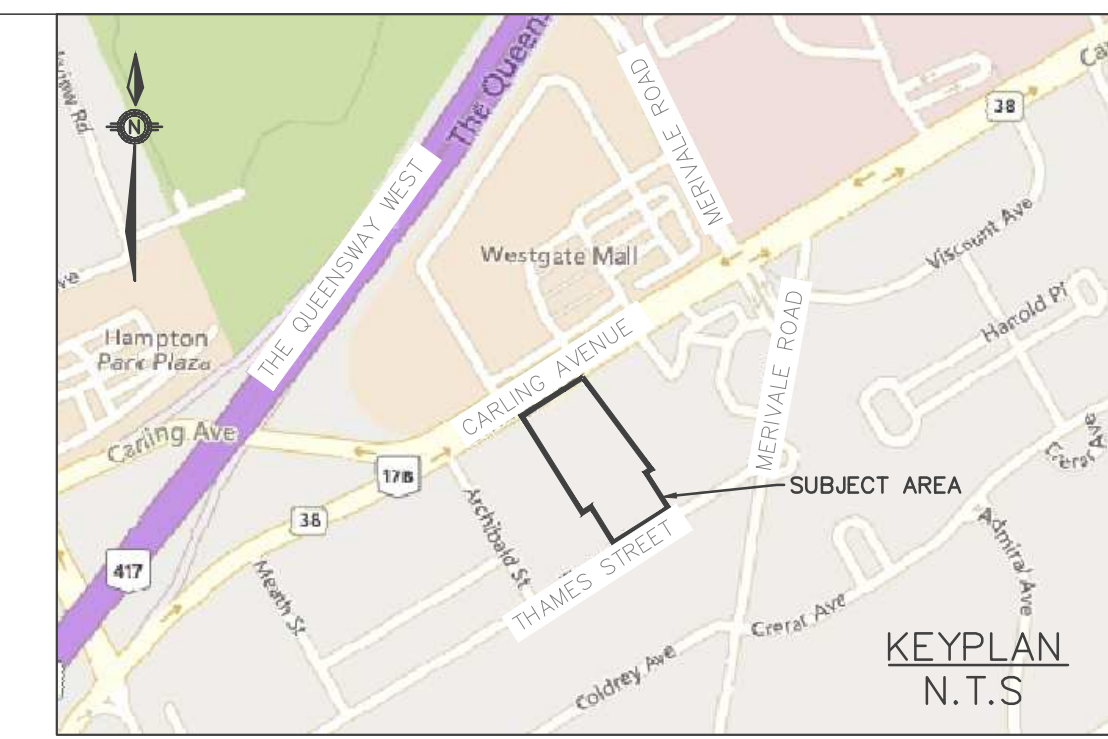
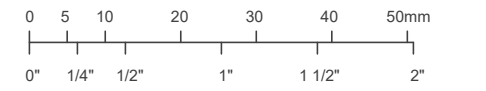


This drawing has been created electronically.
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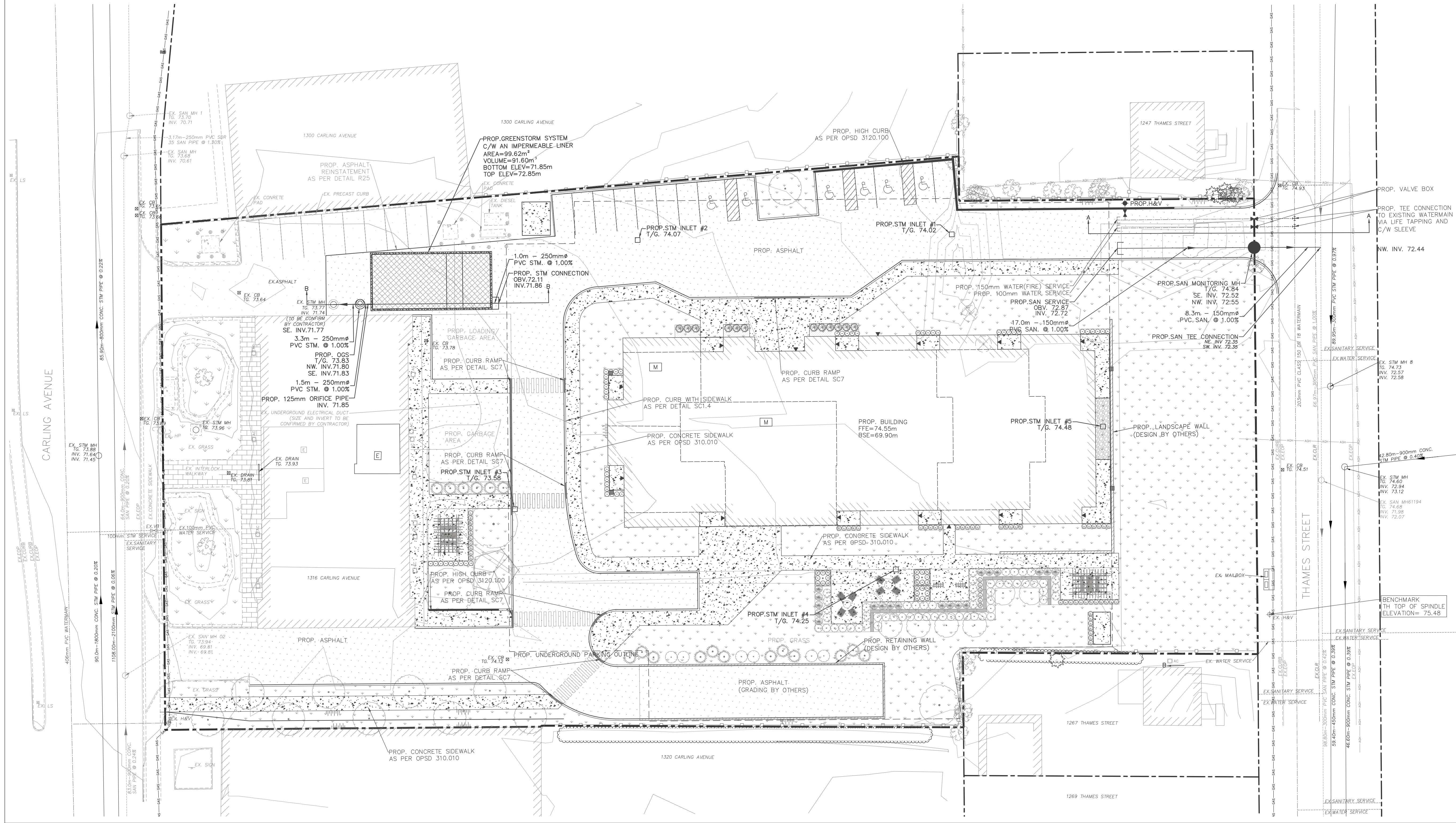
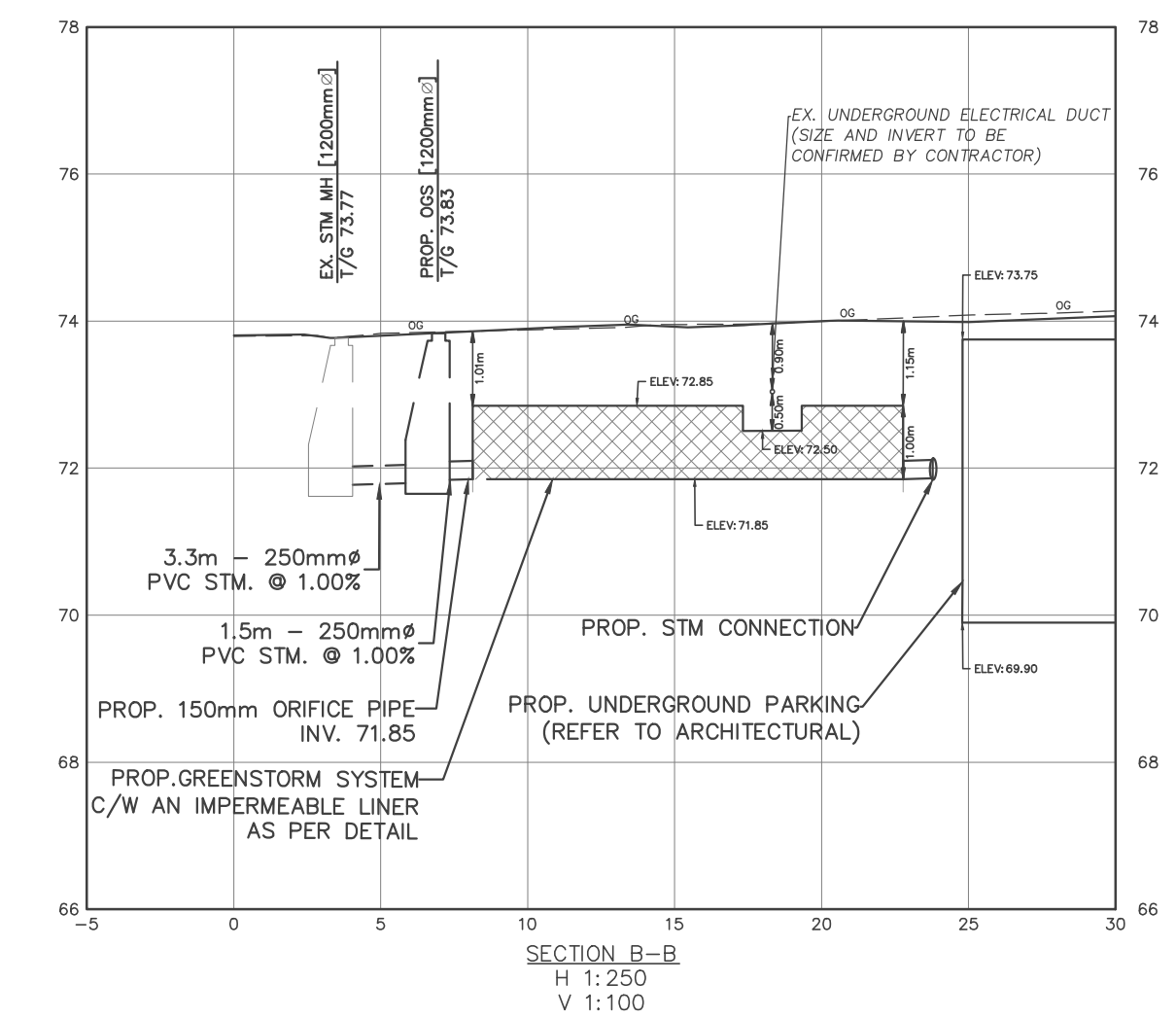
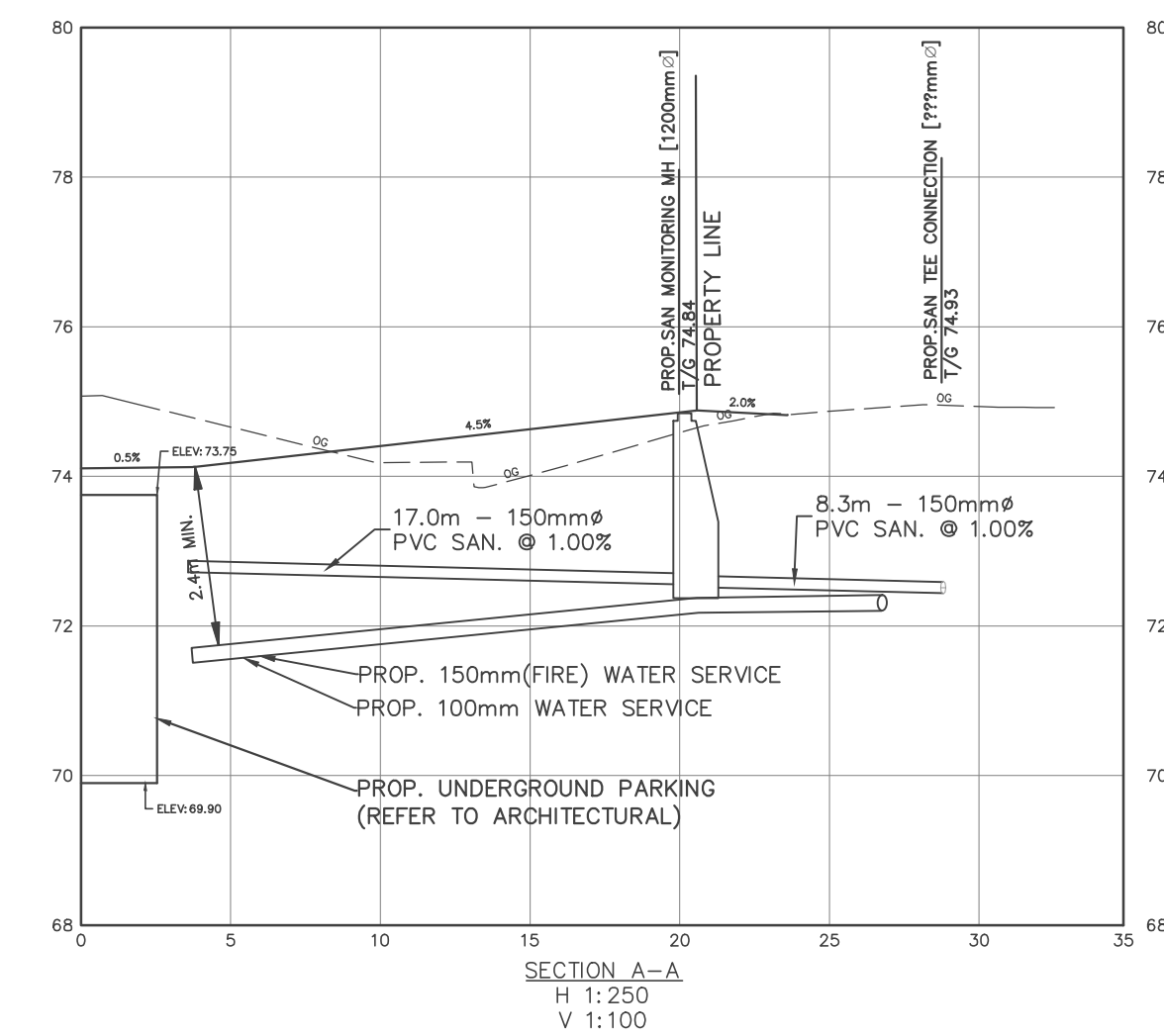
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This drawing may have been reduced.



