

SOUTH DISTRICT CONDOMINIUM

681 & 685 YONGE STREET

CITY OF BARRIE

CITY FILE: D11-013-19

LIST OF DRAWINGS

GRADING AND SERVICING PLANS

SG-1 SITE GRADING PLAN
SS-1 SITE SERVICING PLAN

NOTES AND DETAILS PLANS

DET-1 CONSTRUCTION NOTES
DET-2 SERVICING DETAILS PLAN
DET-3 STANDARD DETAILS PLAN
DET-4 CROSS SECTIONS PLAN

EROSION AND SEDIMENT CONTROL PLAN

ESC-1 EROSION AND SEDIMENT CONTROL PLAN

PAVEMENT MARKING AND SIGNAGE PLAN

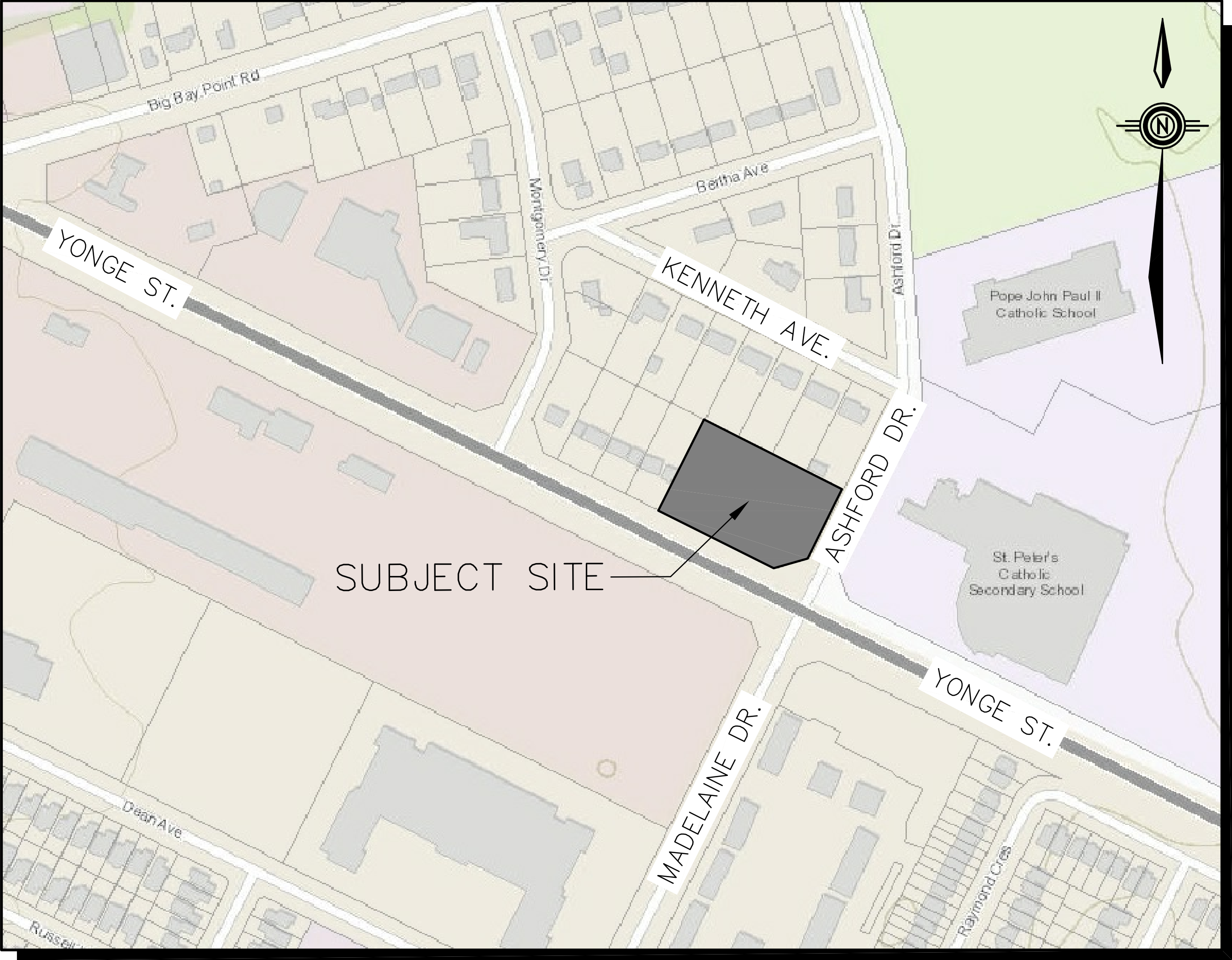
PM-1 PAVEMENT MARKING AND SIGNAGE PLAN

STORM AND SANITARY DRAINAGE PLANS

PRE-1 PRE-DEVELOPMENT STORM DRAINAGE CATCHMENT PLAN
STM-1 STORM DRAINAGE PLAN
SAN-1 SANITARY DRAINAGE PLAN

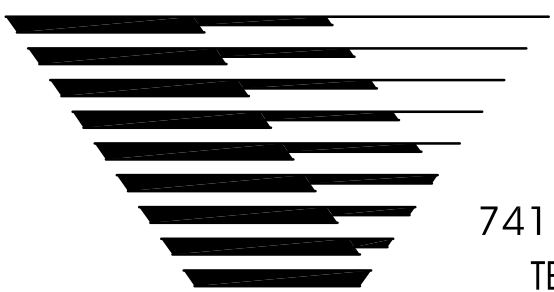
SITE ALTERATION PLAN

SAP-1 SITE ALTERATION PLAN

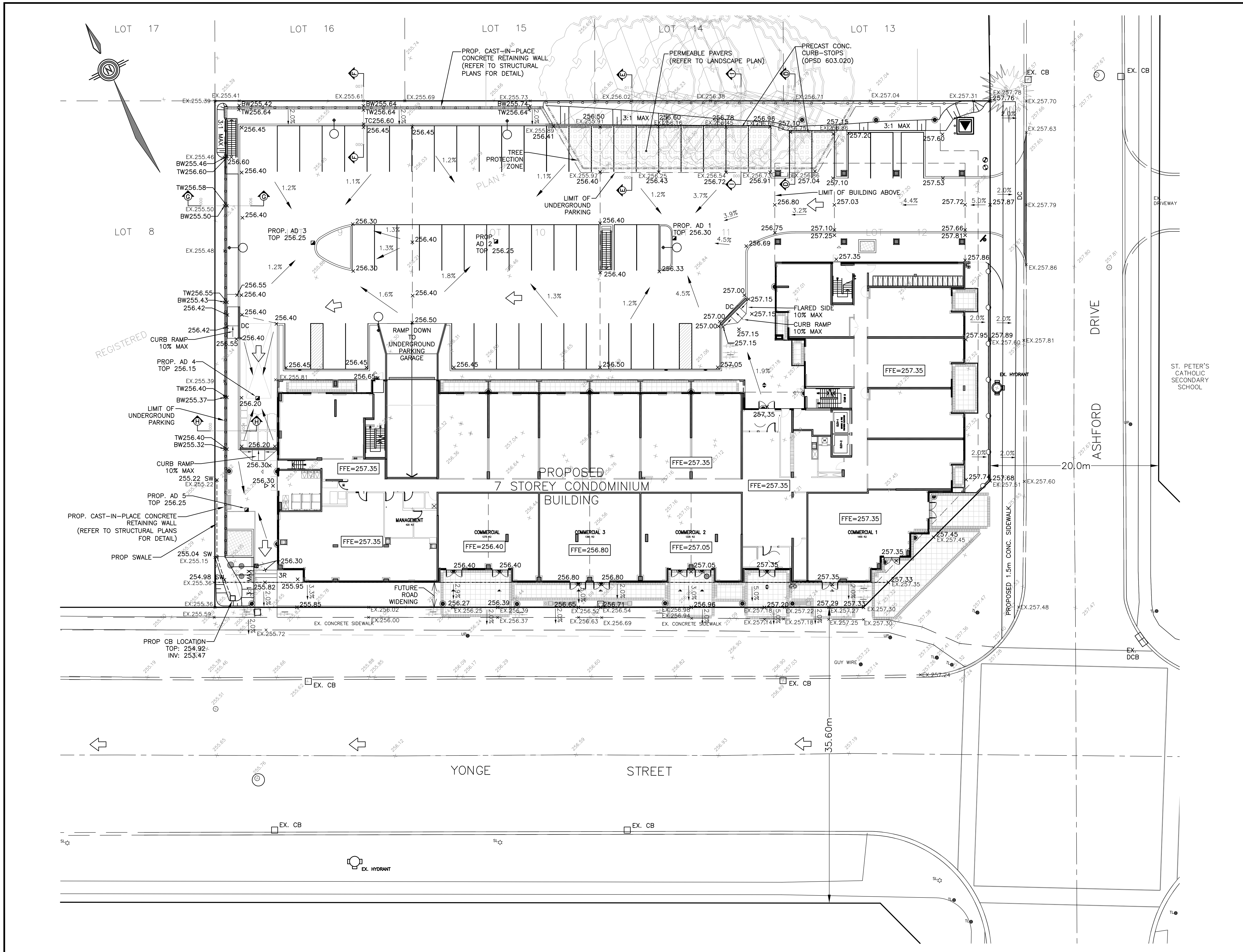


PROJ. NO. 19112

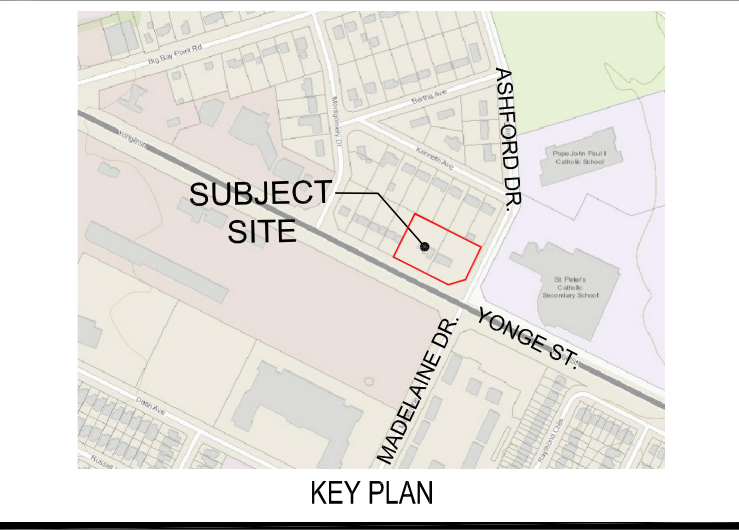
OWNER :
QUEENSGATE HOMES (BARRIE) INC.



VALDOR ENGINEERING INC.
Consulting Engineers - Project Managers
741 ROWNTREE DAIRY ROAD, SUITE 2, WOODBRIDGE, ONTARIO, L4L 5T9
TEL (905)264-0054, FAX (905)264-0069 E-MAIL: info@valdor-engineering.com
www.valdor-engineering.com



METRIC
ALL DIMENSIONS AND ELEVATIONS ARE
IN METRES UNLESS OTHERWISE SHOWN



CONTRACTOR'S NOTES:

1. DRAWINGS ARE NOT TO BE SCALED.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY UPON FINDING.
3. BY CONSULTING THE UTILITY COMPANIES CONCERNED, THE CONTRACTOR SHALL PROVE.

NOTES:

1. EVERY REASONABLE EFFORT HAS BEEN MADE TO ENSURE THAT THE INFORMATION APPEARING ON THIS PLAN IS ACCURATE AND CURRENT. WE BELIEVE THE INFORMATION TO BE RELIABLE, HOWEVER, THE CITY OF BARRIE ASSUMES NO RESPONSIBILITY OR LIABILITY DUE TO ERRORS OR OMISSIONS.
2. EXISTING ELEVATIONS AND TOPOGRAPHIC INFORMATION TAKEN FROM SURVEY PREPARED BY BOWERS & JONES SURVEYING LIMITED REFERENCE NO. 911-ELEV. DATED OCTOBER 17TH, 2014.
3. ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO GEODETIC DATUM AND ARE DERIVED FROM TOP OF HYDRANT WEST SIDE OF MADELAINE DRIVE HAVING AN ELEVATION OF 257.98 METRES.
4. BEARINGS SHOWN ON THIS PLAN ARE ASTROMONIC AND ARE REFERRED TO THE WESTERLY LIMIT OF ASHFORD DRIVE AS SHOWN ON REGISTERED PLAN 1213 AS N26°37'00E.

LEGEND	
EX. 256.60	EXISTING ELEVATION
257.20	PROPOSED ELEVATION
2.0%	DRAINAGE FLOW DIRECTION AND SLOPE
□	CATCHBASIN
■	AREA DRAIN
○	VALVE AND BOX
○	VALVED HYDRANT
FFE	FINISHED GROUND FLOOR ELEVATION
SL	STREET LIGHTING
←	OVERLAND FLOW ROUTE
DC	DEPRESSED CURB
▽	HYDRO TRANSFORMER
○	SIAMSE CONNECTION
○	PARKING AREA LIGHT POLES
○	LIGHT BOLLARDS
▬	PROPOSED PRE-CAST CONCRETE RETAINING WALL
▬	PROPOSED CAST-IN-PLACE CONCRETE RETAINING WALL
○	PROPOSED BOARD FENCE

NO.	REVISION	BY	DATE
2	AS PER CITY COMMENTS	DC	NOV.08/19
1	AS PER CITY COMMENTS	DC	SEPT.12/19

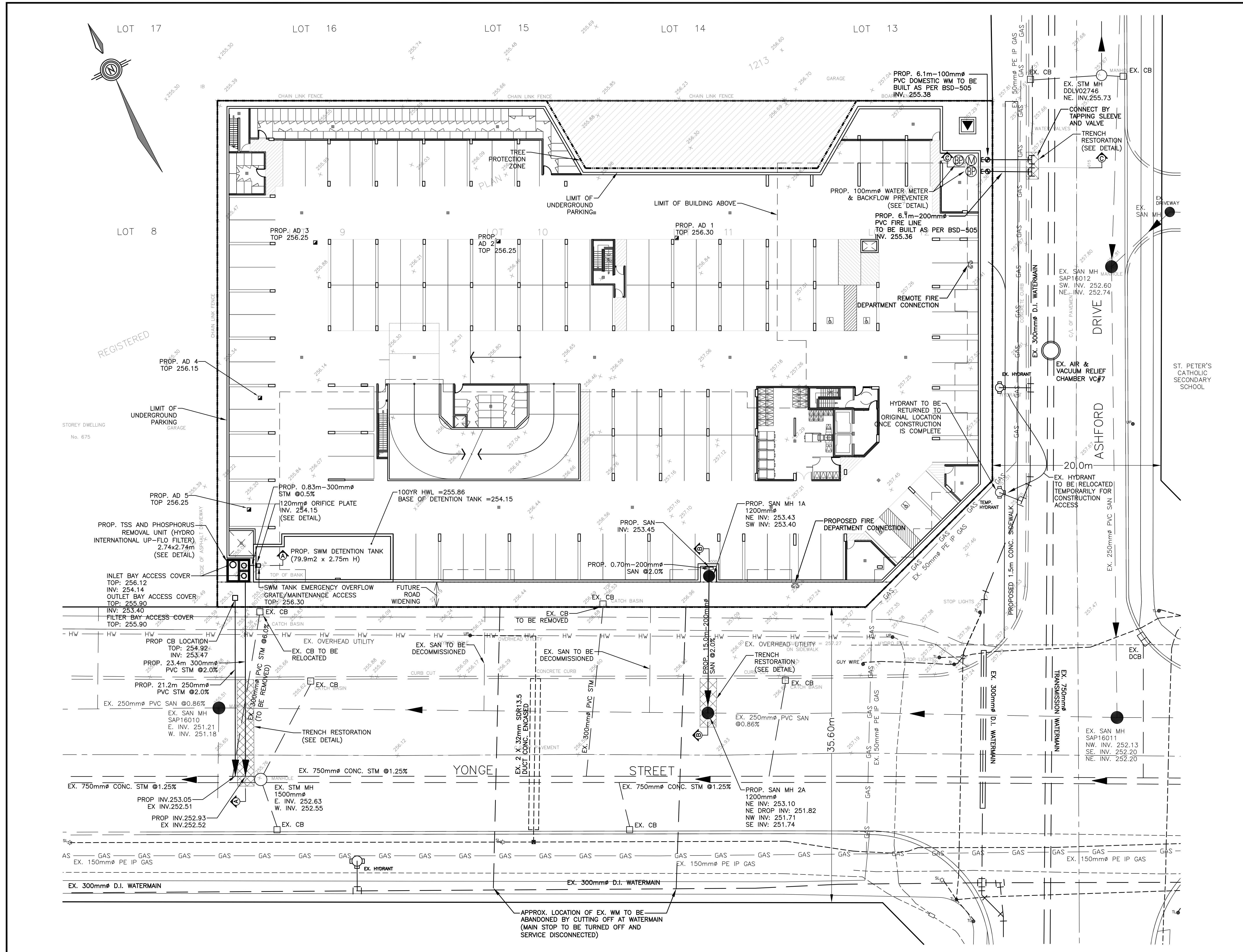
VALDOR ENGINEERING INC.
Consulting Engineers - Project Managers
741 BOWNTREE DRIVE ROAD, UNIT 12, WOODBINE, ONTARIO, L4L 5P9
TEL: (905) 644-0054 FAX: (905) 644-0069
E-MAIL: info@valdor-engineering.com
www.valdor-engineering.com

SOUTH DISTRICT CONDOMINIUM

681 & 685 YONGE STREET
CITY OF BARRIE
CITY FILE NO. D11-013-19

SITE GRADING PLAN

DRAWN BY: P.Y.	CHECKED BY: D.G.
DATE: JUNE 10, 2019	DESIGNED BY:
SCALE: 1:200	
PROJECT NO. 19112	DRAWING NO. SG-1



METRIC
ALL DIMENSIONS AND ELEVATIONS ARE
IN METRES UNLESS OTHERWISE SHOWN

SUBJECT SITE
KEY PLAN

CONTRACTOR'S NOTES:

- DRAWINGS ARE NOT TO BE SCALED.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY UPON FINDING.
- THE EXACT LOCATION OF UTILITIES SHALL BE DETERMINED BY CONSULTING THE UTILITY COMPANIES CONCERNED. THE CONTRACTOR SHALL PROVE.

NOTES:

- EVERY REASONABLE EFFORT HAS BEEN MADE TO ENSURE THAT THE INFORMATION APPEARING ON THIS PLAN IS ACCURATE AND CURRENT. WE BELIEVE THE INFORMATION TO BE RELIABLE. HOWEVER, THE CITY OF BARRIE ASSUMES NO RESPONSIBILITY OR LIABILITY DUE TO ERRORS OR OMISSIONS.
- EXISTING ELEVATIONS AND TOPOGRAPHIC INFORMATION TAKEN FROM SURVEY PREPARED BY BOWERS & JONES SURVEYING LIMITED REFERENCE NO. 911-ELEV, DATED OCTOBER 17th, 2014.
- ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO GEODETIC DATUM AND ARE DERIVED FROM TOP OF HYDRANT WEST SIDE OF MADELINE DRIVE HAVING AN ELEVATION OF 257.98 METRES.
- BEARINGS SHOWN ON THIS PLAN ARE ASTRONOMIC AND ARE REFERRED TO THE WESTERLY LIMIT OF ASHFORD DRIVE AS SHOWN ON REGISTERED PLAN 1213 AS N26°37'00E

LEGEND

- STORM MANHOLE
- SANITARY MANHOLE
- CATCHBASIN
- AREA DRAIN
- ⊗ VALVE AND BOX
- ⊕ WATER METER LOCATION
- ⊖ BACKFLOW PREVENTER
- ⊙ VALVED HYDRANT
- ➔ OVERLAND FLOW ROUTE
- ⊡ HYDRO TRANSFORMER
- ⊞ SIAMESE CONNECTION

NO.	REVISION	BY	DATE
2	AS PER CITY COMMENTS	DG	NOV.08/19
1	AS PER CITY COMMENTS	DG	SEPT.12/19

REVISIONS

VALDOR ENGINEERING INC.
Consulting Engineers - Project Managers
7411 ROYAL FREE DRIVE ROAD, UNIT 2, WOODBINE, ONTARIO, L4L 9P9
TEL: 905.884.0084 FAX: 905.884.0089
E-MAIL: INFO@valdor-engineering.com
www.valdor-engineering.com

SOUTH DISTRICT CONDOMINIUM
681 & 685 YONGE STREET
CITY OF BARRIE
CITY FILE NO. D11-013-19

SITE SERVICING PLAN

DRAWN BY: P.Y.	CHECKED BY: D.G.
DATE: JUNE 10, 2019	DESIGNED BY:
SCALE: 1:200	
PROJECT NO. 19112	DRAWING NO. SS-1

CONSTRUCTION NOTES:

GENERAL:

- ALL WORKS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH CURRENT MUNICIPAL, AND ONTARIO PROVINCIAL STANDARD DRAWINGS AND SPECIFICATIONS.
- ALL CONSTRUCTION SIGNING MUST CONFORM TO THE M.T.O. MANUAL OF "UNIFORM TRAFFIC CONTROL DEVICES".
- ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE "OCCUPATIONAL HEALTH AND SAFETY ACT". THE GENERAL CONTRACTOR SHALL BE DEEMED TO BE THE CONTRACTOR AS DEFINED IN ACT.
- THE CONTRACTOR SHALL OBTAIN ALL RELEVANT PERMITS, EXCAVATION PERMIT.
- CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS WITH THE MUNICIPALITY FOR WORK WITHIN PUBLIC RIGHTS-OF-WAY.
- FOR BUILDING LOCATION SITE LAYOUT AND BOUNDARY INFORMATION REFER TO ARCHITECTURAL SITE PLAN.
- EXACT LOCATION AND ELEVATION OF EXISTING SERVICES AND UTILITIES TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ANY EXCAVATION. THE LOCATION OF ALL UNDER/ABOVE GROUND UTILITIES AND STRUCTURES IS APPROXIMATE ONLY, AND WHERE SHOWN ON THE DRAWING(S), THE ACCURACY OF THE LOCATION OF SUCH UTILITIES IS NOT GUARANTEED. THE CONTRACTOR SHALL DETERMINE THE LOCATION OF ALL SUCH UTILITIES AND STRUCTURES BY CONSULTING THE APPROPRIATE AUTHORITIES OR UTILITY COMPANIES CONCERNED. THE CONTRACTOR SHALL PROVE THE LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND SHALL ASSUME ALL LIABILITY FOR DAMAGE OR RESTORATION TO SAME.
- CONTRACTOR TO CONFIRM INVERT ELEVATION OF EXISTING SERVICES PRIOR TO STARTING CONSTRUCTION. ANY DISCREPANCIES TO BE REPORTED TO ENGINEER.

