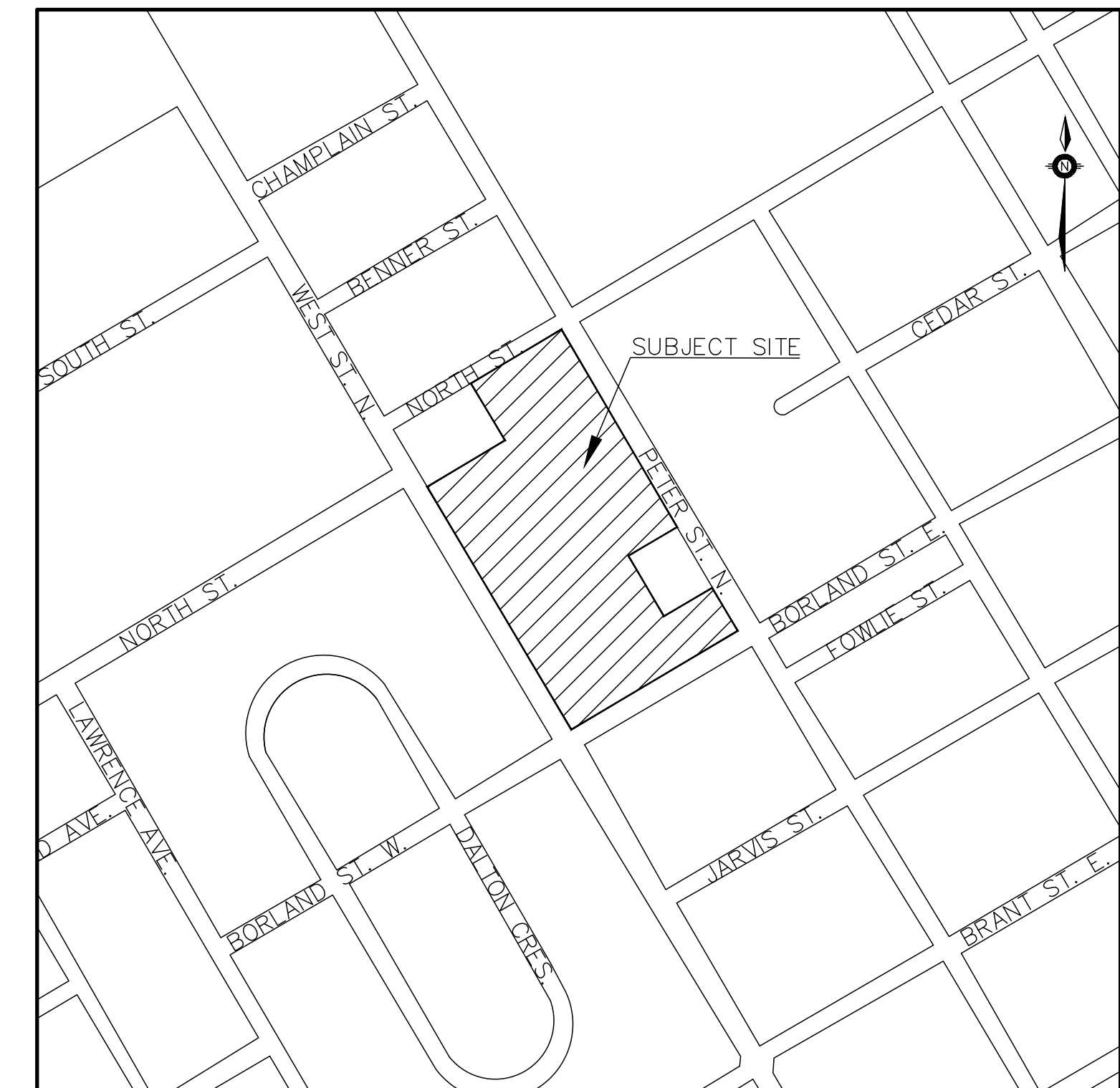


COUNTY OF SIMCOE ORILLIA AFFORDABLE HOUSING 2 BORLAND STREET

DRAWING LIST

ND-1	NOTES AND DETAILS (1 OF 4)
ND-2	NOTES AND DETAILS (2 OF 4)
ND-3	NOTES AND DETAILS (3 OF 4)
ND-4	NOTES AND DETAILS (4 OF 4)
SG-1	SITE GRADING PLAN (1 OF 3)
SG-2	SITE GRADING PLAN (2 OF 3)
SG-3	SITE GRADING PLAN (3 OF 3)
SS-1	SITE SERVICING PLAN (1 OF 3)
SS-2	SITE SERVICING PLAN (2 OF 3)
SS-3	SITE SERVICING PLAN (3 OF 3)
STM-1	PRE-DEVELOPMENT STORM CATCHMENT PLAN
STM-2	POST-DEVELOPMENT STORM CATCHMENT PLAN
STM-3	STORM DRAINAGE AREA PLAN
PND-1	STORMWATER MANAGEMENT POND DETAILS
EPR-1	ENVIRONMENTAL PROTECTION AND REMOVALS PLAN



CITY OF ORILLIA
50 ANDREW STREET SOUTH, SUITE 300
ORILLIA, ON, L3V 7T5

COUNTY OF SIMCOE
1110 HIGHWAY 26
MIDHURST, ON, L0L 1X0



PEARSON
ENGINEERING LTD.
PEARSONENG.COM PH. 705.719.4785

DRAWINGS
THE NOTES ON THIS SHEET APPLY TO ALL WORK UNDER THIS CONTRACT UNLESS OTHERWISE NOTED ON THE PLAN AND PROFILE DRAWINGS AND/OR SPECIFIC DETAIL DRAWINGS.

GENERAL NOTES
THE STANDARD DRAWINGS OF THE CITY OF ORILLIA, ORILLIA HYDRO DISTRIBUTION ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS (SPS) AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OSD) CONSTITUTE PART OF THE PLAN OF THE CONTRACT.

MEASUREMENTS
ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
ALL DIMENSIONS SHALL BE CHECKED AND VERIFIED BY THE FIELD OF THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORK. DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.

GENERAL
EXISTING SERVICES AND UTILITIES SHOWN ON THE CONTRACT DRAWINGS ARE BASED ON THE BEST INFORMATION AVAILABLE AND THEIR LOCATIONS ARE NOT GUARANTEED. THE CONTRACTOR SHALL INTERFERE WITH THIS INFORMATION AS HE WISHES WITH THE UNDERSTANDING THAT THE OWNER DISCLAIMS ALL RESPONSIBILITY FOR ITS ACCURACY AND/OR SUFFICIENCY. THE CONTRACTOR IS REQUIRED TO NOTIFY THE VARIOUS UTILITY COMPANIES AT LEAST 14 DAYS PRIOR TO THE COMMENCEMENT OF ANY WORK.

NEARLY ADJACENT PROPERTY
REQUIREMENTS FOR NEARLY ADJACENT PROPERTY ARE SET OUT IN THE SPS. THE CONTRACTOR SHALL COMPLY WITH ALL CITY OF ORILLIA STANDARDS AND SPECIFICATIONS (SPS) AND THE ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS (OSD) FOR NEARLY ADJACENT PROPERTY.

CONSTRUCTION
THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF ORILLIA AND ANY OTHER AGENCIES THAT MAY BE REQUIRED FOR THE CONSTRUCTION OF THE WORK.

WATERMATERIAL
WATERMATERIAL IS TO BE POLYVINYL CHLORIDE (PVC) CLASS 150 DR10 OR DUCTILE IRON CLASS 200 TRACER WIRE IS TO BE 12 AWG STRENGTH COPPER CLAD STEEL CONDUCTOR (HS-CCS) INSULATED WITH 30mm HIGH DENSITY POLYETHYLENE (HDPE) INSULATION. WIRE TO BE COLOUR CODED BLUE. WATERPROOF CONNECTION ASTM D1248 ASTM B910/B910M TO BE USED FOR TRACER WIRE SYSTEMS.

THE CORPORATION OF THE CITY OF ORILLIA
DEPARTMENT OF PLANNING & DEVELOPMENT

ENGINEERING DESIGN STANDARDS
RESIDENTIAL DEVELOPMENT
GENERAL
DATE: AUGUST 2011 | SCALE: NTS | SECTION: 1-3
DRAWN: GMS

ROADS
THE ROAD PAVEMENT STRUCTURE SHALL CONSIST OF A MINIMUM OF THE FOLLOWING:
1. 100mm HL3 ASPHALT
2. 100mm HL4 ASPHALT
3. 150mm HL8 ASPHALT
4. 150mm GRANULAR 'A'
5. 150mm GRANULAR 'B'

5. SANITARY SEWERS
SANITARY SEWERS TO BE LOCATED 1.5M OFF CENTRELINE OF THE ROAD UNLESS NOTED OTHERWISE.
MAXIMUM PIPE DEFLECTION FROM COMBINED LIVE AND DEAD LOADING SHALL NOT EXCEED ANY CSA OR MANUFACTURER'S RECOMMENDED SPECIFICATION. FLEXIBLE PIPE SHALL BE PVC DUCTILE IRON APPROVED EQUIVALENT WITH RUBBER GASKET TYPE JOINTS AND SHALL CONFORM TO CSA B482.3-4. RIGID PIPE SHALL BE REINFORCED CONCRETE WITH A MINIMUM STRENGTH OF 30MPa CONFORMING TO CSA STANDARD A517.1 CLASS 300 AND OPEN TOP MANHOLES SHALL CONFORM TO CSA STANDARD A517.2.

6. SANITARY SEWERS LATERALS
SANITARY SEWERS LATERALS TO BE LOCATED AS SHOWN UNLESS OTHERWISE NOTED.
MINIMUM DEPTH OF LATERAL AT PROPERTY LINE SHALL BE 1.0M MEASURED FROM THE FINISHED GRADE TO THE TOP OF THE PIPE.

THE CORPORATION OF THE CITY OF ORILLIA
DEPARTMENT OF PLANNING & DEVELOPMENT

ENGINEERING DESIGN STANDARDS
RESIDENTIAL DEVELOPMENT
ROADS
DATE: AUGUST 2011 | SCALE: NTS | SECTION: 4
DRAWN: GMS

7. STORM SEWERS
MAXIMUM PIPE DEFLECTION FROM COMBINED LIVE AND DEAD LOADING SHALL NOT EXCEED ANY CSA OR MANUFACTURER'S RECOMMENDED SPECIFICATION. FLEXIBLE PIPE SHALL BE PVC DUCTILE IRON APPROVED EQUIVALENT WITH RUBBER GASKET TYPE JOINTS AND SHALL CONFORM TO CSA B482.3-4. RIGID PIPE SHALL BE REINFORCED CONCRETE WITH A MINIMUM STRENGTH OF 30MPa CONFORMING TO CSA STANDARD A517.1 CLASS 300 AND OPEN TOP MANHOLES SHALL CONFORM TO CSA STANDARD A517.2.

8. WATERMATERIALS
WATERMATERIAL IS TO BE POLYVINYL CHLORIDE (PVC) CLASS 150 DR10 OR DUCTILE IRON CLASS 200 TRACER WIRE IS TO BE 12 AWG STRENGTH COPPER CLAD STEEL CONDUCTOR (HS-CCS) INSULATED WITH 30mm HIGH DENSITY POLYETHYLENE (HDPE) INSULATION. WIRE TO BE COLOUR CODED BLUE. WATERPROOF CONNECTION ASTM D1248 ASTM B910/B910M TO BE USED FOR TRACER WIRE SYSTEMS.

THE CORPORATION OF THE CITY OF ORILLIA
DEPARTMENT OF PLANNING & DEVELOPMENT

ENGINEERING DESIGN STANDARDS
RESIDENTIAL DEVELOPMENT
SANITARY
DATE: AUGUST 2011 | SCALE: NTS | SECTION: 5 & 6
DRAWN: GMS

9. WATERMATERIALS
WATERMATERIAL IS TO BE POLYVINYL CHLORIDE (PVC) CLASS 150 DR10 OR DUCTILE IRON CLASS 200 TRACER WIRE IS TO BE 12 AWG STRENGTH COPPER CLAD STEEL CONDUCTOR (HS-CCS) INSULATED WITH 30mm HIGH DENSITY POLYETHYLENE (HDPE) INSULATION. WIRE TO BE COLOUR CODED BLUE. WATERPROOF CONNECTION ASTM D1248 ASTM B910/B910M TO BE USED FOR TRACER WIRE SYSTEMS.

THE CORPORATION OF THE CITY OF ORILLIA
DEPARTMENT OF PLANNING & DEVELOPMENT

ENGINEERING DESIGN STANDARDS
RESIDENTIAL DEVELOPMENT
STORM SEWERS
DATE: AUGUST 2011 | SCALE: NTS | SECTION: 7
DRAWN: GMS

10. WATERMATERIALS
WATERMATERIAL IS TO BE POLYVINYL CHLORIDE (PVC) CLASS 150 DR10 OR DUCTILE IRON CLASS 200 TRACER WIRE IS TO BE 12 AWG STRENGTH COPPER CLAD STEEL CONDUCTOR (HS-CCS) INSULATED WITH 30mm HIGH DENSITY POLYETHYLENE (HDPE) INSULATION. WIRE TO BE COLOUR CODED BLUE. WATERPROOF CONNECTION ASTM D1248 ASTM B910/B910M TO BE USED FOR TRACER WIRE SYSTEMS.

THE CORPORATION OF THE CITY OF ORILLIA
DEPARTMENT OF PLANNING & DEVELOPMENT

ENGINEERING DESIGN STANDARDS
RESIDENTIAL DEVELOPMENT
WATER
DATE: AUGUST 2011 | SCALE: NTS | SECTION: 8
DRAWN: GMS

11. WATERMATERIALS
WATERMATERIAL IS TO BE POLYVINYL CHLORIDE (PVC) CLASS 150 DR10 OR DUCTILE IRON CLASS 200 TRACER WIRE IS TO BE 12 AWG STRENGTH COPPER CLAD STEEL CONDUCTOR (HS-CCS) INSULATED WITH 30mm HIGH DENSITY POLYETHYLENE (HDPE) INSULATION. WIRE TO BE COLOUR CODED BLUE. WATERPROOF CONNECTION ASTM D1248 ASTM B910/B910M TO BE USED FOR TRACER WIRE SYSTEMS.

THE CORPORATION OF THE CITY OF ORILLIA
DEPARTMENT OF PLANNING & DEVELOPMENT

ENGINEERING DESIGN STANDARDS
RESIDENTIAL DEVELOPMENT
WATER (cont.)
DATE: AUGUST 2011 | SCALE: NTS | SECTION: 9 & 9
DRAWN: GMS

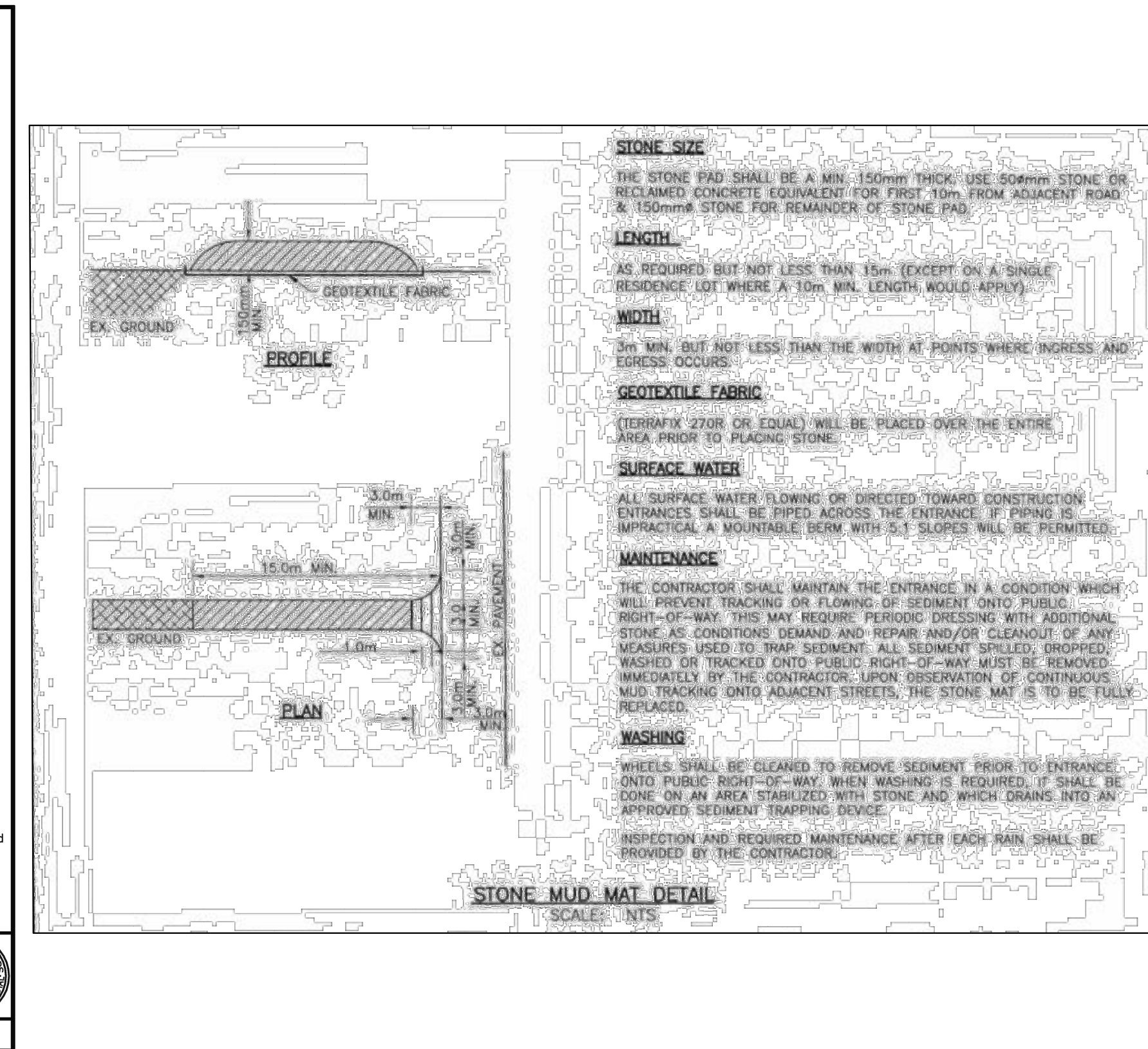
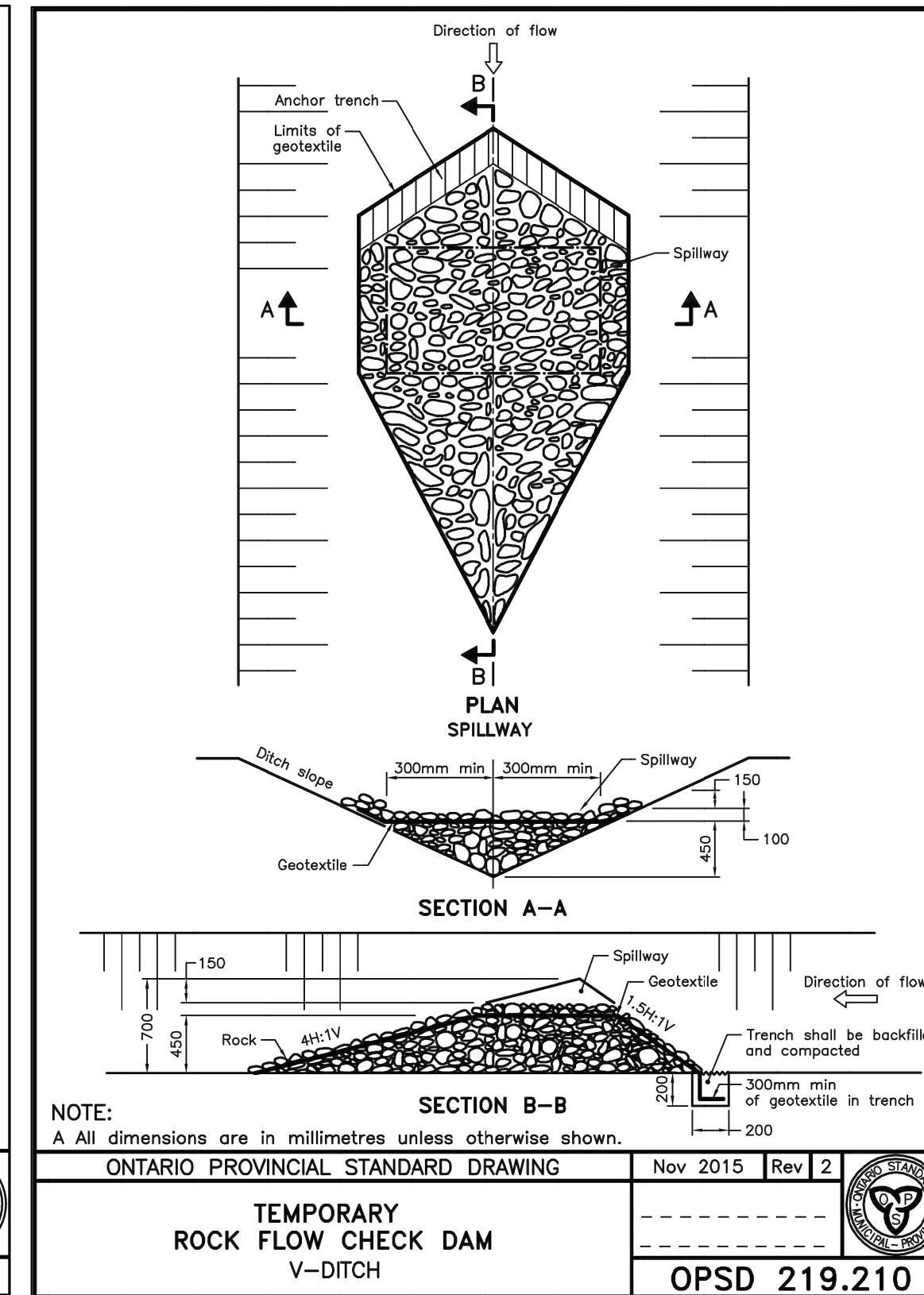
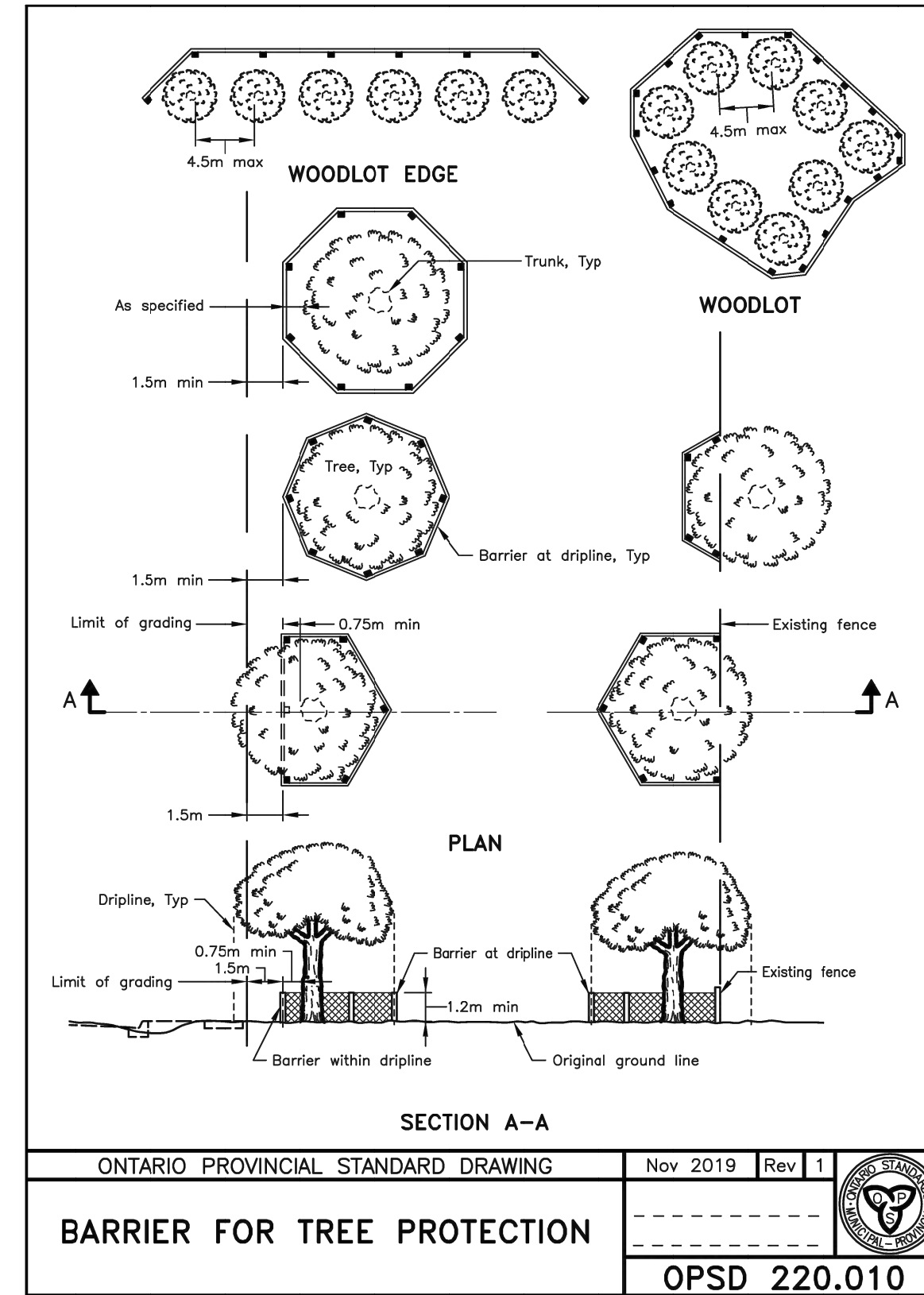
PARKING LOT
1. THE LIGHT DUTY PAVEMENT STRUCTURE SHALL CONSIST OF THE FOLLOWING (AS PER GEOTECHNICAL REPORT BY EXP DATED DECEMBER 2000):

