2.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.12		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	24.4%	ICU Level of Service	A
Analysis Period (min)	15		

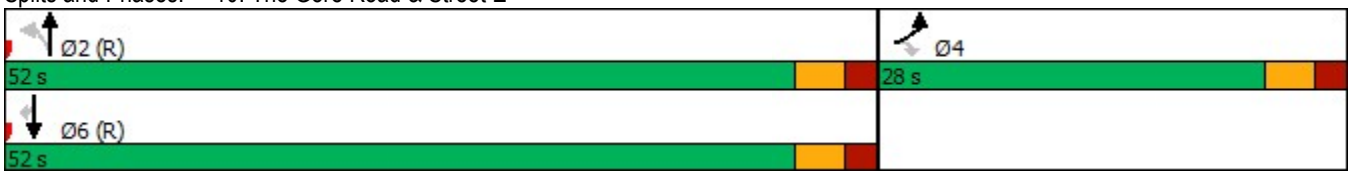
c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	370	150	55	875	815	200
Future Volume (vph)	370	150	55	875	815	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0	0.0	50.0			50.0
Storage Lanes	1	1	1			1
Taper Length (m)	7.5		7.5			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.306			
Satd. Flow (perm)	1770	1583	570	3539	3539	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		150				200
Link Speed (k/h)	50			50	50	
Link Distance (m)	398.1			374.7	444.4	
Travel Time (s)	28.7			27.0	32.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	370	150	55	875	815	200
Shared Lane Traffic (%)						
Lane Group Flow (vph)	370	150	55	875	815	200
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15	25			15
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (m)	2.0	2.0	2.0	10.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	28.0	28.0	52.0	52.0	52.0	52.0
Total Split (%)	35.0%	35.0%	65.0%	65.0%	65.0%	65.0%
Maximum Green (s)	23.0	23.0	47.0	47.0	47.0	47.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	C-Min	C-Min	C-Min	C-Min
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	22.4	22.4	49.6	49.6	49.6	49.6
Actuated g/C Ratio	0.28	0.28	0.62	0.62	0.62	0.62
v/c Ratio	0.75	0.27	0.16	0.40	0.37	0.19
Control Delay	35.4	4.8	9.2	8.6	8.4	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.4	4.8	9.2	8.6	8.4	2.1
LOS	D	A	A	A	A	A
Approach Delay	26.6			8.6	7.2	
Approach LOS	C			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 11.8		Intersection LOS: B	
Intersection Capacity Utilization 57.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 10: The Gore Road & Street E



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	370	150	55	875	815	200
v/c Ratio	0.75	0.27	0.16	0.40	0.37	0.19
Control Delay	35.4	4.8	9.2	8.6	8.4	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.4	4.8	9.2	8.6	8.4	2.1
Queue Length 50th (m)	53.3	0.0	3.2	26.5	21.5	0.0
Queue Length 95th (m)	74.9	11.6	m9.8	59.3	51.4	7.0
Internal Link Dist (m)	374.1			350.7	420.4	
Turn Bay Length (m)	50.0		50.0			50.0
Base Capacity (vph)	558	601	361	2246	2246	1077
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.25	0.15	0.39	0.36	0.19

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	370	150	55	875	815	200
Future Volume (vph)	370	150	55	875	815	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.31	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	570	3539	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	370	150	55	875	815	200
RTOR Reduction (vph)	0	108	0	0	0	76
Lane Group Flow (vph)	370	42	55	875	815	124
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	21.4	21.4	48.6	48.6	48.6	48.6
Effective Green, g (s)	22.4	22.4	49.6	49.6	49.6	49.6
Actuated g/C Ratio	0.28	0.28	0.62	0.62	0.62	0.62
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	495	443	353	2194	2194	981
v/s Ratio Prot	c0.21			c0.25	0.23	
v/s Ratio Perm		0.03	0.10			0.08
v/c Ratio	0.75	0.09	0.16	0.40	0.37	0.13
Uniform Delay, d1	26.2	21.3	6.4	7.7	7.5	6.3
Progression Factor	1.00	1.00	0.97	0.94	0.95	1.13
Incremental Delay, d2	6.1	0.1	0.9	0.5	0.5	0.3
Delay (s)	32.3	21.4	7.1	7.7	7.6	7.3
Level of Service	C	C	A	A	A	A
Approach Delay (s)	29.2			7.7	7.5	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	145	0	190	15	0	460
Future Volume (vph)	145	0	190	15	0	460
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0	0.0		0.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt			0.989			
Flt Protected	0.950					
Satd. Flow (prot)	1770	1863	3500	0	0	3539
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1863	3500	0	0	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)			15			
Link Speed (k/h)	50		50			50
Link Distance (m)	521.7		584.7			422.0
Travel Time (s)	37.6		42.1			30.4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	145	0	190	15	0	460
Shared Lane Traffic (%)						
Lane Group Flow (vph)	145	0	205	0	0	460
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.6		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.8		4.8			4.8
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15		15	25	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	2.0	2.0	10.0		2.0	10.0
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	2.0	2.0	0.6		2.0	0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			9.4			9.4
Detector 2 Size(m)			0.6			0.6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8			6	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8	8	2		6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	23.0	23.0	23.0		23.0	23.0
Total Split (s)	33.0	33.0	47.0		47.0	47.0
Total Split (%)	41.3%	41.3%	58.8%		58.8%	58.8%
Maximum Green (s)	28.0	28.0	42.0		42.0	42.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0			-1.0
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Min		C-Min	C-Min
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0
Act Effct Green (s)	13.5		58.5			58.5
Actuated g/C Ratio	0.17		0.73			0.73
v/c Ratio	0.49		0.08			0.18
Control Delay	35.3		3.3			2.5
Queue Delay	0.0		0.0			0.0
Total Delay	35.3		3.3			2.5
LOS	D		A			A
Approach Delay	35.3		3.3			2.5
Approach LOS	D		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay: 8.6		Intersection LOS: A	
Intersection Capacity Utilization 27.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: Centreville Creek Road & Street F

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	145	205	460
v/c Ratio	0.49	0.08	0.18
Control Delay	35.3	3.3	2.5
Queue Delay	0.0	0.0	0.0
Total Delay	35.3	3.3	2.5
Queue Length 50th (m)	21.5	3.5	6.0
Queue Length 95th (m)	36.5	7.8	9.2
Internal Link Dist (m)	497.7	560.7	398.0
Turn Bay Length (m)	50.0		
Base Capacity (vph)	641	2565	2589
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.23	0.08	0.18

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	145	0	190	15	0	460
Future Volume (vph)	145	0	190	15	0	460
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frt	1.00		0.99			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1770		3500			3539
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1770		3500			3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	145	0	190	15	0	460
RTOR Reduction (vph)	0	0	4	0	0	0
Lane Group Flow (vph)	145	0	201	0	0	460
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	12.5		57.5			57.5
Effective Green, g (s)	13.5		58.5			58.5
Actuated g/C Ratio	0.17		0.73			0.73
Clearance Time (s)	5.0		5.0			5.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	298		2559			2587
v/s Ratio Prot	c0.08		0.06			c0.13
v/s Ratio Perm						
v/c Ratio	0.49		0.08			0.18
Uniform Delay, d1	30.1		3.1			3.3
Progression Factor	1.00		1.00			0.64
Incremental Delay, d2	1.3		0.1			0.1
Delay (s)	31.4		3.1			2.3
Level of Service	C		A			A
Approach Delay (s)	31.4		3.1			2.3
Approach LOS	C		A			A

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	27.7%	ICU Level of Service	A
Analysis Period (min)	15		

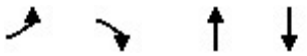
c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	275	45	10	660	910	55
Future Volume (vph)	275	45	10	660	910	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt		0.850			0.991	
Flt Protected	0.950			0.999		
Satd. Flow (prot)	1770	1583	0	3536	3507	0
Flt Permitted	0.950			0.940		
Satd. Flow (perm)	1770	1583	0	3327	3507	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		45			16	
Link Speed (k/h)	50			50	50	
Link Distance (m)	402.2			603.4	374.7	
Travel Time (s)	29.0			43.4	27.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	275	45	10	660	910	55
Shared Lane Traffic (%)						
Lane Group Flow (vph)	275	45	0	670	965	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.2			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15	25			15
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (m)	2.0	2.0	2.0	10.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	2.0	2.0	0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Detector Phase	4	4	2	2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	
Total Split (s)	23.0	23.0	57.0	57.0	57.0	
Total Split (%)	28.8%	28.8%	71.3%	71.3%	71.3%	
Maximum Green (s)	18.0	18.0	52.0	52.0	52.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	C-Min	C-Min	C-Min	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	
Act Effct Green (s)	18.3	18.3		53.7	53.7	
Actuated g/C Ratio	0.23	0.23		0.67	0.67	
v/c Ratio	0.68	0.11		0.30	0.41	
Control Delay	36.4	7.8		3.8	7.6	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	36.4	7.8		3.8	7.6	
LOS	D	A		A	A	
Approach Delay	32.4			3.8	7.6	
Approach LOS	C			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 10.3		Intersection LOS: B	
Intersection Capacity Utilization 48.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 14: The Gore Road & Street F



Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	275	45	670	965
v/c Ratio	0.68	0.11	0.30	0.41
Control Delay	36.4	7.8	3.8	7.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	36.4	7.8	3.8	7.6
Queue Length 50th (m)	40.3	0.0	11.3	34.3
Queue Length 95th (m)	59.6	7.2	19.5	41.3
Internal Link Dist (m)	378.2		579.4	350.7
Turn Bay Length (m)				
Base Capacity (vph)	451	436	2290	2419
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.61	0.10	0.29	0.40

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	275	45	10	660	910	55
Future Volume (vph)	275	45	10	660	910	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	
Frt	1.00	0.85		1.00	0.99	
Flt Protected	0.95	1.00		1.00	1.00	
Satd. Flow (prot)	1770	1583		3537	3509	
Flt Permitted	0.95	1.00		0.94	1.00	
Satd. Flow (perm)	1770	1583		3328	3509	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	275	45	10	660	910	55
RTOR Reduction (vph)	0	35	0	0	5	0
Lane Group Flow (vph)	275	10	0	670	960	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	17.3	17.3		52.7	52.7	
Effective Green, g (s)	18.3	18.3		53.7	53.7	
Actuated g/C Ratio	0.23	0.23		0.67	0.67	
Clearance Time (s)	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	404	362		2233	2355	
v/s Ratio Prot	c0.16				c0.27	
v/s Ratio Perm		0.01		0.20		
v/c Ratio	0.68	0.03		0.30	0.41	
Uniform Delay, d1	28.2	23.9		5.4	6.0	
Progression Factor	1.00	1.00		0.56	1.08	
Incremental Delay, d2	4.7	0.0		0.3	0.5	
Delay (s)	32.9	24.0		3.4	6.9	
Level of Service	C	C		A	A	
Approach Delay (s)	31.6			3.4	6.9	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	9.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	190	0	205	50	0	605
Future Volume (vph)	190	0	205	50	0	605
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0	0.0		0.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt			0.971			
Flt Protected	0.950					
Satd. Flow (prot)	1770	1863	3437	0	0	3539
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1863	3437	0	0	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)			50			
Link Speed (k/h)	50		50			50
Link Distance (m)	496.5		780.3			584.7
Travel Time (s)	35.7		56.2			42.1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	190	0	205	50	0	605
Shared Lane Traffic (%)						
Lane Group Flow (vph)	190	0	255	0	0	605
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.6		3.6			3.6
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.8		4.8			4.8
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15		15	25	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	2.0	2.0	10.0		2.0	10.0
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	2.0	2.0	0.6		2.0	0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			9.4			9.4
Detector 2 Size(m)			0.6			0.6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8			6	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8	8	2		6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	23.0	23.0	23.0		23.0	23.0
Total Split (s)	25.0	25.0	35.0		35.0	35.0
Total Split (%)	41.7%	41.7%	58.3%		58.3%	58.3%
Maximum Green (s)	20.0	20.0	30.0		30.0	30.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0			-1.0
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Min		C-Min	C-Min
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0
Act Effct Green (s)	13.3		38.7			38.7
Actuated g/C Ratio	0.22		0.64			0.64
v/c Ratio	0.48		0.11			0.27
Control Delay	24.2		3.8			5.3
Queue Delay	0.0		0.0			0.0
Total Delay	24.2		3.8			5.3
LOS	C		A			A
Approach Delay	24.2		3.8			5.3
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.48			
Intersection Signal Delay: 8.4		Intersection LOS: A	
Intersection Capacity Utilization 33.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 15: Centreville Creek Road & Street H

15: Centreville Creek Road & Street H

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	190	255	605
v/c Ratio	0.48	0.11	0.27
Control Delay	24.2	3.8	5.3
Queue Delay	0.0	0.0	0.0
Total Delay	24.2	3.8	5.3
Queue Length 50th (m)	19.5	3.7	12.5
Queue Length 95th (m)	33.1	9.1	24.2
Internal Link Dist (m)	472.5	756.3	560.7
Turn Bay Length (m)	50.0		
Base Capacity (vph)	619	2234	2282
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.31	0.11	0.27

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	190	0	205	50	0	605
Future Volume (vph)	190	0	205	50	0	605
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frt	1.00		0.97			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1770		3435			3539
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1770		3435			3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	190	0	205	50	0	605
RTOR Reduction (vph)	0	0	18	0	0	0
Lane Group Flow (vph)	190	0	237	0	0	605
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	12.3		37.7			37.7
Effective Green, g (s)	13.3		38.7			38.7
Actuated g/C Ratio	0.22		0.65			0.65
Clearance Time (s)	5.0		5.0			5.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	392		2215			2282
v/s Ratio Prot	c0.11		0.07			c0.17
v/s Ratio Perm						
v/c Ratio	0.48		0.11			0.27
Uniform Delay, d1	20.4		4.1			4.6
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.9		0.1			0.3
Delay (s)	21.3		4.2			4.8
Level of Service	C		A			A
Approach Delay (s)	21.3		4.2			4.8
Approach LOS	C		A			A

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.9%	ICU Level of Service	A
Analysis Period (min)	15		

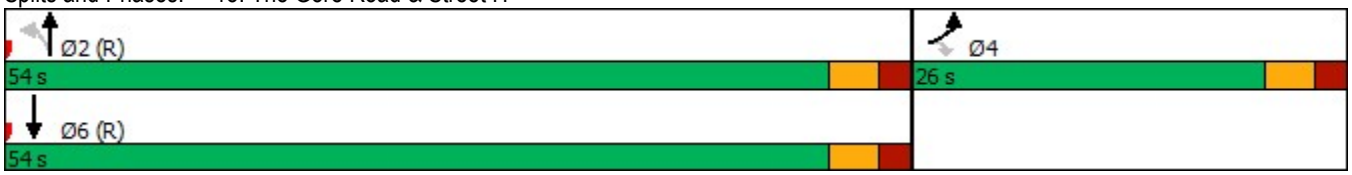
c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	255	130	35	415	800	155
Future Volume (vph)	255	130	35	415	800	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0	0.0	50.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	7.5		7.5			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.850			0.976	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3539	3454	0
Flt Permitted	0.950		0.267			
Satd. Flow (perm)	1770	1583	497	3539	3454	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		130			53	
Link Speed (k/h)	50			50	50	
Link Distance (m)	434.7			703.8	603.4	
Travel Time (s)	31.3			50.7	43.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	255	130	35	415	800	155
Shared Lane Traffic (%)						
Lane Group Flow (vph)	255	130	35	415	955	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15	25			15
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (m)	2.0	2.0	2.0	10.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	2.0	2.0	0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	4	2	2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	
Total Split (s)	26.0	26.0	54.0	54.0	54.0	
Total Split (%)	32.5%	32.5%	67.5%	67.5%	67.5%	
Maximum Green (s)	21.0	21.0	49.0	49.0	49.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	C-Min	C-Min	C-Min	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	
Act Effct Green (s)	17.6	17.6	54.4	54.4	54.4	
Actuated g/C Ratio	0.22	0.22	0.68	0.68	0.68	
v/c Ratio	0.66	0.29	0.10	0.17	0.40	
Control Delay	36.1	6.3	6.7	5.4	6.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	36.1	6.3	6.7	5.4	6.7	
LOS	D	A	A	A	A	
Approach Delay	26.0			5.5	6.7	
Approach LOS	C			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 10.6		Intersection LOS: B	
Intersection Capacity Utilization 49.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 18: The Gore Road & Street H



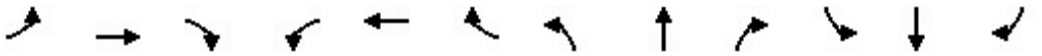
Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	255	130	35	415	955
v/c Ratio	0.66	0.29	0.10	0.17	0.40
Control Delay	36.1	6.3	6.7	5.4	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	36.1	6.3	6.7	5.4	6.7
Queue Length 50th (m)	37.3	0.0	1.7	10.8	3.2
Queue Length 95th (m)	55.8	12.0	6.2	20.4	92.5
Internal Link Dist (m)	410.7			679.8	579.4
Turn Bay Length (m)	50.0		50.0		
Base Capacity (vph)	492	534	339	2418	2377
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.52	0.24	0.10	0.17	0.40