GRADING:

- ALL GRASSED AND PAVED SURFACES SHALL BE GRADED IN ACCORDANCE WITH THE MUNICIPALITY'S DESIGN CRITERIA. THE MINIMUM AND MAXIMUM GRADIENTS FOR GRASSED AREAS SHALL BE 2% AND 5%, RESPECTIVELY, UNLESS OTHERWISE NOTED. THE SLOPING OF GRASSED AREAS SHALL NOT EXCEED 3:1 (HORIZ.:VERT.) WITH A MAXIMUM VERTICAL ELEVATION NOT IN EXCESS OF THE APPLICABLE CITY STANDARD. THE MINIMUM AND MAXIMUM GRADIENTS FOR PAVED AREAS SHALL BE 0.5% AND 5%, RESPECTIVELY, UNLESS OTHERWISE NOTED.
- TOPSOIL IN FILL AREA TO BE STRIPPED. ALL FILL MATERIAL SHALL BE APPROVED FOR SUITABILITY BY THE GEOTECHNICAL ENGINEER PRIOR TO ANY FILLING OR REUSE OF EXCAVATED MATERIAL. APPROVED FILL MATERIAL SHALL BE COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD) TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER, UNLESS OTHERWISE NOTED.
- ALL EXTERNAL SITE AREAS DISTURBED BY THE ACTIVITIES OF THE CONTRACTOR SHALL BE RESTORED TO EXISTING CONDITION OR BETTER. GRASSED AREAS SHALL BE RESTORED BY PLACING 100mm OT TOPSOIL AND ACTIVELY GROWING No. 1 NURSERY SOD. ALL BOULEVARDS TO BE SODDED.

DRIVEWAYS & PARKING AREAS:

- CONCRETE BARRIER CURB TO BE OPSD 600.11 CURB HEIGHTS TO BE 150mm, UNLESS OTHERWISE NOTED.
- A UTILITY CLEARANCE RADIUS OF 1.5 METRES BETWEEN THE PROPOSED DRIVEWAY ENTRANCE CURB RETURN AND ALL ABOVE GROUND UTILITIES MUST BE MAINTAINED.
- HEAVY DUTY ASPHALT PAVEMENT TO BE:
 - 40mm OF HL-3 (OPSS 310), 92 TO 96% MRD COMPACTION
 - 50mm OF HL-8 (OPSS 310), 92 TO 96% MRD COMPACTION
 - 150mm OF GRANULAR 'A' BASE (OPSS 1010), 100% SPMDD COMPACTION
 - 300mm OF GRANULAR 'B' SUB-BASE (OPSS 1010), 100% SPMDD COMPACTION
- ALL SUBGRADE TO BE INSPECTED BY A QUALIFIED SOILS ENGINEER PRIOR TO PLACEMENT OF GRANULAR MATERIALS. THE SUBGRADE AND ALL GRANULAR MATERIALS SHALL BE COMPACTED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.
- AT ALL ENTRANCES TO THE SITE THE MUNICIPAL CURB AND SIDEWALK WILL BE CONTINUOUS THROUGH THE DRIVEWAY. THE DRIVEWAY GRADE WILL BE COMPATABLE WITH THE EXISTING SIDEWALK AND CURB DEPRESSION WILL BE PROVIDED FOR EACH ENTRANCE.
- ALL REQUIRED CURB AT DRIVEWAY ENTRANCE(S) AND CURB DEPRESSIONS AT SIDEWALK CROSSINGS SHALL BE INSTALLED TO THE SATISFACTION OF THE MUNICIPALITY (COMMERCIAL CURB).

STORM SEWERS :

- MAINTENANCE HOLES (MHs) TO BE PRECAST AS PER OPSD 701.01 AND BENCHED IN ACCORDANCE WITH MUNICIPAL STANDARDS.
- STORM SEWERS UP TO AND INCLUDING 450mm DIAMETER SHALL BE ULTRA-RIB PVC CSA B182.4 (OR APPROVED EQUAL) WITH BEDDING AS PER OPSD 802.01, UNLESS OTHERWISE NOTED. CONCRETE PIPE 300mm DIAMETER AND LARGER TO BE REINFORCED CSA A257.2 CLASS 100-D WITH CLASS 'B' BEDDING AS PER OPSD 802.03. ALL SEWER PIPE SHALL HAVE RUBBER GASKET JOINTS.
- SINGLE CATCHBASIN SHALL BE AS PER OPSD 705.010. CATCHBASIN LEADS TO BE 250mm DIAMETER, AT 2% UNLESS OTHERWISE NOTED.
- DOUBLE CATCHBASINS SHALL BE AS PER OPSD 705.020. LEADS TO BE 300mm DIAMETER AT 2% UNLESS OTHERWISE NOTED.
- TRENCH BACKFILL TO BE COMPACTED TO MINIMUM 98% SPMDD IN THE LAST 0.6m TO THE SUBGRADE AND BELOW TO 95% SPMDD. TRENCHES WITHIN THE PAVED AREA OF EXISTING PUBLIC ROADS SHALL BE VERTICAL TRENCHES AND BE BACKFILLED WITH NON-SHRINKABLE MATERIALS.
- DITCH INLET CATCHBASIN SHALL BE AS PER OPSD 705.030 FOR 600 X 600mm AND OPSD 705.040 FOR 600 X 1200mm.

SANITARY SEWERS

- ALL MATERIALS AND CONSTRUCTION METHOD MUST CONFORM TO THE CURRENT MUNICIPAL STANDARDS AND SPECIFICATIONS.
- SANITARY SEWERS AND CONNECTIONS TO BE PVC SDR 28 FOR 150mm DIAMETER (6") OR SMALLER, PVC SDR 35 FOR 200mm DIAMETER (8") OR LARGER UNLESS OTHERWISE NOTED.
- SANITARY SEWER MANHOLES SHALL BE 1200mm DIAMETER WITH FRAME AND COVER.
- SEWERS SHALL BE CONSTRUCTED WITH BEDDING AS PER OPSD-802.010, (GRAN. 'A' EMBEDMENT MATERIAL) FOR FLEXIBLE PIPES AND OPSD-802.031 CLASS B (GRAN. 'A' BEDDING MATERIAL) FOR RIGID PIPE UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF ENGINEERING.

EXISTING SERVICES

- ALL EXISTING SERVICES SUCH AS SEWERS & WATER LINES AS SHOWN ARE APPROXIMATE ONLY AND ARE BASED ON THE MUNICIPALITY'S AND OWNER'S RECORD DRAWINGS.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING SITE SERVICES INCLUDING INVERT & LOCATION ON SITE AND REPORT THE MEASUREMENTS TO THE ENGINEER PRIOR TO CONSTRUCTION.
- CONTRACTOR TO PROVIDE CCTV VIDEO INSPECTION OF ALL EXISTING SEWERS AND SUBMIT VIDEO & REPORT TO THE ENGINEER REGARDING THE CONDITION OF THE PIPING PRIOR TO CONSTRUCTION.

WATERMAINS

- WHEN DISINFECTING NEW WATER LINES, THE DISCHARGE OF SUPER CHLORINATED WATER MUST BE TREATED TO COMPLETELY ELIMINATE ANY SOURCES OF CHLORINE PRIOR TO DISCHARGING TO THE NATURAL ENVIRONMENT. SAMPLING VERIFICATION MUST BE COMPLETED AND RECORDED TO ENSURE NO RESIDUAL CHLORINE IS DETECTED. RECORD MUST BE RETAINED FOR ONE YEAR AND PROVIDED TO THE CITY UPON REQUEST.

GENERAL NOTES - WATERMAIN

- CONTRACTORS SHALL INFORM THE CITY OF BARRIE WATER OPERATIONS DEPARTMENT A MINIMUM OF 48 HOURS IN ADVANCE OF THEIR INTENTIONS TO PERFORM WORK ON WATER INFRASTRUCTURE.
- OPERATION OF HYDRANTS AND VALVES ON THE POTABLE WATER SYSTEM BY OTHER THAN QUALIFIED WATER OPERATIONS STAFF IS PROHIBITED BY CURRENT BY-LAW. CITY SERVICE FEES ARE PER THE CURRENT FEES BY-LAW. THE CITY'S WATER OPERATIONS STAFF WILL SWAB, PRESSURE TEST, CHLORINATE AND FLUSH ALL NEW WATERMAINS.
- MINIMUM COVER OVER WATERMAIN SHALL BE 1.7m. THE MINIMUM HORIZONTAL SEPARATION BETWEEN WATERMAIN AND SEWERS SHALL BE 2.5m WHERE WATERMAIN CONFLICTS WITH SEWER PIPES, DEFLECT WATERMAIN HORIZONTALLY OR VERTICALLY WHILE PROVIDING A MINIMUM OF 0.5m CLEARANCE BETWEEN WATERMAIN AND SEWERS. MAINTAIN MINIMUM DEPTH OF COVER AT ALL TIMES.
- WATERMAIN SHALL BE INSTALLED IN BEDDING AS PER OPSD 802.010 (GRANULAR 'A' EMBEDMENT MATERIAL) FOR FLEXIBLE PIPES AND OPSD 802.030 OR 802.031 CLASS 'B' (GRANULAR 'A' BEDDING MATERIAL, GRANULAR 'A' OR SELECT NATIVE COVER MATERIAL) FOR RIGID PIPE UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF WATER OPERATIONS. ALTERNATIVE EMBEDMENT MATERIAL - SAND MEETING GRADATION REQUIREMENTS OF OPSS MUNI 1004.05.07 COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY IS PERMISSIBLE WHERE NOTED IN STANDARD DETAILS. GEOTECHNICAL CERTIFICATION OF MATERIAL AND COMPACTION TESTING MUST BE PROVIDED EVERY 150 METRES. THE COMPACTION TESTING MUST INCLUDE THE ENTIRE EMBEDMENT ENVELOPE (HAUNCHES, BEDDING, TOP OF PIPE AND COVER).
- COPPER WATER MAINS AND SERVICES 25mm TO 50mm IN DIAMETER SHALL BE EMBEDDED IN SAND 100mm ABOVE AND BELOW TO CONFORM TO OPSS MUNI 1004.05.07.
- RESTRAINING WILL BE REQUIRED ON ALL HYDRANTS, THRUST BLOCKS, AS PER OPSD 1103.010 AND 1103.020. RESTRAINING DEVICES MAY BE REQUIRED IN ADDITION TO STANDARD CONCRETE THRUST BLOCKING WHERE SOIL CONDITIONS WARRANT AT THE CITY'S DISCRETION.
- NEW WATERMAINS TO BE PVC DR18 CL150 MINIMUM, DUCTILE IRON CL52 AS PER THE APPROVED MANUFACTURERS PRODUCTS FOR LINEAR WATER SYSTEMS LIST.
- TRACING WIRE SHALL BE #12 AWG HIGH STRENGTH COPPER CLAD (HS-CSS) AND SHALL BE INSTALLED ON THE TOTAL LENGTH OF ALL WATERMAIN AND BROUGHT UP AT EACH HYDRANT AND CONNECTED TO FLANGE BOLT. ALL SPLICES TO UTILIZE CONNECTORS AS PER THE APPROVED MANUFACTURERS PRODUCTS FOR LINEAR WATER SYSTEMS LIST.
- ALL WATER SERVICES SHALL BE MINIMUM 25mm TYPE 'K' COPPER OR 25mm CROSS-LINKED POLYETHYLENE UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF WATER OPERATIONS. WATER SERVICE SADDLES SHALL BE USED WHEN TAPPING INTO PVC WATERMAIN.
- SERVICE TAPPINGS SHALL BE PLACED AT A MINIMUM SEPARATION OF 1.0m AND A MINIMUM OF 0.6m FROM JOINTS. (ENDS OF PIPE)
- RISER PIPES ARE TO BE INSTALLED AS PER BSD-510, AND REMOVED AS DIRECTED. SWABBING SCHEDULE TO BE SUPPLIED BY A WATER OPERATIONS FIELD REPRESENTATIVE. ALL RISERS ARE TO BE RESTRAINED OR THRUST BLOCKED.
- ALL NEW CURB STOPS AND BOXES TO BE LOCATED AT PROPERTY LINE AND OUT OF DRIVEWAYS AND SIDEWALKS.



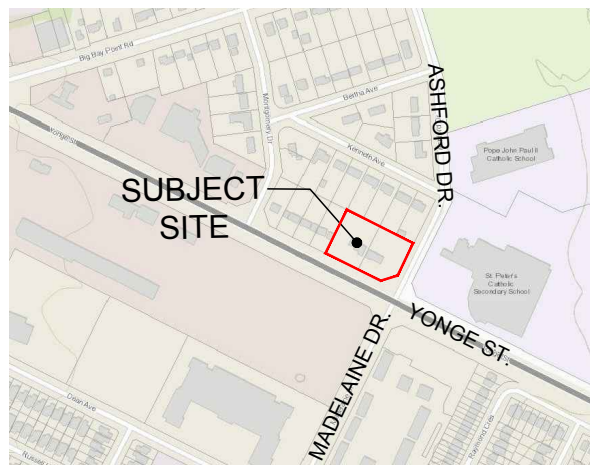
GENERAL NOTES - WATERMAIN

REV. No. 2
DATE: MAY 2015
SCALE: N.T.S.
BSD-500

APPROVED
DATE: May 29/15
Director of Engineering



METRIC
ALL DIMENSIONS AND ELEVATIONS ARE
IN METRES UNLESS OTHERWISE SHOWN



KEY PLAN

CONTRACTOR'S NOTES:

- DRAWINGS ARE NOT TO BE SCALED.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY UPON FINDING.
- THE EXACT LOCATION OF UTILITIES SHALL BE DETERMINED BY CONSULTING THE UTILITY COMPANIES CONCERNED. THE CONTRACTOR SHALL PROVE

NOTES:

- EVERY REASONABLE EFFORT HAS BEEN MADE TO ENSURE THAT THE INFORMATION APPEARING ON THIS PLAN IS ACCURATE AND CURRENT. WE BELIEVE THE INFORMATION TO BE RELIABLE, HOWEVER, THE CITY OF BARRIE ASSUMES NO RESPONSIBILITY OR LIABILITY DUE TO ERRORS OR OMISSIONS.
- EXISTING ELEVATIONS AND TOPOGRAPHIC INFORMATION TAKEN FROM SURVEY PREPARED BY BOWERS & JONES SURVEYING LIMITED REFERENCE No. 911-ELEV. DATED OCTOBER 17th, 2014.
- ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO GEODETIC DATUM AND ARE DERIVED FROM TOP HYDRANT WEST SIDE OF MADELAINE DRIVE HAVING AN ELEVATION OF 257.98 METRES.
- BEARINGS SHOWN ON THIS PLAN ARE ASTRONOMIC AND ARE REFERRED TO THE WESTERLY LIMIT OF ASHFORD DRIVE AS SHOWN ON REGISTERED PLAN 1213 AS N26°37'00E

