

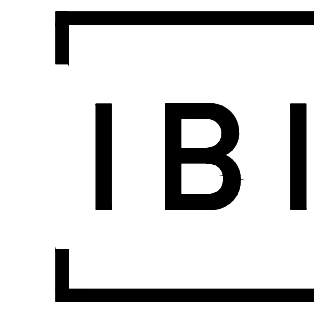


Project No: 135636

TOWN OF CALEDON REGION OF PEEL

BROCCOLINI

BROCCOLINI
2680 SKYMARK AVENUE
SUITE 800
MISSISSAUGA ON L4W 5L6 CANADA
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broccolini.com



IBI GROUP
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UNIT 300
MARKHAM ON L6G 1B3 CANADA
tel 905 763 2322
ibigroup.com

12304 HEART LAKE ROAD PHASE 2

TOWN OF CALEDON
PLANNING
RECEIVED
June 14, 2022

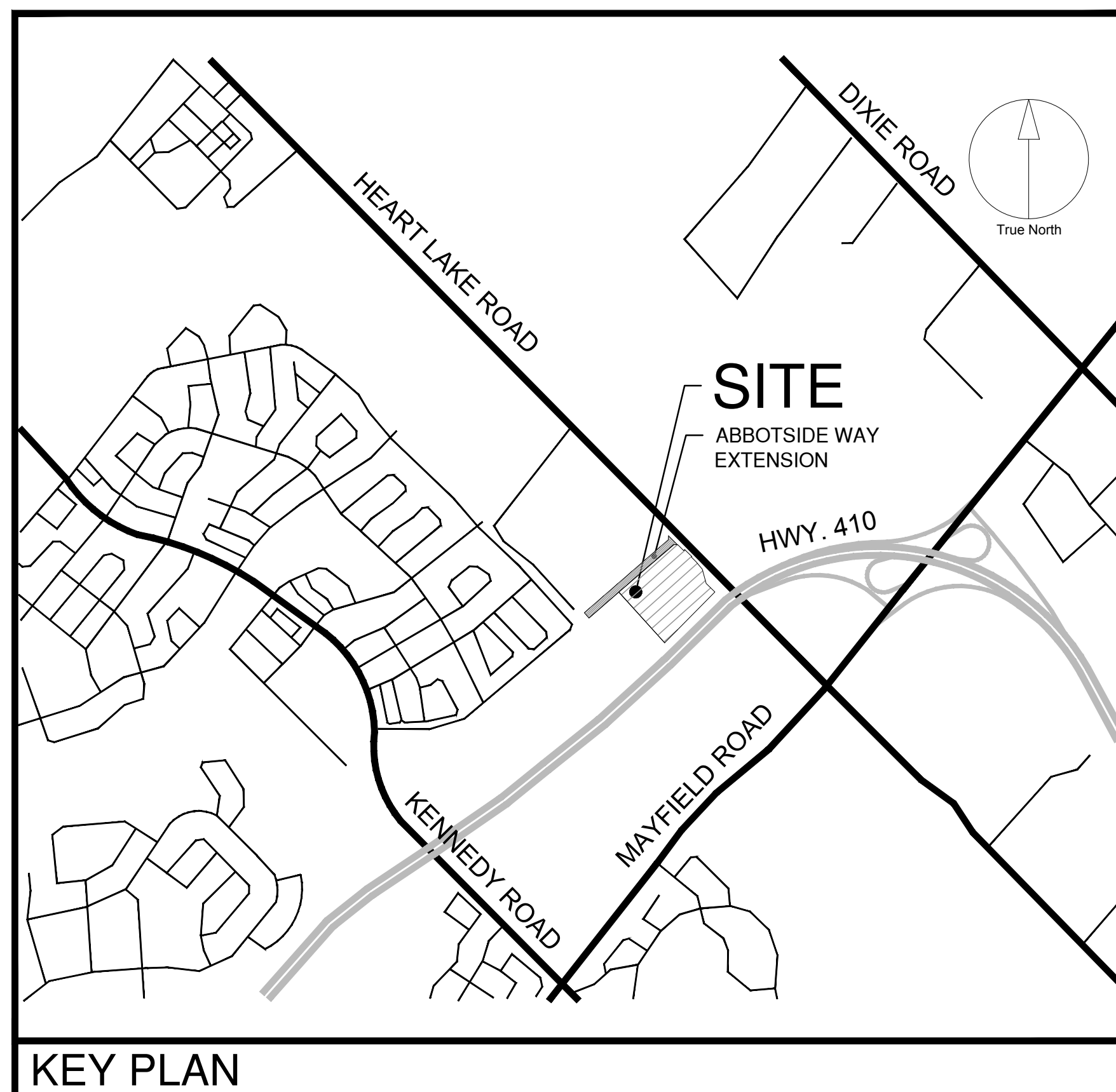
DESCRIPTION:

6.53 ha INDUSTRIAL SITE FRONTING THE PROPOSED ABBOTTSIDE WAY EXTENSION. PACKAGE INCLUDES, GRADING AND SERVICING DETAILS FOR THE SUBJECT SITE.

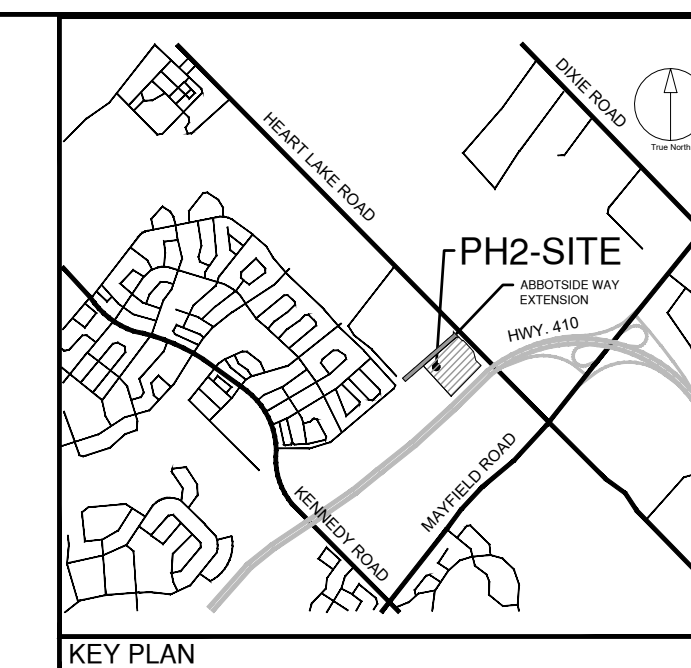
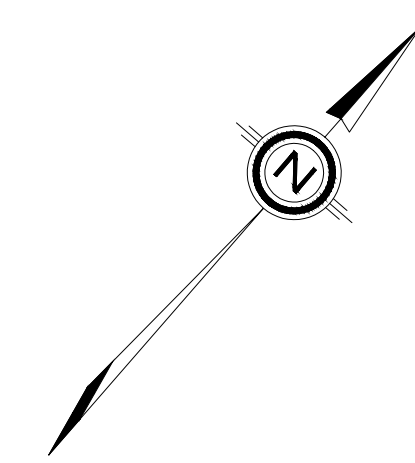
NOT FOR CONSTRUCTION

2022-04-22- ISSUED FOR SPA SUBMISSION

No:	SHEET	DESCRIPTIONS
1	135636-SG-01	PHASE 2 - SITE GRADING PLAN
2	135636-SG-02	PHASE 2 - SITE GRADING PLAN
3	135636-SG-03	PHASE 2 - SITE GRADING PLAN
4	135636-SG-04	PHASE 2 - SITE GRADING PLAN
5	135636-SS-01	PHASE 2 - SITE SERVICING PLAN
6	135636-SS-02	PHASE 2 - SITE SERVICING PLAN
7	135636-SS-03	PHASE 2 - SITE SERVICING PLAN
8	135636-SS-04	PHASE 2 - SITE SERVICING PLAN
9	135636-EC-01	PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
10	135636-EC-02	PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
11	135636-EC-03	PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
12	135636-EC-04	PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
13	135636-DD-01	PHASE 2 - GENERAL NOTES AND DETAILS
14	135636-DD-02	PHASE 2 - GENERAL NOTES AND DETAILS
15	135636-DD-03	PHASE 2 - GENERAL NOTES AND DETAILS
16	135636-DD-04	PHASE 2 - GENERAL NOTES AND DETAILS

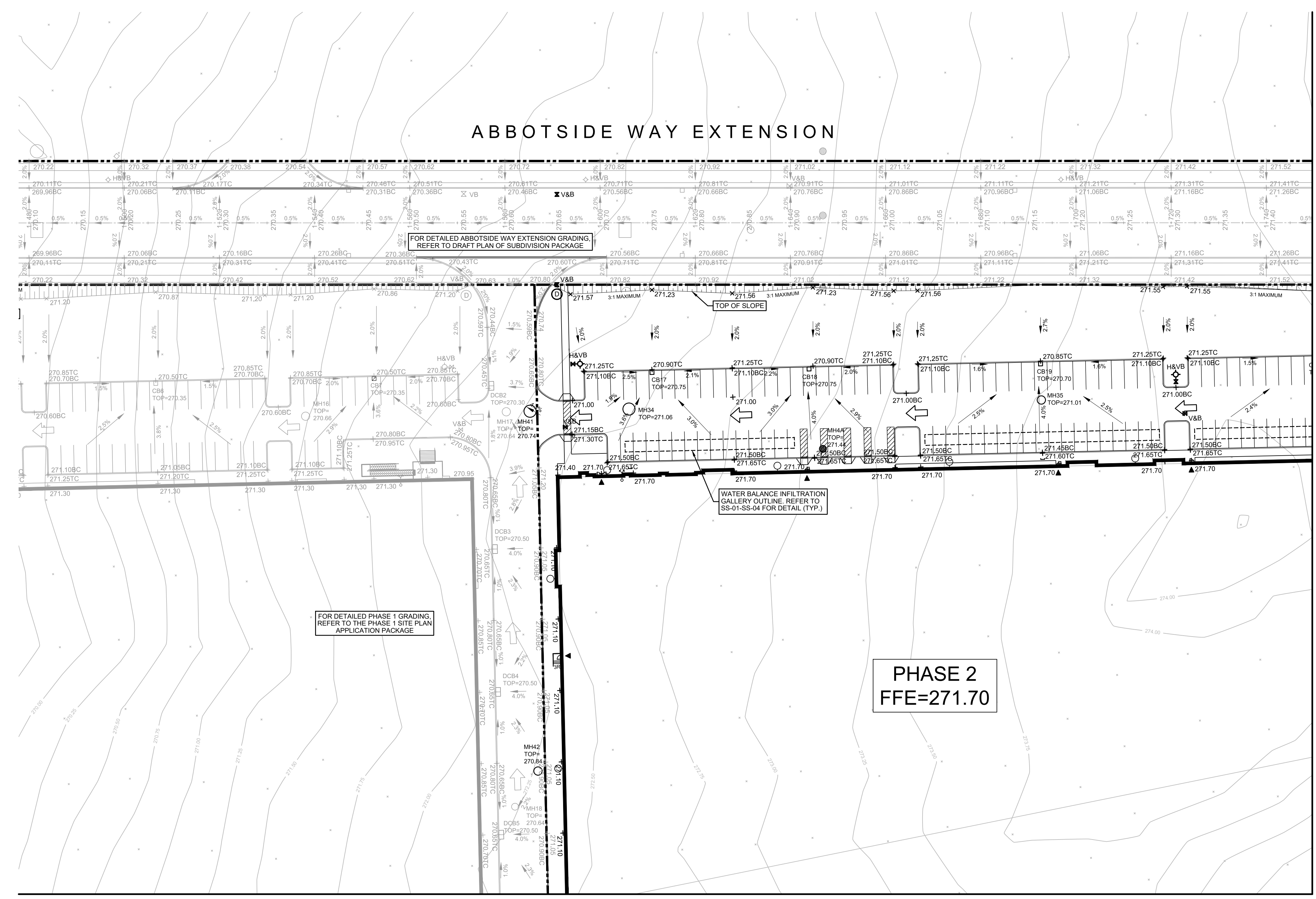


KEY PLAN



CLIENT
BROCCOLINI
 2680 SKYMARK AVENUE, SUITE 800
 MISSISSAUGA, ON. L4W5L6

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SEE DWG. SG-02

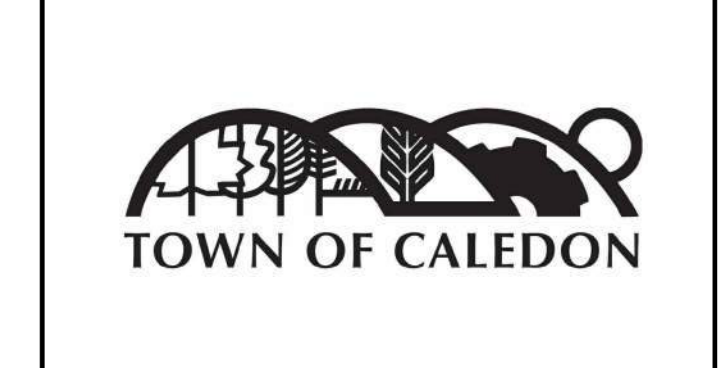
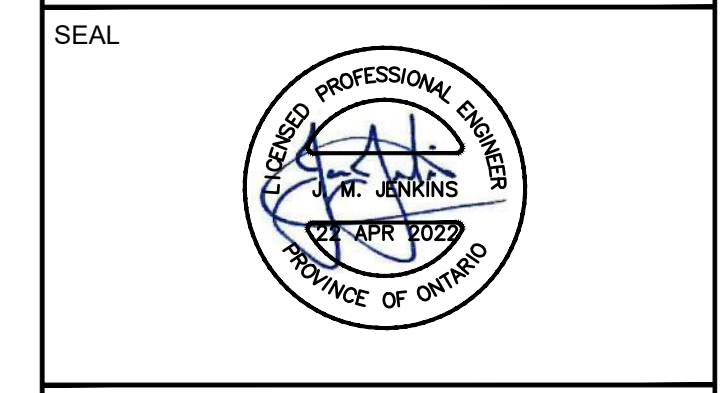
SEE DWG. SG-03

ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR SPA SUBMISSION	APR 22, 2022

LEGEND

PROPERTY LINE	---
PROPOSED GRADE	x 149.50
EXISTING GRADE	x 149.33EX
PROPOSED GRADE (TOP OF CURB)	x 149.65TC
PROPOSED GRADE (BOTTOM OF CURB)	x 149.65BC
PROPOSED STORM MANHOLE	○
PROPOSED SANITARY MANHOLE	⊙
PROPOSED SINGLE CATCH BASIN	⊠
PROPOSED DOUBLE CATCH BASIN	⊞
EXISTING STORM MANHOLE	○
EXISTING SANITARY MANHOLE	⊙
EXISTING CATCH BASIN	⊠
PROPOSED VALVE AND BOX	⊞
PROPOSED FIRE HYDRANT	⊞
EXISTING OVERLAND FLOW ROUTE	→
OVERLAND FLOW ROUTE	→
PROPOSED STREET LIGHTING	⊞



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 ibigroup.com

PROJECT
 12304 HEART LAKE ROAD
 PHASE 2
 CALEDON, ON. L7C 2J2

PROJECT NO:
135636

DRAWN BY: NDS
CHECKED BY: JJ

PROJECT MGR: JJ
APPROVED BY: JJ

SHEET TITLE
 PHASE 2 - SITE GRADING PLAN

SHEET NUMBER
SG-01

ISSUE
01

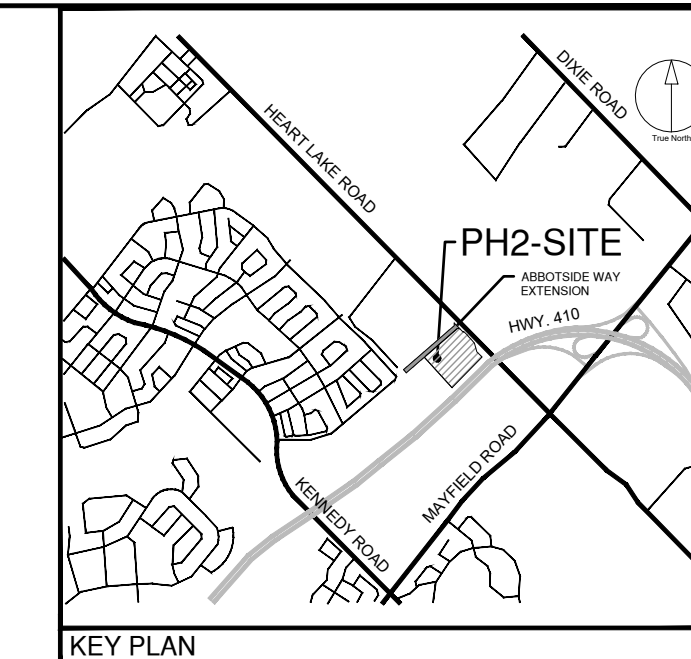
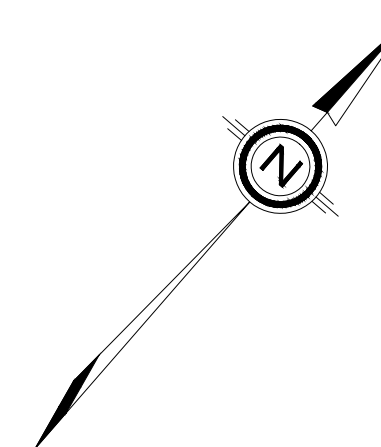
LIST OF DRAWINGS
 SG-01 - PHASE 2 - SITE GRADING PLAN
 SG-02 - PHASE 2 - SITE GRADING PLAN
 SG-03 - PHASE 2 - SITE GRADING PLAN
 SG-04 - PHASE 2 - SITE GRADING PLAN
 SS-01 - PHASE 2 - SITE SERVICING PLAN
 SS-02 - PHASE 2 - SITE SERVICING PLAN
 SS-03 - PHASE 2 - SITE SERVICING PLAN
 SS-04 - PHASE 2 - SITE SERVICING PLAN
 EC-01 - PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
 EC-02 - PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
 EC-03 - PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
 EC-04 - PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
 DD-01 - PHASE 2 - DETAIL DRAWING
 DD-02 - PHASE 2 - DETAIL DRAWING
 DD-03 - PHASE 2 - DETAIL DRAWING
 DD-04 - PHASE 2 - DETAIL DRAWING

SITE PLAN INFORMATION
 WARE MALCOMB
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 PHONE: (416) 537-0700
 WEBSITE: www.waremalcomb.com

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 WEBSITE: www.rpe.ca

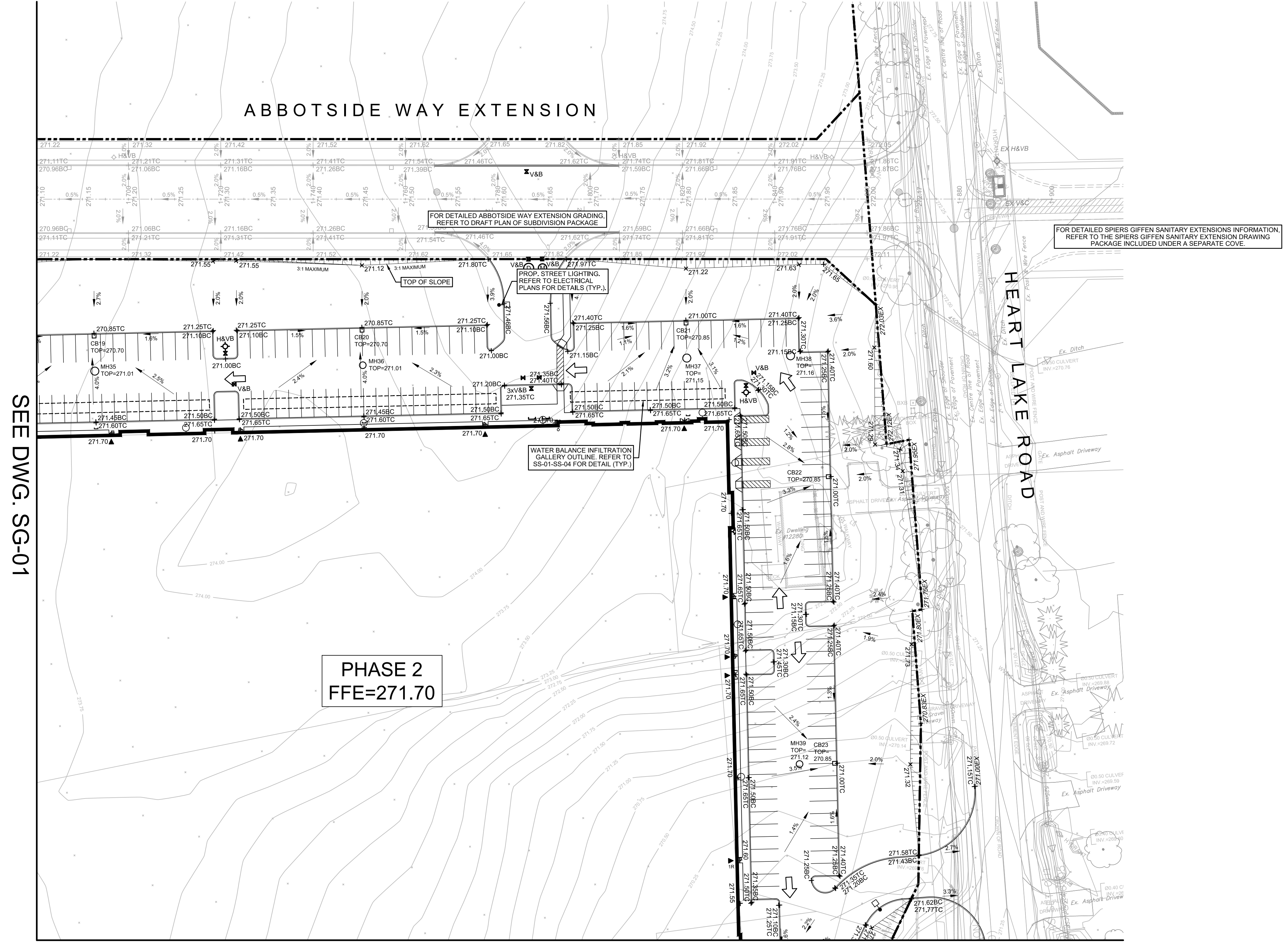
BENCHMARK INFORMATION:
 ELEVATIONS ARE GEODETIC AND ARE REFERRED TO MTD VERTICAL BENCHMARK NUMBER 05199981 HAVING AN ORTHOMETRIC ELEVATION OF 266.112 METRES. ELEVATIONS ARE REFERENCED TO THE CANADIAN GEODETIC VERTICAL DATUM OF 1984, 1978 ADJUSTMENT (CGVD-1984/1978).

SCALE: 1:500



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 MISSISSAUGA, ON. L4W5L6

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SEE DWG. SG-01

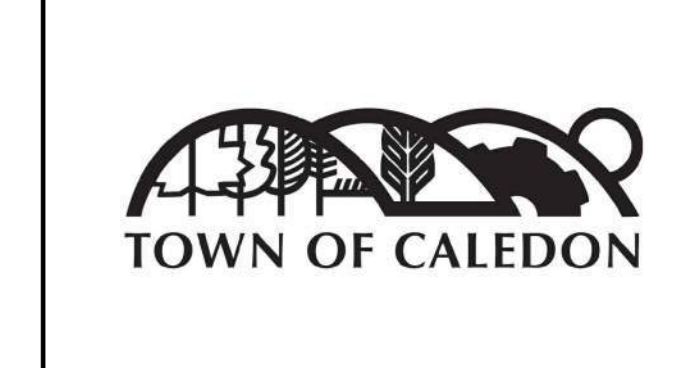
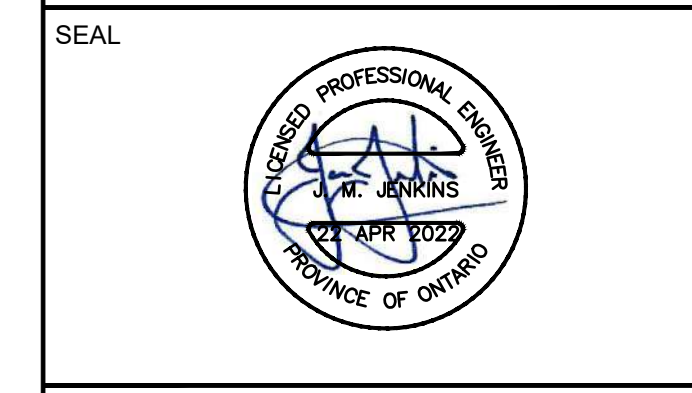
SEE DWG. SG-04

ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR SPA SUBMISSION	APR 22, 2022

LEGEND

PROPERTY LINE	---
PROPOSED GRADE	x 149.50
EXISTING GRADE	x 149.33EX
PROPOSED GRADE (TOP OF CURB)	x 149.65TC
PROPOSED GRADE (BOTTOM OF CURB)	x 149.65BC
PROPOSED STORM MANHOLE	○
PROPOSED SANITARY MANHOLE	⊙
PROPOSED SINGLE CATCH BASIN	⊠
PROPOSED DOUBLE CATCH BASIN	⊞
EXISTING STORM MANHOLE	○
EXISTING SANITARY MANHOLE	⊙
EXISTING CATCH BASIN	⊠
PROPOSED VALVE AND BOX	x V&B
PROPOSED FIRE HYDRANT	◇ FH
EXISTING OVERLAND FLOW ROUTE	→
OVERLAND FLOW ROUTE	→
PROPOSED STREET LIGHTING	□



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PROJECT
 12304 HEART LAKE ROAD
 PHASE 2
 CALEDON, ON. L7C 2J2

PROJECT NO:
135636

DRAWN BY: NDS
CHECKED BY: JJ

PROJECT MGR: JJ
APPROVED BY: JJ

SHEET TITLE
 PHASE 2 - SITE GRADING PLAN

SHEET NUMBER
SG-02

ISSUE
01

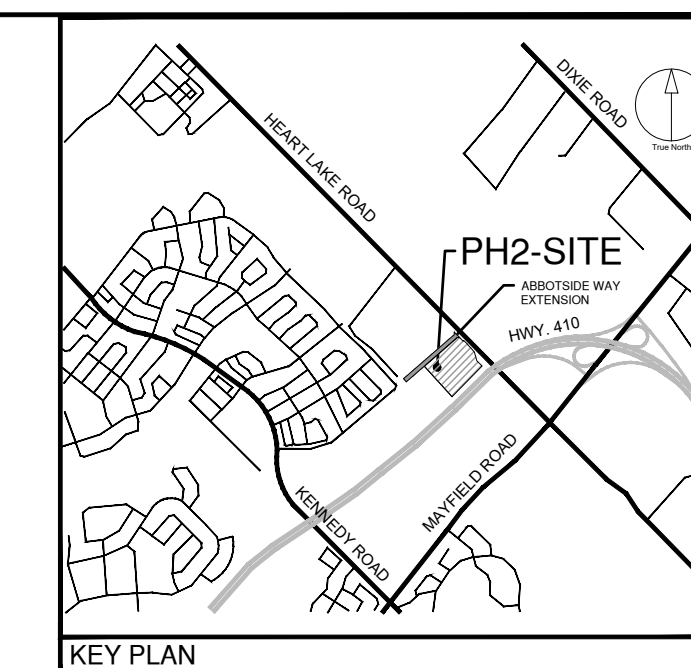
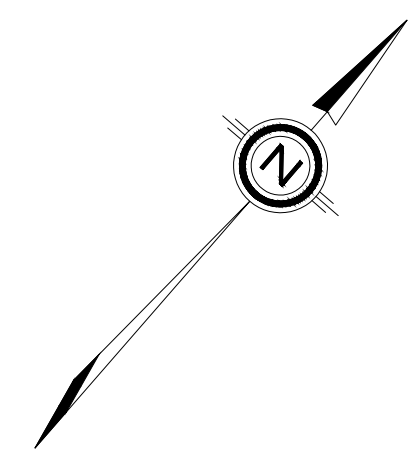
LIST OF DRAWINGS
 SG-01 - PHASE 2 - SITE GRADING PLAN
 SG-02 - PHASE 2 - SITE GRADING PLAN
 SG-03 - PHASE 2 - SITE GRADING PLAN
 SG-04 - PHASE 2 - SITE GRADING PLAN
 SS-01 - PHASE 2 - SITE SERVICING PLAN
 SS-02 - PHASE 2 - SITE SERVICING PLAN
 SS-03 - PHASE 2 - SITE SERVICING PLAN
 SS-04 - PHASE 2 - SITE SERVICING PLAN
 EC-01 - PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
 EC-02 - PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
 EC-03 - PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
 EC-04 - PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
 DD-01 - PHASE 2 - DETAIL DRAWING
 DD-02 - PHASE 2 - DETAIL DRAWING
 DD-03 - PHASE 2 - DETAIL DRAWING
 DD-04 - PHASE 2 - DETAIL DRAWING

SITE PLAN INFORMATION
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 WOODBRIDGE, ON. L4L 6A3
 PHONE: (416) 855-5000
 WEBSITE: www.rife.ca

BENCHMARK INFORMATION:
 ELEVATIONS ARE GEODETIC AND ARE REFERRED TO MTO VERTICAL BENCHMARK NUMBER 0581999H HAVING AN ORTHOMETRIC ELEVATION OF 268.112 METRES. ELEVATIONS ARE REFERENCED TO THE CANADIAN GEODETIC VERTICAL DATUM OF 1984, 1978 ADJUSTMENT (CGVD-1984/1978).

SCALE: 1:500



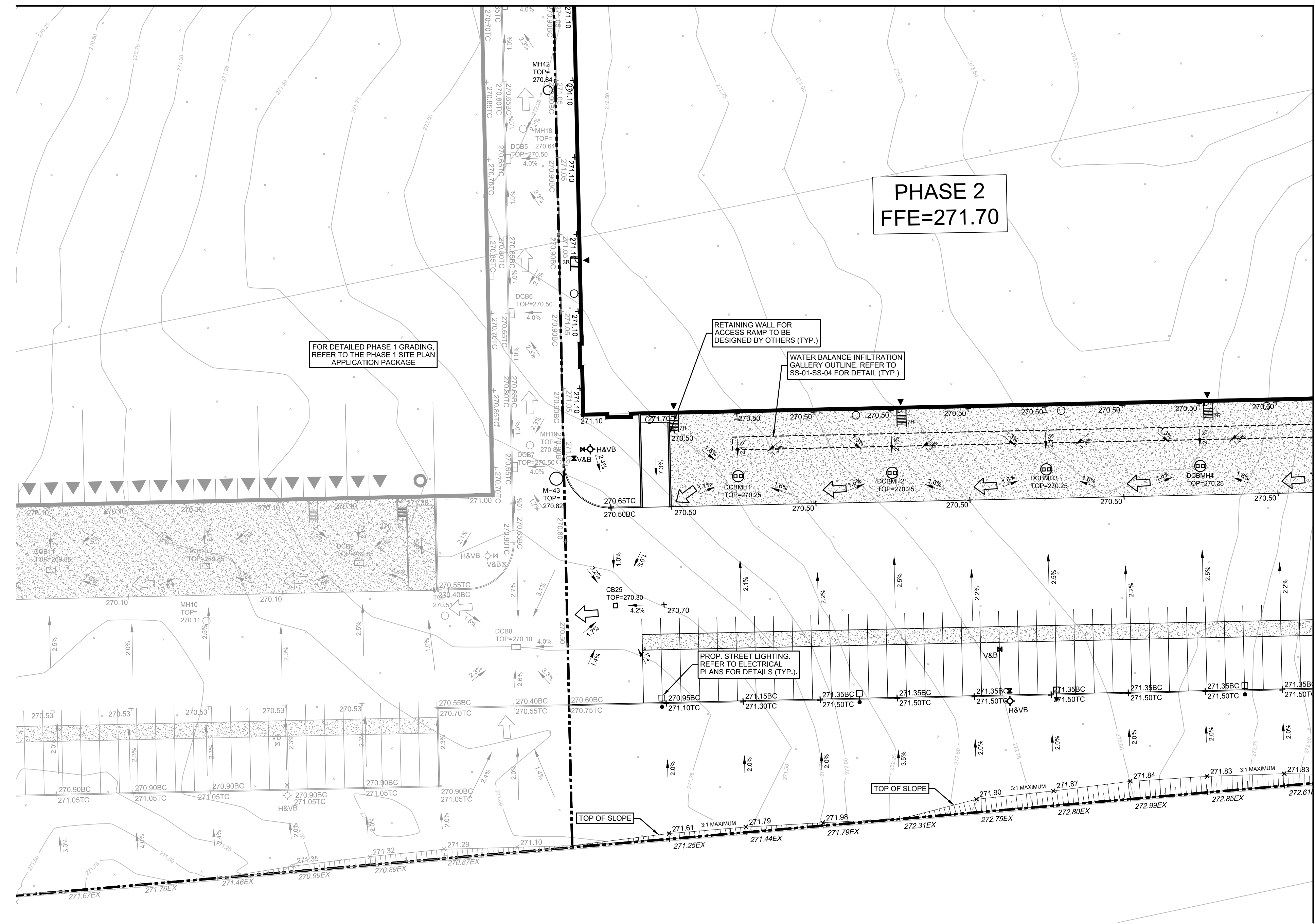
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SEE DWG. SG-01



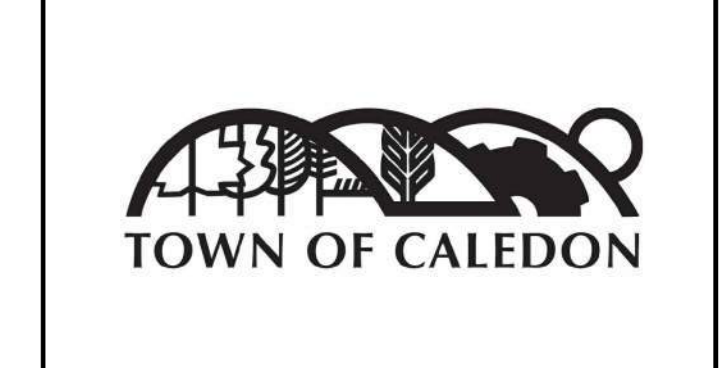
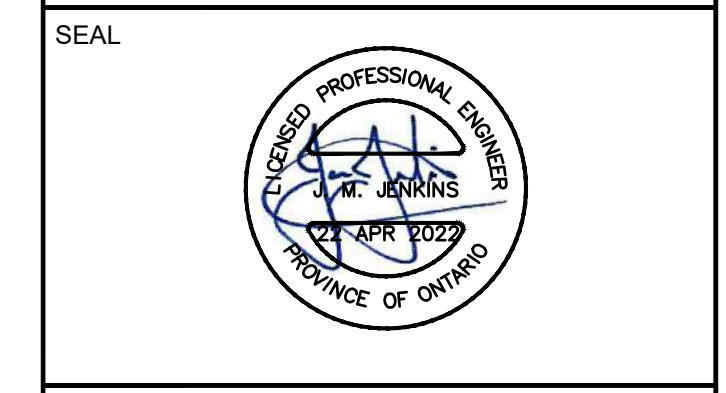
SEE DWG. SG-04

ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR SPA SUBMISSION	APR 22, 2022

LEGEND

PROPERTY LINE	---
PROPOSED GRADE	x 149.50
EXISTING GRADE	x 149.33EX
PROPOSED GRADE (TOP OF CURB)	x 149.65TC
PROPOSED GRADE (BOTTOM OF CURB)	x 149.65BC
PROPOSED STORM MANHOLE	○
PROPOSED SANITARY MANHOLE	⊙
PROPOSED SINGLE CATCH BASIN	□
PROPOSED DOUBLE CATCH BASIN	⊠
EXISTING STORM MANHOLE	○
EXISTING SANITARY MANHOLE	⊙
EXISTING CATCH BASIN	□
PROPOSED VALVE AND BOX	⊗ V&B
PROPOSED FIRE HYDRANT	⊕ FH
EXISTING OVERLAND FLOW ROUTE	→
OVERLAND FLOW ROUTE	←
PROPOSED STREET LIGHTING	□



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ibigroup.com

PROJECT
**12304 HEART LAKE ROAD
PHASE 2**
CALEDON, ON. L7C 2J2

PROJECT NO:
135636

DRAWN BY: **NDS** CHECKED BY: **JJ**

PROJECT MGR: **JJ** APPROVED BY: **JJ**

LIST OF DRAWINGS

- SG-01 - PHASE 2 - SITE GRADING PLAN
- SG-02 - PHASE 2 - SITE GRADING PLAN
- SG-03 - PHASE 2 - SITE GRADING PLAN
- SG-04 - PHASE 2 - SITE GRADING PLAN
- SS-01 - PHASE 2 - SITE SERVICING PLAN
- SS-02 - PHASE 2 - SITE SERVICING PLAN
- SS-03 - PHASE 2 - SITE SERVICING PLAN
- SS-04 - PHASE 2 - SITE SERVICING PLAN
- EC-01 - PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
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- DD-01 - PHASE 2 - DETAIL DRAWING
- DD-02 - PHASE 2 - DETAIL DRAWING
- DD-03 - PHASE 2 - DETAIL DRAWING
- DD-04 - PHASE 2 - DETAIL DRAWING

SITE PLAN INFORMATION

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PHONE: (416) 537-5700
WEBSITE: www.waremalcomb.com

SUBVEYOR INFORMATION

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643 CHRISLEA ROAD, SUITE 7
WOODBRIDGE, ON. L4L 4A3
PHONE: (416) 855-5000
WEBSITE: www.rpe.ca

BENCHMARK INFORMATION:

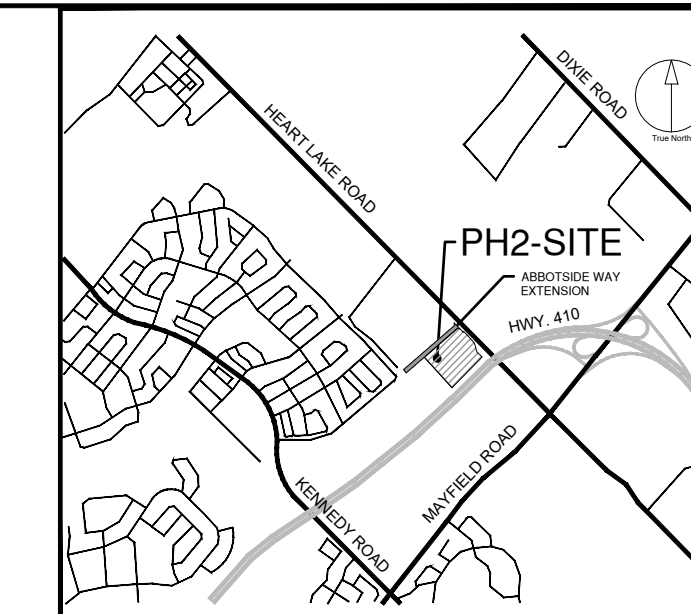
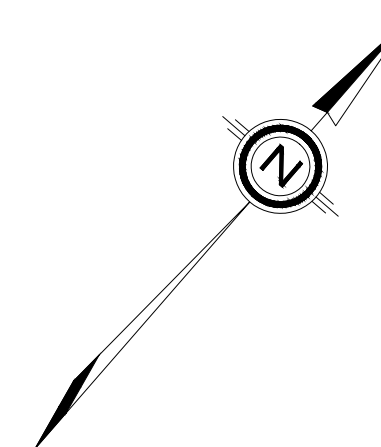
ELEVATIONS ARE GEODETIC AND ARE REFERRED TO MTO VERTICAL BENCHMARK NUMBER 050199917 HAVING AN ORTHOMETRIC ELEVATION OF 265.112 METRES. ELEVATIONS ARE REFERENCED TO THE CANADIAN GEODETIC VERTICAL DATUM OF 1984, 1978 ADJUSTMENT (CGVD-1984/1978).