- LIGHT DUTY PAVEMENT COMPONENTS
 - 40mm HL3 ASPHALT
 - 50mm HL8 ASPHALT
 - 150mm GRANULAR 'A'
 - 350mm GRANULAR 'B'
- HEAVY DUTY PAVEMENT COMPONENTS
 - 40mm HL3 ASPHALT
 - 80mm HL4 ASPHALT
 - 150mm GRANULAR 'A'
 - 500mm GRANULAR 'B'

2. NATIVE SUBGRADE TO BE COMPACTED TO MINIMUM 95% STANDARD PROCTOR MAXIMUM DRY DENSITY.

THE CORPORATION OF THE CITY OF ORILLIA
DEPARTMENT OF PLANNING & DEVELOPMENT

ENGINEERING DESIGN STANDARDS
RESIDENTIAL DEVELOPMENT
WATER (cont.)
DATE: AUGUST 2011 | SCALE: NTS | SECTION: 9 & 9
DRAWN: GMS



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NO.	REVISION NOTE	DATE	BY	BENCHMARK
2.	REVISED AS PER CITY ORILLIA COMMENTS	04/28/21	AA	
1.	REVISED AS PER CITY ORILLIA COMMENTS	01/26/21	AA	

COUNTY OF SIMCOE
AFFORDABLE HOUSING
ORILLIA, 2 BORLAND STREET EAST

PEARSON ENGINEERING LTD.
PEARSONENGINE.COM PH. 705.719.4785

DESIGNED BY: AA
DRAWN BY: AA
CHECKED BY: MWD

HORIZ SCALE
VERT SCALE
DATE: NOVEMBER 2020

PROJECT #: 2002
DRAWING #: ND-1
REVISION #: 2

NOTES AND DETAILS 1 OF 4

ALTERNATE STANDARD HEIGHTS	DIMENSION
A	1980
B	1830
C	1520
D	1380

NOTES:
 1 Outlet hole size 525mm diameter maximum, location as required.
 2 200mm diameter knockout to accommodate subdrain. Knockout shall be 60mm deep.
 3 Centre reinforcing in base slab and walls ±200mm.
 4 Granular backfill shall be placed to a minimum thickness of 300mm all around the catch basin.
 5 Frame, grate, and adjustment units shall be installed according to OPSD 704.010.
 6 Pipe support shall be according to OPSD 708.020.
 7 All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2019 Rev 4
PRECAST CONCRETE CATCH BASIN
 600x600mm
 OPSD 705.010

NOTES:
 1 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.
 2 Precast concrete components shall be according to OPSD 701.030, 701.031, or 701.032.
 3 Structure exceeding 5.0m in depth shall include safety platform according to OPSD 404.020.
 4 Pipe support according to OPSD 708.020.
 5 For benching and pipe opening details, see OPSD 701.021.
 6 For adjustment unit and frame installation, see OPSD 704.010.
 7 All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2014 Rev 5
PRECAST CONCRETE MAINTENANCE HOLE
 1200mm DIAMETER
 OPSD 701.010

NOTES:
 A Concrete shall be placed to within 50mm of the face of the wall.
 B Bond breaker shall be used between concrete and fittings.
 C The above thrust block dimensions meet or exceed the MECP Watermain Design Criteria for Future Alterations Authorized Under a Drinking Water Works Permit.
 D The assumptions made for the above calculations are:
 - Maximum operating pressure of 690 kPa,
 - Maximum surge pressure with a flow velocity change of 0.6 m/s of 790 kPa for Class 52 DI pipe and 240 kPa for PVC pipe.
 E The tables apply to both ductile iron and PVC pipe. When one length exceeded the other, the longer length was used.
 F All dimensions are in millimetres unless otherwise shown.

SOILS WITH TYPICAL BEARING STRENGTH OF 100 TO 199 kPa

PIPE DIA	a	b	c	d
100	150	250	200	200
150	250	400	250	300
200	400	550	300	450
250	500	650	400	500
300	650	800	450	650
350	700	900	550	700
400	800	1050	600	850

SOILS WITH TYPICAL BEARING STRENGTH OF 200 TO 299 kPa

PIPE DIA	a	b	c	d
100	150	200	150	150
150	250	200	200	200
200	400	350	250	300
250	500	450	300	350
300	650	500	350	400
350	700	600	400	500
400	900	750	400	600

SOILS WITH TYPICAL BEARING STRENGTH OF 300 kPa AND OVER

PIPE DIA	a	b	c	d
100	150	150	150	150
150	200	200	200	200
200	400	300	200	200
250	500	400	250	300
300	650	450	300	300
350	700	550	350	350
400	900	650	350	450

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2018 Rev 3
CONCRETE THRUST BLOCKS FOR TEES, PLUGS, AND HORIZONTAL BENDS
 OPSD 1103.010

NOTES:
 1 Where concrete bedding is used for the main sewer, the pipe subdrain shall be placed 150mm above the top of such bedding.
 2 Subdrain pipe shall be cored into maintenance hole.
 3 A Maintenance hole benching shall accommodate pipe subdrain, as required.
 4 All dimensions are in metres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2018 Rev 4
PERFORATED PIPE SUBDRAIN IN GRANULAR TRENCH MAIN STORM SEWER CONNECTION TO DRAINAGE STRUCTURE
 OPSD 809.010

NOTES:
 1 Slopes shall be maintained from the outlet hole opening for top of benching.
 2 Concrete for benching shall be 30MPa.
 3 When benching is hand-finished, it shall be given wood float finish, channel shall be given steel trowel finish.
 4 Benching slope and height shall be as specified.
 5 When specified, maintenance holes that are 1200mm in diameter with a uniform channel for 200 or 250mm pipe may be pre-benched at the manufacturer with standardized benching slope and channel orientation.
 6 All dimensions are nominal.
 7 All dimensions are in millimetres unless otherwise shown.

Maintenance Hole Diameter	MAXIMUM SIZE HOLE IN THE WALL IN PRECAST RISER SECTIONS			
	No. 1-4	No. 5 and 6	No. 8	No. 7
1200	700	860	780	860
1500	860	1220	960	860
1800	1220	1485	1220	1170
2400	1485	2020	1760	1485
3000	1930	2450	2300	2450
3600	2470	3085	2730	3085

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2014 Rev 4
MAINTENANCE HOLE BENCHING AND PIPE OPENING ALTERNATIVES
 OPSD 701.021

NOTES:
 1 The sump is measured from the lowest invert. Benching as shown in Benching Detail.
 2 Lap horizontal 10M rebar 300mm. Laps shall be placed at corners.
 3 Lap horizontal wires 300mm or weld. Welds to develop 75% of yield strength of wire. Laps or welds shall be placed at corners.
 4 End rebar or WWR in base 75mm from outside face of wall.
 5 Where inlet is placed across ditch and is accessible to vehicular traffic, grading slope shall be 8H:1V or flatter.
 6 Granular backfill shall be placed a minimum thickness of 300mm all around the ditch inlet maintenance hole.
 7 Concrete for benching shall be 30MPa.
 8 Benching slope and height shall be as specified.
 9 Grating shall be according to OPSD 403.010.
 10 Steps shall be according to OPSD 405.010 or 405.020.
 11 Maximum pipe size: straight through-1200mm dia, right angle pipes - 700mm diameter.
 12 Pipe support shall be according to OPSD 708.020.
 13 Centre reinforcing in walls ±35mm. All other reinforcing shall have a minimum cover of 25mm.
 14 All dimensions are nominal.
 15 All dimensions are in millimetres unless otherwise shown.

Grate	Opening Dimensions		
	Type	a	b
C	2H:1V	1341	66
	3H:1V	1265	104
4H:1V	1237	118	1473
	1216	65	1346
B	8H:1V	1210	68
	10H:1V	1206	70
HOR	1200	73	1346

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2014 Rev 3
PRECAST CONCRETE DITCH INLET MAINTENANCE HOLE - TYPE B
 1200 x 1200mm
 OPSD 702.050

NOTES:
 1 Pipe shall be supported with concrete or unshrinkable fill to the first pipe joint.
 2 All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2016 Rev 4
SUPPORT FOR PIPE AT CATCH BASIN OR MAINTENANCE HOLE
 OPSD 708.020

NOTES:
 1 If first step is in an adjustment unit, the adjustment unit shall be of the type manufactured with a step in place.
 2 Centre reinforcing in adjustment unit ±50mm.
 3 Round and square adjustment units are available in sizes of 50, 75, 100, 150, and 300mm.
 4 Adjustment units shall not extend beyond the outside edge of the structure.
 5 All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2014 Rev 3
PRECAST CONCRETE ADJUSTMENT UNITS FOR MAINTENANCE HOLES, CATCH BASINS, AND VALVE CHAMBERS
 OPSD 704.010

NOTES:
 A Covers shall be Type A or Type B, as specified.
 B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2016 Rev 4
CAST IRON, SQUARE FRAME WITH CIRCULAR CLOSED OR OPEN COVER FOR MAINTENANCE HOLES
 OPSD 401.010

NOTES:
 1 The company undertaking welded fabrication shall be certified according to CSA W47.1. All welding shall be according to CSA W59.
 2 All aluminum components shall be 6000 series structural aluminum.
 3 All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2018 Rev 4
MAINTENANCE HOLE STEPS HOLLOW
 OPSD 405.010

NOTES:
 A This OPSD shall be read in conjunction with OPSD 610.010 and 610.020.
 B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2016 Rev 3
CAST IRON, SQUARE FRAME WITH SQUARE FLAT GRATE FOR CATCH BASINS, HERRING BONE OPENINGS
 OPSD 400.020

LEGEND:
 D = Inside diameter

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

CLEARANCE TABLE	TYPE 4 SOIL	
	PIPE Inside Diameter, mm	CLEARANCE mm
900 or less	300	
Over 900	500	

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2014 Rev 3
FLEXIBLE PIPE EMBEDMENT AND BACKFILL EARTH EXCAVATION
 OPSD 802.010

NO.	REVISION NOTE	DATE	BY
2.	REVISED AS PER CITY ORILLIA COMMENTS	04/28/21	AA
1.	REVISED AS PER CITY ORILLIA COMMENTS	01/26/21	AA