LEGEND

- RETAINING WALL
- ○ — PRIVACY FENCE
- ○ — ACOUSTIC FENCE
- x — x — CHAIN LINK FENCE
- ○ — SILT FENCE
- ○ — GAS LINE
- ○ — ABOVE HYDRO LINE
- ○ — HYDRO LINE
- ○ — BELL LINE
- SAN# EXISTING SANITARY MAINTENANCE HOLE
- SAN# PROPOSED SANITARY MAINTENANCE HOLE
- CB# EXISTING CATCH BASIN
- CB# PROPOSED CATCH BASIN
- STM# EXISTING STORM MAINTENANCE HOLE
- STM# PROPOSED STORM MAINTENANCE HOLE
- SERVICE CAP
- DOWN SPOUTS
- FIRE DEPT CONNECTION
- EXISTING FIRE HYDRANT
- H&V# PROPOSED FIRE HYDRANT
- VE# EXISTING VALVE BOX
- PROPOSED VALVE BOX
- PROPOSED SIGN
- EXISTING LIGHT POLE
- EXISTING LIGHT MOUNT LIGHT
- MANDOOR
- OVERHEAD DOOR
- UNDERGROUND PARKING OUTLINE
- LANDSCAPE AREA
- EXISTING ASPHALT AREA
- PROPOSED ASPHALT AREA
- CONCRETE AREA



No.	Issuance Description	YYMMDD
1.	CLIENT REVIEW	26/03/11
2.	ZONING BY-LAW AMENDMENT	26/03/27

BENCHMARK
ELEVATIONS SHOWN ARE GEODETIC, DERIVED FROM CITY OF OTTAWA VERTICAL CONTROL MONUMENT NO. N-29 (INDEX NO. 86), HAVING A PUBLISHED ELEVATION OF 77.347 METRES, AND ARE REFERRED TO THE CGVD26 GEODETIC DATUM.

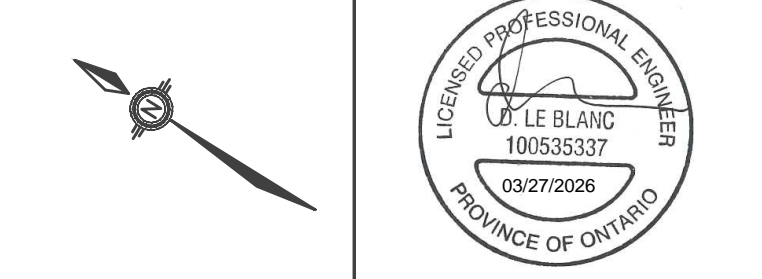
Issued For:
ZONING BY-LAW AMENDMENT
DRAWINGS ARE "ZONING BY-LAW AMENDMENT" AND ARE NOT TO BE USED FOR PERMIT APPLICATIONS, QUOTATION/TENDER, OR CONSTRUCTION.

Client:
HOMESTEAD LAND HOLDINGS LIMITED
80 Johnson Street
Kington, ON, K7L 1X7

Project:
RESIDENTIAL APARTMENTS
1316 Carlung Avenue, Ottawa, ON

Drawing:
SITE SERVICING PLAN

Project No. 2300-001-25
Scale: 1:250
Orientation: Stamp

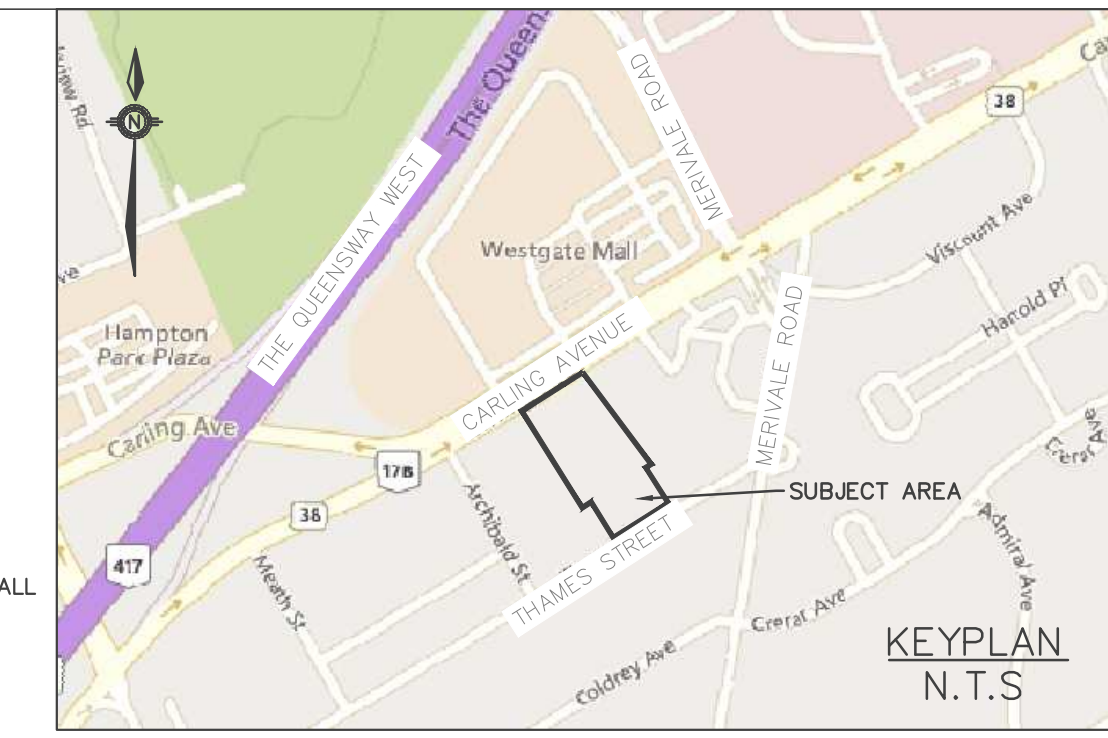
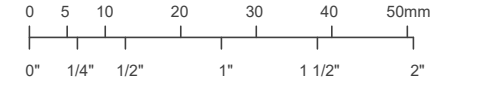