SCALE: 1:500

SHEET TITLE
**PHASE 2 - SITE
GRADING PLAN**

SHEET NUMBER
SG-03

ISSUE
01

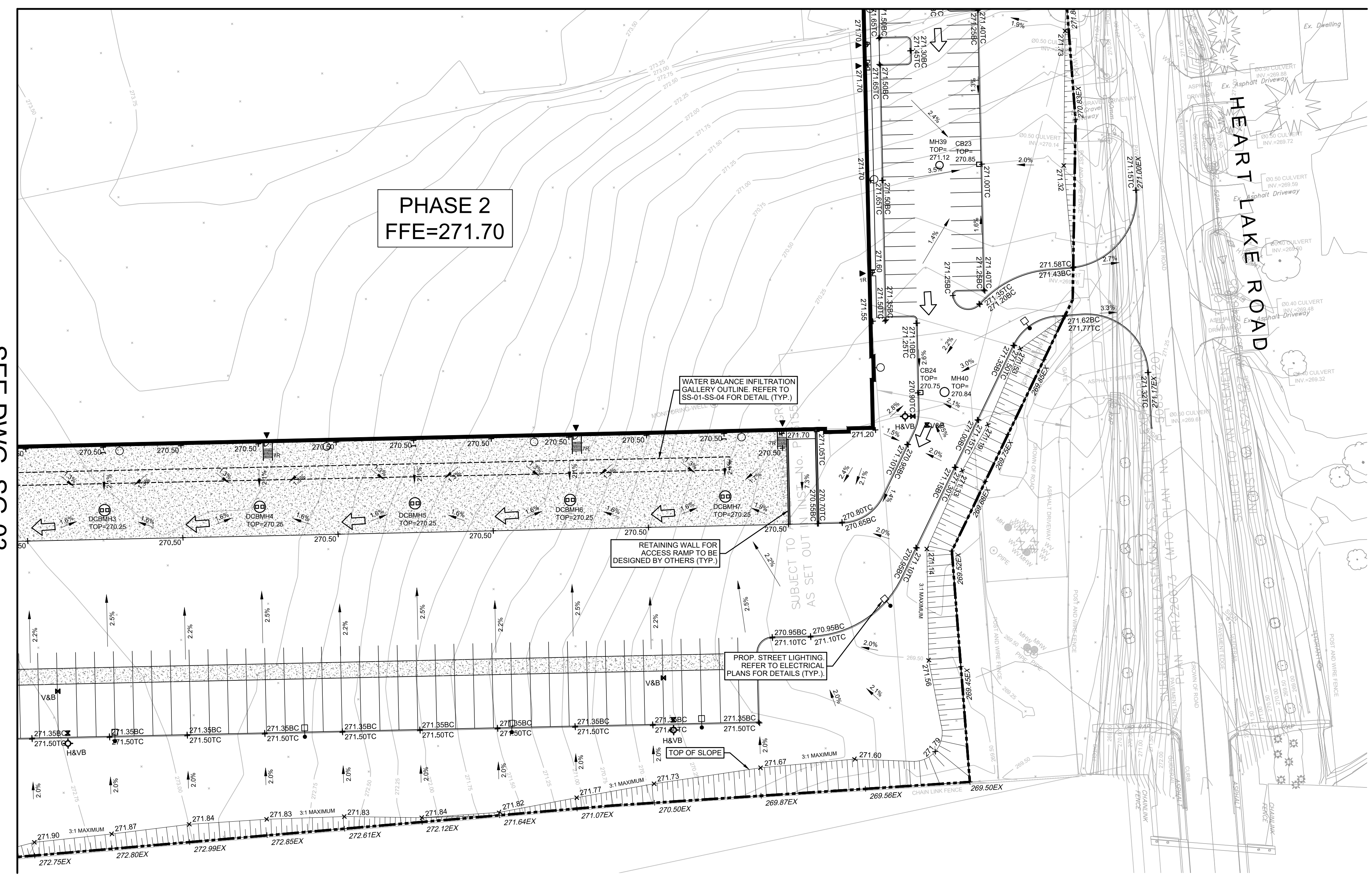


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 MISSISSAUGA, ON. L4W5L6

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SEE DWG. SG-02

SEE DWG. SG-03

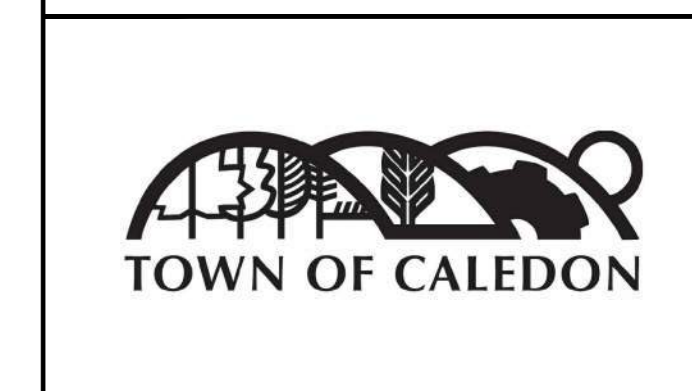


ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR SPA SUBMISSION	APR 22, 2022

LEGEND

PROPERTY LINE	---
PROPOSED GRADE	x 149.50
EXISTING GRADE	x 149.33EX
PROPOSED GRADE (TOP OF CURB)	x 149.65TC
PROPOSED GRADE (BOTTOM OF CURB)	x 149.65BC
PROPOSED STORM MANHOLE	○
PROPOSED SANITARY MANHOLE	⊗
PROPOSED SINGLE CATCH BASIN	⊕
PROPOSED DOUBLE CATCH BASIN	⊞
EXISTING STORM MANHOLE	○
EXISTING SANITARY MANHOLE	⊗
EXISTING CATCH BASIN	⊕
PROPOSED VALVE AND BOX	⊞
PROPOSED FIRE HYDRANT	⊞
EXISTING OVERLAND FLOW ROUTE	→
OVERLAND FLOW ROUTE	→
PROPOSED STREET LIGHTING	⊞



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 Unit 300 - 8133 Warden Avenue
 Markham ON L6G 1B3 Canada
 Tel: 905.763.2322 Fax: 905.763.9983
 ibigroup.com

LIST OF DRAWINGS

- SG-01 - PHASE 2 - SITE GRADING PLAN
- SG-02 - PHASE 2 - SITE GRADING PLAN
- SG-03 - PHASE 2 - SITE GRADING PLAN
- SG-04 - PHASE 2 - SITE GRADING PLAN
- SS-01 - PHASE 2 - SITE SERVICING PLAN
- SS-02 - PHASE 2 - SITE SERVICING PLAN
- SS-03 - PHASE 2 - SITE SERVICING PLAN
- SS-04 - PHASE 2 - SITE SERVICING PLAN
- EC-01 - PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
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- DD-01 - PHASE 2 - DETAIL DRAWING
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- DD-04 - PHASE 2 - DETAIL DRAWING

SITE PLAN INFORMATION

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 WOODBRIDGE, ON. L4L 6A3
 PHONE: (416) 855-5000
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BENCHMARK INFORMATION:
 ELEVATIONS ARE GEODETIC AND ARE REFERRED TO MTO VERTICAL BENCHMARK NUMBER 0581999H HAVING AN ORTHOMETRIC ELEVATION OF 266.112 METRES. ELEVATIONS ARE REFERENCED TO THE CANADIAN GEODETIC VERTICAL DATUM OF 1984, 1978 ADJUSTMENT (CGVD-1984/1978).

SCALE: 1:500

PROJECT
 12304 HEART LAKE ROAD
 PHASE 2
 CALEDON, ON. L7C 2J2

PROJECT NO:
 135636

DRAWN BY: NDS
CHECKED BY: JJ

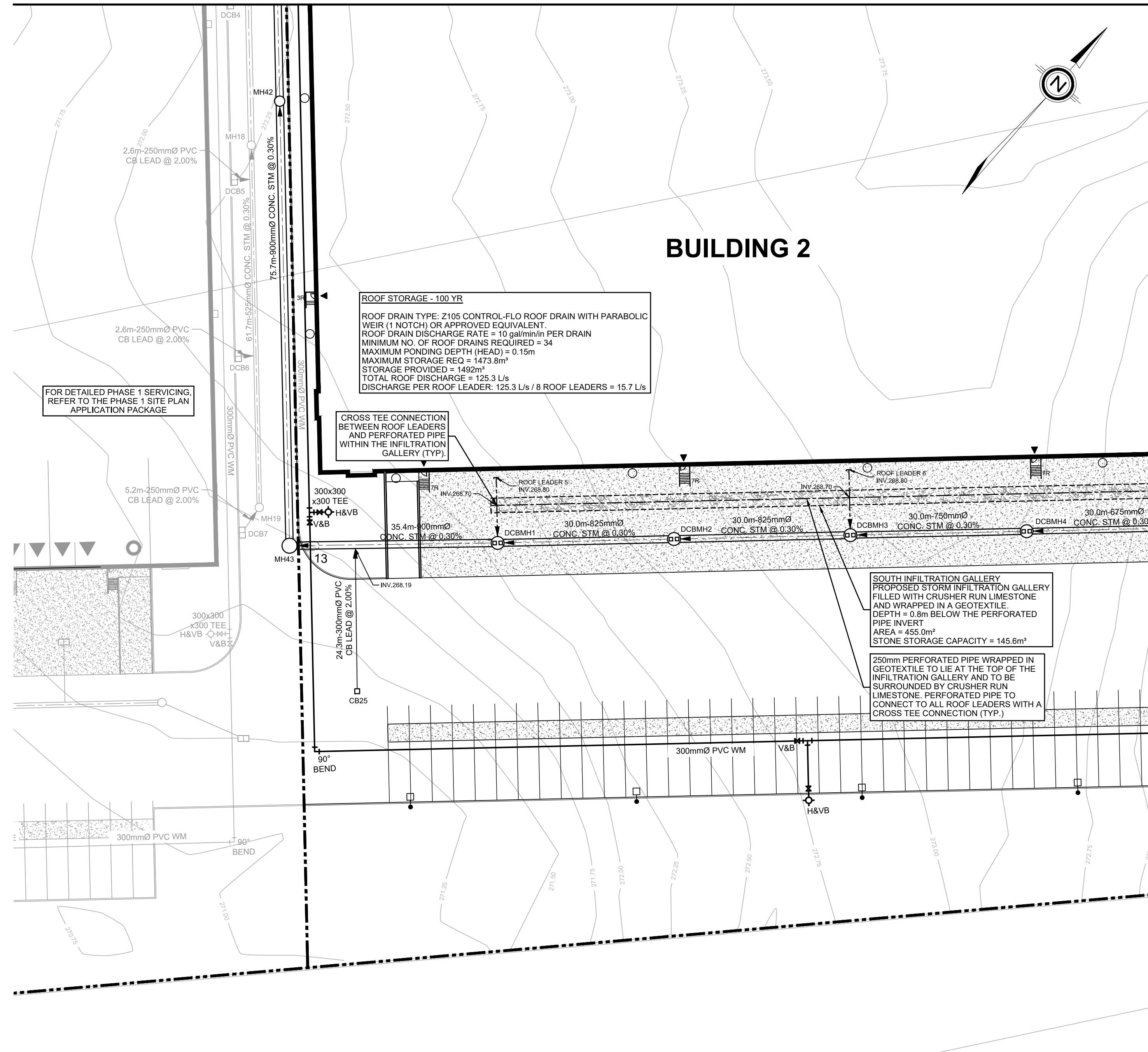
PROJECT MGR: JJ
APPROVED BY: JJ

SHEET TITLE
 PHASE 2 - SITE GRADING PLAN

SHEET NUMBER
 SG-04

ISSUE
 01

SEE DWG. SS-01



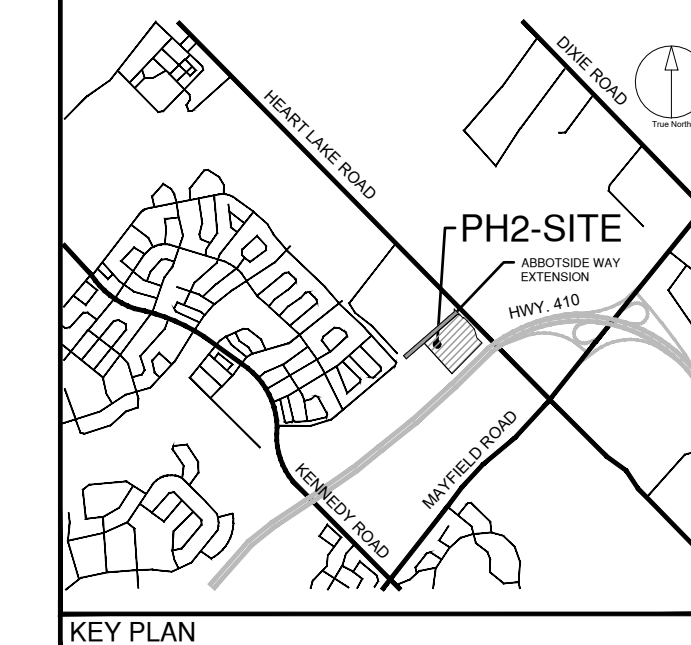
SEE DWG. SS-04

STORM SEWER STRUCTURE INVENTORY						
MH #	MH DIAMETER	MH OPSD	FRAME OPSD	TOP ELEV.	INVERTS	
DCBMH1	1800mmØ	OPSD 701.012	400.010 x2	270.25	NE 267.44 (825mmØ) NW 268.57 (250mmØ) SW 267.38 (900mmØ)	
DCBMH2	1800mmØ	OPSD 701.012	400.010 x2	270.25	NE 267.55 (825mmØ) SW 267.53 (825mmØ)	
DCBMH3	1800mmØ	OPSD 701.012	400.010 x2	270.25	NE 267.71 (750mmØ) NW 268.57 (250mmØ) SW 267.64 (825mmØ)	
DCBMH4	1800mmØ	OPSD 701.012	400.010	270.25	NE 267.88 (875mmØ) SW 267.80 (750mmØ)	
DCBMH5	1800mmØ	OPSD 701.012	400.010 x2	270.25	NE 268.04 (600mmØ) NW 268.57 (250mmØ) SW 267.97 (875mmØ)	
DCBMH6	1800mmØ	OPSD 701.012	400.010 x2	270.25	NE 268.21 (525mmØ) SW 268.13 (600mmØ)	
DCBMH7	1500mmØ	OPSD 701.012	400.010 x2	270.25	NW 268.57 (250mmØ) SW 268.30 (525mmØ)	
MH31	3000mm x 2400mm	AS PER MANUFACTURER	401.010	270.68	NE 268.26 (1500mmØ) SE 268.23 (1050mmØ) SW 265.83 (1950mmØ)	
MH33	1800mmØ	OPSD 701.012	401.010	271.37	SE 268.34 (1050mmØ) NW 266.32 (1050mmØ)	
MH34	2400mmØ	OPSD 701.013	401.010	271.06	NE 268.71 (750mmØ) SE 268.70 (250mmØ) SW 266.56 (900mmØ) SE 267.26 (200mmØ)DR NW 266.41 (1050mmØ)	
MH35	1500mmØ	OPSD 701.011	401.010	271.01	NE 267.05 (675mmØ) NW 268.00 (300mmØ) SE 268.70 (250mmØ) SE 267.52 (200mmØ)DR SW 266.97 (750mmØ)	
MH36	1200mmØ	OPSD 701.010	401.010	271.01	NE 267.30 (600mmØ) SE 268.70 (250mmØ) NW 268.00 (300mmØ) SE 267.70 (200mmØ)DR SW 267.22 (675mmØ)	
MH37	1200mmØ	OPSD 701.010	401.010	271.15	NE 267.58 (525mmØ) SE 268.70 (250mmØ) NW 268.00 (300mmØ) SE 267.91 (200mmØ)DR SW 267.51 (600mmØ)	
MH38	1500mmØ	OPSD 701.011	401.010	271.16	SE 267.73 (525mmØ) SW 267.65 (525mmØ)	
MH39	1200mmØ	OPSD 701.010	401.010	271.12	SE 268.22 (300mmØ) NE 268.22 (300mmØ) NW 267.99 (525mmØ)	
MH40	1200mmØ	OPSD 701.010	401.010	270.84	SW 268.44 (250mmØ) NW 268.35 (300mmØ)	
MH41	2400mmØ	OPSD 701.013	401.010	270.74	SE 266.70 (900mmØ) NE 266.62 (900mmØ)	
MH42	1500mmØ	OPSD 701.011	401.010	270.84	SE 266.95 (900mmØ) NW 266.93 (900mmØ)	
MH43	2400mmØ	OPSD 701.013	401.010	270.82	NE 267.26 (900mmØ) NW 267.18 (900mmØ)	

SANITARY SEWER STRUCTURE INVENTORY						
MH #	MH DIAMETER	MH OPSD	FRAME OPSD	TOP ELEV.	INVERTS	
MH3A	1200mmØ	OPSD 701.010	401.010	271.27	SE 265.46 (300mmØ) NW 265.43 (300mmØ)	
MH4A	1200mmØ	OPSD 701.010	401.010	271.44	SE 265.82 (300mmØ) NW 265.80 (300mmØ)	
MH28A	1200mmØ	OPSD 701.010	401.010	270.90	NW 265.28 (300mmØ) SE 265.27 (300mmØ) NE 265.18 (300mmØ)	

CATCHBASIN STRUCTURE INVENTORY				
CB #	CB STD.	FRAME OPSD	TOP ELEV.	INVERTS
CB17	OPSD 705.010	400.010	270.75	268.09 (250mmØ)
CB18	OPSD 705.010	400.010	270.75	268.14 (250mmØ)
CB19	OPSD 705.010	400.010	270.70	268.15 (300mmØ)
CB20	OPSD 705.010	400.010	270.70	268.15 (300mmØ)
CB21	OPSD 705.010	400.010	270.85	268.15 (250mmØ)
CB22	OPSD 705.010	400.010	270.85	268.47 (300mmØ)
CB23	OPSD 705.010	400.010	270.85	268.37 (300mmØ)
CB24	OPSD 705.010	400.010	270.75	268.53 (250mmØ)
CB25	OPSD 705.010	400.010	270.30	268.68 (300mmØ)

PIPE CROSSING INFORMATION			PIPE CROSSING SYMBOL
1. WM INV. 268.73 STM INV. 267.50 SEPERATION = 1.23m	2. STM INV. 268.77 WM INV. 268.27 SEPERATION = 0.50m	3. STM INV. 266.83 SAN INV. 266.00 SEPERATION = 0.83m	1
4. WM INV. 269.11 SAN INV. 266.00 SEPERATION = 3.11m	5. STM INV. 268.77 WM INV. 268.27 SEPERATION = 0.50m	6. WM INV. 268.90 STM INV. 267.81 SEPERATION = 1.09m	
7. STM INV. 268.77 WM INV. 268.27 SEPERATION = 0.50m	8. WM INV. 269.10 STM INV. 268.00 SEPERATION = 1.10m	9. WM INV. 269.17 STM INV. 268.01 SEPERATION = 1.16m	
10. 300 WM INV. 269.15 150 WM INV. 268.65 SEPERATION = 0.50m	11. STM INV. 268.77 WM INV. 268.27 SEPERATION = 0.50m	12. STM CB INV. 268.53 WM INV. 268.03 SEPERATION = 0.50m	
13. WM INV. 268.95 STM INV. 268.16 SEPERATION = 0.79m			

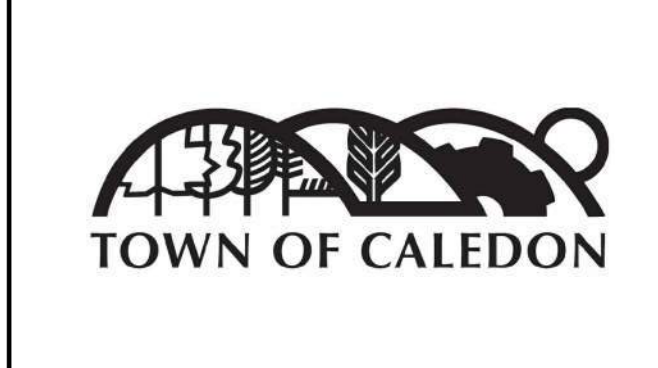
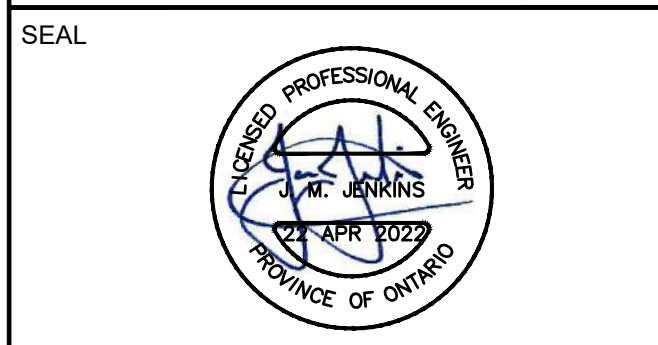


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ISSUES		
No.	DESCRIPTION	DATE
1	ISSUED FOR SPA SUBMISSION	APR 22, 2022

LEGEND	
PROPERTY LINE	---
PROPOSED STORM MANHOLE	○
PROPOSED SANITARY MANHOLE	⊗
PROPOSED SINGLE CATCH BASIN	□
PROPOSED DOUBLE CATCH BASIN	⊠
EXISTING STORM MANHOLE	○
EXISTING SANITARY MANHOLE	⊗
EXISTING CATCH BASIN	□
PROPOSED VALVE AND BOX	V&B
PROPOSED STORM	---
PROPOSED SANITARY	---
PROPOSED WATER	---
EXISTING STORM	---
EXISTING SANITARY	---
EXISTING WATER	---
EXISTING BELL	---
EXISTING GAS	---
PROPOSED AREA DRAIN AND CURB STOP	⊗
PROPOSED WATER SERVICE AND CURB STOP	⊗
PROPOSED SANITARY SERVICE	---
PROPOSED STORM SERVICE	---



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PROJECT
12304 HEART LAKE ROAD
PHASE 2
CALEDON, ON. L7C 2J2

PROJECT NO:
135636
DRAWN BY: NDS
CHECKED BY: JJ
PROJECT MGR: JJ
APPROVED BY: JJ

SHEET TITLE
PHASE 2 - SITE
SERVICING PLAN

SHEET NUMBER
SS-03
ISSUE
01

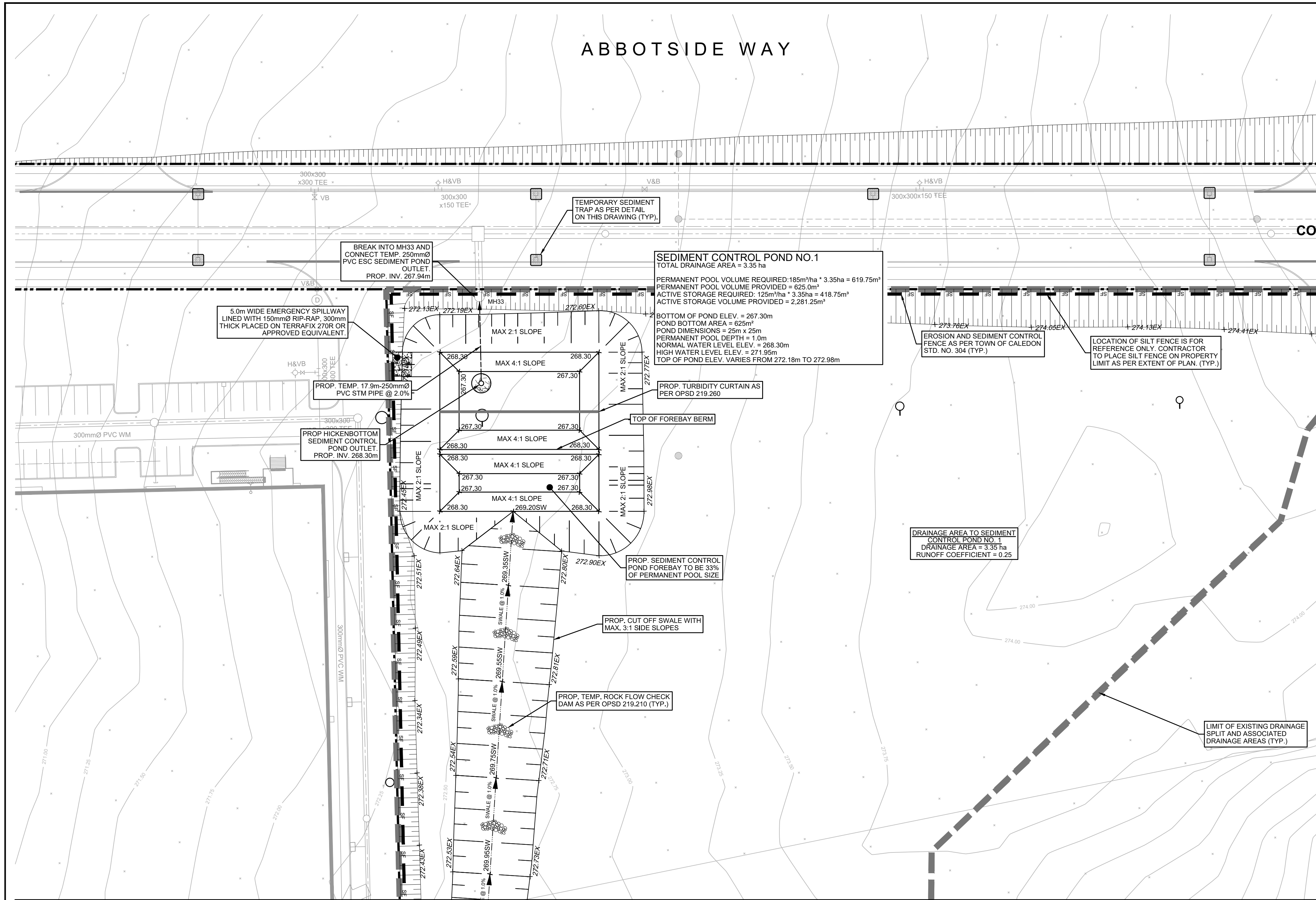
LIST OF DRAWINGS
SG-01 - PHASE 2 - SITE GRADING PLAN
SG-02 - PHASE 2 - SITE GRADING PLAN
SG-03 - PHASE 2 - SITE GRADING PLAN
SG-04 - PHASE 2 - SITE GRADING PLAN
SS-01 - PHASE 2 - SITE SERVICING PLAN
SS-02 - PHASE 2 - SITE SERVICING PLAN
SS-03 - PHASE 2 - SITE SERVICING PLAN
SS-04 - PHASE 2 - SITE SERVICING PLAN
EC-01 - PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
EC-02 - PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
EC-03 - PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
EC-04 - PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
DD-01 - PHASE 2 - DETAIL DRAWING
DD-02 - PHASE 2 - DETAIL DRAWING
DD-03 - PHASE 2 - DETAIL DRAWING
DD-04 - PHASE 2 - DETAIL DRAWING

SITE PLAN INFORMATION
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640 CHURCHILL ROAD, SUITE 7
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BENCHMARK INFORMATION:
ELEVATIONS ARE GEODETIC AND ARE REFERRED TO MTO VERTICAL BENCHMARK NUMBER 050999P HAVING AN ORTHOMETRIC ELEVATION OF 268.12 METRES. ELEVATIONS ARE REFERENCED TO THE CANADIAN GEODETIC VERTICAL DATUM OF 1984, 1978 ADJUSTMENT (CGVD-1988/1978).

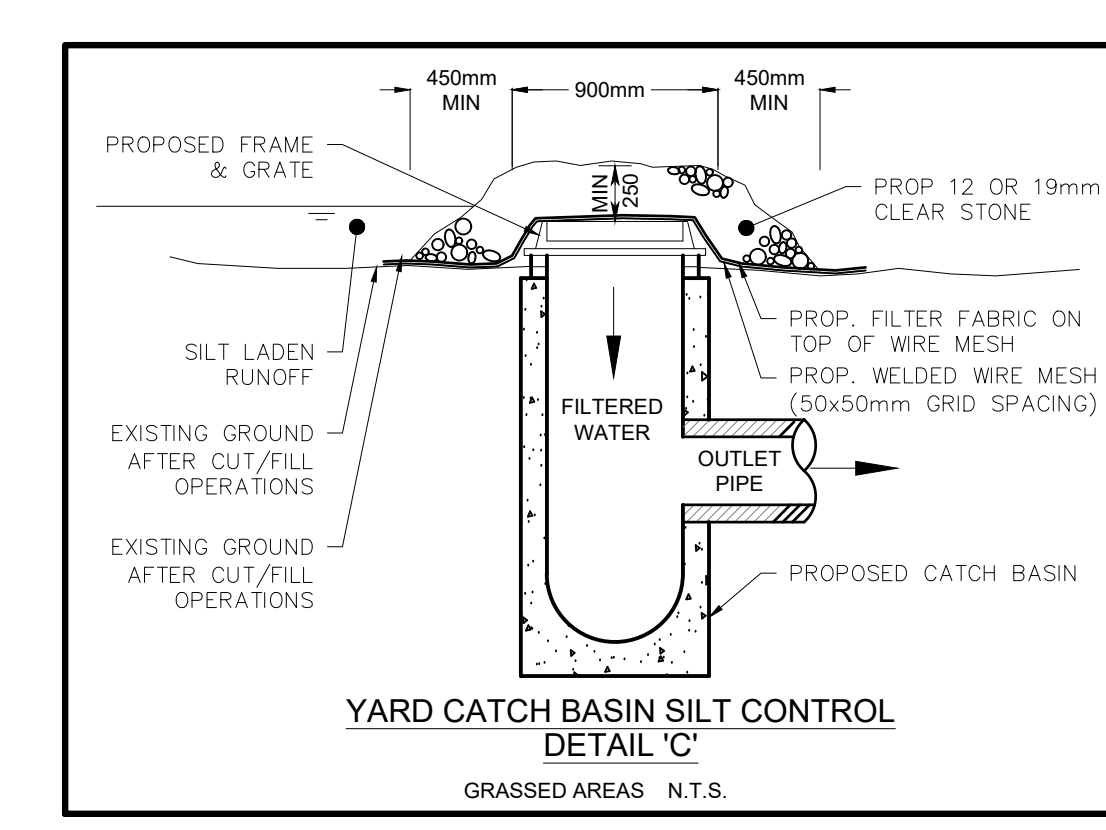
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SEE DWG. EC-02

EROSION CONTROL MEASURES

- ALL EROSION AND SEDIMENT CONTROL FACILITIES ARE TO BE INSPECTED BY THE CONSULTING ENGINEER ONCE A WEEK AND AFTER EACH RAINFALL OF 10mm OR GREATER OR A SIGNIFICANT SNOW MELT. DAILY INSPECTIONS ARE REQUIRED DURING EXTENDED RAINFALL OR SNOW MELT PERIODS.
- ALL DAMAGED ESC FACILITIES ARE TO BE REPAIRED AND/OR REPLACED WITHIN 48 HOURS OF INSPECTION.
- SILTATION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO WORKS COMMENCING ON THE SITE AND SHALL BE MAINTAINED FOR THE DURATION OF CONSTRUCTION, TO THE SATISFACTION OF THE CITY.
- ALTERNATIVE METHODS OF EROSION CONTROL MUST BE REVIEWED AND APPROVED BY IBI GROUP PRIOR TO IMPLEMENTATION. CONTRACTOR TO SUBMIT PLAN FOR REVIEW AND APPROVAL BY IBI GROUP.
- SILT FENCING SHALL BE AS PER TOWN OF CALEDON STD NO.304 PER DETAIL AND INSTALLED PRIOR TO COMMENCEMENT OF ANY AREA GRADING, EXCAVATION OR DEMOLITION AND LOCATED WHERE OFF-SITE FLOWS OCCUR.
- ALL CATCHBASINS TO HAVE SEDIMENT TRAP OR SEDIMENT BARRIER INSTALLED AS PER TOWN OF CALEDON STD NO.302 AND 303.
- ALL STOCKPILE LOCATIONS TO BE MINIMUM 2.5m FROM PROPERTY LINE AND SURROUNDED BY SILT FENCING TO AVOID OFF-SITE MIGRATION OF SEDIMENT.
- ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AS SITE DEVELOPMENT PROGRESSES. CONTRACTOR TO PROVIDE ALL ADDITIONAL EROSION CONTROL FEATURES TO PREVENT SEDIMENT FROM LEAVING THE SITE.
- CONTRACTOR IS RESPONSIBLE FOR REMOVING SEDIMENTS FROM THE MUNICIPAL ROADWAY AND SIDEWALKS AT THE END OF EACH WORK DAY.
- ALL EROSION CONTROL STRUCTURES TO REMAIN IN PLACE UNTIL ALL DISTURBED GROUND SURFACES HAVE BEEN RE-STABILIZED EITHER BY PAVING OR RESTORATION OF VEGETATIVE GROUND COVER.
- CONTRACTOR TO MINIMIZE EXTENT OF DISTURBED AREA AND DURATION OF EXPOSURE. STABILIZE/PROTECT DISTURBED AREA AS SOON AS POSSIBLE.
- CONTRACTOR TO MONITOR THE SITE DEVELOPMENT TO ENSURE ALL EROSION CONTROLS ARE INSTALLED AND MAINTAINED TO MUNICIPAL REQUIREMENTS.
- CONTRACTOR TO COMPLY WITH THE ENGINEER'S INSTRUCTIONS TO INSTALL, MODIFY OR MAINTAIN EROSION CONTROL MEASURES.
- EROSION CONTROL STRUCTURES TO BE MONITORED REGULARLY BY IBI GROUP AND ANY DAMAGE REPAIRED IMMEDIATELY. CONTRACTOR WILL REMOVE SEDIMENTS WHEN ACCUMULATIONS REACH A MAXIMUM OF 1/3 THE HEIGHT OF THE STRUCTURE. (I.E. FENCE)
- SEE DWG. EC-05 FOR FURTHER INFO FOR SEDIMENT CONTROL MEASURES.
- SEE STORMWATER MANAGEMENT REPORT PREPARED BY IBI GROUP (BI PROJECT NO. 32529) FOR FURTHER INFO ON EROSION AND SEDIMENT CONTROLS.
- ALL DISTURBED GROUND LEFT INACTIVE SHALL BE STABILIZED BY SEEDING, SODDING, MULCHING OR COVERING, OR OTHER EQUIVALENT CONTROL MEASURE. THE PERIOD OF TIME OF INACTIVITY SHALL NOT EXCEED 30 DAYS, UNLESS OTHERWISE AUTHORIZED BY THE DIRECTOR OF PUBLIC WORKS AND ENGINEERING.
- CONSTRUCTION ACCESS ROUTES SHALL BE CLEARED OF MUD AND DUST DAILY.
- INTERNAL AND EXTERNAL ROADS TO BE SCRAPPED, FLUSHED AND SWEEP TWICE WEEKLY. THIS WORK SHALL BE COMPLETED EVERY TUESDAY AND FRIDAY OF EACH WEEK AND CONTINUE UNTIL ALL LOTS ARE SODDED.