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	255	130	35	415	800	155
Future Volume (vph)	255	130	35	415	800	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	3539	3453	
Flt Permitted	0.95	1.00	0.27	1.00	1.00	
Satd. Flow (perm)	1770	1583	498	3539	3453	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	255	130	35	415	800	155
RTOR Reduction (vph)	0	101	0	0	17	0
Lane Group Flow (vph)	255	29	35	415	938	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	16.6	16.6	53.4	53.4	53.4	
Effective Green, g (s)	17.6	17.6	54.4	54.4	54.4	
Actuated g/C Ratio	0.22	0.22	0.68	0.68	0.68	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	389	348	338	2406	2348	
v/s Ratio Prot	c0.14			0.12	c0.27	
v/s Ratio Perm		0.02	0.07			
v/c Ratio	0.66	0.08	0.10	0.17	0.40	
Uniform Delay, d1	28.4	24.8	4.4	4.6	5.6	
Progression Factor	1.00	1.00	1.00	1.00	1.04	
Incremental Delay, d2	3.9	0.1	0.6	0.2	0.5	
Delay (s)	32.4	24.9	5.0	4.8	6.3	
Level of Service	C	C	A	A	A	
Approach Delay (s)	29.9			4.8	6.3	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

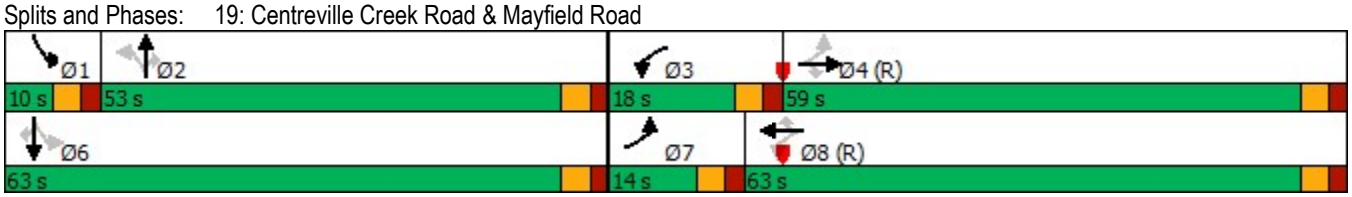


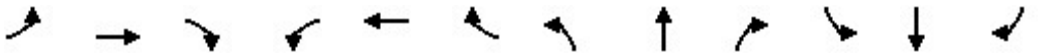
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	810	40	160	1020	130	5	80	50	20	610	370
Future Volume (vph)	110	810	40	160	1020	130	5	80	50	20	610	370
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		85.0	125.0		85.0	0.0		0.0	100.0		100.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.248			0.286			0.264			0.606		
Satd. Flow (perm)	462	5085	1583	533	5085	1583	492	3539	1583	1129	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			94			130			94			192
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		303.6			457.4			200.0			780.3	
Travel Time (s)		21.9			32.9			14.4			56.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	810	40	160	1020	130	5	80	50	20	610	370
Shared Lane Traffic (%)												
Lane Group Flow (vph)	110	810	40	160	1020	130	5	80	50	20	610	370
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	2	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	23.0	23.0	10.0	23.0	23.0	23.0	23.0	23.0	10.0	23.0	23.0
Total Split (s)	14.0	59.0	59.0	18.0	63.0	63.0	53.0	53.0	53.0	10.0	63.0	63.0
Total Split (%)	10.0%	42.1%	42.1%	12.9%	45.0%	45.0%	37.9%	37.9%	37.9%	7.1%	45.0%	45.0%
Maximum Green (s)	9.0	54.0	54.0	13.0	58.0	58.0	48.0	48.0	48.0	5.0	58.0	58.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0		0	0
Act Effct Green (s)	90.6	81.3	81.3	98.6	86.0	86.0	25.3	25.3	25.3	32.7	32.7	32.7
Actuated g/C Ratio	0.65	0.58	0.58	0.70	0.61	0.61	0.18	0.18	0.18	0.23	0.23	0.23
v/c Ratio	0.28	0.27	0.04	0.32	0.33	0.13	0.06	0.13	0.14	0.07	0.74	0.72
Control Delay	9.5	16.1	0.1	8.0	11.8	2.7	49.8	48.9	1.2	39.3	55.0	30.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.5	16.1	0.1	8.0	11.8	2.7	49.8	48.9	1.2	39.3	55.0	30.7
LOS	A	B	A	A	B	A	D	D	A	D	E	C
Approach Delay		14.7			10.4			31.2			45.7	
Approach LOS		B			B			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 22.8		Intersection LOS: C	
Intersection Capacity Utilization 56.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 19: Centreville Creek Road & Mayfield Road





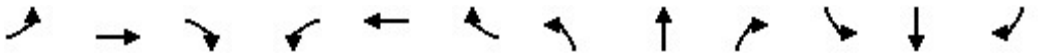
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	110	810	40	160	1020	130	5	80	50	20	610	370
v/c Ratio	0.28	0.27	0.04	0.32	0.33	0.13	0.06	0.13	0.14	0.07	0.74	0.72
Control Delay	9.5	16.1	0.1	8.0	11.8	2.7	49.8	48.9	1.2	39.3	55.0	30.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.5	16.1	0.1	8.0	11.8	2.7	49.8	48.9	1.2	39.3	55.0	30.7
Queue Length 50th (m)	9.1	41.5	0.0	13.1	50.5	2.1	1.3	10.7	0.0	4.5	87.2	48.9
Queue Length 95th (m)	18.5	61.6	0.0	16.9	48.9	4.6	5.5	18.2	1.0	10.9	101.5	81.4
Internal Link Dist (m)		279.6			433.4			176.0			756.3	
Turn Bay Length (m)	125.0		85.0	125.0		85.0				100.0		100.0
Base Capacity (vph)	399	2952	958	515	3122	1022	172	1238	615	299	1491	778
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.27	0.04	0.31	0.33	0.13	0.03	0.06	0.08	0.07	0.41	0.48

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	810	40	160	1020	130	5	80	50	20	610	370
Future Volume (vph)	110	810	40	160	1020	130	5	80	50	20	610	370
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.25	1.00	1.00	0.29	1.00	1.00	0.26	1.00	1.00	0.61	1.00	1.00
Satd. Flow (perm)	463	5085	1583	533	5085	1583	491	3539	1583	1130	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	810	40	160	1020	130	5	80	50	20	610	370
RTOR Reduction (vph)	0	0	17	0	0	52	0	0	41	0	0	144
Lane Group Flow (vph)	110	810	23	160	1020	78	5	80	9	20	610	226
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	86.6	78.3	78.3	96.0	83.0	83.0	24.3	24.3	24.3	33.7	33.7	33.7
Effective Green, g (s)	88.6	79.3	79.3	97.3	84.0	84.0	25.3	25.3	25.3	34.7	34.7	34.7
Actuated g/C Ratio	0.63	0.57	0.57	0.69	0.60	0.60	0.18	0.18	0.18	0.25	0.25	0.25
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	379	2880	896	494	3051	949	88	639	286	304	877	392
v/s Ratio Prot	0.02	0.16		c0.03	c0.20			0.02		0.00	c0.17	
v/s Ratio Perm	0.16		0.01	0.19		0.05	0.01		0.01	0.01		0.14
v/c Ratio	0.29	0.28	0.03	0.32	0.33	0.08	0.06	0.13	0.03	0.07	0.70	0.58
Uniform Delay, d1	10.2	15.7	13.4	7.8	14.0	11.8	47.5	48.1	47.3	40.1	47.8	46.2
Progression Factor	1.00	1.00	1.00	0.88	0.83	1.06	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.2	0.1	0.4	0.3	0.2	0.3	0.1	0.0	0.1	2.4	2.0
Delay (s)	10.7	15.9	13.4	7.2	11.9	12.6	47.7	48.2	47.3	40.2	50.3	48.2
Level of Service	B	B	B	A	B	B	D	D	D	D	D	D
Approach Delay (s)		15.2			11.4			47.8			49.3	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	25.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

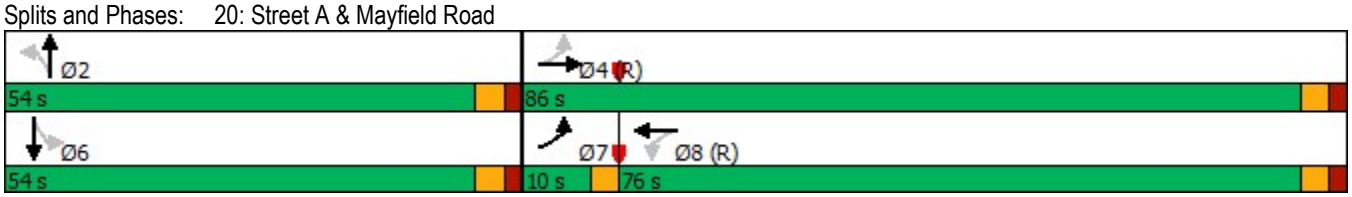


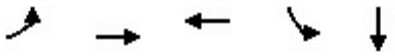
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	845	0	0	980	10	0	0	0	60	0	425
Future Volume (vph)	125	845	0	0	980	10	0	0	0	60	0	425
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.998						0.850	
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	5085	0	1863	5075	0	1863	1863	0	1770	1583	0
Flt Permitted	0.244									0.757		
Satd. Flow (perm)	455	5085	0	1863	5075	0	1863	1863	0	1410	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					1						177	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		457.4			416.0			194.2			756.3	
Travel Time (s)		32.9			30.0			14.0			54.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	125	845	0	0	980	10	0	0	0	60	0	425
Shared Lane Traffic (%)												
Lane Group Flow (vph)	125	845	0	0	990	0	0	0	0	60	425	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm			Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	10.0	86.0		76.0	76.0		54.0	54.0		54.0	54.0	
Total Split (%)	7.1%	61.4%		54.3%	54.3%		38.6%	38.6%		38.6%	38.6%	
Maximum Green (s)	7.0	81.0		71.0	71.0		49.0	49.0		49.0	49.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	0.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	2.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	
Act Effct Green (s)	102.6	100.6			89.0					31.4	31.4	
Actuated g/C Ratio	0.73	0.72			0.64					0.22	0.22	
v/c Ratio	0.29	0.23			0.31					0.19	0.86	
Control Delay	11.0	6.5			16.4					41.9	46.9	
Queue Delay	0.0	0.0			0.0					0.0	0.0	
Total Delay	11.0	6.5			16.4					41.9	46.9	
LOS	B	A			B					D	D	
Approach Delay		7.1			16.4						46.3	
Approach LOS		A			B						D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 18.6		Intersection LOS: B	
Intersection Capacity Utilization 62.4%		ICU Level of Service B	
Analysis Period (min) 15			

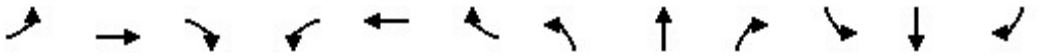
Splits and Phases: 20: Street A & Mayfield Road





Lane Group	EBL	EBT	WBT	SBL	SBT
Lane Group Flow (vph)	125	845	990	60	425
v/c Ratio	0.29	0.23	0.31	0.19	0.86
Control Delay	11.0	6.5	16.4	41.9	46.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	11.0	6.5	16.4	41.9	46.9
Queue Length 50th (m)	8.5	23.2	41.9	14.3	74.0
Queue Length 95th (m)	15.6	27.4	87.4	24.4	104.7
Internal Link Dist (m)		433.4	392.0		732.3
Turn Bay Length (m)	50.0				
Base Capacity (vph)	425	3654	3225	503	679
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.29	0.23	0.31	0.12	0.63

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	845	0	0	980	10	0	0	0	60	0	425
Future Volume (vph)	125	845	0	0	980	10	0	0	0	60	0	425
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0			4.0					4.0	4.0	
Lane Util. Factor	1.00	0.91			0.91					1.00	1.00	
Frt	1.00	1.00			1.00					1.00	0.85	
Flt Protected	0.95	1.00			1.00					0.95	1.00	
Satd. Flow (prot)	1770	5085			5078					1770	1583	
Flt Permitted	0.24	1.00			1.00					0.76	1.00	
Satd. Flow (perm)	455	5085			5078					1410	1583	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	125	845	0	0	980	10	0	0	0	60	0	425
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	137	0
Lane Group Flow (vph)	125	845	0	0	990	0	0	0	0	60	288	0
Turn Type	pm+pt	NA		Perm	NA		Perm			Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	99.6	99.6			88.0					30.4	30.4	
Effective Green, g (s)	100.6	100.6			89.0					31.4	31.4	
Actuated g/C Ratio	0.72	0.72			0.64					0.22	0.22	
Clearance Time (s)	3.0	5.0			5.0					5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0					3.0	3.0	
Lane Grp Cap (vph)	417	3653			3228					316	355	
v/s Ratio Prot	c0.02	0.17			c0.19						c0.18	
v/s Ratio Perm	0.19									0.04		
v/c Ratio	0.30	0.23			0.31					0.19	0.81	
Uniform Delay, d1	6.5	6.6			11.5					44.0	51.5	
Progression Factor	1.35	0.83			1.24					1.00	1.00	
Incremental Delay, d2	0.4	0.1			0.2					0.3	13.1	
Delay (s)	9.2	5.7			14.6					44.3	64.6	
Level of Service	A	A			B					D	E	
Approach Delay (s)		6.1			14.6			0.0			62.1	
Approach LOS		A			B			A			E	

Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

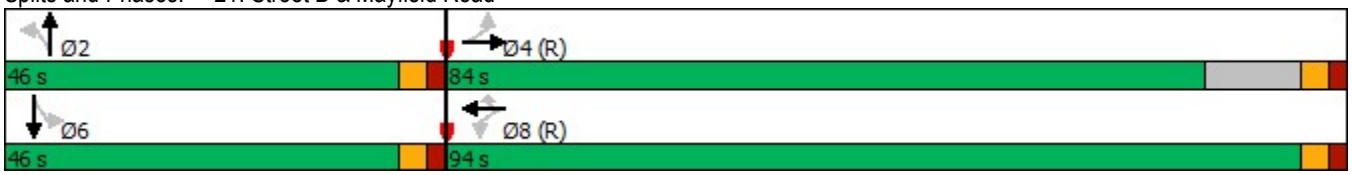
c Critical Lane Group

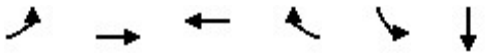
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	1105	0	0	515	100	0	0	0	250	0	115
Future Volume (vph)	95	1105	0	0	515	100	0	0	0	250	0	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	50.0		50.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850					0.850	
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	5085	0	1863	5085	1583	1863	1863	0	1770	1583	0
Flt Permitted	0.449									0.757		
Satd. Flow (perm)	836	5085	0	1863	5085	1583	1863	1863	0	1410	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						100					388	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		416.0			484.3			168.6			739.2	
Travel Time (s)		30.0			34.9			12.1			53.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	95	1105	0	0	515	100	0	0	0	250	0	115
Shared Lane Traffic (%)												
Lane Group Flow (vph)	95	1105	0	0	515	100	0	0	0	250	115	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm			Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	23.0	23.0		23.0	23.0	23.0	23.0	23.0		23.0	23.0	
Total Split (s)	84.0	84.0		94.0	94.0	94.0	46.0	46.0		46.0	46.0	
Total Split (%)	60.0%	60.0%		67.1%	67.1%	67.1%	32.9%	32.9%		32.9%	32.9%	
Maximum Green (s)	79.0	79.0		89.0	89.0	89.0	41.0	41.0		41.0	41.0	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min		C-Min	C-Min	C-Min	None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0		0	0	
Act Effct Green (s)	100.9	100.9			100.9	100.9				31.1	31.1	
Actuated g/C Ratio	0.72	0.72			0.72	0.72				0.22	0.22	
v/c Ratio	0.16	0.30			0.14	0.09				0.80	0.18	
Control Delay	7.1	7.1			10.9	6.7				69.4	0.6	
Queue Delay	0.0	0.0			0.0	0.0				0.0	0.0	
Total Delay	7.1	7.1			10.9	6.7				69.4	0.6	
LOS	A	A			B	A				E	A	
Approach Delay		7.1			10.2						47.8	
Approach LOS		A			B						D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 56 (40%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 14.8		Intersection LOS: B	
Intersection Capacity Utilization 53.5%		ICU Level of Service A	
Analysis Period (min) 15			

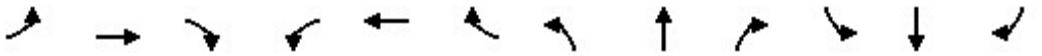
Splits and Phases: 21: Street B & Mayfield Road





Lane Group	EBL	EBT	WBT	WBR	SBL	SBT
Lane Group Flow (vph)	95	1105	515	100	250	115
v/c Ratio	0.16	0.30	0.14	0.09	0.80	0.18
Control Delay	7.1	7.1	10.9	6.7	69.4	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.1	7.1	10.9	6.7	69.4	0.6
Queue Length 50th (m)	7.6	33.7	17.9	0.0	69.4	0.0
Queue Length 95th (m)	14.3	41.9	38.2	16.3	94.1	0.0
Internal Link Dist (m)		392.0	460.3			715.2
Turn Bay Length (m)	50.0			50.0		
Base Capacity (vph)	602	3664	3664	1168	423	746
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.30	0.14	0.09	0.59	0.15