Drawing No. SS-1

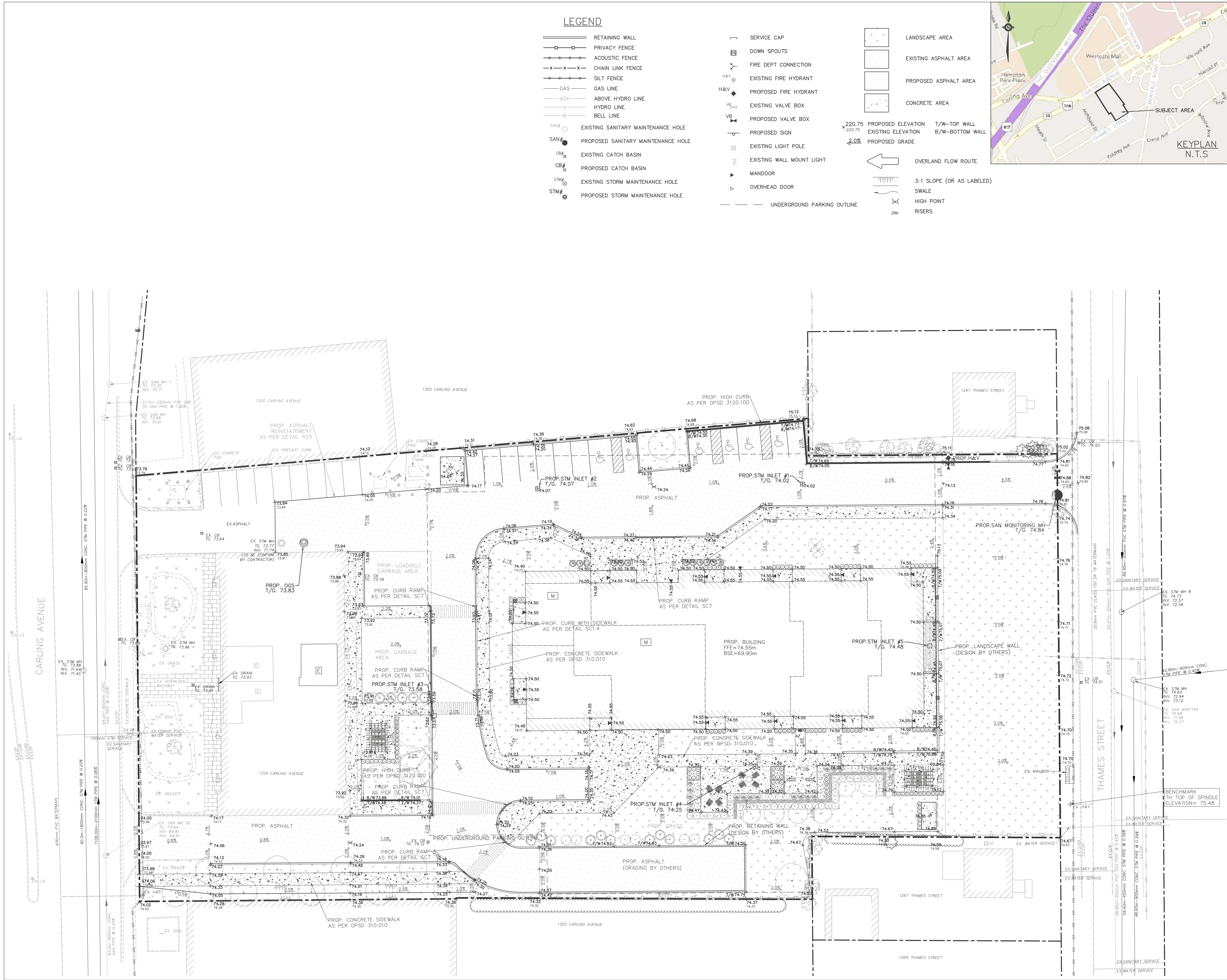
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This drawing may have been reduced.



- LEGEND**
- RETAINING WALL
 - PRIVACY FENCE
 - ACOUSTIC FENCE
 - CHAIN LINK FENCE
 - SILT FENCE
 - GAS
 - AGH ABOVE HYDRO LINE
 - H HYDRO LINE
 - B BELL LINE
 - SAN# EXISTING SANITARY MAINTENANCE HOLE
 - SAN# PROPOSED SANITARY MAINTENANCE HOLE
 - CB# EXISTING CATCH BASIN
 - CB# PROPOSED CATCH BASIN
 - STM# EXISTING STORM MAINTENANCE HOLE
 - STM# PROPOSED STORM MAINTENANCE HOLE
 - UNDERGROUND PARKING OUTLINE
 - SERVICE CAP
 - DOWN SPOUTS
 - FIRE DEPT CONNECTION
 - EXISTING FIRE HYDRANT
 - PROPOSED FIRE HYDRANT
 - EXISTING VALVE BOX
 - PROPOSED VALVE BOX
 - PROPOSED SIGN
 - EXISTING LIGHT POLE
 - EXISTING WALL MOUNT LIGHT
 - MANDOOR
 - OVERHEAD DOOR
 - LANDSCAPE AREA
 - EXISTING ASPHALT AREA
 - PROPOSED ASPHALT AREA
 - CONCRETE AREA
 - 2.20.75 PROPOSED ELEVATION
 - 2.20.75 EXISTING ELEVATION
 - 2.0% PROPOSED GRADE
 - ← OVERLAND FLOW ROUTE
 - 3:1 SLOPE (OR AS LABELED)
 - SWALE
 - HIGH POINT
 - RISERS



No.	Issuance Description	YYMMDD
1.	CLIENT REVIEW	26/03/11
2.	ZONING BY-LAW AMENDMENT	26/03/27

BENCHMARK
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Issued For:
ZONING BY-LAW AMENDMENT
DRAWINGS ARE "ZONING BY-LAW AMENDMENT" AND ARE NOT TO BE USED FOR PERMIT APPLICATIONS, QUOTATION/TENDER, OR CONSTRUCTION.

Client:
HOMESTEAD LAND HOLDINGS LIMITED
80 Johnson Street
Kingston, ON, K7L 1X7

Project:
RESIDENTIAL APARTMENTS
1316 Carling Avenue, Ottawa, ON

Drawing:
GRADING PLAN

Project No. 2300-001-25
Scale: 1:250
Orientation

Designed by: IO
Checked by: KF
Drawn by: IO
Approved by: DL
Stamp

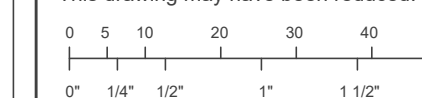


Drawing No. **GR-1**

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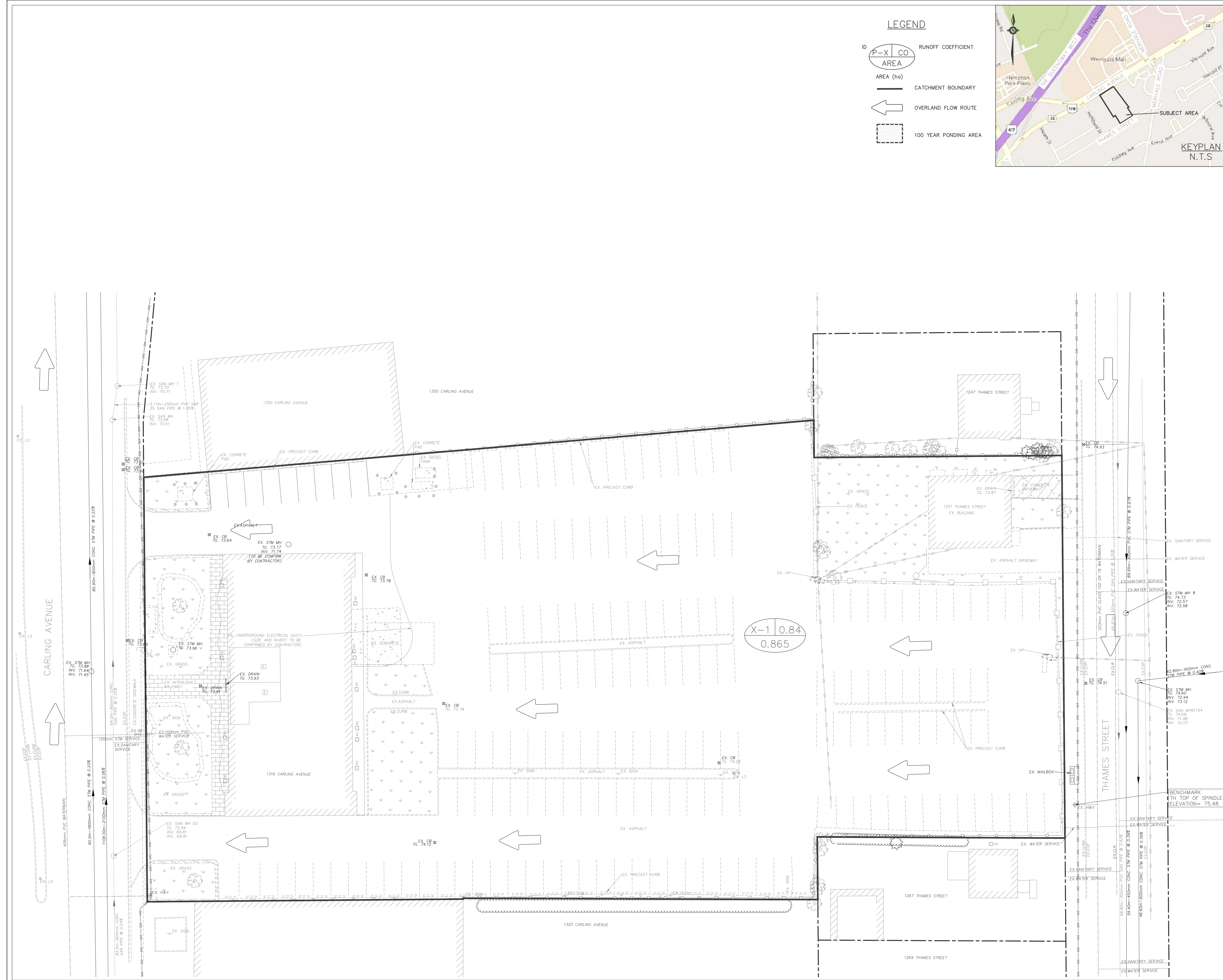
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LEGEND

$\frac{P-X}{CO}$	RUNOFF COEFFICIENT
AREA	AREA (ha)
—	CATCHMENT BOUNDARY
←	OVERLAND FLOW ROUTE
---	100 YEAR PONDING AREA



No.	Issuance Description	YYMMDD
1.	CLIENT REVIEW	26/03/11
2.	ZONING BY-LAW AMENDMENT	26/03/27

BENCHMARK
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Issued For:
ZONING BY-LAW AMENDMENT
DRAWINGS ARE "ZONING BY-LAW AMENDMENT" AND ARE NOT TO BE USED FOR PERMIT APPLICATIONS, QUOTATION/TENDER, OR CONSTRUCTION.