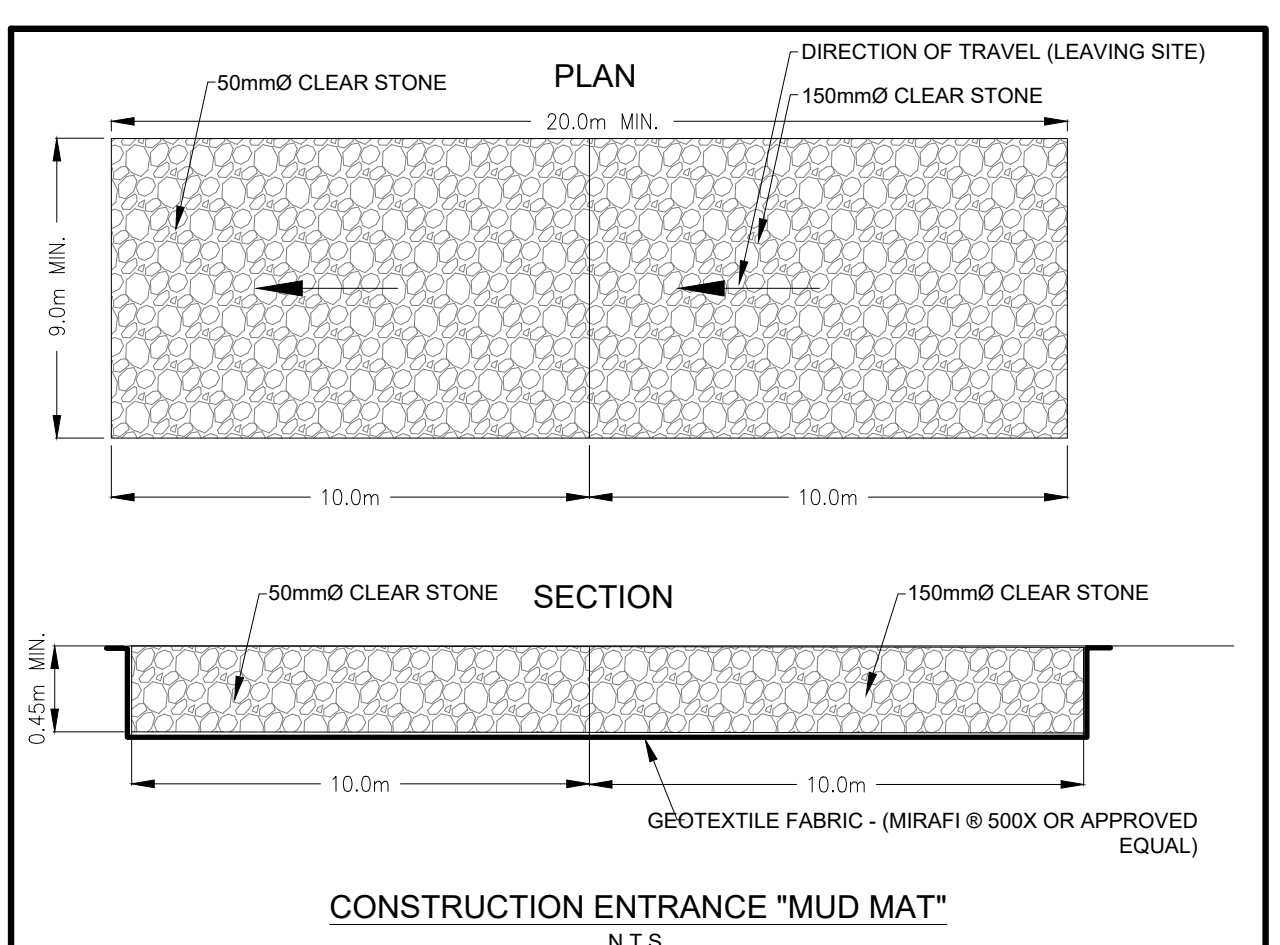
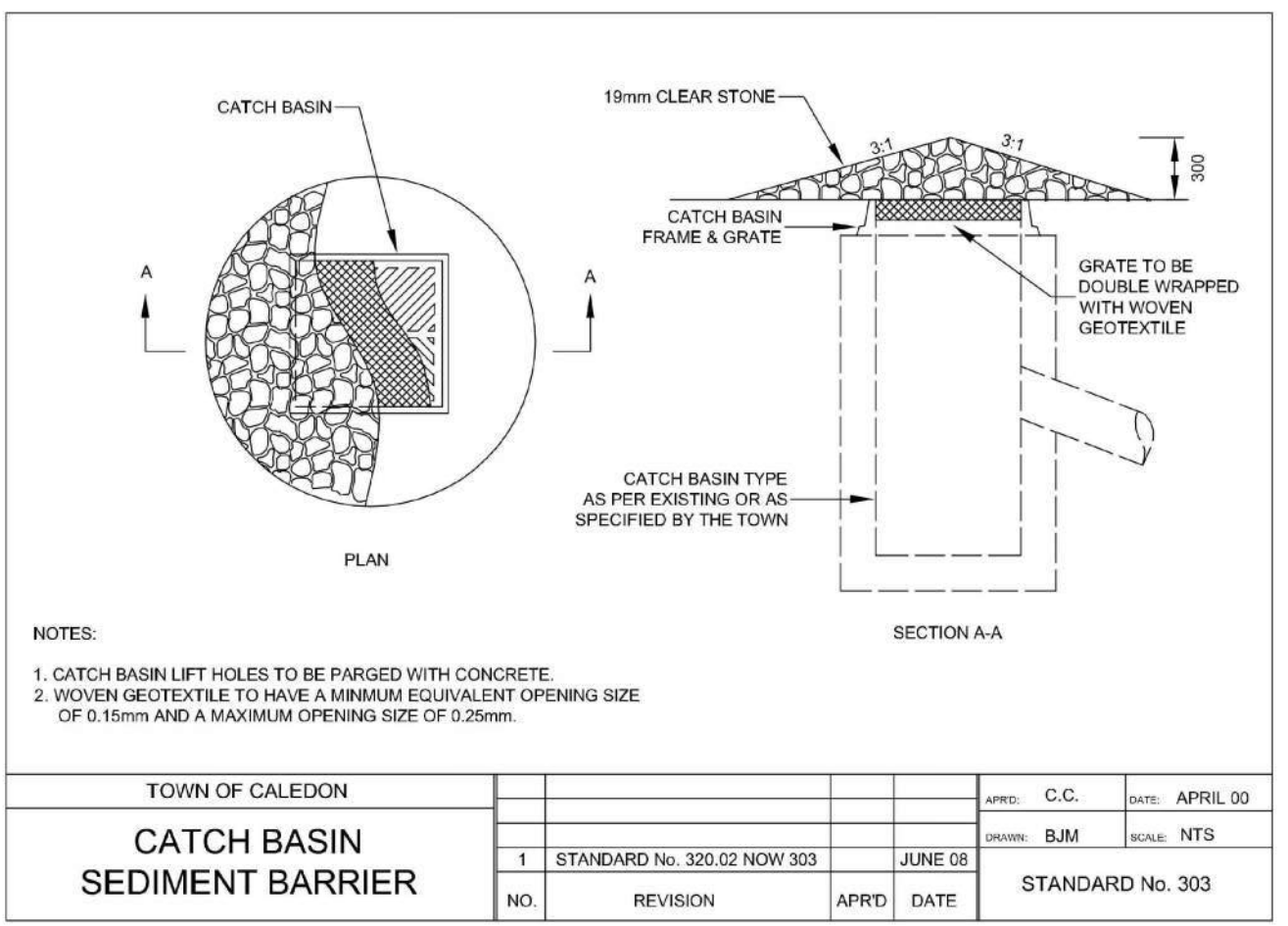
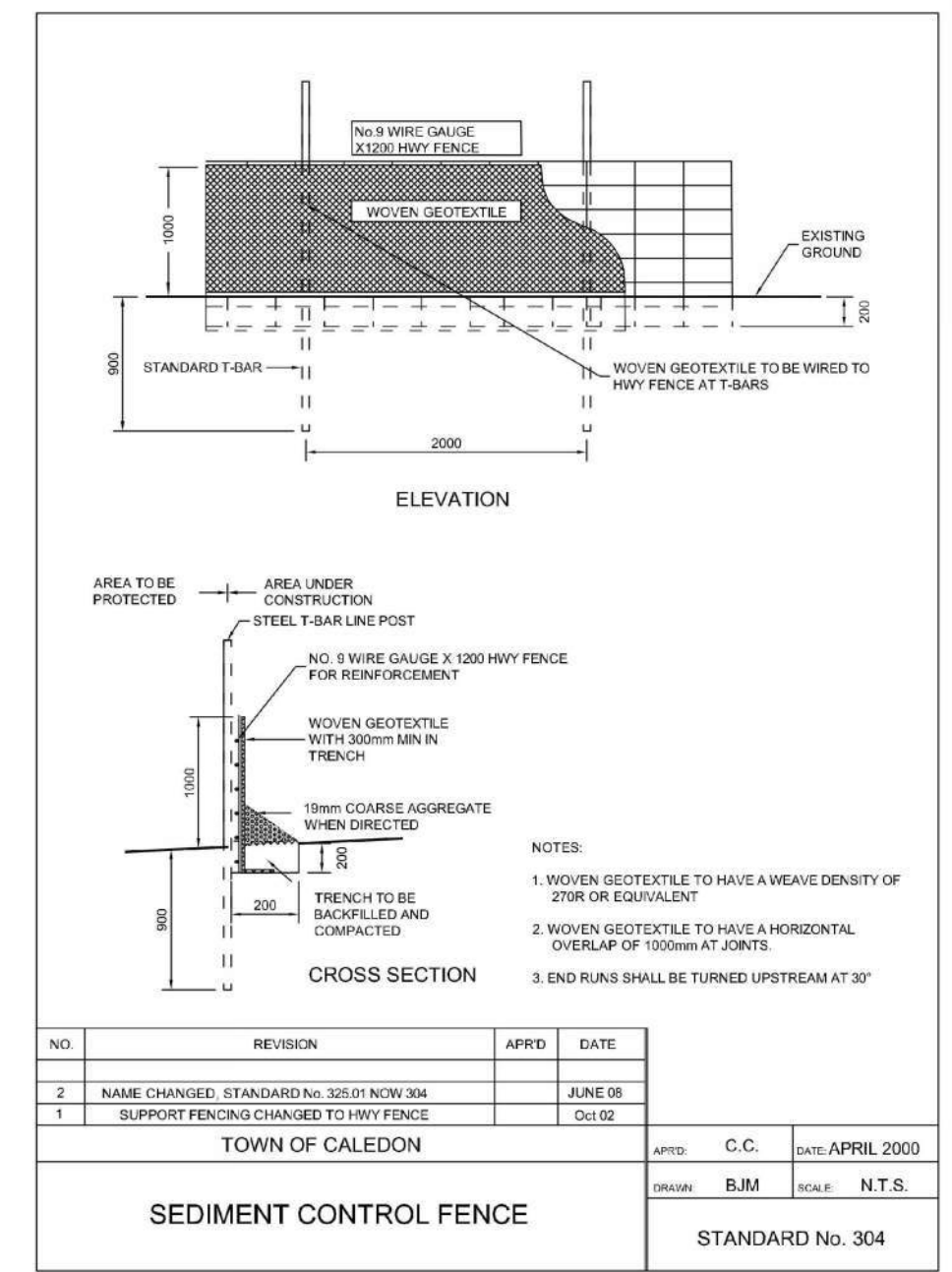


SILTATION AND EROSION CONTROL

- SILTATION CONTROL BARRIERS SHALL BE PLACED AS DETAILED.
 - ALL SILTATION CONTROL MEASURES SHALL BE CLEANED AND MAINTAINED AFTER EACH RAINFALL AS DIRECTED AND TO THE SATISFACTION OF THE TOWN OF CALEDON.
 - ADDITIONAL SILT CONTROL LOCATIONS MAY BE REQUIRED AS DETERMINED BY THE TOWN OF CALEDON.
- IMPORTANT NOTE:**
IN THE EVENT THAT THE APPROVED EROSION AND SEDIMENT CONTROLS AND STORMWATER MANAGEMENT FACILITIES ARE NOT EFFECTIVELY CONTROLLING SEDIMENT RELEASE INTO THE NATURAL ENVIRONMENT, THE PROJECT MANAGER OR SITE SUPERVISOR WILL IMMEDIATELY UPGRADE CONTROLS TO RECTIFY THE SITUATION.

SEE DWG. EC-03

- EROSION AND SEDIMENT CONTROL NOTES:**
FOLLOWING ARE THE MINIMUM OR "GOOD HOUSEKEEPING" REQUIREMENTS, TO ACHIEVE EROSION CONTROL DURING THE CONSTRUCTION PERIOD. THE MEASURES WILL BE INSPECTED PERIODICALLY BY MUNICIPAL STAFF. IT IS THE RESPONSIBILITY OF THE DEVELOPER/GENERAL CONTRACTOR TO ASSURE THEIR CONTINUED EFFECTIVENESS THROUGHOUT CONSTRUCTION.
- PROVIDE GRAVEL ENTRANCE WHEREVER EQUIPMENT LEAVES THE SITE TO PREVENT MUD TRACKING ONTO PAVED SURFACES. GRAVEL BED SHALL BE A MINIMUM OF 30m LONG, 6m WIDE AND 0.45m DEEP AND SHALL CONSIST OF COARSE (2" CRUSHER-RUN LIMESTONE) MATERIAL. MAINTAIN GRAVEL ENTRANCE IN CLEAN CONDITION.
 - COVER ALL CATCHBASINS WITH 6mm STEEL PLATE THAT IS FIRMLY SECURED TO THE CB GRATING WITH CLAMPS, SCREWS OR WIRES. COVER TO REMAIN IN PLACE UNTIL ROUGH PAVING IS COMPLETED. MAINTAIN GOOD HOUSEKEEPING TO PREVENT WATERBORNE SEDIMENT FROM ENTERING THE STORM SEWER SYSTEM. IF THE CB'S MUST BE USED FOR SITE DRAINAGE DURING CONSTRUCTION, THEY ARE EACH TO BE SURROUNDED BY A STRAW BALE SILT-TRAP.
 - DO NOT LOCATE TOPSOIL PILES AND EXCAVATION MATERIAL CLOSER THAN 2.5m FROM ANY PAVED SURFACE, OR ONE WHICH IS TO BE PAVED BEFORE THE PILE IS REMOVED. ALL TOPSOIL PILES TO BE SEEDED IF THEY ARE TO REMAIN ON-SITE LONG ENOUGH FOR SEEDS TO GROW (LONGER THAN ONE MONTH).
 - CONTROL WIND-BLOWN DUST OFF-SITE TO ACCEPTABLE LEVELS, BY SEEDING TOPSOIL PILES AND OTHER AREAS TEMPORARILY, AND/OR WATERING, AS REQUIRED.
 - TEMPORARY SOIL STOCKPILES SHOULD BE PLACED AWAY FROM ALL WATERCOURSES.
 - SILT FENCE & SEDIMENT TRAP TO BE CLEANED PERIODICALLY AS REQUIRED.
- DURING CONSTRUCTION:**
- STONE JACKET TO BE WRAPPED IN FILTER CLOTH.
 - FILTER CLOTH WRAPPING ON STONE JACKET TO BE INSPECTED AFTER EACH RAINFALL EVENT AND REPLACED IF CLOGGED.
 - ACCUMULATED SEDIMENT TO BE REMOVED AS REQUIRED.
 - AT COMPLETION OF CONSTRUCTION:
 - ACCUMULATED SEDIMENT TO BE REMOVED AND DISPOSED OFFSITE.
 - FILTER CLOTH TO BE REMOVED FROM STONE JACKET.
 - TOPSOIL, SEED AND PLANT AS PER SPECIFICATIONS.



SOIL STABILIZATION:

- STABILIZE DISTURBED GROUND AND STOCKPILES BY SEEDING, SODDING, MULCHING, COVERING, OR OTHER ACCEPTABLE CONTROL MEASURES. IF GROUND IS INACTIVE FOR THIRTY (30) DAYS. (SEE TRCA ESC GUIDELINES FOR DETAILS)

THE EROSION AND SEDIMENT CONTROL (ESC) STRATEGIES OUTLINED ON THE PLANS ARE NOT STATIC AND MAY NEED TO BE UPGRADED/AMENDED AS SITE CONDITIONS CHANGE TO PREVENT SEDIMENT RELEASES TO THE NATURAL ENVIRONMENT. FAILED ESC MEASURES SHOULD BE REPAIRED WITHIN 48 HOURS.

LIST OF DRAWINGS

SG-01	PHASE 2 - SITE GRADING PLAN
SG-02	PHASE 2 - SITE GRADING PLAN
SG-03	PHASE 2 - SITE GRADING PLAN
SG-04	PHASE 2 - SITE GRADING PLAN
SS-01	PHASE 2 - SITE SERVICING PLAN
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SS-04	PHASE 2 - SITE SERVICING PLAN
EC-01	PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
EC-02	PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
EC-03	PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
EC-04	PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
DD-01	PHASE 2 - DETAIL DRAWING
DD-02	PHASE 2 - DETAIL DRAWING
DD-03	PHASE 2 - DETAIL DRAWING
DD-04	PHASE 2 - DETAIL DRAWING

SITE PLAN INFORMATION

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R-PE SURVEYING LTD.
ONTARIO LAND SURVEYORS
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WOODBRIDGE, ON, L4L 6A3
PHONE: (416) 635-5000
WEBSITE: www.rpe.ca

BENCHMARK INFORMATION:
ELEVATIONS ARE GEODETIC AND ARE REFERRED TO MTO VERTICAL BENCHMARK NUMBER 09199991 HAVING AN ORTHOMETRIC ELEVATION OF 268.112 METRES. ELEVATIONS ARE REFERENCED TO THE CANADIAN GEODETIC VERTICAL DATUM OF 1988. 1978 ADJUSTMENT (GVD-1988/1978).

SCALE: 1:500

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ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR SPA SUBMISSION	APR 22, 2022

LEGEND

PROPERTY LINE

TEMPORARY SEDIMENT CONTROL FENCE

TEMPORARY CONSTRUCTION ACCESS

TEMPORARY SEDIMENT TRAP

TEMPORARY GRAVEL MUD MAT

SEAL

TOWN OF CALEDON

IBI GROUP
Unit 300 - 8133 Warden Avenue
Markham ON L6G 1B3 Canada
Tel: 905.763.2322 Fax: 905.763.9983
ibigroup.com

PROJECT
12304 HEART LAKE ROAD
PHASE 2
CALEDON, ON. L7C 2J2

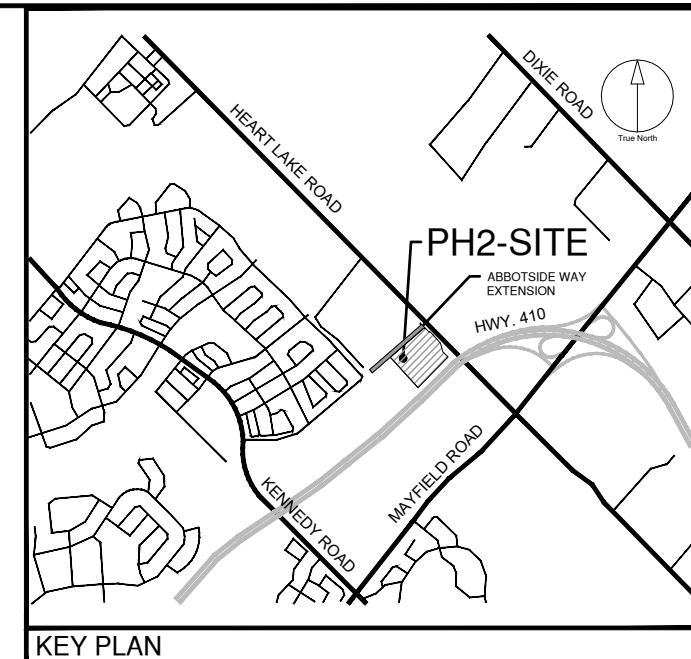
PROJECT NO: 135636

DRAWN BY: NDS **CHECKED BY:** JJ

PROJECT MGR: JJ **APPROVED BY:** JJ

SHEET TITLE
PHASE 2 - EROSION CONTROL PLAN

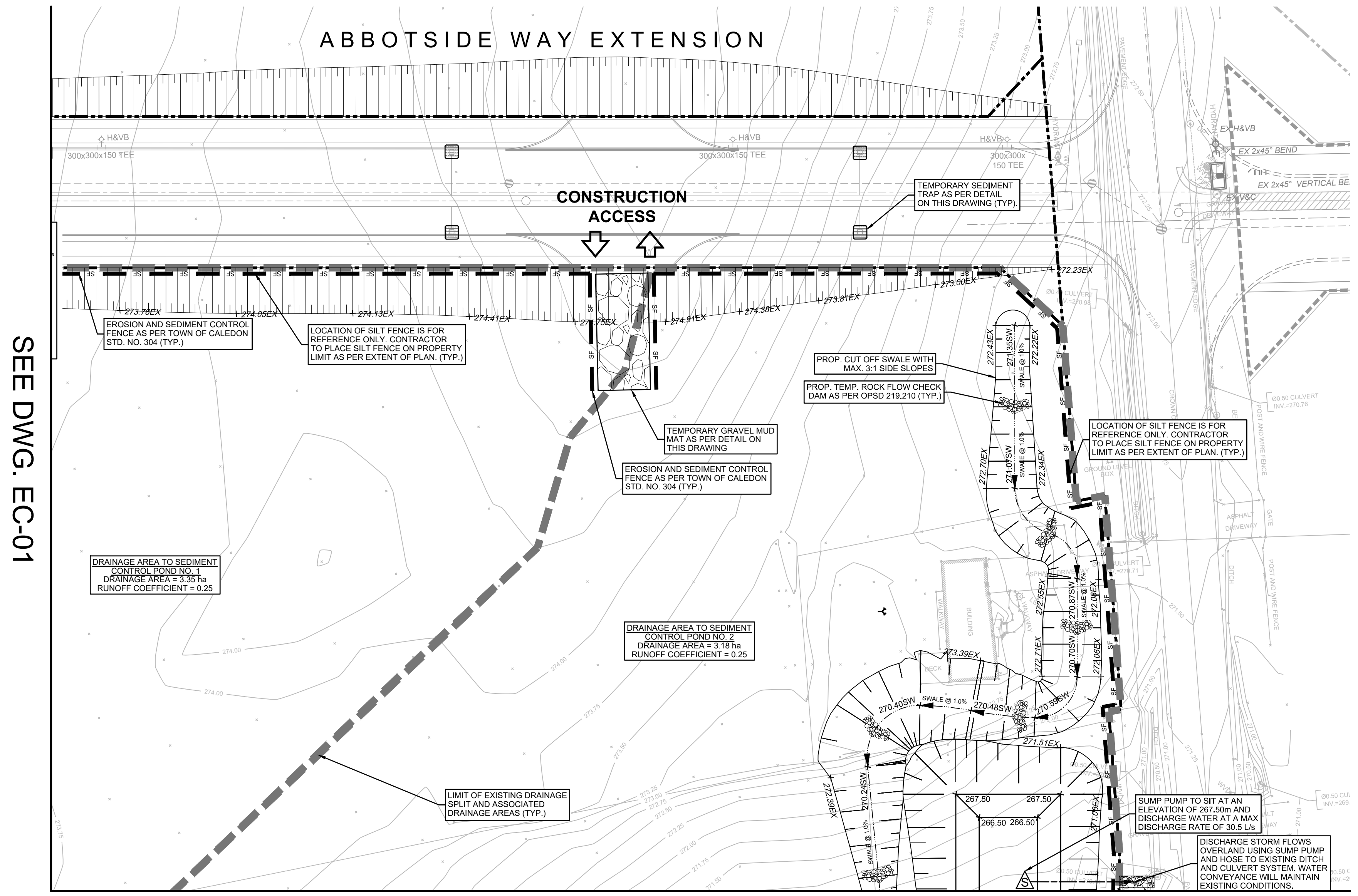
SHEET NUMBER EC-01 **ISSUE** 01



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SEE DWG. EC-01

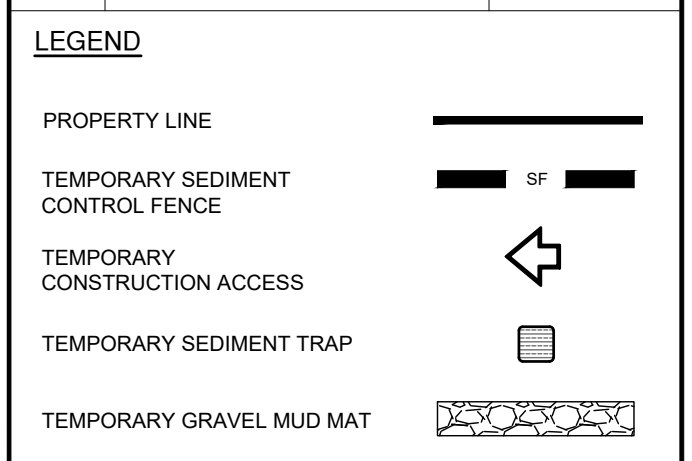
SEE DWG. EC-04

EROSION CONTROL MEASURES

- ALL EROSION AND SEDIMENT CONTROL FACILITIES ARE TO BE INSPECTED BY THE CONSULTING ENGINEER ONCE A WEEK AND AFTER EACH RAINFALL OF 10mm OR GREATER OR A SIGNIFICANT SNOW MELT. DAILY INSPECTIONS ARE REQUIRED DURING EXTENDED RAINFALL OR SNOW MELT PERIODS.
- ALL DAMAGED ESC FACILITIES ARE TO BE REPAIRED AND/OR REPLACED WITHIN 48 HOURS OF INSPECTION.
- SILTATION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO WORKS COMMENCING ON THE SITE AND SHALL BE MAINTAINED FOR THE DURATION OF CONSTRUCTION, TO THE SATISFACTION OF THE CITY.
- ALTERNATIVE METHODS OF EROSION CONTROL MUST BE REVIEWED AND APPROVED BY IBI GROUP PRIOR TO IMPLEMENTATION. CONTRACTOR TO SUBMIT PLAN FOR REVIEW AND APPROVAL BY IBI GROUP.
- SILT FENCING SHALL BE AS PER TOWN OF CALEDON STD NO.304 PER DETAIL AND INSTALLED PRIOR TO COMMENCEMENT OF ANY AREA GRADING, EXCAVATION OR DEMOLITION AND LOCATED WHERE OFF-SITE FLOWS OCCUR.
- ALL CATCHBASINS TO HAVE SEDIMENT TRAP OR SEDIMENT BARRIER INSTALLED AS PER TOWN OF CALEDON STDS NO.302 AND 303.
- ALL STOCKPILE LOCATIONS TO BE MINIMUM 2.50m FROM PROPERTY LINE AND SURROUNDED BY SILT FENCING TO AVOID OFF-SITE MIGRATION OF SEDIMENT.
- ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AS SITE DEVELOPMENT PROGRESSES. CONTRACTOR TO PROVIDE ALL ADDITIONAL EROSION CONTROL FEATURES TO PREVENT SEDIMENT FROM LEAVING THE SITE.
- CONTRACTOR IS RESPONSIBLE FOR REMOVING SEDIMENTS FROM THE MUNICIPAL ROADWAY AND SIDEWALKS AT THE END OF EACH WORK DAY.
- ALL EROSION CONTROL STRUCTURES TO REMAIN IN PLACE UNTIL ALL DISTURBED GROUND SURFACES HAVE BEEN RE-STABILIZED EITHER BY PAVING OR RESTORATION OF VEGETATIVE GROUND COVER.
- CONTRACTOR TO MINIMIZE EXTENT OF DISTURBED AREA AND DURATION OF EXPOSURE. STABILIZE/PROTECT DISTURBED AREA AS SOON AS POSSIBLE.
- CONTRACTOR TO MONITOR THE SITE DEVELOPMENT TO ENSURE ALL EROSION CONTROLS ARE INSTALLED AND MAINTAINED TO MUNICIPAL REQUIREMENTS.
- CONTRACTOR TO COMPLY WITH THE ENGINEER'S INSTRUCTIONS TO INSTALL, MODIFY OR MAINTAIN EROSION CONTROL WORKS.
- EROSION CONTROL STRUCTURES TO BE MONITORED REGULARLY BY IBI GROUP AND ANY DAMAGE REPAIRED IMMEDIATELY. CONTRACTOR WILL REMOVE SEDIMENTS WHEN ACCUMULATIONS REACH A MAXIMUM OF 1/3 THE HEIGHT OF THE STRUCTURE. (I.E. FENCE)
- SEE DETAIL PAGE FOR FURTHER INFO FOR SEDIMENT CONTROL MEASURES.
- SEE STORMWATER MANAGEMENT REPORT PREPARED BY IBI GROUP (IBI PROJECT NO. 32529) FOR FURTHER INFO ON EROSION AND SEDIMENT CONTROLS.
- ALL DISTURBED GROUND LEFT INACTIVE SHALL BE STABILIZED BY SEEDING, SODDING, MULCHING OR COVERING, OR OTHER EQUIVALENT CONTROL MEASURE. THE PERIOD OF TIME OF INACTIVITY SHALL NOT EXCEED 30 DAYS, UNLESS OTHERWISE AUTHORIZED BY THE DIRECTOR OF PUBLIC WORKS AND ENGINEERING.
- CONSTRUCTION ACCESS ROUTES SHALL BE CLEARED OF MUD AND DUST DAILY.
- INTERNAL AND EXTERNAL ROADS TO BE SCRAPED, FLUSHED AND SWEEPED TWICE WEEKLY. THIS WORK SHALL BE COMPLETED EVERY TUESDAY AND FRIDAY OF EACH WEEK AND CONTINUE UNTIL ALL LOTS ARE SODDED.

ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR SPA SUBMISSION	APR 22, 2022

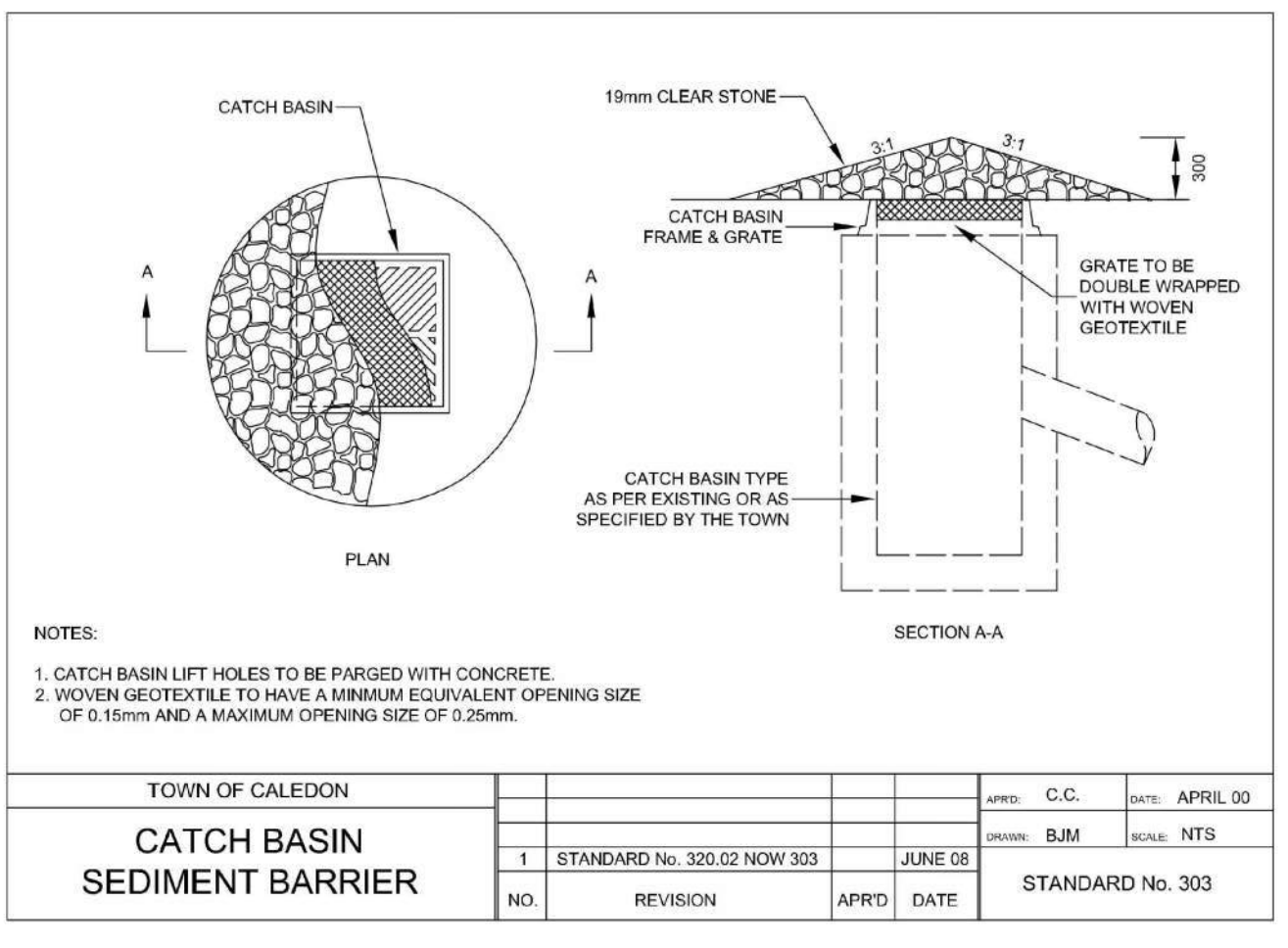
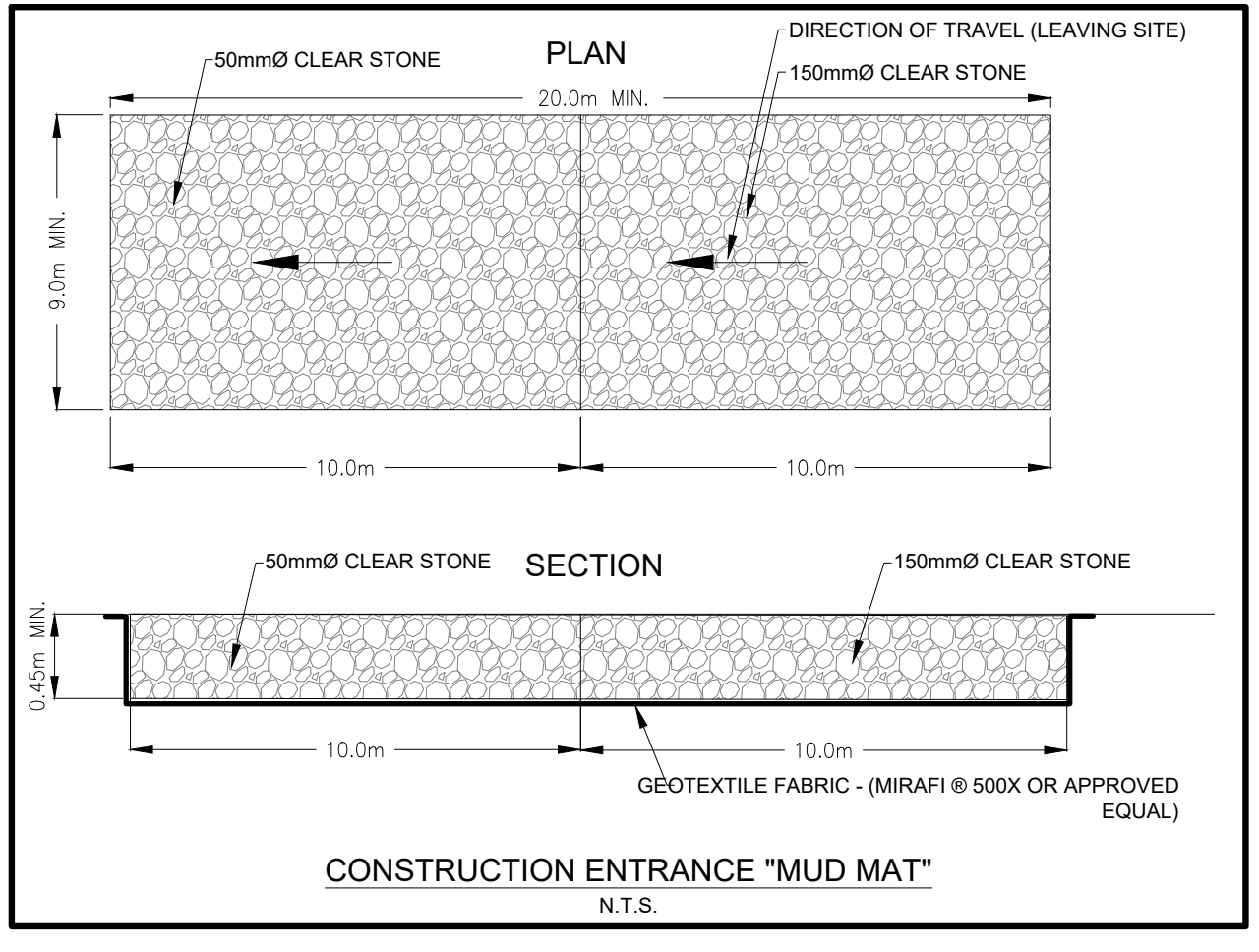
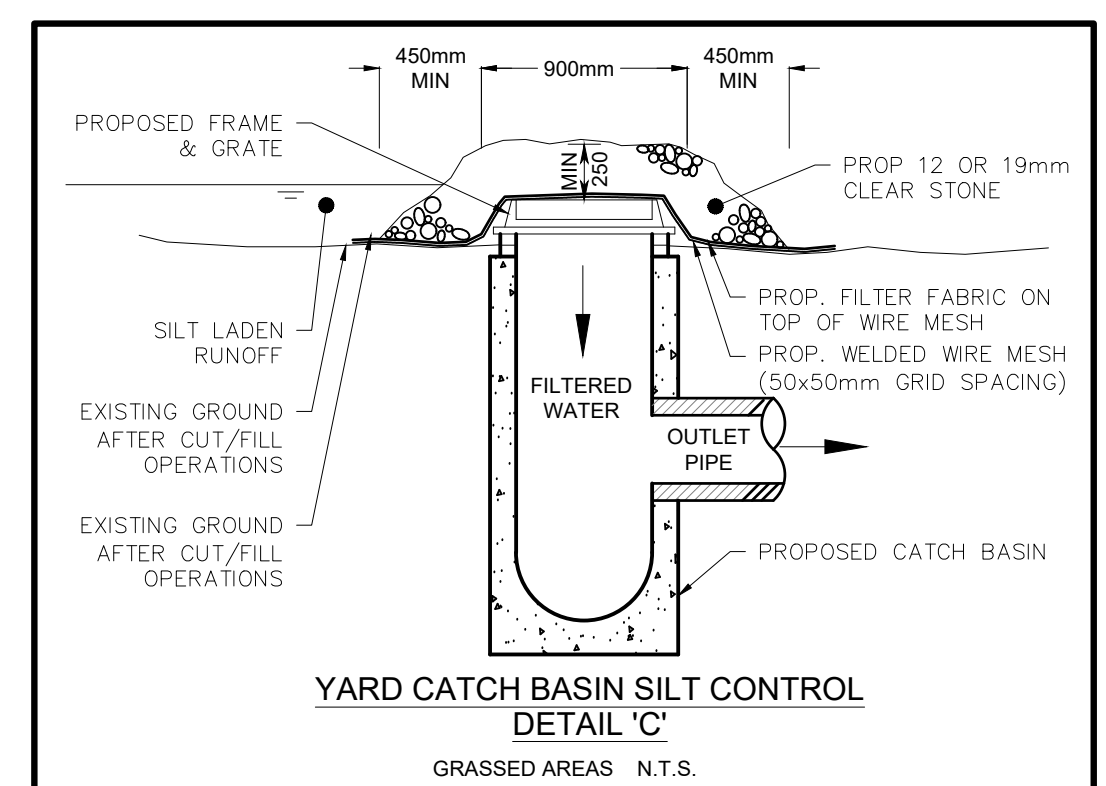


PROJECT
 12304 HEART LAKE ROAD
 PHASE 2
 CALEDON, ON. L7C 2J2

PROJECT NO.: 135636
DRAWN BY: NDS
PROJECT MGR: JJ
CHECKED BY: JJ
APPROVED BY: JJ

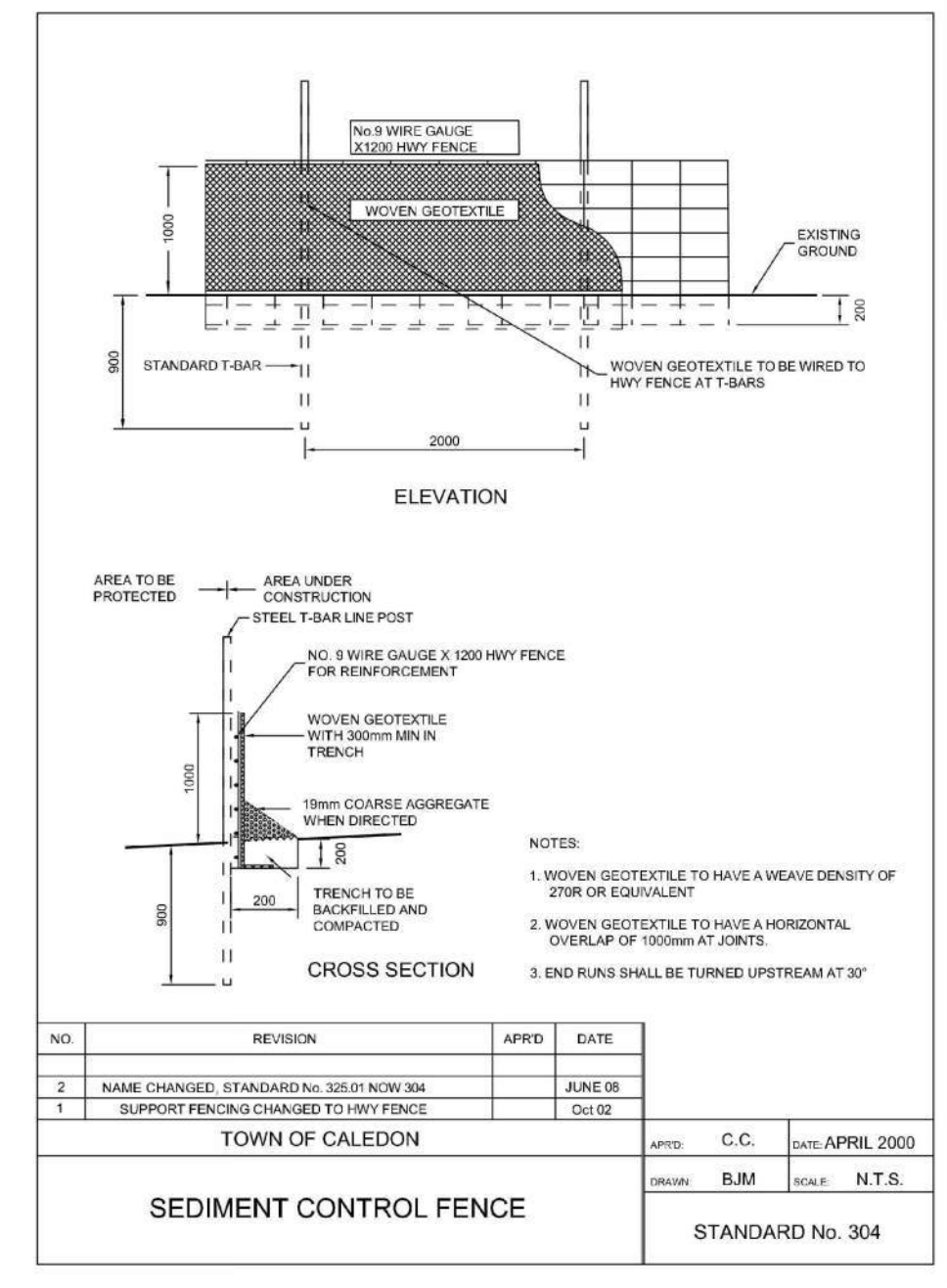
SHEET TITLE
 PHASE 2 - EROSION CONTROL PLAN

SHEET NUMBER EC-02 **ISSUE** 01



TOWN OF CALEDON

NO.	REVISION	APPRO	DATE
1	STANDARD No. 320.02 NOW 303	JUNE 08	
2	STANDARD No. 303		APRIL 00



TOWN OF CALEDON

NO.	REVISION	APPRO	DATE
1	NAME CHANGED, STANDARD NO. 304 NOW 304	JUNE 08	
2	SUPPORT FENCING CHANGED TO THIS FENCE		APRIL 2000

SILTATION AND EROSION CONTROL

- SILTATION CONTROL BARRIERS SHALL BE PLACED AS DETAILED.
- ALL SILTATION CONTROL MEASURES SHALL BE CLEANED AND MAINTAINED AFTER EACH RAINFALL AS DIRECTED AND TO THE SATISFACTION OF THE TOWN OF CALEDON.
- ADDITIONAL SILT CONTROL LOCATIONS MAY BE REQUIRED AS DETERMINED BY THE TOWN OF CALEDON.

IN THE EVENT THAT THE APPROVED EROSION AND SEDIMENT CONTROLS AND STORMWATER MANAGEMENT FACILITIES ARE NOT EFFECTIVELY CONTROLLING SEDIMENT RELEASE INTO THE NATURAL ENVIRONMENT, THE PROJECT MANAGER OR SITE SUPERVISOR WILL IMMEDIATELY UPGRADE CONTROLS TO RECTIFY THE SITUATION.

EROSION AND SEDIMENT CONTROL NOTES:

FOLLOWING ARE THE MINIMUM OR "GOOD HOUSEKEEPING" REQUIREMENTS, TO ACHIEVE EROSION CONTROL DURING THE CONSTRUCTION PERIOD. THE MEASURES WILL BE INSPECTED PERIODICALLY BY MUNICIPAL STAFF. IT IS THE RESPONSIBILITY OF THE DEVELOPER/GENERAL CONTRACTOR TO ASSURE THEIR CONTINUED EFFECTIVENESS THROUGHOUT CONSTRUCTION.

- PROVIDE GRAVEL ENTRANCE WHEREVER EQUIPMENT LEAVES THE SITE TO PREVENT MUD TRACKING ONTO PAVED SURFACES. GRAVEL BED SHALL BE A MINIMUM OF 30m LONG, 6m WIDE AND 0.45m DEEP AND SHALL CONSIST OF COARSE (2" CRUSHER-RUN LIMESTONE) MATERIAL. MAINTAIN GRAVEL ENTRANCE IN CLEAN CONDITION.
- COVER ALL CATCHBASINS WITH 6mm STEEL PLATE THAT IS FIRMLY SECURED TO THE CB GRATING WITH CLAMPS, SCREWS OR WIRES. COVER TO REMAIN IN PLACE UNTIL ROUGH PAVING IS COMPLETED. MAINTAIN GOOD HOUSEKEEPING TO PREVENT WATERBORNE SEDIMENT FROM ENTERING THE STORM SEWER SYSTEM. IF THE CB'S MUST BE USED FOR SITE DRAINAGE DURING CONSTRUCTION, THEY ARE EACH TO BE SURROUNDED BY A STRAW BALE SILT-TRAP.
- DO NOT LOCATE TOPSOIL PILES AND EXCAVATION MATERIAL CLOSER THAN 2.5m FROM ANY PAVED SURFACE, OR ONE WHICH IS TO BE PAVED BEFORE THE PILE IS REMOVED. ALL TOPSOIL PILES TO BE SEEDDED IF THEY ARE TO REMAIN ON-SITE LONG ENOUGH FOR SEEDS TO GROW (LONGER THAN ONE MONTH).
- CONTROL WIND-BLOWN DUST OFF-SITE TO ACCEPTABLE LEVELS, BY SEEDING TOPSOIL PILES AND OTHER AREAS TEMPORARILY, AND/OR WATERING, AS REQUIRED.
- TEMPORARY SOIL STOCKPILES SHOULD BE PLACED AWAY FROM ALL WATERCOURSES.
- SILT FENCE & SEDIMENT TRAP TO BE CLEANED PERIODICALLY AS REQUIRED.

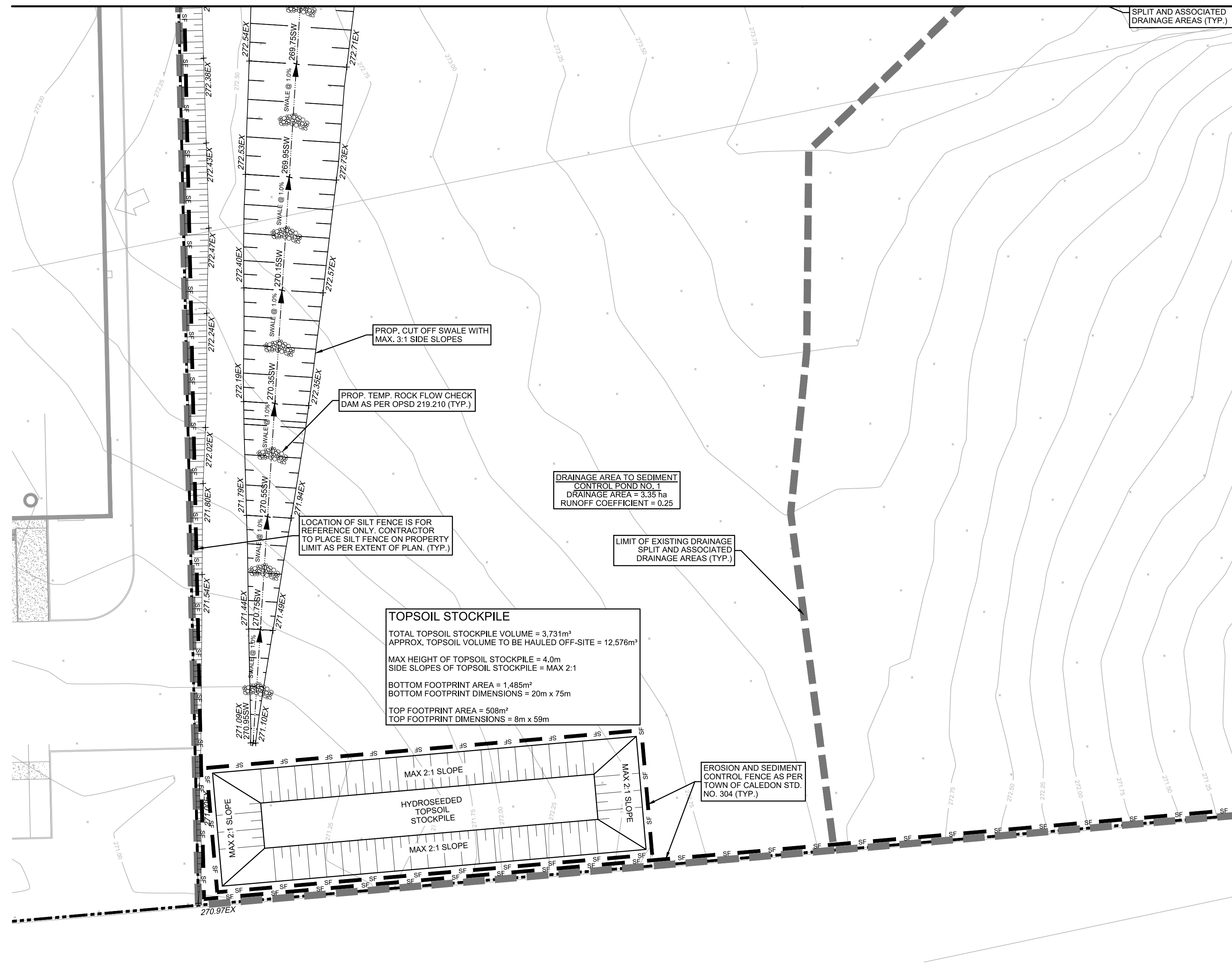
DURING CONSTRUCTION:

- STONE JACKET TO BE WRAPPED IN FILTER CLOTH.
- FILTER CLOTH WRAPPING ON STONE JACKET TO BE INSPECTED AFTER EACH RAINFALL EVENT AND REPLACED IF CLOGGED.
- ACCUMULATED SEDIMENT TO BE REMOVED AS REQUIRED.
- AT COMPLETION OF CONSTRUCTION:
 - ACCUMULATED SEDIMENT TO BE REMOVED AND DISPOSED OFFSITE.
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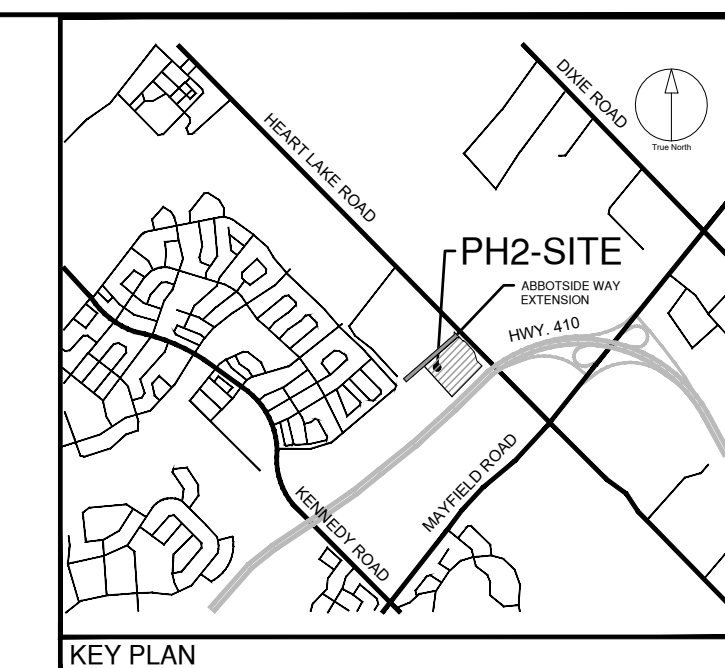
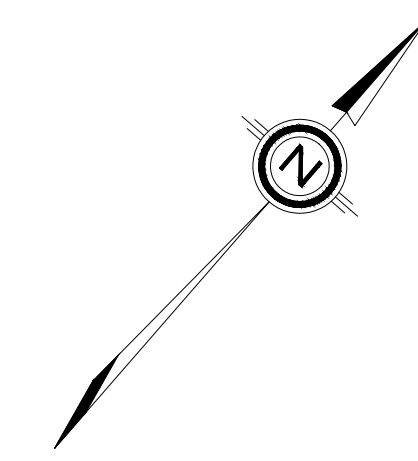
SOIL STABILIZATION:

- STABILIZE DISTURBED GROUND AND STOCKPILES BY SEEDING, SODDING, MULCHING, COVERING, OR OTHER ACCEPTABLE CONTROL MEASURES. IF GROUND IS INACTIVE FOR THIRTY(30) DAYS, (SEE TRCA ESC GUIDELINES FOR DETAILS)

SEE DWG. EC-01



SEE DWG. EC-04



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BROCCOLINI
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 MISSISSAUGA, ON. L4W5L6

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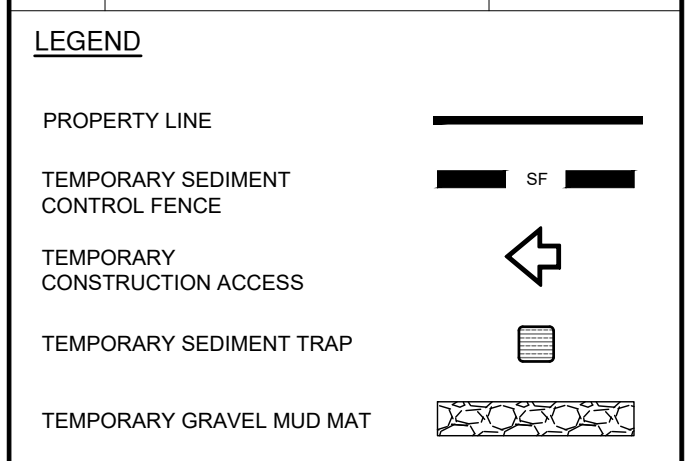
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EROSION CONTROL MEASURES

- ALL EROSION AND SEDIMENT CONTROL FACILITIES ARE TO BE INSPECTED BY THE CONSULTING ENGINEER ONCE A WEEK AND AFTER EACH RAINFALL OF 10mm OR GREATER OR A SIGNIFICANT SNOW MELT. DAILY INSPECTIONS ARE REQUIRED DURING EXTENDED RAINFALL OR SNOW MELT PERIODS.
- ALL DAMAGED ESC FACILITIES ARE TO BE REPAIRED AND/OR REPLACED WITHIN 48 HOURS OF INSPECTION.
- SILTATION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO WORKS COMMENCING ON THE SITE AND SHALL BE MAINTAINED FOR THE DURATION OF CONSTRUCTION, TO THE SATISFACTION OF THE CITY.
- ALTERNATIVE METHODS OF EROSION CONTROL MUST BE REVIEWED AND APPROVED BY IBI GROUP PRIOR TO IMPLEMENTATION. CONTRACTOR TO SUBMIT PLAN FOR REVIEW AND APPROVAL BY IBI GROUP.
- SILT FENCING SHALL BE AS PER TOWN OF CALEDON STD NO.304 PER DETAIL AND INSTALLED PRIOR TO COMMENCEMENT OF ANY AREA GRADING, EXCAVATION OR DEMOLITION AND LOCATED WHERE OFF-SITE FLOWS OCCUR.
- ALL CATCHBASINS TO HAVE SEDIMENT TRAP OR SEDIMENT BARRIER INSTALLED AS PER TOWN OF CALEDON STDS NO.302 AND 303.
- ALL STOCKPILE LOCATIONS TO BE MINIMUM 2.50m FROM PROPERTY LINE AND SURROUNDED BY SILT FENCING TO AVOID OFF-SITE MIGRATION OF SEDIMENT.
- ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AS SITE DEVELOPMENT PROGRESSES. CONTRACTOR TO PROVIDE ALL ADDITIONAL EROSION CONTROL FEATURES TO PREVENT SEDIMENT FROM LEAVING THE SITE.
- CONTRACTOR IS RESPONSIBLE FOR REMOVING SEDIMENTS FROM THE MUNICIPAL ROADWAY AND SIDEWALKS AT THE END OF EACH WORK DAY.
- ALL EROSION CONTROL STRUCTURES TO REMAIN IN PLACE UNTIL ALL DISTURBED GROUND SURFACES HAVE BEEN RE-STABILIZED EITHER BY PAVING OR RESTORATION OF VEGETATIVE GROUND COVER.
- CONTRACTOR TO MINIMIZE EXTENT OF DISTURBED AREA AND DURATION OF EXPOSURE. STABILIZE/PROTECT DISTURBED AREA AS SOON AS POSSIBLE.
- CONTRACTOR TO MONITOR THE SITE DEVELOPMENT TO ENSURE ALL EROSION CONTROLS ARE INSTALLED AND MAINTAINED TO MUNICIPAL REQUIREMENTS.
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- SEE DETAIL PAGE FOR FURTHER INFO FOR SEDIMENT CONTROL MEASURES.
- SEE STORMWATER MANAGEMENT REPORT PREPARED BY IBI GROUP (IBI PROJECT NO. 32529) FOR FURTHER INFO ON EROSION AND SEDIMENT CONTROLS.
- ALL DISTURBED GROUND LEFT INACTIVE SHALL BE STABILIZED BY SEEDING, SODDING, MULCHING OR COVERING, OR OTHER EQUIVALENT CONTROL MEASURE. THE PERIOD OF TIME OF INACTIVITY SHALL NOT EXCEED 30 DAYS, UNLESS OTHERWISE AUTHORIZED BY THE DIRECTOR OF PUBLIC WORKS AND ENGINEERING.
- CONSTRUCTION ACCESS ROUTES SHALL BE CLEARED OF MUD AND DUST DAILY.
- INTERNAL AND EXTERNAL ROADS TO BE SCRAPED, FLUSHED AND SWEEPED TWICE WEEKLY. THIS WORK SHALL BE COMPLETED EVERY TUESDAY AND FRIDAY OF EACH WEEK AND CONTINUE UNTIL ALL LOTS ARE SODDED.

ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR SPA SUBMISSION	APR 22, 2022



SILTATION AND EROSION CONTROL

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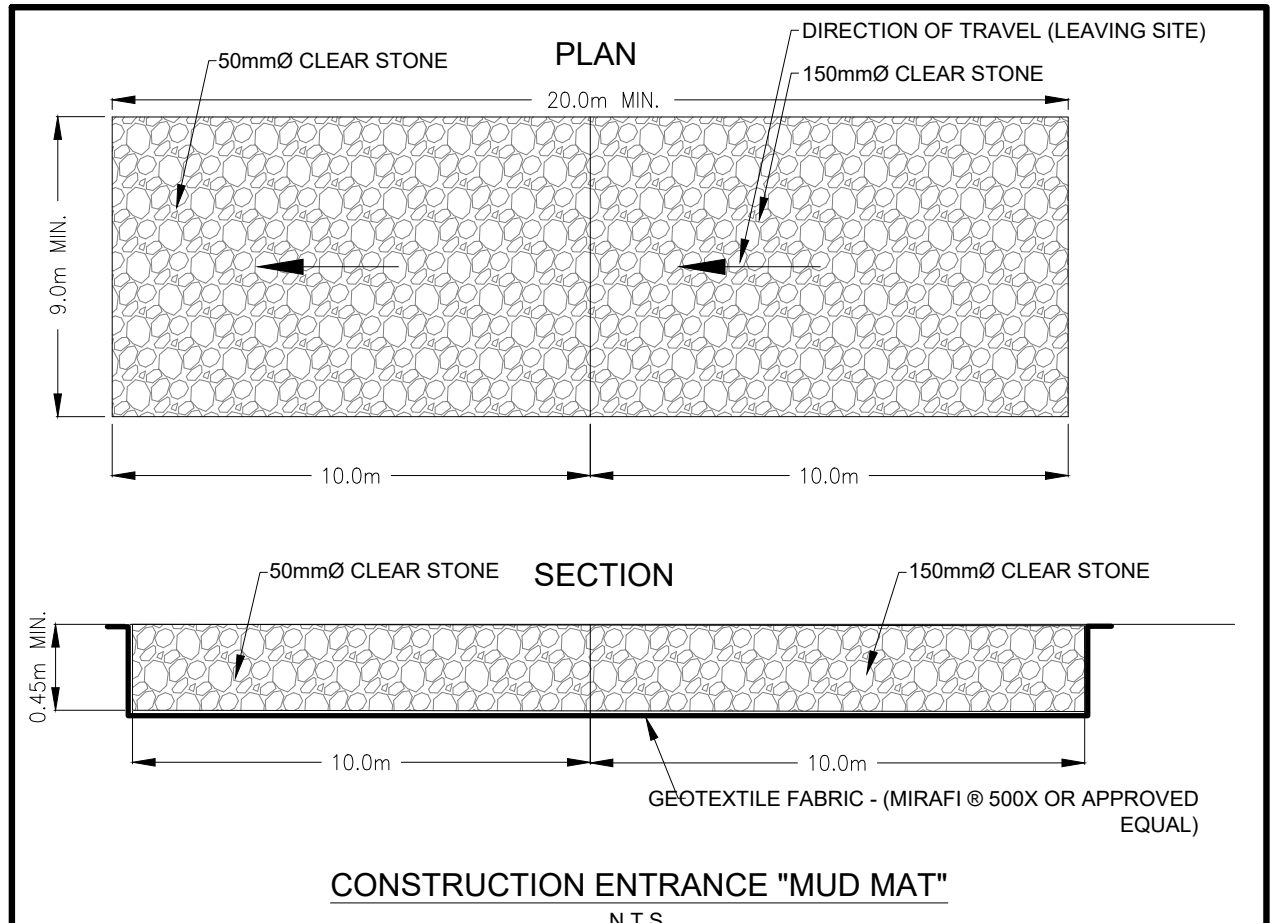
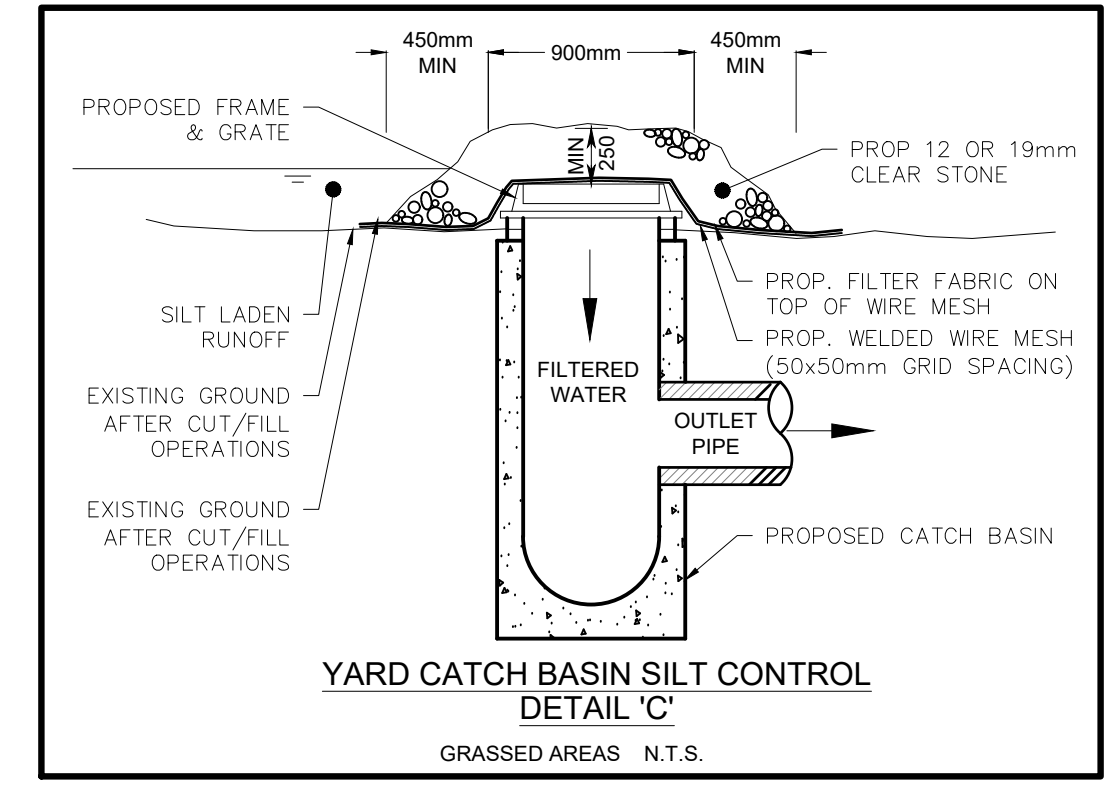
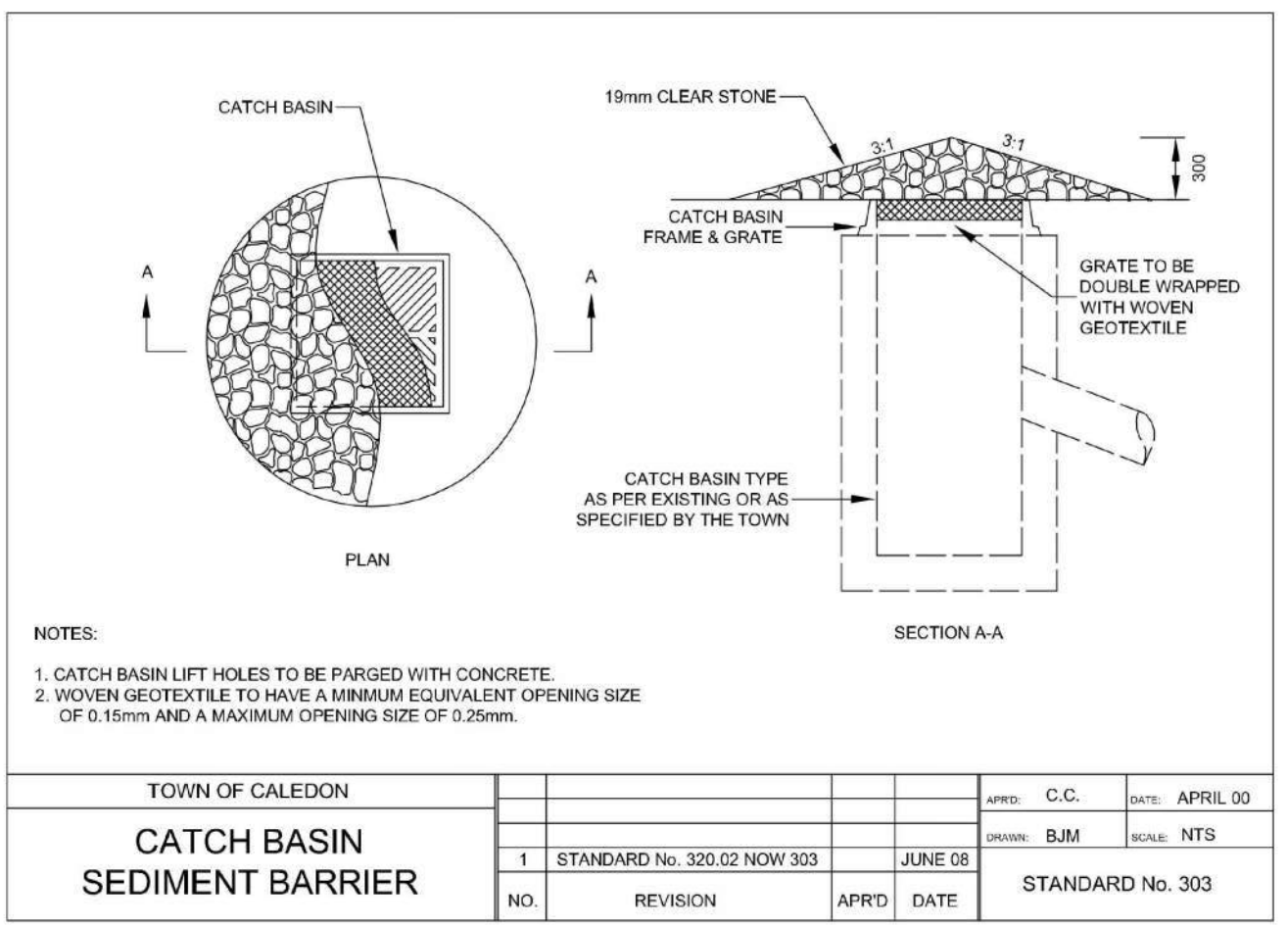
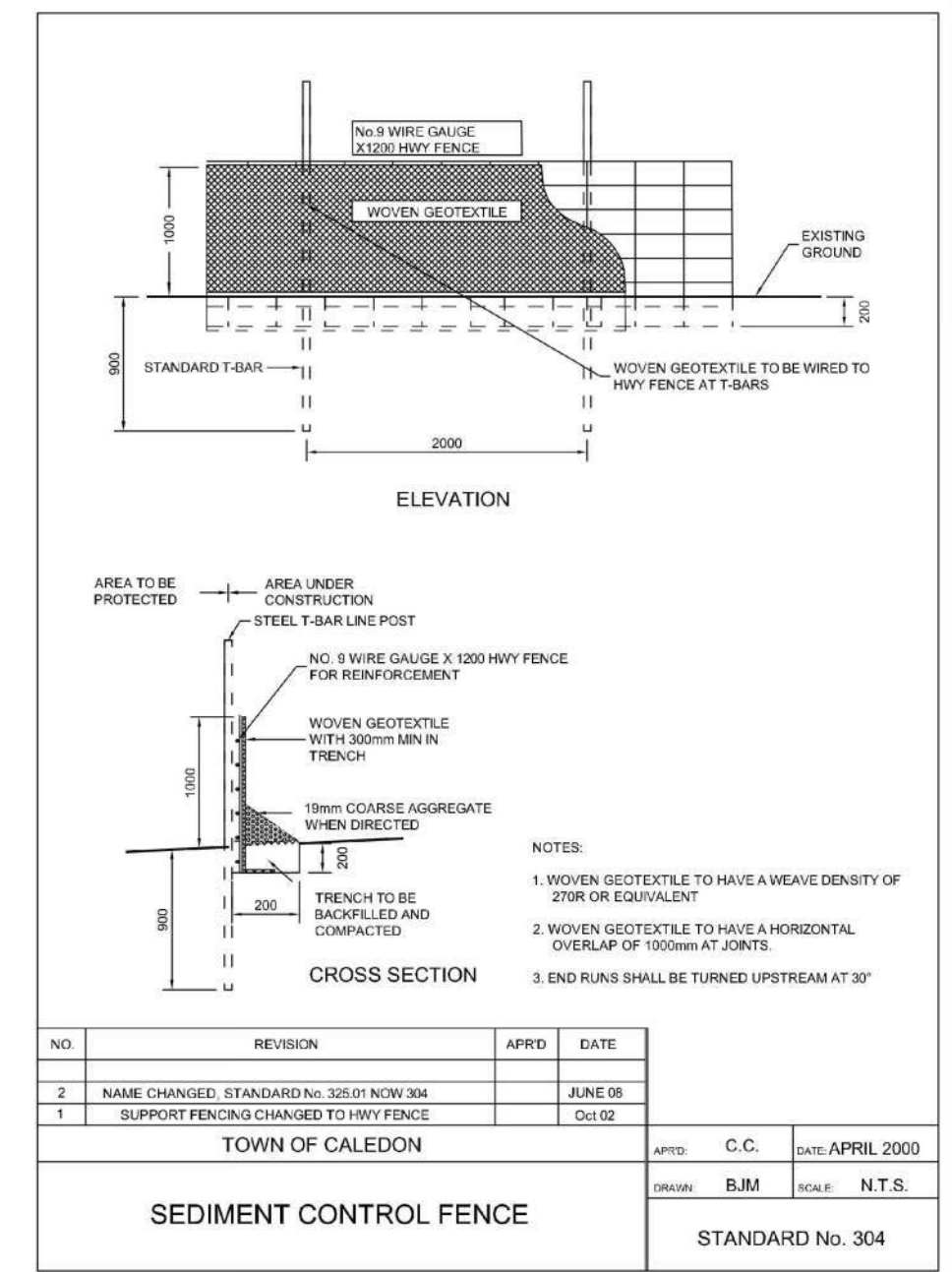
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THE EROSION AND SEDIMENT CONTROL (ESC) STRATEGIES OUTLINED ON THE PLANS ARE NOT STATIC AND MAY NEED TO BE UPGRADED/AMENDED AS SITE CONDITIONS CHANGE TO PREVENT SEDIMENT RELEASES TO THE NATURAL ENVIRONMENT. FAILED ESC MEASURES SHOULD BE REPAIRED WITHIN 48 HOURS.