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	1105	0	0	515	100	0	0	0	250	0	115
Future Volume (vph)	95	1105	0	0	515	100	0	0	0	250	0	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0	4.0	
Lane Util. Factor	1.00	0.91			0.91	1.00				1.00	1.00	
Frt	1.00	1.00			1.00	0.85				1.00	0.85	
Flt Protected	0.95	1.00			1.00	1.00				0.95	1.00	
Satd. Flow (prot)	1770	5085			5085	1583				1770	1583	
Flt Permitted	0.45	1.00			1.00	1.00				0.76	1.00	
Satd. Flow (perm)	837	5085			5085	1583				1410	1583	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	95	1105	0	0	515	100	0	0	0	250	0	115
RTOR Reduction (vph)	0	0	0	0	0	28	0	0	0	0	89	0
Lane Group Flow (vph)	95	1105	0	0	515	72	0	0	0	250	26	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm			Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	99.9	99.9			99.9	99.9				30.1	30.1	
Effective Green, g (s)	100.9	100.9			100.9	100.9				31.1	31.1	
Actuated g/C Ratio	0.72	0.72			0.72	0.72				0.22	0.22	
Clearance Time (s)	5.0	5.0			5.0	5.0				5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0				3.0	3.0	
Lane Grp Cap (vph)	603	3664			3664	1140				313	351	
v/s Ratio Prot		c0.22			0.10						0.02	
v/s Ratio Perm	0.11					0.05				c0.18		
v/c Ratio	0.16	0.30			0.14	0.06				0.80	0.07	
Uniform Delay, d1	6.2	7.0			6.1	5.7				51.5	43.1	
Progression Factor	0.86	0.90			1.61	4.32				1.00	1.00	
Incremental Delay, d2	0.6	0.2			0.1	0.1				13.3	0.1	
Delay (s)	5.9	6.5			9.8	24.8				64.7	43.1	
Level of Service	A	A			A	C				E	D	
Approach Delay (s)		6.4			12.3			0.0			57.9	
Approach LOS		A			B			A			E	

Intersection Summary			
HCM 2000 Control Delay	16.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		

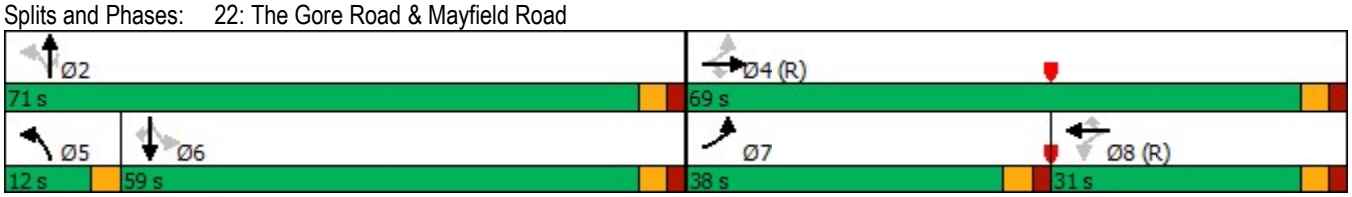
c Critical Lane Group

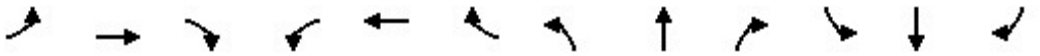
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	935	215	10	260	35	95	235	10	160	615	135
Future Volume (vph)	180	935	215	10	260	35	95	235	10	160	615	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0		60.0	60.0		50.0	50.0		50.0	50.0		50.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.551			0.293			0.156			0.605		
Satd. Flow (perm)	1026	5085	1583	546	5085	1583	291	3539	1583	1127	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			215			78			55			128
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		484.3			211.9			274.0			703.8	
Travel Time (s)		34.9			15.3			19.7			50.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	180	935	215	10	260	35	95	235	10	160	615	135
Shared Lane Traffic (%)												
Lane Group Flow (vph)	180	935	215	10	260	35	95	235	10	160	615	135
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4			8		5	2			6	
Permitted Phases	4		4	8		8	2		2	6		6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	8	8	8	5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	23.0	23.0	23.0	23.0	23.0	10.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	38.0	69.0	69.0	31.0	31.0	31.0	12.0	71.0	71.0	59.0	59.0	59.0
Total Split (%)	27.1%	49.3%	49.3%	22.1%	22.1%	22.1%	8.6%	50.7%	50.7%	42.1%	42.1%	42.1%
Maximum Green (s)	33.0	64.0	64.0	26.0	26.0	26.0	9.0	66.0	66.0	54.0	54.0	54.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	2.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None	None
Walk Time (s)		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0		0	0	0	0	0
Act Effct Green (s)	84.1	84.1	84.1	66.9	66.9	66.9	49.9	47.9	47.9	32.4	32.4	32.4
Actuated g/C Ratio	0.60	0.60	0.60	0.48	0.48	0.48	0.36	0.34	0.34	0.23	0.23	0.23
v/c Ratio	0.26	0.31	0.21	0.04	0.11	0.04	0.39	0.19	0.02	0.62	0.75	0.29
Control Delay	11.1	11.5	1.9	26.8	22.7	0.1	33.0	31.4	0.1	58.0	55.8	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.1	11.5	1.9	26.8	22.7	0.1	33.0	31.4	0.1	58.0	55.8	8.9
LOS	B	B	A	C	C	A	C	C	A	E	E	A
Approach Delay		9.9			20.3			30.9			49.2	
Approach LOS		A			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 97 (69%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 25.9		Intersection LOS: C	
Intersection Capacity Utilization 57.8%		ICU Level of Service B	
Analysis Period (min) 15			

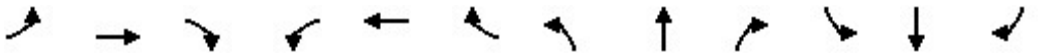
Splits and Phases: 22: The Gore Road & Mayfield Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	180	935	215	10	260	35	95	235	10	160	615	135
v/c Ratio	0.26	0.31	0.21	0.04	0.11	0.04	0.39	0.19	0.02	0.62	0.75	0.29
Control Delay	11.1	11.5	1.9	26.8	22.7	0.1	33.0	31.4	0.1	58.0	55.8	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.1	11.5	1.9	26.8	22.7	0.1	33.0	31.4	0.1	58.0	55.8	8.9
Queue Length 50th (m)	24.1	46.9	5.6	1.5	14.7	0.0	18.8	25.4	0.0	42.2	88.7	1.6
Queue Length 95th (m)	37.7	57.2	8.1	6.4	26.5	0.0	27.6	30.9	0.0	63.3	102.7	17.8
Internal Link Dist (m)		460.3			187.9			250.0			679.8	
Turn Bay Length (m)	75.0		60.0	60.0		50.0	50.0		50.0	50.0		50.0
Base Capacity (vph)	796	3053	1036	260	2428	796	249	1693	786	442	1390	699
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.31	0.21	0.04	0.11	0.04	0.38	0.14	0.01	0.36	0.44	0.19

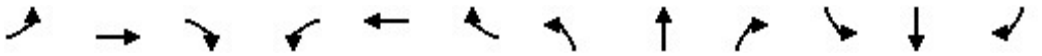
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	935	215	10	260	35	95	235	10	160	615	135
Future Volume (vph)	180	935	215	10	260	35	95	235	10	160	615	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	2.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.55	1.00	1.00	0.29	1.00	1.00	0.16	1.00	1.00	0.61	1.00	1.00
Satd. Flow (perm)	1026	5085	1583	547	5085	1583	291	3539	1583	1128	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	180	935	215	10	260	35	95	235	10	160	615	135
RTOR Reduction (vph)	0	0	86	0	0	18	0	0	7	0	0	98
Lane Group Flow (vph)	180	935	129	10	260	17	95	235	3	160	615	37
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4			8		5	2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	83.1	83.1	83.1	65.9	65.9	65.9	46.9	46.9	46.9	31.4	31.4	31.4
Effective Green, g (s)	84.1	84.1	84.1	66.9	66.9	66.9	47.9	47.9	47.9	32.4	32.4	32.4
Actuated g/C Ratio	0.60	0.60	0.60	0.48	0.48	0.48	0.34	0.34	0.34	0.23	0.23	0.23
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	686	3054	950	261	2429	756	242	1210	541	261	819	366
v/s Ratio Prot	0.02	c0.18			0.05		c0.04	0.07			c0.17	
v/s Ratio Perm	0.13		0.08	0.02		0.01	0.10		0.00	0.14		0.02
v/c Ratio	0.26	0.31	0.14	0.04	0.11	0.02	0.39	0.19	0.01	0.61	0.75	0.10
Uniform Delay, d1	12.5	13.7	12.2	19.4	20.1	19.3	33.9	32.5	30.4	48.2	50.0	42.3
Progression Factor	0.72	0.76	0.71	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.2	0.3	0.3	0.1	0.1	1.1	0.1	0.0	4.2	3.9	0.1
Delay (s)	9.2	10.7	8.9	19.7	20.2	19.3	35.0	32.5	30.4	52.4	54.0	42.4
Level of Service	A	B	A	B	C	B	C	C	C	D	D	D
Approach Delay (s)		10.2			20.1			33.1			52.0	
Approach LOS		B			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	27.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

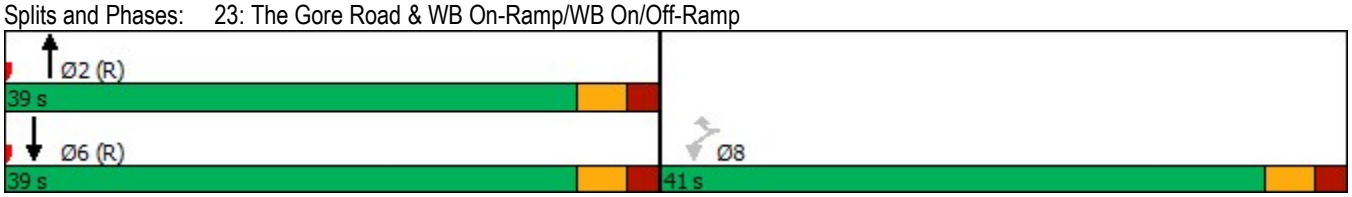


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	320	0	20	0	240	725	0	385	270
Future Volume (vph)	0	0	0	320	0	20	0	240	725	0	385	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		50.0	0.0		100.0
Storage Lanes	0		0	1		1	0		1	0		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt						0.850			0.850			0.850
Flt Protected				0.950								
Satd. Flow (prot)	0	0	0	1770	0	1583	0	3539	1583	0	3539	1583
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	1770	0	1583	0	3539	1583	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						27			725			270
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		321.8			445.2			373.0			653.5	
Travel Time (s)		23.2			32.1			26.9			47.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	320	0	20	0	240	725	0	385	270
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	320	0	20	0	240	725	0	385	270
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors				1		1		2	1		2	1
Detector Template				Left		Right		Thru	Right		Thru	Right
Leading Detector (m)				2.0		2.0		10.0	2.0		10.0	2.0
Trailing Detector (m)				0.0		0.0		0.0	0.0		0.0	0.0
Detector 1 Position(m)				0.0		0.0		0.0	0.0		0.0	0.0
Detector 1 Size(m)				2.0		2.0		0.6	2.0		0.6	2.0
Detector 1 Type				Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0		0.0		0.0	0.0		0.0	0.0
Detector 1 Queue (s)				0.0		0.0		0.0	0.0		0.0	0.0
Detector 1 Delay (s)				0.0		0.0		0.0	0.0		0.0	0.0
Detector 2 Position(m)								9.4			9.4	
Detector 2 Size(m)								0.6			0.6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases				8		8			Free			Free

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase				8		8		2			6	
Switch Phase												
Minimum Initial (s)				5.0		5.0		5.0			5.0	
Minimum Split (s)				23.0		23.0		23.0			23.0	
Total Split (s)				41.0		41.0		39.0			39.0	
Total Split (%)				51.3%		51.3%		48.8%			48.8%	
Maximum Green (s)				36.0		36.0		34.0			34.0	
Yellow Time (s)				3.0		3.0		3.0			3.0	
All-Red Time (s)				2.0		2.0		2.0			2.0	
Lost Time Adjust (s)				-1.0		-1.0		-1.0			-1.0	
Total Lost Time (s)				4.0		4.0		4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				3.0		3.0		3.0			3.0	
Recall Mode				None		None		C-Min			C-Min	
Walk Time (s)				7.0		7.0		7.0			7.0	
Flash Dont Walk (s)				11.0		11.0		11.0			11.0	
Pedestrian Calls (#/hr)				0		0		0			0	
Act Effct Green (s)				21.2		21.2		50.8	80.0		50.8	80.0
Actuated g/C Ratio				0.26		0.26		0.64	1.00		0.64	1.00
v/c Ratio				0.68		0.05		0.11	0.46		0.17	0.17
Control Delay				33.4		6.2		5.3	2.2		7.1	0.2
Queue Delay				0.0		0.0		0.0	0.0		0.0	0.0
Total Delay				33.4		6.2		5.3	2.2		7.1	0.2
LOS				C		A		A	A		A	A
Approach Delay					31.8			3.0			4.2	
Approach LOS					C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 8.4		Intersection LOS: A	
Intersection Capacity Utilization 35.0%		ICU Level of Service A	
Analysis Period (min) 15			

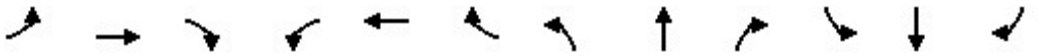
Splits and Phases: 23: The Gore Road & WB On-Ramp/WB On/Off-Ramp



23: The Gore Road & WB On-Ramp/WB On/Off-Ramp

Lane Group	WBL	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	320	20	240	725	385	270
v/c Ratio	0.68	0.05	0.11	0.46	0.17	0.17
Control Delay	33.4	6.2	5.3	2.2	7.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.4	6.2	5.3	2.2	7.1	0.2
Queue Length 50th (m)	45.8	0.0	6.5	0.0	11.7	0.0
Queue Length 95th (m)	63.9	3.6	8.6	87.5	22.7	0.0
Internal Link Dist (m)			349.0		629.5	
Turn Bay Length (m)				50.0		100.0
Base Capacity (vph)	818	746	2248	1583	2248	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.03	0.11	0.46	0.17	0.17

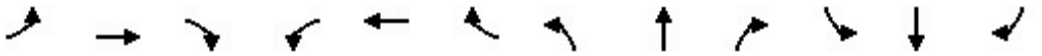
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	320	0	20	0	240	725	0	385	270
Future Volume (vph)	0	0	0	320	0	20	0	240	725	0	385	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0		4.0		4.0	3.0		4.0	3.0
Lane Util. Factor				1.00		1.00		0.95	1.00		0.95	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				1770		1583		3539	1583		3539	1583
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				1770		1583		3539	1583		3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	320	0	20	0	240	725	0	385	270
RTOR Reduction (vph)	0	0	0	0	0	15	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	320	0	5	0	240	725	0	385	270
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases				8		8			Free			Free
Actuated Green, G (s)				20.2		20.2		49.8	80.0		49.8	80.0
Effective Green, g (s)				21.2		21.2		50.8	80.0		50.8	80.0
Actuated g/C Ratio				0.26		0.26		0.63	1.00		0.63	1.00
Clearance Time (s)				5.0		5.0		5.0			5.0	
Vehicle Extension (s)				3.0		3.0		3.0			3.0	
Lane Grp Cap (vph)				469		419		2247	1583		2247	1583
v/s Ratio Prot								0.07			0.11	
v/s Ratio Perm				c0.18		0.00			c0.46			0.17
v/c Ratio				0.68		0.01		0.11	0.46		0.17	0.17
Uniform Delay, d1				26.4		21.7		5.7	0.0		6.0	0.0
Progression Factor				1.00		1.00		0.78	1.00		1.00	1.00
Incremental Delay, d2				4.1		0.0		0.1	0.9		0.2	0.2
Delay (s)				30.4		21.7		4.6	0.9		6.1	0.2
Level of Service				C		C		A	A		A	A
Approach Delay (s)		0.0			29.9			1.8			3.7	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	35.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