Client:
HOMESTEAD LAND HOLDINGS LIMITED
80 Johnson Street
Kingston, ON, K7L 1X7

Project:
RESIDENTIAL APARTMENTS
1316 Carling Avenue, Ottawa, ON

Drawing:
PRE-STORM WATER MANAGEMENT PLAN

Project No. 2300-001-25
Scale: 1:250
Orientation

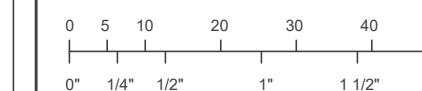
Designed by: IO
Checked by: KF
Drawn by: IO
Approved by: DL
Stamp
Professional Engineer
J. LE BLANC
100535337
03/27/2026
PROVINCE OF ONTARIO

Drawing No. **STM-1**

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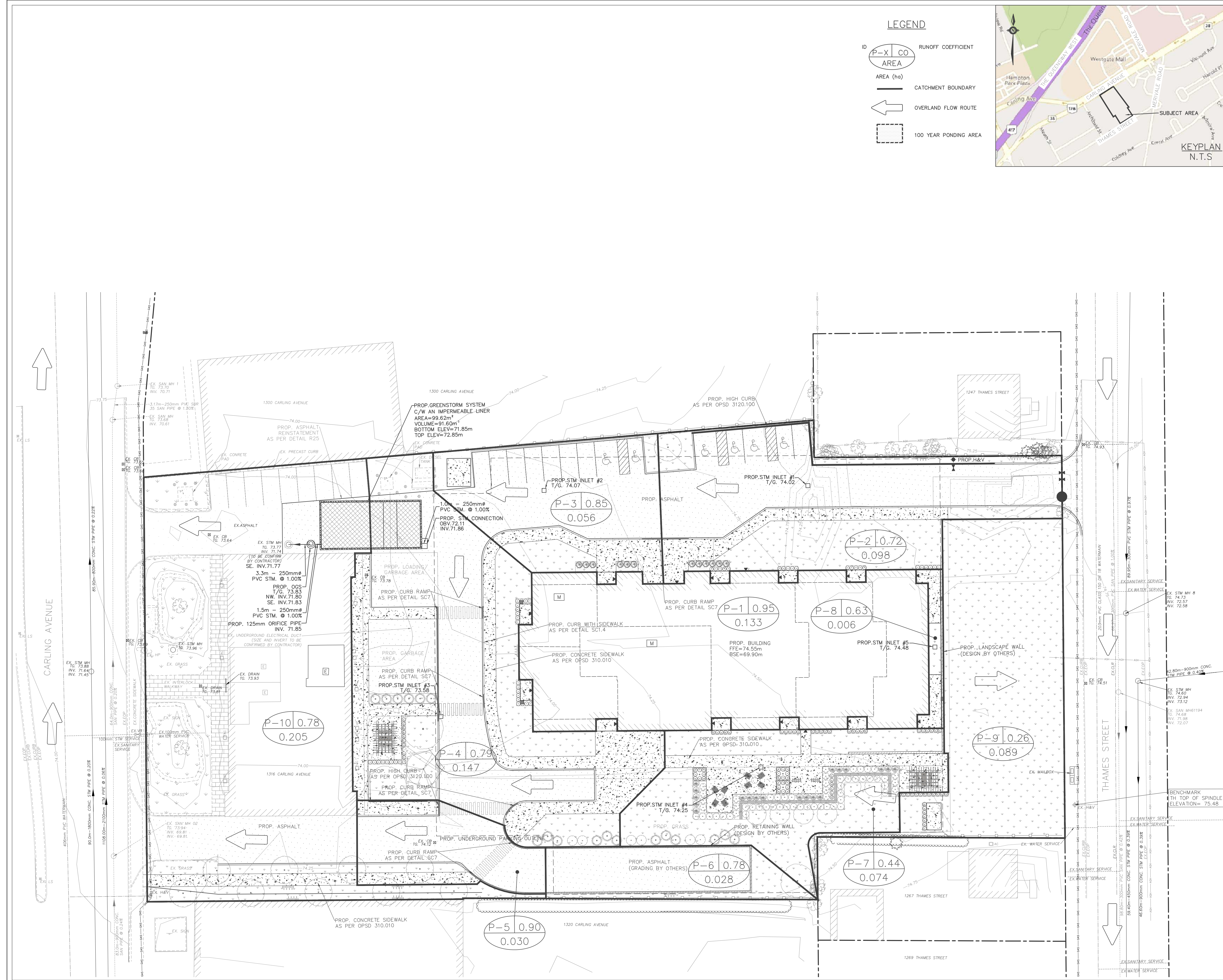
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LEGEND

ID	P-X	CO	RUNOFF COEFFICIENT
AREA			AREA (ha)
			CATCHMENT BOUNDARY
			OVERLAND FLOW ROUTE
			100 YEAR PONDING AREA



No.	Issuance Description	YYMMDD
1.	CLIENT REVIEW	26/03/11
2.	ZONING BY-LAW AMENDMENT	26/03/27

BENCHMARK
ELEVATIONS SHOWN ARE GEODETIC, DERIVED FROM CITY OF OTTAWA VERTICAL CONTROL MONUMENT NO. N-29 (INDEX NO. 86), HAVING A PUBLISHED ELEVATION OF 77.347 METRES, AND ARE REFERRED TO THE CGVD26 GEODETIC DATUM.

Issued For:
ZONING BY-LAW AMENDMENT
DRAWINGS ARE "ZONING BY-LAW AMENDMENT" AND ARE NOT TO BE USED FOR PERMIT APPLICATIONS, QUOTATION/TENDER, OR CONSTRUCTION.

Client:
HOMESTEAD LAND HOLDINGS LIMITED
80 Johnson Street
Kingston, ON, K7L 1X7

Project:
RESIDENTIAL APARTMENTS
1316 Carling Avenue, Ottawa, ON

Drawing:
POST-STORM WATER MANAGEMENT PLAN

Project No. 2300-001-25
Scale: 1:250
Orientation

Designed by: IO
Checked by: KF
Drawn by: IO
Approved by: DL

Stamp:
Drawing No. **STM-2**



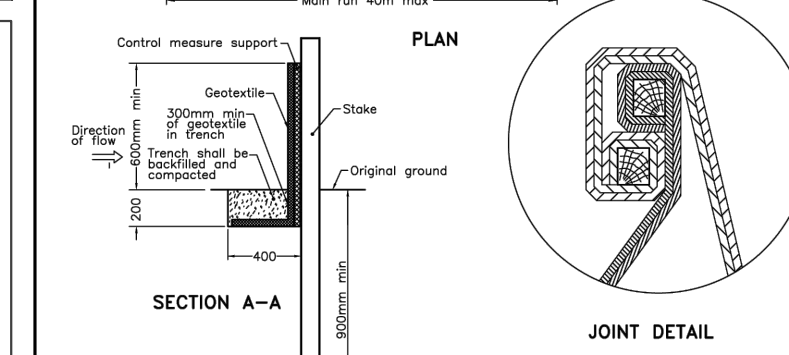
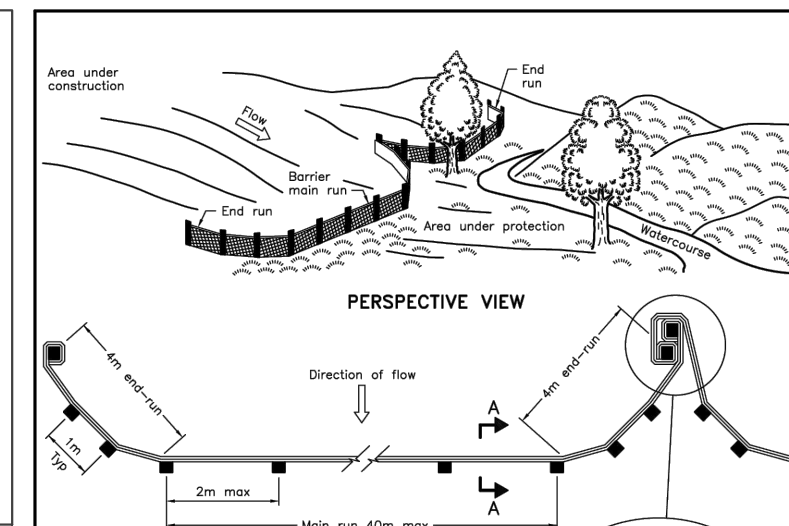
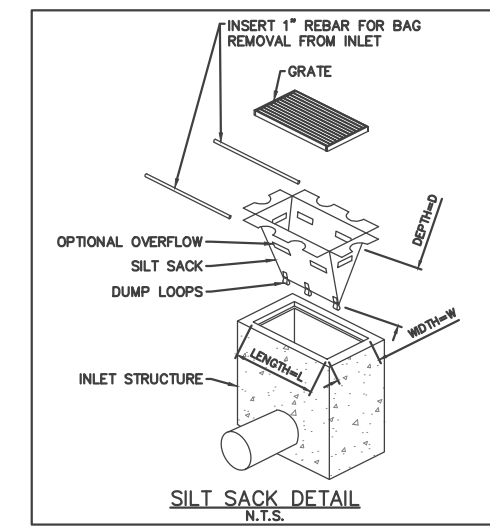
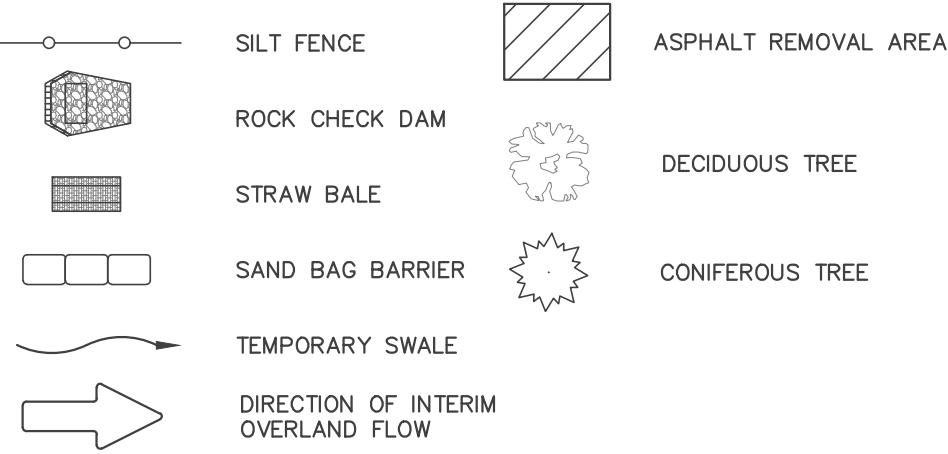
NOTES FOR SEDIMENT & EROSION CONTROL