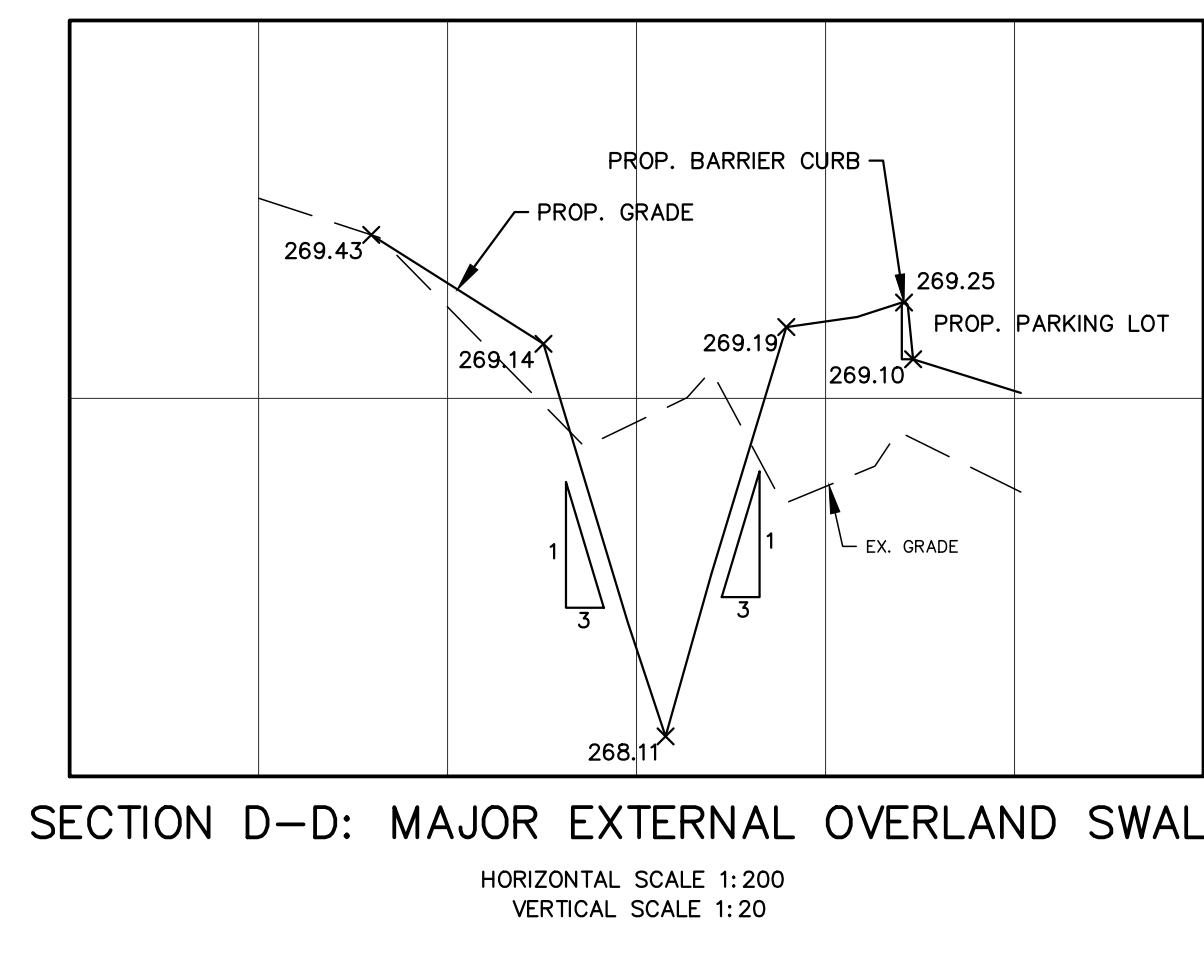
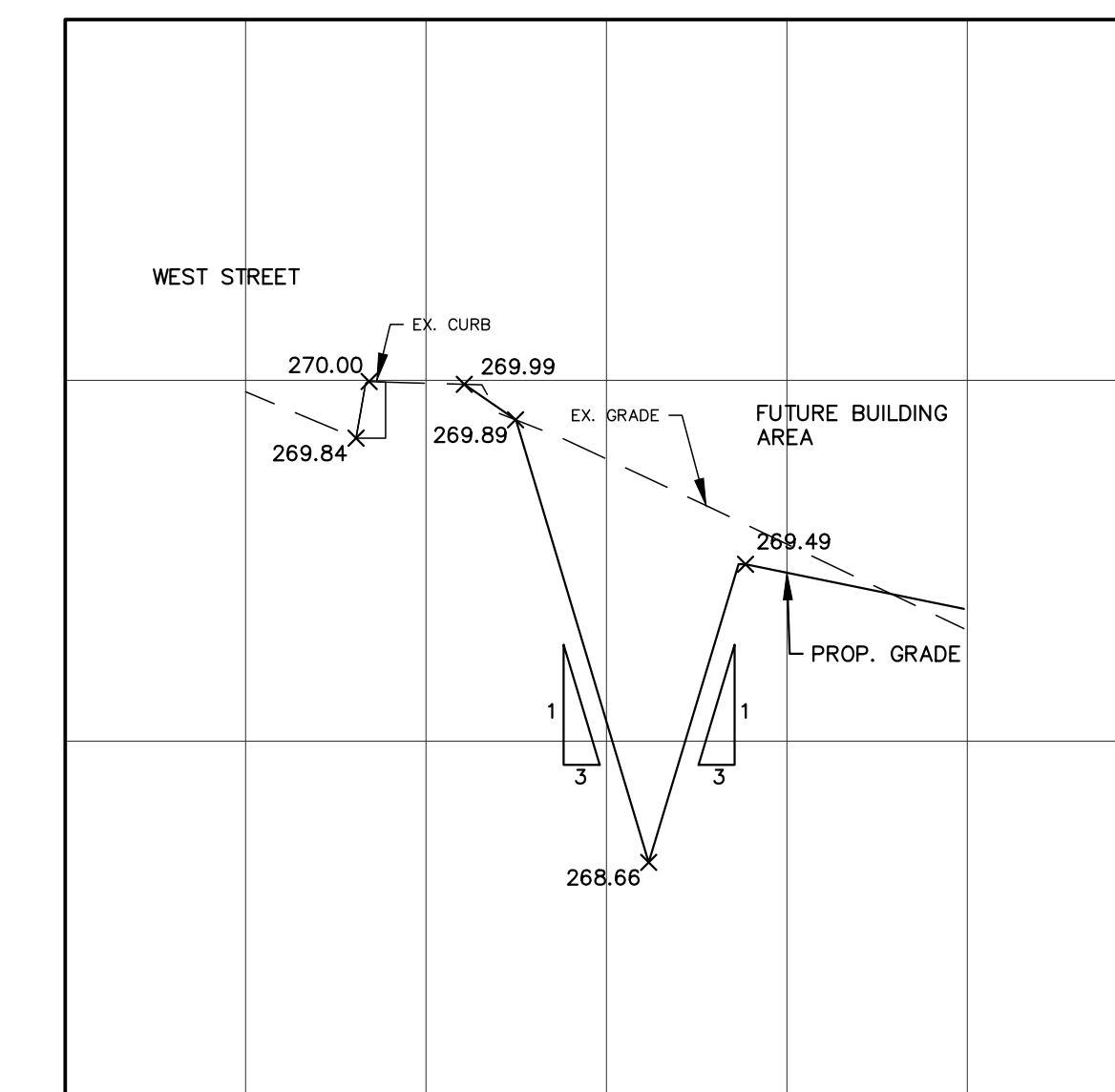
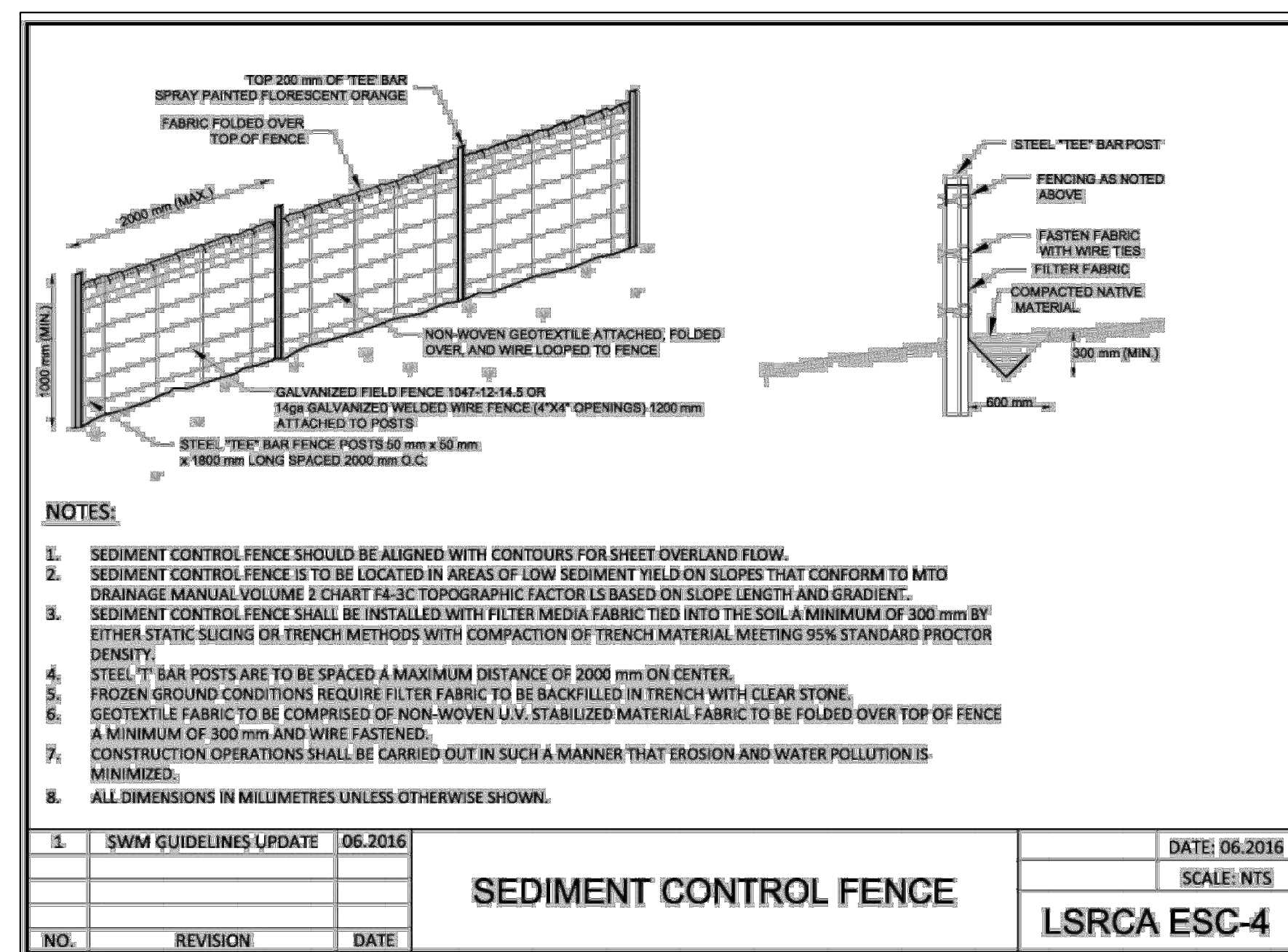
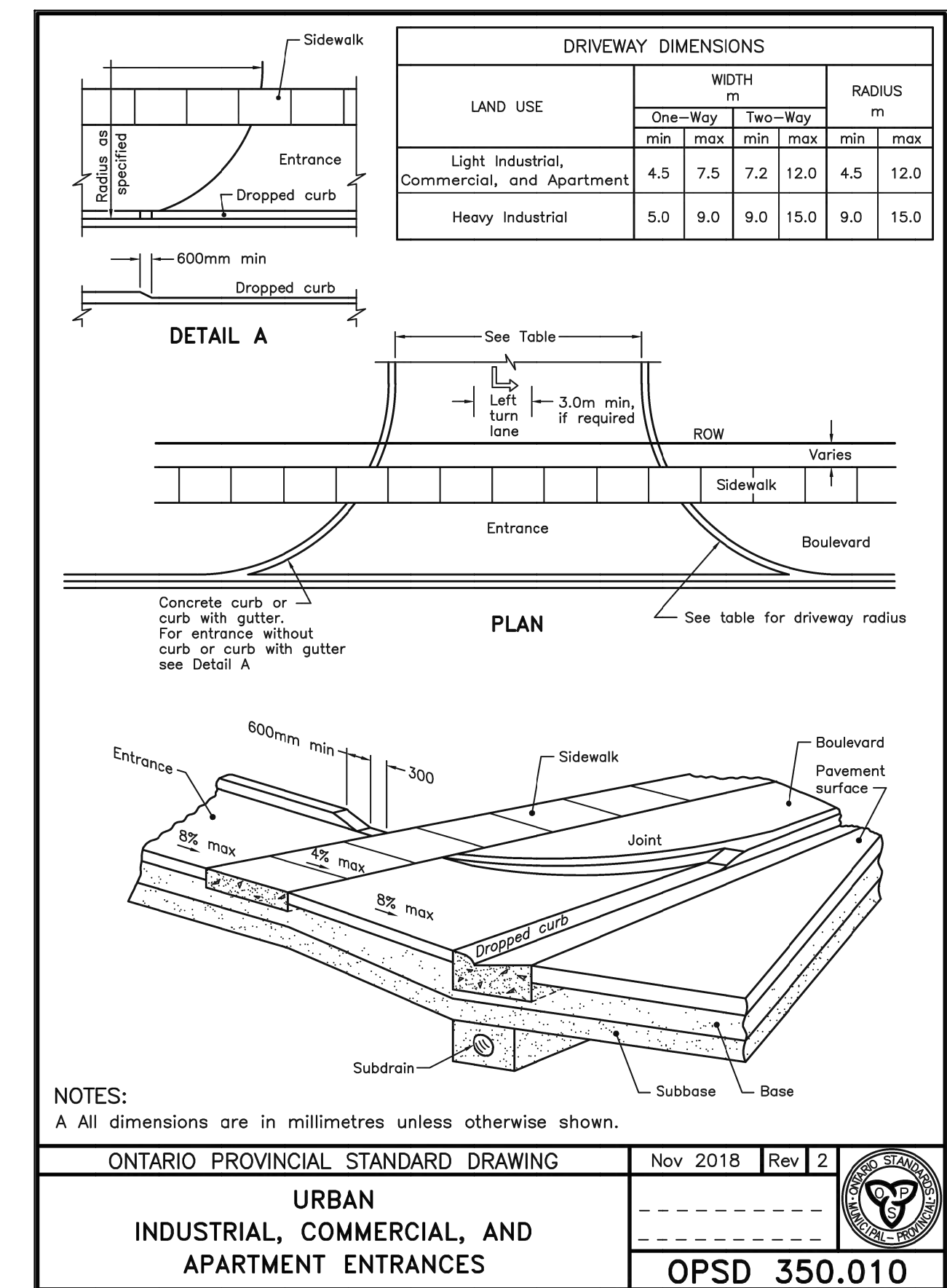
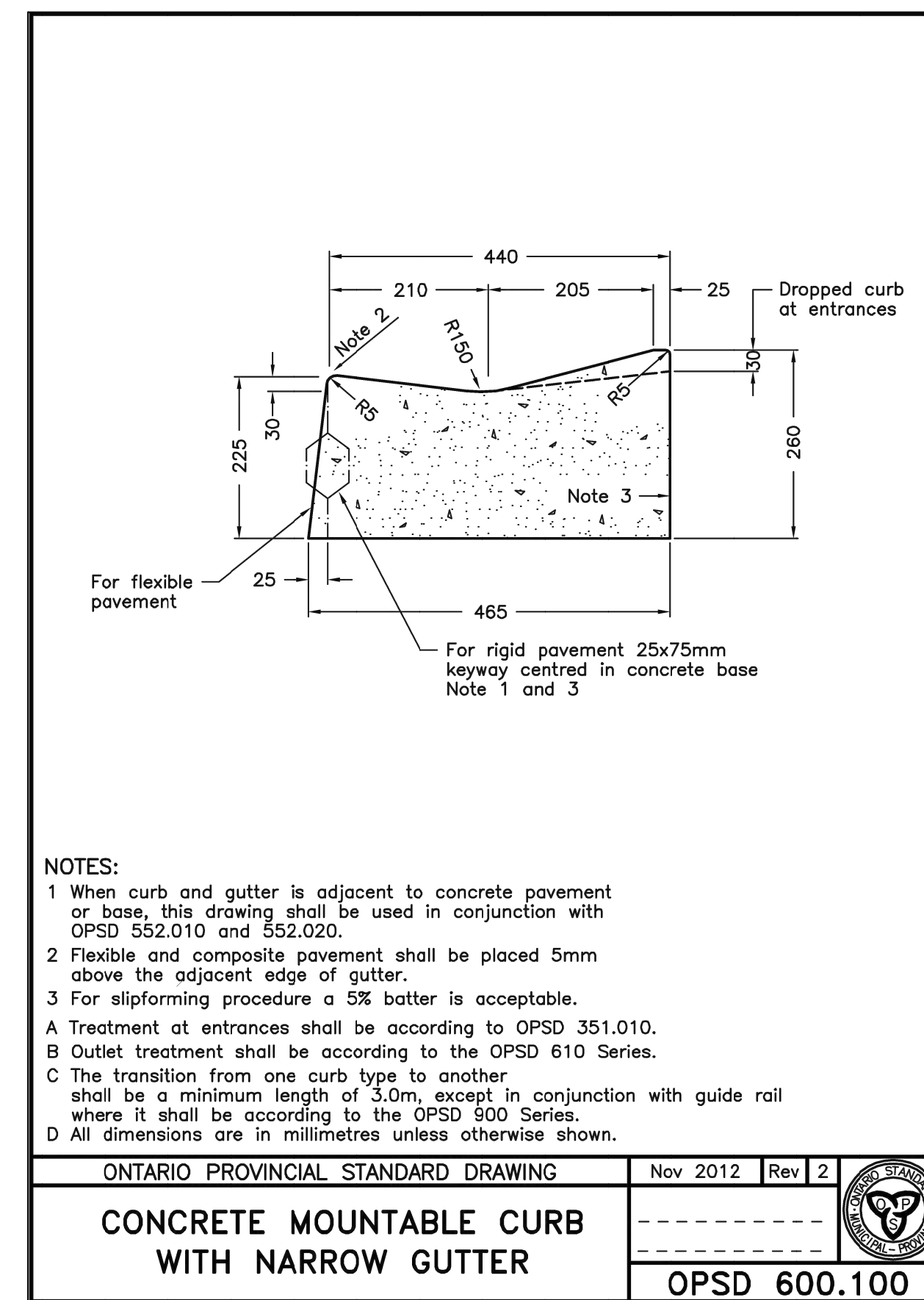
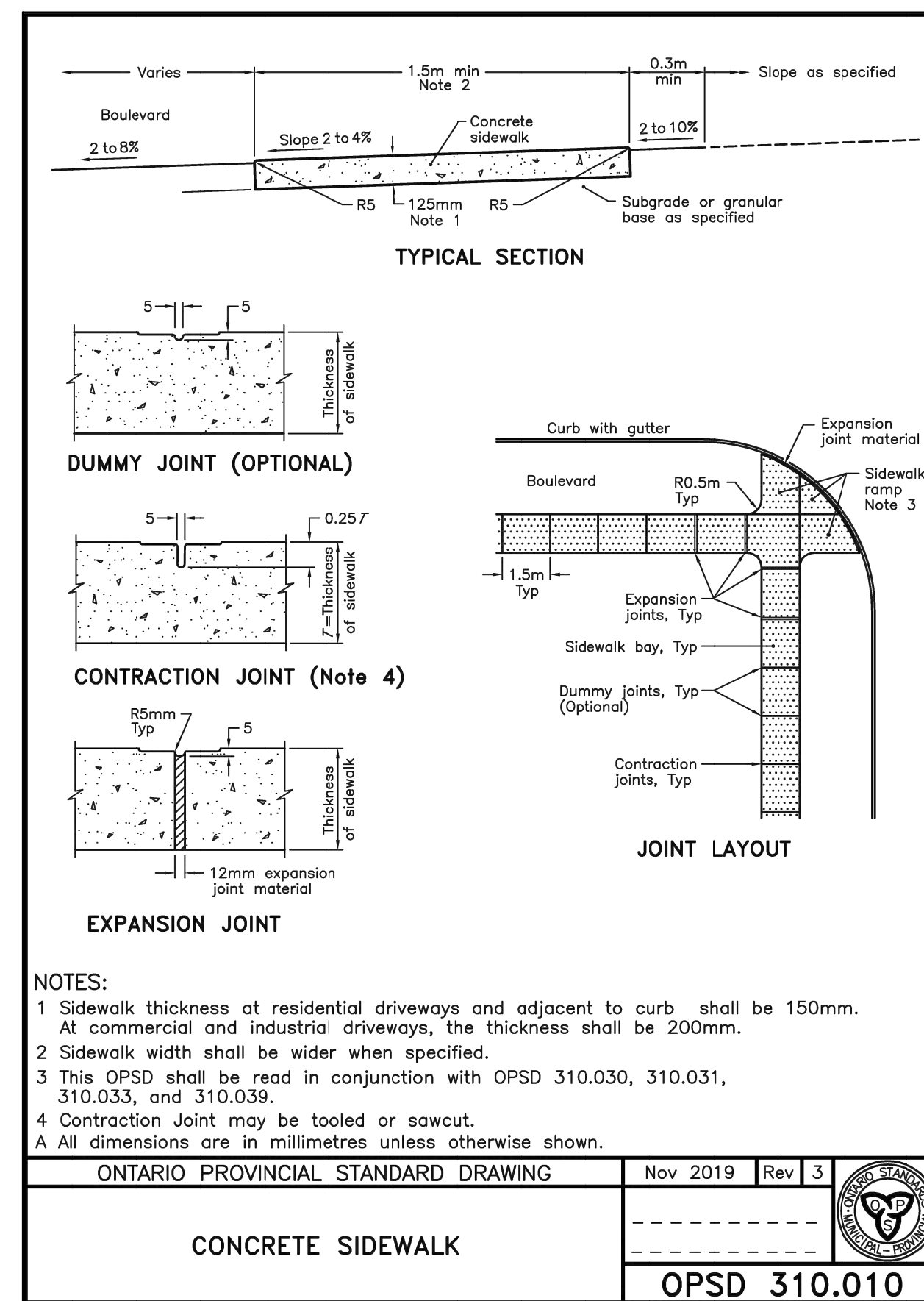
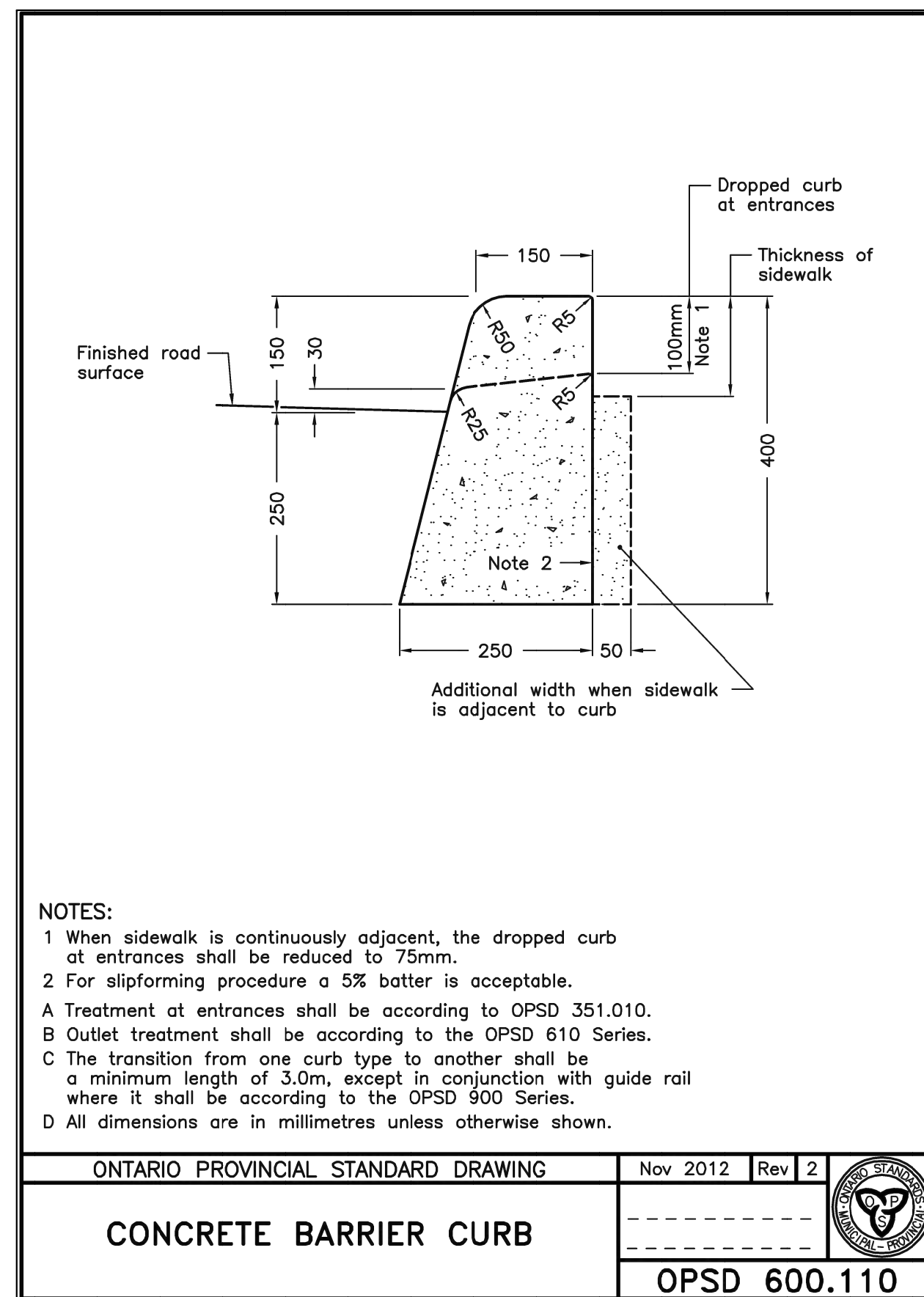
BENCHMARK

COUNTY OF SIMCOE
 AFFORDABLE HOUSING
 ORILLIA, 2 BORLAND STREET EAST

NOTES AND DETAILS 2 OF 4

PEARSON ENGINEERING LTD.
 PEARSONENG.COM PH. 705.719.4785

DESIGNED BY	AA	HORIZ SCALE	PROJECT #	20002	
DRAWN BY	AA	VERT SCALE	DRAWING #	ND-2	
CHECKED BY	MWD	DATE	NOVEMBER 2020	REVISION #	2

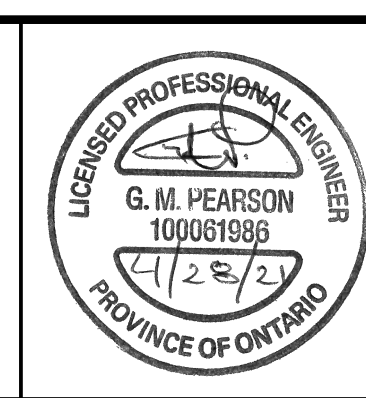


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NO.	REVISION	DATE	BY
2.	REVISED AS PER CITY ORILLIA COMMENTS	04/28/21	AA
1.	REVISED AS PER CITY ORILLIA COMMENTS	01/26/21	AA

NO.	REVISION	DATE	BY

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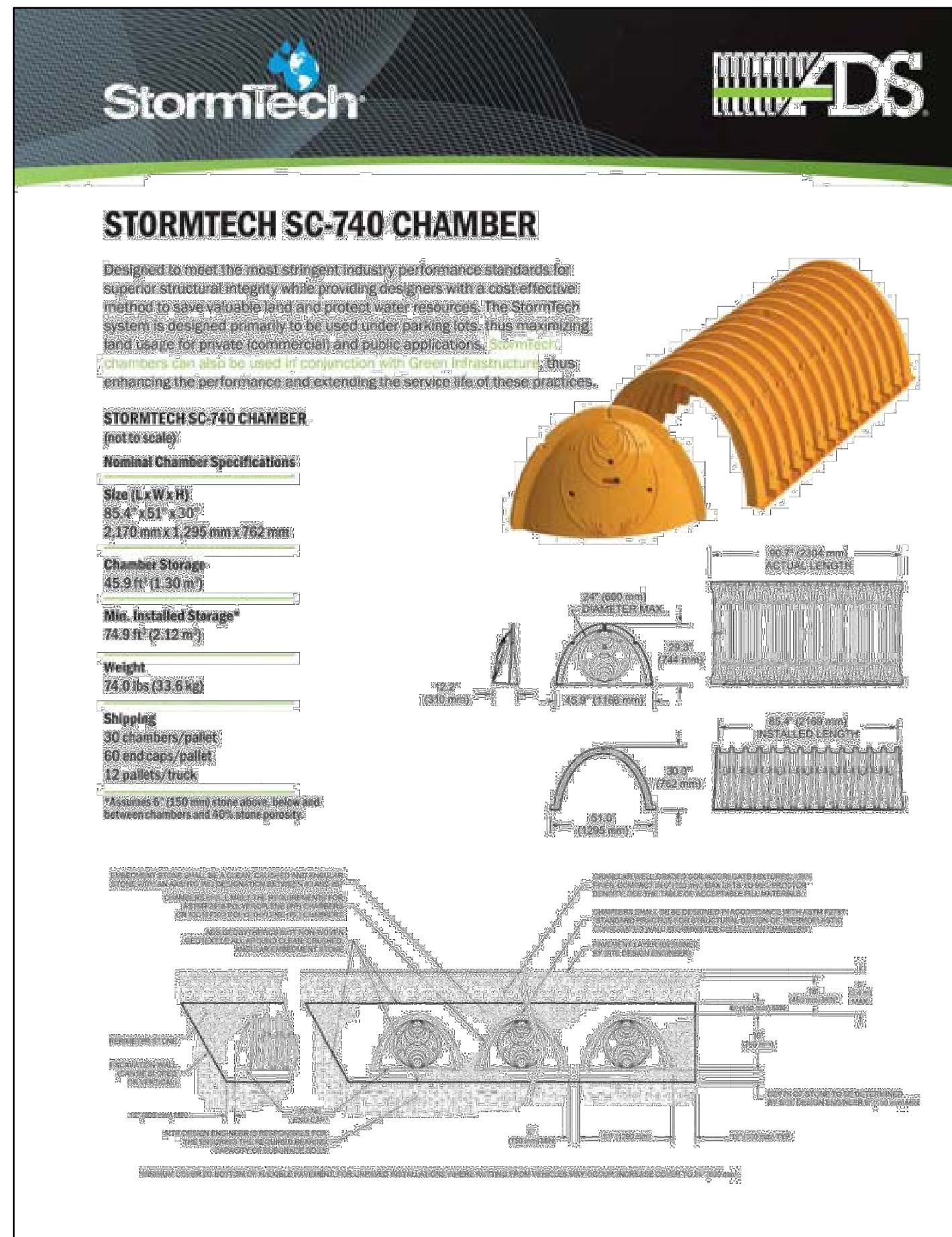
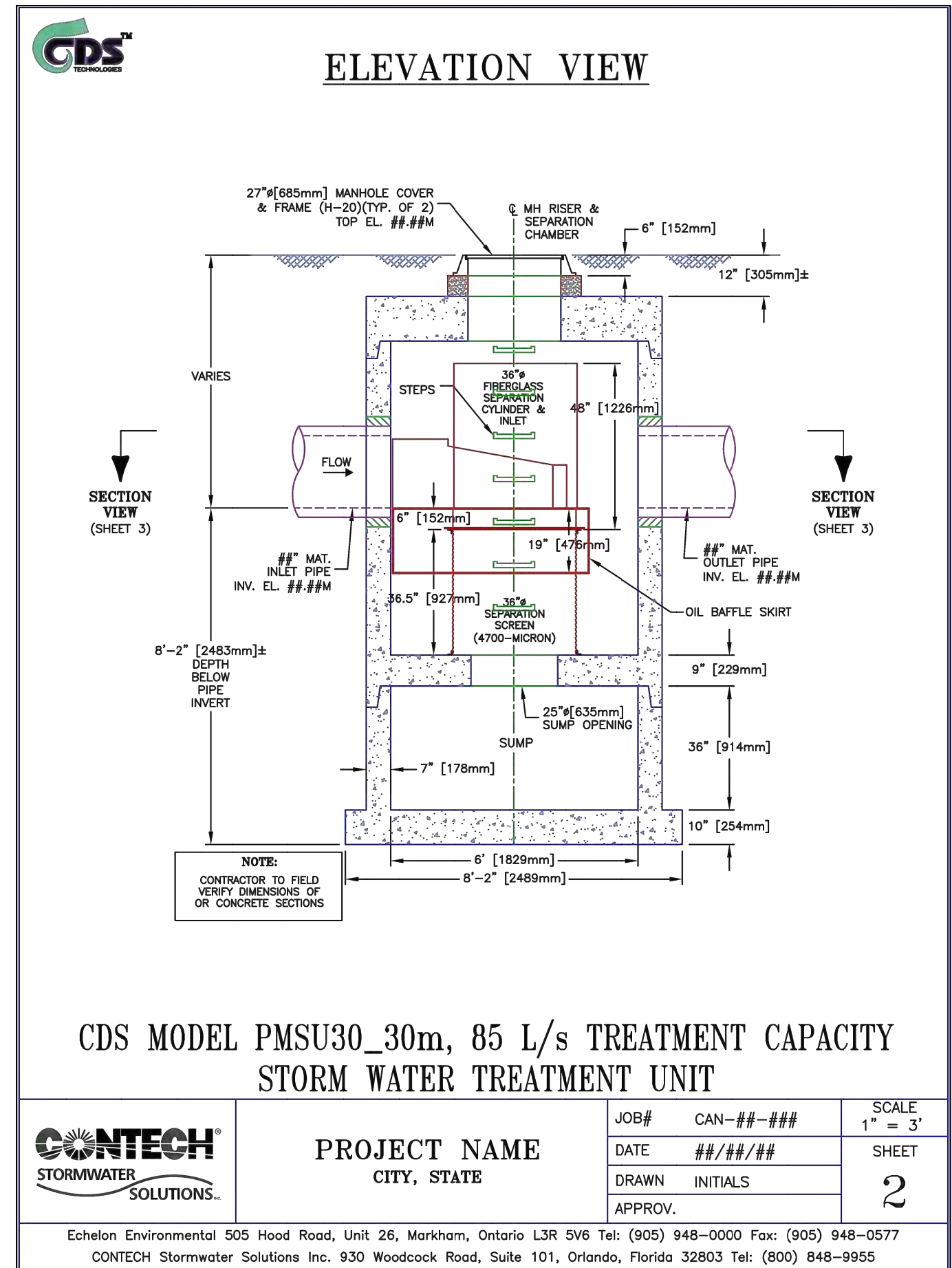
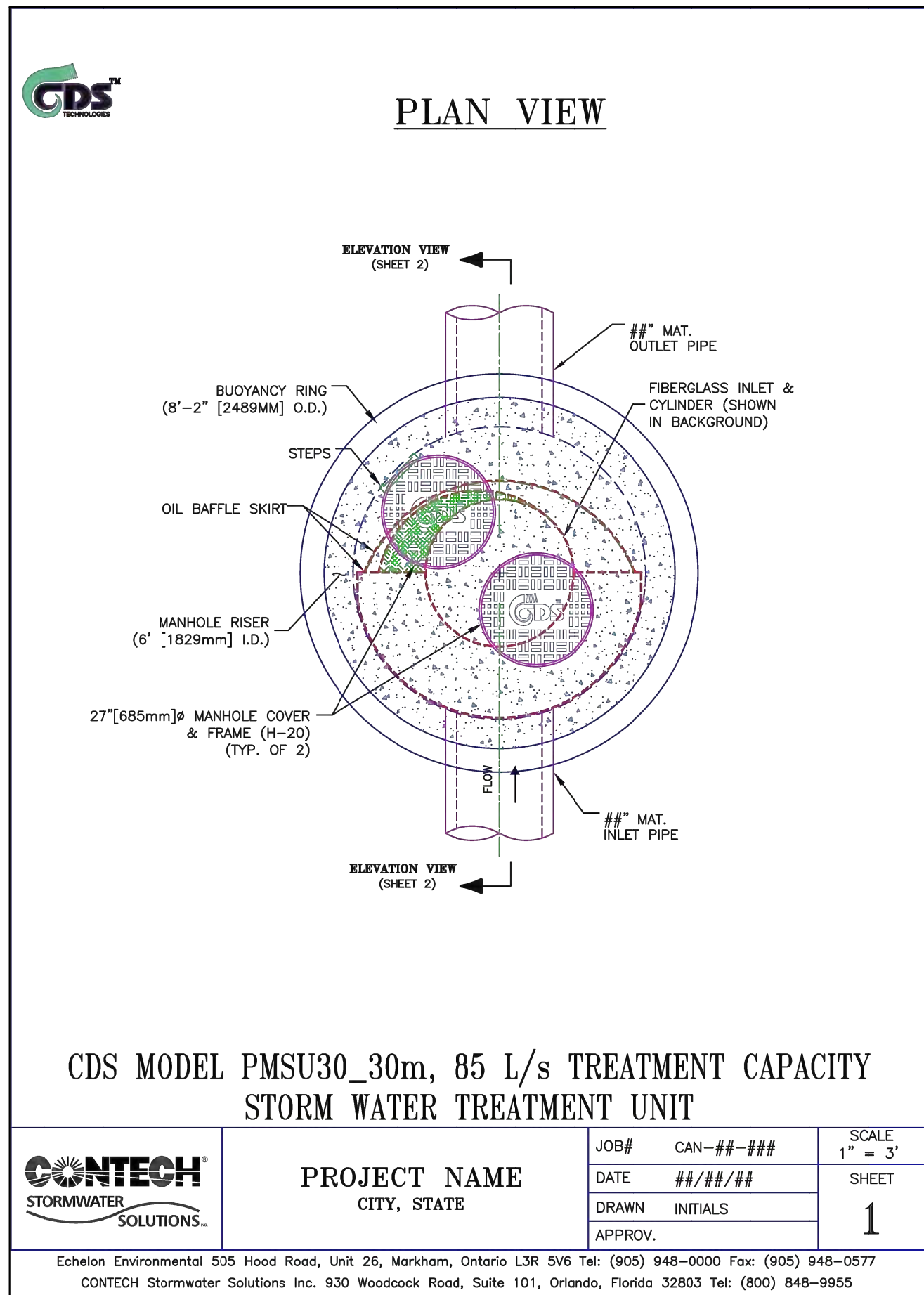