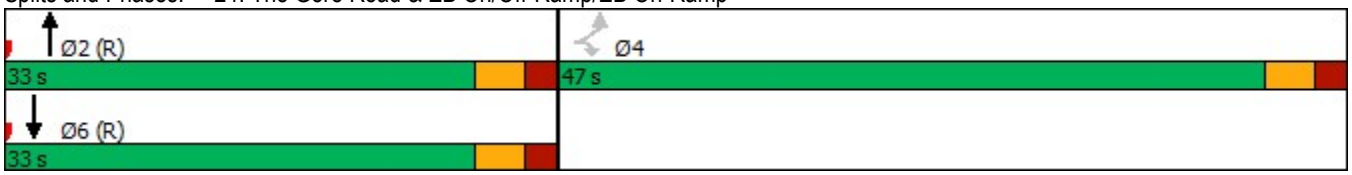


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	0	485	0	0	0	0	790	580	0	480	215
Future Volume (vph)	180	0	485	0	0	0	0	790	580	0	480	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		100.0	0.0		50.0
Storage Lanes	1		2	0		0	0		1	0		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	0.88	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950											
Satd. Flow (prot)	1770	0	2787	0	0	0	0	3539	1583	0	3539	1583
Flt Permitted	0.950											
Satd. Flow (perm)	1770	0	2787	0	0	0	0	3539	1583	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			339						580			215
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		342.3			224.1			444.4			373.0	
Travel Time (s)		24.6			16.1			32.0			26.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	180	0	485	0	0	0	0	790	580	0	480	215
Shared Lane Traffic (%)												
Lane Group Flow (vph)	180	0	485	0	0	0	0	790	580	0	480	215
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1		1					2	1		2	1
Detector Template	Left		Right					Thru	Right		Thru	Right
Leading Detector (m)	2.0		2.0					10.0	2.0		10.0	2.0
Trailing Detector (m)	0.0		0.0					0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0		0.0					0.0	0.0		0.0	0.0
Detector 1 Size(m)	2.0		2.0					0.6	2.0		0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex					Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0					0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0					0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0					0.0	0.0		0.0	0.0
Detector 2 Position(m)								9.4			9.4	
Detector 2 Size(m)								0.6			0.6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4		4					2			6	
Switch Phase												
Minimum Initial (s)	5.0		5.0					5.0			5.0	
Minimum Split (s)	23.0		23.0					23.0			23.0	
Total Split (s)	47.0		47.0					33.0			33.0	
Total Split (%)	58.8%		58.8%					41.3%			41.3%	
Maximum Green (s)	42.0		42.0					28.0			28.0	
Yellow Time (s)	3.0		3.0					3.0			3.0	
All-Red Time (s)	2.0		2.0					2.0			2.0	
Lost Time Adjust (s)	-1.0		-1.0					-1.0			-1.0	
Total Lost Time (s)	4.0		4.0					4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Recall Mode	None		None					C-Min			C-Min	
Walk Time (s)	7.0		7.0					7.0			7.0	
Flash Dont Walk (s)	11.0		11.0					11.0			11.0	
Pedestrian Calls (#/hr)	0		0					0			0	
Act Effct Green (s)	14.9		14.9					57.1	80.0		57.1	80.0
Actuated g/C Ratio	0.19		0.19					0.71	1.00		0.71	1.00
v/c Ratio	0.55		0.61					0.31	0.37		0.19	0.14
Control Delay	35.0		12.0					6.4	0.7		2.4	0.2
Queue Delay	0.0		0.0					0.0	0.0		0.0	0.0
Total Delay	35.0		12.0					6.4	0.7		2.4	0.2
LOS	D		B					A	A		A	A
Approach Delay		18.3						4.0			1.7	
Approach LOS		B						A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 6.9		Intersection LOS: A	
Intersection Capacity Utilization 38.5%		ICU Level of Service A	
Analysis Period (min) 15			

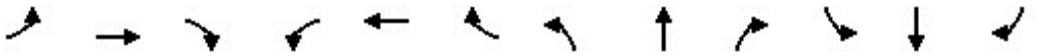
Splits and Phases: 24: The Gore Road & EB On/Off-Ramp/EB On-Ramp



24: The Gore Road & EB On/Off-Ramp/EB On-Ramp

Lane Group	EBL	EBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	180	485	790	580	480	215
v/c Ratio	0.55	0.61	0.31	0.37	0.19	0.14
Control Delay	35.0	12.0	6.4	0.7	2.4	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.0	12.0	6.4	0.7	2.4	0.2
Queue Length 50th (m)	26.4	11.5	11.8	0.0	5.5	0.0
Queue Length 95th (m)	41.7	24.3	55.2	0.3	10.0	0.0
Internal Link Dist (m)			420.4		349.0	
Turn Bay Length (m)				100.0		50.0
Base Capacity (vph)	951	1654	2527	1583	2527	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.29	0.31	0.37	0.19	0.14

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	0	485	0	0	0	0	790	580	0	480	215
Future Volume (vph)	180	0	485	0	0	0	0	790	580	0	480	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	3.0		4.0	3.0
Lane Util. Factor	1.00		0.88					0.95	1.00		0.95	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	1770		2787					3539	1583		3539	1583
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	1770		2787					3539	1583		3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	180	0	485	0	0	0	0	790	580	0	480	215
RTOR Reduction (vph)	0	0	276	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	180	0	209	0	0	0	0	790	580	0	480	215
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	13.9		13.9					56.1	80.0		56.1	80.0
Effective Green, g (s)	14.9		14.9					57.1	80.0		57.1	80.0
Actuated g/C Ratio	0.19		0.19					0.71	1.00		0.71	1.00
Clearance Time (s)	5.0		5.0					5.0			5.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	329		519					2525	1583		2525	1583
v/s Ratio Prot								0.22			0.14	
v/s Ratio Perm	c0.10		0.08						c0.37			0.14
v/c Ratio	0.55		0.40					0.31	0.37		0.19	0.14
Uniform Delay, d1	29.5		28.6					4.2	0.0		3.8	0.0
Progression Factor	1.00		1.00					1.28	1.00		0.52	1.00
Incremental Delay, d2	1.9		0.5					0.3	0.6		0.2	0.2
Delay (s)	31.4		29.2					5.7	0.6		2.1	0.2
Level of Service	C		C					A	A		A	A
Approach Delay (s)		29.7			0.0			3.5			1.5	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	105	0	170	20	0	355
Future Volume (vph)	105	0	170	20	0	355
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0	0.0		0.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt			0.984			
Flt Protected	0.950					
Satd. Flow (prot)	1770	1863	3483	0	0	3539
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1863	3483	0	0	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)			20			
Link Speed (k/h)	50		50			50
Link Distance (m)	503.1		422.0			354.1
Travel Time (s)	36.2		30.4			25.5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	105	0	170	20	0	355
Shared Lane Traffic (%)						
Lane Group Flow (vph)	105	0	190	0	0	355
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.6		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.8		4.8			4.8
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15		15	25	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	2.0	2.0	10.0		2.0	10.0
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	2.0	2.0	0.6		2.0	0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			9.4			9.4
Detector 2 Size(m)			0.6			0.6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8			6	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8	8	2		6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	23.0	23.0	23.0		23.0	23.0
Total Split (s)	41.0	41.0	39.0		39.0	39.0
Total Split (%)	51.3%	51.3%	48.8%		48.8%	48.8%
Maximum Green (s)	36.0	36.0	34.0		34.0	34.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0			-1.0
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Min		C-Min	C-Min
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0
Act Effct Green (s)	11.2		63.9			63.9
Actuated g/C Ratio	0.14		0.80			0.80
v/c Ratio	0.43		0.07			0.13
Control Delay	36.0		2.5			3.1
Queue Delay	0.0		0.0			0.0
Total Delay	36.0		2.5			3.1
LOS	D		A			A
Approach Delay	36.0		2.5			3.1
Approach LOS	D		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.43			
Intersection Signal Delay: 8.2		Intersection LOS: A	
Intersection Capacity Utilization 22.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 25: Centreville Creek Road & Street E

25: Centreville Creek Road & Street E

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	105	190	355
v/c Ratio	0.43	0.07	0.13
Control Delay	36.0	2.5	3.1
Queue Delay	0.0	0.0	0.0
Total Delay	36.0	2.5	3.1
Queue Length 50th (m)	15.6	2.7	5.4
Queue Length 95th (m)	28.8	6.4	16.3
Internal Link Dist (m)	479.1	398.0	330.1
Turn Bay Length (m)	50.0		
Base Capacity (vph)	818	2785	2825
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.13	0.07	0.13

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	105	0	170	20	0	355
Future Volume (vph)	105	0	170	20	0	355
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frt	1.00		0.98			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1770		3483			3539
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1770		3483			3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	105	0	170	20	0	355
RTOR Reduction (vph)	0	0	4	0	0	0
Lane Group Flow (vph)	105	0	186	0	0	355
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	8.9		61.1			61.1
Effective Green, g (s)	9.9		62.1			62.1
Actuated g/C Ratio	0.12		0.78			0.78
Clearance Time (s)	5.0		5.0			5.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	219		2703			2747
v/s Ratio Prot	c0.06		0.05			c0.10
v/s Ratio Perm						
v/c Ratio	0.48		0.07			0.13
Uniform Delay, d1	32.6		2.1			2.2
Progression Factor	1.00		1.01			1.09
Incremental Delay, d2	1.7		0.0			0.1
Delay (s)	34.3		2.2			2.5
Level of Service	C		A			A
Approach Delay (s)	34.3		2.2			2.5
Approach LOS	C		A			A

Intersection Summary			
HCM 2000 Control Delay	7.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	22.3%	ICU Level of Service	A
Analysis Period (min)	15		

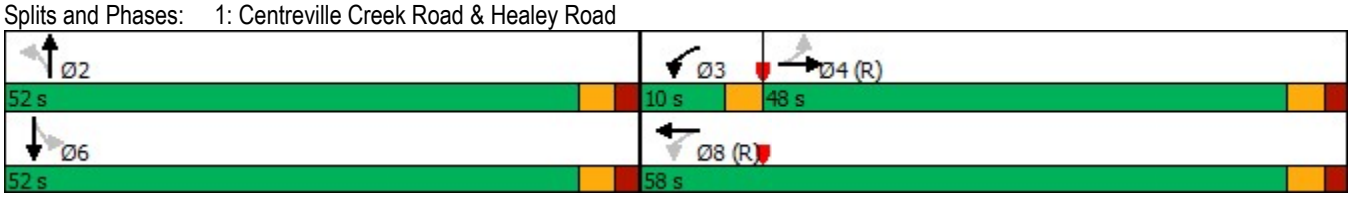
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	350	20	90	50	10	20	180	110	5	35	5
Future Volume (vph)	20	350	20	90	50	10	20	180	110	5	35	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.975			0.943			0.981	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3511	0	1770	3451	0	1770	1757	0	1770	1827	0
Flt Permitted	0.716			0.510			0.731			0.262		
Satd. Flow (perm)	1334	3511	0	950	3451	0	1362	1757	0	488	1827	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			10			35			5	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		203.0			1430.7			316.7			404.1	
Travel Time (s)		14.6			103.0			22.8			29.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	350	20	90	50	10	20	180	110	5	35	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	370	0	90	60	0	20	290	0	5	40	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		

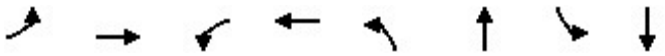
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	23.0	23.0		10.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	48.0	48.0		10.0	58.0		52.0	52.0		52.0	52.0	
Total Split (%)	43.6%	43.6%		9.1%	52.7%		47.3%	47.3%		47.3%	47.3%	
Maximum Green (s)	43.0	43.0		7.0	53.0		47.0	47.0		47.0	47.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.0	4.0		2.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)	70.4	70.4		80.9	78.9		23.1	23.1		23.1	23.1	
Actuated g/C Ratio	0.64	0.64		0.74	0.72		0.21	0.21		0.21	0.21	
v/c Ratio	0.02	0.16		0.12	0.02		0.07	0.73		0.05	0.10	
Control Delay	10.6	9.6		5.5	5.0		32.1	45.9		31.8	29.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	10.6	9.6		5.5	5.0		32.1	45.9		31.8	29.5	
LOS	B	A		A	A		C	D		C	C	
Approach Delay		9.6			5.3			45.0			29.7	
Approach LOS		A			A			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 52 (47%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 22.2		Intersection LOS: C	
Intersection Capacity Utilization 42.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Centreville Creek Road & Healey Road

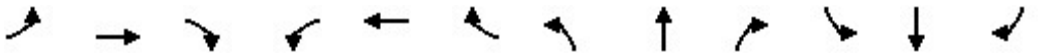


1: Centreville Creek Road & Healey Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	20	370	90	60	20	290	5	40
v/c Ratio	0.02	0.16	0.12	0.02	0.07	0.73	0.05	0.10
Control Delay	10.6	9.6	5.5	5.0	32.1	45.9	31.8	29.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.6	9.6	5.5	5.0	32.1	45.9	31.8	29.5
Queue Length 50th (m)	1.6	16.6	4.9	1.4	3.6	54.4	0.9	6.4
Queue Length 95th (m)	6.0	30.4	12.4	4.4	9.4	76.8	3.9	14.4
Internal Link Dist (m)		179.0		1406.7		292.7		380.1
Turn Bay Length (m)	50.0		50.0					
Base Capacity (vph)	854	2249	762	2478	594	786	212	800
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.16	0.12	0.02	0.03	0.37	0.02	0.05

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	350	20	90	50	10	20	180	110	5	35	5
Future Volume (vph)	20	350	20	90	50	10	20	180	110	5	35	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		2.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	0.94		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3511		1770	3451		1770	1757		1770	1828	
Flt Permitted	0.72	1.00		0.51	1.00		0.73	1.00		0.26	1.00	
Satd. Flow (perm)	1333	3511		951	3451		1362	1757		489	1828	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	350	20	90	50	10	20	180	110	5	35	5
RTOR Reduction (vph)	0	2	0	0	3	0	0	28	0	0	4	0
Lane Group Flow (vph)	20	368	0	90	57	0	20	262	0	5	36	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	68.8	68.8		77.9	77.9		22.1	22.1		22.1	22.1	
Effective Green, g (s)	69.8	69.8		78.9	78.9		23.1	23.1		23.1	23.1	
Actuated g/C Ratio	0.63	0.63		0.72	0.72		0.21	0.21		0.21	0.21	
Clearance Time (s)	5.0	5.0		3.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	845	2227		734	2475		286	368		102	383	
v/s Ratio Prot		c0.10		c0.01	0.02			c0.15			0.02	
v/s Ratio Perm	0.01			0.08			0.01			0.01		
v/c Ratio	0.02	0.17		0.12	0.02		0.07	0.71		0.05	0.09	
Uniform Delay, d1	7.5	8.2		4.7	4.5		34.8	40.4		34.7	35.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2		0.1	0.0		0.1	6.4		0.2	0.1	
Delay (s)	7.5	8.4		4.7	4.5		34.9	46.8		34.9	35.1	
Level of Service	A	A		A	A		C	D		C	D	
Approach Delay (s)		8.3			4.6			46.0			35.1	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		

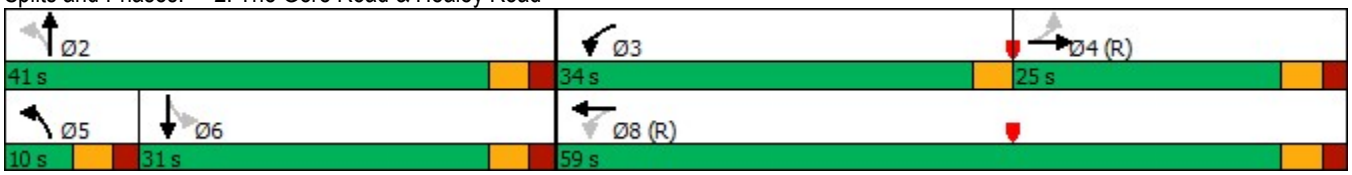
c Critical Lane Group

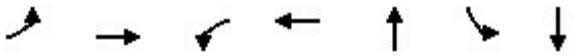
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	380	35	20	175	15	0	300	280	5	350	15
Future Volume (vph)	40	380	35	20	175	15	0	300	280	5	350	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	50.0		0.0	50.0		0.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.987			0.988			0.928			0.994	
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1770	3493	0	1770	3497	0	1863	3284	0	1770	3518	0
Flt Permitted	0.632			0.493						0.230		
Satd. Flow (perm)	1177	3493	0	918	3497	0	1863	3284	0	428	3518	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			14			267			4	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		1430.7			145.4			653.5			353.7	
Travel Time (s)		103.0			10.5			47.1			25.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	380	35	20	175	15	0	300	280	5	350	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	40	415	0	20	190	0	0	580	0	5	365	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		3	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	10.0		5.0	10.0		10.0	10.0	
Minimum Split (s)	23.0	23.0		10.0	23.0		10.0	23.0		23.0	23.0	
Total Split (s)	25.0	25.0		34.0	59.0		10.0	41.0		31.0	31.0	
Total Split (%)	25.0%	25.0%		34.0%	59.0%		10.0%	41.0%		31.0%	31.0%	
Maximum Green (s)	20.0	20.0		31.0	54.0		5.0	36.0		26.0	26.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.0	4.0		2.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lag	Lag		Lead			Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Min	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0			11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0			0		0	0	
Act Effct Green (s)	70.9	70.9		76.6	74.6			17.4		17.4	17.4	
Actuated g/C Ratio	0.71	0.71		0.77	0.75			0.17		0.17	0.17	
v/c Ratio	0.05	0.17		0.03	0.07			0.73		0.07	0.59	
Control Delay	6.8	6.0		3.8	3.7			26.1		33.8	41.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	6.8	6.0		3.8	3.7			26.1		33.8	41.1	
LOS	A	A		A	A			C		C	D	
Approach Delay		6.1			3.7			26.1			41.0	
Approach LOS		A			A			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 21.0		Intersection LOS: C	
Intersection Capacity Utilization 44.0%		ICU Level of Service A	
Analysis Period (min) 15			

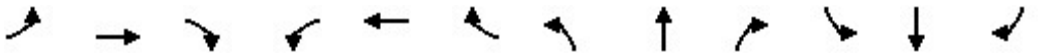
Splits and Phases: 2: The Gore Road & Healey Road





Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	40	415	20	190	580	5	365
v/c Ratio	0.05	0.17	0.03	0.07	0.73	0.07	0.59
Control Delay	6.8	6.0	3.8	3.7	26.1	33.8	41.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.8	6.0	3.8	3.7	26.1	33.8	41.1
Queue Length 50th (m)	1.7	10.0	0.8	4.0	32.1	0.9	36.4
Queue Length 95th (m)	7.8	26.6	3.2	9.1	47.2	4.0	47.3
Internal Link Dist (m)		1406.7		121.4	629.5		329.7
Turn Bay Length (m)	50.0		50.0			50.0	
Base Capacity (vph)	834	2479	975	2611	1383	115	952
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.17	0.02	0.07	0.42	0.04	0.38