- LIST OF DRAWINGS**
- SG-01 - PHASE 2 - SITE GRADING PLAN
 - SG-02 - PHASE 2 - SITE GRADING PLAN
 - SG-03 - PHASE 2 - SITE GRADING PLAN
 - SG-04 - PHASE 2 - SITE GRADING PLAN
 - SS-01 - PHASE 2 - SITE SERVICING PLAN
 - SS-02 - PHASE 2 - SITE SERVICING PLAN
 - SS-03 - PHASE 2 - SITE SERVICING PLAN
 - SS-04 - PHASE 2 - SITE SERVICING PLAN
 - EC-01 - PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
 - EC-02 - PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
 - EC-03 - PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
 - EC-04 - PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
 - DD-01 - PHASE 2 - DETAIL DRAWING
 - DD-02 - PHASE 2 - DETAIL DRAWING
 - DD-03 - PHASE 2 - DETAIL DRAWING
 - DD-04 - PHASE 2 - DETAIL DRAWING

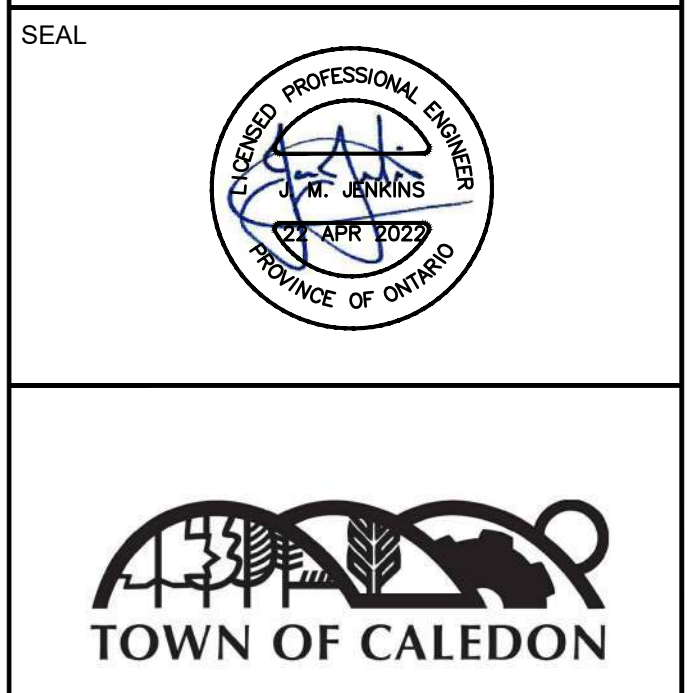
SITE PLAN INFORMATION

2680 SKYMARK AVENUE, SUITE 235
 TORONTO, ON. M9H 3E5
 PHONE: (416) 537-5700
 WEBSITE: www.ibigroup.com

SUBVEYOR INFORMATION

R/PE SURVEYING LTD.
 ONTARIO LAND SURVEYORS
 643 CHURCHILL ROAD, SUITE 7
 WOODBRIDGE, ON. L4L 6A3
 PHONE: (416) 835-5000
 WEBSITE: www.rpe.ca

BENCHMARK INFORMATION:
 ELEVATIONS ARE GEODETIC AND ARE REFERRED TO MTO VERTICAL BENCHMARK NUMBER 09199997 HAVING AN ORTHOMETRIC ELEVATION OF 265.112 METRES. ELEVATIONS ARE REFERENCED TO THE CANADIAN GEODETIC VERTICAL DATUM OF 1988. 1978 ADJUSTMENT (CGVD-1988/1978).



IBI GROUP
 Unit 300 - 8133 Warden Avenue
 Markham ON L6G 1B3 Canada
 Tel: 905.763.2322 Fax: 905.763.9983
 ibigroup.com

PROJECT
 12304 HEART LAKE ROAD
 PHASE 2
 CALEDON, ON. L7C 2J2

PROJECT NO:
 135636

DRAWN BY: NDS
CHECKED BY: JJ

PROJECT MGR: JJ
APPROVED BY: JJ

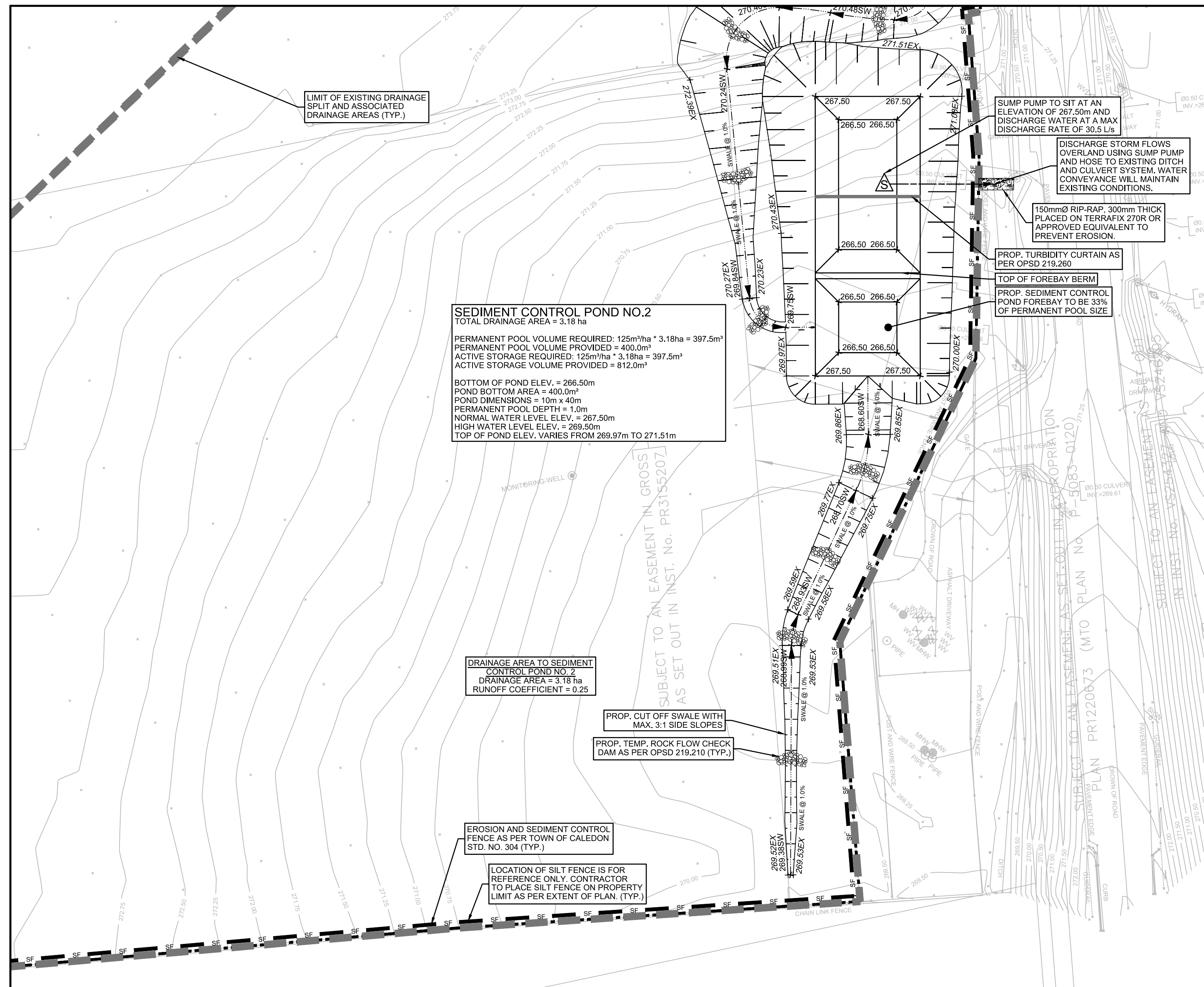
SHEET TITLE
 PHASE 2 - EROSION CONTROL PLAN

SHEET NUMBER
 EC-03

ISSUE
 01

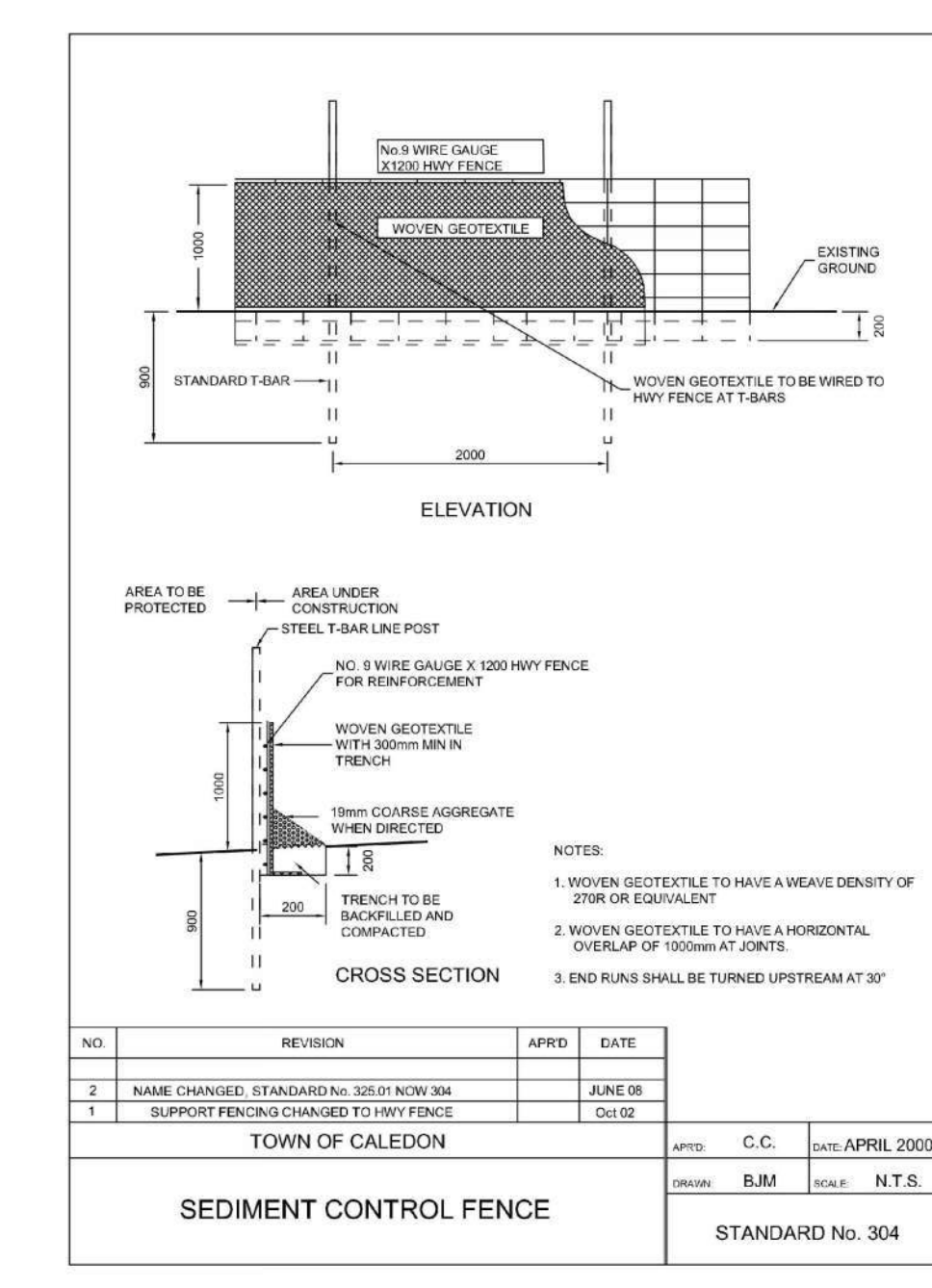
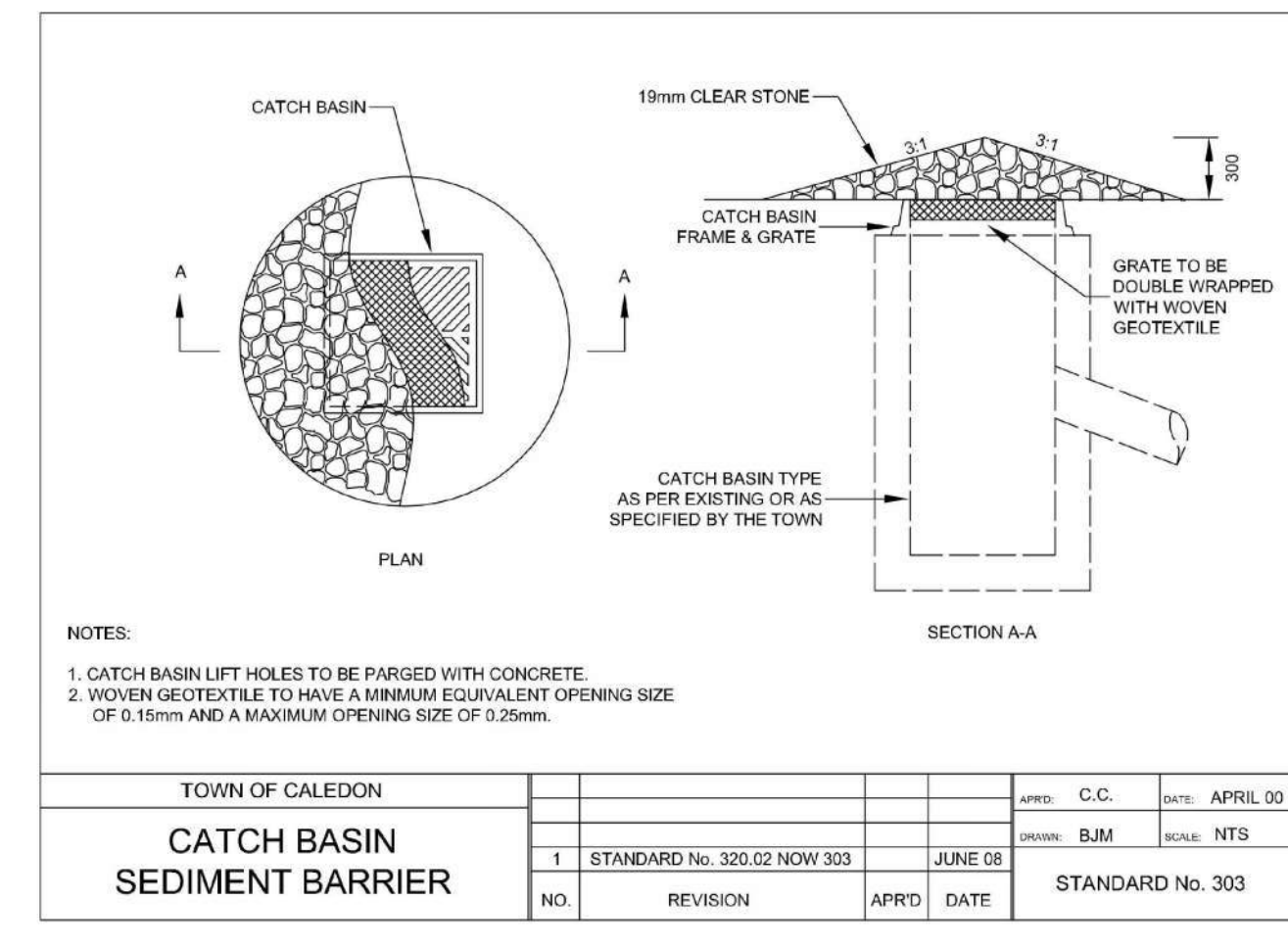
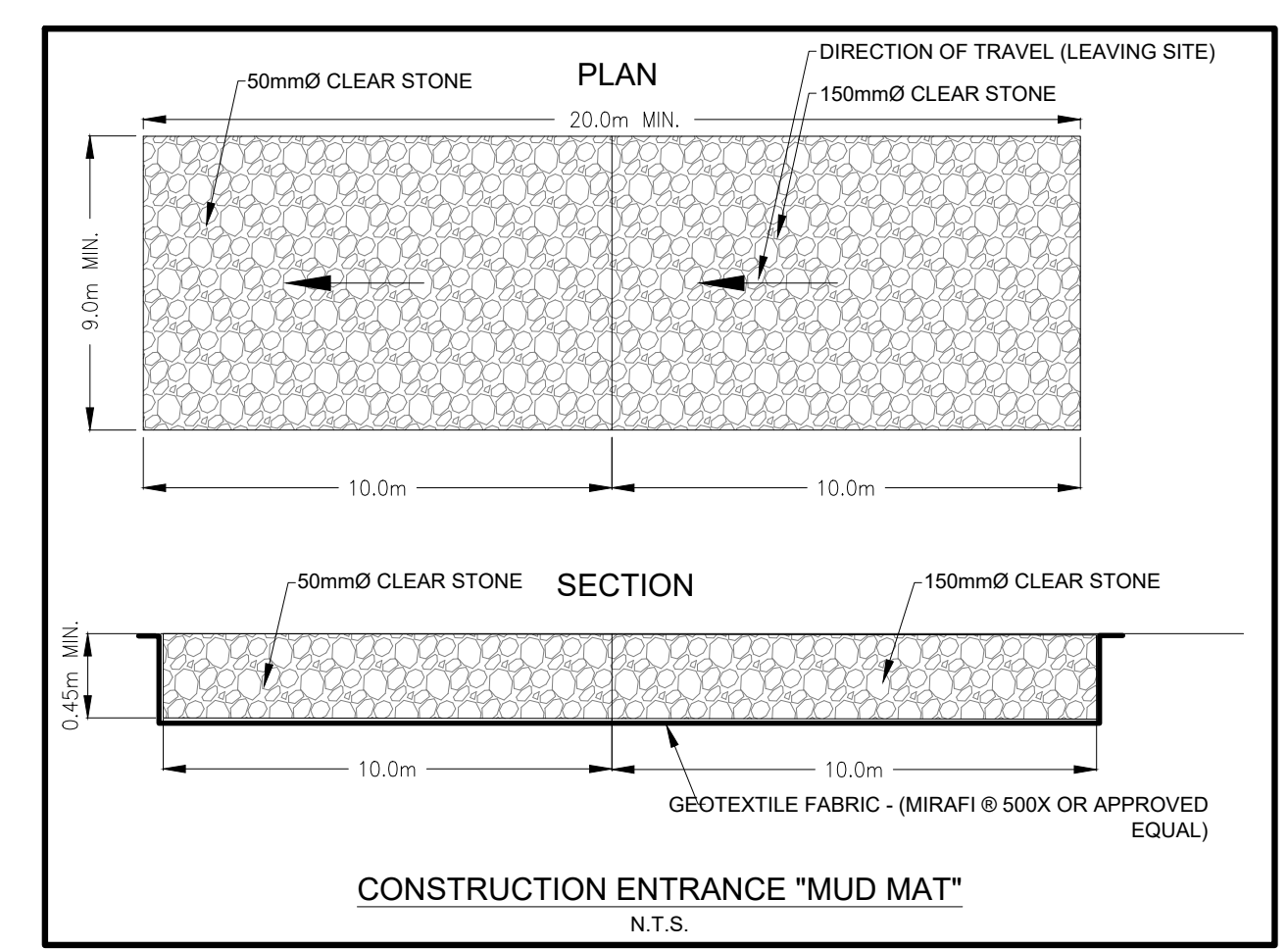
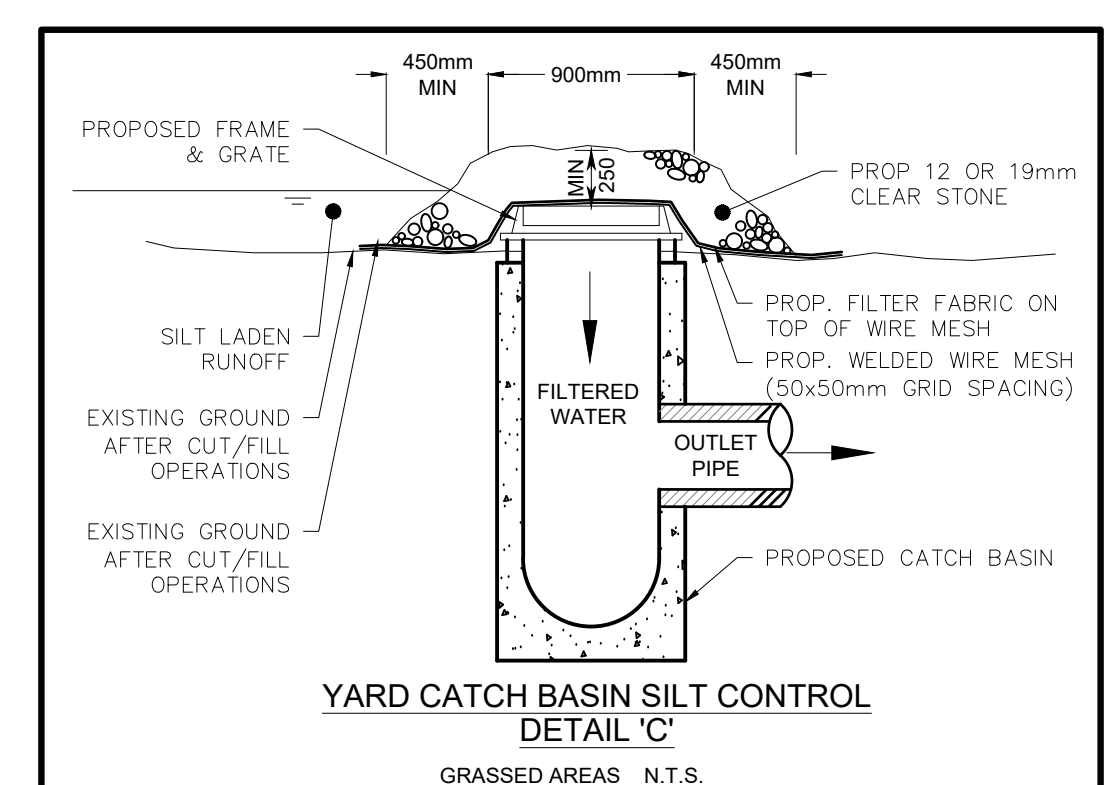
SEE DWG. EC-02

SEE DWG. EC-03



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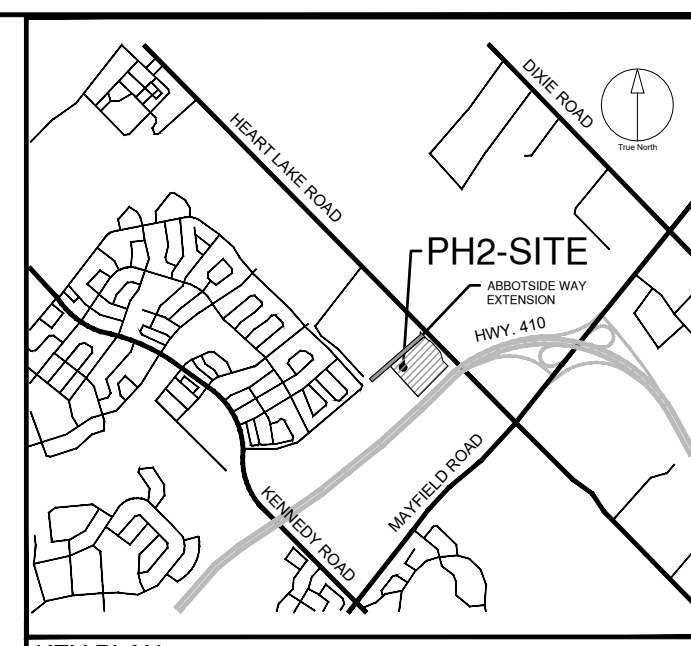


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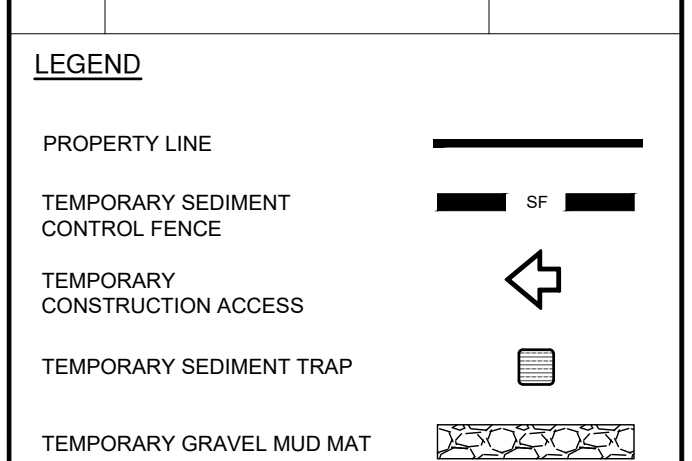


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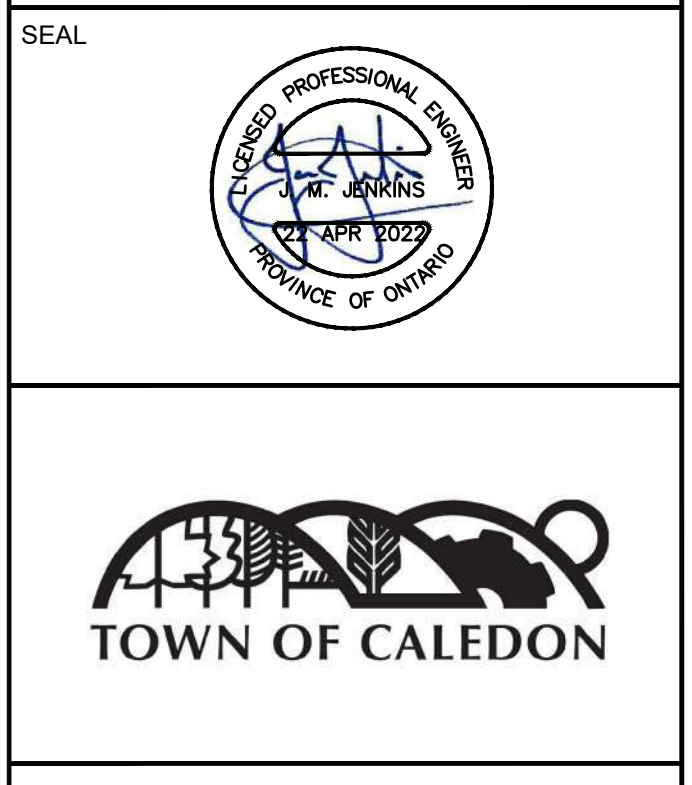
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ISSUES	No.	DESCRIPTION	DATE
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SEAL



IBI GROUP
 Unit 300 - 8133 Warden Avenue
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 Tel: 905.763.2322 Fax: 905.763.9983
 ibigroup.com

PROJECT
 12304 HEART LAKE ROAD
 PHASE 2
 CALEDON, ON. L7C 2J2

PROJECT NO:
 135636

DRAWN BY: NDS
CHECKED BY: JJ

PROJECT MGR: JJ
APPROVED BY: JJ

SHEET TITLE
PHASE 2 - EROSION CONTROL PLAN

SHEET NUMBER EC-04 **ISSUE** 01

THE EROSION AND SEDIMENT CONTROL (ESC) STRATEGIES OUTLINED ON THE PLANS ARE NOT STATIC AND MAY NEED TO BE UPGRADED/AMENDED AS SITE CONDITIONS CHANGE TO PREVENT SEDIMENT RELEASES TO THE NATURAL ENVIRONMENT. FAILED ESC MEASURES SHOULD BE REPAIRED WITHIN 48 HOURS.

LIST OF DRAWINGS

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- SG-02 - PHASE 2 - SITE GRADING PLAN
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- EC-01 - PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
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- DD-03 - PHASE 2 - DETAIL DRAWING
- DD-04 - PHASE 2 - DETAIL DRAWING

SUBVEYOR INFORMATION

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BENCHMARK INFORMATION:
 ELEVATIONS ARE GEODETIC AND ARE REFERRED TO MTO VERTICAL BENCHMARK NUMBER 05099997 HAVING AN ORTHOMETRIC ELEVATION OF 268.112 METRES. ELEVATIONS ARE REFERENCED TO THE CANADIAN GEODETIC VERTICAL DATUM OF 1984. 1978 ADJUSTMENT (CGVD-1984/1978).

SCALE: 1:500

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GENERAL NOTES:

- ALL WORK INVOLVED IN THE CONSTRUCTION, RELOCATION, REPAIR OF MUNICIPAL SERVICES FOR THE PROJECT SHALL BE TO THE SATISFACTION OF THE TOWN.
- THE APPLICANT, APPLICANTS REPRESENTATIVE, CONSULTANT, CONTRACTOR AND SUB CONTRACTORS ARE RESPONSIBLE TO ENSURE THAT THEIR DESIGN MATERIALS AND CONSTRUCTION PRACTICES CONFORM TO THE LATEST REGION, TOWN, MINISTRY OF ENVIRONMENT, TORONTO REGIONAL CONSERVATION AUTHORITY'S DEVELOPMENT STANDARDS, POLICIES, SPECIFICATIONS, MATERIALS, DESIGN CRITERIA AND GUIDELINES AS POSTED ON THEIR RESPECTIVE WEBSITES. IN THE ABSENCE OF REGION OR TOWN SPECIFICATIONS, THE ONTARIO PROVINCIAL STANDARD SPECIFICATIONS (OPSS) SHALL APPLY.
- ALL WORKS SHALL BE COMPLETED IN ACCORDANCE WITH THE "OCCUPATIONAL HEALTH AND SAFETY ACT". THE GENERAL CONTRACTOR SHALL BE DEEMED TO BE THE CONSTRUCTOR AS DEEMED IN THE ACT.
- THE LOCATION, DIMENSION AND ELEVATION OF ALL EXISTING SERVICES AND UTILITIES ARE TO BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION, BY THE CONTRACTOR, AT HIS EXPENSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RESTORATION AND THE REPAIR OF EXISTING UTILITIES DISTURBED DURING CONSTRUCTION. ALL AREAS BEYOND THE PLAN OF SUBDIVISION THAT ARE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE REGION OF PEELE AT THE CONTRACTOR'S EXPENSE.
- ALL DIMENSIONS ARE IN METERS UNLESS SPECIFIED OTHERWISE.
- ALL BOREHOLES SHOWN ON THE DRAWING ARE FOR INFORMATION ONLY. REFER TO THE GEOTECHNICAL REPORT.
- ALL SUPPORT OF ALL UTILITIES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION INCLUDING THE DECOMMISSIONING AND RECOMMISSIONING OF THE EXISTING LIGHT STANDARDS ALONG EXISTING SPEIRS GIFFEN AVENUE.
- ALL BACKFILL FOR SEWERS, WATERMANS AND UTILITIES ON THE ROAD ALLOWANCE MUST BE MECHANICALLY COMPACTED.
- FIRE ROUTE SIGNS AND 3-WAY FIRE HYDRANTS SHALL BE ESTABLISHED TO THE SATISFACTION OF THE TOWN FIRE DEPARTMENT AND AT THE EXPENSE OF THE OWNER.
- DRIVEWAY ENTRANCES AND DROP CURBS SHALL BE IN ACCORDANCE WITH THE TOWN OF CALEDON STANDARD DRAWING 402 AND THE MOST RECENT DRAWING STANDARD DRAWINGS FOR THIS PURPOSE (SEE SHEET 19).
- BOULEVARD DRIVEWAY SLOPE SHOULD BE A MAXIMUM OF 6.0% AND A MINIMUM OF 2.0% WHEREVER POSSIBLE.
- A MINIMUM CLEAR DISTANCE OF 1.5m IS REQUIRED BETWEEN THE EDGE OF THE DRIVEWAY AND A UTILITY STRUCTURE OR HYDRANT.
- THE APPROVAL OF THIS PLAN DOES NOT EXEMPT THE OWNERS' BONDED CONTRACTOR FROM THE REQUIREMENTS TO OBTAIN THE VARIOUS PERMITS/APPROVALS NORMALLY REQUIRED TO COMPLETE A CONSTRUCTION PROJECT, SUCH AS BUT NOT LIMITED TO THE FOLLOWING:
 - ROAD CUT PERMITS
 - SEWER PERMITS
 - APPROACH APPROVAL PERMITS
 - RELOCATION OF SERVICES
 - COMMITTEE OF ADJUSTMENT
 - ENCROACHMENT AGREEMENTS (IF REQUIRED)
- 3 METER BY 3 METER VISIBILITY TRIANGLES IN WHICH THE MAXIMUM HEIGHT OF ANY OBJECTS OR MATURE VEGETATION IS NOT TO EXCEED A HEIGHT OF 0.6 METERS ABOVE THE CORRESPONDING PERPENDICULAR CENTERLINE ELEVATION OF THE ADJACENT STREET.
- SILTATION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO WORKS COMMENCING ON THE SITE AND SHALL BE MAINTAINED FOR THE DURATION OF CONSTRUCTION, TO THE SATISFACTION OF THE TOWN.
- THE SUB-GRADE SOILS EXPOSED AFTER EXCAVATION SHALL BE INSPECTED AND CERTIFIED BY A QUALIFIED REGISTERED PROFESSIONAL ENGINEER. A COPY OF THE REPORT SHALL BE FORWARDED TO THE TOWN OF CALEDON BUILDING DIVISION. WHERE THE FOOTING WILL BE SITUATED ON FILL MATERIAL, THE FOOTINGS SHALL BE DESIGNED AND APPROVED BY QUALIFIED REGISTERED PROFESSIONAL ENGINEER.
- ALL PROPOSED SEWERS, THROUGHOUT THEIR LENGTH FROM THE MAIN SEWER TO THE BUILDING OR PLACE TO BE DRAINED IS TO BE LAID, AS NEARLY AS PRACTICAL, IN A STRAIGHT LINE IN A TRENCH AT A RIGHT ANGLE TO THE MAIN SEWER.