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 30 M 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 SHALL COMPLY WITH OPSD 219.110 FOR LIGHT DUTY AND / OR OPSD 219.130 FOR HEAVY DUTY; UNLESS NOTED OTHERWISE, 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 SUGGESTED 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 WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES THE SITE SHALL BE USED. MUD MATS TO BE 300mm IN DEPTH, 6.0m WIDE BY 20.0m LONG, FIRST 10.0m TO 150mm CLEAR STONE WITH THE REMAINING 10.0m CONSISTING OF 50mm CLEAR STONE, OR MEET MUNICIPAL STANDARDS WHERE IDENTIFIED.
6. CONTRACTOR SHALL OBTAIN A CURRENT COPY AND BECOME FAMILIAR WITH OPSD 805, 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 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 INACTIVE 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 MUNICIPAL DIRECTOR OF ENGINEERING BUT SHALL NOT EXCEED (30) DAYS OR SUCH LONGER PERIOD DEEMED ADVISABLE BY THE MUNICIPAL DIRECTOR OF ENGINEERING.
10. CONTRACTOR SHALL INSTALL AND MAINTAIN CATCHBASIN SEDIMENT BARRIERS THROUGHOUT THE SITE DURING ALL CONSTRUCTION ACTIVITIES IN ORDER TO MITIGATE SEDIMENT ENTERING THE STORM STORM SEWERS.
11. NO FUEL TO BE STORED ON SITE. IN CASE OF A SPILL PLEASE CONTACT: MOECC SPILLS ACTION CENTER 1-800-268-6060.
12. SEDIMENT CONTROLS ARE TO REMAIN IN PLACE UNTIL WRITTEN DIRECTION IS RECEIVED FROM THE ENGINEER REGARDING THEIR REMOVAL.
13. EROSION AND SEDIMENT CONTROLS WILL BE INSPECTED ON AS PER MUNICIPAL REQUIREMENTS OR AFTER SIGNIFICANT RAINFALL EVENTS.

SEQUENCE OF CONSTRUCTION

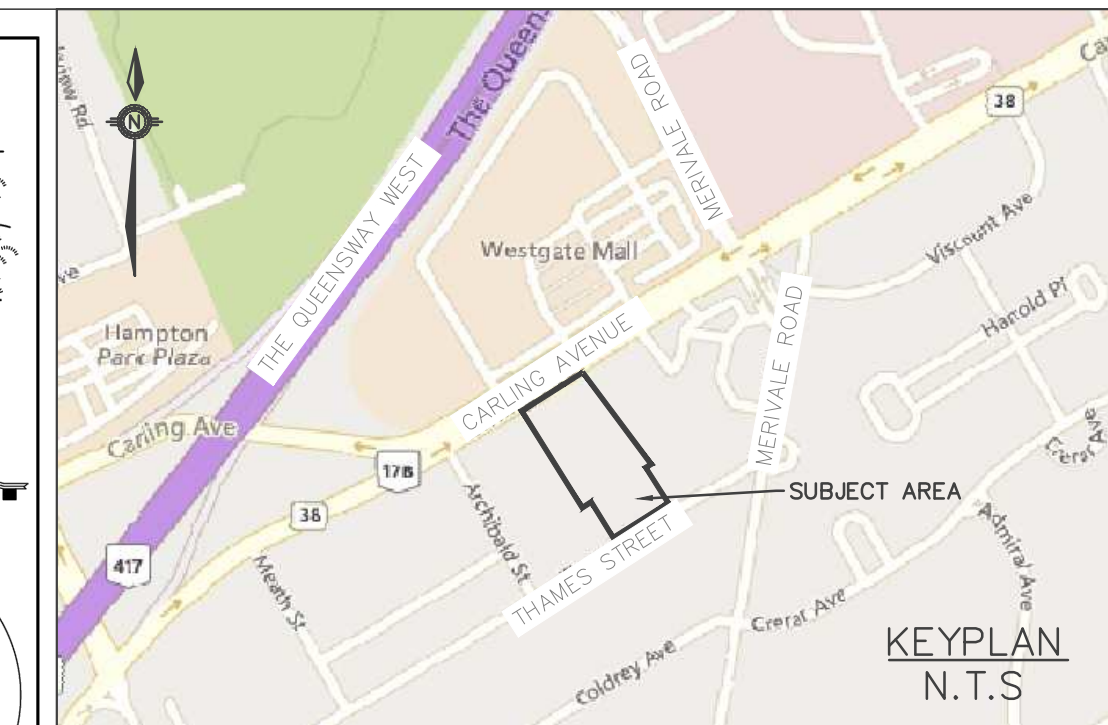
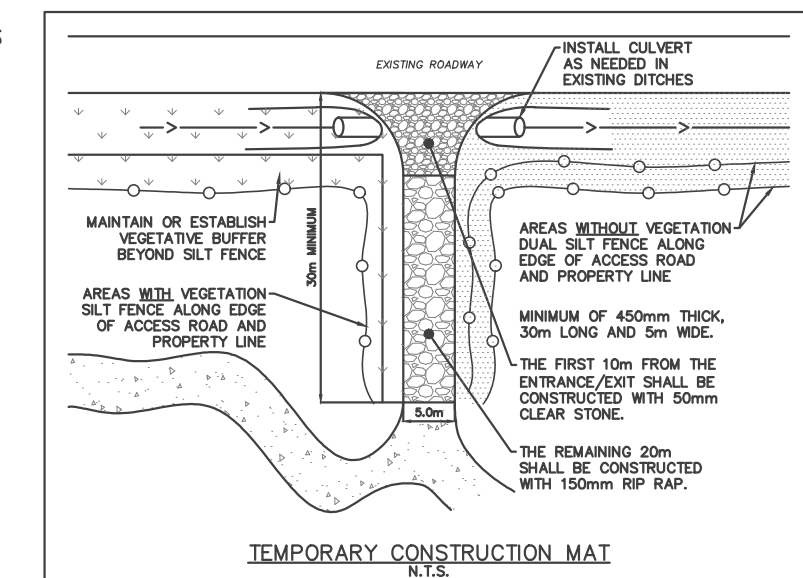
1. ENGINEER AND MUNICIPALITY TO BE NOTIFIED PRIOR TO INITIATION OF ANY ON SITE WORKS.
2. SILT FENCE AND CONSTRUCTION ACCESS MATS TO BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY WORKS ON SITE.
3. VEGETATION REMOVAL MAY COMMENCE AFTER ALL SILT FENCE IS INSTALLED AND APPROVED BY THE ENGINEER.
4. COMMENCE WITH EARTH EXCAVATION AND SITE SERVICING (TO BE REMOVED FROM SITE - NO STOCKPILE).
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.
7. ALL CONSTRUCTION VEHICLES TO ACCESS THE SITE VIA THE DESIGNATED CONSTRUCTION ENTRANCES AS SHOWN.

LEGEND



NOTE:
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING
HEAVY-DUTY
SILT FENCE BARRIER
OPSD 219.130



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This drawing may have been reduced.
0 5 10 20 30 40 50mm
0" 1/4" 1/2" 1" 1 1/2" 2"

No.	Issuance Description	YYMMDD
1.	CLIENT REVIEW	26/03/11
2.	ZONING BY-LAW AMENDMENT	26/03/27

BENCHMARK
ELEVATIONS SHOWN ARE GEODETIC, DERIVED FROM CITY OF OTTAWA VERTICAL CONTROL MONUMENT NO. N-29 (INDEX NO. 86), HAVING A PUBLISHED ELEVATION OF 77.347 METRES, AND ARE REFERRED TO THE CGVD26 GEODETIC DATUM.

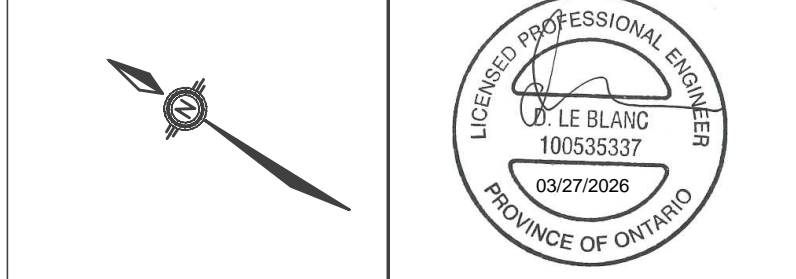
Issued For:
ZONING BY-LAW AMENDMENT
DRAWINGS ARE "ZONING BY-LAW AMENDMENT" AND ARE NOT TO BE USED FOR PERMIT APPLICATIONS, QUOTATION/TENDER, OR CONSTRUCTION.