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	380	35	20	175	15	0	300	280	5	350	15
Future Volume (vph)	40	380	35	20	175	15	0	300	280	5	350	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		2.0	4.0			4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.99			0.93		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00		0.95	1.00	
Satd. Flow (prot)	1770	3494		1770	3497			3283		1770	3517	
Flt Permitted	0.63	1.00		0.49	1.00			1.00		0.23	1.00	
Satd. Flow (perm)	1178	3494		918	3497			3283		428	3517	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	380	35	20	175	15	0	300	280	5	350	15
RTOR Reduction (vph)	0	3	0	0	4	0	0	221	0	0	3	0
Lane Group Flow (vph)	40	412	0	20	186	0	0	359	0	5	362	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	68.1	68.1		73.6	73.6			16.4		16.4	16.4	
Effective Green, g (s)	69.1	69.1		74.6	74.6			17.4		17.4	17.4	
Actuated g/C Ratio	0.69	0.69		0.75	0.75			0.17		0.17	0.17	
Clearance Time (s)	5.0	5.0		3.0	5.0			5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	813	2414		714	2608			571		74	611	
v/s Ratio Prot		c0.12		0.00	c0.05			c0.11			0.10	
v/s Ratio Perm	0.03			0.02						0.01		
v/c Ratio	0.05	0.17		0.03	0.07			0.63		0.07	0.59	
Uniform Delay, d1	4.9	5.4		3.3	3.4			38.3		34.5	38.0	
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2		0.0	0.1			2.2		0.4	1.5	
Delay (s)	5.1	5.6		3.3	3.5			40.5		34.9	39.6	
Level of Service	A	A		A	A			D		C	D	
Approach Delay (s)		5.5			3.4			40.5			39.5	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	25.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	44.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	20	0	310	30	0	155
Future Volume (vph)	20	0	310	30	0	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt			0.987			
Flt Protected	0.950					
Satd. Flow (prot)	1770	1863	3493	0	0	3539
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1863	3493	0	0	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)			23			
Link Speed (k/h)	50		50			50
Link Distance (m)	464.8		609.7			316.7
Travel Time (s)	33.5		43.9			22.8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	0	310	30	0	155
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	0	340	0	0	155
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.6		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.8		4.8			4.8
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15		15	25	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	2.0	2.0	10.0		2.0	10.0
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	2.0	2.0	0.6		2.0	0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			9.4			9.4
Detector 2 Size(m)			0.6			0.6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Detector Phase	8	8	2		6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	23.0	23.0	23.0		23.0	23.0
Total Split (s)	27.0	27.0	53.0		53.0	53.0
Total Split (%)	33.8%	33.8%	66.3%		66.3%	66.3%
Maximum Green (s)	22.0	22.0	48.0		48.0	48.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0			-1.0
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Min		C-Min	C-Min
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0
Act Effct Green (s)	11.0		72.4			72.4
Actuated g/C Ratio	0.14		0.90			0.90
v/c Ratio	0.08		0.11			0.05
Control Delay	31.1		1.5			1.5
Queue Delay	0.0		0.0			0.0
Total Delay	31.1		1.5			1.5
LOS	C		A			A
Approach Delay	31.1		1.5			1.5
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.11			
Intersection Signal Delay: 2.6		Intersection LOS: A	
Intersection Capacity Utilization 24.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: Centreville Creek Road & Street B

3: Centreville Creek Road & Street B

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	20	340	155
v/c Ratio	0.08	0.11	0.05
Control Delay	31.1	1.5	1.5
Queue Delay	0.0	0.0	0.0
Total Delay	31.1	1.5	1.5
Queue Length 50th (m)	2.8	0.0	0.0
Queue Length 95th (m)	9.0	6.5	4.3
Internal Link Dist (m)	440.8	585.7	292.7
Turn Bay Length (m)			
Base Capacity (vph)	508	3163	3203
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.04	0.11	0.05

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	20	0	310	30	0	155
Future Volume (vph)	20	0	310	30	0	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frt	1.00		0.99			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1770		3492			3539
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1770		3492			3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	0	310	30	0	155
RTOR Reduction (vph)	0	0	4	0	0	0
Lane Group Flow (vph)	20	0	336	0	0	155
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	4.0		66.0			66.0
Effective Green, g (s)	5.0		67.0			67.0
Actuated g/C Ratio	0.06		0.84			0.84
Clearance Time (s)	5.0		5.0			5.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	110		2924			2963
v/s Ratio Prot	c0.01		c0.10			0.04
v/s Ratio Perm						
v/c Ratio	0.18		0.12			0.05
Uniform Delay, d1	35.6		1.2			1.1
Progression Factor	1.00		1.07			1.00
Incremental Delay, d2	0.8		0.1			0.0
Delay (s)	36.4		1.3			1.1
Level of Service	D		A			A
Approach Delay (s)	36.4		1.3			1.1
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay	2.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.12		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	24.5%	ICU Level of Service	A
Analysis Period (min)	15		

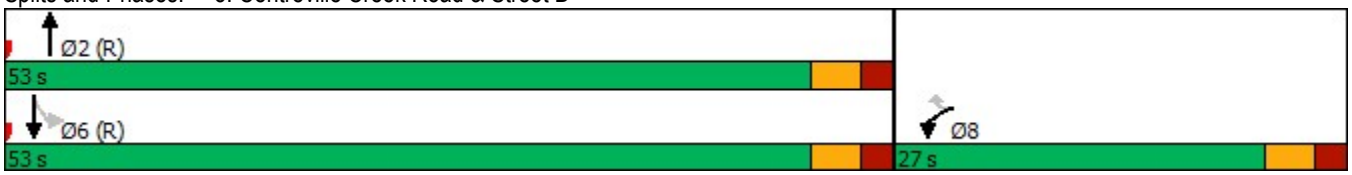
c Critical Lane Group

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	0	340	70	0	175
Future Volume (vph)	10	0	340	70	0	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0	0.0		0.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt			0.974			
Flt Protected	0.950					
Satd. Flow (prot)	1770	1863	3447	0	0	3539
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1863	3447	0	0	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)			56			
Link Speed (k/h)	50		50			50
Link Distance (m)	487.8		354.1			609.7
Travel Time (s)	35.1		25.5			43.9
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	0	340	70	0	175
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	0	410	0	0	175
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.6		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.8		4.8			4.8
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15		15	25	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	2.0	2.0	10.0		2.0	10.0
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	2.0	2.0	0.6		2.0	0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			9.4			9.4
Detector 2 Size(m)			0.6			0.6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8			6	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8	8	2		6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	23.0	23.0	23.0		23.0	23.0
Total Split (s)	27.0	27.0	53.0		53.0	53.0
Total Split (%)	33.8%	33.8%	66.3%		66.3%	66.3%
Maximum Green (s)	22.0	22.0	48.0		48.0	48.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0			-1.0
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Min		C-Min	C-Min
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0
Act Effct Green (s)	11.0		76.2			76.2
Actuated g/C Ratio	0.14		0.95			0.95
v/c Ratio	0.04		0.12			0.05
Control Delay	30.5		2.3			0.7
Queue Delay	0.0		0.0			0.0
Total Delay	30.5		2.3			0.7
LOS	C		A			A
Approach Delay	30.5		2.3			0.7
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.12			
Intersection Signal Delay: 2.3		Intersection LOS: A	
Intersection Capacity Utilization 26.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 5: Centreville Creek Road & Street D



5: Centreville Creek Road & Street D

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	10	410	175
v/c Ratio	0.04	0.12	0.05
Control Delay	30.5	2.3	0.7
Queue Delay	0.0	0.0	0.0
Total Delay	30.5	2.3	0.7
Queue Length 50th (m)	1.4	0.0	0.0
Queue Length 95th (m)	5.9	25.5	4.2
Internal Link Dist (m)	463.8	330.1	585.7
Turn Bay Length (m)	50.0		
Base Capacity (vph)	508	3286	3371
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.02	0.12	0.05

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	0	340	70	0	175
Future Volume (vph)	10	0	340	70	0	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frt	1.00		0.97			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1770		3449			3539
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1770		3449			3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	0	340	70	0	175
RTOR Reduction (vph)	0	0	8	0	0	0
Lane Group Flow (vph)	10	0	402	0	0	175
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	2.0		68.0			68.0
Effective Green, g (s)	3.0		69.0			69.0
Actuated g/C Ratio	0.04		0.86			0.86
Clearance Time (s)	5.0		5.0			5.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	66		2974			3052
v/s Ratio Prot	c0.01		c0.12			0.05
v/s Ratio Perm						
v/c Ratio	0.15		0.14			0.06
Uniform Delay, d1	37.3		0.9			0.8
Progression Factor	1.00		3.17			0.88
Incremental Delay, d2	1.1		0.1			0.0
Delay (s)	38.3		2.8			0.7
Level of Service	D		A			A
Approach Delay (s)	38.3		2.8			0.7
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay	2.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.14		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	26.6%	ICU Level of Service	A
Analysis Period (min)	15		

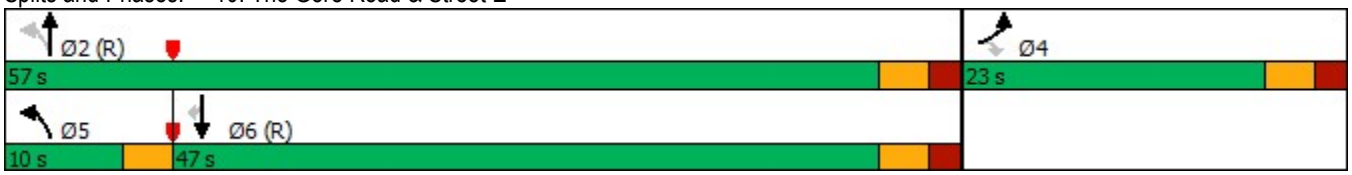
c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	310	125	165	925	1070	625
Future Volume (vph)	310	125	165	925	1070	625
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0	0.0	50.0			50.0
Storage Lanes	1	1	1			1
Taper Length (m)	7.5		7.5			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.179			
Satd. Flow (perm)	1770	1583	333	3539	3539	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		125				625
Link Speed (k/h)	50			50	50	
Link Distance (m)	398.1			374.7	444.4	
Travel Time (s)	28.7			27.0	32.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	310	125	165	925	1070	625
Shared Lane Traffic (%)						
Lane Group Flow (vph)	310	125	165	925	1070	625
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15	25			15
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (m)	2.0	2.0	2.0	10.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	23.0	23.0	10.0	23.0	23.0	23.0
Total Split (s)	23.0	23.0	10.0	57.0	47.0	47.0
Total Split (%)	28.8%	28.8%	12.5%	71.3%	58.8%	58.8%
Maximum Green (s)	18.0	18.0	7.0	52.0	42.0	42.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	0.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	2.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	C-Min	C-Min	C-Min
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	18.7	18.7	55.3	53.3	43.0	43.0
Actuated g/C Ratio	0.23	0.23	0.69	0.67	0.54	0.54
v/c Ratio	0.75	0.27	0.44	0.39	0.56	0.55
Control Delay	40.8	6.5	11.2	7.9	9.8	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.8	6.5	11.2	7.9	9.8	3.0
LOS	D	A	B	A	A	A
Approach Delay	30.9			8.4	7.3	
Approach LOS	C			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 10.9		Intersection LOS: B	
Intersection Capacity Utilization 65.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 10: The Gore Road & Street E



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	310	125	165	925	1070	625
v/c Ratio	0.75	0.27	0.44	0.39	0.56	0.55
Control Delay	40.8	6.5	11.2	7.9	9.8	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.8	6.5	11.2	7.9	9.8	3.0
Queue Length 50th (m)	44.9	0.0	8.6	37.1	48.5	8.6
Queue Length 95th (m)	#82.4	12.8	15.6	33.6	75.8	9.8
Internal Link Dist (m)	374.1			350.7	420.4	
Turn Bay Length (m)	50.0		50.0			50.0
Base Capacity (vph)	443	489	382	2401	1965	1156
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.26	0.43	0.39	0.54	0.54

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	310	125	165	925	1070	625
Future Volume (vph)	310	125	165	925	1070	625
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	2.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.18	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	334	3539	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	310	125	165	925	1070	625
RTOR Reduction (vph)	0	96	0	0	0	289
Lane Group Flow (vph)	310	29	165	925	1070	336
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	17.7	17.7	52.3	52.3	42.0	42.0
Effective Green, g (s)	18.7	18.7	53.3	53.3	43.0	43.0
Actuated g/C Ratio	0.23	0.23	0.67	0.67	0.54	0.54
Clearance Time (s)	5.0	5.0	3.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	413	370	371	2357	1902	850
v/s Ratio Prot	c0.18		c0.05	0.26	c0.30	
v/s Ratio Perm		0.02	0.25			0.21
v/c Ratio	0.75	0.08	0.44	0.39	0.56	0.40
Uniform Delay, d1	28.5	23.9	7.0	6.0	12.3	10.9
Progression Factor	1.00	1.00	1.68	1.15	0.68	1.40
Incremental Delay, d2	7.5	0.1	0.8	0.5	1.0	1.1
Delay (s)	36.0	24.0	12.5	7.4	9.3	16.3
Level of Service	D	C	B	A	A	B
Approach Delay (s)	32.5			8.2	11.8	
Approach LOS	C			A	B	

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	105	0	470	40	0	280
Future Volume (vph)	105	0	470	40	0	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0	0.0		0.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt			0.988			
Flt Protected	0.950					
Satd. Flow (prot)	1770	1863	3497	0	0	3539
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1863	3497	0	0	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)			17			
Link Speed (k/h)	50		50			50
Link Distance (m)	521.7		584.7			422.0
Travel Time (s)	37.6		42.1			30.4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	105	0	470	40	0	280
Shared Lane Traffic (%)						
Lane Group Flow (vph)	105	0	510	0	0	280
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.6		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.8		4.8			4.8
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15		15	25	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	2.0	2.0	10.0		2.0	10.0
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	2.0	2.0	0.6		2.0	0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			9.4			9.4
Detector 2 Size(m)			0.6			0.6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8			6	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8	8	2		6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	23.0	23.0	23.0		23.0	23.0
Total Split (s)	33.0	33.0	47.0		47.0	47.0
Total Split (%)	41.3%	41.3%	58.8%		58.8%	58.8%
Maximum Green (s)	28.0	28.0	42.0		42.0	42.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0			-1.0
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Min		C-Min	C-Min
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0
Act Effct Green (s)	12.2		63.6			63.6
Actuated g/C Ratio	0.15		0.80			0.80
v/c Ratio	0.39		0.18			0.10
Control Delay	34.7		2.9			1.5
Queue Delay	0.0		0.0			0.0
Total Delay	34.7		2.9			1.5
LOS	C		A			A
Approach Delay	34.7		2.9			1.5
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.39			
Intersection Signal Delay: 6.2		Intersection LOS: A	
Intersection Capacity Utilization 29.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: Centreville Creek Road & Street F

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	105	510	280
v/c Ratio	0.39	0.18	0.10
Control Delay	34.7	2.9	1.5
Queue Delay	0.0	0.0	0.0
Total Delay	34.7	2.9	1.5
Queue Length 50th (m)	15.6	8.7	2.5
Queue Length 95th (m)	28.9	16.4	4.8
Internal Link Dist (m)	497.7	560.7	398.0
Turn Bay Length (m)	50.0		
Base Capacity (vph)	641	2785	2815
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.16	0.18	0.10

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	105	0	470	40	0	280
Future Volume (vph)	105	0	470	40	0	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frt	1.00		0.99			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1770		3498			3539
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1770		3498			3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	105	0	470	40	0	280
RTOR Reduction (vph)	0	0	4	0	0	0
Lane Group Flow (vph)	105	0	506	0	0	280
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	9.2		60.8			60.8
Effective Green, g (s)	10.2		61.8			61.8
Actuated g/C Ratio	0.13		0.77			0.77
Clearance Time (s)	5.0		5.0			5.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	225		2702			2733
v/s Ratio Prot	c0.06		c0.14			0.08
v/s Ratio Perm						
v/c Ratio	0.47		0.19			0.10
Uniform Delay, d1	32.4		2.4			2.2
Progression Factor	1.00		1.00			0.54
Incremental Delay, d2	1.5		0.2			0.1
Delay (s)	33.9		2.6			1.3
Level of Service	C		A			A
Approach Delay (s)	33.9		2.6			1.3
Approach LOS	C		A			A

Intersection Summary			
HCM 2000 Control Delay	5.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	29.3%	ICU Level of Service	A
Analysis Period (min)	15		

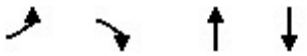
c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	175	30	35	920	1030	165
Future Volume (vph)	175	30	35	920	1030	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt		0.850			0.979	
Flt Protected	0.950			0.998		
Satd. Flow (prot)	1770	1583	0	3532	3465	0
Flt Permitted	0.950			0.874		
Satd. Flow (perm)	1770	1583	0	3093	3465	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		30			47	
Link Speed (k/h)	50			50	50	
Link Distance (m)	402.2			603.4	374.7	
Travel Time (s)	29.0			43.4	27.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	175	30	35	920	1030	165
Shared Lane Traffic (%)						
Lane Group Flow (vph)	175	30	0	955	1195	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.2			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15	25			15
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (m)	2.0	2.0	2.0	10.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	2.0	2.0	0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Detector Phase	4	4	2	2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	
Total Split (s)	23.0	23.0	57.0	57.0	57.0	
Total Split (%)	28.8%	28.8%	71.3%	71.3%	71.3%	
Maximum Green (s)	18.0	18.0	52.0	52.0	52.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	C-Min	C-Min	C-Min	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	
Act Effct Green (s)	14.5	14.5		57.5	57.5	
Actuated g/C Ratio	0.18	0.18		0.72	0.72	
v/c Ratio	0.55	0.10		0.43	0.48	
Control Delay	35.9	10.3		5.7	13.2	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	35.9	10.3		5.7	13.2	
LOS	D	B		A	B	
Approach Delay	32.1			5.7	13.2	
Approach LOS	C			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 11.8		Intersection LOS: B	
Intersection Capacity Utilization 67.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 14: The Gore Road & Street F