COUNTY OF SIMCOE
 AFFORDABLE HOUSING
 ORILLIA, 2 BORLAND STREET EAST

NOTES AND DETAILS 3 OF 4

DESIGNED BY	AA	HORIZ SCALE	PROJECT #	2002	
DRAWN BY	AA	VERT SCALE	DRAWING #	ND-3	
CHECKED BY	MWD	DATE	NOVEMBER 2020	REVISION #	2





StormTech **ADS**

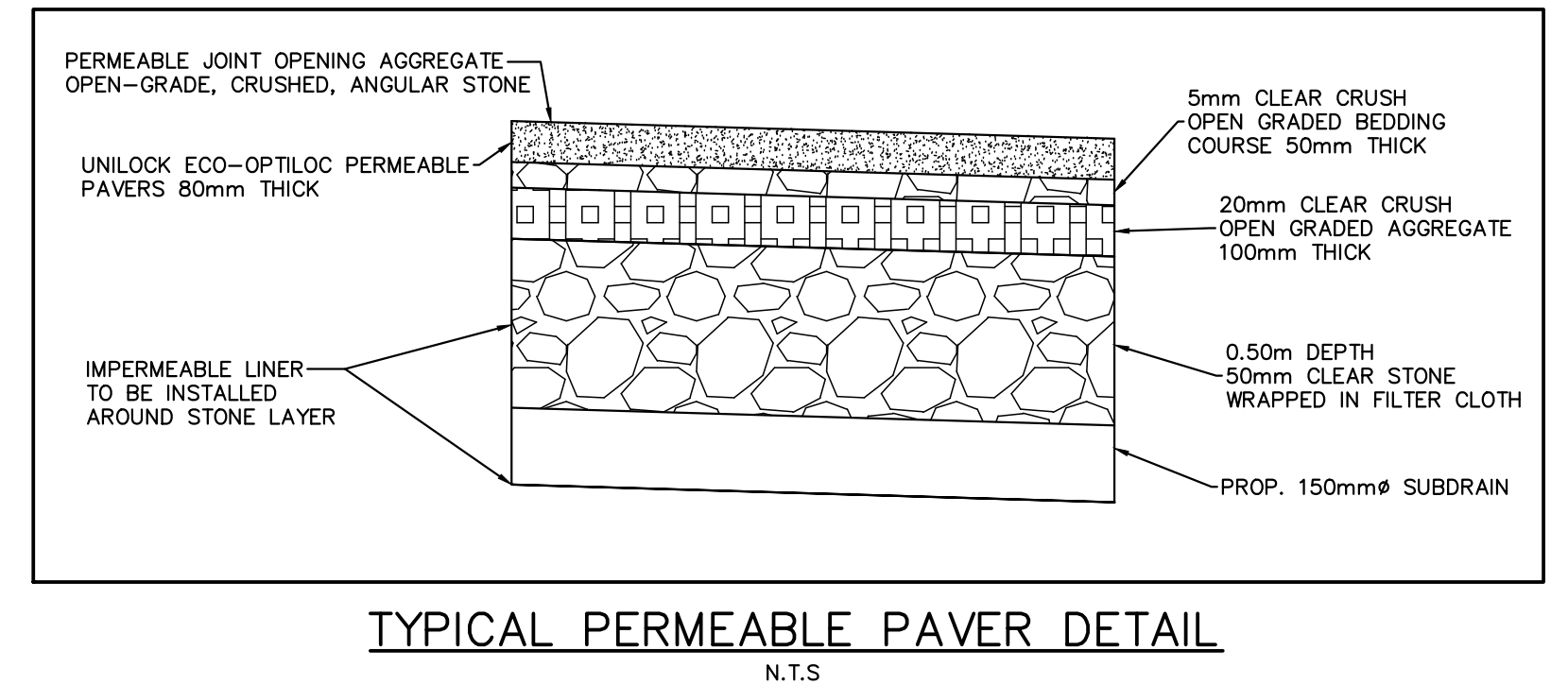
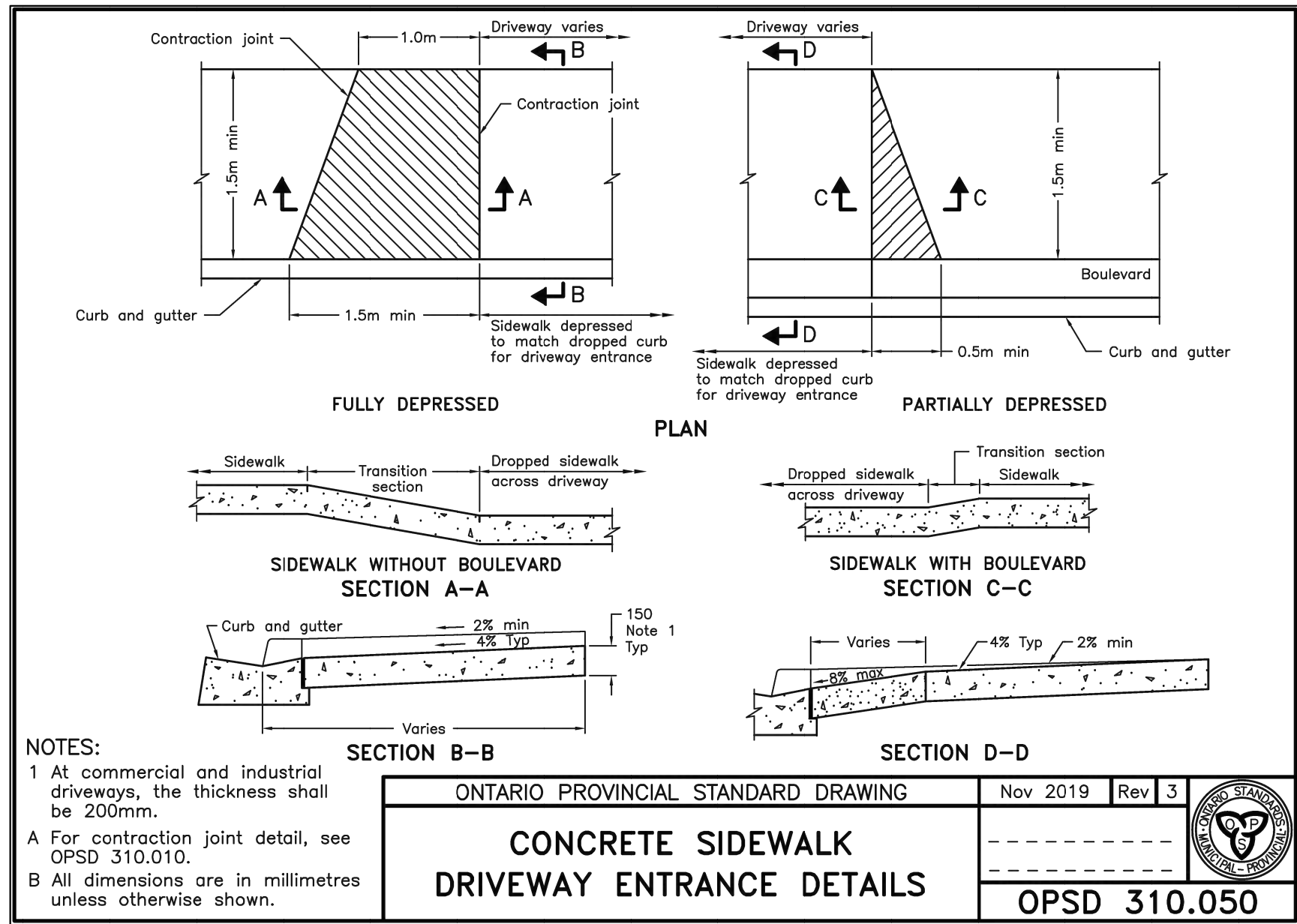
SC-740 CUMULATIVE STORAGE VOLUMES PER CHAMBER
Assumes 40% Stone Porosity. Calculations are Based Upon a 6" (150 mm) Stone Base Under Chambers.

Depth of Water in System Inches (mm)	Cumulative Chamber Storage FT³ (m³)	Total System Cumulative Storage FT³ (m³)
42 (1067)	45.90 (1.308)	74.90 (2.121)
41 (1041)	45.90 (1.308)	73.77 (2.099)
40 (1016)	45.90 (1.308)	72.64 (2.077)
39 (991)	45.90 (1.308)	71.52 (2.055)
38 (965)	45.90 (1.308)	70.39 (1.993)
37 (940)	45.90 (1.308)	69.26 (1.971)
36 (914)	45.90 (1.308)	68.14 (1.929)
35 (889)	45.90 (1.298)	66.96 (1.897)
34 (864)	45.90 (1.298)	65.78 (1.865)
33 (838)	45.81 (1.288)	64.61 (1.823)
32 (813)	44.81 (1.268)	62.97 (1.773)
31 (787)	44.01 (1.248)	61.34 (1.723)
30 (762)	43.08 (1.218)	59.68 (1.689)
29 (737)	41.98 (1.188)	57.89 (1.626)
28 (711)	40.81 (1.158)	56.06 (1.567)
27 (686)	39.54 (1.128)	54.17 (1.476)
26 (660)	38.18 (1.081)	52.23 (1.476)
25 (635)	36.76 (1.048)	50.23 (1.425)
24 (610)	35.27 (0.977)	48.18 (1.365)
23 (584)	33.68 (0.955)	46.11 (1.305)
22 (559)	31.99 (0.908)	44.01 (1.246)
21 (533)	30.29 (0.858)	41.89 (1.187)
20 (508)	28.54 (0.808)	39.67 (1.128)
19 (482)	26.76 (0.757)	37.41 (1.069)
18 (457)	24.98 (0.705)	35.21 (0.997)
17 (432)	23.09 (0.651)	32.96 (0.938)
16 (406)	21.16 (0.598)	30.68 (0.869)
15 (381)	19.09 (0.541)	28.38 (0.803)
14 (356)	17.06 (0.484)	26.03 (0.737)
13 (330)	15.06 (0.426)	23.68 (0.671)
12 (305)	13.07 (0.367)	21.31 (0.606)
11 (279)	11.07 (0.308)	18.92 (0.539)
10 (254)	9.76 (0.247)	16.51 (0.469)
9 (228)	8.38 (0.188)	14.09 (0.399)
8 (203)	6.41 (0.182)	11.66 (0.333)
7 (177)	4.21 (0.086)	9.21 (0.264)
6 (152)	0.00 (0.000)	6.76 (0.193)
5 (127)	0.00 (0.000)	4.31 (0.124)
4 (102)	0.00 (0.000)	1.85 (0.053)
3 (76)	0.00 (0.000)	0.00 (0.000)
2 (51)	0.00 (0.000)	0.00 (0.000)
1 (25)	0.00 (0.000)	0.00 (0.000)

Note: Add 1.13 m³ (0.032 m³) of storage for each additional inch (25 mm) of stone foundation.

For more information on the StormTech SC-740 Chamber and other ADS products, please contact our Customer Service Representatives at 1-800-821-6710

Advanced Drainage Systems, Inc. 4640 Truman Blvd., Willard, OH 43095 1-800-821-6710 www.ads-pipe.com



P:\AutoCAD\Working\Folders\200002 - MCL - 2 Borland St. E., Orillia\Engineering\200002 - BASE.dwg Layout:ND-4 Plotted: Apr 28, 2021 @ 3:09pm by cadellio @ PEARSON ENGINEERING LTD.

NO.	REVISION NOTE	DATE	BY
2.	REVISED AS PER CITY ORILLIA COMMENTS	04/28/21	AA
1.	REVISED AS PER CITY ORILLIA COMMENTS	01/26/21	AA



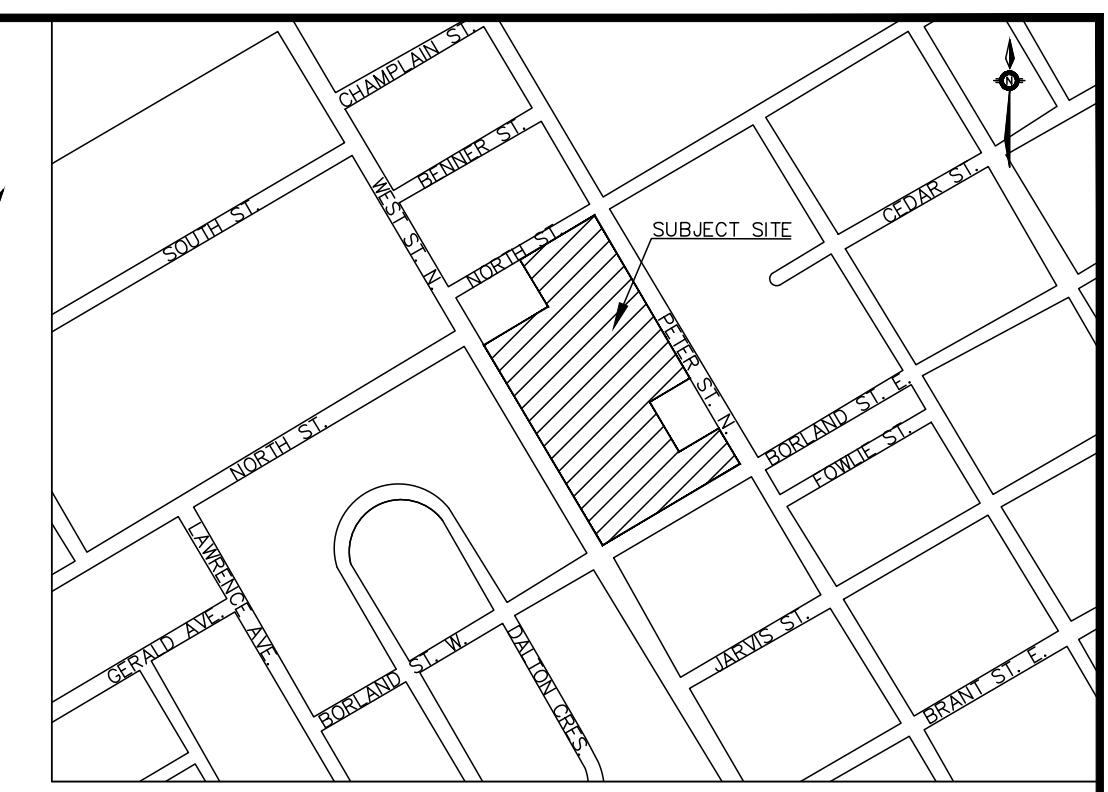
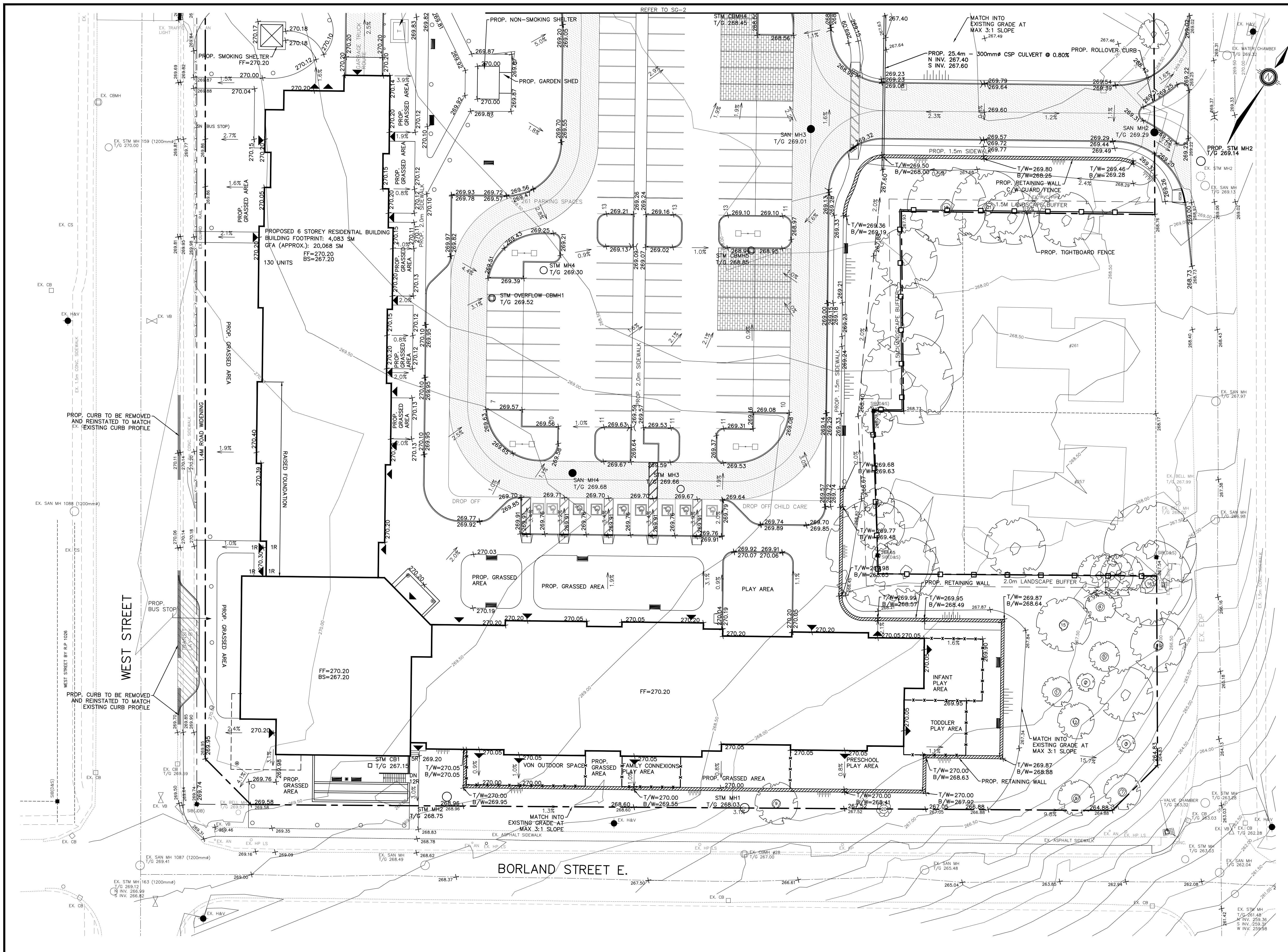
COUNTY OF SIMCOE
AFFORDABLE HOUSING
ORILLIA, 2 BORLAND STREET EAST

NOTES AND DETAILS 4 OF 4

DESIGNED BY	AA	HORIZ SCALE	PROJECT #	20002	
DRAWN BY	AA	VERT SCALE	DRAWING #	ND-4	
CHECKED BY	MWD	DATE	NOVEMBER 2020	REVISION #	2

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P:\Projects\2020\2020022 - MCL 2 Borland St. E., Orillia\Working Folders\2020022 - BASE.dwg Layout:SG-1 Plotted Apr 28, 2021 @ 3:08pm by cadellio @ PEARSON ENGINEERING LTD.