REGIONAL ROAD (DIXIE ROAD):

- ALL CONSTRUCTION SIGNAGE MUST CONFORM TO MTO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- ASPHALT PRESERVATIVE SEALER SUCH AS RE-CLIMATEX OR APPROVED EQUIVALENT SHALL BE APPLIED AFTER THE ONE-YEAR MAINTENANCE PERIOD FOR THE TOP COURSE ASPHALT.
- ALL TEMPORARY SIGNAGE AND TRAFFIC CONTROL MEASURES SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF ONTARIO TRAFFIC MANUAL, BOOK 7 TEMPORARY CONDITION.
- ACCESS TO EXISTING ENTRANCES AND SIDE STREETS SHALL BE MAINTAINED.
- WORK OPERATIONS THAT REQUIRE DIVERTING TRAFFIC TO ONE LANE SUBJECT TO TIME RESTRICTIONS AND/OR NIGHT TIME OPERATIONS AS SPECIFIED IN ROAD OCCUPANCY PERMIT.
- LOCATION OF EXISTING UTILITIES TO BE ESTABLISHED BY CONTRACTOR. ALL EXISTING UTILITY ELEVATIONS (SEWERS AND WATERMANS) INCLUDING CENTRE LINE OF THE ROAD ELEVATIONS HAVE TO BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCING ANY WORK ON SITE. ANY DISCREPANCIES SHALL BE REPORTED TO THE DESIGN ENGINEER AND THE REGION IMMEDIATELY.
- THE CONTRACTOR(S) SHALL BE SOLELY RESPONSIBLE FOR LOCATING, SUPPORTING AND PROTECTING ALL UNDERGROUND AND OVERHEAD UTILITIES AND STRUCTURES EXISTING AT THE TIME OF CONSTRUCTION IN THE AREA OF HIS WORK, WHETHER SHOWN ON THE PLANS OR NOT, AND FOR ALL REPAIRS AND CONSEQUENCES RESULTING FROM DAMAGE TO SAME.
- THE CONTRACTOR(S) SHALL BE SOLELY RESPONSIBLE TO GIVE 72 HOURS WRITTEN NOTICE TO UTILITY AUTHORITY PRIOR TO CROSSING SUCH UTILITIES FOR THE PURPOSE OF INSPECTION. THIS INSPECTION WILL BE FOR THE DURATION OF CONSTRUCTION WITH THE CONTRACTOR RESPONSIBLE FOR ALL COSTS ARISING FROM SUCH INSPECTIONS.
- THE CONTRACTOR SHALL NOTIFY IN ADVANCE, AS REQUIRED, THE APPROPRIATE AUTHORITY HAVING JURISDICTION FOR THE ROAD PRIOR TO COMMENCING ANY WORK AND SHALL ACQUIRE AND SATISFY THE REQUIREMENTS OF APPROPRIATE PERMITS (FEES, INSPECTIONS, SIGNAGE, TRAFFIC, MAINTENANCE, DIVERSION, ETC.).
- ALL EXISTING PAVEMENTS, CURBS, SIDEWALKS, AND BOULEVARDS AND OTHER AREAS DISTURBED BY THE WORK TO BE REINSTATED EQUAL OR BETTER TO EXISTING AND TO THE SATISFACTION OF APPLICABLE AUTHORITY HAVING JURISDICTION OVER THE ROAD ALLOWANCE. EXISTING PAVEMENTS AND CURBS TO BE SAW-CUT TO PROVIDE A SMOOTH JOINT.

ROADWORKS:

1. GENERAL

- CONSTRUCTION OF ROADWAYS & RELATED WORKS SHALL BE IN ACCORDANCE WITH TOWN OF CALEDON STANDARDS AND SPECIFICATIONS (LATEST EDITION).
- FOLLOWING THE INSTALLATION OF SEWERS, ALL ROADWAYS SHALL BE ROUGH GRADED TO A SUBGRADE FOR THE INSTALLATION OF WATERMANS AND UTILITIES.

2. CATCH BASINS

- CATCH BASIN CONNECTIONS TO BE 250mm DIA. PVC PIPE, CSA 182.2, SDR-35 UNLESS OTHERWISE NOTED.
- SINGLE / DOUBLE STREET CATCH BASINS AS PER OPSD 705.010 / 705.020 RESPECTIVELY WITH GOSS TRAPS. STREET CB GRATES AS PER OPSD 400.100

3. FINAL ROADWAYS

- ROAD DESIGN TO ADHERE TO TOWN OF CALEDON STANDARD No. 211 (SEE DETAIL SEE DETAIL SHEET 16) FOR A 26.0m INDUSTRIAL COLLECTOR (14.5m ROADWAY, 13.0m PAVEMENT).
- MANHOLES AND CATCH BASINS SHALL BE INSTALLED FLUSH WITH THE BINDER COURSE ASPHALT (HLS).
- MANHOLES TO BE ADJUSTED TO MATCH FINAL LIFT OF ASPHALT.

4. SIDEWALKS

- CONCRETE CURB AND GUTTER AS PER OPSD 600.040 (SEE SHEET 20). Min. 30 MPa STRENGTH. A 50 mm KEY IS REQUIRED FOR ALL LOCATIONS.
- 1.5m WIDE CONCRETE SIDEWALK AS PER OPSD 310.010 (SEE SHEET 20) (125mm THICKNESS, Min. 30 MPa STRENGTH WITH GRANULAR 'A' BASE AS REQUIRED TO PROVIDE A LEVELING COURSE FOR THE CONCRETE. AT DRIVEWAYS, CONCRETE DEPTH TO BE Min. 175mm).
- WHEELCHAIR RAMPS REQUIRED AT ALL INTERSECTIONS AS PER OPSD 310.030 (SEE SHEET 20).
- WHEELCHAIR ACCESS SHALL BE PROVIDED AT ALL DRIVEWAY INTERSECTIONS.
- ASPHALT RAMPING SHALL BE PLACED TO SUIT THE WHEELCHAIR RAMPS IF SURFACE COURSE ASPHALT IS NOT INSTALLED AT THE SAME TIME. THESE RAMPS ARE TO BE REMOVED JUST PRIOR TO COMPLETION OF SURFACE COURSE ASPHALT.

5. ROAD SUBDRAINS

- 100mm FILTER WRAPPED CORRUGATED SLOTTED P.E. PLASTIC PIPE SUBDRAINS TO BE INSTALLED CONTINUOUSLY BELOW THE CURB AND GUTTER AND CONNECTED TO THE CURB AS PER TOWN OF CALEDON STANDARD No. 219 (SEE STANDARD SHEET 19).

COMPACTION REQUIREMENTS

- ALL COMPACTION REQUIREMENTS TO MEET THE REQUIREMENTS AS OUTLINED IN THE GEOTECHNICAL REPORT.
- ALL BEDDING AND BACKFILL MATERIAL, ROAD SUB-GRADES AND GENERALLY ALL MATERIALS USED FOR LOT GRADING AND FILL SECTIONS, ETC. SHALL BE COMPACTED TO MIN 98% SPMOD. WHILE THE UPPER ZONE (WITHIN 1.2m OF THE DESIGN SUBGRADE) SHOULD BE COMPACTED TO A MINIMUM OF 98% SPMOD.
- THE PAVEMENT SUBGRADE SHOULD BE PROOF-ROLLED WITH A HEAVY RUBBER TIRE VEHICLE (SUCH AS A GRADER) AND ANY LOOSE, SOFT, WET OR UNSTABLE AREAS SHOULD BE SUB-EXCAVATED, AND BACKFILLED WITH CLEAN EARTH FILL MATERIAL PLACED IN 150mm LIFTS (OR LESS) AND COMPACTED TO A MINIMUM OF 100% SPMOD.
- ASPHALT MATERIALS SHALL BE ROLLED AND COMPACTED AS PER OPSD 310.
- THE GRANULAR AND ASPHALT PAVEMENT MATERIALS AND THEIR PLACEMENT SHOULD CONFORM TO OPSD FORMS 310, 501, 1010, AND 1150 AND THE TOWN REGION SPECIFICATIONS.
- FOR ALL SEWERS AND WATERMANS IN FILL SECTIONS, THE COMPACTION SHALL BE CERTIFIED BY A GEOTECHNICAL ENGINEER PRIOR TO LAYING OF PIPE.
- WHERE DEWATERING MEASURES ARE TO BE IMPLEMENTED IN SECTIONS OF SEWER INSTALLATION, CLAY PLUGS SHOULD BE INSTALLED WITH GRANULAR BEDDING AND THE GRANULAR ZONES OF BACKFILL MATERIAL TO HELP PREVENT MIGRATION OF GROUND WATER ALONG THE RELATIVELY FREE DRAINING BEDDING MATERIAL.
- CLAY PLUGS SHOULD BE PLACED IN TRENCHES AT 50m INTERVALS (OR LESS) ALONG THE FULL LENGTH OF THE WATER TRENCH, WHERE THE INVERT OF THE TRENCH IS BELOW THE WATER TABLE. THE PLUG SHOULD BE AT LEAST 1.0m THICK (MEASURED ALONG THE PIPE) AND SHOULD BE COMPACTED TO A MINIMUM OF 98% SPMOD.

WATERMANS:

1. GENERAL

- CONSTRUCTION OF WATERMANS AND PRIVATE SERVICES SHALL BE IN ACCORDANCE WITH THE REGION OF PEELE PUBLIC WORKS DESIGN, SPECIFICATIONS AND PROCEDURES MANUAL (LATEST EDITION) AND MINISTRY OF ENVIRONMENT (MOE) GUIDELINES (LATEST EDITION).
- WHERE NON-METALLIC PIPE (PVC, CONCRETE PRESSURE PIPE) IS INSTALLED, A 12-GAUGE TWU STRANDED COPPER, LIGHT COLOURED PLASTIC COATED TRACER WIRE MUST BE INSTALLED WITH AND ALONG THE PIPE AND BROUGHT TO THE SURFACE AT EACH VALVE BOX/CHAMBER AND HYDRANT (AROUND PORT). TRACER WIRE IS TO BE ATTACHED TO THE PIPE AND OUTSIDE OF EACH VALVE BOX BY MEANS OF TAPE.
- ALL FITTINGS SHALL BE RESTRAINED WHERE REQUIRED BY THE DESIGN OR BY THE REGION.
- STAINLESS STEEL BOLTS AND NUTS ARE TO BE USED ON ALL FITTINGS AND JOINT RESTRAINTS.
- CATHODIC PROTECTION IS REQUIRED ON ALL METALLIC FITTINGS, VALVES AND JOINT RESTRAINTS MUST BE WRAPPED END TO END WITH AN APPROVED CORROSION PROTECTION SYSTEM THAT INCLUDES PETROLATUM PRIMER (PASTE), PETROLATUM MOULDING, AND LOW TEMPERATURE PETROLATUM TAPE.
- ALL SYSTEM COMPONENTS ARE TO BE EITHER TO THE REGION OF PEELE STANDARDS OR ONTARIO PROVINCIAL STANDARD DRAWING (OPSD), WHERE A REGION STANDARD EXISTS, IT SHALL BE USED IN PLACE OF THE OPSD STANDARD.
- ALL LIVE TAPPING AND OPERATION OF EXISTING REGIONAL WATER VALVES SHALL BE ARRANGED THROUGH THE REGIONAL INSPECTOR ASSIGNED OR BY CONTACTING THE WATER DIVISION.
- THE NEW WATERMAIN MUST BE ISOLATED FROM THE EXISTING WATERMAIN TO MAINTAIN PRESSURE IN THE NEW MAIN DURING INSTALLATION OF SERVICES. PROPER SIZE BY-PASS WITH THE APPROVED DIFFERENTIAL BACKFLOW PREVENTER TO BE INSTALLED AROUND THE CLOSED OPERATING VALVE.
- ANY JOINT DEFLECTION SHALL BE 50% OF MANUFACTURERS SPECIFICATIONS. PIPER BARREL DEFLECTION IS PROHIBITED WHEN USING PVC PIPE.

2. LOCATIONS

- MINIMUM HORIZONTAL SEPARATION BETWEEN SEWERS AND WATERMANS SHALL BE IN ACCORDANCE WITH TOWN OF CALEDON STANDARD No. 211 (SEE DETAIL SHEET 16) AND HAVE A MINIMUM HORIZONTAL SEPARATION OF 2.0m AS PER THE REGION OF PEELE VERTICAL CLEARANCE BETWEEN SEWERS AND WATERMANS THAT CROSS TO BE 500mm BETWEEN THE OUTSIDE OF THE WATERMAIN AND OUTSIDE OF THE SEWER AS PER MOE DESIGN CRITERIA.
- THE MINIMUM LATERAL DISTANCE BETWEEN WATER SERVICES AND OTHER UTILITIES SHALL BE 1.2m.

3. DEPTH

- ALL WATER SERVICES TO BE INSTALLED WITH A MINIMUM OF 2.4m COVER.
- REFER TO STD DWG 1-5-8 FOR INSULATION REQUIREMENTS.

4. CROSSINGS

- WHERE WATERMANS CROSS UNDER A CREEK, THE MINIMUM COVER OVER THE WATERMAIN BELOW THE CREEK BOTTOM SHALL BE AS PER MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT AND CONSERVATION AUTHORITIES REQUIREMENTS. GENERALLY, WHERE WATERMANS CROSS OVER UTILITIES, A 0.3m MINIMUM CLEARANCE SHALL BE PROVIDED, WHERE WATERMANS CROSS UNDER UTILITIES, THE MINIMUM CLEARANCE SHALL BE 0.9m.
- FOR A WATERMAIN CROSSING A SANITARY SEWER, WATERMAIN JOINTS ARE TO BE OFFSET A MINIMUM OF 2.3m HORIZONTALLY FROM THE CENTERLINE OF THE SANITARY SEWER.

5. CONSTRUCTION IN FILL AREAS

- "NO WATERMAIN SHALL BE LAID ON FILL UNLESS DENSITY TEST REPORTS HAVE BEEN SUBMITTED TO AND APPROVED BY THE CONSULTANT OR REGION. FILL SHALL BE PLACED TO 0.6m MINIMUM ABOVE THE TOP OF WATERMAIN GRASSES AND COMPACTED TO THE MINIMUM OF 100% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMOD) IN 0.3m LIFTS. TESTS SHALL BE TAKEN ALONG THE CENTERLINE OF THE PROPOSED WATERMAIN. ALL FITTINGS AND BRANCH VALVES IN FILL AREAS SHALL BE TIED WITH THE RODS IN ADDITION TO CONCRETE BLOCKING ACCORDING TO THE FOLLOWING:
 - THRUST BLOCKING**
CONCRETE THRUST BLOCKS SHALL BE INSTALLED AT ALL TEES, HORIZONTAL BENDS, HYDRANTS END OF MAINS AND CONNECTIONS 100mm TO 300mm DIAMETER AS PER REGIONAL STANDARDS. ALL 400mm DIAMETER WATERMANS AND LARGER SHALL HAVE RESTRAINED JOINTS. CALCULATIONS WILL BE REQUIRED FROM THE CONSULTANT TO DETERMINE THE NUMBER OF JOINTS TO BE RESTRAINED BEYOND THE BEND.
ALL THRUST BLOCK LOCATIONS, WHERE COMPACTED FILL RATHER THAN UNDISTURBED GROUND EXISTS BEHIND THE THRUST BLOCK, THE FOLLOWING ADDITIONAL PROCEDURE SHALL BE FOLLOWED:
ALL SEGMENTS OF THE FITTING AND THE WATERMAIN AT THE THRUST BLOCK LOCATION SHALL BE TIED USING APPROVED RESTRAINING DEVICES INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS (TIE RODS AND CLAMPS SHALL BE PROTECTED USING CATHODIC PROTECTION AND CORROSION PREVENTION TAPE).
IMPORTED GRANULAR FILL OPS GRANULAR "B" OR EQUIVALENT IS TO BE USED BEHIND THE THRUST BLOCK AND FOR A MINIMUM DISTANCE OF 2m EACH SIDE OF THE THRUST BLOCK. THIS IMPORTED GRANULAR FILL SHALL BE COMPACTED TO A MINIMUM OF 100% STANDARD PROCTOR DENSITY. PRIOR TO CONSTRUCTING THE THRUST BLOCKS, THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FOR BACKFILL FROM A LICENSED GEOTECHNICAL ENGINEER."

6. LINE VALVES

- ALL VALVE BOXES TO BE SET TO SURFACE GRADE.
- CORROSION PROTECTION TAPE AND ZINC ANODE CAPS SHALL BE APPLIED TO ALL VALVES LOCATED WITHIN CHAMBERS.
- ALL VALVES 300mm AND SMALLER SHALL BE EQUIPPED WITH VALVE BOXES AND RESTRAINED.
- A 12-GAUGE TWU STRANDED COPPER, LIGHT COLOURED PLASTIC COATED TRACER WIRE MUST BE INSTALLED WITH AND ALONG THE PIPE AND BROUGHT TO THE SURFACE AT EACH VALVE BOX/CHAMBER. TRACER WIRE IS TO BE ATTACHED TO THE PIPE OUTSIDE OF EACH VALVE BOX BY MEANS OF TAPE.
- TRACER WIRE IS TO BE LOOPED THROUGH A HOLE IN THE SIDE OF THE VALVE BOX AS PER STD DWG 1-3-11 (SEE DETAIL SHEET 20).
- ALL VALVE BOXES AND HYDRANTS ARE TO BE PROTECTED DURING CONSTRUCTION.
- WATERTIGHT BOLT DOWN COVERS SHALL BE PROVIDED ON ALL CHAMBERS THAT ARE SUSCEPTIBLE TO FLOODING OR VANDALISM.
- EACH CHAMBER WILL REQUIRE EXTENDED VENTS. THE ELEVATIONS OF THE VENTS SHALL BE ABOVE REGIONAL FLOOD LINES AS DETERMINED BY THE APPROPRIATE CONSERVATION AUTHORITY.

7. SERVICES

- WATERMAIN SERVICES ARE TO BE INSTALLED PERPENDICULAR TO THE PROPOSED WATERMAIN AND STRAIGHT INTO THE BUILDING.
- ALL SERVICES SHALL HAVE CURB STOPS AND BOXES INSTALLED AT THE STREET LINE, BE FLUSH WITH GRADE AND ACCESSIBLE AT ALL TIMES. REDUCING CURB STOPS SHALL NOT BE USED.
- ALL WATER SERVICES SHALL HAVE THE SAME SIZE MAINSTOP AS THE SERVICE PIPE. MAINSTOPS ARE NOT REQUIRED ON WATER SERVICES OFF 50mm DIAMETER COPPER WATERMANS.
- SERVICE CONNECTIONS SHALL BE AS PER STD DWG 1-4-6 (SEE DETAIL SHEET 17).
- 50mm DIAMETER BLOW-OFFS ARE TO BE INSTALLED AT THE STREET LINE FOR ALL DEAD-ENDS (GREATER THAN 10m) INDUSTRIAL WATER SERVICES, UNLESS OTHER METHODS ARE AVAILABLE FOR BLEEDING OFF, CHARGING AND FLUSHING OF THE SERVICE

WATERMANS:

- ALL CONNECTIONS TO PVC PIPES TO BE MADE USING AN APPROVED WIDE BRANCH SERVICE SADDLE. DIRECT TAPPING IS NOT ALLOWED TO PVC WATERMANS. TRACER WIRE TO BE INSTALLED AS PER STD. DWG. 1-7-1.
- HYDRANTS

 - FIRE HYDRANTS TO BE INSTALLED AS PER REGION STD. DWG. 1-4-1 (SEE SHEET 17) AND 1-4-2 WITH FLANGE SET BETWEEN 50mm AND 150mm ABOVE FINISHED GRADE.
 - ALL HYDRANTS SHALL HAVE 150mm DIAMETER VALVES AND BOXES. HYDRANT BRANCH TEES FROM BE AS PER STD. DWG. 1-4-1 (SEE SHEET 17) AND 1-4-2.
 - ALL HYDRANTS SHALL HAVE MINIMUM 1.2m MINIMUM HORIZONTAL CLEARANCE FROM ALL UTILITIES AND STRUCTURES MEASURED FROM THE NEAREST POINT OF THE STRUCTURE. HYDRANTS NEAR DRIVEWAYS SHALL BE LOCATED A MINIMUM OF 1.2m CLEAR FROM THE PROJECTED GARAGE OR EDGE OF DRIVEWAY, WHICHEVER IS GREATER.
 - THE HYDRANT SAFETY BREAKAWAY FLANGE MUST BE LOCATED 50mm TO 150mm ABOVE THE FINISHED GRADE AND FIELD ADJUSTED IF REQUIRED.

- THRUST BLOCKS

 - THRUST BLOCKING OF WATERMAIN TO BE INSTALLED AS PER STD. 1-5-4 (SEE SHEET 16), 1-5-5 (SEE SHEET 16), AND 1-5-7 (SEE SHEET 17).

- AIR VALVES AND DRAIN VALVES

 - FOR WATERMANS 400mm DIAMETER AND LARGER, PROVISION FOR AIR RELEASE AND DRAINAGE IS REQUIRED AT THE HIGH AND LOW POINTS RESPECTIVELY. THIS PROVISION MAY BE INCORPORATED WITH THE LINE VALVE CHAMBER OR IN SEPARATE CHAMBERS. REFER TO STD. DWG. 1-3-5 (AIR VALVE)

- BEDDING

 - BEDDING FOR WATERMANS SHALL BE PER REGION STD. DWG. 1-5-1 (SEE SHEET 16) AND 1-5-2.

SANITARY SEWERS:

1. GENERAL

- ALL SYSTEM COMPONENTS ARE TO BE EITHER TO THE REGION OF PEELE STANDARDS OR ONTARIO PROVINCIAL STANDARD DRAWING (OPSD), WHERE A REGION STANDARD EXISTS, IT SHALL BE USED IN PLACE OF THE OPSD STANDARD.
- SANITARY SEWERS IN FILL SECTIONS, THE COMPACTION SHALL BE CERTIFIED BY A GEOTECHNICAL ENGINEER PRIOR TO LAYING OF PIPE.
- PROPOSED SANITARY MAINLINE SEWERS SHALL BE REINFORCED CONCRETE, CSA 257.2, 40-D.
- FLOW VELOCITIES SHALL BE DETERMINED IN ACCORDANCE WITH GUIDELINES OUTLINED IN THE REGION OF PEELE PUBLIC WORKS DESIGN CRITERIA MANUAL.
- DEFORMATION GAUGE TEST (PGS) IS REQUIRED ON ALL PIPE WORKS PRIOR TO MAINTENANCE AND ACCEPTANCE. ALL PIPE WORKS SHALL HAVE A VIDEO TAPING COMPLETE AS PART OF THE PRELIMINARY AND ASSUMPTION INSPECTIONS.

2. MAINTENANCE HOLES

- FRAME AND COVERS SHALL BE AS PER REGION STD. DWG. 2-5-13 (SEE SHEET 17).
- DROP MAINTENANCE HOLES SHALL BE PROVIDED WHERE THE DIFFERENCE IN INVERT ELEVATION IS GREATER THAN 0.90m. THE DROP PIPE SHALL BE ONE SIZE SMALLER THAN THE SEWER LINE (MINIMUM 250mm). (SEE STANDARD 2-5-26, SHEET 18).
- ALL MAINTENANCE HOLES SHALL CONFORM TO THE CURRENT MANUFACTURERS APPROVED TOOLS LIST, SANITARY SEWER AND APPURTENANCES, REGION OF PEELE STANDARD DRAWING 2-4-3, 2-5-4 (REFER TO STANDARDS ON SHEET 17).
- WHERE DEPTH FROM INVERT TO TOP OF A MAINTENANCE HOLE EXCEEDS 5.0m, A SAFETY PLATFORM IS TO BE PROVIDED AS PER PEELE REGIONAL STANDARD 2-4-13 TO 2-6-15 (SEE STANDARD ON SHEET 18).
- MAXIMUM SPACING OF MAINTENANCE HOLES SHALL BE 120m FOR SANITARY SEWERS UP TO 600mm IN SIZE. FOR SANITARY SEWERS GREATER THAN 600mm IN SIZE, THE MAXIMUM SPACING SHALL BE 170m.

3. SIZING

- MAINLINE SANITARY SEWER PIPE SIZE SHALL BE MINIMUM 375mm DIAMETER.
- MINIMUM HORIZONTAL SEPARATION BETWEEN SANITARY SEWERS AND STORM SEWERS SHALL BE 2.0m IF BOTH SEWERS ARE AT THE SAME RELATIVE ELEVATION. IF THE SEWER INVERTS VARY MORE THAN 1.0m, A MINIMUM HORIZONTAL SEPARATION OF 3.0m SHALL BE MAINTAINED.
- MINIMUM HORIZONTAL SEPARATION BETWEEN SEWERS AND WATERMANS SHALL BE 2.5m. VERTICAL CLEARANCE BETWEEN SEWERS AND WATERMANS THAT CROSS TO BE 500mm BETWEEN THE OUTSIDE OF THE WATERMAIN AND OUTSIDE OF THE SEWER. THE LENGTH OF WATER PIPE SHOULD BE CENTERED AT THE POINT OF CROSSING SUCH THAT JOINTS IN THE WATERMAIN WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER, CROSSING PERPENDICULAR IF POSSIBLE.

4. DEPTH

- THE OVERT OF THE SANITARY SEWER SHALL BE A MINIMUM OF 2.5m BELOW THE CENTRELINE OF ROAD.
- IN ALL CASES, THE PROPOSED SANITARY SEWER SHALL BE INSTALLED AT SUFFICIENT DEPTH TO SERVICE LANDS EXTERNAL TO THE SITE AS DETERMINED BY THE REGION OF PEELE.

5. CREEK CROSSINGS

- IN VALLEYS, THE SANITARY SEWER SHALL BE A MINIMUM 1.4m BELOW THE CREEK BOTTOM.
- A PERMIT FROM THE TORONTO REGIONAL CONSERVATION AUTHORITY IS REQUIRED FOR A CREEK CROSSING.

6. SPECIAL DESIGN CONSIDERATIONS

- SPECIAL CONSIDERATIONS FOR WATER TIGHT JOINTS IS TO BE APPLIED WHEN PIPE IS BURIED TO A DEPTH WHERE SIGNIFICANT HYDROSTATIC PRESSURES ARE ANTICIPATED.
- WHERE SIGNIFICANT SECTIONS OF SANITARY SEWERS ARE PROVIDED WITH WATERTIGHT COVERS, EXTENDED VENTS WILL BE REQUIRED AT EVERY THIRD MAINTENANCE HOLE AS PER PEELE REGIONAL STANDARD DRAWING 2-5-22, SEE STANDARD, SHEET 18).

7. BEDDING AND COMPACTION

- ALL SANITARY SEWER BEDDING AS PER REGION STD. DWG. 2-3-1 (REFER TO STANDARD ON SHEET 18).
- GRANULAR BEDDING MATERIAL SHOULD CONSIST OF WELL GRADED, FREE DRAINING SOIL, SUCH AS OPSS GRANULAR 'A' OR 19mm CRUSHER RUN LIMESTONE OR ITS EQUIVALENT AS PER THE PERTINENT TOWN / REGION SPECIFICATIONS.
- THE BEDDING MATERIALS SHOULD BE PLACED IN 150mm LIFTS AND COMPACTED TO A MINIMUM OF 100% SPMOD, SEE REGION OF PEELE STANDARD 2-3-1 (REFER TO STANDARD ON SHEET 18).

8. SANITARY SERVICES

- IN INDUSTRIAL AREAS, THE MINIMUM SIZE OF SANITARY LATERALS SHALL BE 150mm, INSTALLED WITH A MINIMUM GRADE OF 1% AND A MAXIMUM GRADE OF 2%.
- THE MINIMUM AND MAXIMUM COVER OF SANITARY LATERALS SHALL BE 2.00m AND 2.75m RESPECTIVELY, UNLESS CIRCUMSTANCES REQUIRE OTHERWISE.
- THE MAXIMUM DROP ACROSS A PROPERTY LINE SHALL BE 0.03m.
- A MAINTENANCE HOLE IS REQUIRED IF THE LATERAL DIAMETER IS EQUAL TO OR GREATER THAN HALF THE DIAMETER OF THE MAIN SEWER LINE. EXCEPT FOR A 150mm DIAMETER PIPE CONNECTING TO A 250mm DIAMETER MAINLINE OR A 200mm DIAMETER PIPE CONNECTING TO A 375mm MAINLINE.

STORM SEWERS:

1. GENERAL

- STORM SEWER TO BE CONSTRUCTED IN ACCORDANCE WITH THE MOST RECENT REQUIREMENTS AND SPECIFICATIONS OF THE TOWN OF CALEDON.
- STORM SEWERS SHALL BE PROVIDED ON ALL ROADS WITH CURB AND GUTTER.
- RADIUS PIPE SHALL BE ALLOWED FOR STORM SEWERS 675mm IN DIAMETER AND LARGER PROVIDED THAT A MANHOLE IS LOCATED AT THE BEGINNING OR AT THE END OF THE RADIAL SECTION.
- NO DECREASE OF PIPE SIZE FROM A LARGER UPSTREAM TO A SMALLER DOWNSTREAM WILL BE ALLOWED REGARDLESS OF THE INCREASE IN GRADE.
- DEFORMATION GAUGE TEST (PGS) IS REQUIRED ON ALL PIPE WORKS PRIOR TO MAINTENANCE AND ACCEPTANCE. ALL PIPE WORKS SHALL HAVE A VIDEO TAPING COMPLETE AS PART OF THE PRELIMINARY AND ASSUMPTION INSPECTIONS. ALL SEWERS WILL BE FLUSHED PRIOR TO VIDEO INSPECTION.
- MAINTENANCE HOLE TOPS (FRAMES) AND CATCHBASIN (FRAMES) ARE TO BE SET TO BASE COURSE ASPHALT AND THEN ADJUSTED FINAL GRADE WHEN THE TOP OF ASPHALT IS PLACED.
- ALL CONNECTIONS TO THE STORM MAIN SHALL BE MADE WITH A STORM MANHOLE OR APPROVED FACTORY TEE CONNECTION AS PER OPSD 708.011 OR 708.03.
- ALL PIPE HANDLING INSTRUCTIONS MUST BE IN STRICT COMPLIANCE WITH MANUFACTURERS INSTALLATION GUIDES.
- THE MAXIMUM ALLOWABLE FLOW VELOCITY FOR CIRCULAR STORM SEWERS SHALL BE 4.0m/sec AND THE MINIMUM ALLOWABLE VELOCITY SHALL BE 0.75m/sec.
- STORM SEWERS TO HAVE A MINIMUM COVER OF 2.0m AS PER TOWN OF CALEDON STANDARD DRAWING No. 211.

2. SIZING

- STORM SEWERS TO BE MINIMUM 300mm DIAMETER WITH JOINTS CONFORMING TO C.S.A. STANDARD A 257.3.
- THE STORM SEWERS SHALL BE LOCATED AS SHOWN ON THE TOWN OF CALEDON STANDARD INDUSTRIAL ROAD CROSS SECTION NO 211 (SEE STANDARD ON SEE DETAIL SHEET 16). THE STANDARD LOCATION IS GENERALLY 1.5m METERS FROM THE CENTER LINE OF ROAD.

3. DEPTH

- MINIMUM HORIZONTAL SEPARATION BETWEEN SEWERS AND WATERMANS SHALL BE 2.5m. VERTICAL CLEARANCE BETWEEN SEWERS AND WATERMANS THAT CROSS TO BE 500mm BETWEEN THE OUTSIDE OF THE WATERMAIN AND OUTSIDE OF THE SEWER. THE LENGTH OF WATER PIPE SHOULD BE CENTERED AT THE POINT OF CROSSING SUCH THAT JOINTS IN THE WATERMAIN WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER, CROSSING PERPENDICULAR IF POSSIBLE.

4. PIPE CLASSIFICATION, BEDDING AND COMPACTION

- ALL STORM SEWER PIPES SHALL CONFORM TO THE REQUIREMENTS OF THE CANADIAN STANDARDS ASSOCIATION (CSA).
- GRANULAR BEDDING MATERIAL SHOULD CONSIST OF WELL GRADED, FREE DRAINING SOIL, SUCH AS OPSS GRANULAR 'A' OR 19mm CRUSHER RUN LIMESTONE OR ITS EQUIVALENT AS PER THE PERTINENT TOWN / REGION SPECIFICATIONS.
- THE BEDDING MATERIALS SHOULD BE PLACED IN 150mm LIFTS AND COMPACTED TO A MINIMUM OF 98% SPMOD.
- FOR ALL SEWERS AND WATERMANS IN FILL SECTIONS, THE COMPACTION SHALL BE CERTIFIED BY A GEOTECHNICAL ENGINEER PRIOR TO LAYING OF PIPE.
- STORM SEWERS SHALL BE CONSTRUCTED WITH BEDDING AS PER OPSD 802.030 FOR RIGID PIPE OR OPSD 802.010 WITH GRANULAR 'A' FOR FLEXIBLE PIPE UNLESS APPROVED OTHERWISE BY THE DIRECTOR.
- PIPE MATERIAL TO BE REINFORCED CONCRETE SHALL BE CERTIFIED TO C.S.A. STANDARD A247-2-1982, CLASS 65-0 OR PVC CERTIFIED C.S.A. STANDARDS 182.2 AND 182.4-MAX.
- ALL PIPE BEDDING MUST CONFORM TO OPSD MAXIMUM COVER TABLE OPSD 807.010. NO FLEXIBLE PIPE SEWERS WILL BE INSTALLED WITH A DEPTH COVER GREATER THAN 6m UNLESS SPECIFICALLY APPROVED BY THE DIRECTOR.
- SEWER BEDDING, COVER AND BACKFILL FOR FLEXIBLE PIPE TO BE AS PER OPSD 802.010 WITH GRANULAR 'A' FOR BOTH THE BEDDING AND COVER. REFERENCE HOWEVER SHOULD BE MADE TO THE OPSD STANDARDS FOR ALTERNATE BEDDING AND BACKFILL SPECIFICATIONS AS DETERMINED BY THE PROPOSED PIPE MATERIAL AND EXCAVATION CONDITIONS.