Client:
HOMESTEAD LAND HOLDINGS LIMITED
80 Johnson Street
Kingston, ON, K7L 1X7

Project:
RESIDENTIAL APARTMENTS
1316 Carling Avenue, Ottawa, ON

Drawing:
EROSION & SEDIMENT CONTROL PLAN

Project No. 2300-001-25
Scale: 1:250
Orientation: Stamp



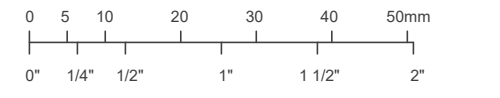
Drawing No. **ESC-1**



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No.	Issuance Description	YYMMDD
1.	CLIENT REVIEW	26/03/11
2.	ZONING BY-LAW AMENDMENT	26/03/27

BENCHMARK
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Issued For:
ZONING BY-LAW AMENDMENT
DRAWINGS ARE "ZONING BY-LAW AMENDMENT" AND ARE NOT TO BE USED FOR PERMIT APPLICATIONS, QUOTATION/TENDER OR CONSTRUCTION.

Client:
HOMESTEAD LAND HOLDINGS LIMITED
80 Johnson Street
Kingston, ON, K7L 1X7

Project:
RESIDENTIAL APARTMENTS
1316 Carling Avenue, Ottawa, ON

Drawing:
NOTES & DETAILS

Project No.	2300-001-25	Designed by:	IO	Checked by:	KF
Scale:	N/A	Drawn by:	IO	Approved by:	DL
Orientation	Stamp				



Drawing No. ND-1

1. DRAWINGS

- THE NOTES ON THIS SHEET APPLY TO ALL WORKS UNDER THIS CONTRACT UNLESS OTHERWISE NOTED ON THE SPECIFIC DETAIL DWGS.
- THE STANDARD DRAWINGS OF THE LOCAL MUNICIPALITY OF OTTAWA, ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS (OPSS) AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) CONSTITUTE PART OF THE PLANS OF THIS CONTRACT.
- ORDER OF PRECEDENCE OF STANDARD DRAWINGS IS FIRSTLY THE CITY OF OTTAWA AND SECONDLY ONTARIO PROVINCIAL STANDARD DRAWINGS.
- THE STANDARD DRAWINGS INCLUDED WITH THESE PLANS ARE PROVIDED FOR CONVENIENCE ONLY AND ARE NOT TO BE CONSTRUED TO BE A COMPLETE SET FOR THE PURPOSE OF THE CONTRACT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL RELEVANT STANDARD DRAWINGS AND SPECIFICATIONS AS REQUIRED FOR THIS CONTRACT.

2. MEASUREMENTS

- ALL DIMENSIONS ARE IN METRES, EXCEPT PIPE DIAMETERS, WHICH ARE IN MILLIMETRES, UNLESS SPECIFIED OTHERWISE.
- ALL DIMENSIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION, AND ANY DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.

3. GENERAL

- ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE CITY OF OTTAWA STANDARD SPECIFICATIONS AND DRAWINGS, THE ONTARIO PROVINCIAL STANDARD SPECIFICATIONS (OPSS), AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD), WHERE MUNICIPAL STANDARDS ARE NOT AVAILABLE, APPLICABLE ONTARIO PROVINCIAL STANDARDS SHALL APPLY.
- THE LOCATIONS OF EXISTING SERVICES AND UTILITIES SHOWN ON THESE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND SHALL OBTAIN UTILITY LOCATES FROM THE APPROPRIATE AUTHORITIES BEFORE ANY EXCAVATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND REINSTATEMENT OF ANY EXISTING UTILITIES AFFECTED BY THE WORK.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONFIRM ALL TIE-IN LOCATIONS AND ELEVATIONS TO EXISTING INFRASTRUCTURE. ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE INFORMATION SHOWN ON THE DRAWINGS SHALL BE REPORTED TO THE ENGINEER BEFORE PROCEEDING.
- NATIVE MATERIAL, SUITABLE FOR BACKFILL, SHALL BE COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY.
- GRANULAR MATERIAL, USED FOR BACKFILL, SHALL BE PLACED IN LAYERS 150mm IN DEPTH MAXIMUM AND COMPACTED TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY.
- ALL DISTURBED AREAS ARE TO BE REINSTATED TO THEIR ORIGINAL CONDITION OR BETTER, AS DETERMINED BY THE ENGINEER. ALL GRASS AND VEGETATION COVERED AREAS SHALL BE RESTORED BY PLACING 200mm OF APPROVED TOPSOIL AND NURSERY SOIL UNLESS NOTED OTHERWISE.

4. ROADWORKS

- ALL ROAD CONSTRUCTION SHALL CONFORM TO THE CITY OF OTTAWA STANDARD SPECIFICATIONS AND DETAILS UNLESS OTHERWISE NOTED.
- SUB-EXCAVATE SOFT AREAS AND FILL WITH GRANULAR B' TYPE II, COMPACTED IN 0.30 m LAYERS.
- NATIVE SUBGRADE TO BE COMPACTED TO MINIMUM 98% STANDARD PROCTOR MAXIMUM DRY DENSITY.
- ROAD SUBDRAIN SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF OTTAWA STANDARD DETAIL R1.
- THE CONTRACTOR SHALL OBTAIN A ROAD OCCUPANCY PERMIT AT LEAST 48 HOURS PRIOR TO COMMENCING WORK WITHIN THE MUNICIPAL ROAD ALLOWANCE, IF REQUIRED BY THE MUNICIPALITY. ALL WORK WITHIN MUNICIPAL RIGHT-OF-WAYS AND EASEMENTS SHALL BE INSPECTED AND APPROVED BY THE MUNICIPALITY PRIOR TO BACKFILLING.
- PAVEMENT REINSTATEMENT FOR UTILITY AND SERVICE CUTS SHALL BE COMPLETED IN ACCORDANCE WITH CITY OF OTTAWA STANDARD R10, OPSD 509.010, AND OPSS 310.
- CONCRETE CURBS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS SC1.1 AND SC1.3, USING BARRIER OR MOUNTABLE CURB AS INDICATED ON THE DRAWINGS.
- CONCRETE SIDEWALKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS SC3 AND SC1.4.
- PAVEMENT STRUCTURE TO BE CONFIRMED BY GEOTECHNICAL ENGINEER PRIOR TO START OF CONSTRUCTION
- THE PARKING LOT PAVEMENT STRUCTURE SHALL CONSIST OF THE FOLLOWING:
LIGHT DUTY: xxxmm HL3, xxxmm HL4, xxxmm GRANULAR "A", xxxmm GRANULAR "B"
HEAVY DUTY: xxxmm HL3, xxxmm HL4, xxxmm GRANULAR "A", xxxmm GRANULAR "B"

8. GRADING

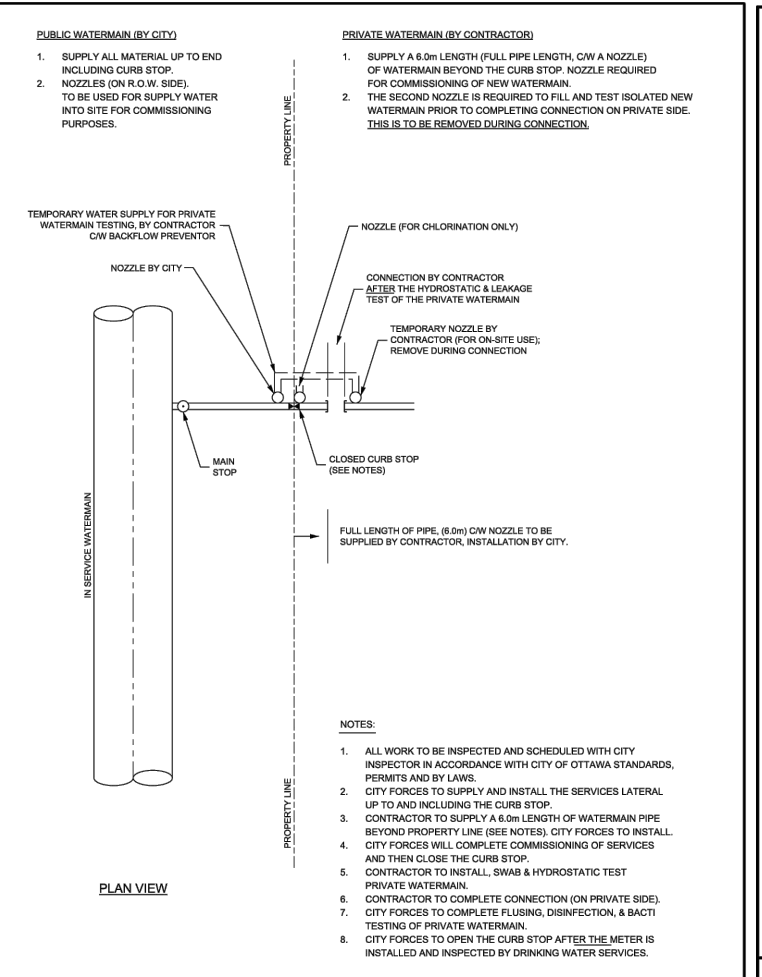
- ALL GRANULAR BASE AND SUBBASE MATERIALS SHALL BE COMPACTED TO A MINIMUM OF 98% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
- SUB-EXCAVATED SOFT AREAS AND FILL REPLACED WITH CLEAN IMPORTED GRANULAR MATERIAL, SUCH AS OPSS GRANULAR A OR GRANULAR B TYPE II, PLACED AND COMPACTED IN MAXIMUM 0.30 m LAYERS.
- ALL DISTURBED GRASSED AREAS SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER, USING SOD PLACED ON A MINIMUM OF 100 mm OF TOPSOIL. ANY RELOCATION OF TREES OR SHRUBS SHALL BE SUBJECT TO APPROVAL BY THE PROJECT LANDSCAPE ARCHITECT OR ENGINEER.
- THE MAXIMUM 100-YEAR STORM PONDING DEPTH SHALL NOT EXCEED 0.30 m.
- EMBANKMENT SLOPES SHALL NOT BE STEEPER THAN 3H:1V, UNLESS OTHERWISE SPECIFIED.
- ALL SWALES SHALL HAVE A MINIMUM DEPTH OF 0.15 m, WITH SIDE SLOPES NOT STEEPER THAN 3H:1V, UNLESS OTHERWISE NOTED. THE MINIMUM LONGITUDINAL SLOPE SHALL BE 1.5% OR 1.0% WHERE A PERFORATED SUBDRAIN IS PROVIDED.
- ALL ROOF DOWNSPOUTS SHALL DISCHARGE AT GRADE ONTO SPLASH PADS AND SHALL NOT BE CONNECTED TO THE STORM SEWER SYSTEM OR FOUNDATION DRAIN.
- TOP OF GRATE (T/G) ELEVATIONS FOR ALL STREET CATCHBASINS ARE AS SHOWN ON THE PLANS, REFER TO THE EDGE OF PAVEMENT OR GUTTERLINE ELEVATION, WHERE APPLICABLE.
- ALL RETAINING WALLS GREATER THAN 1.0 m IN HEIGHT SHALL BE DESIGNED, REVIEWED, AND STAMPED BY A STRUCTURAL ENGINEER.
- SAFETY FENCES OR RAILINGS SHALL BE PROVIDED FOR RETAINING WALLS EXCEEDING 0.60 m IN HEIGHT.
- ALL EXCESS EXCAVATED MATERIAL SHALL BE REMOVED FROM THE SITE.
- ALL CLEARING AND GRUBBING OPERATIONS SHALL BE COMPLETED BY THE CONTRACTOR. TREE REMOVAL SHALL BE COORDINATED WITH THE CONTRACT ADMINISTRATOR AND THE CITY OF OTTAWA PRIOR TO CUTTING.
- REFER TO DRAWING EC/05-1 FOR EROSION AND SEDIMENT CONTROL DETAILS.