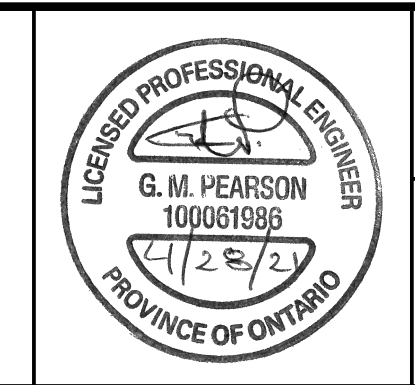


LEGEND

- CB CATCH BASIN
- DCB DOUBLE CATCH BASIN
- CBM CATCH BASIN
- MH STORM MANHOLE
- MH SANITARY MANHOLE
- SERVICE CAP
- ◆ HYD. FIRE HYDRANT
- ◆ VB WATER VALVE
- CS CURB STOP W/ SERVICE
- × 254.63 PROPOSED ELEVATION
- 254.09 EXISTING ELEVATION
- 1.5% PROPOSED DIRECTION AND GRADE
- BACK OF CURB
- EDGE OF PAVEMENT
- CURB CUT LOCATION
- () HIGH POINT
- - - - EX. CHAINLINK FENCE
- EX. BELL BOX
- EX. TREE
- PROP. RETAINING WALL
- PROP. TIGHTBOARD FENCE
- PROP. LIGHT STANDARD
- PROP. BOLLARD LIGHT
- ▨ PROP. PERMEABLE PAVERS AS PER ND-4
- ▨ PROP. HEAVY DUTY ASPHALT

NO.	REVISION NOTE	DATE	BY
2.	REVISED AS PER CITY ORILLIA COMMENTS	04/28/21	AA
1.	REVISED AS PER CITY ORILLIA COMMENTS	01/26/21	AA

NO.	REVISION NOTE	DATE	BY	BENCHMARK

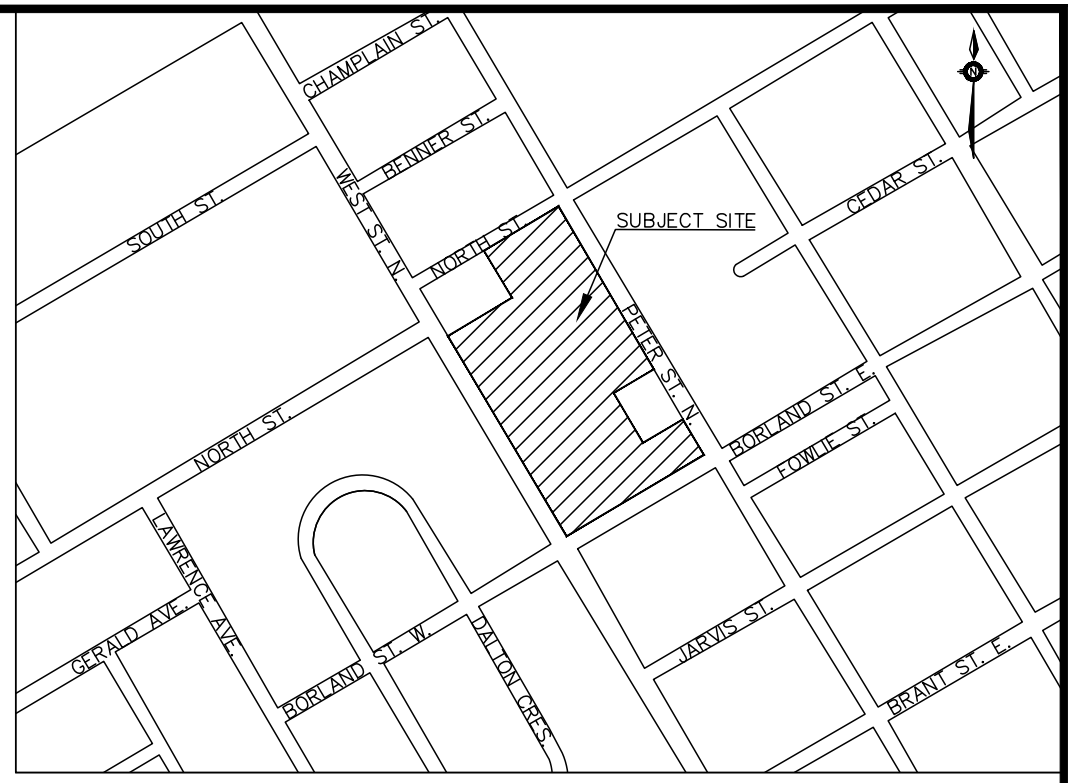
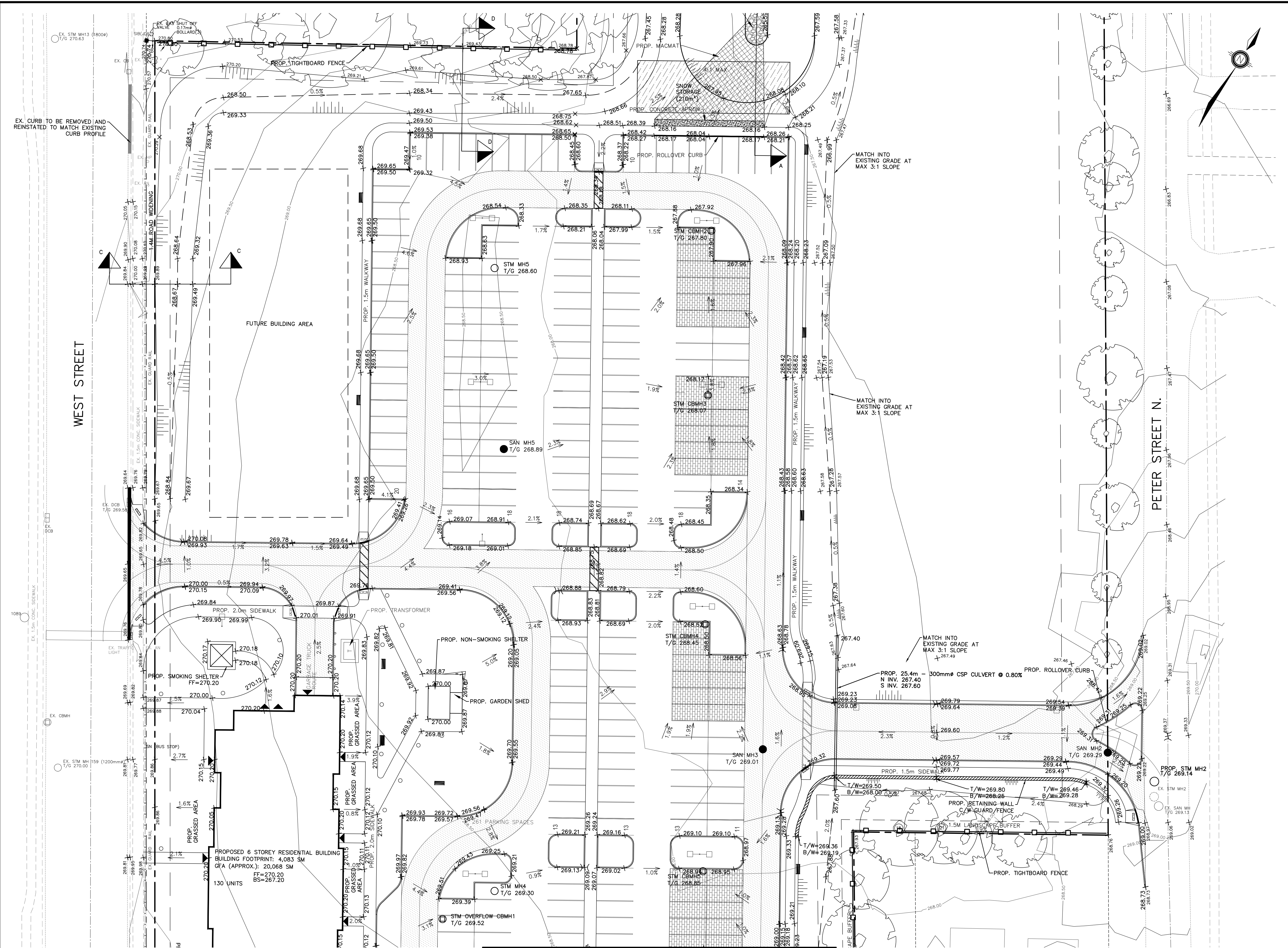


COUNTY OF SIMCOE
AFFORDABLE HOUSING
ORILLIA, 2 BORLAND STREET EAST

SITE GRADING PLAN
1 OF 3

PEARSON ENGINEERING LTD.
PEARSONENG.COM PH. 705.719.4785

DESIGNED BY	AA	HORIZ SCALE	1:300	PROJECT #	20002
DRAWN BY	AA	VERT SCALE		DRAWING #	SG-1
CHECKED BY	MWD	DATE	NOVEMBER 2020	REVISION #	2



LEGEND

- CB CATCH BASIN
- DCB DOUBLE CATCH BASIN
- CBMH CATCH BASIN
- MH STORM MANHOLE
- SMH SANITARY MANHOLE
- SERVICE CAP
- ◆ HYD. FIRE HYDRANT
- ⊕ VB WATER VALVE
- CS CURB STOP W/ SERVICE
- × 254.63 PROPOSED ELEVATION
- 254.09 EXISTING ELEVATION
- 1.5% PROPOSED DIRECTION AND GRADE
- BACK OF CURB
- EDGE OF PAVEMENT
- CURB CUT LOCATION
- () HIGH POINT
- - - EX. CHAINLINK FENCE
- EX. BELL BOX
- EX. TREE
- ▨ PROP. RETAINING WALL
- PROP. TIGHTBOARD FENCE
- PROP. LIGHT STANDARD
- ▨ PROP. PERMEABLE PAVERS AS PER ND-4
- ▨ PROP. HEAVY DUTY ASPHALT

NO.	REVISION NOTE	DATE	BY
2.	REVISED AS PER CITY ORILLIA COMMENTS	04/28/21	AA
1.	REVISED AS PER CITY ORILLIA COMMENTS	01/26/21	AA

BENCHMARK			



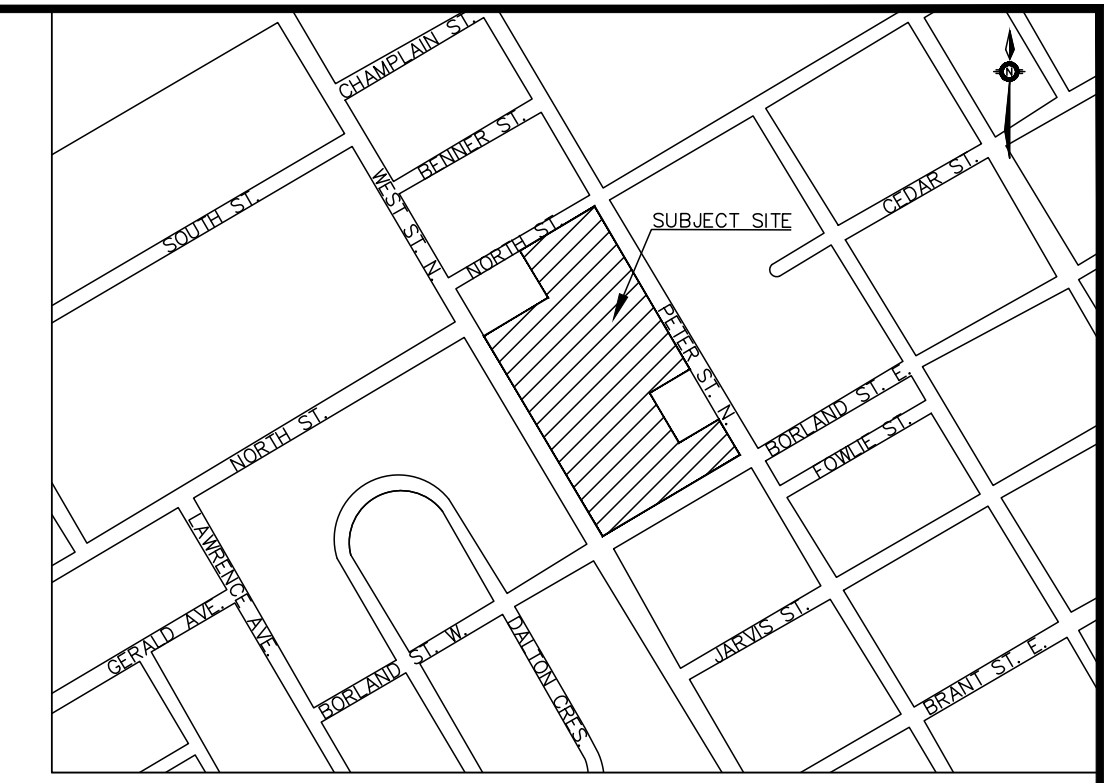
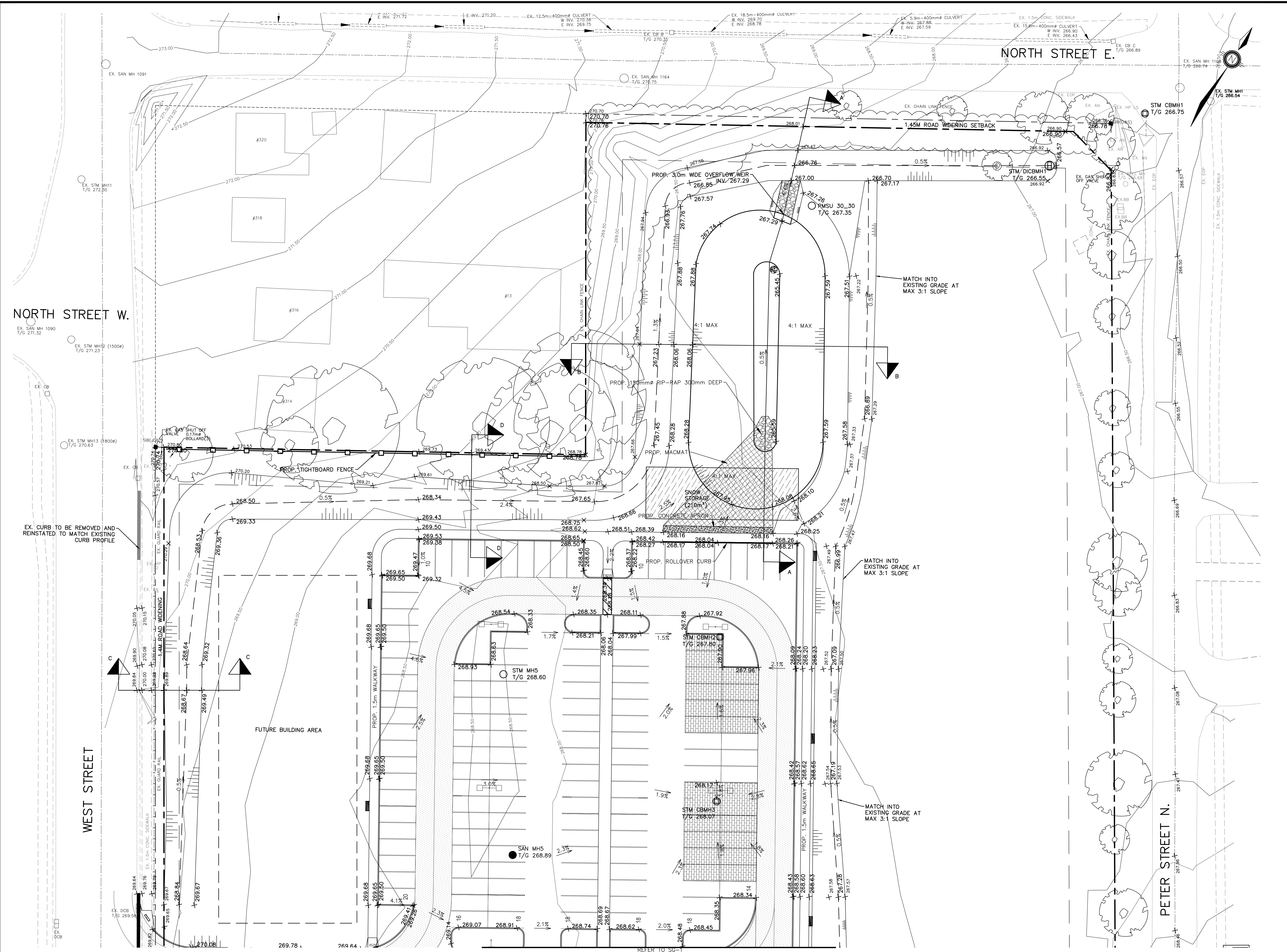
COUNTY OF SIMCOE
AFFORDABLE HOUSING
ORILLIA, 2 BORLAND STREET EAST

SITE GRADING PLAN
2 OF 3

PEARSON ENGINEERING LTD.
PEARSONENG.COM PH. 705.719.4785

DESIGNED BY	AA	HORIZ SCALE	1:300	PROJECT #	20002
DRAWN BY	AA	VERT SCALE		DRAWING #	SG-2
CHECKED BY	MWD	DATE	NOVEMBER 2020	REVISION #	2

P:\AutoCAD\Working\Folders\200202 - MCL 2 Borland St. E., Orillia\Engineering\200202 - BASE.dwg Layout:SG-3 Plotted Apr 28, 2021 @ 3:10pm by aedilio @ PEARSON ENGINEERING LTD.



KEY MAP
NTS

LEGEND

- CB CATCH BASIN
- DCB DOUBLE CATCH BASIN
- CBMH CATCH BASIN
- MH STORM MANHOLE
- SMH SANITARY MANHOLE
- SERVICE CAP
- HYD. FIRE HYDRANT
- VB WATER VALVE
- CS CURB STOP W/ SERVICE
- × 254.63 PROPOSED ELEVATION
- 254.09 EXISTING ELEVATION
- 1.5% PROPOSED DIRECTION AND GRADE
- BACK OF CURB
- EDGE OF PAVEMENT
- CURB CUT LOCATION
- () HIGH POINT
- - - - - EX. CHAINLINK FENCE
- EX. BELL BOX
- EX. TREE
- PROP. RETAINING WALL
- PROP. TIGHTBOARD FENCE
- PROP. LIGHT STANDARD
- PROP. PERMEABLE PAVERS AS PER ND-4
- PROP. HEAVY DUTY ASPHALT

NO.	REVISION NOTE	DATE	BY
2.	REVISED AS PER CITY ORILLIA COMMENTS	04/28/21	AA
1.	REVISED AS PER CITY ORILLIA COMMENTS	01/26/21	AA

BENCHMARK			
NO.	DESCRIPTION	DATE	BY



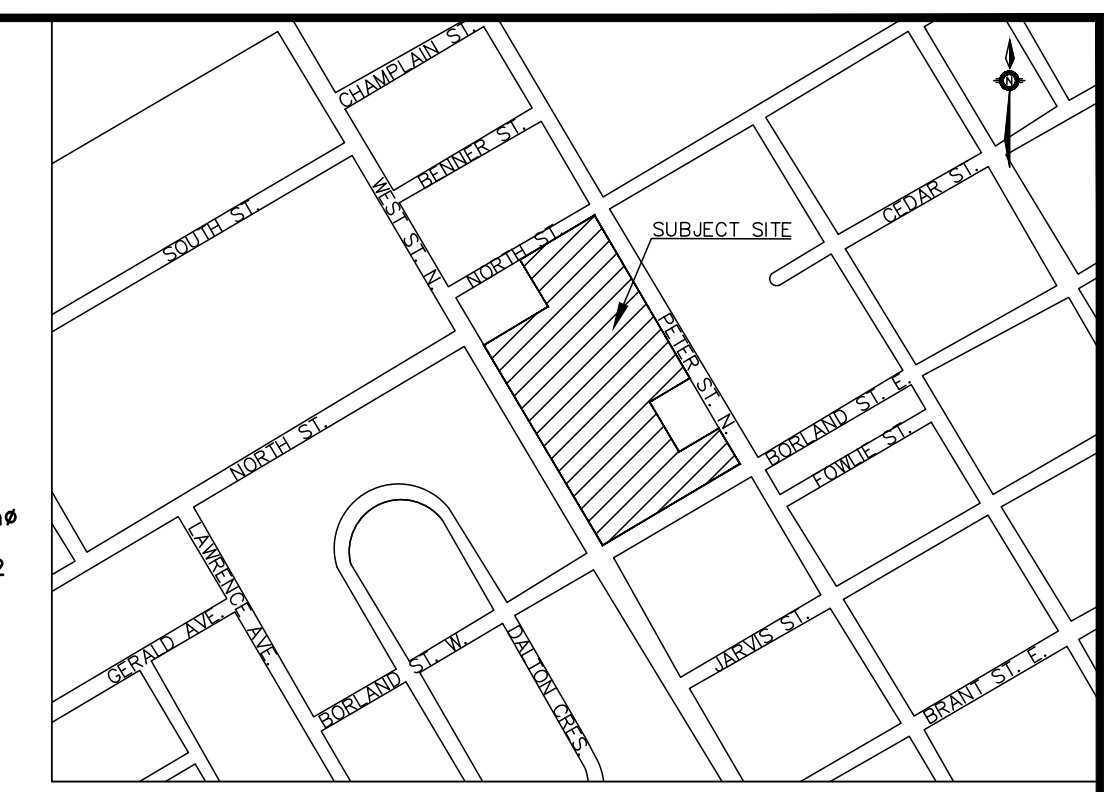
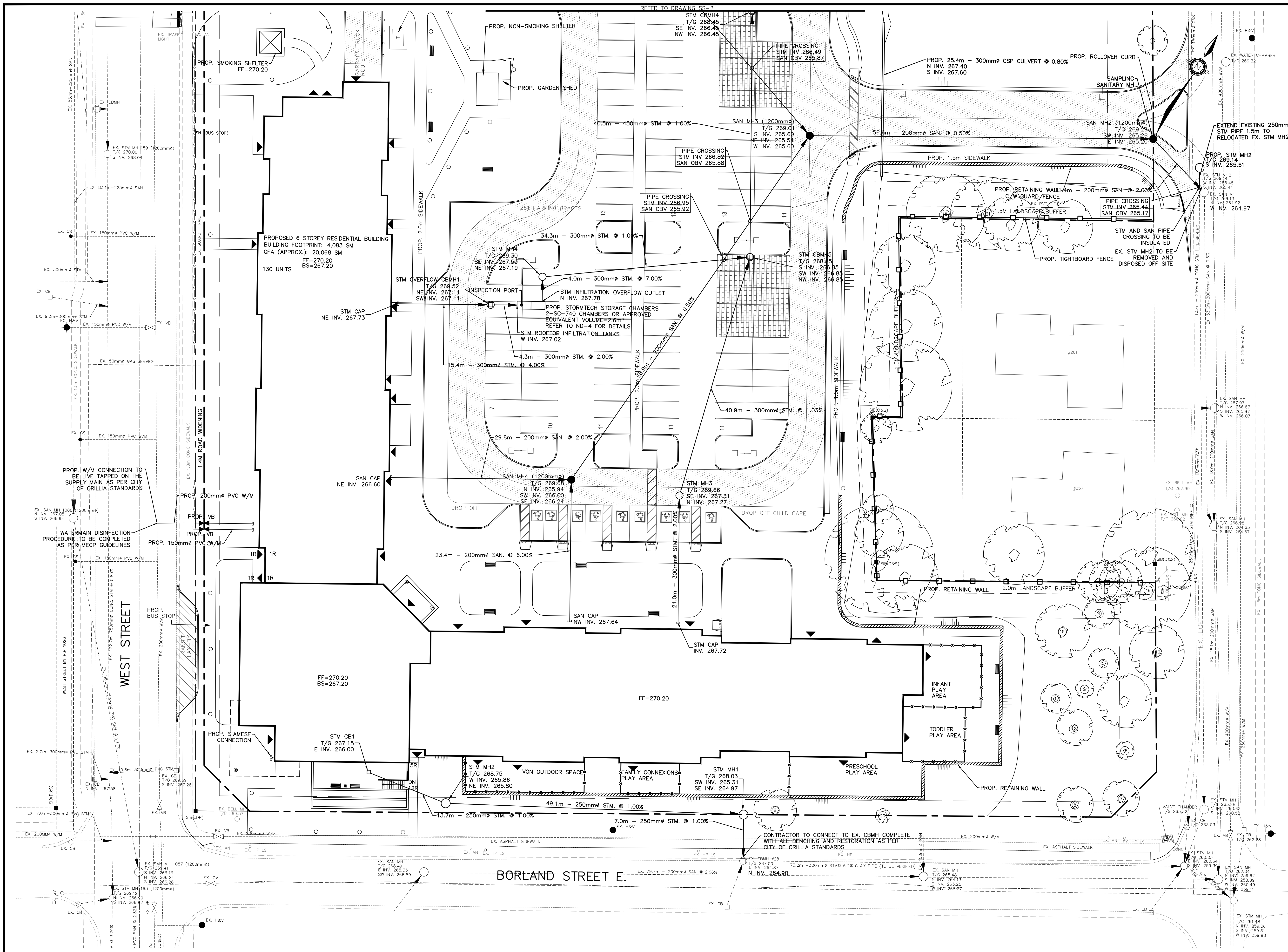
COUNTY OF SIMCOE
AFFORDABLE HOUSING
ORILLIA, 2 BORLAND STREET EAST