LEGEND

2	AS PER CITY COMMENTS	DG	NOV.08/19
1	AS PER CITY COMMENTS	DG	SEPT.12/19
NO.	REVISION	BY	DATE
REVISIONS			



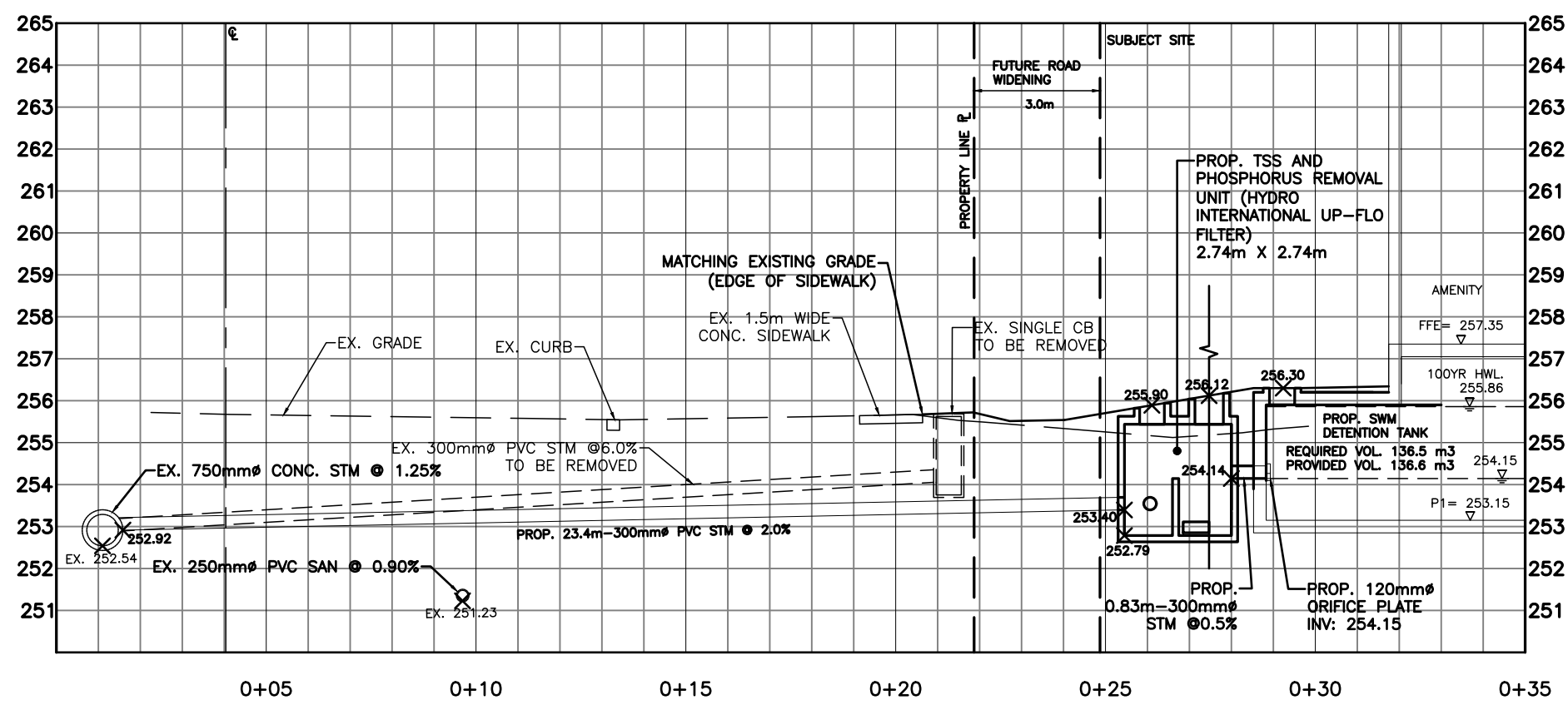
SOUTH DISTRICT CONDOMINIUM

681 & 685 YONGE STREET
CITY OF BARRIE
CITY FILE NO. D11-013-19

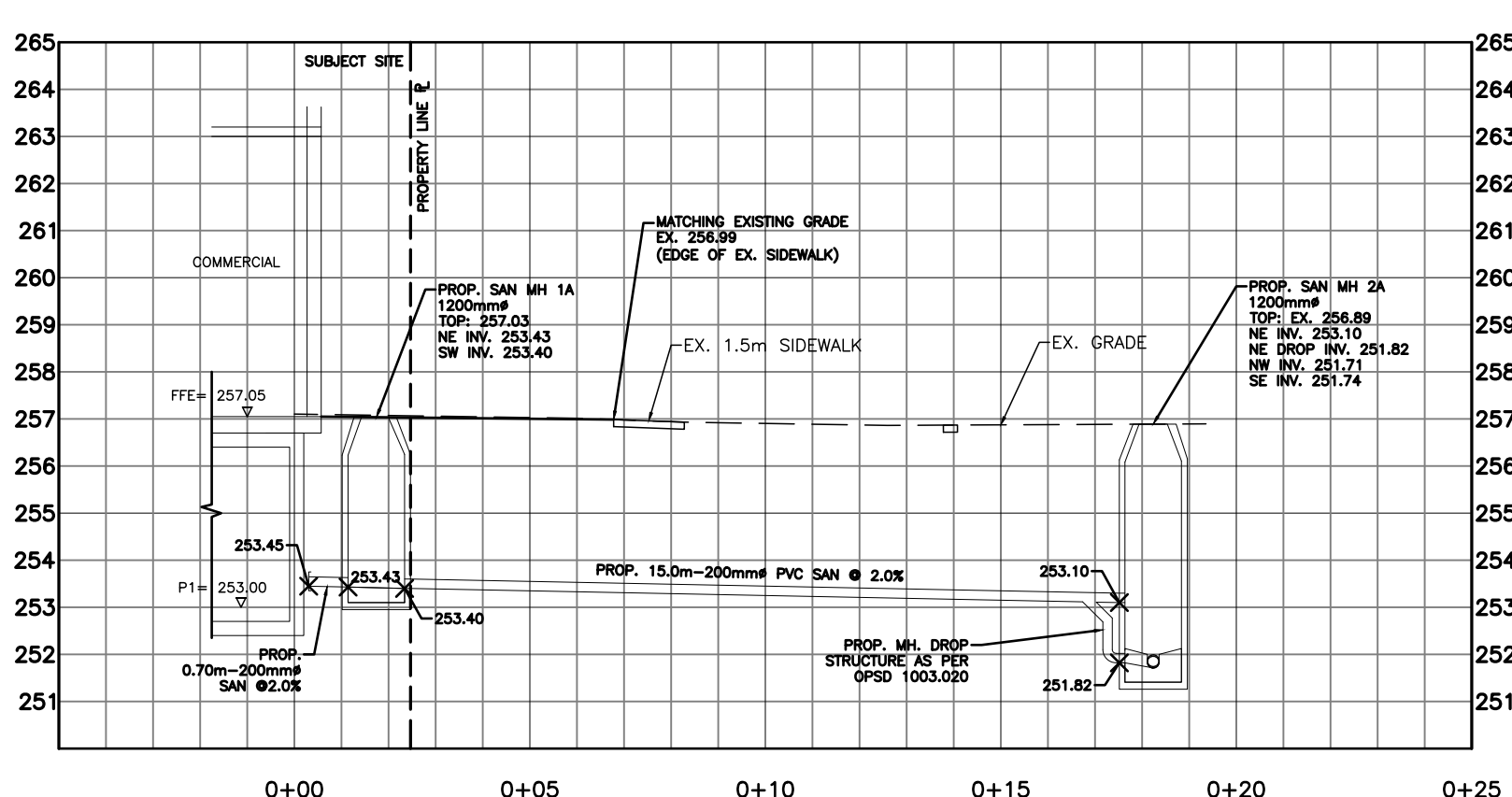
CONSTRUCTION NOTES



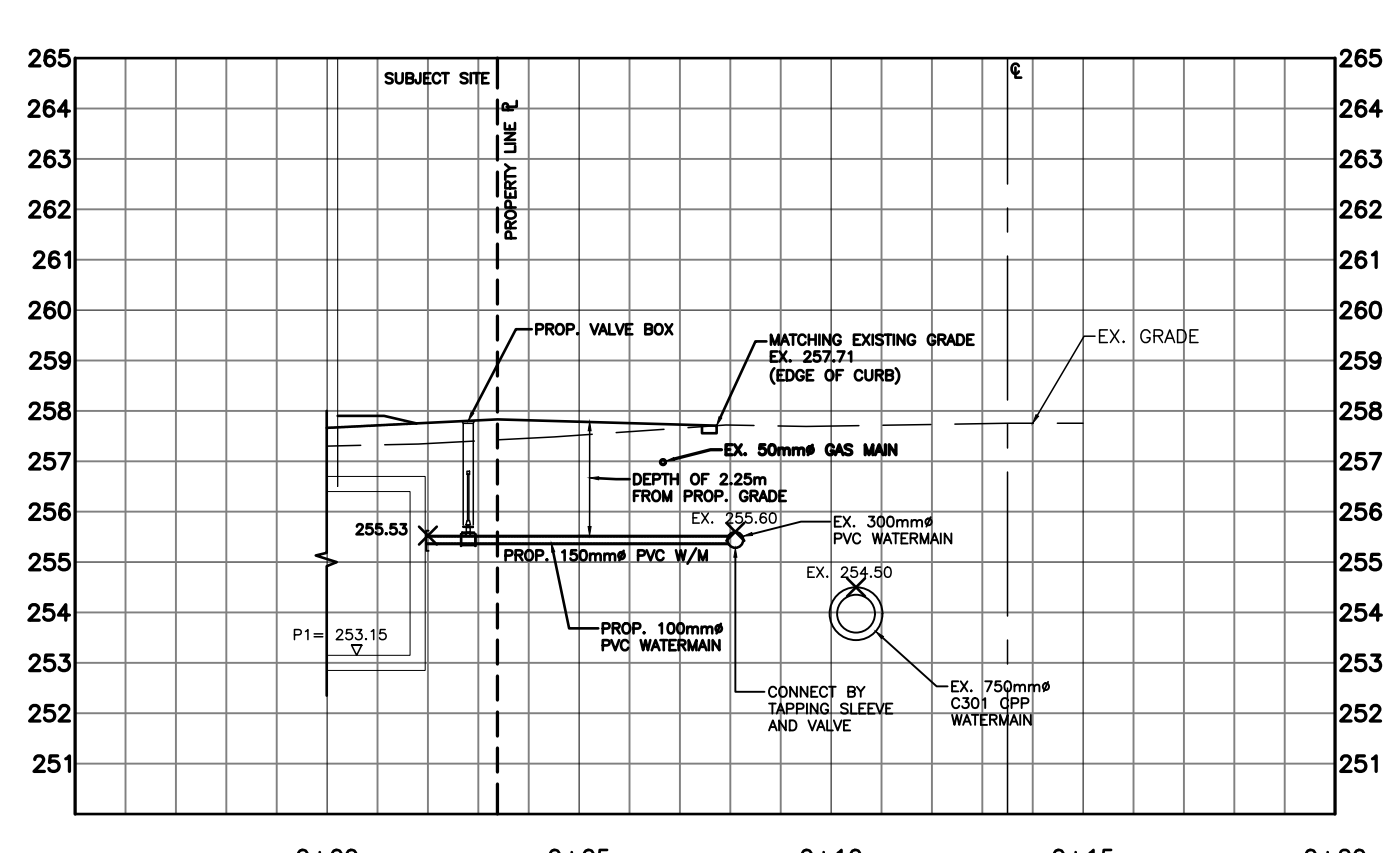
DRAWN BY: P.Y.	CHKED BY: D.G.
DATE: JUNE 10, 2019	DESIGNED BY:
SCALE: AS SHOWN	
PROJECT NO. 19112	DRAWING NO. DET-1



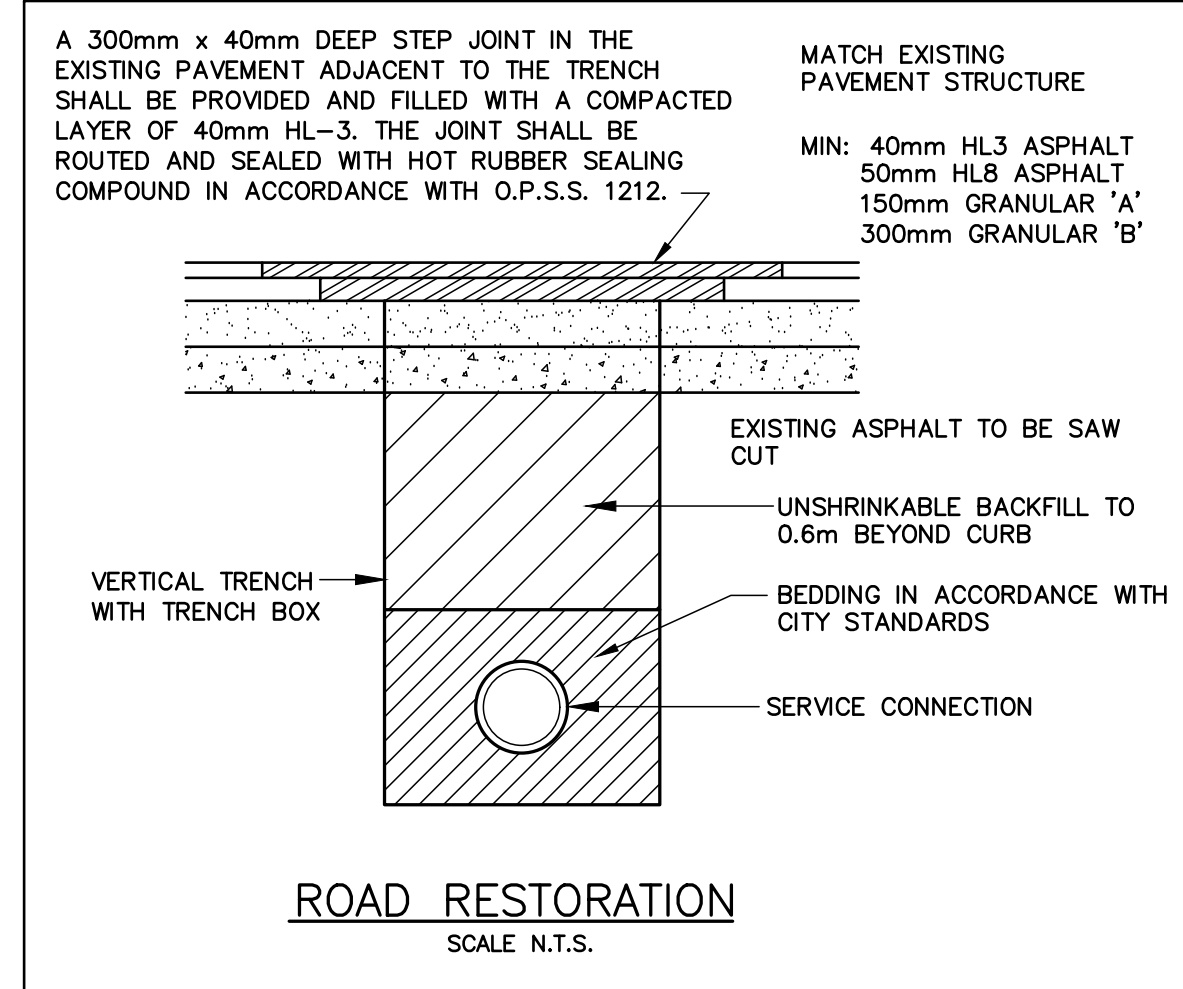
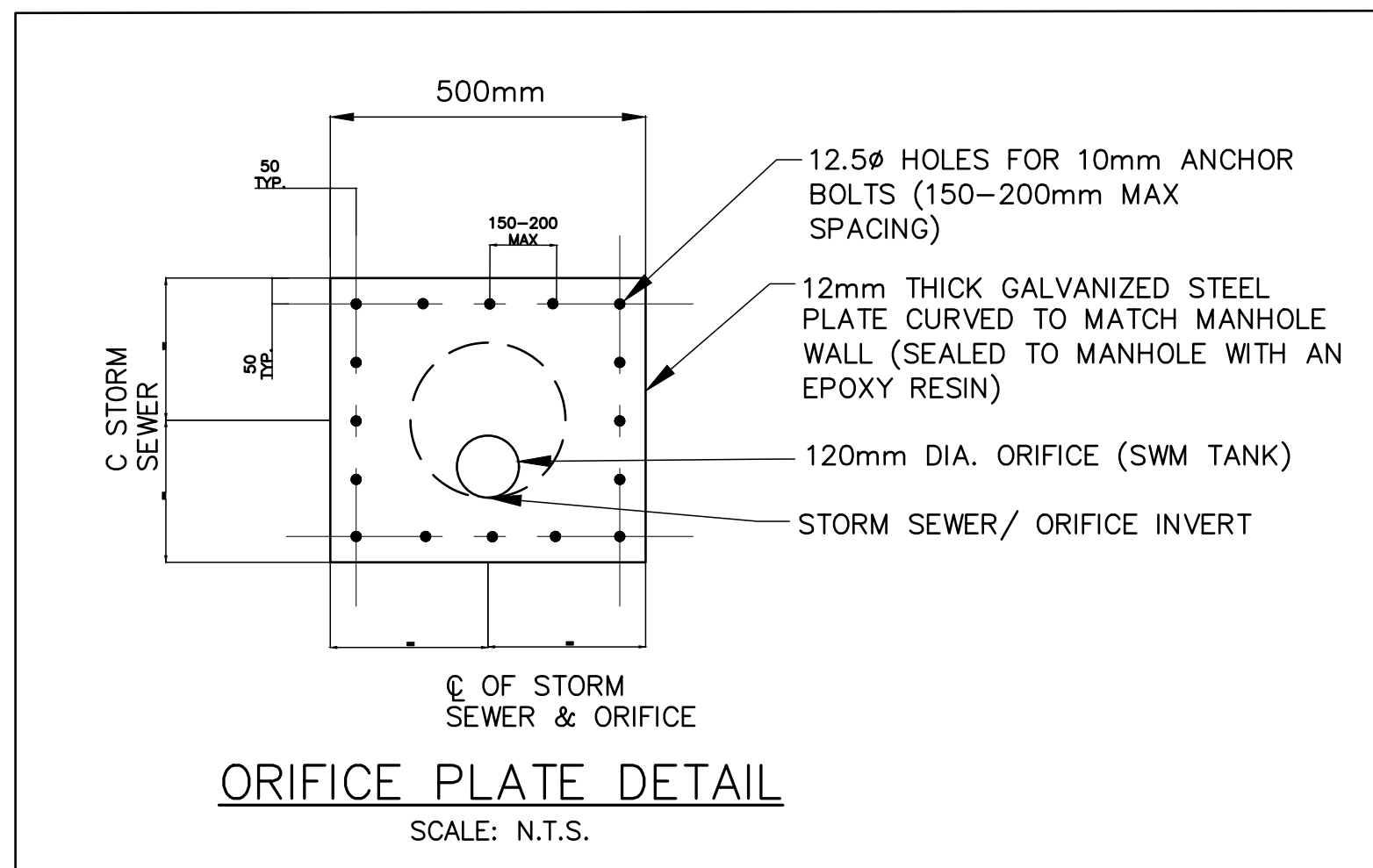
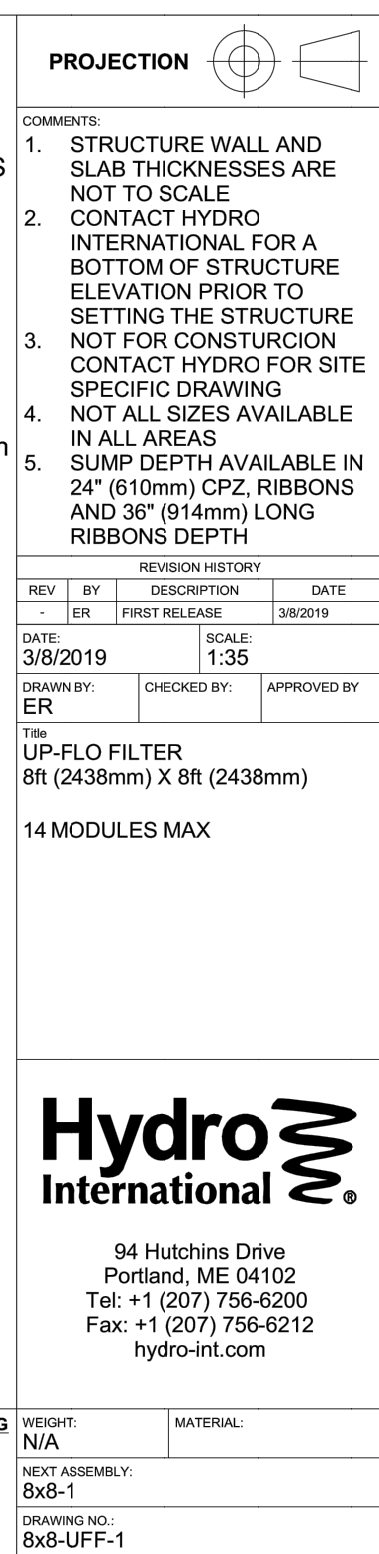
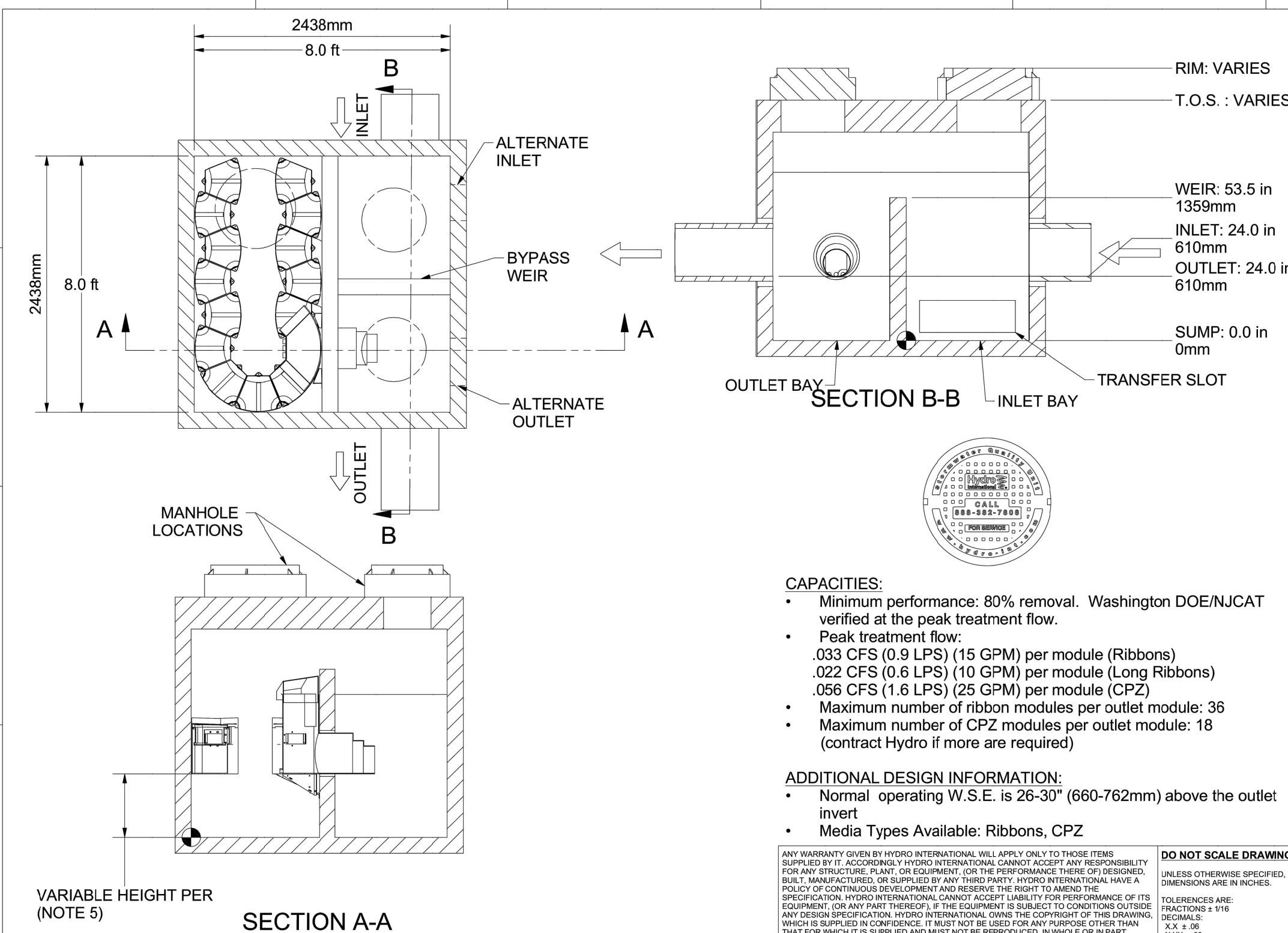
SWM TANK & PHOSPHORUS REMOVAL UNIT DETAIL
SECTION A-A
 SCALE: 1:150