5. MAINTENANCE HOLES

- MANHOLES MAY BE EITHER PRECAST OR POURED IN PLACE AND SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE MOST RECENT ONTARIO PROVINCIAL STANDARD DRAWINGS SPECIFICATIONS.
- MANHOLES SHALL BE LOCATED AT EACH CHANGE IN ALIGNMENT, GRADE OR PIPE MATERIAL. AT ALL PIPE JUNCTIONS, AT THE BEGINNING AND END OF RADIUS PIPE SELECTIONS AND AT INTERVALS ALONG THE PIPE TO PERMIT ENTRY FOR MAINTENANCE TO THE SEWER.
- MAXIMUM SPACING OF MANHOLES SHALL BE 120m FOR SEWERS 600mm OR LEASS IN DIAMETER AND 150m FOR SEWERS 675mm OR GREATER IN DIAMETER.
- MAINTENANCE HOLES SHALL BE 1200mm DIA. AND 1500mm DIA. AS PER OPSD 701.010 AND OPSD 701.011 (RESPECTIVELY). (SEE OPSD SHEET 19).
- MANHOLE CHAMBER OPENINGS SHALL BE LOCATED ON THE SIDE OF THE MANHOLE PARALLEL TO THE FLOW FOR STRAIGHT RUN MANHOLES, OR ON THE UPSTREAM SIDE OF THE MANHOLE AT ALL JUNCTIONS.
- CHANGE IN DIRECTION OF FLOW IN ANY MANHOLES SHALL NOT BE GREATER THAN 90 DEGREES PERPENDICULAR TO THE FLOW.
- SAFETY GRATINGS SHALL BE PROVIDED IN ALL MANHOLES WHEN THE DEPTH OF THE MANHOLE EXCEEDS 5.0m. THE MAXIMUM SPACING BETWEEN SAFETY GRATINGS SHALL NOT EXCEED 4.5m, AS PER OPSD 404.020. (SEE OPSD SHEET 19).
- THE OVERTS ON THE UPSTREAM SIDE OF THE MANHOLES SHALL NOT BE LOWER THAN THE OVERT OF THE OUTLET PIPE.
- WHERE THE DIFFERENCE IN ELEVATION BETWEEN THE OVERT OF THE INLET AND OUTLET PIPES EXCEED 1.2m, A DROP PIPE AS INDICATED ON OPSD 1003.010 SHALL BE PLACED ON THE INLET PIPE. (SEE OPSD SHEET 18).
- STORM SEWER MANHOLES SHALL BE BENCHMARKED TO THE OVERT OF THE OUTLET PIPE ON THE VERTICAL PROJECTION FROM THE SPRING LINE OF THE SEWER.
- MANHOLES SHALL BE LOCATED, WHEREVER POSSIBLE, A MINIMUM OF 1.5m AWAY FROM THE FACE OF THE CURB AND/OR ANY OTHER SERVICE.
- THE MINIMUM DROPS ACROSS MANHOLES SHALL BE AS FOLLOWS.

CHANGE IN DIRECTION	MINIMUM DROP (mm)
0°	30
1° TO 45°	50
45° TO 90°	80

6. CATCH BASINS

- CATCH BASINS MAY BE EITHER PRECAST OR POURED AND SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE MOST RECENT OPSS AND OPSS REQUIREMENTS.
- ROADWAY CATCH BASIN COVERS SHALL BE "BICYCLE PROOF" AS PER OPSD 600.010. CATCH BASINS WITH THE TRAVELLED PORTION OF A ROADWAY, SHALL HAVE THE FRAME ELEVATION FLUSH WITH THE SURFACE OF THE BASE COURSE ASPHALT. THE ADJUSTMENT AND SETTING OF THE FRAME AND COVER SHALL BE COMPLETED IN ACCORDANCE WITH THE DETAILS PROVIDED IN THE OPSD STANDARDS.
- CATCH BASINS SHALL BE AS PER OPSD 701.010 (SEE OPSD SHEET 19).
- DUAL CATCH BASINS SHALL BE AS PER OPSD 705.020 (SEE OPSD SHEET 19).
- DITCH INLET CATCH SHALL BE AS PER OPSD 705.040 (SEE OPSD SHEET 19).
- ALL CATCH BASIN LATERALS SHALL BE PLACED AT 2% GRADE UNLESS OTHERWISE NOTED. PIPE SIZE MINIMUM 250mm DIAMETER SINGLE, 300mm DIAMETER DOUBLE.
- MAXIMUM SPACING FOR CATCHBASINS SHALL BE AS FOLLOWS:

ROAD GRADE @	0.75%	1.0%	1.5%
ROAD GRADE @	7.0m	9.0m	11.0m
ROAD GRADE GREATER THAN 3%	7.0m		

7. LIST OF DRAWINGS

- SG-01 - PHASE 2 - SITE GRADING PLAN
- SG-02 - PHASE 2 - SITE GRADING PLAN
- SG-03 - PHASE 2 - SITE GRADING PLAN
- SG-04 - PHASE 2 - SITE GRADING PLAN
- SS-01 - PHASE 2 - SITE SERVICING PLAN
- SS-02 - PHASE 2 - SITE SERVICING PLAN
- SS-03 - PHASE 2 - SITE SERVICING PLAN
- SS-04 - PHASE 2 - SITE SERVICING PLAN
- EC-01 - PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
- EC-02 - PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
- EC-03 - PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
- EC-04 - PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
- DD-01 - PHASE 2 - DETAIL DRAWING
- DD-02 - PHASE 2 - DETAIL DRAWING
- DD-03 - PHASE 2 - DETAIL DRAWING
- DD-04 - PHASE 2 - DETAIL DRAWING

SITE PLAN INFORMATION

WARE MALCOLM 260 UNIVERSITY AVE, SUITE 235 TORONTO, ON, M5H 3E5 PHONE: (416) 537-0700 WEBSITE: www.waremalcolm.com	PIPE SURVEYING LTD. ONTARIO LAND SURVEYORS 640 CHURCHILL ROAD, SUITE 7 WOODBRIDGE, ON, L4L 6A7 PHONE: (416) 635-5000 WEBSITE: www.pj-c.com
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BENCHMARK INFORMATION:
ELEVATIONS ARE GEODETIC AND ARE REFERRED TO MTO VERTICAL BENCHMARK NUMBER 8999999 HAVING AN ORIGNAL BENCHMARK ELEVATION OF 261.13 METRES. ELEVATIONS ARE REFERENCED TO THE CANADIAN GEODETIC VERTICAL DATUM OF 1984. 1978 ADJUSTMENT (CGVD-1988/1978).

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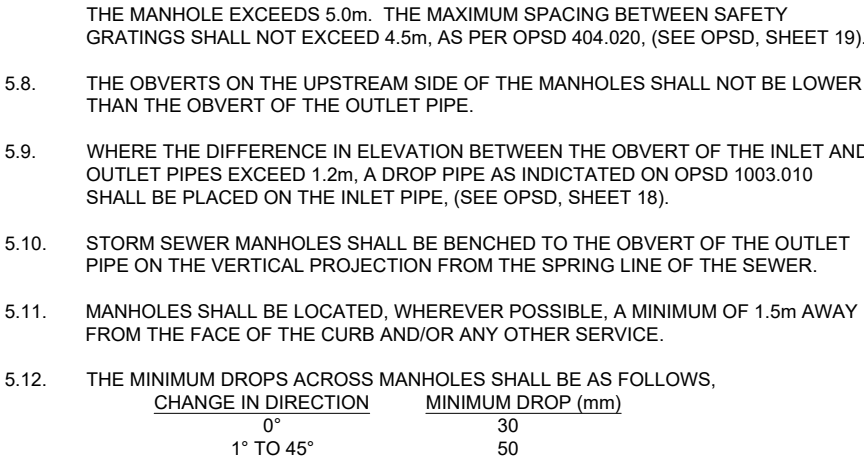
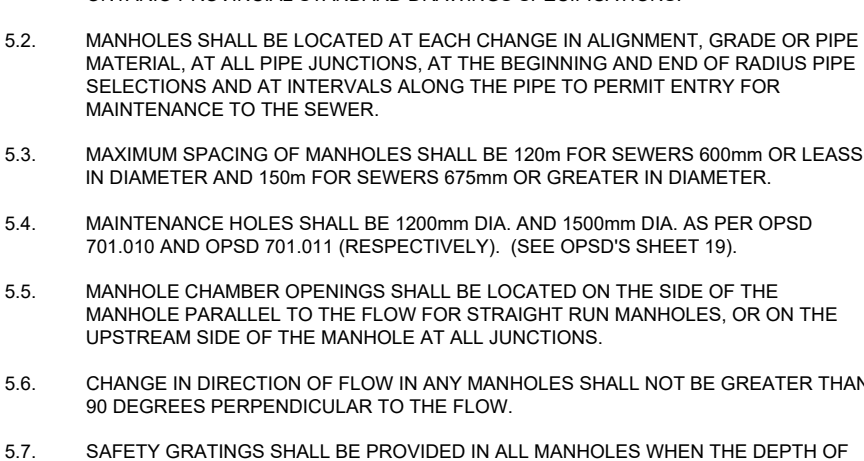
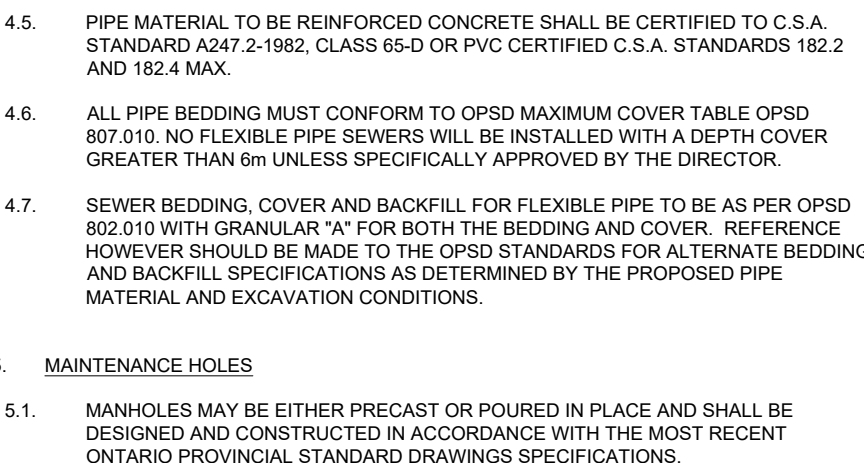
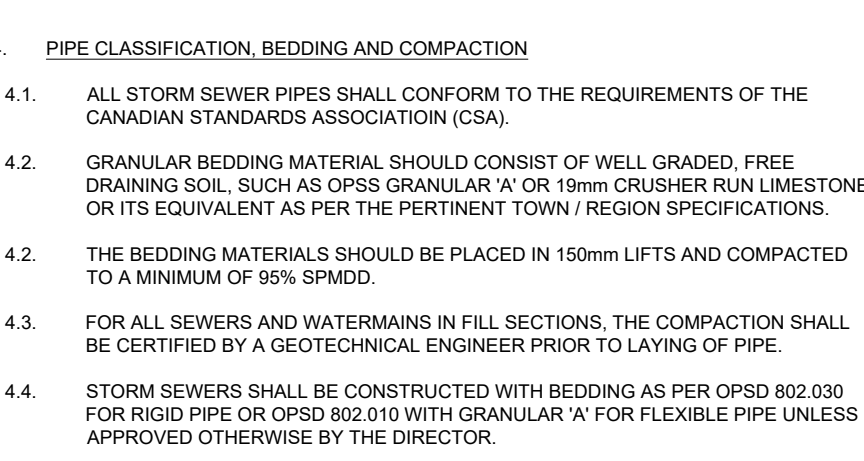
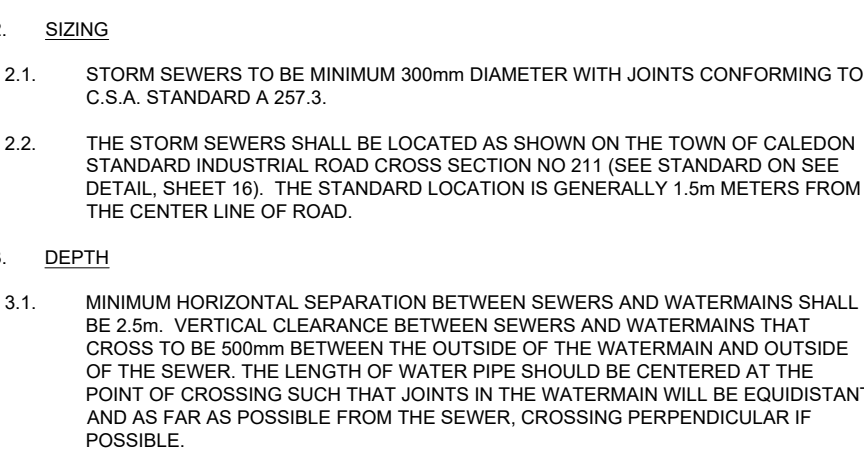
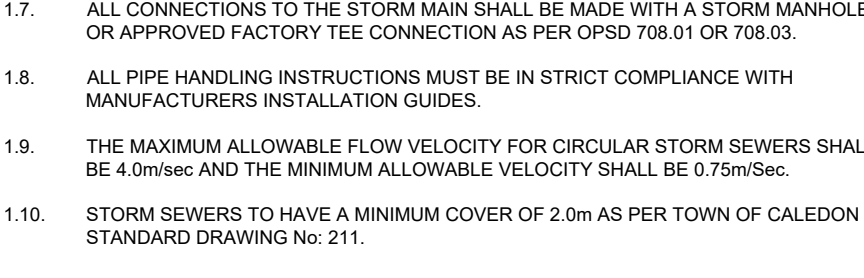
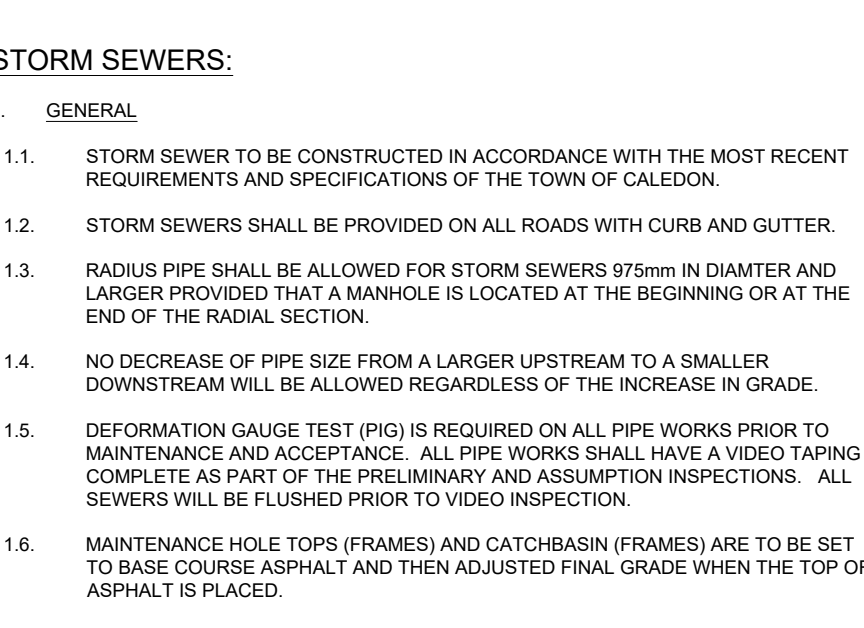
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LEGEND



Region of Peel
PUBLIC WORKS
STANDARD DRAWING

REV. DATE: NOVEMBER 2011

APPROVED BY: A.P. ANLEY GROUP
DRAWN BY: ANLEY GROUP

STD. DWG. NUMBER: 1-2-1
SCALE: N.T.S.

SAFETY PLATFORM FOR 1500mm DIAMETER PRECAST MAINTENANCE HOLE

Region of Peel
PUBLIC WORKS
STANDARD DRAWING

REV. DATE: NOVEMBER 2011

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STD. DWG. NUMBER: 1-2-6
SCALE: N.T.S.

TYPICAL VALVE AND PIPE SUPPORT DETAILS

Region of Peel
PUBLIC WORKS
STANDARD DRAWING

REV. DATE: APRIL 2014

APPROVED BY: A.P. ANLEY GROUP
DRAWN BY: ANLEY GROUP

STD. DWG. NUMBER: 1-2-7
SCALE: N.T.S.

TYPICAL FROST STRAP DETAILS

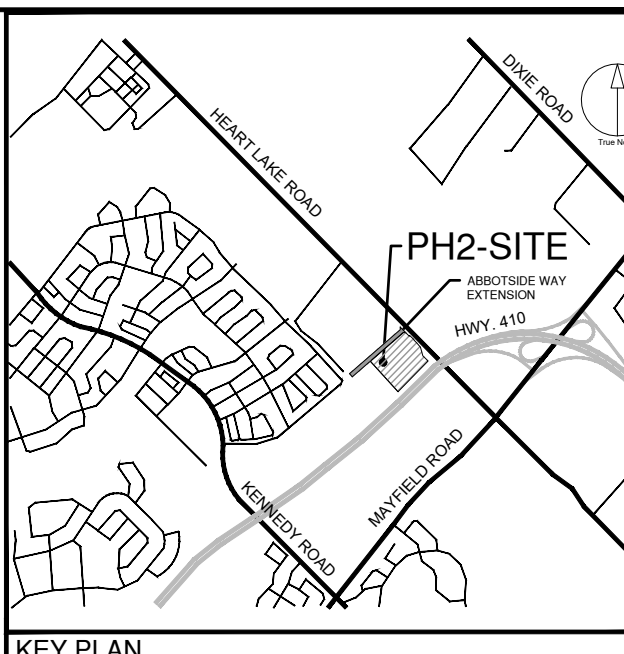
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REV. DATE: APRIL 2014

APPROVED BY: A.P. ANLEY GROUP
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STD. DWG. NUMBER: 1-2-7
SCALE: N.T.S.

CONCRETE BARRIER CURB WITH STANDARD GUTTER TWO STAGE CONSTRUCTION



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REV. DATE: APRIL 2014

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DRAWN BY: ANLEY GROUP

STD. DWG. NUMBER: 1-5-1
SCALE: N.T.S.

WATERMAIN BEDDING

Region of Peel
PUBLIC WORKS
STANDARD DRAWING

REV. DATE: NOVEMBER 2011

APPROVED BY: A.P. ANLEY GROUP
DRAWN BY: ANLEY GROUP

STD. DWG. NUMBER: 1-5-4
SCALE: N.T.S.

VERTICAL BLOCKING 5 DEGREE TO 45 DEGREE BENDS FOR CONNECTION TO EXISTING WATERMAIN ONLY

Region of Peel
PUBLIC WORKS
STANDARD DRAWING

REV. DATE: NOVEMBER 2011

APPROVED BY: A.P. ANLEY GROUP
DRAWN BY: ANLEY GROUP

STD. DWG. NUMBER: 1-5-5
SCALE: N.T.S.

HORIZONTAL BLOCKING 5 DEGREE TO 45 DEGREE BENDS FOR CONNECTION TO EXISTING WATERMAIN ONLY

TOWN OF CALEDON

26.0m INDUSTRIAL COLLECTOR
14.5m ROADWAY (13.9m PAVEMENT)

NO.	REVISION	APRD	DATE
3	DIMENSION AND TEXT REVISION	JAN	09
2	DIMENSION AND LAYOUT REVISION	JULY	08
1	DIMENSION EDIT, STD No. 209 NOV 211	JUNE	08

APRD: C.C. DATE: JUNE 08
DRAWN: SCALE: N.T.S.
STANDARD No. 211

SEAL

TOWN OF CALEDON

Region of Peel
PUBLIC WORKS
STANDARD DRAWING

REV. DATE: APRIL 2014

APPROVED BY: A.P. ANLEY GROUP
DRAWN BY: ANLEY GROUP

STD. DWG. NUMBER: 1-3-11
SCALE: N.T.S.

VALVE BOX PROTECTION (DURING CONSTRUCTION)

Region of Peel
PUBLIC WORKS
STANDARD DRAWING

REV. DATE: NOV 2015 [Rev. 2]

APPROVED BY: A.P. ANLEY GROUP
DRAWN BY: ANLEY GROUP

STD. DWG. NUMBER: OPSD 310.010
SCALE: N.T.S.

CONCRETE SIDEWALK

Region of Peel
PUBLIC WORKS
STANDARD DRAWING

REV. DATE: NOV 2010 [Rev. 2]

APPROVED BY: A.P. ANLEY GROUP
DRAWN BY: ANLEY GROUP

STD. DWG. NUMBER: OPSD 301.010
SCALE: N.T.S.

RURAL ENTRANCES TO ROADS ON FILL

Region of Peel
PUBLIC WORKS
STANDARD DRAWING

REV. DATE: NOV 2015 [Rev. 3]

APPROVED BY: A.P. ANLEY GROUP
DRAWN BY: ANLEY GROUP

STD. DWG. NUMBER: OPSD 802.030
SCALE: N.T.S.

RIGID PIPE BEDDING, COVER, AND BACKFILL TYPE 1 OR 2 SOIL - EARTH EXCAVATION

IBI GROUP
Unit 300 - 8133 Warden Avenue
Markham ON L6G 1B3 Canada
Tel: 905.763.2322 Fax: 905.763.9883
ibigroup.com

PROJECT

12304 HEART LAKE ROAD
PHASE 2
CALEDON, ON. L7C 2J2

PROJECT NO:
135636

DRAWN BY: NDS
CHECKED BY: JJ

PROJECT MGR: JJ
APPROVED BY: JJ

SHEET TITLE

PHASE 2 - GENERAL NOTES AND DETAILS

SHEET NUMBER DD-02 **ISSUE** 01

LIST OF DRAWINGS

NO.	DESCRIPTION
SG-01	PHASE 2 - SITE GRADING PLAN
SG-02	PHASE 2 - SITE GRADING PLAN
SG-03	PHASE 2 - SITE GRADING PLAN
SG-04	PHASE 2 - SITE GRADING PLAN
SS-01	PHASE 2 - SITE SERVICING PLAN
SS-02	PHASE 2 - SITE SERVICING PLAN
SS-03	PHASE 2 - SITE SERVICING PLAN
SS-04	PHASE 2 - SITE SERVICING PLAN
EC-01	PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
EC-02	PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
EC-03	PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
EC-04	PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
DD-01	PHASE 2 - DETAIL DRAWING
DD-02	PHASE 2 - DETAIL DRAWING
DD-03	PHASE 2 - DETAIL DRAWING
DD-04	PHASE 2 - DETAIL DRAWING

SITE PLAN INFORMATION

2560 UNIVERSITY AVE, SUITE 235
TORONTO, ON. M9H 3E5
PHONE: (416) 537-5700
WEBSITE: www.warrenatomb.com

SUBVEYOR INFORMATION

PIPE SURVEYING LTD.
ONTARIO LAND SURVEYORS
640 CHURCHILL ROAD, SUITE 7
WOODBRIDGE, ON. L4L 6A3
PHONE: (416) 856-5000
WEBSITE: www.pj-c.com

BENCHMARK INFORMATION:
ELEVATIONS ARE GEODETIC AND ARE REFERRED TO MTD VERTICAL BENCHMARK NUMBER 0919997 HAVING AN ORTHOMETRIC ELEVATION OF 261.12 METRES. ELEVATIONS ARE REFERENCED TO THE CANADIAN GEODETIC VERTICAL DATUM OF 1984. 1978 ADJUSTMENT (CGVD-1984/1978).

SCALE:

File Location: \\1136566_12204Heart7_0_Production\04_Civil\Sheets\SPA\Phase_2\135636-SHT-PH2-DET-01.dwg
Last Saved: March 29, 2022, 2:27:27 AM by Kevin Peck
Plotted: Tuesday, April 26, 2022 8:27:27 AM by Kevin Peck

Region of Peel PUBLIC WORKS STANDARD DRAWING
Working for you

REV. DATE: NOVEMBER 2011

APPROVED BY: A.P. ANLEY GROUP
 DRAWN BY: ANLEY GROUP

STD. DWG. NUMBER: 1-5-7
 SCALE: N.T.S.

HORIZONTAL BLOCKING PLUGS, CAPS AND TEES FOR CONNECTION TO EXISTING WATERMAIN ONLY

NOTE:
 1. BLOCKING IS NOT PERMITTED ON NEW INSTALLATIONS.
 2. PIPE GREATER THAN 300mm REQUIRES MECHANICAL RESTRAINTS WITH SHOP DRAWING SUBMISSION.
 3. ASSUME BEARING AT 18MPa (CLEAN DRY SAND, FAIRLY DRY ETC.).
 4. FOR POOR CONDITIONS (SOFT CLAY) LARGER BLOCKING MAY BE REQUIRED.
 5. ALL CONCRETE TO BE 15MPa.
 6. BASED ON WATER TEST PRESSURE OF 1000Pa.
 7. ALL DIMENSIONS ARE IN MILLIMETRES.

Region of Peel PUBLIC WORKS STANDARD DRAWING
Working for you

REV. DATE: NOVEMBER 2011

APPROVED BY: A.P. ANLEY GROUP
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STD. DWG. NUMBER: 1-5-8
 SCALE: N.T.S.

WATERMAIN INSULATION DETAILS

NOTE:
 1. MINIMUM TRENCH WIDTH TO BE O.D. PLUS 100mm AND 750mm MIN TO BE O.D. PLUS 750mm.
 2. MINIMUM TRENCH WIDTH TO BE O.D. PLUS 100mm AND 750mm MIN TO BE O.D. PLUS 750mm.
 3. MINIMUM TRENCH WIDTH TO BE O.D. PLUS 100mm AND 750mm MIN TO BE O.D. PLUS 750mm.
 4. FOR POOR CONDITIONS (SOFT CLAY) LARGER BLOCKING MAY BE REQUIRED.
 5. ALL CONCRETE TO BE 15MPa.
 6. BASED ON WATER TEST PRESSURE OF 1000Pa.
 7. ALL DIMENSIONS ARE IN MILLIMETRES.

Region of Peel PUBLIC WORKS STANDARD DRAWING
Working for you

REV. DATE: MARCH 2017

APPROVED BY: A.P. ANLEY GROUP
 DRAWN BY: ANLEY GROUP

STD. DWG. NUMBER: 1-6-1
 SCALE: N.T.S.

HYDRANT SETTING FOR D.I. OR P.V.C. PIPE

NOTE:
 1. IF THE WATERMAIN IS NOT AT THE STANDARD OFFSET, THE LOCATION OF THE HYDRANT TO BE AS PER CONSTRUCTION DRAWINGS.
 2. BACKFILL TRENCH WITH GRANULAR 'B' COMPACTED TO 100% STD. PROCTOR DENSITY.
 3. MECHANICAL RESTRAINTS REQUIRED ON ALL PVC HYDRANT LATERALS INCLUDING VALVES AND FITTINGS.
 4. ALL FITTINGS, VALVES, APPURTENANCES AND MECHANICAL RESTRAINTS TO BE PROTECTED WITH 3 PART CORROSION PREVENTION SYSTEM APPLIED TO MANUFACTURER'S RECOMMENDATIONS.

Region of Peel PUBLIC WORKS STANDARD DRAWING
Working for you

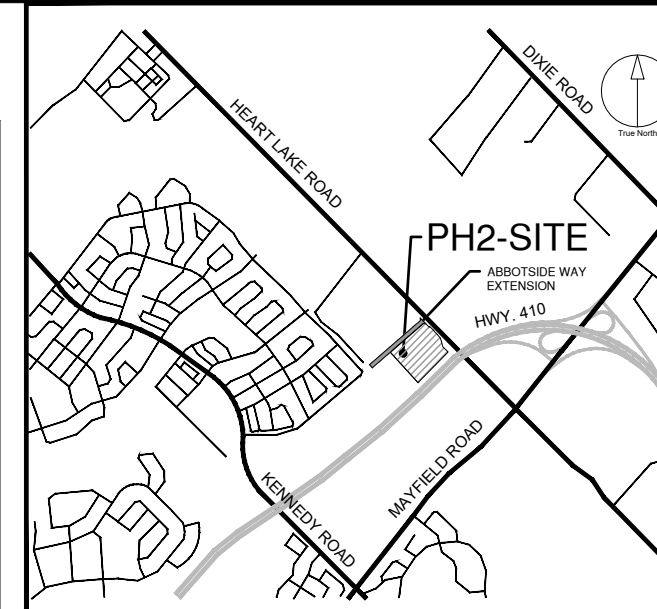
REV. DATE: MARCH 2017

APPROVED BY: A.P. ANLEY GROUP
 DRAWN BY: ANLEY GROUP

STD. DWG. NUMBER: 2-5-3
 SCALE: N.T.S.

NEW SANITARY SEWER CONSTRUCTION TYPICAL 1200mm DIAMETER PRECAST CIRCULAR MAINTENANCE HOLE DETAILS

NOTE:
 1. REFER TO STANDARD DRAWINGS 2-5-1 FOR GENERAL NOTES PERTAINING TO PRECAST MAINTENANCE HOLES.
 2. REFER TO STANDARD DRAWING 2-5-2 FOR TYPICAL INSTALLATION OPTIONS AND REQUIREMENTS.



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 MISSISSAUGA, ON. L4W5L6

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No.	DESCRIPTION	DATE
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LEGEND

Region of Peel PUBLIC WORKS STANDARD DRAWING
Working for you

REV. DATE: MARCH 2018

APPROVED BY: A.P. ANLEY GROUP
 DRAWN BY: ANLEY GROUP

STD. DWG. NUMBER: 1-7-10
 SCALE: N.T.S.

TYPICAL TRACER WIRE INSTALLATION FOR WATERMAIN VALVES, HYDRANTS AND TEES

NOTE:
 1. REFER TO STD. DWG. 1-3-8 FOR TRACER WIRE INSTALLATION AT VALVE BOXES AND STD. DWG. 1-6-1 FOR TRACER WIRE INSTALLATION AT HYDRANTS.
 2. ALL FITTINGS, VALVES, APPURTENANCES AND MECHANICAL RESTRAINTS TO BE PROTECTED WITH 3 PART CORROSION PREVENTION SYSTEM, APPLIED TO MANUFACTURER'S RECOMMENDATIONS.
 3. TRACER WIRE TO BE SECURED TO THE TOP OF THE PIPE AT NO MORE THAN 2.0m INTERVALS.

GENERAL REFERENCES FOR DRAWINGS:
 REGION OF PEEL STANDARD DRAWINGS DELETED - MARCH 2017 REVISION

DRAWING TITLE	DATE	REPLACED WITH NEW REGION OF PEEL STANDARD DRAWING
1-2-1 PRECAST MAINTENANCE HOLE 1500mm DIAMETER	MAY 2014	2-5-3
1-2-2 PRECAST MAINTENANCE HOLE 1500mm AND 1800mm DIAMETER	MAY 2014	2-5-2, 2-5-3
1-2-3 PRECAST MAINTENANCE HOLE TEES	MAY 2014	2-5-2, 2-5-3, 2-5-4
1-2-4 MAINTENANCE HOLE RENCING DETAILS	MAY 2009	2-5-2
1-2-5 MAINTENANCE HOLE DROP STRUCTURE EXTERNAL ASSEMBLY	MAY 2009	2-5-2
1-2-6 MAINTENANCE HOLE DROP STRUCTURE INTERNAL ASSEMBLY	SEP 2006	2-5-2
1-2-7 MAINTENANCE HOLE RENCING DETAILS	MAY 2009	2-5-2
2-1-1 SAFETY PLATFORM FOR 1200mm DIAMETER PRECAST	DEC 2011	2-5-1, 2-5-4
2-1-2 STANDARD HEAVY DUTY FRAME AND COVER	MAY 2009	2-5-1, 2-5-2, 2-5-4
2-1-3 DETAIL OF ANCHORING METHOD FOR WATER TIGHT SEAL	MAY 2009	2-5-2
2-1-4 DETAIL OF ANCHORING METHOD FOR WATER TIGHT SEAL	MAY 2009	2-5-2
2-1-5 STANDARD MAINTENANCE HOLE STEPS ALUMINUM	MAY 2009	2-5-1
2-1-6 STANDARD MAINTENANCE HOLE STEPS ALUMINUM	MAY 2009	2-5-1

ONTARIO PROVINCIAL STANDARD DRAWING REFERENCES TO BE READ IN CONJUNCTION WITH REGION OF PEEL STANDARD DRAWINGS DELETED - MARCH 2017 REVISION

NOTE: THIS LIST INCLUDES CROSS-REFERENCES THAT APPLY DIRECTLY TO THE NEW AND REVISED REGION OF PEEL STANDARD DRAWINGS. IT DOES NOT INCLUDE REFERENCES TO OTHER REGION OF PEEL STANDARD DRAWINGS DELETED - MARCH 2017 REVISION.

GENERAL NOTES FOR PRECAST CONCRETE MAINTENANCE HOLES AND CHAMBERS:

1. ALL PRECAST CHAMBERS TO BE SUPPLIED BY A MANUFACTURER CERTIFIED UNDER THE COCA PLANT PREQUALIFICATION PROGRAM.
2. SUBMIT SHOP DRAWINGS TO THE CONTRACT ADMINISTRATOR FOR INFORMATION. ALL DRAWINGS SHALL BEAR THE SIGNATURE AND SEAL OF A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN ONTARIO.
3. THE MANUFACTURER SHALL PROVIDE LETTERS SIGNED BY A PROFESSIONAL ENGINEER CERTIFYING THE FOLLOWING:
 - a) THAT THE DESIGN OF THE PRECAST UNITS MEETS THE REQUIREMENTS OF THE SPECIFICATIONS.
 - b) THAT THE PRECAST UNITS HAVE BEEN MANUFACTURED AS PER DESIGN AND INSPECTED IN ACCORDANCE WITH THE PLANT PREQUALIFICATION PROGRAM.
 - c) PROVIDE CONCRETE WITH MINIMUM STRENGTH OF 35 MPa UNLESS A HIGHER STRENGTH IS REQUIRED BY THE MANUFACTURER OR DESIGNER.
4. REINFORCING STEEL SHALL BE IN ACCORDANCE WITH CSA C308.18 WITH A MINIMUM YIELD STRENGTH OF Fy=400 MPa.
5. IF CHAMBERS ARE TO BE USED FOR THE STORAGE OF SOLIDS, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE CONTRACT ADMINISTRATOR FOR INFORMATION. THE CONTRACTOR SHALL PROVIDE LETTERS SIGNED BY A PROFESSIONAL ENGINEER CERTIFYING THE FOLLOWING:
 - a) THAT THE DESIGN OF THE PRECAST UNITS MEETS THE REQUIREMENTS OF THE SPECIFICATIONS.
 - b) THAT THE PRECAST UNITS HAVE BEEN MANUFACTURED AS PER DESIGN AND INSPECTED IN ACCORDANCE WITH THE PLANT PREQUALIFICATION PROGRAM.
 - c) PROVIDE CONCRETE WITH MINIMUM STRENGTH OF 35 MPa UNLESS A HIGHER STRENGTH IS REQUIRED BY THE MANUFACTURER OR DESIGNER.
6. ALL PRECAST COMPONENTS SHALL BE DESIGNED AND MANUFACTURED TO CSA STANDARD A23.3 AND CSA STANDARD A23.4. UNLESS ALL PRECAST CHAMBERS COMPLY WITH THE REQUIREMENTS OF CSA STANDARD A23.3 AND CSA STANDARD A23.4, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE CONTRACT ADMINISTRATOR FOR INFORMATION. THE CONTRACTOR SHALL PROVIDE LETTERS SIGNED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN ONTARIO. THE REQUIREMENTS OF CSA STANDARD 56 (CANADIAN HIGHWAY BRIDGE CODE).