SITE GRADING PLAN
3 OF 3

PEARSON ENGINEERING LTD.
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DESIGNED BY	AA	HORIZ SCALE	1:300	PROJECT #	2002
DRAWN BY	AA	VERT SCALE		DRAWING #	SG-3
CHECKED BY	MWD	DATE	NOVEMBER 2020	REVISION #	2

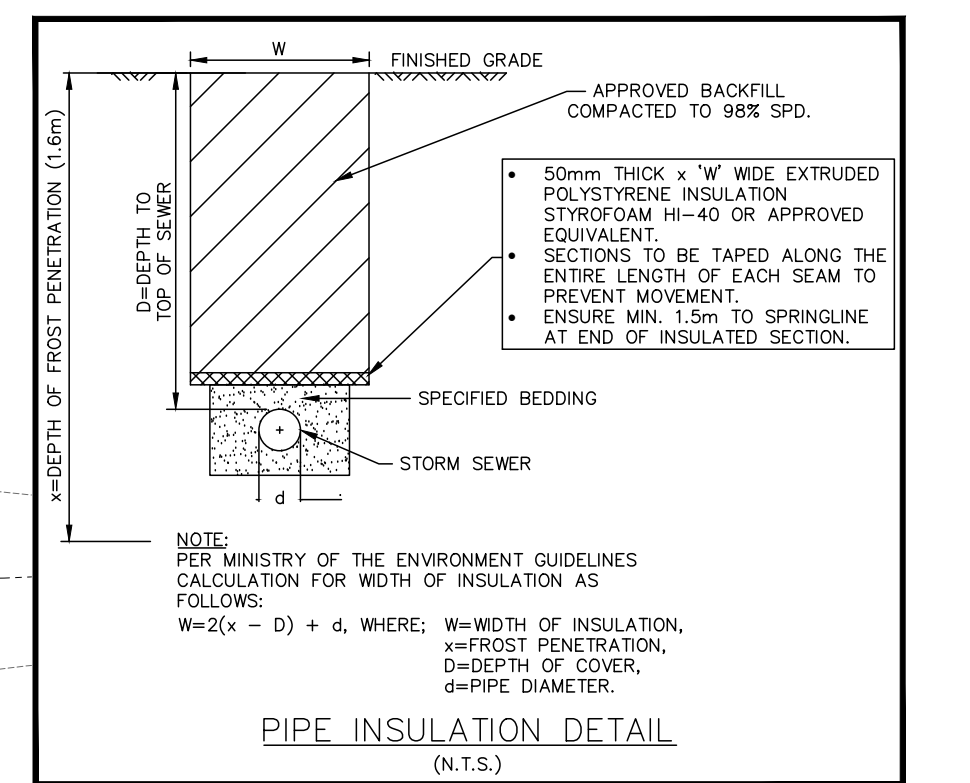
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KEY MAP
NTS

LEGEND

- CB CATCH BASIN
- DCB DOUBLE CATCH BASIN
- CBMH CATCH BASIN
- MH STORM MANHOLE
- SMH SANITARY MANHOLE
- SERVICE CAP
- ◆ HYD. FIRE HYDRANT
- ◆ VB WATER VALVE
- CS CURB STOP W/ SERVICE
- × 254.63 PROPOSED ELEVATION
- 254.09 EXISTING ELEVATION
- 1.5% PROPOSED DIRECTION AND GRADE
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- EDGE OF PAVEMENT
- CURB CUT LOCATION
- () HIGH POINT
- - - - - EX. CHAINLINK FENCE
- EX. BELL BOX
- EX. TREE
- PROP. RETAINING WALL
- PROP. TIGHTBOARD FENCE
- PROP. LIGHT STANDARD
- ▨ PROP. PERMEABLE PAVERS AS PER ND-4
- ▨ PROP. HEAVY DUTY ASPHALT



NO.	REVISION NOTE	DATE	BY
2.	REVISED AS PER CITY ORILLIA COMMENTS	04/28/21	AA
1.	REVISED AS PER CITY ORILLIA COMMENTS	01/26/21	AA

BENCHMARK			
NO.	DESCRIPTION	DATE	BY



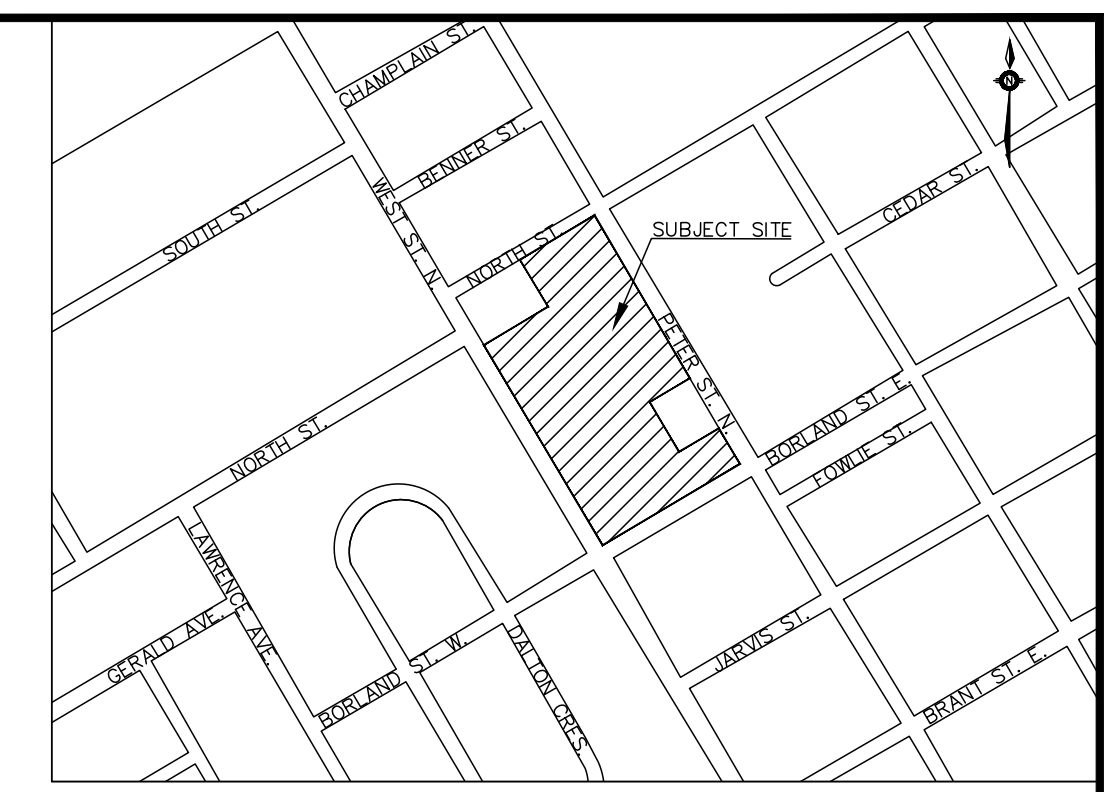
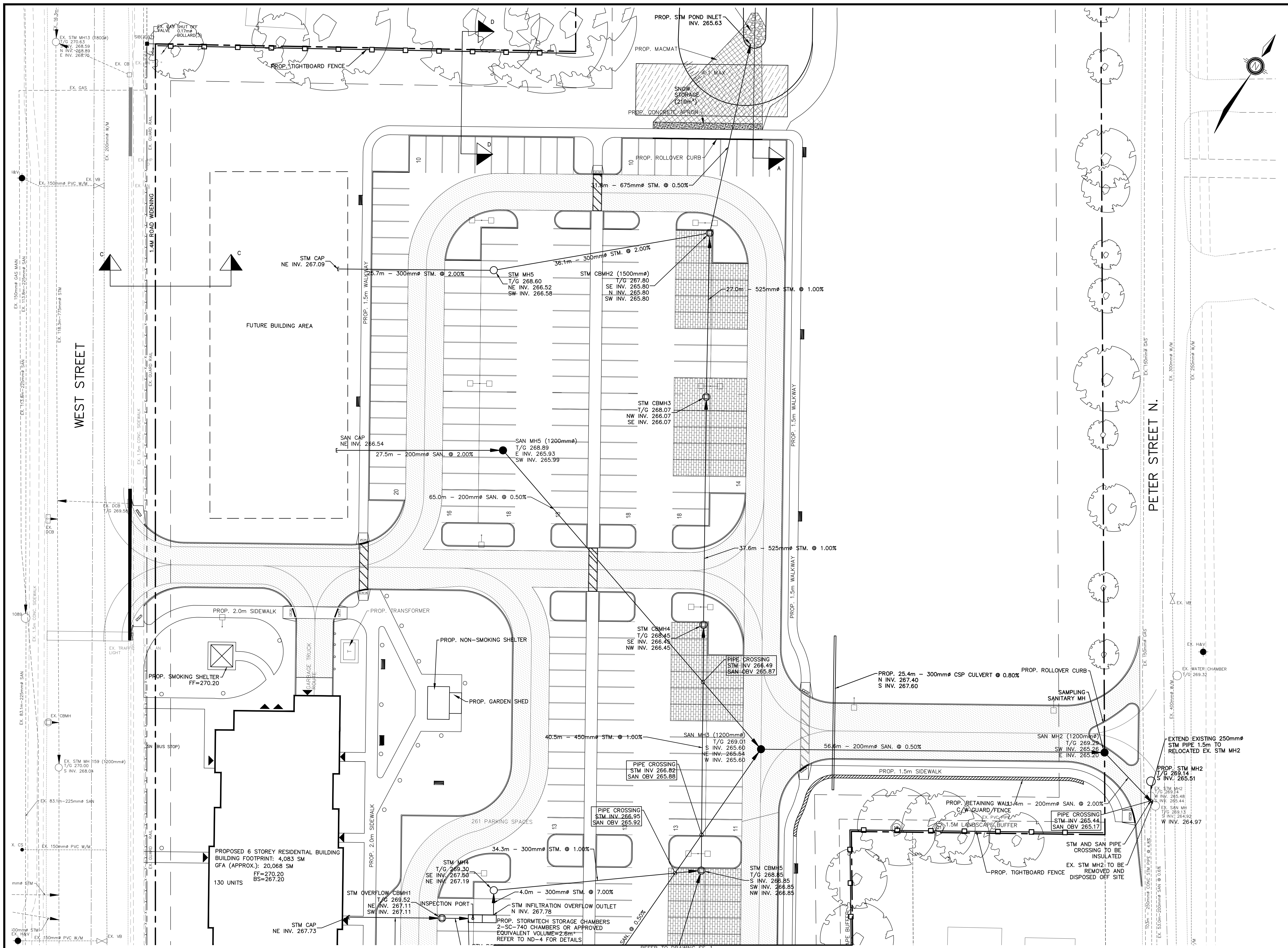
COUNTY OF SIMCOE
AFFORDABLE HOUSING
ORILLIA, 2 BORLAND STREET EAST

SITE SERVICING PLAN
1 OF 3



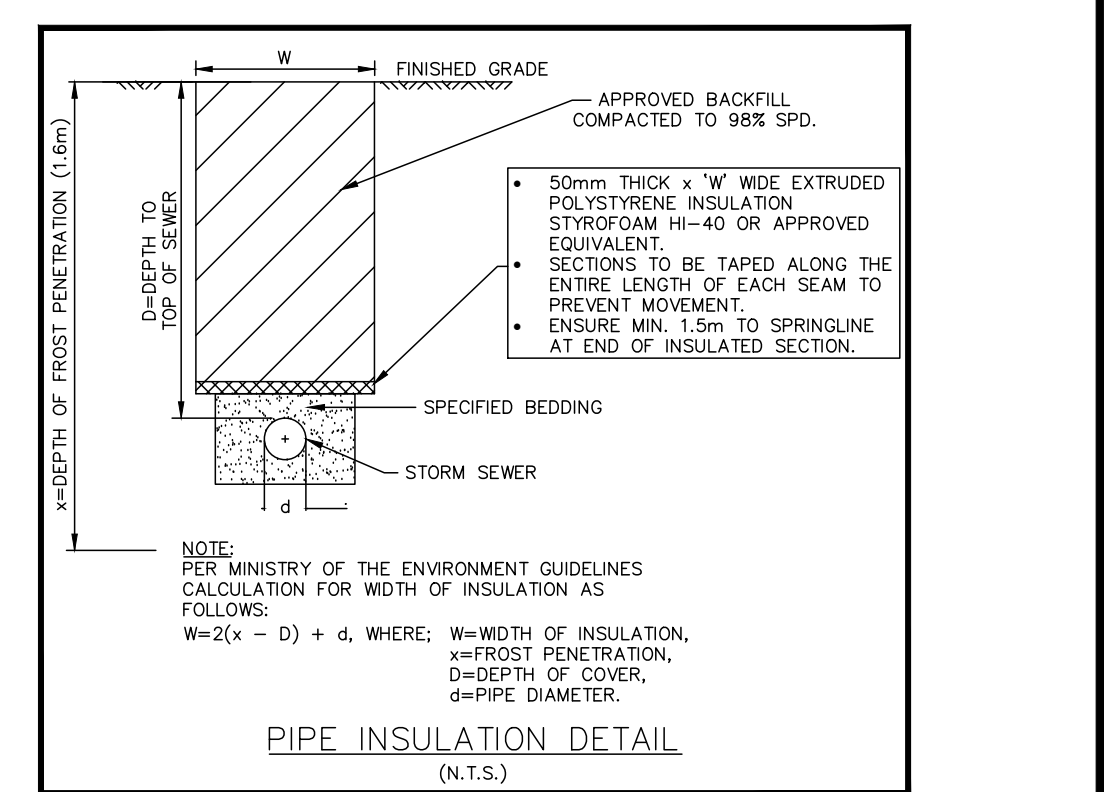
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DRAWN BY	AA	VERT SCALE		DRAWING #	SS-1
CHECKED BY	MWD	DATE	NOVEMBER 2020	REVISION #	2

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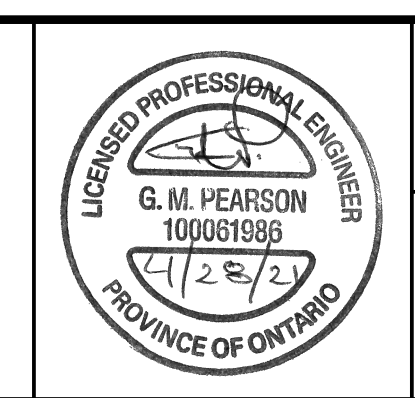
LEGEND

- CB CATCH BASIN
- DCB DOUBLE CATCH BASIN
- CBMH CATCH BASIN
- MH STORM MANHOLE
- MH SANITARY MANHOLE
- SERVICE CAP
- ◆ HYD. FIRE HYDRANT
- ▲ VB WATER VALVE
- CS CURB STOP
- W/ SERVICE
- × 254.63
254.09 PROPOSED ELEVATION
EXISTING ELEVATION
- 1.5% PROPOSED DIRECTION AND GRADE
- BACK OF CURB
- EDGE OF PAVEMENT
- CURB CUT LOCATION
-) (HIGH POINT
- - - - - EX. CHAINLINK FENCE
- EX. BELL BOX
- EX. TREE
- PROP. TIGHTBOARD FENCE
- PROP. LIGHT STANDARD
- ▨ PROP. PERMEABLE PAVERS AS PER ND-4
- ▨ PROP. HEAVY DUTY ASPHALT



NO.	REVISION NOTE	DATE	BY
2.	REVISED AS PER CITY ORILLIA COMMENTS	04/28/21	AA
1.	REVISED AS PER CITY ORILLIA COMMENTS	01/26/21	AA

BENCHMARK			



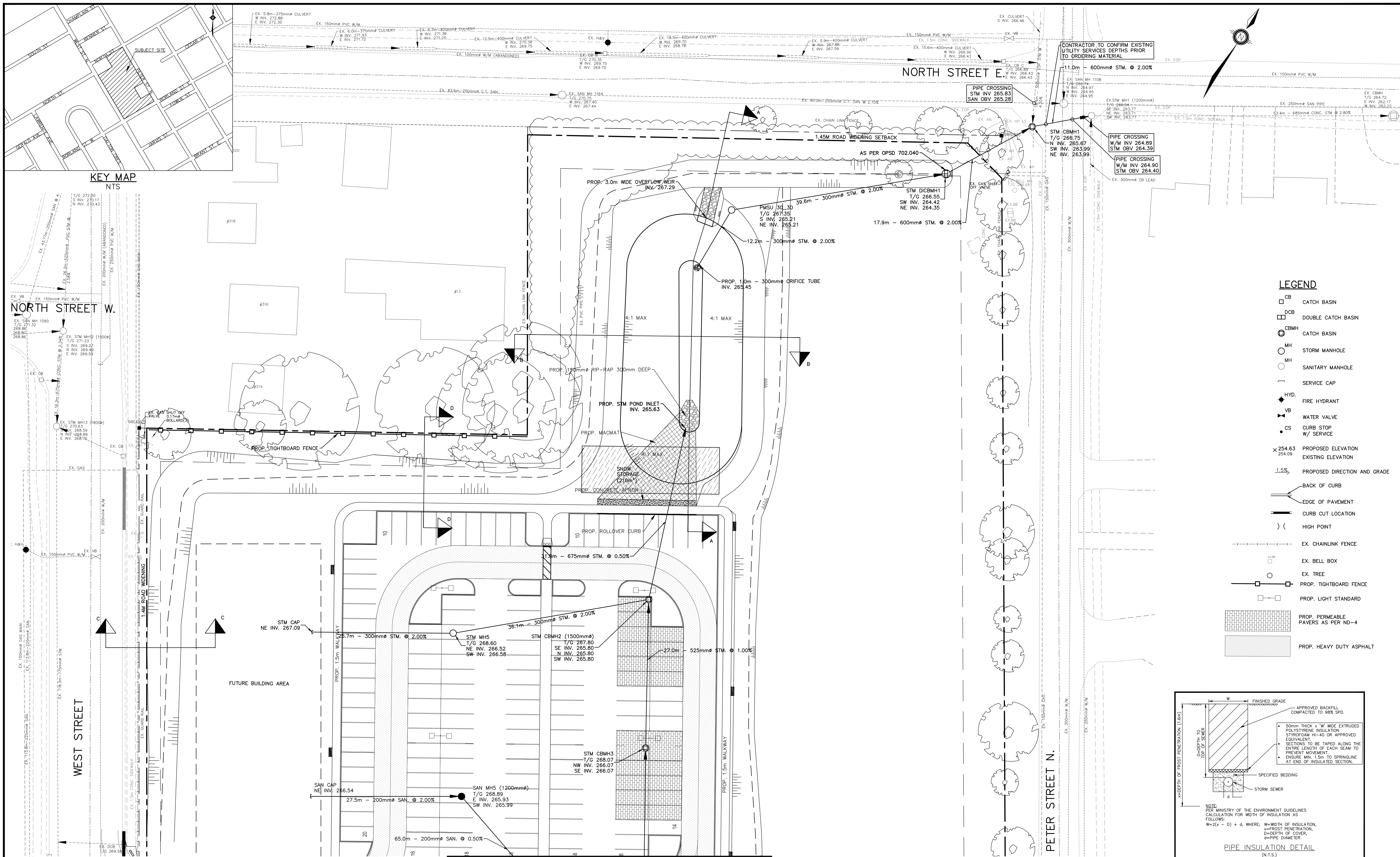
COUNTY OF SIMCOE
AFFORDABLE HOUSING
ORILLIA, 2 BORLAND STREET EAST

SITE SERVICING PLAN
2 OF 3

PEARSON ENGINEERING LTD.
PEARSONENG.COM PH. 705.719.4785

DESIGNED BY	AA	HORIZ SCALE	1:300	PROJECT #	20002
DRAWN BY	AA	VERT SCALE		DRAWING #	SS-2
CHECKED BY	MWD	DATE	NOVEMBER 2020	REVISION #	2

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NO.	REVISION NOTE	DATE	BY
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1.	REVISED AS PER CITY ORILLIA COMMENTS	01/26/21	AA

BENCHMARK			



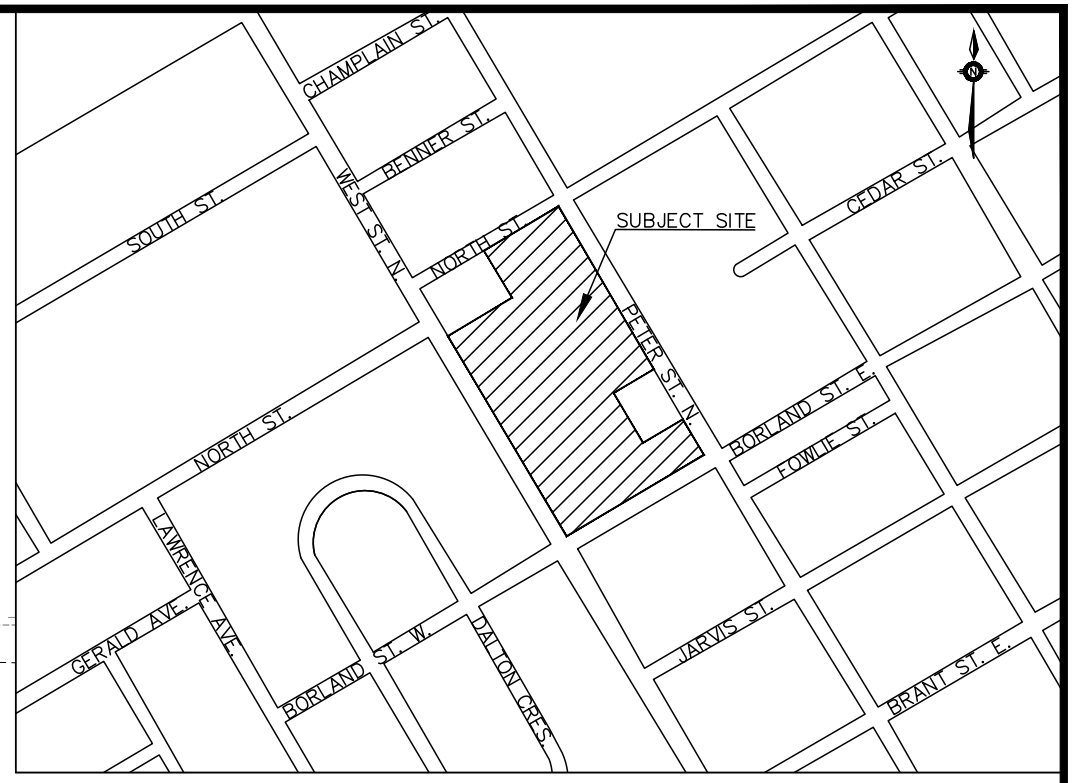
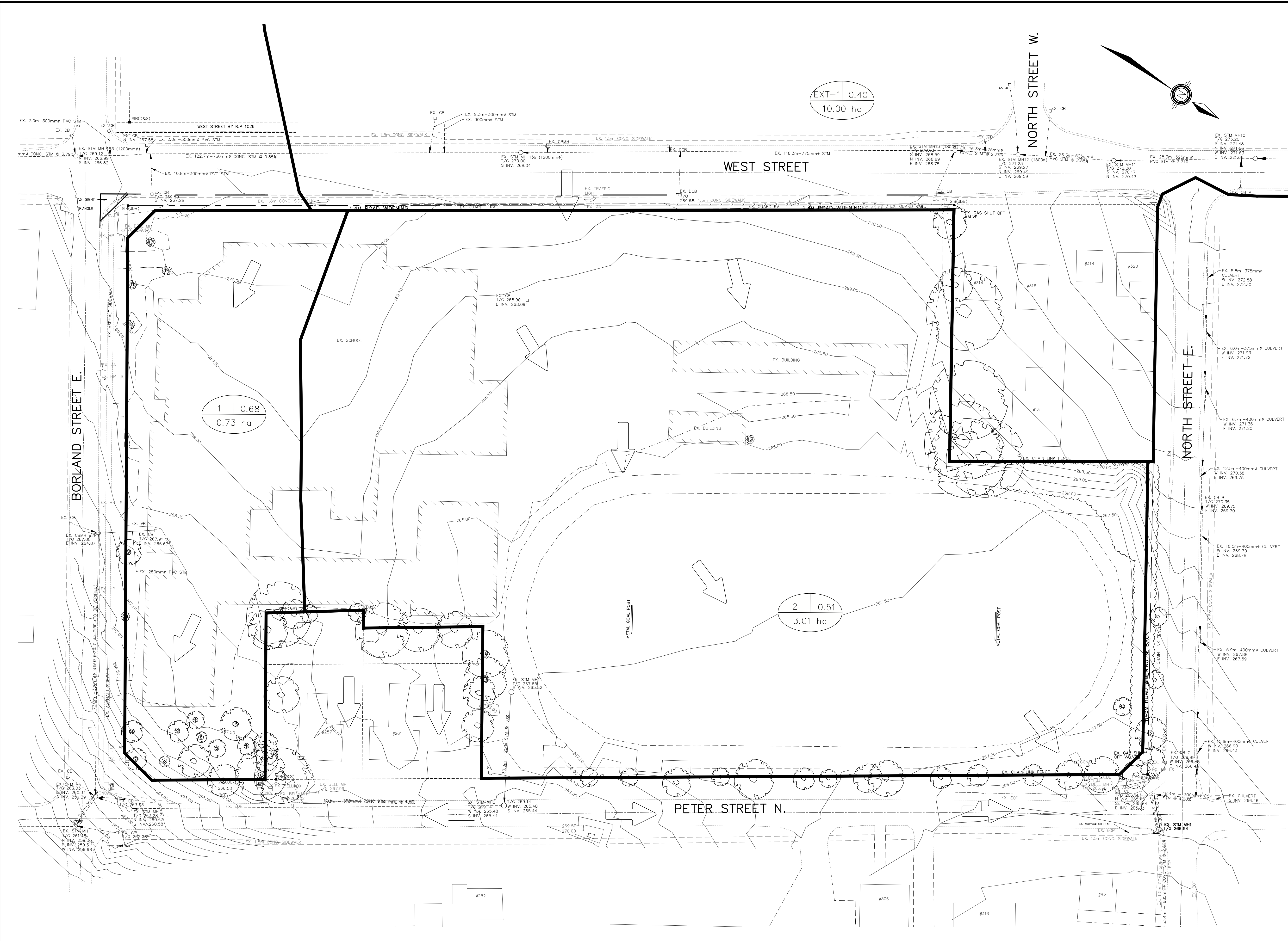
COUNTY OF SIMCOE
AFFORDABLE HOUSING
ORILLIA, 2 BORLAND STREET EAST