Lane Group	EBL	EBR	NBT	SBT
Lane Group Flow (vph)	175	30	955	1195
v/c Ratio	0.55	0.10	0.43	0.48
Control Delay	35.9	10.3	5.7	13.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	35.9	10.3	5.7	13.2
Queue Length 50th (m)	25.9	0.0	20.1	85.2
Queue Length 95th (m)	42.2	6.5	48.6	100.3
Internal Link Dist (m)	378.2		579.4	350.7
Turn Bay Length (m)				
Base Capacity (vph)	420	398	2223	2504
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.42	0.08	0.43	0.48

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	175	30	35	920	1030	165
Future Volume (vph)	175	30	35	920	1030	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	
Frt	1.00	0.85		1.00	0.98	
Flt Protected	0.95	1.00		1.00	1.00	
Satd. Flow (prot)	1770	1583		3533	3466	
Flt Permitted	0.95	1.00		0.87	1.00	
Satd. Flow (perm)	1770	1583		3095	3466	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	175	30	35	920	1030	165
RTOR Reduction (vph)	0	25	0	0	13	0
Lane Group Flow (vph)	175	5	0	955	1182	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	13.5	13.5		56.5	56.5	
Effective Green, g (s)	14.5	14.5		57.5	57.5	
Actuated g/C Ratio	0.18	0.18		0.72	0.72	
Clearance Time (s)	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	320	286		2224	2491	
v/s Ratio Prot	c0.10				c0.34	
v/s Ratio Perm		0.00		0.31		
v/c Ratio	0.55	0.02		0.43	0.47	
Uniform Delay, d1	29.8	26.9		4.6	4.8	
Progression Factor	1.00	1.00		1.00	2.49	
Incremental Delay, d2	1.9	0.0		0.6	0.6	
Delay (s)	31.7	26.9		5.2	12.5	
Level of Service	C	C		A	B	
Approach Delay (s)	31.0			5.2	12.5	
Approach LOS	C			A	B	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	120	0	510	150	0	385
Future Volume (vph)	120	0	510	150	0	385
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0	0.0		0.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt			0.966			
Flt Protected	0.950					
Satd. Flow (prot)	1770	1863	3419	0	0	3539
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1863	3419	0	0	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)			95			
Link Speed (k/h)	50		50			50
Link Distance (m)	496.5		780.3			584.7
Travel Time (s)	35.7		56.2			42.1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	120	0	510	150	0	385
Shared Lane Traffic (%)						
Lane Group Flow (vph)	120	0	660	0	0	385
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.6		3.6			3.6
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.8		4.8			4.8
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15		15	25	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	2.0	2.0	10.0		2.0	10.0
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	2.0	2.0	0.6		2.0	0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			9.4			9.4
Detector 2 Size(m)			0.6			0.6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8			6	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8	8	2		6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	23.0	23.0	23.0		23.0	23.0
Total Split (s)	25.0	25.0	35.0		35.0	35.0
Total Split (%)	41.7%	41.7%	58.3%		58.3%	58.3%
Maximum Green (s)	20.0	20.0	30.0		30.0	30.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0			-1.0
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Min		C-Min	C-Min
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0
Act Effct Green (s)	11.8		44.0			44.0
Actuated g/C Ratio	0.20		0.73			0.73
v/c Ratio	0.35		0.26			0.15
Control Delay	23.6		3.5			3.7
Queue Delay	0.0		0.0			0.0
Total Delay	23.6		3.5			3.7
LOS	C		A			A
Approach Delay	23.6		3.5			3.7
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.35			
Intersection Signal Delay: 5.6		Intersection LOS: A	
Intersection Capacity Utilization 33.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 15: Centreville Creek Road & Street H

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	120	660	385
v/c Ratio	0.35	0.26	0.15
Control Delay	23.6	3.5	3.7
Queue Delay	0.0	0.0	0.0
Total Delay	23.6	3.5	3.7
Queue Length 50th (m)	12.3	10.2	6.5
Queue Length 95th (m)	24.0	19.3	12.7
Internal Link Dist (m)	472.5	756.3	560.7
Turn Bay Length (m)	50.0		
Base Capacity (vph)	619	2535	2597
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.19	0.26	0.15

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	120	0	510	150	0	385
Future Volume (vph)	120	0	510	150	0	385
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frt	1.00		0.97			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1770		3419			3539
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1770		3419			3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	120	0	510	150	0	385
RTOR Reduction (vph)	0	0	28	0	0	0
Lane Group Flow (vph)	120	0	632	0	0	385
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	8.8		41.2			41.2
Effective Green, g (s)	9.8		42.2			42.2
Actuated g/C Ratio	0.16		0.70			0.70
Clearance Time (s)	5.0		5.0			5.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	289		2404			2489
v/s Ratio Prot	c0.07		c0.18			0.11
v/s Ratio Perm						
v/c Ratio	0.42		0.26			0.15
Uniform Delay, d1	22.5		3.2			3.0
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	1.0		0.3			0.1
Delay (s)	23.5		3.5			3.1
Level of Service	C		A			A
Approach Delay (s)	23.5		3.5			3.1
Approach LOS	C		A			A

Intersection Summary			
HCM 2000 Control Delay	5.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.9%	ICU Level of Service	A
Analysis Period (min)	15		

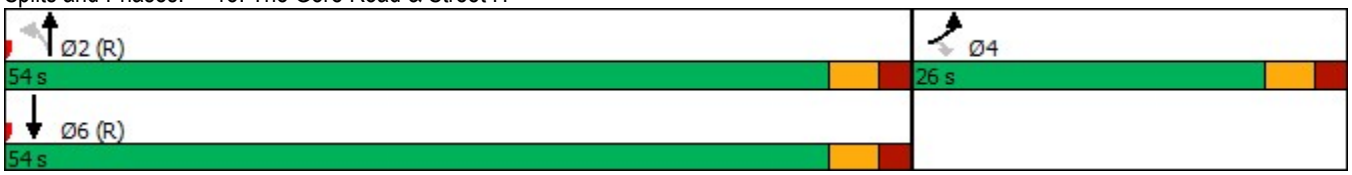
c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	165	80	105	790	585	475
Future Volume (vph)	165	80	105	790	585	475
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0	0.0	50.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	7.5		7.5			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.850			0.933	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3539	3302	0
Flt Permitted	0.950		0.242			
Satd. Flow (perm)	1770	1583	451	3539	3302	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		80			475	
Link Speed (k/h)	50			50	50	
Link Distance (m)	434.7			703.8	603.4	
Travel Time (s)	31.3			50.7	43.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	165	80	105	790	585	475
Shared Lane Traffic (%)						
Lane Group Flow (vph)	165	80	105	790	1060	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15	25			15
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (m)	2.0	2.0	2.0	10.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	2.0	2.0	0.6	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	4	2	2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	
Total Split (s)	26.0	26.0	54.0	54.0	54.0	
Total Split (%)	32.5%	32.5%	67.5%	67.5%	67.5%	
Maximum Green (s)	21.0	21.0	49.0	49.0	49.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	C-Min	C-Min	C-Min	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	
Act Effct Green (s)	14.1	14.1	57.9	57.9	57.9	
Actuated g/C Ratio	0.18	0.18	0.72	0.72	0.72	
v/c Ratio	0.53	0.23	0.32	0.31	0.42	
Control Delay	35.7	8.4	8.0	4.6	6.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	35.7	8.4	8.0	4.6	6.9	
LOS	D	A	A	A	A	
Approach Delay	26.8			5.0	6.9	
Approach LOS	C			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay: 8.3		Intersection LOS: A	
Intersection Capacity Utilization 58.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 18: The Gore Road & Street H



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	165	80	105	790	1060
v/c Ratio	0.53	0.23	0.32	0.31	0.42
Control Delay	35.7	8.4	8.0	4.6	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	35.7	8.4	8.0	4.6	6.9
Queue Length 50th (m)	24.4	0.0	4.8	18.7	39.1
Queue Length 95th (m)	40.3	10.5	15.8	32.9	43.4
Internal Link Dist (m)	410.7			679.8	579.4
Turn Bay Length (m)	50.0		50.0		
Base Capacity (vph)	486	493	326	2560	2520
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.34	0.16	0.32	0.31	0.42

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	165	80	105	790	585	475
Future Volume (vph)	165	80	105	790	585	475
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.93	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	3539	3301	
Flt Permitted	0.95	1.00	0.24	1.00	1.00	
Satd. Flow (perm)	1770	1583	451	3539	3301	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	165	80	105	790	585	475
RTOR Reduction (vph)	0	66	0	0	131	0
Lane Group Flow (vph)	165	14	105	790	929	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	13.1	13.1	56.9	56.9	56.9	
Effective Green, g (s)	14.1	14.1	57.9	57.9	57.9	
Actuated g/C Ratio	0.18	0.18	0.72	0.72	0.72	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	311	279	326	2561	2389	
v/s Ratio Prot	c0.09			0.22	c0.28	
v/s Ratio Perm		0.01	0.23			
v/c Ratio	0.53	0.05	0.32	0.31	0.39	
Uniform Delay, d1	29.9	27.4	4.0	3.9	4.2	
Progression Factor	1.00	1.00	1.00	1.00	2.60	
Incremental Delay, d2	1.7	0.1	2.6	0.3	0.4	
Delay (s)	31.7	27.5	6.6	4.2	11.5	
Level of Service	C	C	A	A	B	
Approach Delay (s)	30.3			4.5	11.5	
Approach LOS	C			A	B	

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.9%	ICU Level of Service	B
Analysis Period (min)	15		

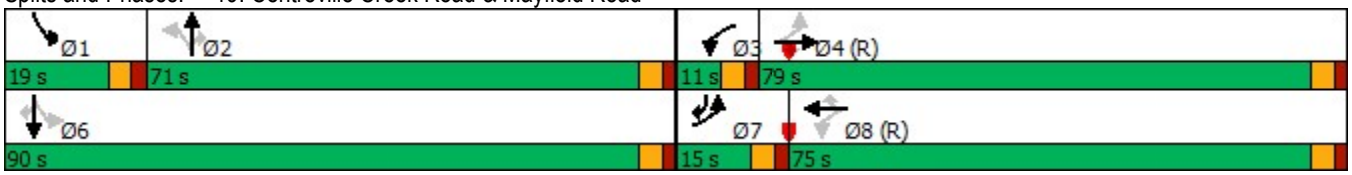
c Critical Lane Group

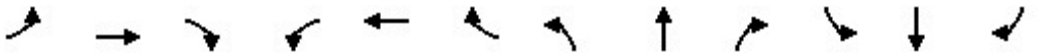
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	225	1125	5	90	995	20	40	615	185	130	135	295
Future Volume (vph)	225	1125	5	90	995	20	40	615	185	130	135	295
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		85.0	125.0		85.0	0.0		0.0	100.0		100.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.214			0.204			0.666			0.133		
Satd. Flow (perm)	399	5085	1583	380	5085	1583	1241	3539	1583	248	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			73			73			150			39
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		303.6			457.4			200.0			780.3	
Travel Time (s)		21.9			32.9			14.4			56.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	225	1125	5	90	995	20	40	615	185	130	135	295
Shared Lane Traffic (%)												
Lane Group Flow (vph)	225	1125	5	90	995	20	40	615	185	130	135	295
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8			2		1	6	7
Permitted Phases	4		4	8		8	2		2	6		6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	2	2	2	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0	5.0
Minimum Split (s)	10.0	23.0	23.0	10.0	23.0	23.0	23.0	23.0	23.0	10.0	23.0	10.0
Total Split (s)	15.0	79.0	79.0	11.0	75.0	75.0	71.0	71.0	71.0	19.0	90.0	15.0
Total Split (%)	8.3%	43.9%	43.9%	6.1%	41.7%	41.7%	39.4%	39.4%	39.4%	10.6%	50.0%	8.3%
Maximum Green (s)	10.0	74.0	74.0	6.0	70.0	70.0	66.0	66.0	66.0	14.0	85.0	10.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-3.5	-1.0	-1.0	-1.0	-2.5	-1.0	-1.0	-2.0	-1.0	-3.0	-1.0	-1.0
Total Lost Time (s)	1.5	4.0	4.0	4.0	2.5	4.0	4.0	3.0	4.0	2.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead		Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0		0	
Act Effct Green (s)	115.0	97.5	97.5	102.1	92.6	91.1	39.4	40.4	39.4	61.5	59.5	80.9
Actuated g/C Ratio	0.64	0.54	0.54	0.57	0.51	0.51	0.22	0.22	0.22	0.34	0.33	0.45
v/c Ratio	0.55	0.41	0.01	0.30	0.38	0.02	0.15	0.77	0.40	0.55	0.12	0.40
Control Delay	20.3	26.2	0.0	20.0	27.8	1.9	55.8	72.3	15.3	49.2	40.4	28.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.3	26.2	0.0	20.0	27.8	1.9	55.8	72.3	15.3	49.2	40.4	28.7
LOS	C	C	A	B	C	A	E	E	B	D	D	C
Approach Delay		25.2			26.6			58.9			36.3	
Approach LOS		C			C			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 180			
Actuated Cycle Length: 180			
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 34.6		Intersection LOS: C	
Intersection Capacity Utilization 69.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 19: Centreville Creek Road & Mayfield Road

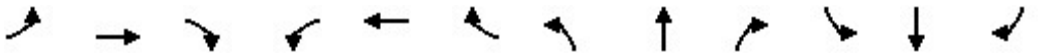




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	225	1125	5	90	995	20	40	615	185	130	135	295
v/c Ratio	0.55	0.41	0.01	0.30	0.38	0.02	0.15	0.77	0.40	0.55	0.12	0.40
Control Delay	20.3	26.2	0.0	20.0	27.8	1.9	55.8	72.3	15.3	49.2	40.4	28.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.3	26.2	0.0	20.0	27.8	1.9	55.8	72.3	15.3	49.2	40.4	28.7
Queue Length 50th (m)	33.8	89.8	0.0	13.9	61.2	0.2	12.4	116.4	10.7	35.1	18.7	64.7
Queue Length 95th (m)	57.9	122.7	0.0	32.5	102.5	m1.8	23.4	132.1	33.6	48.1	25.0	73.8
Internal Link Dist (m)		279.6			433.4			176.0			756.3	
Turn Bay Length (m)	125.0		85.0	125.0		85.0				100.0		100.0
Base Capacity (vph)	406	2755	891	299	2616	837	461	1336	683	245	1690	732
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.41	0.01	0.30	0.38	0.02	0.09	0.46	0.27	0.53	0.08	0.40

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	225	1125	5	90	995	20	40	615	185	130	135	295
Future Volume (vph)	225	1125	5	90	995	20	40	615	185	130	135	295
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.5	4.0	4.0	4.0	2.5	4.0	4.0	3.0	4.0	2.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.21	1.00	1.00	0.20	1.00	1.00	0.67	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	399	5085	1583	379	5085	1583	1241	3539	1583	248	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	225	1125	5	90	995	20	40	615	185	130	135	295
RTOR Reduction (vph)	0	0	2	0	0	10	0	0	117	0	0	22
Lane Group Flow (vph)	225	1125	3	90	995	10	40	615	68	130	135	273
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8			2		1	6	7
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	111.5	96.6	96.6	100.1	90.2	90.2	38.4	38.4	38.4	58.5	58.5	74.8
Effective Green, g (s)	115.0	97.6	97.6	102.1	92.7	91.2	39.4	40.4	39.4	61.5	59.5	76.8
Actuated g/C Ratio	0.64	0.54	0.54	0.57	0.52	0.51	0.22	0.22	0.22	0.34	0.33	0.43
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	405	2757	858	299	2618	802	271	794	346	237	1169	710
v/s Ratio Prot	c0.06	c0.22		0.02	0.20			c0.17		c0.05	0.04	0.04
v/s Ratio Perm	0.29		0.00	0.15		0.01	0.03		0.04	0.13		0.14
v/c Ratio	0.56	0.41	0.00	0.30	0.38	0.01	0.15	0.77	0.20	0.55	0.12	0.38
Uniform Delay, d1	15.7	24.2	18.9	18.4	26.3	22.0	56.7	65.5	57.4	45.0	41.9	35.4
Progression Factor	1.00	1.00	1.00	1.12	0.97	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.7	0.4	0.0	0.5	0.4	0.0	0.3	4.7	0.3	2.6	0.0	0.3
Delay (s)	17.3	24.7	18.9	21.2	25.9	22.1	57.0	70.3	57.7	47.6	42.0	35.7
Level of Service	B	C	B	C	C	C	E	E	E	D	D	D
Approach Delay (s)		23.4			25.5			66.9			40.0	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	35.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		