6. WATERMANS

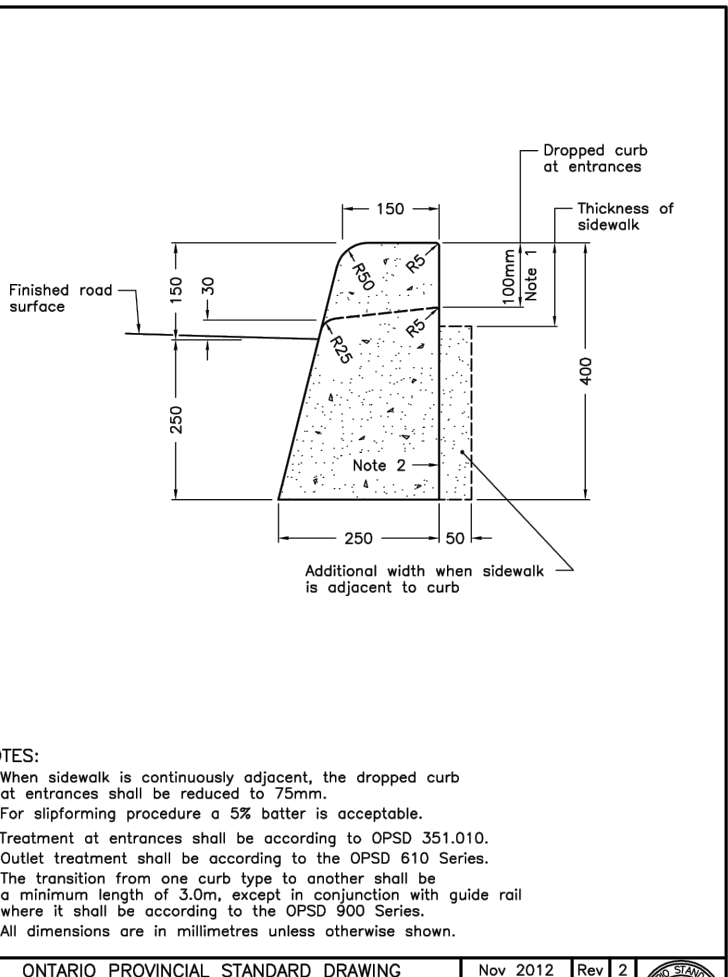
- THE CONTRACTOR SHALL INSTALL THE WATERMAIN, WATER SERVICES, CONNECTIONS, AND ASSOCIATED APPURTENANCES IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE CITY AND SHALL BE RESPONSIBLE FOR ALL ASSOCIATED COSTS, INCLUDING CONNECTIONS, INSPECTION, AND DISINFECTION BY CITY PERSONNEL.
- WATERMAIN PIPE SHALL BE PVC CL150 DR18. PIPE DEFLECTION IS NOT EXCEED 1/2 OF THE MAXIMUM DEFLECTION PERMITTED BY THE MANUFACTURER. ALL PVC WATERMANS SHALL BE INSTALLED WITH TRACER WIRE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD W36.
- WATER SERVICES TO BE TYPE K SOFT COPPER IN ACCORDANCE WITH CITY OF OTTAWA STANDARD W26, UNLESS OTHERWISE SPECIFIED. WATER SERVICES SHALL EXTEND 1.0 m BEYOND THE PROPERTY LINE, WITH A STAND POST INSTALLED AT THE PROPERTY LINE.
- FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS W18 AND W19.
- WATER VALVES SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF OTTAWA STANDARD W24.
- WATERMAIN TRENCHING, BEDDING, AND INSTALLATION SHALL BE COMPLETED IN ACCORDANCE WITH CITY OF OTTAWA STANDARD W17 UNLESS OTHERWISE SPECIFIED.
- THE MINIMUM HORIZONTAL SEPARATION BETWEEN THE WATERMAIN AND THE SANITARY/STORM SEWER IS TO BE 2.4 METERS, WHERE THIS SEPARATION CANNOT BE ACHIEVED, THERMAL INSULATION SHALL BE PROVIDED THE FULL PROPOSED CATCHBASIN ON THE WATERMAIN SIDE, IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS W22 AND W23.
- A MINIMUM OF 0.5m VERTICAL CLEARANCE BETWEEN THE WATERMAIN, SANITARY, STORM AND/OR ALL UTILITIES MUST BE KEPT WHILE STILL MAINTAINING A MINIMUM DEPTH OF COVER AT ALL TIMES. WHERE WATERMAIN CONFLICTS WITH SEWER PIPE, DEFLECT WATERMAIN HORIZONTALLY OR VERTICALLY TO OBTAIN MINIMUM COVER AND VERTICAL CLEARANCE IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS.
- CATHODIC PROTECTION SHALL BE PROVIDED FOR ALL METALLIC FITTINGS IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS W40 AND W42.
- WATERMANS SHALL BE PVC DR 18 AND INSTALLED WITH A MINIMUM COVER OF 2.4m (MEASURED FROM FINISHED GRADE TO TOP OF WATERMAIN). IF MINIMUM COVER CANNOT BE ACHIEVED, THERMAL INSULATION SHALL BE PROVIDED IN ACCORDANCE WITH CITY OF OTTAWA STANDARD W22.
- WATERMAIN SHALL BE CONSTRUCTED WITH BEDDING AS PER OPSD 802.010 (GRANULAR 'A' EMBEDMENT MATERIAL) FOR FLEXIBLE PIPES.
- COPPER WATER SERVICES 25mm DIA. SHALL BE EMBEDDED IN SAND 100mm ABOVE AND BELOW TO CONFORM TO OPSS 1104.010.
- WATERMAIN BEDDING SHALL ADHERE TO THE MUNICIPAL STANDARD AND BE PLACED MIN 150mm BELOW AND 300mm ABOVE THE WATERMAIN.
- CONCRETE THRUST BLOCKS ARE TO BE INSTALLED AT ALL TEES, BENDS, HYDRANTS, ENDS OF MAINS AND CONNECTIONS 100mm AND LARGER IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS W25.3 AND W25.4-ALL BENDS TO BE MECHANICALLY RESTRAINED.
- ALL JOINTS MUST BE MECHANICALLY RESTRAINED AND THRUST BLOCKED (OPSD 1103.010)
- WATERMAIN CROSSINGS ABOVE OR BELOW SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS W25 AND W25.2.
- PRESSURE REDUCING VALVES (PRVs), WHERE REQUIRED, SHALL BE INSTALLED IN ACCORDANCE WITH THE ONTARIO PLUMBING CODE.
- ANY EXISTING, ON SITE, WATER WELLS MUST BE DECOMMISSIONED.
- WHERE A COPPER SERVICE MUST BE JOINED UNDER THE FLOOR, THE COPPER SHALL BE JOINED BY SILVER SOLDER CONNECTION ONLY.
- ALL SERVICE PIPE MATERIAL MUST BE DUCTILE IRON AND MECHANICALLY FROM THE RESTRAINING FLANGE TO A MINIMUM OF 3 METERS OUTSIDE THE FOUNDATION. ALL DUCTILE SHALL BE POLY WRAPPED FOR ADDED PROTECTION.
- OPERATION OF FIRE HYDRANTS AND VALVES ON POTABLE WATER BY OTHER THAN MUNICIPAL CITY DEPARTMENT IS PROHIBITED.
- THE CITY WILL SWAB, CHLORINATE AND FLUSH ALL NEW SERVICES. THE CONTRACTOR SHALL PERFORM PRESSURE TEST WITH WATER FIELD COORDINATOR WITNESSING.
- EXTERNAL CONTRACTOR TO COORDINATE WITH INTERNAL CONTRACTOR ON ALL INSTALLATION, SWABBING, CHLORINATING AND TESTING WITNESSED BY WATER FIELD SERVICES COORDINATOR.
- MECHANICAL RESTRAINTS WILL BE REQUIRED ON ALL HYDRANTS. A MINIMUM OF TWO PIPE LENGTHS OF EITHER SIDE OF THE HYDRANT TEE CONNECTION. HYDRANTS TO BE PAINTED RED.
- TRACING WIRE (#12 TWO STRANDED COPPER) TO BE INSTALLED ON THE TOTAL LENGTH OF ALL PVC WATERMANS AND BROUGHT UP AT EACH HYDRANT AND CONNECTED TO FLANGE BOLT.
- SERVICE CONNECTIONS SHALL BE PLACED AT A MINIMUM SEPARATION OF 1.0m AND A MINIMUM OF 0.6m FROM JOINTS.
- CONTRACTOR TO PROVIDE PLAN FOR REMOVING CHLORINATED WATER FROM SITE.
- A CHLORINATION TAIL SHALL BE INSTALLED JUST BEHIND TAPPING VALVE TO FACILITATE CHLORINATING SERVICE, TO BE REMOVED AFTER TESTING.
- PIPE INVERTS AND OBVERTS DO NOT ACCOUNT FOR PIPE MATERIAL AND OR WALL THICKNESS.