SITE SERVICING PLAN
3 OF 3

PEARSON ENGINEERING LTD.
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DESIGNED BY	AA	HORIZ SCALE	1:300	PROJECT #	20002
DRAWN BY	AA	VERT SCALE		DRAWING #	SS-3
CHECKED BY	MWD	DATE	NOVEMBER 2020	REVISION #	2

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KEY MAP
NTS

LEGEND

- CATCH BASIN
- DOUBLE CATCH BASIN
- CATCH BASIN
- STORM MANHOLE
- OVERLAND FLOW DIRECTION
- CATCHMENT AREA $\frac{1}{1.00 \text{ ha}}$ RUNOFF COEFFICIENT
- AREA IN HECTARES
- CATCHMENT BOUNDARY
- EX. CHAINLINK FENCE

NO.	REVISION NOTE	DATE	BY
2.	REVISED AS PER CITY ORILLIA COMMENTS	04/28/21	AA
1.	REVISED AS PER CITY ORILLIA COMMENTS	01/26/21	AA

BENCHMARK			



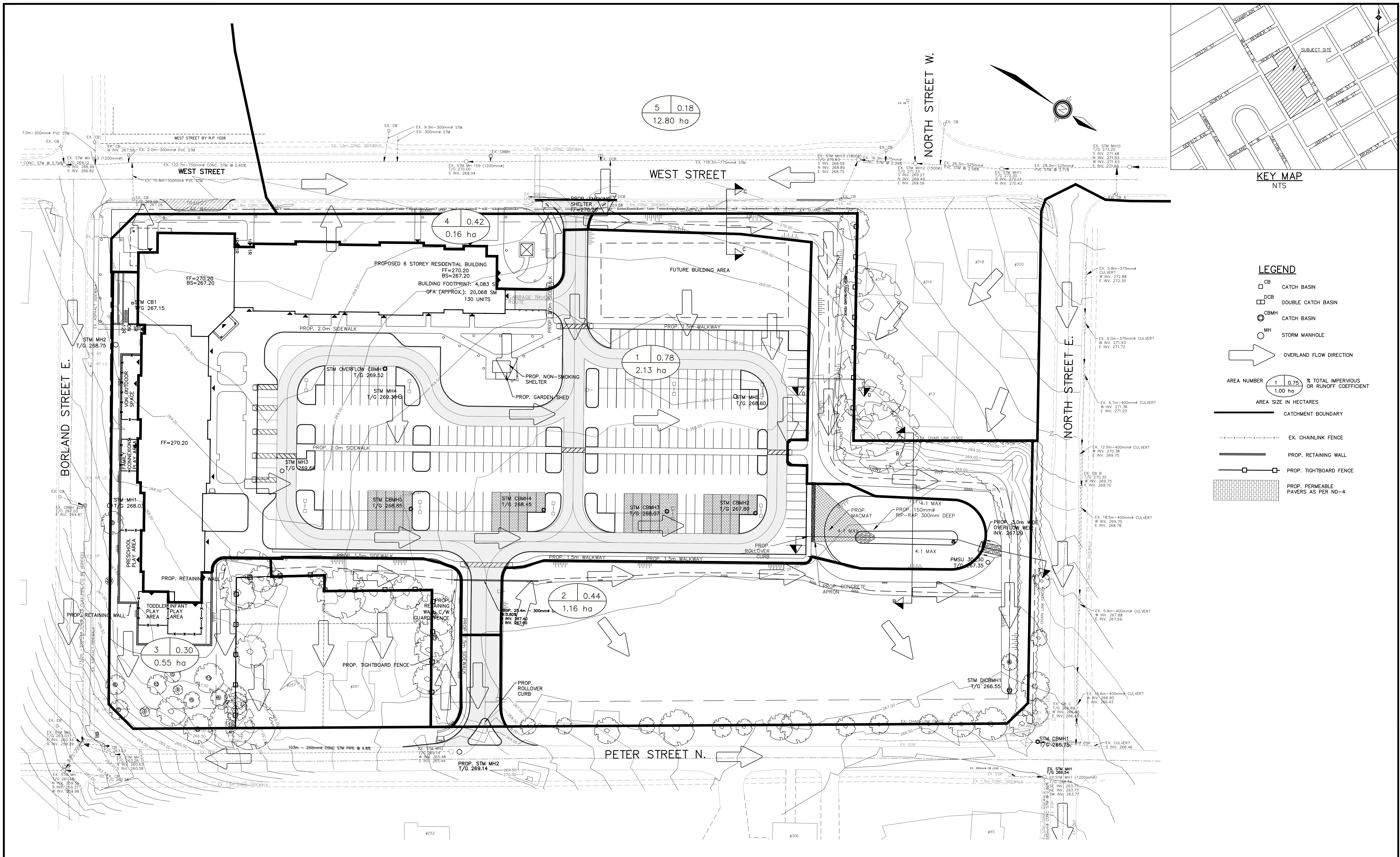
COUNTY OF SIMCOE
AFFORDABLE HOUSING
ORILLIA, 2 BORLAND STREET EAST

PRE-DEVELOPMENT STORM
CATCHMENT PLAN

PEARSON ENGINEERING LTD.
PEARSONENGINEERING.COM PH. 705.719.4785

DESIGNED BY	AA	HORIZ SCALE	1:500	PROJECT #	20002
DRAWN BY	AA	VERT SCALE		DRAWING #	STM-1
CHECKED BY	MWD	DATE	NOVEMBER 2020	REVISION #	2

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KEY MAP
NTS

LEGEND

- CB CATCH BASIN
 - DCB DOUBLE CATCH BASIN
 - CBMH CATCH BASIN
 - MH STORM MANHOLE
 - ➔ OVERLAND FLOW DIRECTION
- AREA NUMBER $\frac{1}{1.00}$ % TOTAL IMPERVIOUS OR RUNOFF COEFFICIENT
- AREA SIZE IN HECTARES
- CATCHMENT BOUNDARY
 - - - - EX. CHAINLINK FENCE
 - ▬▬▬▬ PROP. RETAINING WALL
 - ▬▬▬▬ PROP. TIGHTBOARD FENCE
 - ▨▨▨▨ PROP. PERMEABLE PAVERS AS PER ND-4

NO.	REVISION NOTE	DATE	BY
2.	REVISED AS PER CITY ORILLIA COMMENTS	04/28/21	AA
1.	REVISED AS PER CITY ORILLIA COMMENTS	01/26/21	AA

BENCHMARK			



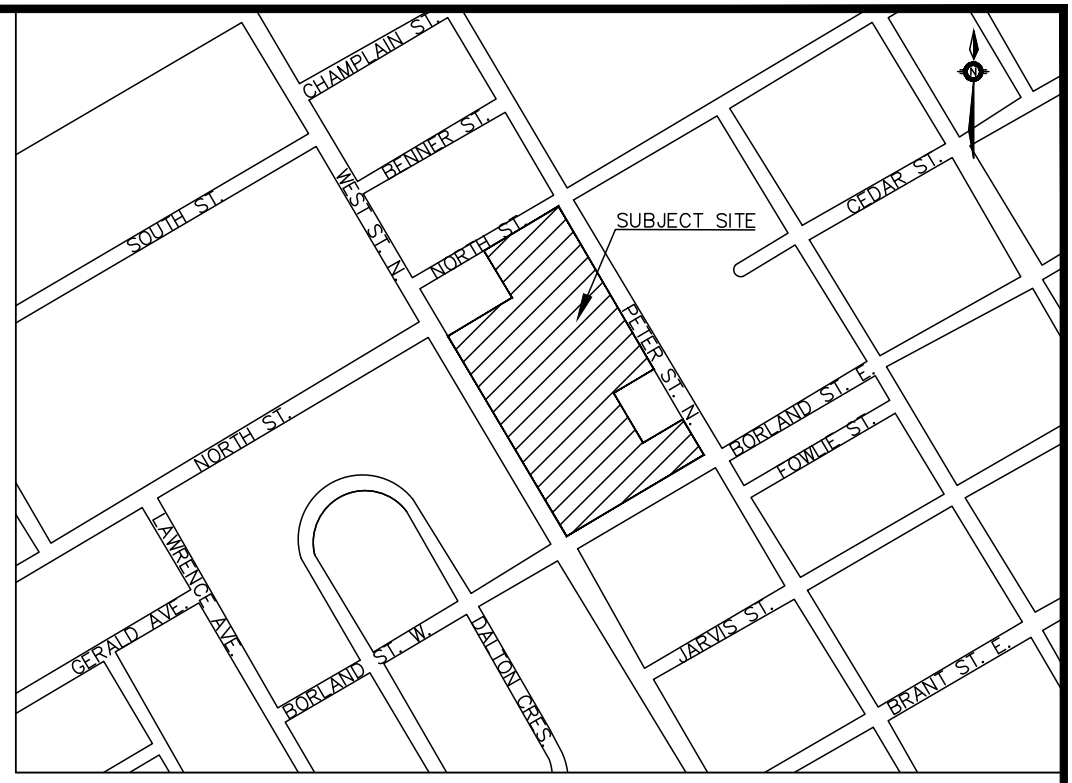
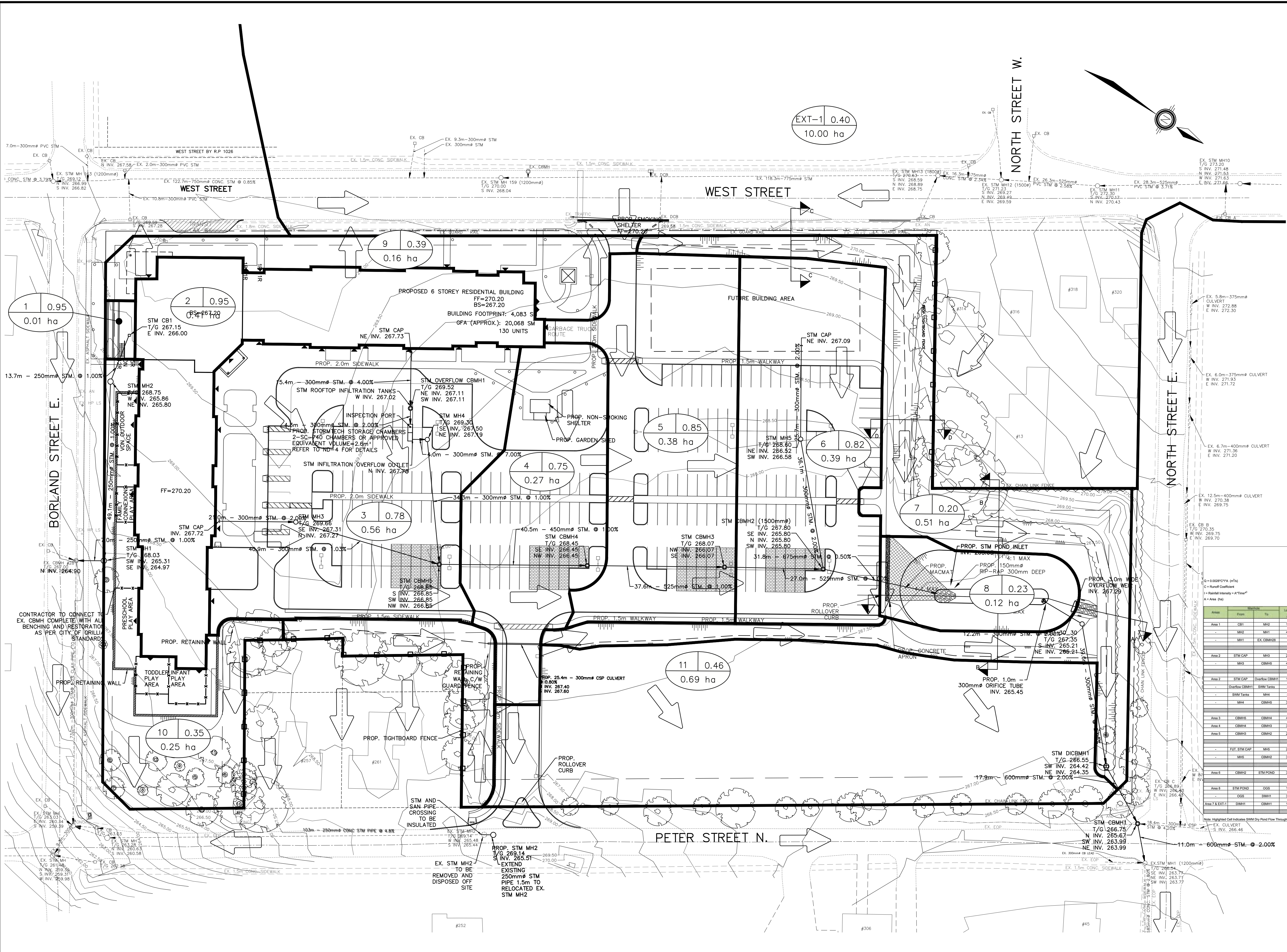
COUNTY OF SIMCOE
AFFORDABLE HOUSING
ORILLIA, 2 BORLAND STREET EAST

POST-DEVELOPMENT STORM
CATCHMENT PLAN

PEARSON ENGINEERING LTD.
PEARSONENG.COM PH. 705.719.4785

DESIGNED BY	AA	HORIZ SCALE	1:500	PROJECT #	20002
DRAWN BY	AA	VERT SCALE		DRAWING #	STM-2
CHECKED BY	MWD	DATE	NOVEMBER 2020	REVISION #	2

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LEGEND

- CB CATCH BASIN
- DCB DOUBLE CATCH BASIN
- CBMH CATCH BASIN
- MH STORM MANHOLE
- OVERLAND FLOW DIRECTION
- 1 0.75 RUNOFF COEFFICIENT
- AREA IN HECTARES
- CATCHMENT BOUNDARY
- - - EX. CHAINLINK FENCE
- ▨ PROP. RETAINING WALL
- ▣ PROP. TIGHTBOARD FENCE
- ▩ PROP. PERMEABLE PAVERS AS PER ND-4



County of Simcoe Affordable Housing - Orillia
Storm Sewer Design
2-Year Storm Event

DATE: 28-Apr-21
FILE: 20002
CONTRACT/PROJECT: SDSC Orillia

Area	Flow	Flow (m³/s)	Flow (L/s)	Flow (m³/d)	Flow (m³/h)	Flow (m³/min)	Flow (m³/s)	Flow (L/s)	Flow (m³/d)	Flow (m³/h)	Flow (m³/min)	Flow (m³/s)	Flow (L/s)	Flow (m³/d)	Flow (m³/h)	Flow (m³/min)
Area 1	CB1	13.1	0.95	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Area 2	STM CAP	21.6	0.86	0.41	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Area 3	CBMH4	40.6	0.78	0.26	0.43	1.22	0.37	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
Area 4	CBMH4	37.6	0.75	0.27	0.21	1.44	0.34	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Area 5	CBMH4	27.0	0.65	0.38	0.32	1.74	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Area 6	STM CAP	25.7	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area 7	STM CAP	36.1	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area 8	STM POND	12.2	0.83	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area 9	STM POND	36.8	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area 10	STM POND	17.2	0.39	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32

BENCHMARK

NO.	REVISION NOTE	DATE	BY
2.	REVISED AS PER CITY ORILLIA COMMENTS	04/28/21	AA
1.	REVISED AS PER CITY ORILLIA COMMENTS	01/26/21	AA