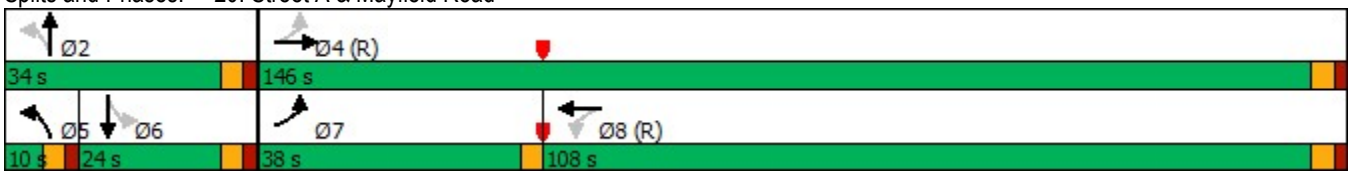
c Critical Lane Group

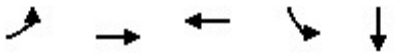
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	390	1160	0	0	900	25	0	0	0	45	0	315
Future Volume (vph)	390	1160	0	0	900	25	0	0	0	45	0	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.996						0.850	
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	5085	0	1863	5065	0	1863	1863	0	1770	1583	0
Flt Permitted	0.284									0.757		
Satd. Flow (perm)	529	5085	0	1863	5065	0	1863	1863	0	1410	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					4						406	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		457.4			416.0			194.2			756.3	
Travel Time (s)		32.9			30.0			14.0			54.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	390	1160	0	0	900	25	0	0	0	45	0	315
Shared Lane Traffic (%)												
Lane Group Flow (vph)	390	1160	0	0	925	0	0	0	0	45	315	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		pm+pt			Perm	NA	
Protected Phases	7	4			8		5	2			6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0		5.0	10.0		10.0	10.0	
Minimum Split (s)	15.0	23.0		23.0	23.0		10.0	23.0		23.0	23.0	
Total Split (s)	38.0	146.0		108.0	108.0		10.0	34.0		24.0	24.0	
Total Split (%)	21.1%	81.1%		60.0%	60.0%		5.6%	18.9%		13.3%	13.3%	
Maximum Green (s)	35.0	141.0		103.0	103.0		5.0	29.0		19.0	19.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	0.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	2.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead			Lag	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0			11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0			0		0	0	
Act Effct Green (s)	161.0	159.0			144.2					13.0	13.0	
Actuated g/C Ratio	0.89	0.88			0.80					0.07	0.07	
v/c Ratio	0.70	0.26			0.23					0.44	0.64	
Control Delay	25.8	1.7			5.7					93.1	6.9	
Queue Delay	0.0	0.0			0.0					0.0	0.0	
Total Delay	25.8	1.7			5.7					93.1	6.9	
LOS	C	A			A					F	A	
Approach Delay		7.8			5.7						17.6	
Approach LOS		A			A						B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 180			
Actuated Cycle Length: 180			
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 8.3		Intersection LOS: A	
Intersection Capacity Utilization 69.1%		ICU Level of Service C	
Analysis Period (min) 15			

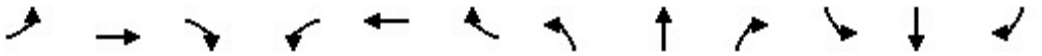
Splits and Phases: 20: Street A & Mayfield Road





Lane Group	EBL	EBT	WBT	SBL	SBT
Lane Group Flow (vph)	390	1160	925	45	315
v/c Ratio	0.70	0.26	0.23	0.44	0.64
Control Delay	25.8	1.7	5.7	93.1	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	1.7	5.7	93.1	6.9
Queue Length 50th (m)	47.2	14.9	20.9	16.7	0.0
Queue Length 95th (m)	101.5	26.8	55.6	31.6	0.0
Internal Link Dist (m)		433.4	392.0		732.3
Turn Bay Length (m)	50.0				
Base Capacity (vph)	721	4491	4058	156	536
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.54	0.26	0.23	0.29	0.59

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	390	1160	0	0	900	25	0	0	0	45	0	315
Future Volume (vph)	390	1160	0	0	900	25	0	0	0	45	0	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0			4.0					4.0	4.0	
Lane Util. Factor	1.00	0.91			0.91					1.00	1.00	
Frt	1.00	1.00			1.00					1.00	0.85	
Flt Protected	0.95	1.00			1.00					0.95	1.00	
Satd. Flow (prot)	1770	5085			5065					1770	1583	
Flt Permitted	0.28	1.00			1.00					0.76	1.00	
Satd. Flow (perm)	529	5085			5065					1410	1583	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	390	1160	0	0	900	25	0	0	0	45	0	315
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	0	0	292	0
Lane Group Flow (vph)	390	1160	0	0	924	0	0	0	0	45	23	0
Turn Type	pm+pt	NA		Perm	NA		pm+pt			Perm	NA	
Protected Phases	7	4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	158.0	158.0			143.2					12.0	12.0	
Effective Green, g (s)	159.0	159.0			144.2					13.0	13.0	
Actuated g/C Ratio	0.88	0.88			0.80					0.07	0.07	
Clearance Time (s)	3.0	5.0			5.0					5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0					3.0	3.0	
Lane Grp Cap (vph)	555	4491			4057					101	114	
v/s Ratio Prot	c0.05	c0.23			0.18						0.01	
v/s Ratio Perm	0.57									c0.03		
v/c Ratio	0.70	0.26			0.23					0.45	0.20	
Uniform Delay, d1	1.9	1.6			4.4					80.0	78.6	
Progression Factor	13.73	0.95			1.19					1.00	1.00	
Incremental Delay, d2	3.8	0.1			0.1					3.1	0.9	
Delay (s)	30.5	1.6			5.3					83.2	79.5	
Level of Service	C	A			A					F	E	
Approach Delay (s)		8.9			5.3			0.0			79.9	
Approach LOS		A			A			A			E	

Intersection Summary			
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

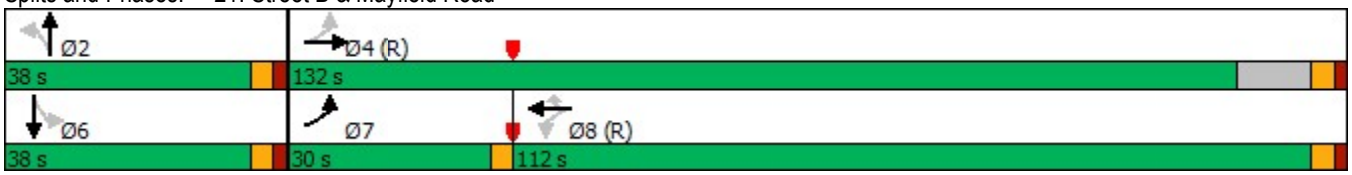
c Critical Lane Group

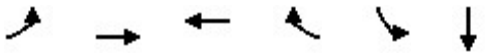
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	295	550	0	0	1175	295	0	0	0	185	0	75
Future Volume (vph)	295	550	0	0	1175	295	0	0	0	185	0	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	50.0		50.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850					0.850	
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	5085	0	1863	5085	1583	1863	1863	0	1770	1583	0
Flt Permitted	0.201									0.757		
Satd. Flow (perm)	374	5085	0	1863	5085	1583	1863	1863	0	1410	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						249					284	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		416.0			484.3			168.6			739.2	
Travel Time (s)		30.0			34.9			12.1			53.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	295	550	0	0	1175	295	0	0	0	185	0	75
Shared Lane Traffic (%)												
Lane Group Flow (vph)	295	550	0	0	1175	295	0	0	0	185	75	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm			Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.0	23.0		23.0	23.0	23.0	23.0	23.0		23.0	23.0	
Total Split (s)	30.0	132.0		112.0	112.0	112.0	38.0	38.0		38.0	38.0	
Total Split (%)	16.7%	73.3%		62.2%	62.2%	62.2%	21.1%	21.1%		21.1%	21.1%	
Maximum Green (s)	27.0	127.0		107.0	107.0	107.0	33.0	33.0		33.0	33.0	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	0.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	2.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		C-Min	C-Min	C-Min	None	None		None	None	
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0	0	0	0		0	0	
Act Effct Green (s)	144.3	142.3			125.5	125.5				29.7	29.7	
Actuated g/C Ratio	0.80	0.79			0.70	0.70				0.16	0.16	
v/c Ratio	0.71	0.14			0.33	0.25				0.80	0.15	
Control Delay	33.0	5.4			9.7	1.6				95.3	0.6	
Queue Delay	0.0	0.0			0.0	0.0				0.0	0.0	
Total Delay	33.0	5.4			9.7	1.6				95.3	0.6	
LOS	C	A			A	A				F	A	
Approach Delay		15.1			8.1						68.0	
Approach LOS		B			A						E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 180			
Actuated Cycle Length: 180			
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 16.4		Intersection LOS: B	
Intersection Capacity Utilization 59.3%		ICU Level of Service B	
Analysis Period (min) 15			

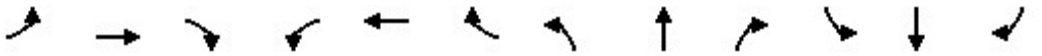
Splits and Phases: 21: Street B & Mayfield Road





Lane Group	EBL	EBT	WBT	WBR	SBL	SBT
Lane Group Flow (vph)	295	550	1175	295	185	75
v/c Ratio	0.71	0.14	0.33	0.25	0.80	0.15
Control Delay	33.0	5.4	9.7	1.6	95.3	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.0	5.4	9.7	1.6	95.3	0.6
Queue Length 50th (m)	57.8	10.4	53.3	4.8	68.2	0.0
Queue Length 95th (m)	104.7	41.0	65.3	7.8	94.2	0.0
Internal Link Dist (m)		392.0	460.3			715.2
Turn Bay Length (m)	50.0			50.0		
Base Capacity (vph)	517	4049	3547	1179	274	536
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.14	0.33	0.25	0.68	0.14

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	295	550	0	0	1175	295	0	0	0	185	0	75
Future Volume (vph)	295	550	0	0	1175	295	0	0	0	185	0	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0			4.0	4.0				4.0	4.0	
Lane Util. Factor	1.00	0.91			0.91	1.00				1.00	1.00	
Frt	1.00	1.00			1.00	0.85				1.00	0.85	
Flt Protected	0.95	1.00			1.00	1.00				0.95	1.00	
Satd. Flow (prot)	1770	5085			5085	1583				1770	1583	
Flt Permitted	0.20	1.00			1.00	1.00				0.76	1.00	
Satd. Flow (perm)	375	5085			5085	1583				1410	1583	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	295	550	0	0	1175	295	0	0	0	185	0	75
RTOR Reduction (vph)	0	0	0	0	0	75	0	0	0	0	63	0
Lane Group Flow (vph)	295	550	0	0	1175	220	0	0	0	185	12	0
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm			Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	141.3	141.3			124.5	124.5				28.7	28.7	
Effective Green, g (s)	142.3	142.3			125.5	125.5				29.7	29.7	
Actuated g/C Ratio	0.79	0.79			0.70	0.70				0.16	0.16	
Clearance Time (s)	3.0	5.0			5.0	5.0				5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0				3.0	3.0	
Lane Grp Cap (vph)	411	4019			3545	1103				232	261	
v/s Ratio Prot	c0.06	0.11			c0.23						0.01	
v/s Ratio Perm	0.51					0.14				c0.13		
v/c Ratio	0.72	0.14			0.33	0.20				0.80	0.05	
Uniform Delay, d1	6.8	4.4			10.7	9.6				72.3	63.2	
Progression Factor	4.02	1.11			0.80	0.44				1.00	1.00	
Incremental Delay, d2	5.8	0.1			0.2	0.4				17.1	0.1	
Delay (s)	33.1	5.0			8.8	4.6				89.4	63.3	
Level of Service	C	A			A	A				F	E	
Approach Delay (s)		14.8			8.0			0.0			81.9	
Approach LOS		B			A			A			F	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

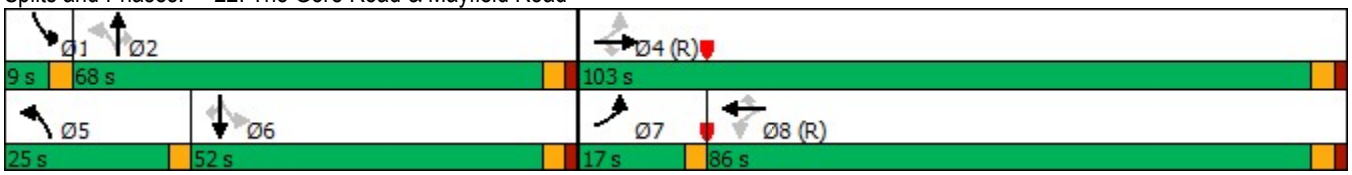
c Critical Lane Group

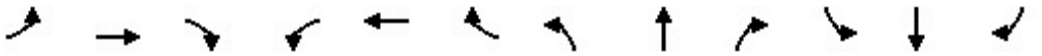
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	335	155	10	955	115	235	635	10	100	320	225
Future Volume (vph)	120	335	155	10	955	115	235	635	10	100	320	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0		60.0	60.0		50.0	50.0		50.0	50.0		50.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.245			0.542			0.308			0.158		
Satd. Flow (perm)	456	5085	1583	1010	5085	1583	574	3539	1583	294	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			155			88			48			225
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		484.3			211.9			274.0			703.8	
Travel Time (s)		34.9			15.3			19.7			50.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	120	335	155	10	955	115	235	635	10	100	320	225
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	335	155	10	955	115	235	635	10	100	320	225
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.0	23.0	23.0	23.0	23.0	23.0	10.0	23.0	23.0	8.0	23.0	23.0
Total Split (s)	17.0	103.0	103.0	86.0	86.0	86.0	25.0	68.0	68.0	9.0	52.0	52.0
Total Split (%)	9.4%	57.2%	57.2%	47.8%	47.8%	47.8%	13.9%	37.8%	37.8%	5.0%	28.9%	28.9%
Maximum Green (s)	14.0	98.0	98.0	81.0	81.0	81.0	22.0	63.0	63.0	6.0	47.0	47.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	1.0	4.0	4.0	4.0	4.0	4.0	2.0	3.0	4.0	2.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None	None
Walk Time (s)		7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0		0	0		0	0
Act Effct Green (s)	119.5	116.5	116.5	103.3	103.3	103.3	57.5	40.7	39.7	44.3	28.5	28.5
Actuated g/C Ratio	0.66	0.65	0.65	0.57	0.57	0.57	0.32	0.23	0.22	0.25	0.16	0.16
v/c Ratio	0.31	0.10	0.14	0.02	0.33	0.12	0.67	0.79	0.03	0.54	0.57	0.51
Control Delay	20.3	17.7	8.5	21.0	21.7	6.7	56.8	73.2	0.1	54.1	73.8	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.3	17.7	8.5	21.0	21.7	6.7	56.8	73.2	0.1	54.1	73.8	11.0
LOS	C	B	A	C	C	A	E	E	A	D	E	B
Approach Delay		15.8			20.1			68.0			48.9	
Approach LOS		B			C			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 180			
Actuated Cycle Length: 180			
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 38.2		Intersection LOS: D	
Intersection Capacity Utilization 61.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 22: The Gore Road & Mayfield Road

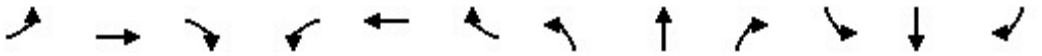




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	120	335	155	10	955	115	235	635	10	100	320	225
v/c Ratio	0.31	0.10	0.14	0.02	0.33	0.12	0.67	0.79	0.03	0.54	0.57	0.51
Control Delay	20.3	17.7	8.5	21.0	21.7	6.7	56.8	73.2	0.1	54.1	73.8	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.3	17.7	8.5	21.0	21.7	6.7	56.8	73.2	0.1	54.1	73.8	11.0
Queue Length 50th (m)	29.0	29.6	14.8	1.6	67.0	4.3	70.3	120.9	0.0	27.5	60.0	0.0
Queue Length 95th (m)	m35.3	29.7	22.2	5.9	94.2	17.6	88.5	136.7	0.0	40.1	75.2	25.9
Internal Link Dist (m)		460.3			187.9			250.0			679.8	
Turn Bay Length (m)	75.0		60.0	60.0		50.0	50.0		50.0	50.0		50.0
Base Capacity (vph)	419	3289	1078	579	2918	945	356	1277	593	185	943	587
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.10	0.14	0.02	0.33	0.12	0.66	0.50	0.02	0.54	0.34	0.38