PROPOSED SANITARY SEWER DETAIL
SECTION B-B
 SCALE: 1:150



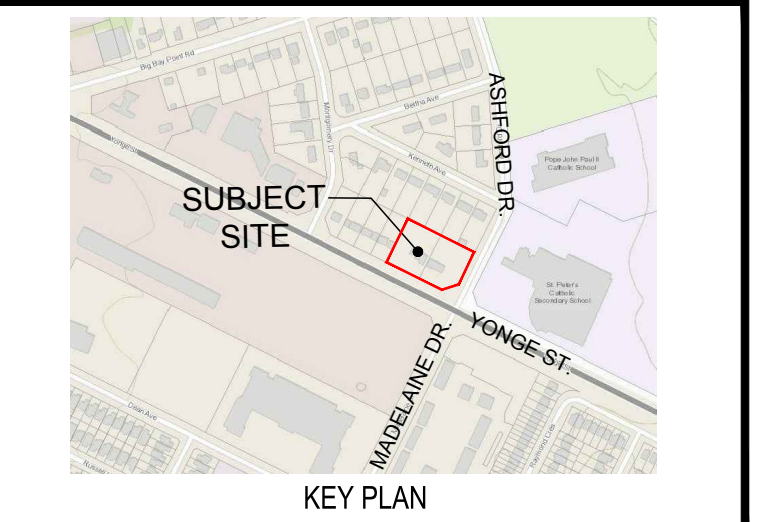
WATERMAIN CONNECTION DETAIL
SECTION C-C
 SCALE: 1:150



AREA DRAIN CAPTURE CAPACITY

AREA DRAIN MAKE: Zurn Industries

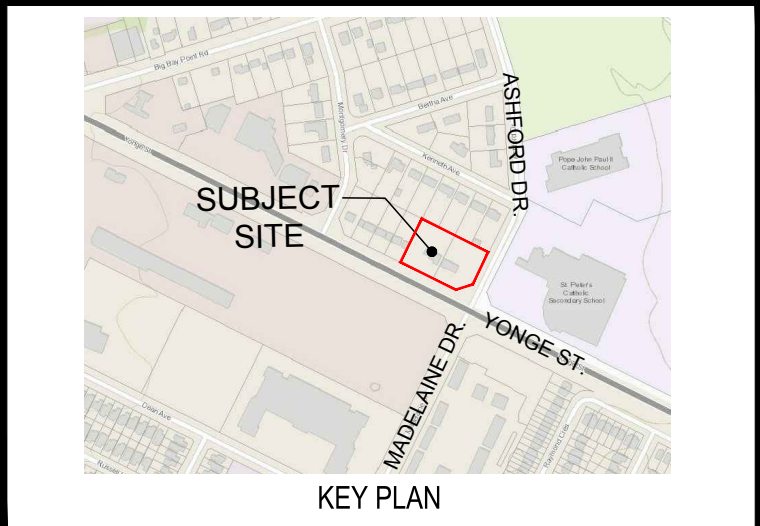
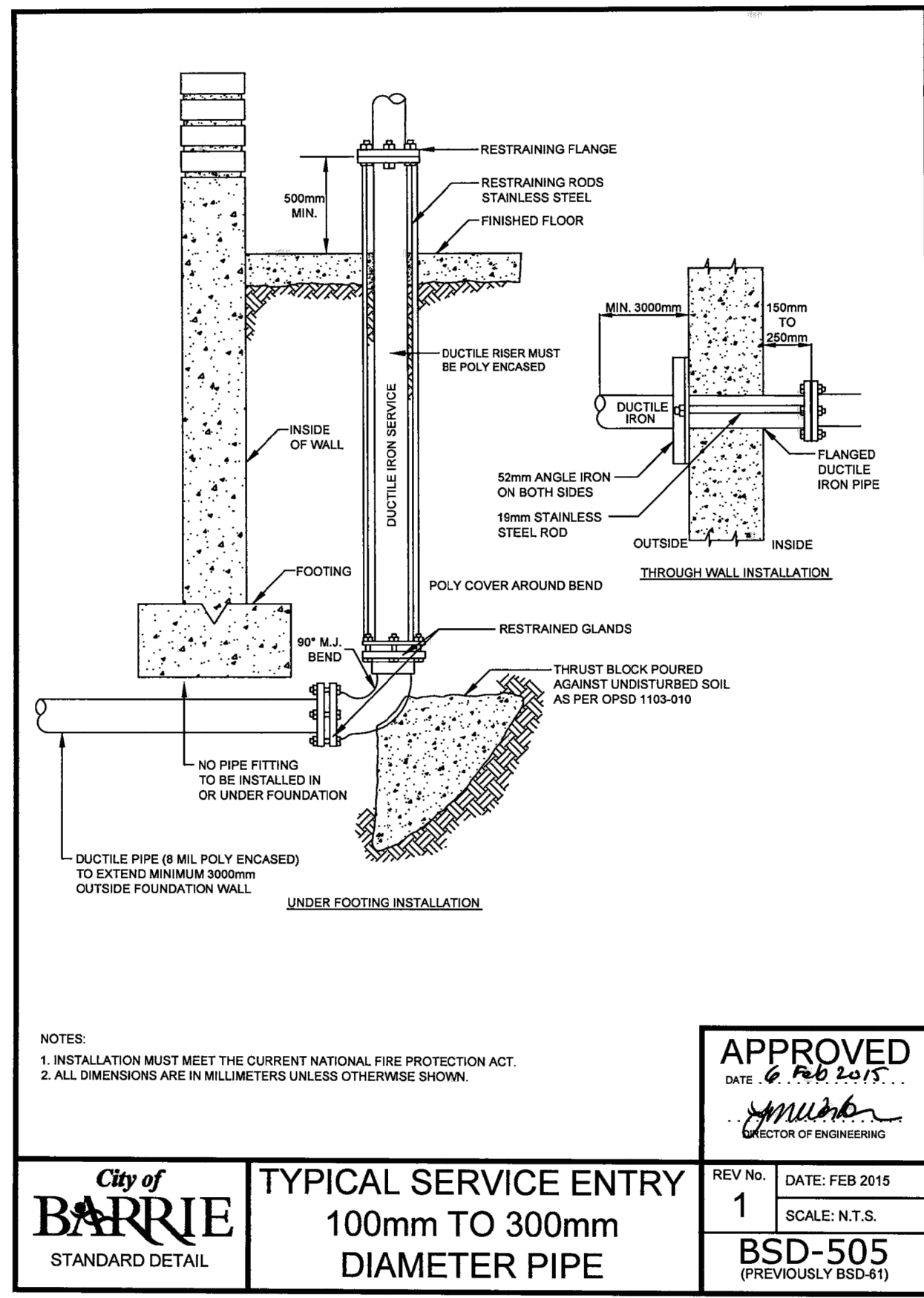
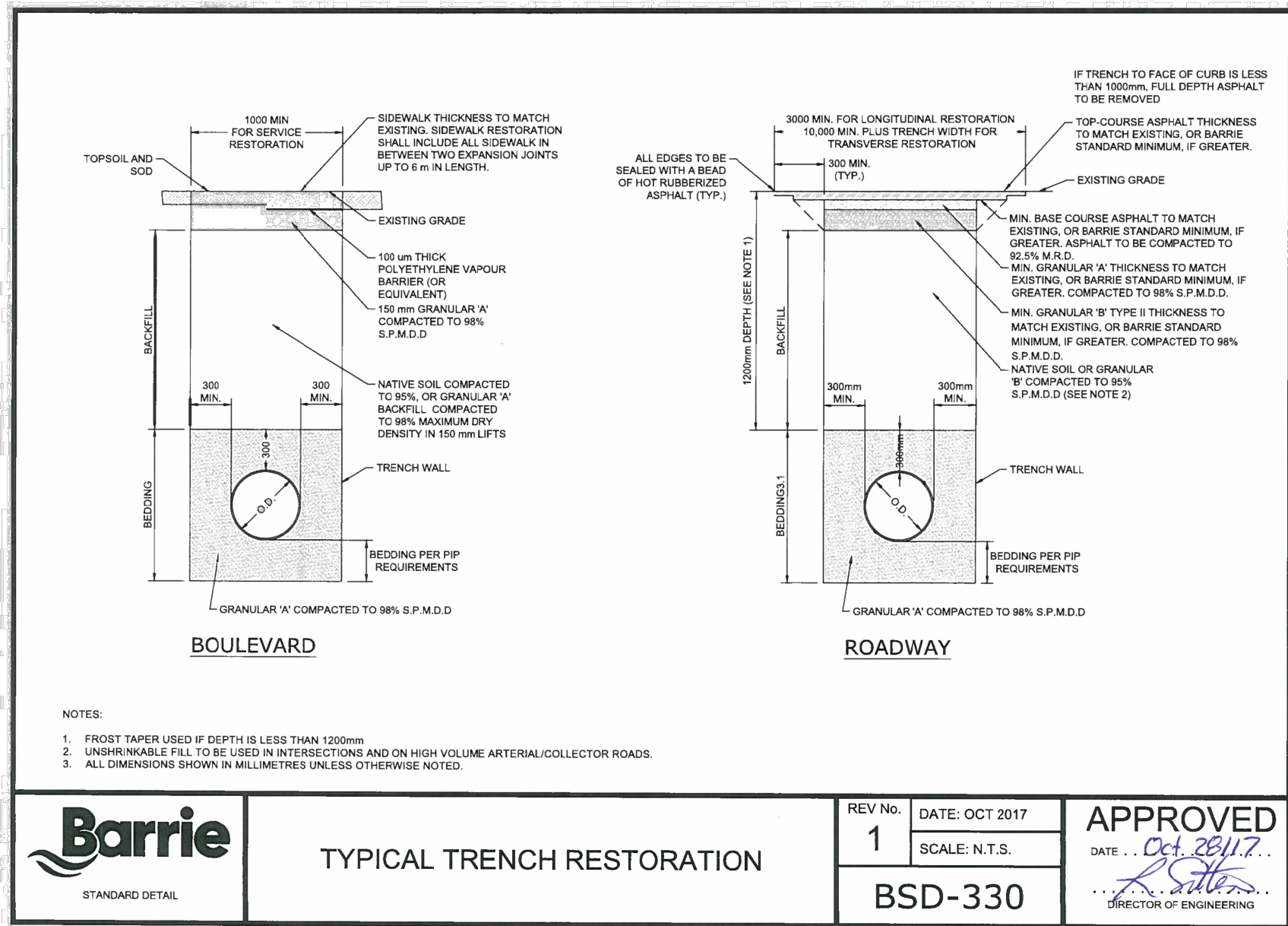
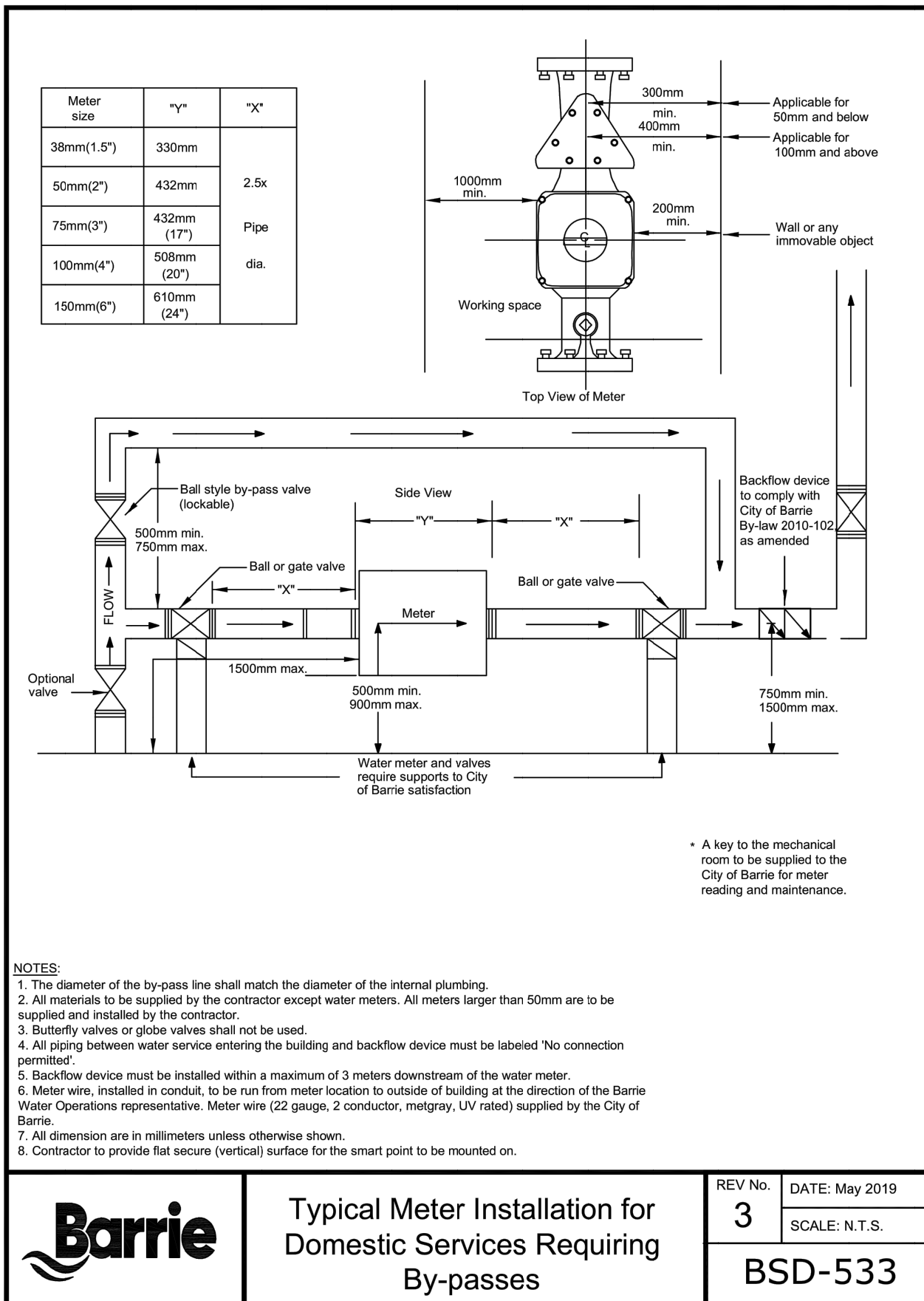
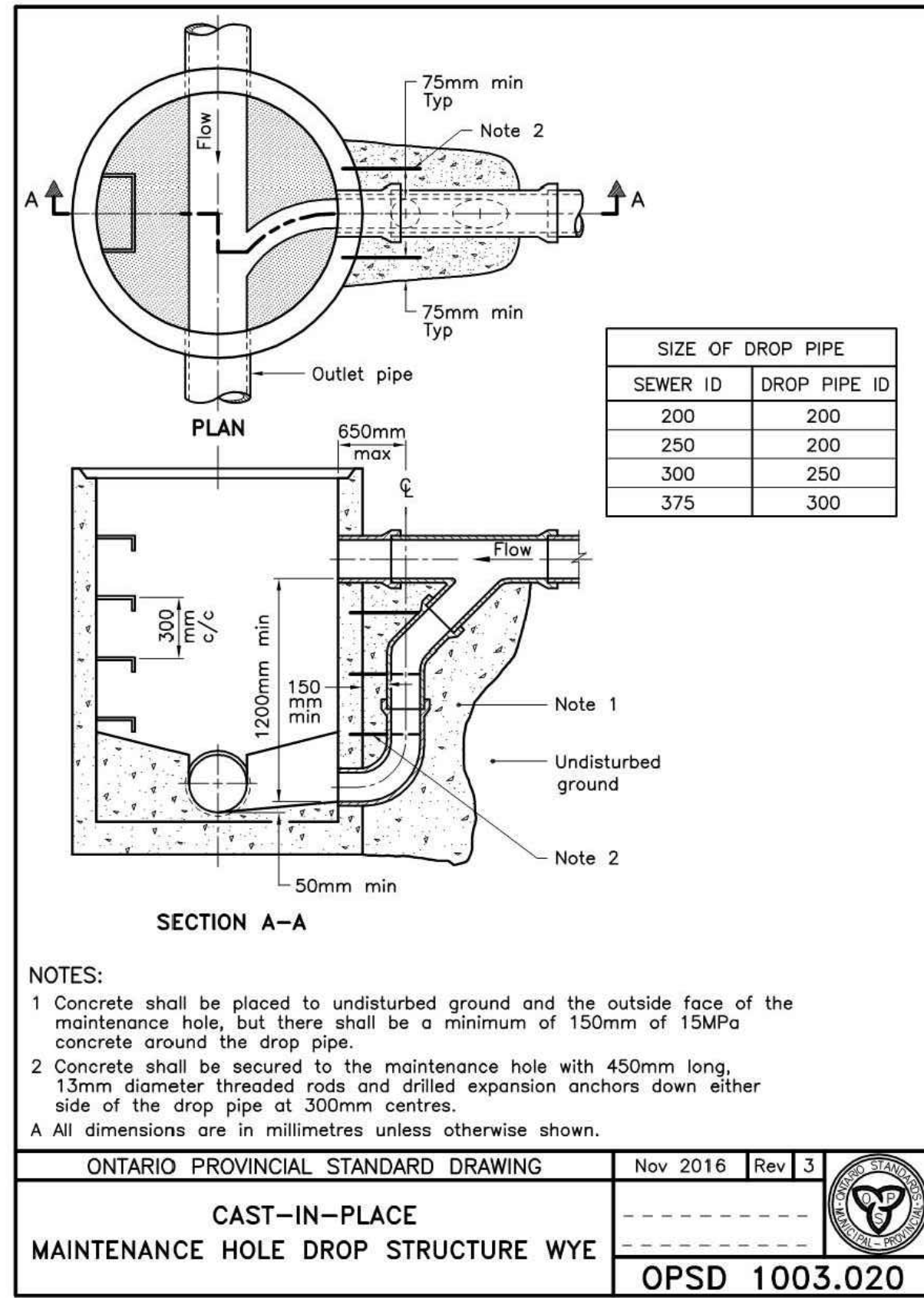
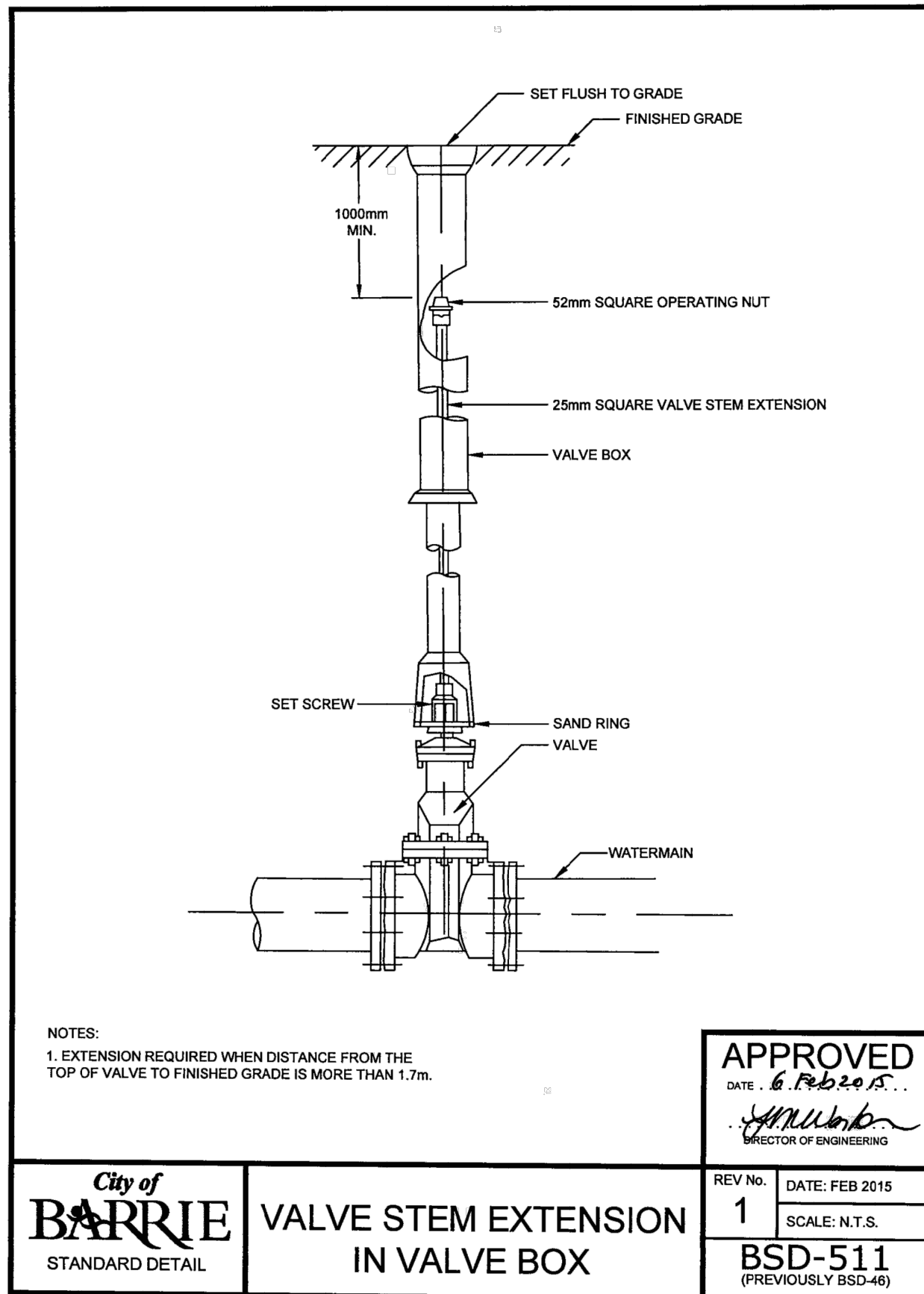
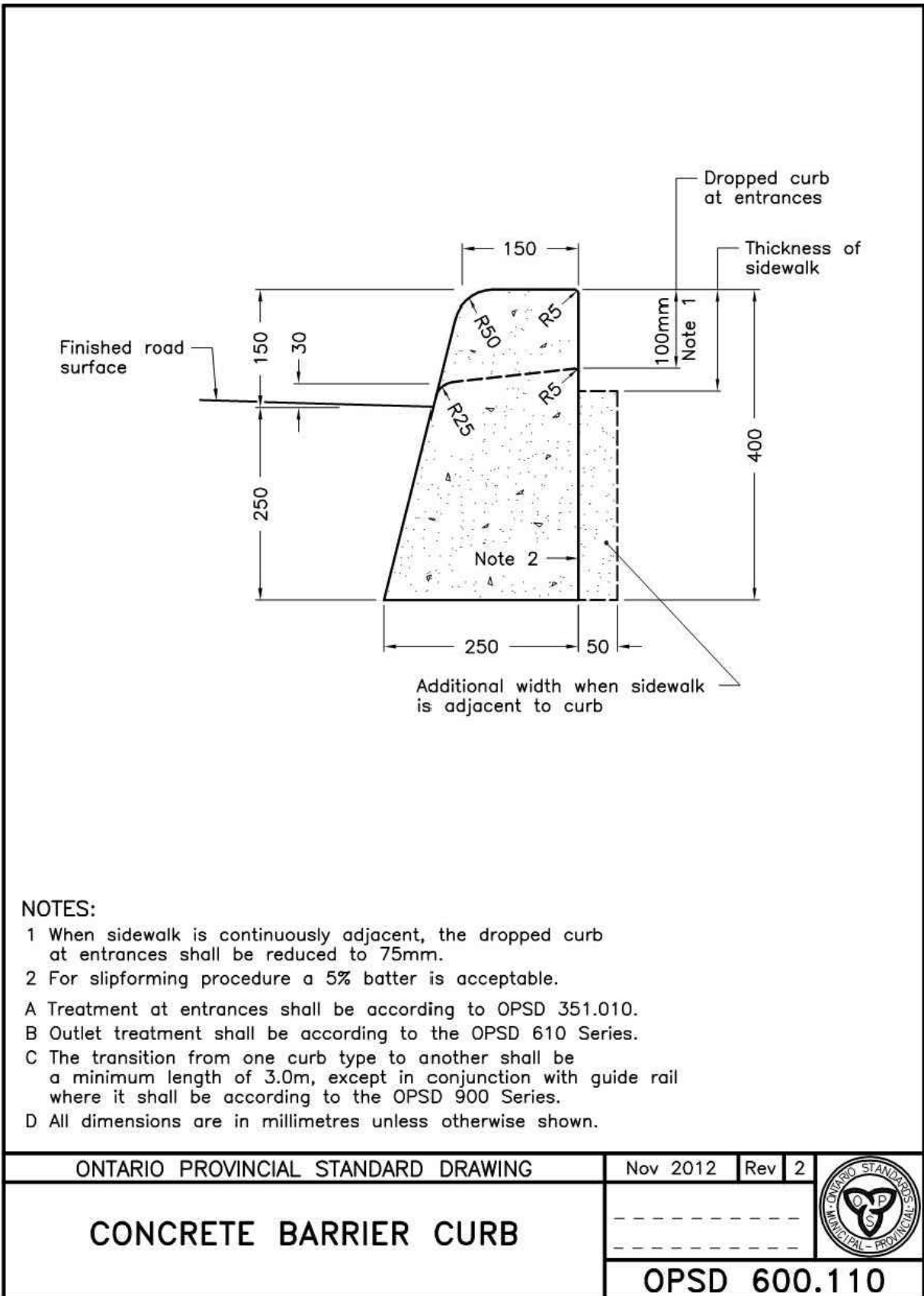
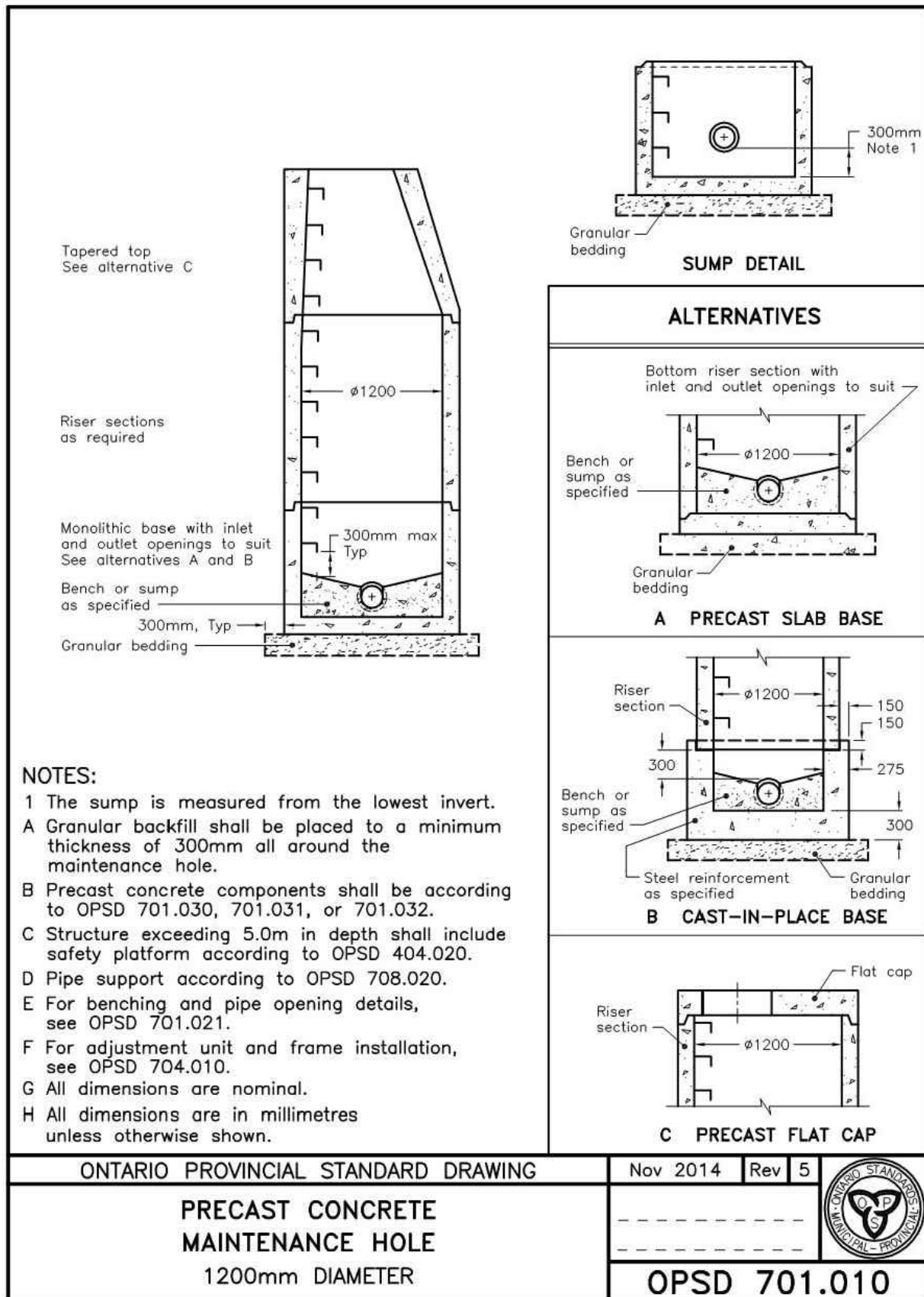
Area Drain Number	Contributing Area (Ha)	Area Drain Grate Elevation (m)	High Point (m)	Available Head (m)	100 Year Flow (L/s)	Area Drain Model	Size (mm)	Capture Capacity (L/s)
1	0.0881	256.30	256.60	0.30	28.69	Z662-HF	406 x 406	48.40
2	0.0648	256.25	256.50	0.25	21.10	Z662	406 x 406	22.72
3	0.0579	256.25	256.45	0.20	18.84	Z662	406 x 406	20.32
4	0.0081	256.15	256.40	0.25	2.64	Z610	305 x 305	18.01
5	0.0093	256.25	256.40	0.15	3.01	Z610	305 x 305	13.95