GENERAL NOTES FOR PIPING:

1. SUBMIT CONCRETE PRECAST PIPE SHOP DRAWINGS TO THE CONTRACT ADMINISTRATOR FOR INFORMATION. ALL DRAWINGS SHALL BEAR THE SIGNATURE AND SEAL OF A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN ONTARIO.
2. REFER TO STANDARD DRAWING 2-5-1 FOR MAXIMUM PIPE SIZES IN PRECAST MAINTENANCE HOLES OR CHAMBERS.

GENERAL NOTES FOR PRECAST CIRCULAR OR RECTANGULAR MAINTENANCE HOLES:

1. PRECAST MAINTENANCE HOLES TO BE SUPPLIED BY A MANUFACTURER CERTIFIED UNDER THE COCA PLANT PREQUALIFICATION PROGRAM (STD. DWG. 2-5-1).
2. PROVIDE MONTHLY-BASE SECTIONS FOR ALL MAINTENANCE HOLES UNLESS ALTERNATE APPROVED AND SPECIFIED ON PROJECT SPECIFIC REQUIREMENTS.
3. USE ALTERNATE BASE TOP PIPE SUPPORT OR CONNECTOR, STEPS, FRAME AND COVER AND/OR RENCING ONLY AFTER APPROVAL AND SPECIFIED ON PROJECT SPECIFIC REQUIREMENTS.
4. PROVIDE BASE EXTENSIONS FOR LIGHT PREVENTION ON PRECAST MAINTENANCE HOLES 1200mm DIAMETER OR GREATER IF THESE ARE REQUIRED TO BE PROTECTED WITH 3 PART CORROSION PREVENTION SYSTEM APPLIED TO MANUFACTURER'S RECOMMENDATIONS.
5. SPECIAL BASE DESIGN REQUIRED FOR DEPTHS GREATER THAN 1.8m (STD. DWG. SECTION 2-7).
6. FOR 1000mm DIAMETER AND LARGER SEWER PRECAST MAINTENANCE HOLES ACCEPTABLE (STD. DWG. SECTION 2-7).
7. APPROVED ADJUSTMENT UNITS AND APPROVED FRAME AND COVER SYSTEMS TO BE INSTALLED AS PER MANUFACTURER'S INSTRUCTIONS (STD. DWG. SECTION 2-6).
8. FILLING HOLES WITH 1:3 NON-BRINK MORTAR MIX.
9. FROST STRAPS SHALL BE INSTALLED AT ALL REBER, TOP AND BASE SECTION JOINTS ON ALL PRECAST MAINTENANCE HOLES TO A MAXIMUM DEPTH OF 150mm FROM TYPICAL DEPTH. INTERNAL FROST STRAP TO BE TYPICAL (STD. DWG. 2-5-2). EXTERNAL FROST STRAPS PERMITTED WITH APPROVAL FROM PROJECT ENGINEER. ADDITIONAL CONSTRUCTION PROTECTION REQUIRED AS PER MANUFACTURER'S RECOMMENDATIONS.
10. WENT PIPES SHALL BE REQUIRED AT EVERY THIRD MAINTENANCE HOLE ON SECTIONS OF SANITARY SEWERS WITH MAINTENANCE HOLES TO A MAXIMUM DEPTH OF 150mm FROM TYPICAL DEPTH. INTERNAL FROST STRAP TO BE TYPICAL (STD. DWG. 2-5-2). EXTERNAL FROST STRAPS PERMITTED WITH APPROVAL FROM PROJECT ENGINEER. ADDITIONAL CONSTRUCTION PROTECTION REQUIRED AS PER MANUFACTURER'S RECOMMENDATIONS.
11. WATERPROOF MEMBRANE SHALL BE APPLIED EXTERNALLY AROUND ALL REBER, GRADE ADJUSTMENT UNITS TOP AND BASE SECTION JOINTS ON ALL MAINTENANCE HOLES. EXTERNALLY APPLIED WATERPROOFING SHALL BE APPLIED BY A MEANS OF MILLION TON WATERPROOFING MEMBRANE. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE CONTRACT ADMINISTRATOR FOR INFORMATION. THE CONTRACTOR SHALL PROVIDE LETTERS SIGNED BY A PROFESSIONAL ENGINEER CERTIFYING THE FOLLOWING:
 - a) THAT THE DESIGN OF THE PRECAST UNITS MEETS THE REQUIREMENTS OF THE SPECIFICATIONS.
 - b) THAT THE PRECAST UNITS HAVE BEEN MANUFACTURED AS PER DESIGN AND INSPECTED IN ACCORDANCE WITH THE PLANT PREQUALIFICATION PROGRAM.
 - c) PROVIDE CONCRETE WITH MINIMUM STRENGTH OF 35 MPa UNLESS A HIGHER STRENGTH IS REQUIRED BY THE MANUFACTURER OR DESIGNER.
12. SSP SAFETY PLATFORM BY ACCESS INDUSTRIAL OF MESSISSAUGA, ONTARIO, OR ALUMINUM SAFETY PLATFORMS WHERE REQUIRED TO BE INSTALLED IN MAINTENANCE HOLES 1500mm DIAMETER OR GREATER (STD. DWG. SECTION 2-6). PLATFORMS TO BE ANCHORED TO THE REBER WITH 10mm DIA. OR ENGINEER APPROVED EQUAL.
13. RPP LADDERS BY ACCESS INDUSTRIAL OF MESSISSAUGA, ONTARIO, OR ALUMINUM LADDERS TO BE INSTALLED IN ALL MAINTENANCE HOLES 1500mm DIAMETER OR GREATER (STD. DWG. SECTION 2-6). LADDERS TO BE ANCHORED TO THE REBER WITH 10mm DIA. OR ENGINEER APPROVED EQUAL.
14. RENCING TO BE CONSTRUCTED TO THE OUTSIDE OF THE PIPE IN ALL CASES. 15MPa CONCRETE UNLESS FOR CONCRETE MATERIALS AND PRODUCTION.
15. FOR PVC PIPE (SEE NOTE 19), USE A FLEXIBLE WATER TIGHT CONNECTOR WITH GRANULAR BEDDING (STD. DWG. 2-5-15).
16. FOR REBER (SEE NOTE 19), SUPPORT FROM MAINTENANCE HOLE TO REBER JOINT WITH MIN. 20mm CONCRETE CRADLE (STD. DWG. 2-5-16).
17. IF MOUNTING BRASS OR PRECAST RISER SECTIONS ARE USED, THEN THE LADDERS OR FIRST STEP CAN BE ANCHORED INTO THE SECTION TO MEET THE MAX. 300mm DISTANCE FROM SURFACE. IF CONCRETE RISERS ARE USED, THEN RPP LADDER SHALL BE ANCHORED TO THE TOP OF CONCRETE RISER SECTION TO MEET THE MAX. 300mm DISTANCE FROM SURFACE.
18. ALL CHAMBERS LOCATED OUTSIDE OF R.O.W. OR WITHIN PARK SETTINGS MUST HAVE A 1500mm HIGH SANITARY CHAMBER BENCHING (PRECAST CHAMBER WITH BENCHING CHAMBER COVER) TO BE PROVIDED TO PROTECT THE CHAMBER FROM COLLISION WITH VEHICLES OR PEDESTRIANS OR VEHICULAR TRAFFIC, NOT INCLUSIVE OF MAINTENANCE EQUIPMENT.
19. FOR CONNECTION OF FLEXIBLE OR RIBBON PIPE TO SANITARY CHAMBER, A FLEXIBLE WATER TIGHT RUBBER CONNECTOR SHALL BE USED. THE CONNECTOR DESIGN TO BE USED MUST BE APPROVED BY THE CONTRACT ADMINISTRATOR. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE CONTRACT ADMINISTRATOR FOR INFORMATION. THE CONTRACTOR SHALL PROVIDE LETTERS SIGNED BY A PROFESSIONAL ENGINEER CERTIFYING THE FOLLOWING:
 - a) THAT THE DESIGN OF THE PRECAST UNITS MEETS THE REQUIREMENTS OF THE SPECIFICATIONS.
 - b) THAT THE PRECAST UNITS HAVE BEEN MANUFACTURED AS PER DESIGN AND INSPECTED IN ACCORDANCE WITH THE PLANT PREQUALIFICATION PROGRAM.
 - c) PROVIDE CONCRETE WITH MINIMUM STRENGTH OF 35 MPa UNLESS A HIGHER STRENGTH IS REQUIRED BY THE MANUFACTURER OR DESIGNER.
20. ALL INTERNAL HORIZONTAL SURFACES UNDERSIDE OF PRECAST FLAT CAPS OR TRANSITION SECTIONS TO BE PROVIDED WITH 1:3 NON-BRINK MORTAR OR APPROVED EQUAL.
21. ALL CHAMBERS LOCATED OUTSIDE OF R.O.W. OR WITHIN PARK SETTINGS SHALL BE CONSTRUCTED SO THAT COVER SURFACE IS 150mm MIN. ABOVE FINISHED GRADE UNLESS OTHERWISE APPROVED BY PROJECT ENGINEER. IF THIS GRADE IS AN IMPEDIMENT TO PEDESTRIAN OR VEHICULAR TRAFFIC, NOT INCLUSIVE OF MAINTENANCE EQUIPMENT.

NOTE
 1. REFER TO STANDARD DRAWING 2-5-1 FOR GENERAL NOTES PERTAINING TO PRECAST MAINTENANCE HOLES.

Region of Peel PUBLIC WORKS STANDARD DRAWING
Working for you

REV. DATE: MARCH 2017

APPROVED BY: A.P. ANLEY GROUP
 DRAWN BY: ANLEY GROUP

STD. DWG. NUMBER: 2-5-2
 SCALE: N.T.S.

NEW SANITARY SEWER CONSTRUCTION TYPICAL PRECAST CIRCULAR MAINTENANCE HOLE DETAILS (1200mm - 3000mm)

NOTE:
 1. REFER TO STANDARD DRAWING 2-5-1 FOR GENERAL NOTES PERTAINING TO PRECAST MAINTENANCE HOLES.

Region of Peel PUBLIC WORKS STANDARD DRAWING
Working for you

REV. DATE: MARCH 2017

APPROVED BY: A.P. ANLEY GROUP
 DRAWN BY: ANLEY GROUP

STD. DWG. NUMBER: 2-5-13
 SCALE: N.T.S.

NEW SANITARY SEWER CONSTRUCTION STANDARD FRAME AND COVER SYSTEM DETAILS

NOTE:
 1. REFER TO STANDARD DRAWING 2-5-1 FOR GENERAL NOTES PERTAINING TO PRECAST MAINTENANCE HOLES.
 2. REFER TO STANDARD DRAWING 2-5-2, 2-5-4 FOR TYPICAL INSTALLATION OPTIONS AND REQUIREMENTS.

Region of Peel PUBLIC WORKS STANDARD DRAWING
Working for you

REV. DATE: MARCH 2017

APPROVED BY: A.P. ANLEY GROUP
 DRAWN BY: ANLEY GROUP

STD. DWG. NUMBER: 2-0-1
 SCALE: N.T.S.

GENERAL NOTES AND REFERENCES

Region of Peel PUBLIC WORKS STANDARD DRAWING
Working for you

REV. DATE: MARCH 2017

APPROVED BY: A.P. ANLEY GROUP
 DRAWN BY: ANLEY GROUP

STD. DWG. NUMBER: 2-5-1
 SCALE: N.T.S.

NEW SANITARY SEWER CONSTRUCTION GENERAL NOTES FOR PRECAST MAINTENANCE HOLES

Region of Peel PUBLIC WORKS STANDARD DRAWING
Working for you

REV. DATE: MARCH 2017

APPROVED BY: A.P. ANLEY GROUP
 DRAWN BY: ANLEY GROUP

STD. DWG. NUMBER: 2-5-2
 SCALE: N.T.S.

NEW SANITARY SEWER CONSTRUCTION TYPICAL PRECAST CIRCULAR MAINTENANCE HOLE DETAILS (1200mm - 3000mm)

Region of Peel PUBLIC WORKS STANDARD DRAWING
Working for you

REV. DATE: MARCH 2017

APPROVED BY: A.P. ANLEY GROUP
 DRAWN BY: ANLEY GROUP

STD. DWG. NUMBER: 2-5-13
 SCALE: N.T.S.

NEW SANITARY SEWER CONSTRUCTION STANDARD FRAME AND COVER SYSTEM DETAILS

Region of Peel PUBLIC WORKS STANDARD DRAWING
Working for you

REV. DATE: MARCH 2017

APPROVED BY: A.P. ANLEY GROUP
 DRAWN BY: ANLEY GROUP

STD. DWG. NUMBER: 2-5-13
 SCALE: N.T.S.

NEW SANITARY SEWER CONSTRUCTION STANDARD FRAME AND COVER SYSTEM DETAILS

Region of Peel PUBLIC WORKS STANDARD DRAWING
Working for you

REV. DATE: NOVEMBER 2011

APPROVED BY: A.P. ANLEY GROUP
 DRAWN BY: ANLEY GROUP

STD. DWG. NUMBER: 1-8-6
 SCALE: N.T.S.

SERVICING FOR INDUSTRIAL BUILDINGS

LEGEND:
 V VALVE & BOX
 D DETECTOR CHECK VALVE IN CHAMBER
 C CHECK VALVE IN CHAMBER
 T TAPPING SLLEEVE & VALVE & BOX
 F FIBRE HYDRANT CIV WALK & BOX
 M METER
 S SAMPLING SANITARY MAINTENANCE HOLE

Region of Peel PUBLIC WORKS STANDARD DRAWING
Working for you

REV. DATE: NOVEMBER 2011

APPROVED BY: A.P. ANLEY GROUP
 DRAWN BY: ANLEY GROUP

STD. DWG. NUMBER: 1-8-6
 SCALE: N.T.S.

SERVICING FOR INDUSTRIAL BUILDINGS

LEGEND:
 V VALVE & BOX
 D DETECTOR CHECK VALVE IN CHAMBER
 C CHECK VALVE IN CHAMBER
 T TAPPING SLLEEVE & VALVE & BOX
 F FIBRE HYDRANT CIV WALK & BOX
 M METER
 S SAMPLING SANITARY MAINTENANCE HOLE

Region of Peel PUBLIC WORKS STANDARD DRAWING
Working for you

REV. DATE: NOVEMBER 2011

APPROVED BY: A.P. ANLEY GROUP
 DRAWN BY: ANLEY GROUP

STD. DWG. NUMBER: 1-8-6
 SCALE: N.T.S.

SERVICING FOR INDUSTRIAL BUILDINGS

LEGEND:
 V VALVE & BOX
 D DETECTOR CHECK VALVE IN CHAMBER
 C CHECK VALVE IN CHAMBER
 T TAPPING SLLEEVE & VALVE & BOX
 F FIBRE HYDRANT CIV WALK & BOX
 M METER
 S SAMPLING SANITARY MAINTENANCE HOLE

Region of Peel PUBLIC WORKS STANDARD DRAWING
Working for you

REV. DATE: NOVEMBER 2011

APPROVED BY: A.P. ANLEY GROUP
 DRAWN BY: ANLEY GROUP

STD. DWG. NUMBER: 1-8-6
 SCALE: N.T.S.

SERVICING FOR INDUSTRIAL BUILDINGS

LEGEND:
 V VALVE & BOX
 D DETECTOR CHECK VALVE IN CHAMBER
 C CHECK VALVE IN CHAMBER
 T TAPPING SLLEEVE & VALVE & BOX
 F FIBRE HYDRANT CIV WALK & BOX
 M METER
 S SAMPLING SANITARY MAINTENANCE HOLE

Region of Peel PUBLIC WORKS STANDARD DRAWING
Working for you

REV. DATE: NOVEMBER 2011

APPROVED BY: A.P. ANLEY GROUP
 DRAWN BY: ANLEY GROUP

STD. DWG. NUMBER: 1-8-6
 SCALE: N.T.S.

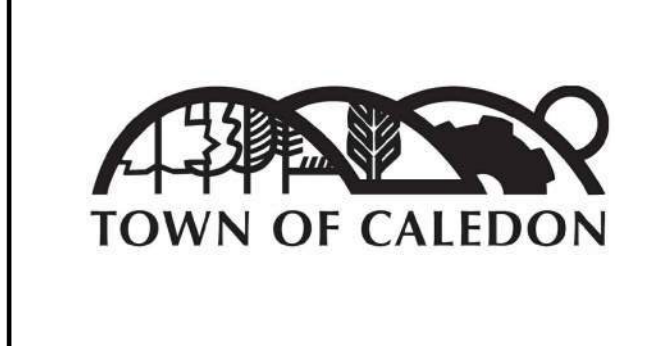
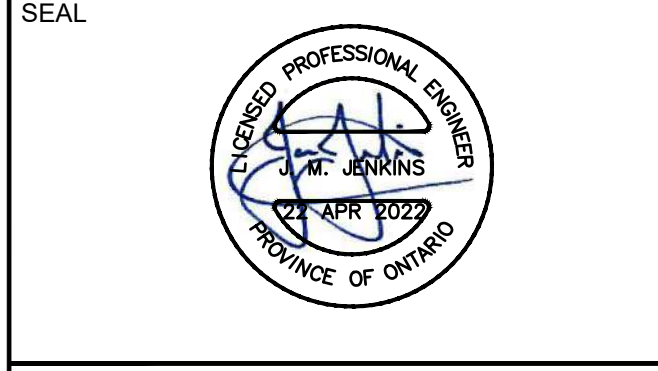
SERVICING FOR INDUSTRIAL BUILDINGS

LEGEND:
 V VALVE & BOX
 D DETECTOR CHECK VALVE IN CHAMBER
 C CHECK VALVE IN CHAMBER
 T TAPPING SLLEEVE & VALVE & BOX
 F FIBRE HYDRANT CIV WALK & BOX
 M METER
 S SAMPLING SANITARY MAINTENANCE HOLE

ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR SPA SUBMISSION	APR 22, 2022

LEGEND



IBI GROUP
 Unit 300 - 8133 Warden Avenue
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 Tel: 905.763.2322 Fax: 905.763.9893
 ibigroup.com

PROJECT
 12304 HEART LAKE ROAD
 PHASE 2
 CALEDON, ON. L7C 2J2

PROJECT NO:
 135636

DRAWN BY: NDS
CHECKED BY: JJ

PROJECT MGR: JJ
APPROVED BY: JJ

SHEET TITLE
PHASE 2 - GENERAL NOTES AND DETAILS

SHEET NUMBER DD-03 **ISSUE** 01

File Location: \\135636_12304HeartL_0_Production\04_Civil\Sheets\SPAS\Phase 2\135636-SHT-PH2-DET-01.dwg
 Last Saved: March 29, 2022, 12:40 AM by Kevin Park
 Printed: Tuesday, April 26, 2022 12:41 AM by Kevin Park

NOTES FOR RIGID PIPE

- OVERBILT OF DROP PIPE TO MEET THE OVERTOP OF THE RECEIVING SEWER.
- DROP STRUCTURE TO BE COMPLETELY ENCASED IN MIN. 150mm OF 20 MPa CONCRETE.
- WYE FITTINGS MAY BE USED IN LIEU OF TEES.
- DROP PIPE TO BE ONE SIZE SMALLER THAN THE INCOMING SEWER, MINIMUM SIZE 250mm, TO ENABLE EFFECTIVE CLEANING.

NOTES FOR FLEXIBLE PIPE

- OVERBILT OF DROP PIPE TO MEET THE OVERTOP OF THE RECEIVING SEWER.
- DROP STRUCTURE TO BE COMPLETELY ENCASED IN MIN. OF 150mm OF GRANULAR BEDDING MATERIAL.
- WYE FITTINGS MAY BE USED IN LIEU OF TEES.
- DROP PIPE TO BE ONE SIZE SMALLER THAN THE INCOMING SEWER, MINIMUM SIZE 250mm, TO ENABLE EFFECTIVE CLEANING.
- IN LIEU OF NO. 2, THE DROP STRUCTURE MAY BE ENCASED IN MIN. OF 150mm OF 20 MPa CONCRETE TO WITHIN 100mm OF THE BEDDING FOR THE TEE TO REMAIN GRANULAR.
- SAFETY PLATFORMS TO BE LOCATED ABOVE DROP STRUCTURE (AS PER STD. DWGS. SECTION 2-6).

NOTE

- REFER TO STANDARD DRAWING 2-5-1 FOR GENERAL NOTES PERTAINING TO PRECAST MAINTENANCE HOLES.
- REFER TO STANDARD DRAWING 2-5-2 FOR TYPICAL INSTALLATION OPTIONS AND REQUIREMENTS.

Region of Peel PUBLIC WORKS STANDARD DRAWING
NEW SANITARY SEWER CONSTRUCTION MAINTENANCE HOLE DROP STRUCTURE EXTERNAL ASSEMBLY
 REV. DATE: MARCH 2017
 APPROVED BY: A.P. DRAWN BY: ANLEY GROUP
 STD. DWG. NUMBER: 2-5-26 SCALE: N.T.A.

NOTE

- REFER TO STANDARD DRAWING 2-5-1 FOR GENERAL NOTES PERTAINING TO PRECAST OR GFRP MAINTENANCE HOLES.
- REFER TO STANDARD DRAWING 2-5-2 FOR TYPICAL INSTALLATION OPTIONS AND REQUIREMENTS.

Region of Peel PUBLIC WORKS STANDARD DRAWING
NEW SANITARY SEWER CONSTRUCTION MAINTENANCE HOLE VENTING DETAILS
 REV. DATE: MARCH 2017
 APPROVED BY: A.P. DRAWN BY: ANLEY GROUP
 STD. DWG. NUMBER: 2-5-22 SCALE: N.T.A.

NOTE

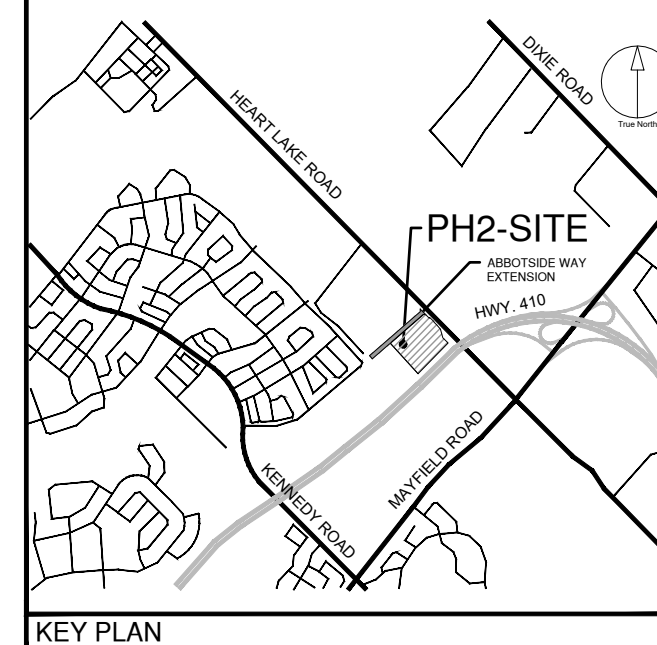
- REFER TO STANDARD DRAWING 2-5-1 FOR GENERAL NOTES PERTAINING TO PRECAST OR GFRP MAINTENANCE HOLES.
- REFER TO STANDARD DRAWING 2-5-2 FOR TYPICAL INSTALLATION OPTIONS AND REQUIREMENTS.

Region of Peel PUBLIC WORKS STANDARD DRAWING
NEW SANITARY SEWER CONSTRUCTION WATERPROOF MEMBRANE DETAILS
 REV. DATE: MARCH 2017
 APPROVED BY: A.P. DRAWN BY: ANLEY GROUP
 STD. DWG. NUMBER: 2-5-25 SCALE: N.T.A.

NOTES:

- The sump is measured from the lowest invert.
- A Granular backfill shall be placed to a minimum thickness of 300mm all around the maintenance hole.
- Precast concrete components shall be according to OPSD 701.030, 701.031, or 701.032.
- Structure exceeding 5.0m in depth shall include safety platform according to OPSD 404.020.
- Pipe support according to OPSD 705.020.
- For adjustment unit and frame installation, see OPSD 704.021.
- For benching and pipe opening details, see OPSD 704.010.
- All dimensions are nominal.
- All dimensions are in millimetres unless otherwise shown.

Region of Peel PUBLIC WORKS STANDARD DRAWING
PRECAST CONCRETE MAINTENANCE HOLE 1200mm DIAMETER
 REV. DATE: MARCH 2017
 APPROVED BY: A.P. DRAWN BY: ANLEY GROUP
 STD. DWG. NUMBER: 2-5-24 SCALE: N.T.A.



CLIENT
BROCCOLINI
 2680 SKYMARK AVENUE, SUITE 800
 MISSISSAUGA, ON. L4W5L6

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ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR SPA SUBMISSION	APR 22, 2022

LEGEND

NOTE

- MATERIAL TO BE PLACED IN TRENCH IN 150mm LAYERS AND COMPACTED TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMCD).
- AND COMPACTED TO 100% STANDARD PROCTOR DENSITY.
- POOR SOIL PIPE FOUNDATION TO BE PROVIDED AS PER DESIGN. ADDITIONAL BEDDING MODIFICATIONS MAY BE REQUIRED AS PER DESIGN.
- BACKFILL ABOVE BEDDING AS REQUIRED PER DESIGN. NATIVE BACKFILL NOT PERMITTED UNDER PAVED PORTIONS.
- COVER MATERIAL, NO STONES GREATER THAN 20mm WILL BE PERMITTED.
- MIN. TRENCH WIDTH TO BE O.D. PLUS 40mm. MAX. TRENCH WIDTH TO BE O.D. PLUS 750mm, UNLESS PROJECT SPECIFIC BEDDING STATES OTHERWISE.
- APPROVED SOIL AS PER GEOTECHNICAL REPORT RECOMMENDATIONS.
- IF THE CHAMBER THAT SHALL BE PROVIDED BEDDING REQUIREMENTS BASED ON THE FINDINGS OF THE GEOTECHNICAL INVESTIGATION AND PROVIDE A CROSS-SECTION ILLUSTRATION ON THE FIRST PLAN AND PROVIDE GENERAL DETAIL PAGE.
- IN ROCK EXCAVATION, A MINIMUM OF 150mm GRANULAR MATERIAL BEDDING IS REQUIRED UNDERNEATH THE PIPE FOR PVC AND UP TO SPREAD LINE FOR CONCRETE PIPE.
- NO ROCK OR SHALE TRENCH CONSTRUCTION. INSTALL 150mm thick POLYETHYLENE FOAM FOR CONCRETE ENCASED SEWER INSTALLATIONS. REFER TO PROJECT SPECIFIC REQUIREMENTS. POLYETHYLENE FOAM TO BE EITHER DOWM ESTIMATED AND ON NOROIC VOID 400 OR APPROVED EQUAL.

Region of Peel PUBLIC WORKS STANDARD DRAWING
BEDDING DETAILS FOR SEWERS
 REV. DATE: MARCH 2017
 APPROVED BY: A.P. DRAWN BY: ANLEY GROUP
 STD. DWG. NUMBER: 2-3-1 SCALE: N.T.A.

NOTE

- REFER TO STANDARD DRAWING 2-5-1 FOR GENERAL NOTES PERTAINING TO PRECAST OR GFRP MAINTENANCE HOLES.
- REFER TO STANDARD DRAWING 2-5-2 FOR TYPICAL INSTALLATION OPTIONS AND REQUIREMENTS.

Region of Peel PUBLIC WORKS STANDARD DRAWING
MAINTENANCE HOLE APPURTENANCES TYPICAL 100 OR 150 DIAMETER FRP SAFETY LANDING DETAILS
 REV. DATE: MARCH 2017
 APPROVED BY: A.P. DRAWN BY: ANLEY GROUP
 STD. DWG. NUMBER: 2-4-13 SCALE: N.T.A.

NOTE

- Height of fill is measured from the finished surface to top of pipe.
- The pipe shall be compacted and shaped to receive the bottom of the pipe.
- Pipe culvert frost treatment shall be according to OPSD 803.030 and 803.031.
- Condition of excavation is symmetrical about centreline of pipe.
- Granular material placed in the hunch area shall be compacted prior to placing and compacting the remainder of the embankment material.
- Soil types as defined in the Occupational Health and Safety Act and Regulations for Construction Projects.
- All dimensions are in metres unless otherwise shown.

Region of Peel PUBLIC WORKS STANDARD DRAWING
FLEXIBLE PIPE EMBEDMENT AND BACKFILL EARTH EXCAVATION
 REV. DATE: MARCH 2017
 APPROVED BY: A.P. DRAWN BY: ANLEY GROUP
 STD. DWG. NUMBER: 2-4-15 SCALE: N.T.A.

NOTES:

- For sump detail, see OPSD 701.010.
- A Granular backfill shall be placed to a minimum thickness of 300mm all around the maintenance hole.
- Precast concrete components shall be according to OPSD 701.030, 701.031, 701.040, 701.041, 703.011, 703.021, and 706.010.
- Structure exceeding 5.0m in depth shall include safety platform according to OPSD 404.020 or 404.021.
- Pipe support shall be according to OPSD 705.020.
- For adjustment unit and frame installation, see OPSD 704.021.
- For benching and pipe opening details, see OPSD 704.010.
- All dimensions are nominal.
- All dimensions are in millimetres unless otherwise shown.

Region of Peel PUBLIC WORKS STANDARD DRAWING
PRECAST CONCRETE MAINTENANCE HOLE 1500mm DIAMETER
 REV. DATE: MARCH 2017
 APPROVED BY: A.P. DRAWN BY: ANLEY GROUP
 STD. DWG. NUMBER: 2-4-14 SCALE: N.T.A.

NOTE

- WATERPROOF MEMBRANE TO BE INSTALLED BY THE CONTRACTOR BY THE METHOD OF THE MANUFACTURER'S APPROVED EQUAL.
- WATERPROOF MEMBRANE TO BE INSTALLED BY THE CONTRACTOR BY THE METHOD OF THE MANUFACTURER'S APPROVED EQUAL.
- INSULATION TO BE INSTALLED BY THE CONTRACTOR BY THE METHOD OF THE MANUFACTURER'S APPROVED EQUAL.
- ALL DIMENSIONS TO BE AS SHOWN UNLESS OTHERWISE SPECIFIED.
- ALL DIMENSIONS TO BE IN METRES UNLESS OTHERWISE SPECIFIED.
- ALL DIMENSIONS TO BE IN METRES UNLESS OTHERWISE SPECIFIED.

Region of Peel PUBLIC WORKS STANDARD DRAWING
TYPICAL PRECAST CIRCULAR CHAMBER DETAILS FOR NEW WATERMAINS
 REV. DATE: APRIL 2014
 APPROVED BY: A.P. DRAWN BY: ANLEY GROUP
 STD. DWG. NUMBER: 1-1-5 SCALE: N.T.A.

NOTE

- INSTALL SHOWN GALVANIZED COUPLER FROM INCHIBER CHAMBER WALL TO SUITABLE LOCATION 2000mm MIN. BEYOND TRAFFIC AREA.
- GATE VALVE, FITTINGS AND PIPE SHALL BE RESTRICTED AS PER REGION OF PEEL REQUIREMENTS.
- VALVE SHALL BE INSTALLED AS SHOWN UNLESS OTHERWISE SPECIFIED.
- VALVE SHALL BE INSTALLED AS SHOWN UNLESS OTHERWISE SPECIFIED.
- VALVE SHALL BE INSTALLED AS SHOWN UNLESS OTHERWISE SPECIFIED.

Region of Peel PUBLIC WORKS STANDARD DRAWING
DETECTOR CHECK VALVE IN CHAMBER
 REV. DATE: APRIL 2014
 APPROVED BY: A.P. DRAWN BY: ANLEY GROUP
 STD. DWG. NUMBER: 1-3-1 SCALE: N.T.A.

NOTE

- NO EXTENDED COPPER FITTINGS (SOLDERED OR GALVANIZED) FITTINGS TO BE USED. ALL FITTINGS MUST BE MADE OF BRASS.
- FOR CORRECT BYPASS INSTALLATION, METER SPACERS ARE AVAILABLE AT 2 COPPER REL. BRAMPTON (PHONE) 745-9587 EXT. 200.
- METER AND COLLECT PORTS TO BE 25mm DIA.
- METER SUPPLY AND RETURN TO BE INSTALLED BY THE REGION OF PEEL METER DEPARTMENT.

Region of Peel PUBLIC WORKS STANDARD DRAWING
25mm BY-PASS FOR DETECTOR CHECK VALVE
 REV. DATE: JANUARY 2015
 APPROVED BY: A.P. DRAWN BY: ANLEY GROUP
 STD. DWG. NUMBER: 1-3-9 SCALE: N.T.A.

NOTE

- METER CHAMBER TO BE LOCATED NEAR THE STREET LINE. VALVE SHALL BE AT STREET LINE.
- IF METER CHAMBER IS LOCATED NEAR THE STREET LINE, VALVE SHALL BE AT STREET LINE.
- IF METER CHAMBER IS LOCATED NEAR THE STREET LINE, VALVE SHALL BE AT STREET LINE.
- IF METER CHAMBER IS LOCATED NEAR THE STREET LINE, VALVE SHALL BE AT STREET LINE.

Region of Peel PUBLIC WORKS STANDARD DRAWING
100mm AND 150mm TRU-FLO COMPOUND METER IN CHAMBER
 REV. DATE: NOVEMBER 2011
 APPROVED BY: A.P. DRAWN BY: ANLEY GROUP
 STD. DWG. NUMBER: 1-4-4 SCALE: N.T.A.

LIST OF DRAWINGS

SG-01	PHASE 2 - SITE GRADING PLAN
SG-02	PHASE 2 - SITE GRADING PLAN
SG-03	PHASE 2 - SITE GRADING PLAN
SG-04	PHASE 2 - SITE GRADING PLAN
SS-01	PHASE 2 - SITE SERVICING PLAN
SS-02	PHASE 2 - SITE SERVICING PLAN
SS-03	PHASE 2 - SITE SERVICING PLAN
SS-04	PHASE 2 - SITE SERVICING PLAN
EC-01	PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
EC-02	PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
EC-03	PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
EC-04	PHASE 2 - EROSION AND SEDIMENT CONTROL PLAN
DD-01	PHASE 2 - DETAIL DRAWING
DD-02	PHASE 2 - DETAIL DRAWING
DD-03	PHASE 2 - DETAIL DRAWING
DD-04	PHASE 2 - DETAIL DRAWING

SUBVEYOR INFORMATION

WARE MALCOMB 500 UNIVERSITY AVE, SUITE 235 TORONTO, ON. M5H 3E5 PHONE: (416) 537-0700 WEBSITE: www.waremalcomb.com	RIFE SURVEYING LTD. ONTARIO LAND SURVEYORS 643 CHURCHILL ROAD, SUITE 7 WOODBRIDGE, ON. L4L 6A3 PHONE: (416) 835-5000 WEBSITE: www.rife.ca
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BENCHMARK INFORMATION:
 ELEVATIONS ARE GEODETIC AND ARE REFERRED TO MTD VERTICAL BENCHMARK NUMBER 050997 HAVING AN ORTHOMETRIC ELEVATION OF 261.12 METRES. ELEVATIONS ARE REFERENCED TO THE CANADIAN GEODETIC VERTICAL DATUM OF 1984. 1978 ADJUSTMENT (CGVD-1984/1978).

SCALE:

TOWN OF CALEDON

IBI GROUP
 Unit 300 - 8133 Warden Avenue
 Markham ON L6G 1B3 Canada
 tel 905 763 2322 fax 905 763 9983
 website: www.ibigroup.com

PROJECT
 12304 HEART LAKE ROAD
 PHASE 2
 CALEDON, ON. L7C 2J2

PROJECT NO: 135636

DRAWN BY: NDS **CHECKED BY:** JJ

PROJECT MGR: JJ **APPROVED BY:** JJ

PROJECT SHEET TITLE
PHASE 2 - GENERAL NOTES AND DETAILS

SHEET NUMBER DD-04 **ISSUE** 01

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