Intersection Summary

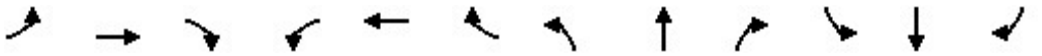
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	335	155	10	955	115	235	635	10	100	320	225
Future Volume (vph)	120	335	155	10	955	115	235	635	10	100	320	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.0	4.0	4.0	4.0	4.0	4.0	2.0	3.0	4.0	2.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.25	1.00	1.00	0.54	1.00	1.00	0.31	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	457	5085	1583	1010	5085	1583	575	3539	1583	294	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	120	335	155	10	955	115	235	635	10	100	320	225
RTOR Reduction (vph)	0	0	55	0	0	37	0	0	8	0	0	189
Lane Group Flow (vph)	120	335	100	10	955	78	235	635	2	100	320	36
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	115.5	115.5	115.5	102.4	102.4	102.4	54.5	38.7	38.7	40.3	27.5	27.5
Effective Green, g (s)	117.5	116.5	116.5	103.4	103.4	103.4	55.5	40.7	39.7	42.3	28.5	28.5
Actuated g/C Ratio	0.65	0.65	0.65	0.57	0.57	0.57	0.31	0.23	0.22	0.23	0.16	0.16
Clearance Time (s)	3.0	5.0	5.0	5.0	5.0	5.0	3.0	5.0	5.0	3.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	386	3291	1024	580	2921	909	343	800	349	182	560	250
v/s Ratio Prot	c0.02	0.07			c0.19		c0.10	c0.18		0.04	0.09	
v/s Ratio Perm	0.18		0.06	0.01		0.05	0.12		0.00	0.09		0.02
v/c Ratio	0.31	0.10	0.10	0.02	0.33	0.09	0.69	0.79	0.01	0.55	0.57	0.14
Uniform Delay, d1	12.5	12.0	12.0	16.5	20.1	17.1	50.3	65.7	54.8	56.8	70.1	65.2
Progression Factor	1.48	1.36	4.08	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.1	0.2	0.1	0.3	0.2	5.6	5.4	0.0	3.4	1.4	0.3
Delay (s)	19.0	16.4	49.0	16.5	20.4	17.3	55.9	71.1	54.8	60.2	71.5	65.5
Level of Service	B	B	D	B	C	B	E	E	D	E	E	E
Approach Delay (s)		25.2			20.0			66.9			67.7	
Approach LOS		C			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	43.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

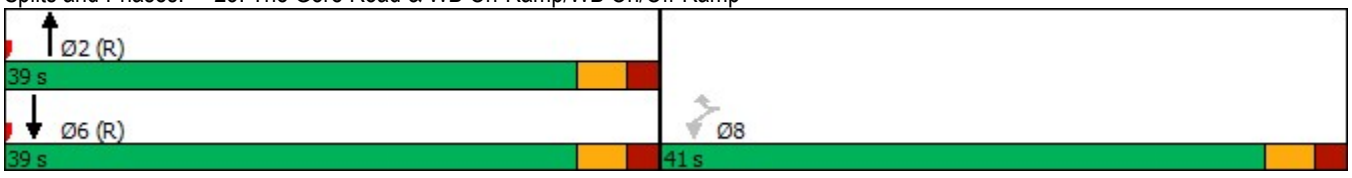


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	485	0	215	0	340	565	0	405	180
Future Volume (vph)	0	0	0	485	0	215	0	340	565	0	405	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		50.0	0.0		100.0
Storage Lanes	0		0	1		1	0		1	0		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt						0.850			0.850			0.850
Flt Protected				0.950								
Satd. Flow (prot)	0	0	0	1770	0	1583	0	3539	1583	0	3539	1583
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	1770	0	1583	0	3539	1583	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						215			565			180
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		321.8			445.2			373.0			653.5	
Travel Time (s)		23.2			32.1			26.9			47.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	485	0	215	0	340	565	0	405	180
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	485	0	215	0	340	565	0	405	180
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors				1		1		2	1		2	1
Detector Template				Left		Right		Thru	Right		Thru	Right
Leading Detector (m)				2.0		2.0		10.0	2.0		10.0	2.0
Trailing Detector (m)				0.0		0.0		0.0	0.0		0.0	0.0
Detector 1 Position(m)				0.0		0.0		0.0	0.0		0.0	0.0
Detector 1 Size(m)				2.0		2.0		0.6	2.0		0.6	2.0
Detector 1 Type				Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0		0.0		0.0	0.0		0.0	0.0
Detector 1 Queue (s)				0.0		0.0		0.0	0.0		0.0	0.0
Detector 1 Delay (s)				0.0		0.0		0.0	0.0		0.0	0.0
Detector 2 Position(m)								9.4			9.4	
Detector 2 Size(m)								0.6			0.6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases				8		8			Free			Free

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase				8		8		2			6	
Switch Phase												
Minimum Initial (s)				5.0		5.0		5.0			5.0	
Minimum Split (s)				23.0		23.0		23.0			23.0	
Total Split (s)				41.0		41.0		39.0			39.0	
Total Split (%)				51.3%		51.3%		48.8%			48.8%	
Maximum Green (s)				36.0		36.0		34.0			34.0	
Yellow Time (s)				3.0		3.0		3.0			3.0	
All-Red Time (s)				2.0		2.0		2.0			2.0	
Lost Time Adjust (s)				-1.0		-1.0		-1.0			-1.0	
Total Lost Time (s)				4.0		4.0		4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				3.0		3.0		3.0			3.0	
Recall Mode				None		None		C-Min			C-Min	
Walk Time (s)				7.0		7.0		7.0			7.0	
Flash Dont Walk (s)				11.0		11.0		11.0			11.0	
Pedestrian Calls (#/hr)				0		0		0			0	
Act Effct Green (s)				28.7		28.7		43.3	80.0		43.3	80.0
Actuated g/C Ratio				0.36		0.36		0.54	1.00		0.54	1.00
v/c Ratio				0.76		0.30		0.18	0.36		0.21	0.11
Control Delay				30.3		3.3		17.0	1.6		11.1	0.1
Queue Delay				0.0		0.0		0.0	0.0		0.0	0.0
Total Delay				30.3		3.3		17.0	1.6		11.1	0.1
LOS				C		A		B	A		B	A
Approach Delay					22.0			7.4			7.7	
Approach LOS					C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 12.2		Intersection LOS: B	
Intersection Capacity Utilization 44.7%		ICU Level of Service A	
Analysis Period (min) 15			

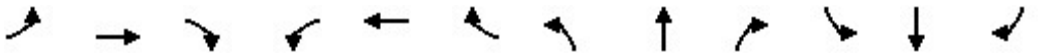
Splits and Phases: 23: The Gore Road & WB On-Ramp/WB On/Off-Ramp



23: The Gore Road & WB On-Ramp/WB On/Off-Ramp

Lane Group	WBL	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	485	215	340	565	405	180
v/c Ratio	0.76	0.30	0.18	0.36	0.21	0.11
Control Delay	30.3	3.3	17.0	1.6	11.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.3	3.3	17.0	1.6	11.1	0.1
Queue Length 50th (m)	66.9	0.0	23.0	5.1	16.5	0.0
Queue Length 95th (m)	86.3	11.2	36.3	15.1	30.3	0.0
Internal Link Dist (m)			349.0		629.5	
Turn Bay Length (m)				50.0		100.0
Base Capacity (vph)	818	847	1913	1583	1913	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.25	0.18	0.36	0.21	0.11

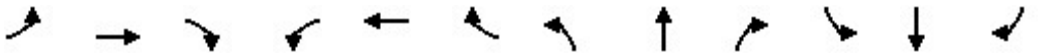
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	485	0	215	0	340	565	0	405	180
Future Volume (vph)	0	0	0	485	0	215	0	340	565	0	405	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0		4.0		4.0	3.0		4.0	3.0
Lane Util. Factor				1.00		1.00		0.95	1.00		0.95	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				1770		1583		3539	1583		3539	1583
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				1770		1583		3539	1583		3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	485	0	215	0	340	565	0	405	180
RTOR Reduction (vph)	0	0	0	0	0	138	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	485	0	77	0	340	565	0	405	180
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases				8		8			Free			Free
Actuated Green, G (s)				27.7		27.7		42.3	80.0		42.3	80.0
Effective Green, g (s)				28.7		28.7		43.3	80.0		43.3	80.0
Actuated g/C Ratio				0.36		0.36		0.54	1.00		0.54	1.00
Clearance Time (s)				5.0		5.0		5.0			5.0	
Vehicle Extension (s)				3.0		3.0		3.0			3.0	
Lane Grp Cap (vph)				634		567		1915	1583		1915	1583
v/s Ratio Prot								0.10			0.11	
v/s Ratio Perm				c0.27		0.05			c0.36			0.11
v/c Ratio				0.76		0.14		0.18	0.36		0.21	0.11
Uniform Delay, d1				22.7		17.3		9.3	0.0		9.5	0.0
Progression Factor				1.00		1.00		1.57	1.00		1.00	1.00
Incremental Delay, d2				5.5		0.1		0.2	0.6		0.3	0.1
Delay (s)				28.2		17.4		14.8	0.6		9.8	0.1
Level of Service				C		B		B	A		A	A
Approach Delay (s)		0.0			24.9			5.9			6.8	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	44.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

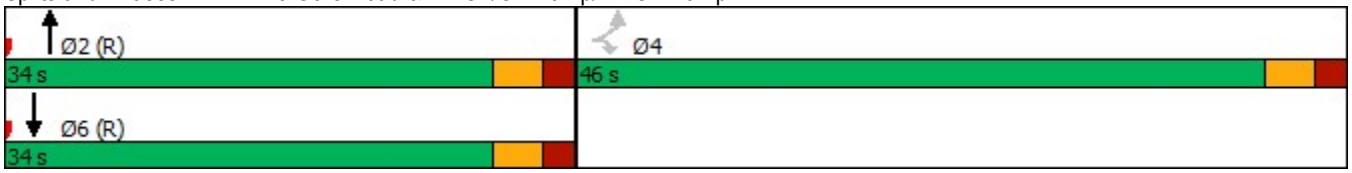


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	270	0	1090	0	0	0	0	705	500	0	740	20
Future Volume (vph)	270	0	1090	0	0	0	0	705	500	0	740	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		100.0	0.0		50.0
Storage Lanes	1		2	0		0	0		1	0		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	0.88	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950											
Satd. Flow (prot)	1770	0	2787	0	0	0	0	3539	1583	0	3539	1583
Flt Permitted	0.950											
Satd. Flow (perm)	1770	0	2787	0	0	0	0	3539	1583	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			139						500			95
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		342.3			224.1			444.4			373.0	
Travel Time (s)		24.6			16.1			32.0			26.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	270	0	1090	0	0	0	0	705	500	0	740	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	270	0	1090	0	0	0	0	705	500	0	740	20
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1		1					2	1		2	1
Detector Template	Left		Right					Thru	Right		Thru	Right
Leading Detector (m)	2.0		2.0					10.0	2.0		10.0	2.0
Trailing Detector (m)	0.0		0.0					0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0		0.0					0.0	0.0		0.0	0.0
Detector 1 Size(m)	2.0		2.0					0.6	2.0		0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex					Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0					0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0					0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0					0.0	0.0		0.0	0.0
Detector 2 Position(m)								9.4			9.4	
Detector 2 Size(m)								0.6			0.6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4		4					2			6	
Switch Phase												
Minimum Initial (s)	5.0		5.0					5.0			5.0	
Minimum Split (s)	23.0		23.0					23.0			23.0	
Total Split (s)	46.0		46.0					34.0			34.0	
Total Split (%)	57.5%		57.5%					42.5%			42.5%	
Maximum Green (s)	41.0		41.0					29.0			29.0	
Yellow Time (s)	3.0		3.0					3.0			3.0	
All-Red Time (s)	2.0		2.0					2.0			2.0	
Lost Time Adjust (s)	-1.0		-1.0					-1.0			-1.0	
Total Lost Time (s)	4.0		4.0					4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Recall Mode	None		None					C-Min			C-Min	
Walk Time (s)	7.0		7.0					7.0			7.0	
Flash Dont Walk (s)	11.0		11.0					11.0			11.0	
Pedestrian Calls (#/hr)	0		0					0			0	
Act Effct Green (s)	36.7		36.7					35.3	80.0		35.3	80.0
Actuated g/C Ratio	0.46		0.46					0.44	1.00		0.44	1.00
v/c Ratio	0.33		0.81					0.45	0.32		0.47	0.01
Control Delay	14.1		20.8					19.3	0.5		15.2	0.0
Queue Delay	0.0		0.0					0.0	0.0		0.0	0.0
Total Delay	14.1		20.8					19.3	0.5		15.2	0.0
LOS	B		C					B	A		B	A
Approach Delay		19.5						11.5			14.8	
Approach LOS		B						B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 15.5		Intersection LOS: B	
Intersection Capacity Utilization 65.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 24: The Gore Road & EB On/Off-Ramp/EB On-Ramp

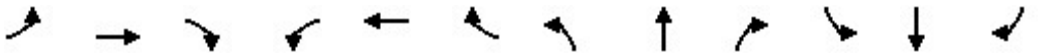


24: The Gore Road & EB On/Off-Ramp/EB On-Ramp

Lane Group	EBL	EBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	270	1090	705	500	740	20
v/c Ratio	0.33	0.81	0.45	0.32	0.47	0.01
Control Delay	14.1	20.8	19.3	0.5	15.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.1	20.8	19.3	0.5	15.2	0.0
Queue Length 50th (m)	25.8	70.3	30.7	0.0	44.5	0.0
Queue Length 95th (m)	36.6	85.1	55.3	0.0	54.4	m0.0
Internal Link Dist (m)			420.4		349.0	
Turn Bay Length (m)				100.0		50.0
Base Capacity (vph)	932	1534	1569	1583	1569	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.71	0.45	0.32	0.47	0.01

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	270	0	1090	0	0	0	0	705	500	0	740	20
Future Volume (vph)	270	0	1090	0	0	0	0	705	500	0	740	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	3.0		4.0	3.0
Lane Util. Factor	1.00		0.88					0.95	1.00		0.95	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	1770		2787					3539	1583		3539	1583
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	1770		2787					3539	1583		3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	270	0	1090	0	0	0	0	705	500	0	740	20
RTOR Reduction (vph)	0	0	75	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	270	0	1015	0	0	0	0	705	500	0	740	20
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	35.7		35.7					34.3	80.0		34.3	80.0
Effective Green, g (s)	36.7		36.7					35.3	80.0		35.3	80.0
Actuated g/C Ratio	0.46		0.46					0.44	1.00		0.44	1.00
Clearance Time (s)	5.0		5.0					5.0			5.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	811		1278					1561	1583		1561	1583
v/s Ratio Prot								0.20			c0.21	
v/s Ratio Perm	0.15		c0.36						0.32			0.01
v/c Ratio	0.33		0.79					0.45	0.32		0.47	0.01
Uniform Delay, d1	13.8		18.4					15.6	0.0		15.8	0.0
Progression Factor	1.00		1.00					1.09	1.00		0.83	1.00
Incremental Delay, d2	0.2		3.5					0.9	0.5		1.0	0.0
Delay (s)	14.1		21.9					17.8	0.5		14.1	0.0
Level of Service	B		C					B	A		B	A
Approach Delay (s)		20.4			0.0			10.6			13.7	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	65.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	95	0	405	60	0	185
Future Volume (vph)	95	0	405	60	0	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0	0.0		0.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt			0.981			
Flt Protected	0.950					
Satd. Flow (prot)	1770	1863	3472	0	0	3539
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1863	3472	0	0	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)			31			
Link Speed (k/h)	50		50			50
Link Distance (m)	503.1		422.0			354.1
Travel Time (s)	36.2		30.4			25.5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	95	0	405	60	0	185
Shared Lane Traffic (%)						
Lane Group Flow (vph)	95	0	465	0	0	185
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.6		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.8		4.8			4.8
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	100	100		100	100	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	2.0	2.0	10.0		2.0	10.0
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	2.0	2.0	0.6		2.0	0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			9.4			9.4
Detector 2 Size(m)			0.6			0.6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8			6	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8	8	2		6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	23.0	23.0	23.0		23.0	23.0
Total Split (s)	34.0	34.0	46.0		46.0	46.0
Total Split (%)	42.5%	42.5%	57.5%		57.5%	57.5%
Maximum Green (s)	29.0	29.0	41.0		41.0	41.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0			-1.0
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Min		C-Min	C-Min
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0
Act Effct Green (s)	10.6		64.3			64.3
Actuated g/C Ratio	0.13		0.80			0.80
v/c Ratio	0.40		0.17			0.07
Control Delay	36.1		2.6			3.0
Queue Delay	0.0		0.0			0.0
Total Delay	36.1		2.6			3.0
LOS	D		A			A
Approach Delay	36.1		2.6			3.0
Approach LOS	D		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.40			
Intersection Signal Delay: 7.0		Intersection LOS: A	
Intersection Capacity Utilization 25.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 25: Centreville Creek Road & Street E

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	95	465	185
v/c Ratio	0.40	0.17	0.07
Control Delay	36.1	2.6	3.0
Queue Delay	0.0	0.0	0.0
Total Delay	36.1	2.6	3.0
Queue Length 50th (m)	14.2	7.3	2.5
Queue Length 95th (m)	27.0	14.0	9.1
Internal Link Dist (m)	479.1	398.0	330.1
Turn Bay Length (m)	50.0		
Base Capacity (vph)	663	2798	2846
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.14	0.17	0.07

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	95	0	405	60	0	185
Future Volume (vph)	95	0	405	60	0	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frt	1.00		0.98			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1770		3471			3539
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1770		3471			3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	95	0	405	60	0	185
RTOR Reduction (vph)	0	0	7	0	0	0
Lane Group Flow (vph)	95	0	458	0	0	185
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	8.5		61.5			61.5
Effective Green, g (s)	9.5		62.5			62.5
Actuated g/C Ratio	0.12		0.78			0.78
Clearance Time (s)	5.0		5.0			5.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	210		2711			2764
v/s Ratio Prot	c0.05		c0.13			0.05
v/s Ratio Perm						
v/c Ratio	0.45		0.17			0.07
Uniform Delay, d1	32.8		2.2			2.0
Progression Factor	1.00		1.01			1.16
Incremental Delay, d2	1.5		0.1			0.0
Delay (s)	34.4		2.4			2.4
Level of Service	C		A			A
Approach Delay (s)	34.4		2.4			2.4
Approach LOS	C		A			A

Intersection Summary			
HCM 2000 Control Delay	6.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	25.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group