- CONTRACTOR'S NOTES:**
- DRAWINGS ARE NOT TO BE SCALED.
 - THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY UPON FINDING.
 - THE EXACT LOCATION OF UTILITIES SHALL BE DETERMINED BY CONSULTING THE UTILITY COMPANIES CONCERNED. THE CONTRACTOR SHALL PROVE.
- NOTES:**
- EVERY REASONABLE EFFORT HAS BEEN MADE TO ENSURE THAT THE INFORMATION APPEARING ON THIS PLAN IS ACCURATE AND CURRENT. WE BELIEVE THE INFORMATION TO BE RELIABLE, HOWEVER, THE CITY OF BARRIE ASSUMES NO RESPONSIBILITY OR LIABILITY DUE TO ERRORS OR OMISSIONS.
 - EXISTING ELEVATIONS AND TOPOGRAPHIC INFORMATION TAKEN FROM SURVEY PREPARED BY BOWERS & JONES SURVEYING LIMITED REFERENCE No. 911-ELEV. DATED OCTOBER 17th, 2014.
 - ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO GEODETIC DATUM AND ARE DERIVED FROM TOP OF HYDRANT WEST SIDE OF MADELAINE DRIVE HAVING AN ELEVATION OF 257.98 METRES.
 - BEARINGS SHOWN ON THIS PLAN ARE ASTROMONIC AND ARE REFERRED TO THE WESTERLY LIMIT OF ASHFORD DRIVE AS SHOWN ON REGISTERED PLAN 1213 AS N26°37'00E.

LEGEND

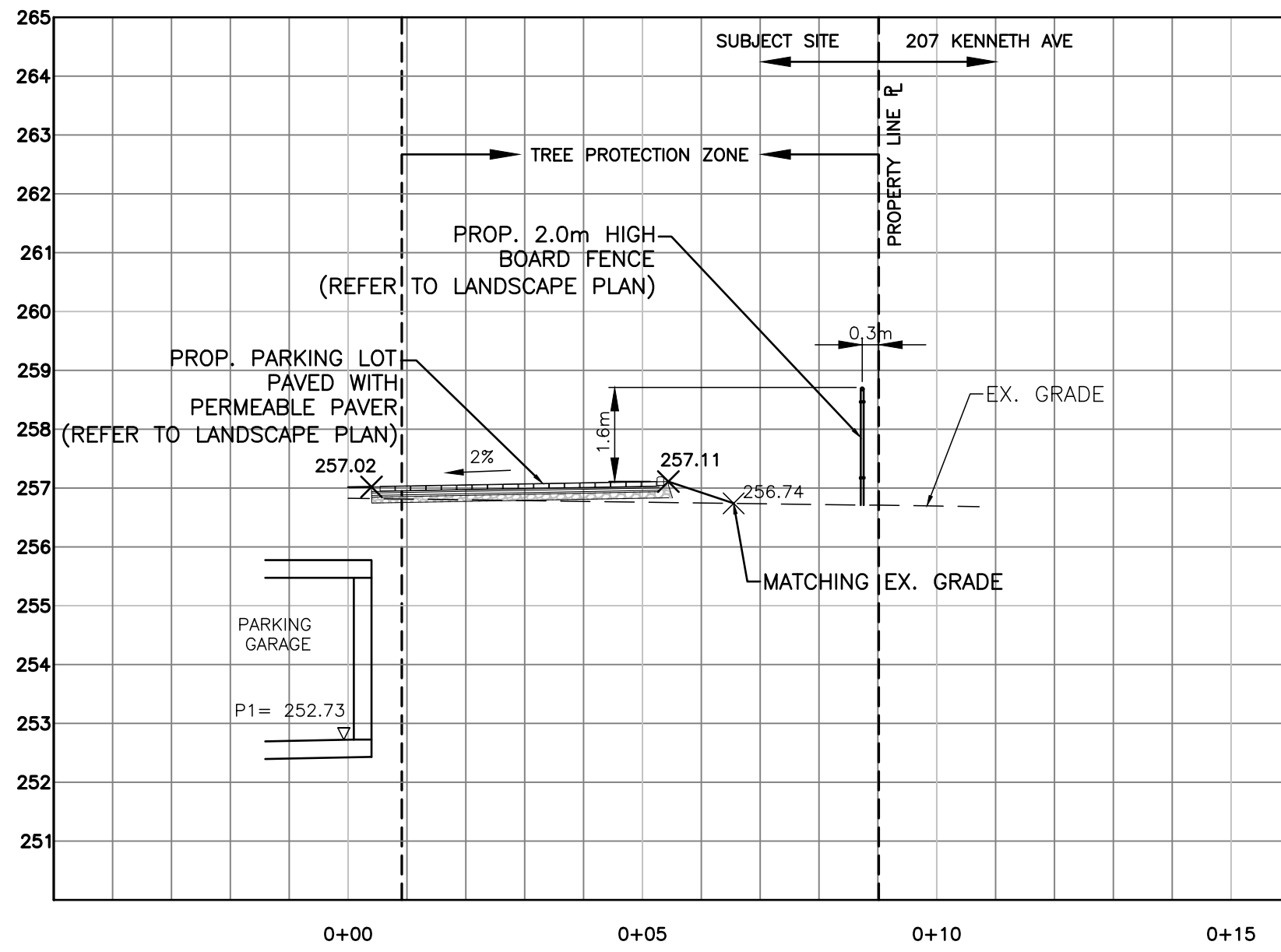
2	AS PER CITY COMMENTS	DC	NOV.08/19
1	AS PER CITY COMMENTS	DC	SEPT.12/19
NO.	REVISION	BY	DATE
REVISIONS			



- CONTRACTOR'S NOTES:**
- DRAWINGS ARE NOT TO BE SCALED.
 - THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY UPON FINDING.
 - THE EXACT LOCATION OF UTILITIES SHALL BE DETERMINED BY CONSULTING THE UTILITY COMPANIES CONCERNED. THE CONTRACTOR SHALL PROVIDE.
- NOTES:**
- EVERY REASONABLE EFFORT HAS BEEN MADE TO ENSURE THAT THE INFORMATION APPEARING ON THIS PLAN IS ACCURATE AND CURRENT. WE BELIEVE THE INFORMATION TO BE RELIABLE. HOWEVER, THE CITY OF BARRIE ASSUMES NO RESPONSIBILITY OR LIABILITY DUE TO ERRORS OR OMISSIONS.
 - EXISTING ELEVATIONS AND TOPOGRAPHIC INFORMATION TAKEN FROM SURVEY PREPARED BY BOWERS & JONES SURVEYING LIMITED REFERENCE No. 911-ELEV. DATED OCTOBER 17TH, 2014.
 - ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO GEODETIC DATUM AND ARE DERIVED FROM TOP OF HYDRANT WEST SIDE OF MADELAINE DRIVE HAVING AN ELEVATION OF 257.98 METRES.
 - BEARINGS SHOWN ON THIS PLAN ARE ASTROMONIC AND ARE REFERRED TO THE WESTERLY LIMIT OF ASPHOFD DRIVE AS SHOWN ON REGISTERED PLAN 1213 AS N26°37'00E