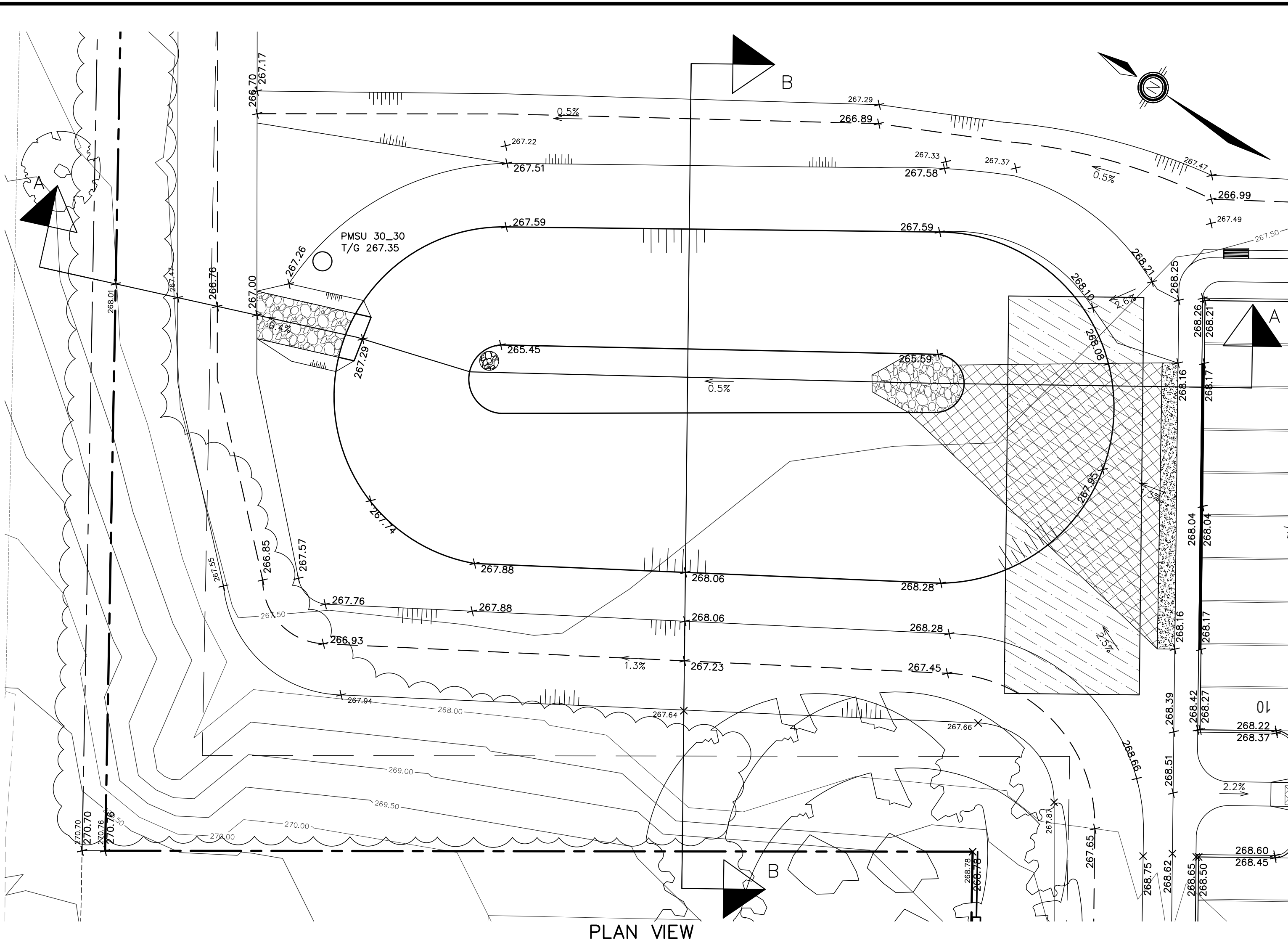


COUNTY OF SIMCOE
AFFORDABLE HOUSING
ORILLIA, 2 BORLAND STREET EAST

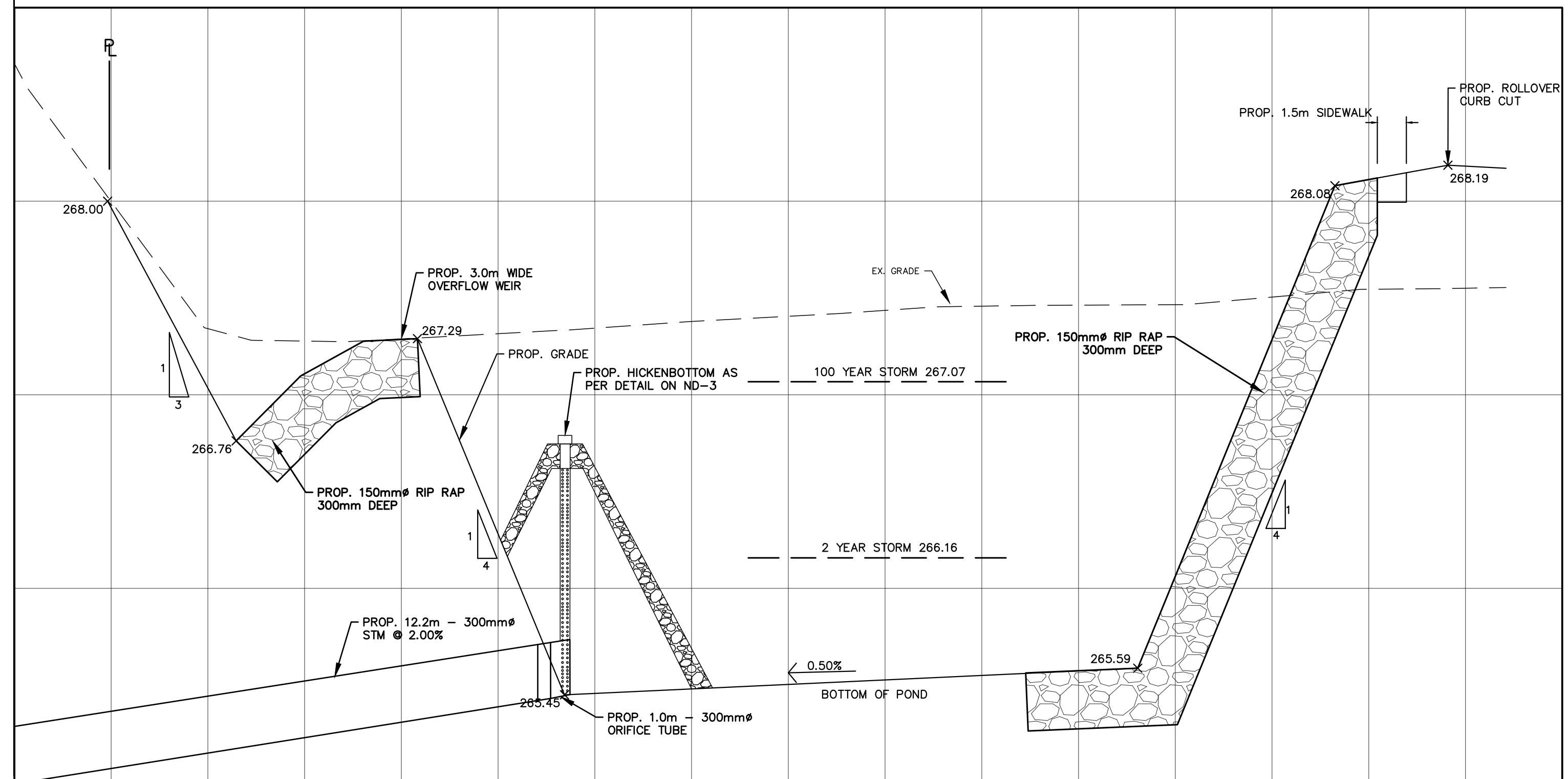
STORM DRAINAGE AREA PLAN

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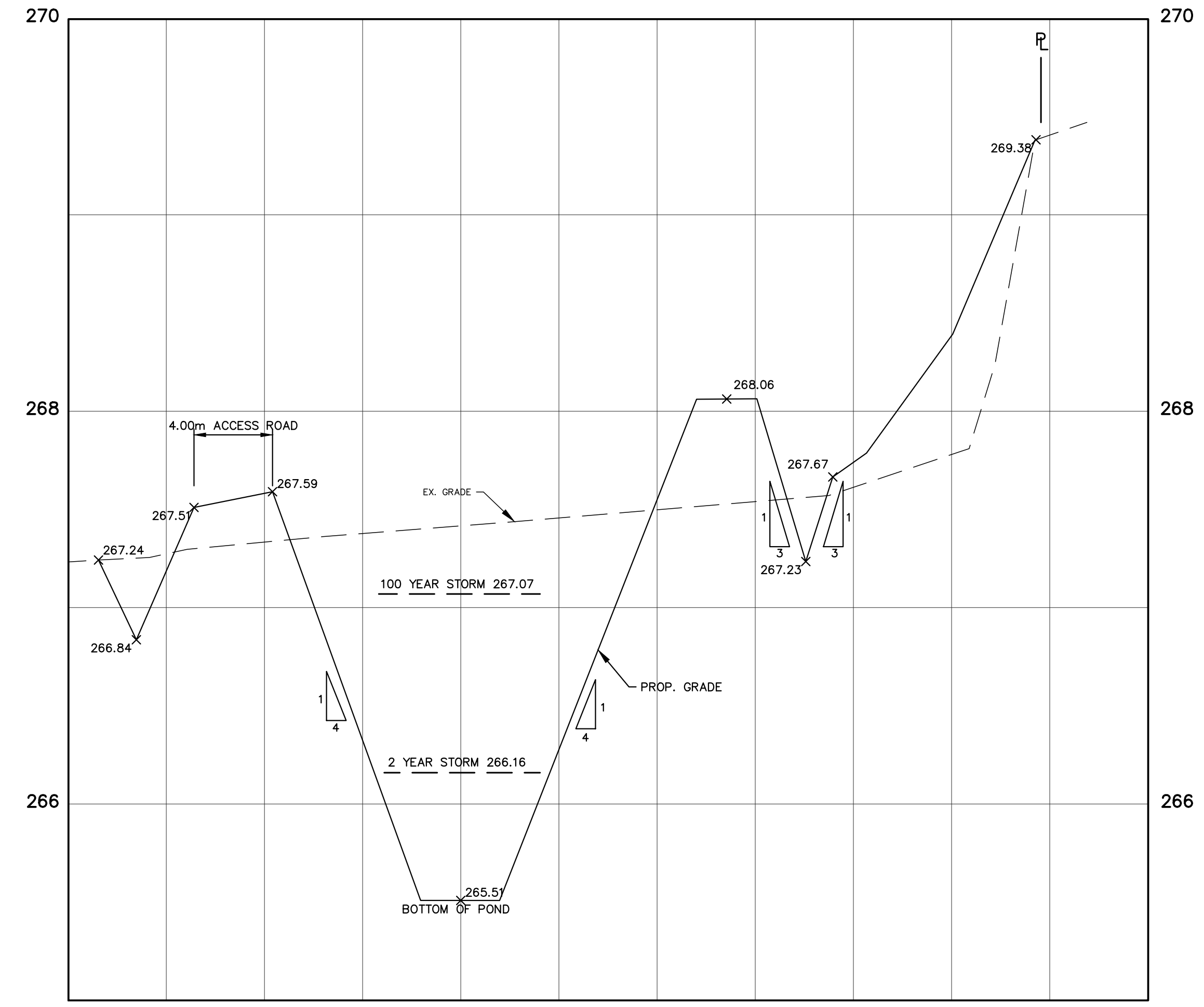
DESIGNED BY	AA	HORIZ SCALE	1:500	PROJECT #	20002
DRAWN BY	AA	VERT SCALE		DRAWING #	STM-3
CHECKED BY	MWD	DATE	NOVEMBER 2020	REVISION #	2



PLAN VIEW
1:200



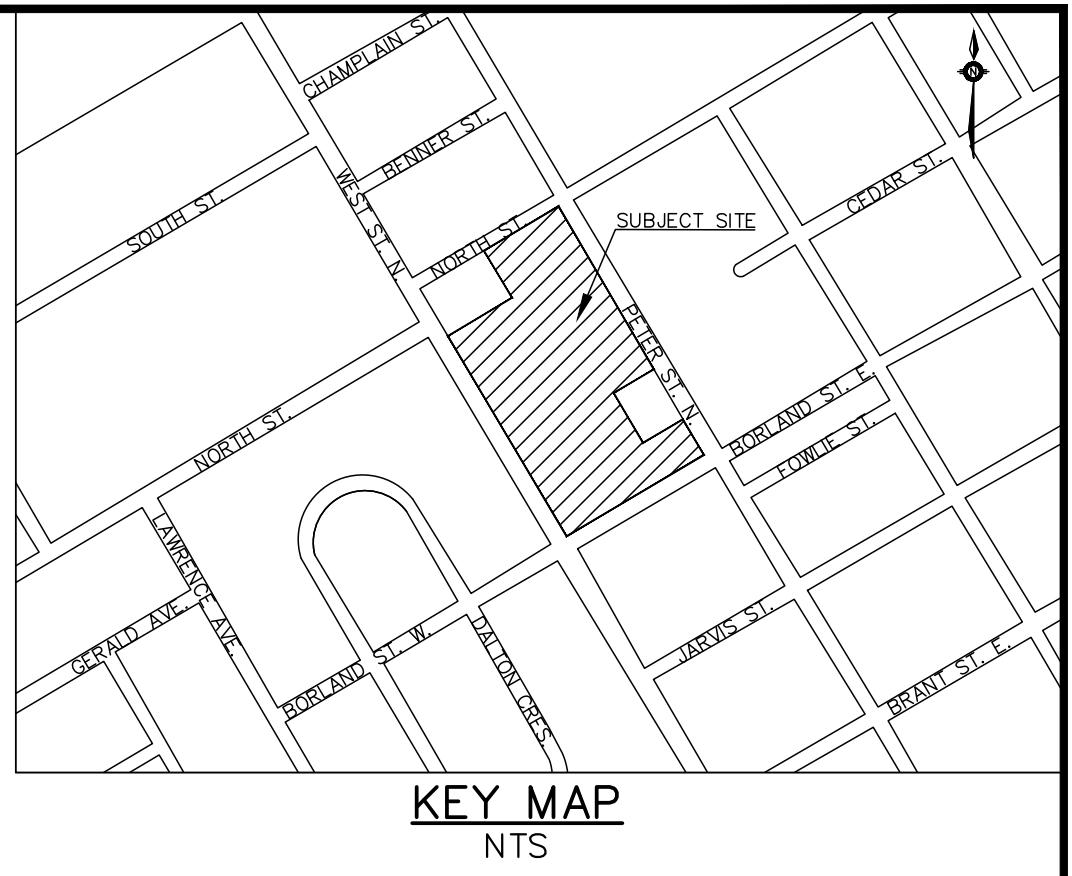
SECTION A-A: POND LENGTH
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:20



SECTION B-B: POND WIDTH
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:20

Table 3: SWM Pond Stage-Storage-Discharge

	2 Year Storm	5 Year Storm	10 Year Storm	25 Year Storm	50 Year Storm	100 Year Storm
Total Flow (m ³ /s)	0.19	0.22	0.23	0.26	0.29	0.30
Elevation (m)	266.16	266.35	266.47	266.71	266.91	267.07
Total Storage (m ³)	130	193	238	340	444	535



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NO.	REVISION NOTE	DATE	BY
2.	REVISED AS PER CITY ORILLIA COMMENTS	04/28/21	AA
1.	REVISED AS PER CITY ORILLIA COMMENTS	01/26/21	AA

BENCHMARK			



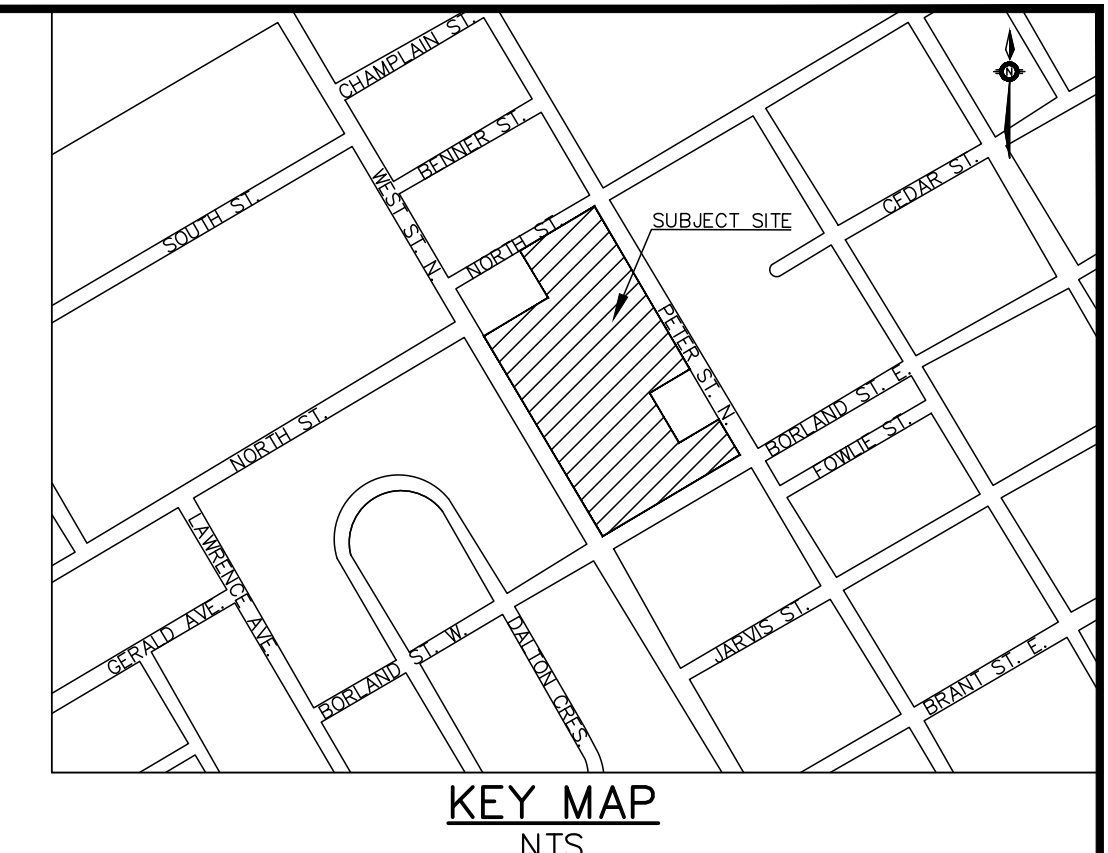
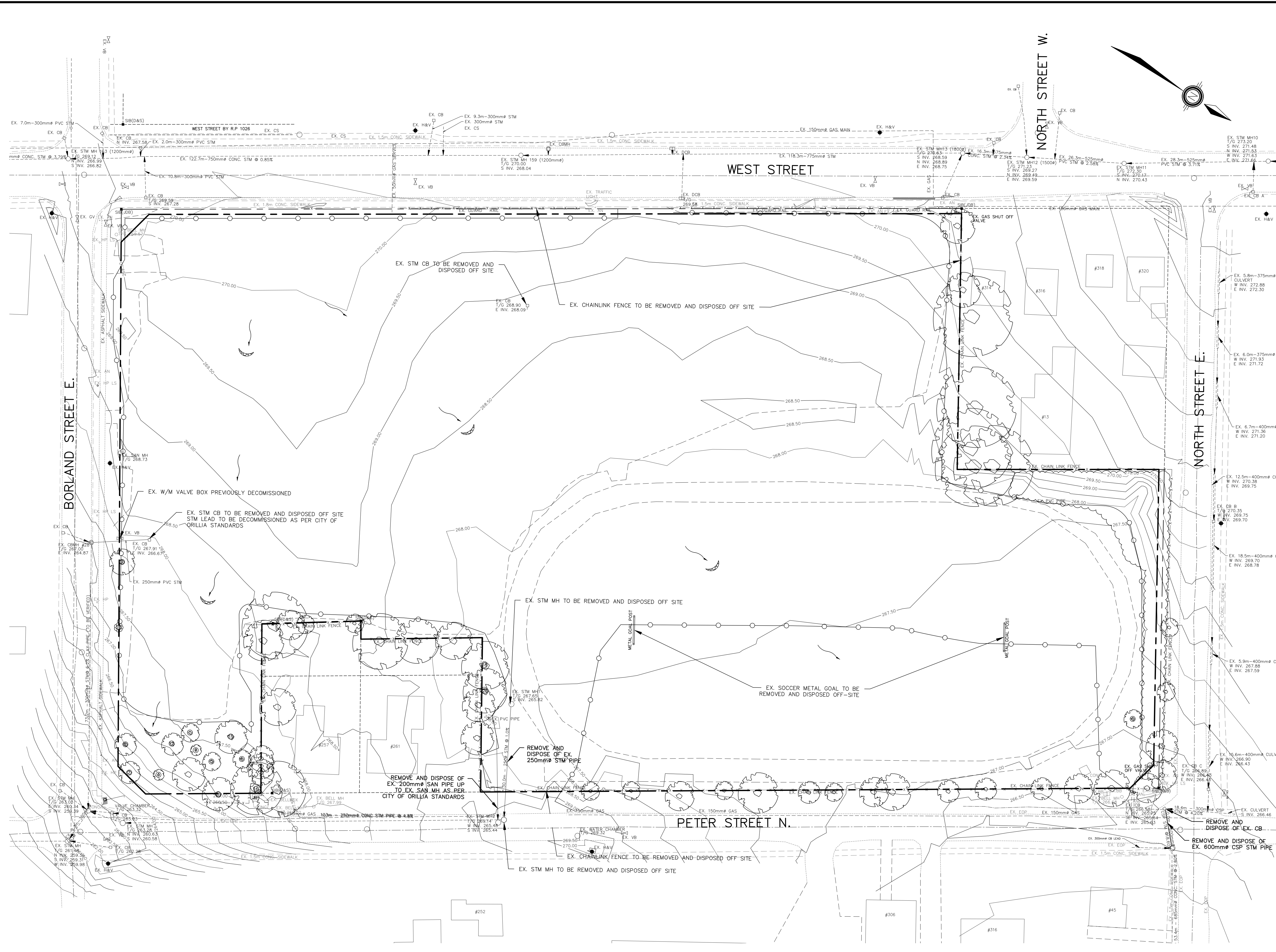
COUNTY OF SIMCOE
AFFORDABLE HOUSING
ORILLIA, 2 BORLAND STREET EAST

STORMWATER MANAGEMENT
POND DETAIL

PEARSON ENGINEERING LTD.
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LEGEND

- SILT FENCE
- TEMPORARY SWALE
- TEMPORARY ROCK CHECK DAM
- EX. CHAINLINK FENCE
- EX. BELL BOX
- EX. TREE

SEQUENCE OF CONSTRUCTION

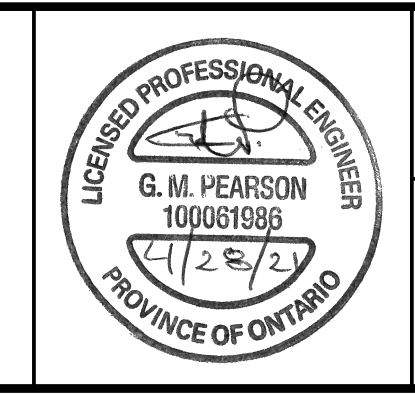
1. ENGINEER TO BE NOTIFIED PRIOR TO INITIATION OF ANY ON SITE WORKS.
2. SILT FENCE AS PER BSD-23, CONSTRUCTION ACCESS MATS, SWALE, AND CHECK DAMS AS PER DETAILS ON EPR-1 ARE TO BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY WORKS ONSITE.
3. VEGETATION REMOVAL MAY COMMENCE AFTER ALL SILT FENCE IS INSTALLED AND APPROVED BY THE ENGINEER.
4. COMMENCE WITH EARTH WORKS AND SITE SERVING.
5. EROSION CONTROL MEASURES TO BE MAINTAINED AS DIRECTED BY THE ENGINEER DURING THE CONSTRUCTION PERIOD. ADDITIONAL CONTROL MEASURES MAY BE REQUIRED AT THE DISCRETION OF THE ENGINEER.
6. ALL DISTURBED GROUND LEFT INACTIVE FOR MORE THAN 30 DAYS SHALL BE STABILIZED WITH SEED, SOD, MULCH OR OTHER ADEQUATE COVERING, AS INSTRUCTED BY THE ENGINEER.

NOTES FOR SEDIMENT & EROSION CONTROL

1. DISTURBED AREAS THAT HAVE FAILED TO HAVE STABLE GROUND COVER ESTABLISHED BY OCTOBER 30TH SHALL BE PROTECTED WITH A SILTATION CONTROL FENCE OR STRAW MULCH ETC. AND MAINTAINED BY THE CONTRACTOR UNTIL VEGETATION BECOMES ESTABLISHED IN THE SUBSEQUENT GROWING SEASON.
2. ANY DEWATERING WASTE SHALL BE DISCHARGED TO A VEGETATED AREA AT LEAST 30m FROM ANY WATERCOURSE AND FILTERED. FILTERING METHODS MUST BE APPROVED BY THE SITE ADMINISTRATOR.
3. SILT FENCE SHALL BE PUT IN PLACE PRIOR TO AND MAINTAINED DURING ALL GRADING. SILT FENCE TO BE INSPECTED PRIOR TO COMMENCEMENT OF EARTH GRADING ACTIVITIES. SILT FENCE TO BE INSPECTED AND REPAIRED OR REPLACED IF DAMAGED AS DIRECTED BY THE SITE ADMINISTRATOR. SILT CONTROLS TO BE INSPECTED ON A REGULAR BASIS AND AFTER EVERY RAIN EVENT. INSTALLATION SHALL BE TO THE MANUFACTURER'S RECOMMENDED SPECIFICATIONS.
4. THE CONTRACTOR SHALL BE PREPARED FOR UNEXPECTED CONDITIONS AND ACCORDINGLY HAVE STOCKPILED MATERIALS ON SITE FOR NECESSARY REPAIRS AS A RESULT OF FAILED OR INADEQUATE CONTROL MEASURES. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE A WEEK, AND AFTER EVERY RAINFALL EVENT.
5. MUD MATS AT ALL LOCATIONS WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES THE SITE SHALL BE USED. 300mm OF 50mm - 100mm CLEAR LIMESTONE PLACED IN A GEOTEXTILE FABRIC SUITABLE FOR ALLOWING EX-FILTRATION OF WATER AND PREVENTING THE QUARRY STONE FROM BECOMING CONTAMINATED WITH THE SUBSTRATE SOIL (TERRAFIX 270R OR APPROVED EQUAL) TO BE FLANKED BY SILT FENCES AND VEGETATIVE BUFFERS FORM THE PROPERTY LINE TO THE START OF ANY ON-SITE ROADWAYS.
6. CONTRACTOR SHALL OBTAIN A CURRENT COPY AND BECOME FAMILIAR WITH OPSS 577, CONSTRUCTION SPECIFICATION FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AS WELL AS ALL APPLICABLE MUNICIPAL STANDARDS.
7. THE CONTRACTOR MAY CONSIDER ALTERNATIVE SEDIMENT AND EROSION CONTROL MEASURES. SUCH MEASURES SHOULD BE PRESENTED IN WRITING FOR APPROVAL OF THE SITE ADMINISTRATOR AND MUST BE APPROVED IN WRITING BY THE MUNICIPALITY AND CONSERVATION AUTHORITY.
8. THE TOPS OF ALL FILTER FABRIC MUST BE A MINIMUM OF 1.0 METRES ABOVE THE GROUND LEVEL AND ATTACHED TO THE FENCE WITH A CONTINUOUS STEEL WIRE. ALTERNATIVELY, THE FILTER FABRIC MUST BE FOLDED OVER THE TOP OF THE FENCE AND ATTACHED TO THE FENCE WITH WIRE LOOPED THROUGH THE FABRIC ON BOTH SIDES OF THE FENCE. FILTER FABRIC IS TO BE TERRAFIX 270R OR EQUIVALENT.
9. ALL DISTURBED GROUND LEFT FOR MORE THAN 30 DAYS SHALL BE STABILIZED BY SEEDING, SODDING, MULCHING, OR COVERING OR OTHER EQUIVALENT CONTROL MEASURES. THIS PERIOD OF INACTIVITY SHALL BE AT THE DISCRETION OF THE CITY OF ORILLIA'S MANAGER OF ENGINEERING BUT SHALL NOT EXCEED THIRTY DAYS OR SUCH LONGER PERIOD DEEMED ADVISABLE BY THE CITY OF ORILLIA'S MANAGER OF ENGINEERING.
10. CONTRACTOR RESPONSIBLE FOR MUD TRACKING, PREVENTION, AND MAINTENANCE ON SURROUNDING ROADS.

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BENCHMARK			
NO.	DESCRIPTION	DATE	BY



COUNTY OF SIMCOE
AFFORDABLE HOUSING
ORILLIA, 2 BORLAND STREET EAST

ENVIRONMENTAL PROTECTION AND
REMOVALS PLAN

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