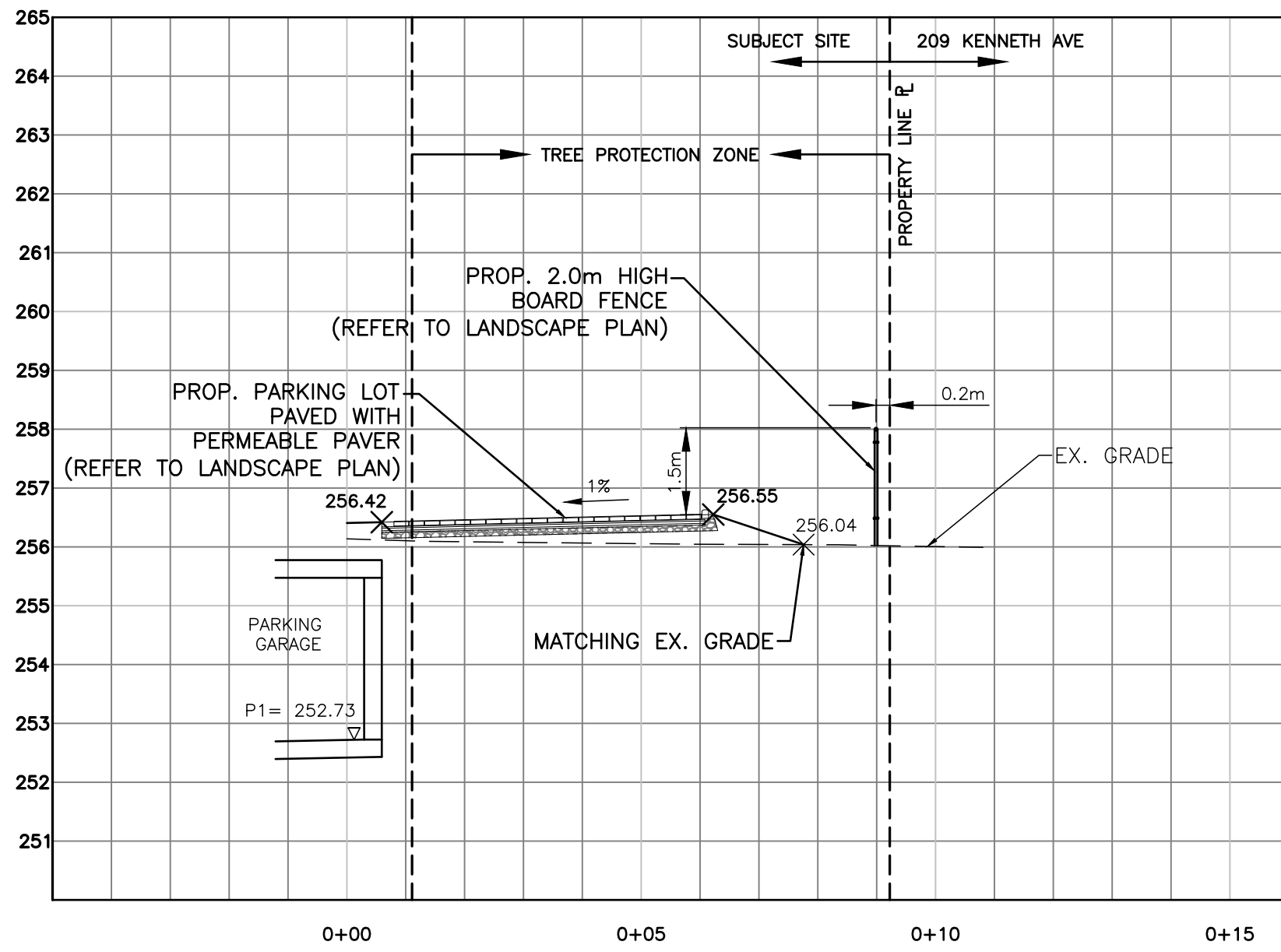
LEGEND

NO.	REVISION	BY	DATE
2	AS PER CITY COMMENTS	DG	NOV.08/19
1	AS PER CITY COMMENTS	DG	SEPT.12/19



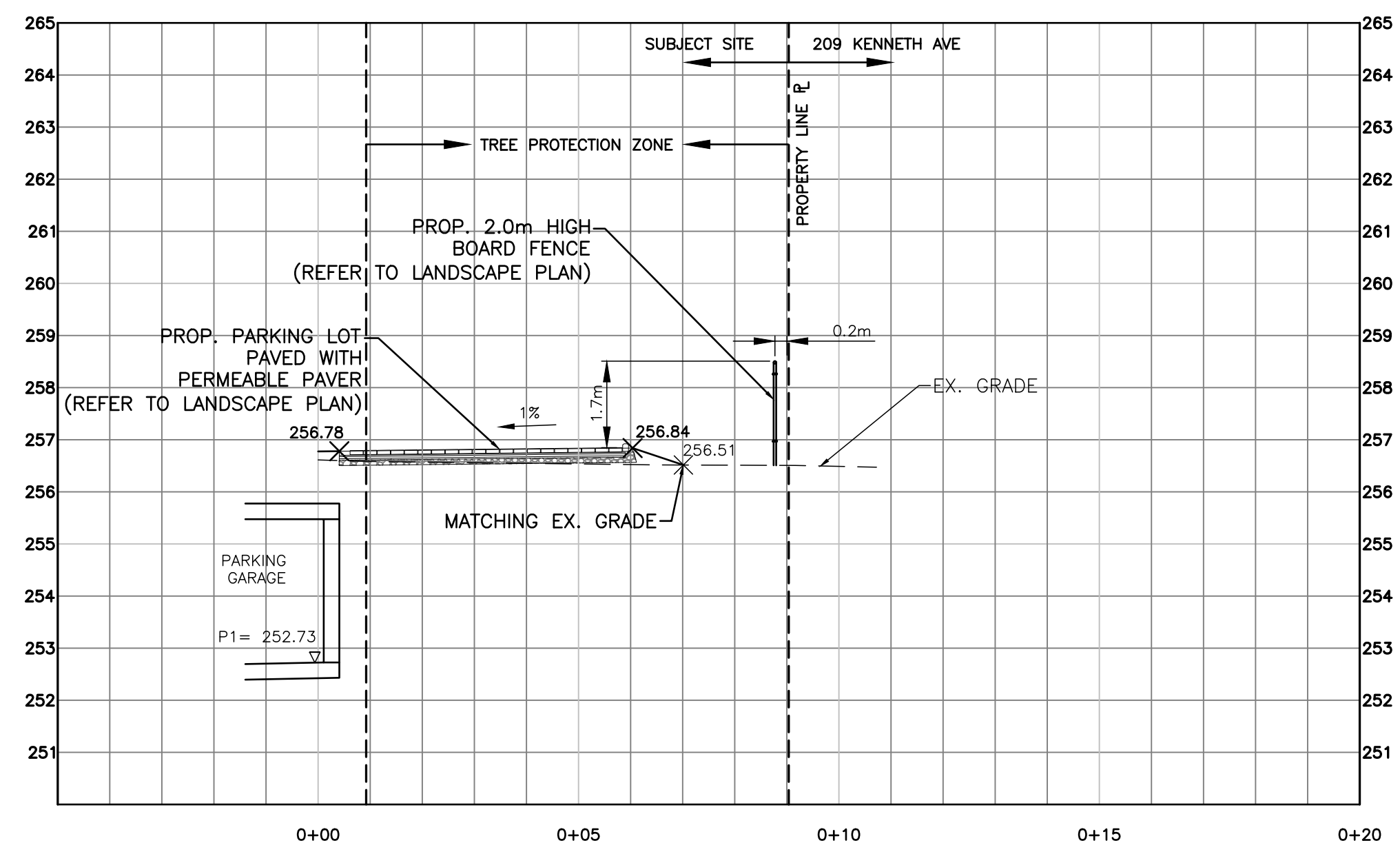
SECTION D-D DETAIL

SCALE: 1:100



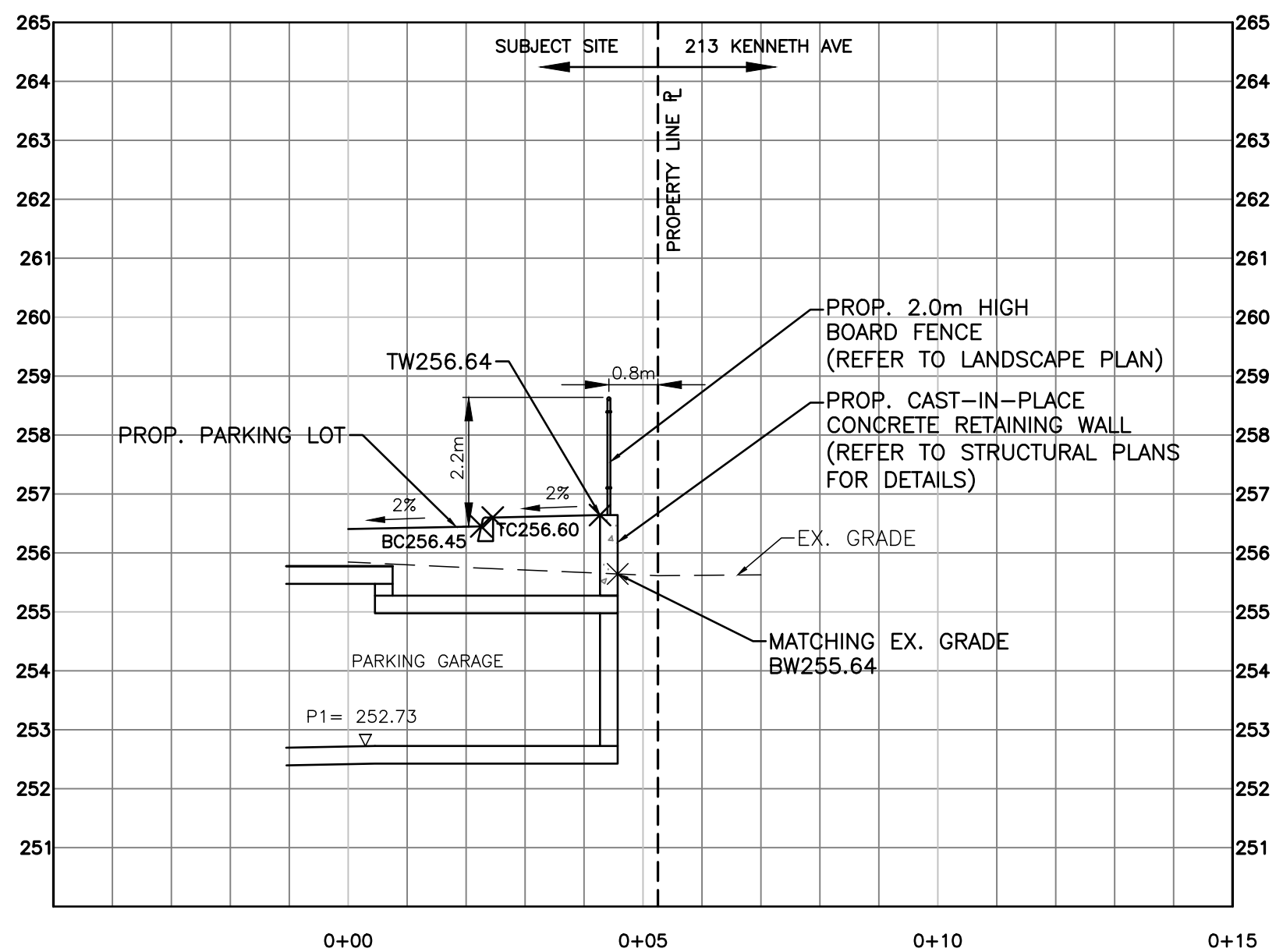
SECTION E-E DETAIL

SCALE: 1:100



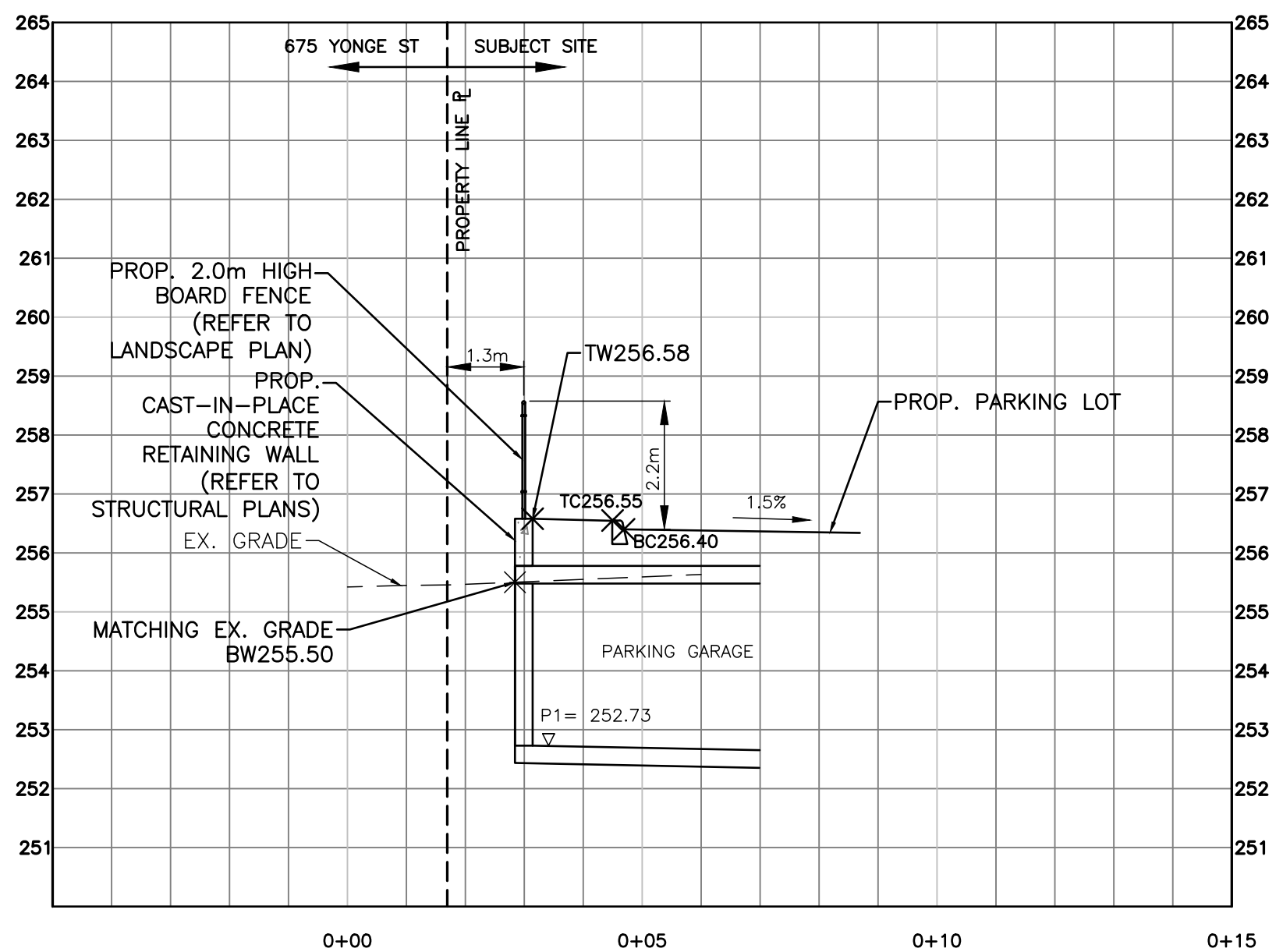
SECTION I-I DETAIL

SCALE: 1:100



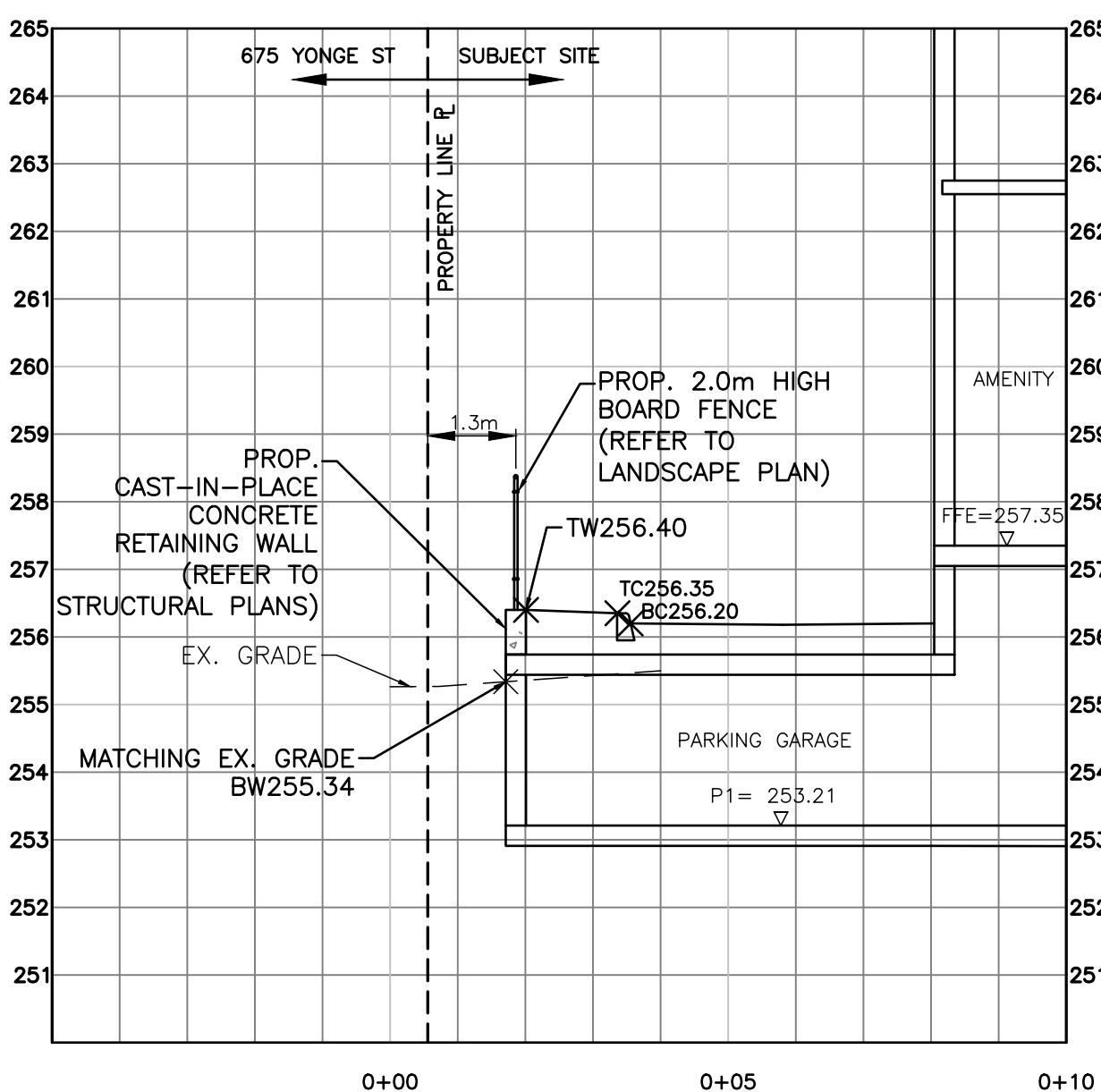
SECTION F-F DETAIL

SCALE: 1:100



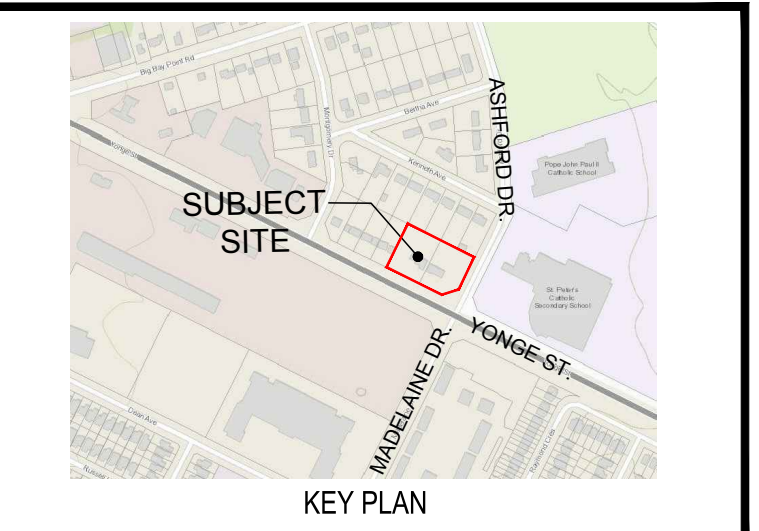
SECTION G-G DETAIL

SCALE: 1:100



SECTION H-H DETAIL

SCALE: 1:100



- CONTRACTOR'S NOTES:**
- DRAWINGS ARE NOT TO BE SCALED.
 - THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY UPON FINDING.
 - THE EXACT LOCATION OF UTILITIES SHALL BE DETERMINED BY CONSULTING THE UTILITY COMPANIES CONCERNED. THE CONTRACTOR SHALL PROVE.
- NOTES:**
- EVERY REASONABLE EFFORT HAS BEEN MADE TO ENSURE THAT THE INFORMATION APPEARING ON THIS PLAN IS ACCURATE AND CURRENT. WE BELIEVE THE INFORMATION TO BE RELIABLE. HOWEVER, THE CITY OF BARRIE ASSUMES NO RESPONSIBILITY OR LIABILITY DUE TO ERRORS OR OMISSIONS.
 - EXISTING ELEVATIONS AND TOPOGRAPHIC INFORMATION TAKEN FROM SURVEY PREPARED BY BOWERS & JONES SURVEYING LIMITED REFERENCE NO. 911-ELEV. DATED OCTOBER 17th, 2014.
 - ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO GEODETIC DATUM AND ARE DERIVED FROM TOP OF HYDRANT WEST SIDE OF MADELAINE DRIVE HAVING AN ELEVATION OF 257.98 METRES.
 - BEARINGS SHOWN ON THIS PLAN ARE ASTRONOMIC AND ARE REFERRED TO THE WESTERLY LIMIT OF ASHFORD DRIVE AS SHOWN ON REGISTERED PLAN 1213 AS N26°37'00E

LEGEND

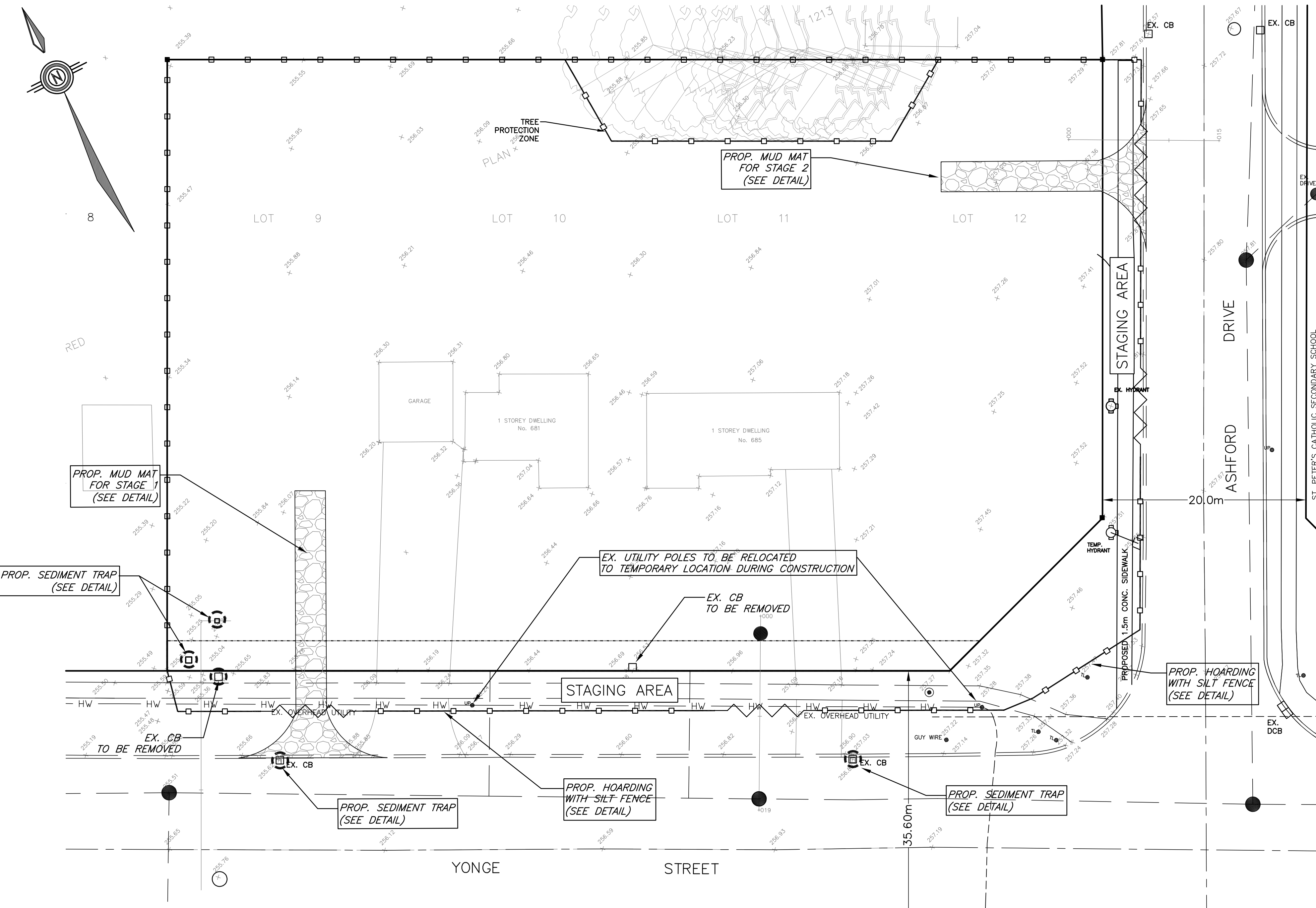
NO.	REVISION	BY	DATE
2	AS PER CITY COMMENTS	DG	NOV.08/19
1	AS PER CITY COMMENTS	DG	SEPT.12/19

SOUTH DISTRICT CONDOMINIUM
681 & 685 YONGE STREET
CITY OF BARRIE
CITY FILE NO. D11-013-19

CROSS SECTIONS PLAN



DRAWN BY: P.Y.	CHECKED BY: D.G.
DATE: JUNE 10, 2019	DESIGNED BY:
SCALE: AS SHOWN	
PROJECT NO. 19112	DRAWING NO. DET-4



SEDIMENT CONTROL NOTES

1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED AND IN PROPER WORKING ORDER PRIOR TO CONSTRUCTION ACTIVITIES. THE EXACT LOCATION TO BE DETERMINED IN THE FIELD.
2. ALL CONSTRUCTION VEHICLES SHALL EXIT/ENTER THE SITE VIA THE TEMPORARY CONSTRUCTION ACCESS MUD MAT.
3. THE CONTRACTOR SHALL PREVENT MUD TRUCKING ONTO EXISTING RIGHTS-OF WAY AND SHALL PROVIDE FOR CLEAN UP AT HIS OWN EXPENSE AS DIRECTED BY ENGINEER.
4. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REGULARLY INSPECTED EVERY 2 WEEKS, AND AFTER EVERY RAINFALL EVENT EXCEEDING 25mm. THE EROSION SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN PROPER WORKING ORDER AND CLEANED PERIODICALLY.
5. CONTRACTOR TO STABILIZE THE SITE AS SOON AS POSSIBLE BY REESTABLISHING VEGETATIVE GROUND COVER AND AVOIDING BARE SOIL AREAS. ALL AREAS (INCLUDING STOCKPILES) WHERE SITE IMPROVEMENTS ARE NOT EXPECTED TO OCCUR IMMEDIATELY SHALL BE REVEGETATED WITH 100mm OF TOPSOIL AND HYDROSEEDING.
6. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION SHALL BE MINIMIZED.
7. EROSION AND SEDIMENT CONTROLS ARE TO BE INSTALLED, INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE EROSION & SEDIMENT CONTROL GUIDELINE FOR URBAN CONSTRUCTION (DEC. 2006) AND THE INSPECTION GUIDE (2006) PREPARED BY THE GREATER GOLDEN HORSESHOE CONSERVATION AUTHORITIES.
8. SOIL TYPE: TOPSOIL OVERLAYING ON SANDY SILT TILL & SILTY SAND TILL.
9. REFER TO CONSTRUCTION MANAGEMENT PLAN FOR CONSTRUCTION STAGING DETAILS.

CONSTRUCTION STAGING NOTES

STAGE 1: FOUNDATIONS & UNDERGROUND PARKING STRUCTURE

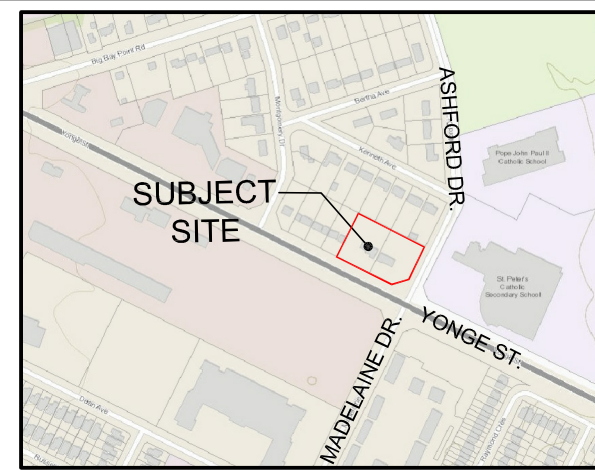
1. INSTALL HOARDING AROUND THE PERIMETER OF SITE AND INSTALL SILT FENCE ONTO THE INSIDE FACE OF THE HOARDING.
2. CONSTRUCT THE MUD MAT FOR CONSTRUCTION ACCESS WITH A LOCKABLE GATE.
3. INSTALL SEDIMENT TRAPS ON STREET CATCHBASINS IN THE VICINITY OF THE SITE.
4. CLEAR THE SITE AND DISPOSE ALL DEBRIS OFF SITE.
5. INSTALL THE EXCAVATION SHORING SYSTEM AROUND PERIMETER OF SITE.
6. EXCAVATE TO THE BASE OF THE PARKING GARAGE FLOOR LEVEL AND DISPOSE OF EARTH MATERIAL OFF SITE.
7. GRADE THE BASE OF THE EXCAVATION TOWARDS ONE OR MORE SUMPS TO GATHER ANY STORMWATER RUNOFF THAT MAY ACCUMULATE. DISCHARGE IS TO BE FILTERED USING GEOTEXTILE WRAPPED CLEAR STONE AROUND THE PUMP INTAKE ASSEMBLY.
8. CONSTRUCT THE BUILDING FOUNDATIONS AND THE PARKING GARAGE STRUCTURE TO THE GROUND FLOOR LEVEL.
9. SWEEP THE STREET REGULARLY TO ENSURE THAT THE ROAD PAVEMENT IS CLEAR OF ANY MUD TRACKING.

STAGE 2: CONSTRUCTION OF SUPERSTRUCTURE

1. CONSTRUCT THE SUPERSTRUCTURE, FAÇADE, ROUGH-INS AND FINISHES.
2. SWEEP THE STREET REGULARLY TO ENSURE THAT THE ROAD PAVEMENT IS CLEAR OF ANY MUD TRACKING.
3. INSPECT AND MAINTAIN THE SILT FENCE, CATCHBASIN PROTECTION AND MUD MAT REGULARLY.

STAGE 3: SERVICING & BOULEVARD WORKS

1. INSTALL THE SERVICE CONNECTIONS AND SITE SERVICING.
2. CAP THE UPSTREAM END OF SEWERS DURING CONSTRUCTION TO ENSURE THAT SILT AND DEBRIS DOES NOT ENTER THE MUNICIPAL SYSTEMS.
3. UPON INSTALLATION OF CATCHBASINS AND AREA DRAINS, PROTECT WITH SEDIMENT TRAPS.
4. SWEEP THE STREET REGULARLY TO ENSURE THAT THE ROAD PAVEMENT IS CLEAR OF ANY MUD TRACKING.
5. CONSTRUCT SURFACE PARKING LOT.
6. COMPLETE BOULEVARD GRADING AND STABILIZE ALL GROUND SURFACES WITH LANDSCAPE AND HARDSCAPE MATERIALS.
7. ONCE ALL SURFACES ARE STABILIZED, REMOVE THE SEDIMENT CONTROLS.
8. CLEAN THE STORMWATER DETENTION TANK, MANHOLES AND CATCHBASINS AND DISPOSE ALL SILT AND DEBRIS OFF SITE.



KEY PLAN

CONTRACTOR'S NOTES:

1. DRAWINGS ARE NOT TO BE SCALED.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY UPON FINDING.
3. THE EXACT LOCATION OF UTILITIES SHALL BE DETERMINED BY CONSULTING THE UTILITY COMPANIES CONCERNED. THE CONTRACTOR SHALL PROVE.

NOTES:

1. EVERY REASONABLE EFFORT HAS BEEN MADE TO ENSURE THAT THE INFORMATION APPEARING ON THIS PLAN IS ACCURATE AND CURRENT. WE BELIEVE THE INFORMATION TO BE RELIABLE. HOWEVER, THE CITY OF BARRIE ASSUMES NO RESPONSIBILITY OR LIABILITY DUE TO ERRORS OR OMISSIONS.
2. EXISTING ELEVATIONS AND TOPOGRAPHIC INFORMATION TAKEN FROM SURVEY PREPARED BY BOWERS & JONES SURVEYING LIMITED REFERENCE No. 911-ELEV. DATED OCTOBER 17th, 2014.
3. ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO GEODETIC DATUM AND ARE DERIVED FROM TOP OF HYDRANT, WEST SIDE OF MADELAINE DRIVE HAVING AN ELEVATION OF 257.58 METRES.
4. BEARINGS SHOWN ON THIS PLAN ARE ASTRONOMIC AND ARE REFERRED TO THE WESTERLY LIMIT OF ASHFORD DRIVE AS SHOWN ON REGISTERED PLAN 1213 AS N26°37'00E.

LEGEND

- 2.0% DRAINAGE FLOW DIRECTION AND SLOPE
- CATCHBASIN
- AREA DRAIN
- VALVE AND BOX
- VALVED HYDRANT
- OVERLAND FLOW ROUTE
- SEDIMENT TRAP (SILT SACK)
- PROPOSED HOARDING WITH SILT FENCE
- GATE (ENTRANCE/EXIT)

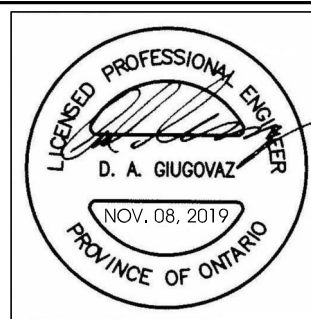
NO.	REVISION	BY	DATE
2	AS PER CITY COMMENTS	DG	NOV.08/19
1	AS PER CITY COMMENTS	DG	SEPT.12/19

REVISIONS

SOUTH DISTRICT CONDOMINIUM

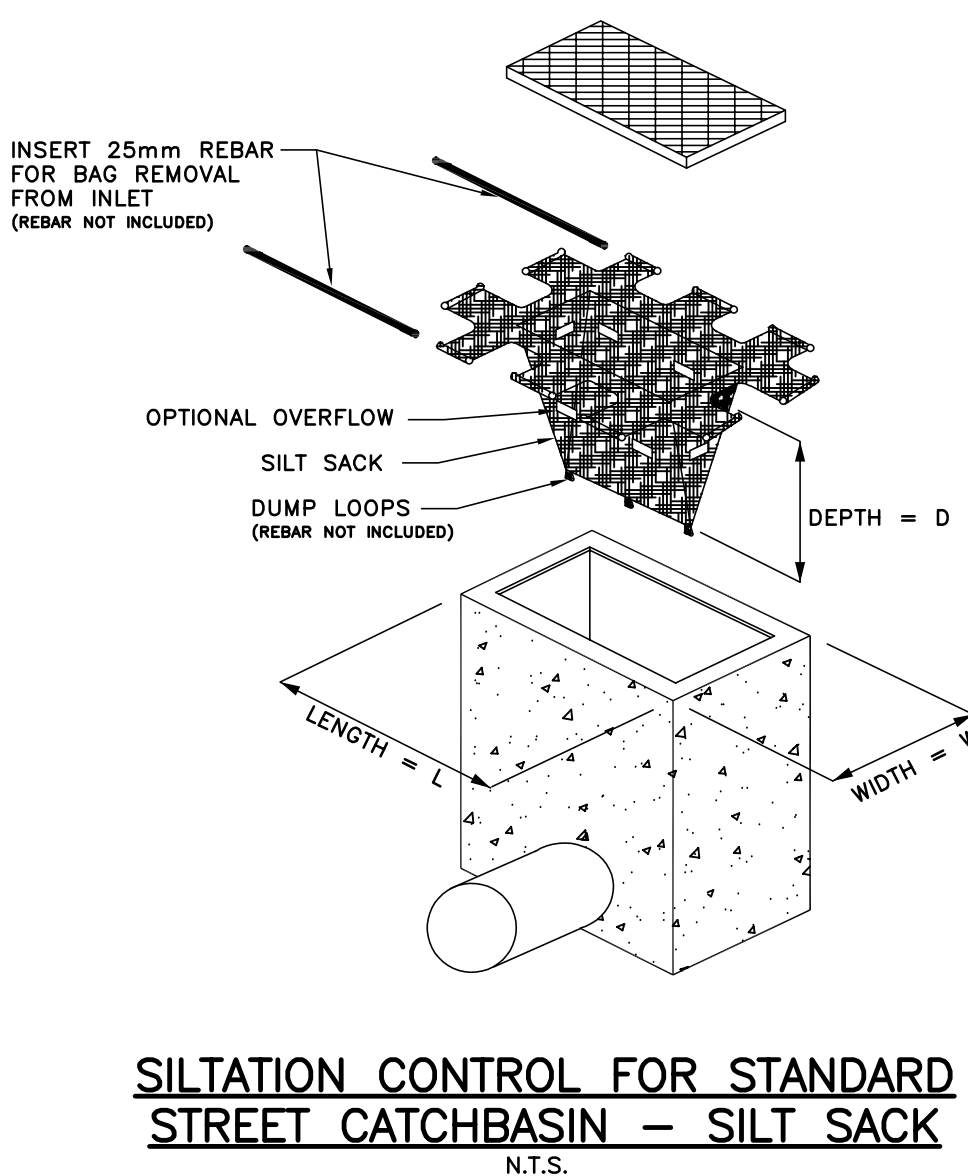
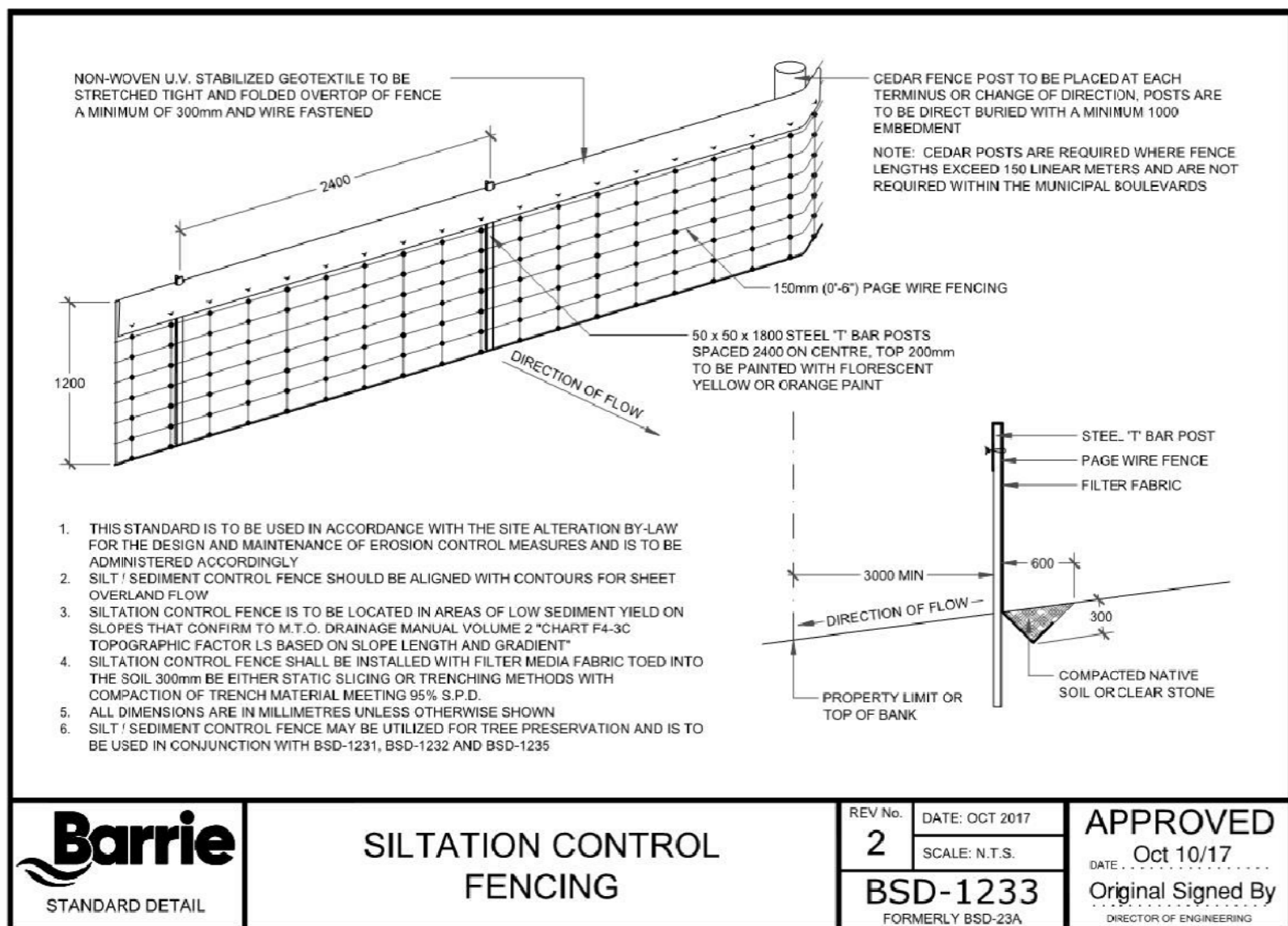
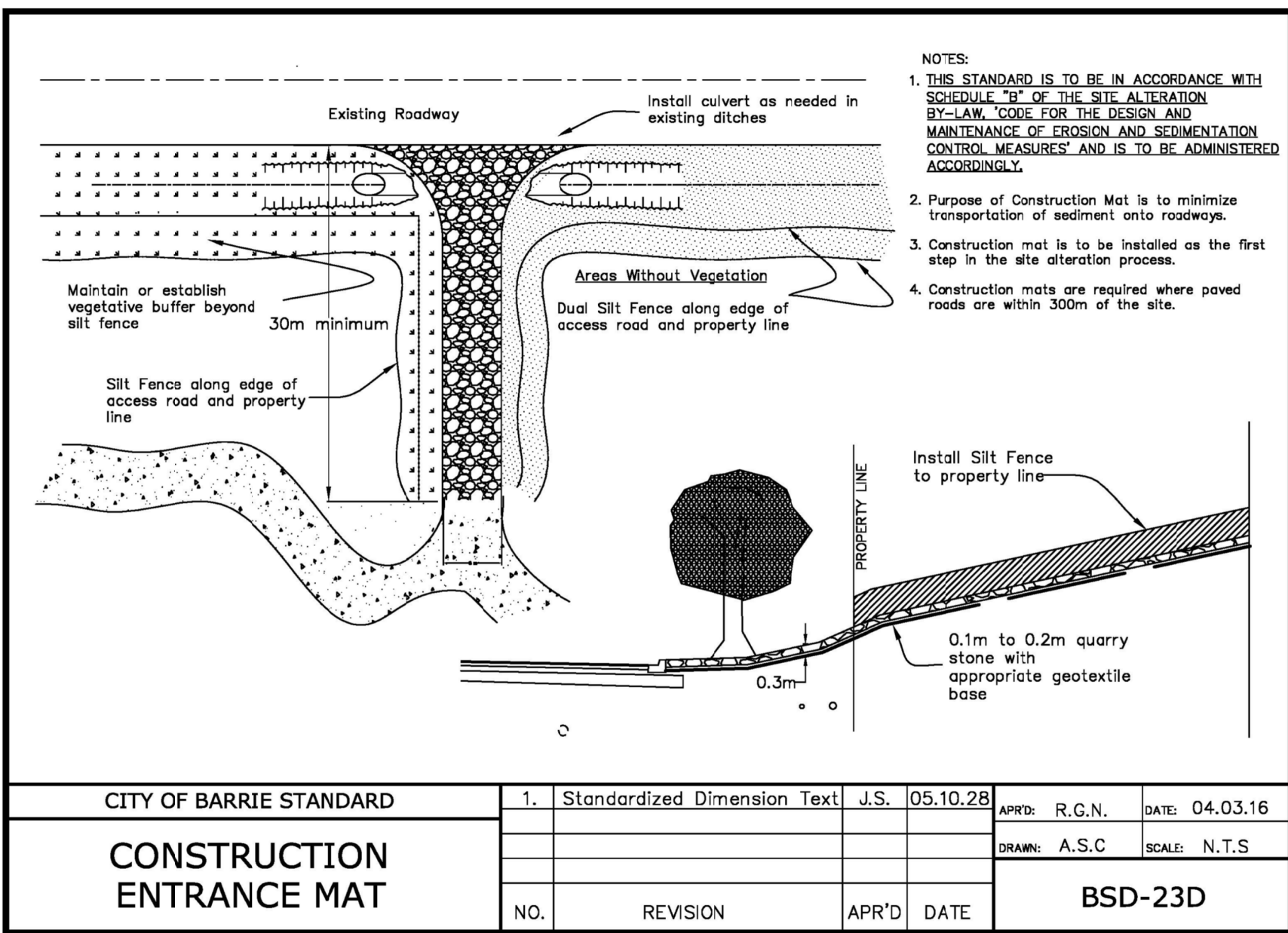
681 & 685 YONGE STREET
CITY OF BARRIE
CITY FILE NO. D11-013-19

EROSION AND SEDIMENT CONTROL PLAN



DRAWN BY: P.Y.	CHECKED BY: D.G.
DATE: JUNE 10, 2019	DESIGNED BY:
SCALE: 1:250	

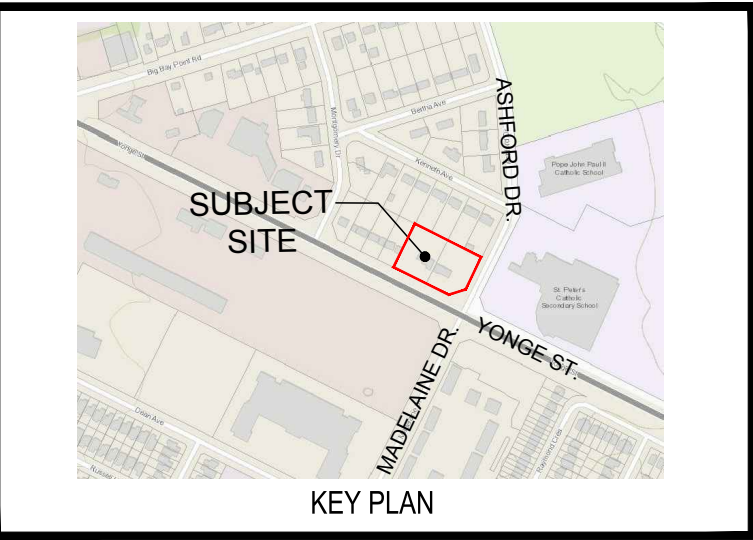
PROJECT NO. 19112	DRAWING NO. ESC-1
----------------------	----------------------





METRIC

ALL DIMENSIONS AND ELEVATIONS ARE IN METRES UNLESS OTHERWISE SHOWN



- CONTRACTOR'S NOTES:
1. DRAWINGS ARE NOT TO BE SCALED.

2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY UPON FINDING.

3. THE EXACT LOCATION OF UTILITIES SHALL BE DETERMINED BY CONSULTING THE UTILITY COMPANIES CONCERNED. THE CONTRACTOR SHALL PROVE.
- NOTES:
1. EVERY REASONABLE EFFORT HAS BEEN MADE TO ENSURE THAT THE INFORMATION APPEARING ON THIS PLAN IS ACCURATE AND CURRENT. WE BELIEVE THE INFORMATION TO BE RELIABLE. HOWEVER, THE CITY OF BARRIE ASSUMES NO RESPONSIBILITY OR LIABILITY DUE TO ERRORS OR OMISSIONS.

2. EXISTING ELEVATIONS AND TOPOGRAPHIC INFORMATION TAKEN FROM SURVEY PREPARED BY BOWERS & JONES SURVEYING LIMITED REFERENCE NO. 911-ELEV. DATED OCTOBER 17TH, 2014.

3. ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO GEODETIC DATUM AND ARE DERIVED FROM TOP OF HYDRANT WEST SIDE OF MADELAINE DRIVE HAVING AN ELEVATION OF 257.98 METRES.

4. BEARINGS SHOWN ON THIS PLAN ARE ASTROMONIC AND ARE REFERRED TO THE WESTERLY LIMIT OF ASHFORD DRIVE AS SHOWN ON REGISTERED PLAN 1213 AS N26°37'00E

LEGEND

0.034

0.90

SITE AREA (ha)

COMPOSITE RUNOFF COEFFICIENT

DRAINAGE BOUNDARY

2	AS PER CITY COMMENTS	DC	NOV.08/19
1	AS PER CITY COMMENTS	DC	SEPT.12/19
NO.	REVISION	BY	DATE
REVISIONS			

VALDOR ENGINEERING INC.

Consulting Engineers - Project Managers

741 ROWNREE CARRY ROAD, UNIT 2, WOODBINE, ONTARIO, L4L 8P9

TEL: (905) 644-0254 FAX: (905) 644-0259

E-MAIL: info@valdor-engineering.com www.valdor-engineering.com

SOUTH DISTRICT CONDOMINIUM

681 & 685 YONGE STREET

CITY OF BARRIE

CITY FILE NO. D11-013-19

PRE-DEVELOPMENT STORM CATCHMENT PLAN

DRAWN BY: P.Y.

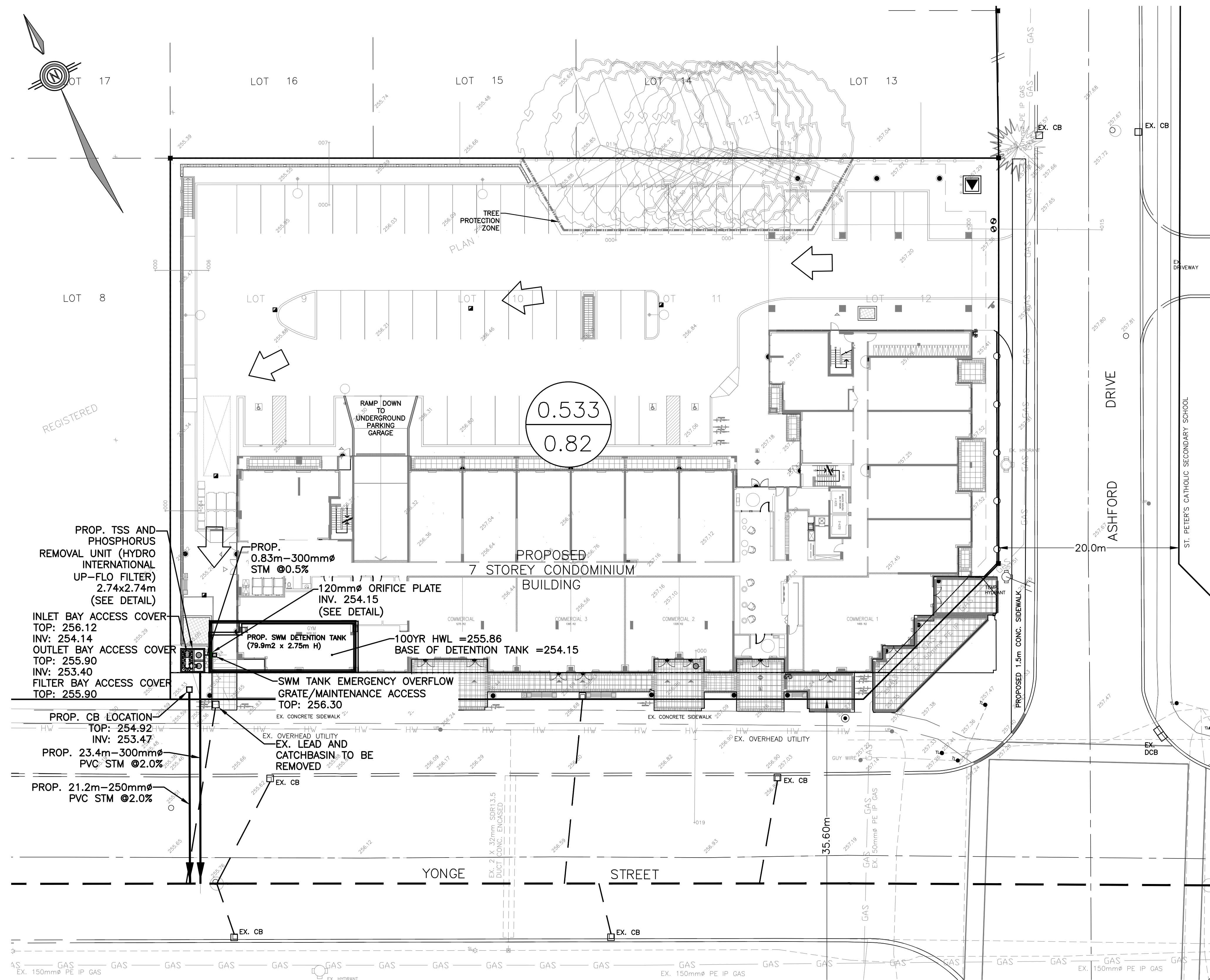
CHOKED BY: D.G.

DATE: JUNE 10, 2019

DESIGNED BY:

SCALE: 1:200

DRAWING NO. PRE-1



POST DEVELOPMENT PEAK FLOW RATES (L/S)	2 YEAR	100 YEAR
	20.9	39.3

681 & 685 Yonge St. Condominium Building
Project No.: 19112



VALDOR ENGINEERING INC.
741 Rowntree Dairy Road, Suite 2, Woodbridge, Ontario, L4L 5T9
Tel: 905-264-0054 Fax: 905-264-0069 info@valdor-engineering.com
www.valdor-engineering.com

CITY OF BARRIE
STORM SEWER DESIGN - 5 YEAR STORM

$$I_s = \frac{853.608}{(T_c + 4.699)^{0.766}}$$

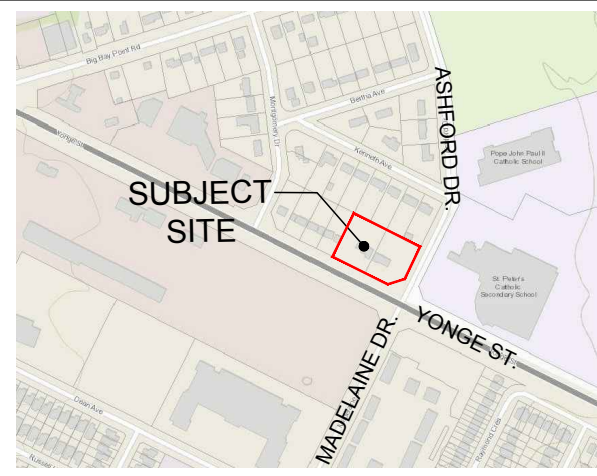
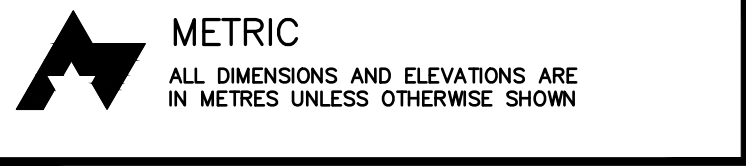
Q = (C¹*A)/360 (cms)
C: Runoff Coefficient
I: Rainfall Intensity
A: Area (ha)

AREA ID#	STREET	MANHOLE		LENGTH (m)	INCREMENT			TOTAL CA	FLOW TIME (min.)		I (mm/hr)	TOTAL Q (cms)	S (%)	DIA (mm)	Q FULL (cms)	V FULL (m/s)	Percent Capacity
		FROM	TO		C	A	CA		TO	IN							
	Yonge Street	SWM TANK	UP-FLO FILTER	0.83	0.81	0.53	0.43	0.43	10.00	0.01	94.8	0.114	0.50	300	0.129	1.13	88%
	Yonge Street	UP-FLO FILTER	Ex. STM	23.87	0.81	0.53	0.43	0.86	10.01	0.18	94.7	0.227	2.00	300	0.259	2.27	88%

September 12, 2019

Calculated by: P.Y.

Checked by: D.G.



KEY PLAN

CONTRACTOR'S NOTES:

1. DRAWINGS ARE NOT TO BE SCALED.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY UPON FINDING.
3. BY CONSULTING THE UTILITY COMPANIES CONCERNED, THE CONTRACTOR SHALL PROVE.

NOTES:

1. EVERY REASONABLE EFFORT HAS BEEN MADE TO ENSURE THAT THE INFORMATION APPEARING ON THIS PLAN IS ACCURATE AND CURRENT. WE BELIEVE THE INFORMATION TO BE RELIABLE. HOWEVER, THE CITY OF BARRIE ASSUMES NO RESPONSIBILITY OR LIABILITY DUE TO ERRORS OR OMISSIONS.
2. EXISTING ELEVATIONS AND TOPOGRAPHIC INFORMATION TAKEN FROM SURVEY PREPARED BY BOWERS & JONES SURVEYING LIMITED REFERENCE No. 911-ELEV. DATED OCTOBER 17th, 2014.
3. ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO GEODETIC DATUM AND ARE DERIVED FROM TOP OF HYDRANT WEST SIDE OF MADELAINE DRIVE HAVING AN ELEVATION OF 257.98 METRES.
4. BEARINGS SHOWN ON THIS PLAN ARE ASTRONOMIC AND ARE REFERRED TO THE WESTERLY LIMIT OF ASHFORD DRIVE AS SHOWN ON REGISTERED PLAN 1213 AS N26°37'00E

LEGEND

0.034 SITE AREA (ha)
0.90 COMPOSITE RUNOFF COEFFICIENT

DRAINAGE BOUNDARY

OVERLAND FLOW

NO.	REVISION	BY	DATE
2	AS PER CITY COMMENTS	DG	NOV.08/19
1	AS PER CITY COMMENTS	DG	SEPT.12/19



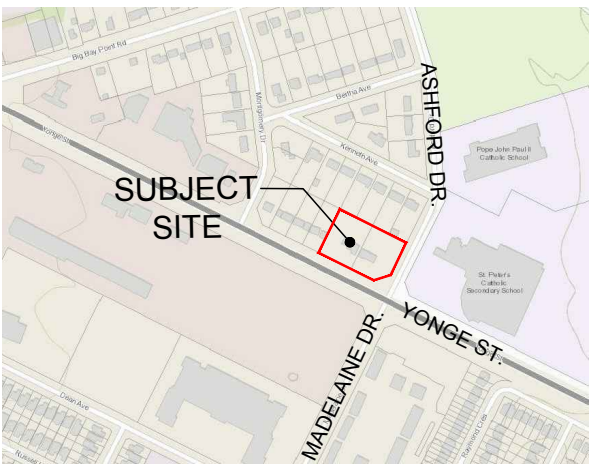
SOUTH DISTRICT CONDOMINIUM

681 & 685 YONGE STREET
CITY OF BARRIE
CITY FILE NO. D11-013-19

STORM DRAINAGE PLAN



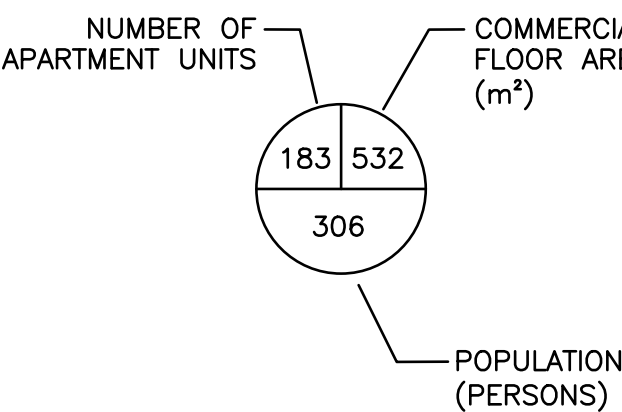
DRAWN BY: P.Y.	CHECKED BY: D.G.
DATE: JUNE 10, 2019	DESIGNED BY:
SCALE: 1:250	
PROJECT NO. 19112	DRAWING NO. STM-1



CONTRACTOR'S NOTES:

- NOTES:**

- LEGEND



2	AS PER CITY COMMENTS	DG	NOV.08/19
1	AS PER CITY COMMENTS	DG	SEPT.12/19
NO.	REVISION	BY	DATE
REVISIONS			



681 & 685 YONGE STREET

SANITARY DRAINAGE PLAN

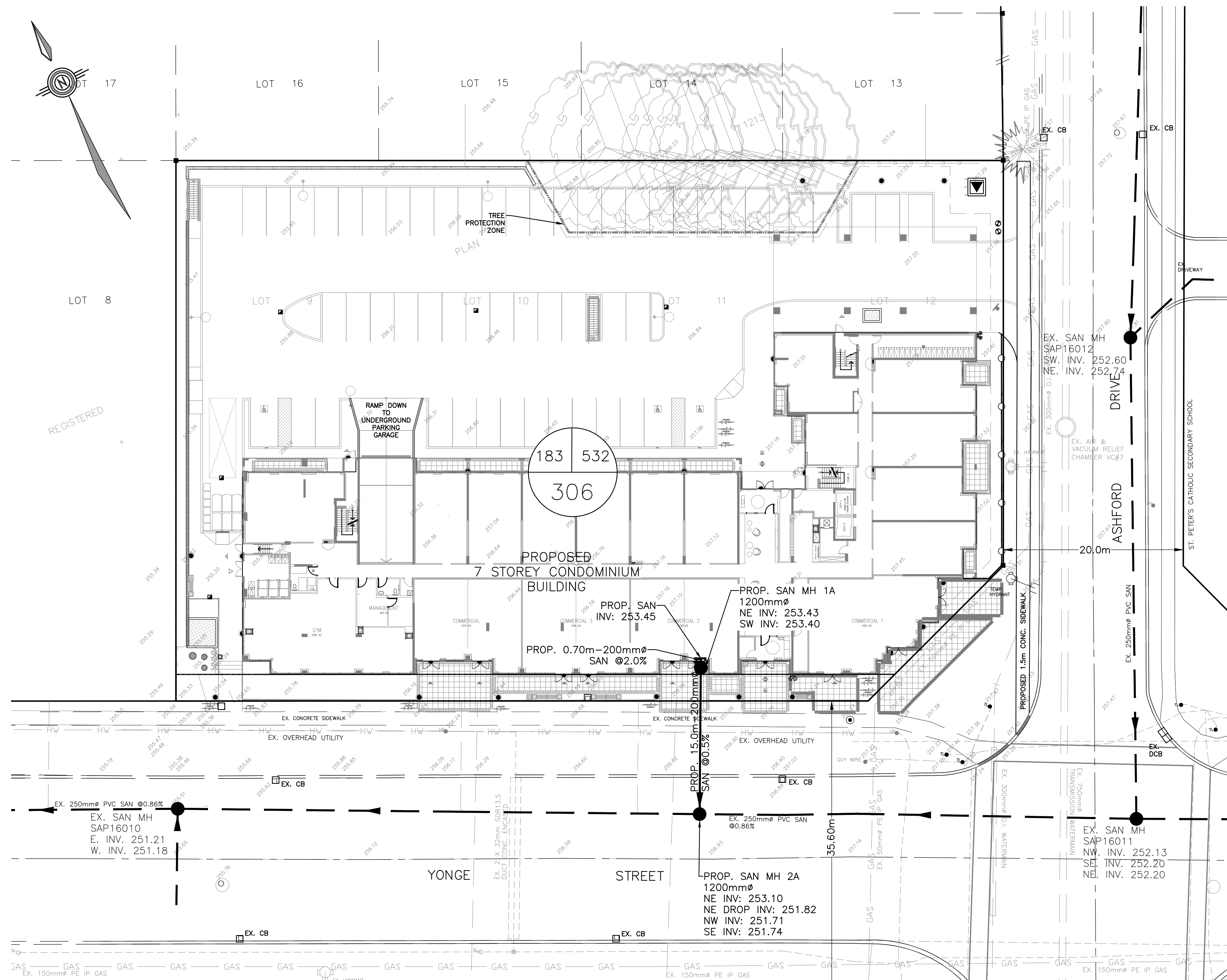


DATE: JUNE 10, 2019 | DESIGNED BY:

PROJECT NO.	DRAWING NO.
-------------	-------------

PROJECT NO.

DRAWING NO.
SAN-1



(Harmon or Babbitt peaking factor where; $M \geq 2$), the greater of the two is used in the spreadsheet. Please refer to Section 3.3.1.1 of the Barrie Sanitary Design Guidelines for additional guidance on which peaking factor to use

(Peak population flow where: q = 225 L/day/person; P = population)(Peak extraneous flow: $I = 0.1 \text{ L/s/ha}$ over development area)

(Total peak flow as the sum of peak population flow and peak extraneous flow)

225 litres/person/day.

STREET / AREA	MAINTENANCE HOLE		DWELL UNITS	DWELL (ACC) UNITS	DENSITY P.P.U.	POP. (P)	POP. (ACC)	M PEAKING FACTOR BABBIT	M PEAKING FACTOR HARMON	Max PEAKING FACTOR	Q _p	AREA (ha)	AREA (ACC) (ha)	Q _t	Q _{ext}	L (m)	D (mm)	S (%)	Q _f FULL (l/s)	d/D ⁽¹⁾ >0.5 or >0.85	Velocity (m/s)	Velocity Partial ⁽¹⁾ (m/s)	Velocity ⁽¹⁾ > 0.6 (m/s)	
	FROM	TO																						
Yonge Street	MH 1A	MH 2A	183	183	1.67	306	306	6.338	4.075	6.338	5.044	0.533	0.533	0.053	5.097	15.0	200	0.50%	23.192	0.318	Ok	0.738	0.589	Check
DATE: September-12-2019 CALCULATED BY: P.Y. CHECKED BY: D.G.																								

Notes:

- (1) without extraneous flow
- (2) with extraneous flow
- (3) $d/D > 0.5$ for pipes 375 and less, $d/D > 0.85$ for pipes greater than 375
- (4) Velocity check based on the lesser of full flow or partial velocity