7. SEWERS

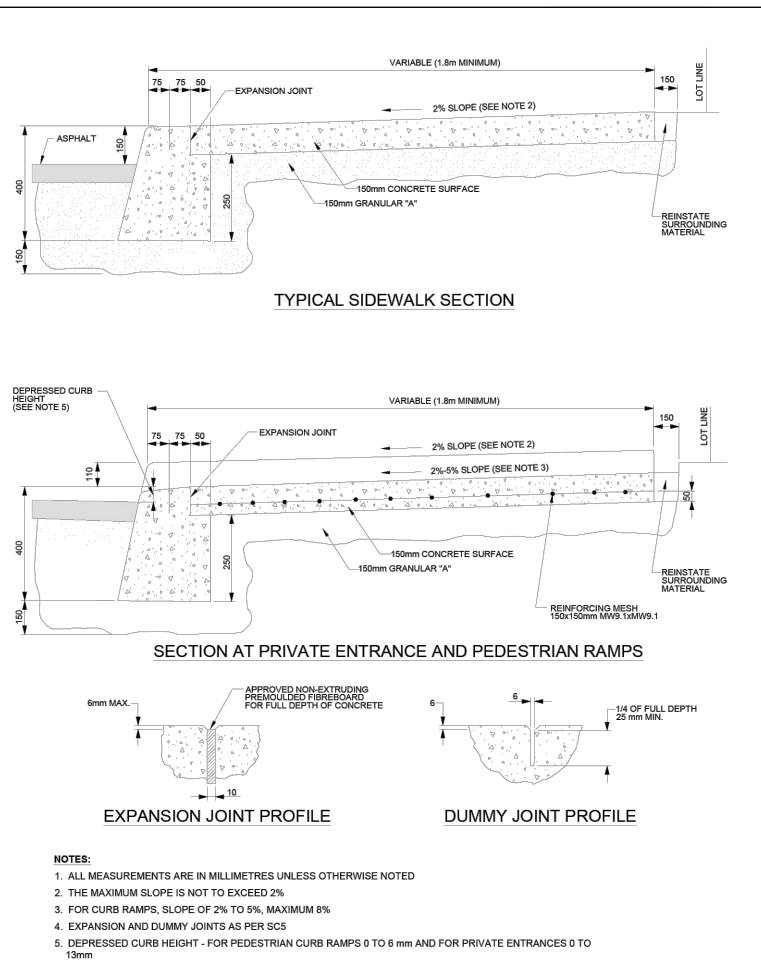
- INTERNAL SANITARY SEWERS AND LATERALS TO BE MINIMUM 150mm DIAMETER PVC DR 28 WITH JOINTS CONFORMING TO CSA STANDARD A257.3.
- SANITARY AND STORM SEWERS 375 mm DIAMETER OR SMALLER SHALL BE PVC DR35. SANITARY SEWERS LARGER THAN 375 mm SHALL BE CONCRETE PIPE CLASS 65A, 257.2 CLASS 1000, OR OPSD 807.010.
- STORM AND SANITARY MANHOLES SHALL BE 1200 mm DIAMETER PRECAST CONCRETE STRUCTURES (UNLESS OTHERWISE NOTED) WITH FRAME AND COVER AS PER CITY OF OTTAWA STANDARD S24.1, AND S25 WHERE APPLICABLE. CATCH BASIN MANHOLE FRAME AND COVERS PER S25 AND S26.1. ALL STORM MANHOLES WITH SEWERS 900 mm DIAMETER AND LARGER, OR WITH INLET/OUTLET PIPES LARGER THAN 375 mm, SHALL BE BENCHED. ALL OTHER STORM MANHOLES SHALL BE COMPLETED WITH 300 mm SUMPS PER CITY STANDARDS. SANITARY MANHOLES SHALL NOT HAVE SUMPS.
- SEWERS SHALL BE CONSTRUCTED WITH BEDDING AS PER OPSD 802.010 (GRANULAR 'A' EMBEDMENT MATERIAL), UNLESS APPROVED OTHERWISE BY THE ENGINEER.
- MANHOLE TOPS ARE TO BE SET TO FINAL GRADE.
- PIPE INVERTS AND OBVERTS DO NOT ACCOUNT FOR PIPE MATERIAL AND OR WALL THICKNESS.
- ALL SEWERS CONSTRUCTED WITH GRADES OF 0.5% OR LESS SHALL BE INSTALLED USING LASER OR APPROVED CHECKED LEVEL INSTRUMENTATION PRIOR TO BACKFILLING.
- FOR STORM SEWER INSTALLATION (EXCLUDING CATCH BASIN LEADS), THE MINIMUM DEPTH OF COVER OVER THE CROWN OF THE PIPE SHALL BE 1.0 m. FOR SANITARY SEWERS THE MINIMUM DEPTH OF COVER SHALL BE 2.5 m.
- ALL STORM AND SANITARY SERVICES SHALL BE EQUIPPED WITH APPROVED BACKWATER VALVES.
- STORM AND SANITARY SERVICE LATERALS SHALL BE SDR 28 PIPE INSTALLED AT A MINIMUM SLOPE OF 1.0%.
- CATCH BASINS SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS S1, S2, S3 WITH FRAME AND GRATE AS PER S19. CURB INLET FRAME AND GRATE PER S22 AND S23. CATCH BASIN MANHOLES FRAME AND GRATE PER S25. CATCH BASIN LEAD SHALL BE 300 mm DIAMETER AT 2.0% MINIMUM SLOPE. STREET CATCH BASIN LEADS SHALL BE 200 mm DIAMETER (PVC DR35) AT 1.0% MINIMUM SLOPE, OR CONCRETE PIPE CLASS 65A, 257.2 CLASS 1000, OR PVC DR28, AS APPROVED BY THE CONSULTANT.
- STREET CATCH BASINS SHALL BE INSTALLED WITH SUBDRAINS ALONG FOUR ORTHOGONAL DIRECTIONS OR LONGITUDINALLY WHEN PLACED ALONG A CURB, AND AT AN ELEVATION OF 300 mm BELOW SUBGRADE LEVEL.
- REAR LOT PERFORATED PIPE SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS W30 AND W31.
- CLAY SEALS SHALL BE INSTALLED PER CITY STANDARD DRAWINGS. SEALS SHALL EXTEND AT LEAST 1.5 m ALONG THE TRENCH AND SHALL EXTEND FROM THE TRENCH WALL TO THE PIPE WALL. THE SEAL SHALL CONSIST OF WELL-COMPACTED CLAY INSTALLED IN MAXIMUM 225 mm LOOSE LAYERS COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY. CLAY SEALS SHALL BE PLACED AT STRATEGIC LOCATIONS, AS DIRECTED BY THE CONTRACT ADMINISTRATOR OR AS REQUIRED BY GEOTECHNICAL INVESTIGATION.
- GRANULAR 'A' SHALL BE USED FOR PAVEMENT PATCHING AND SHALL BE COMPACTED TO A MINIMUM OF 98% SPMDD.
- THE CONTRACTOR SHALL PERFORM LEAKAGE TESTING IN ACCORDANCE WITH OPSS 410 AND OPSS 407. THE CONTRACTOR SHALL ALSO PERFORM VIDEO INSPECTION OF ALL STORM AND SANITARY SEWERS. A COPY OF THE VIDEO AND INSPECTION REPORT SHALL BE SUBMITTED TO THE CONSULTANT FOR REVIEW.
- ANY SEWER ABANDONMENT SHALL BE COMPLETED IN ACCORDANCE WITH CITY OF OTTAWA STANDARD S11.4.
- STORM SEWERS WITH LESS THAN 2.0 m COVER, AND SANITARY SEWERS WITH LESS THAN 2.5 m COVER, SHALL BE THERMALLY INSULATED IN ACCORDANCE WITH CITY OF OTTAWA STANDARD S35.



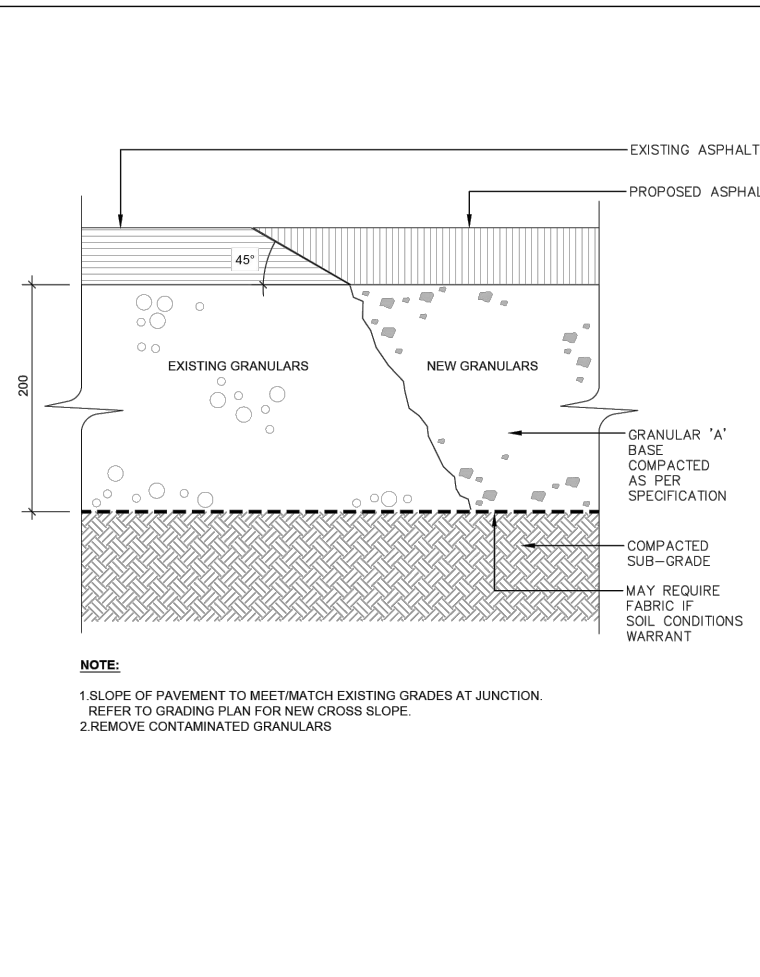
ONTARIO PROVINCIAL STANDARD DRAWING
TYPICAL PRIVATE SERVICE CONNECTION PROCEDURE
Nov 2012 Rev 2
OPSD 600.110



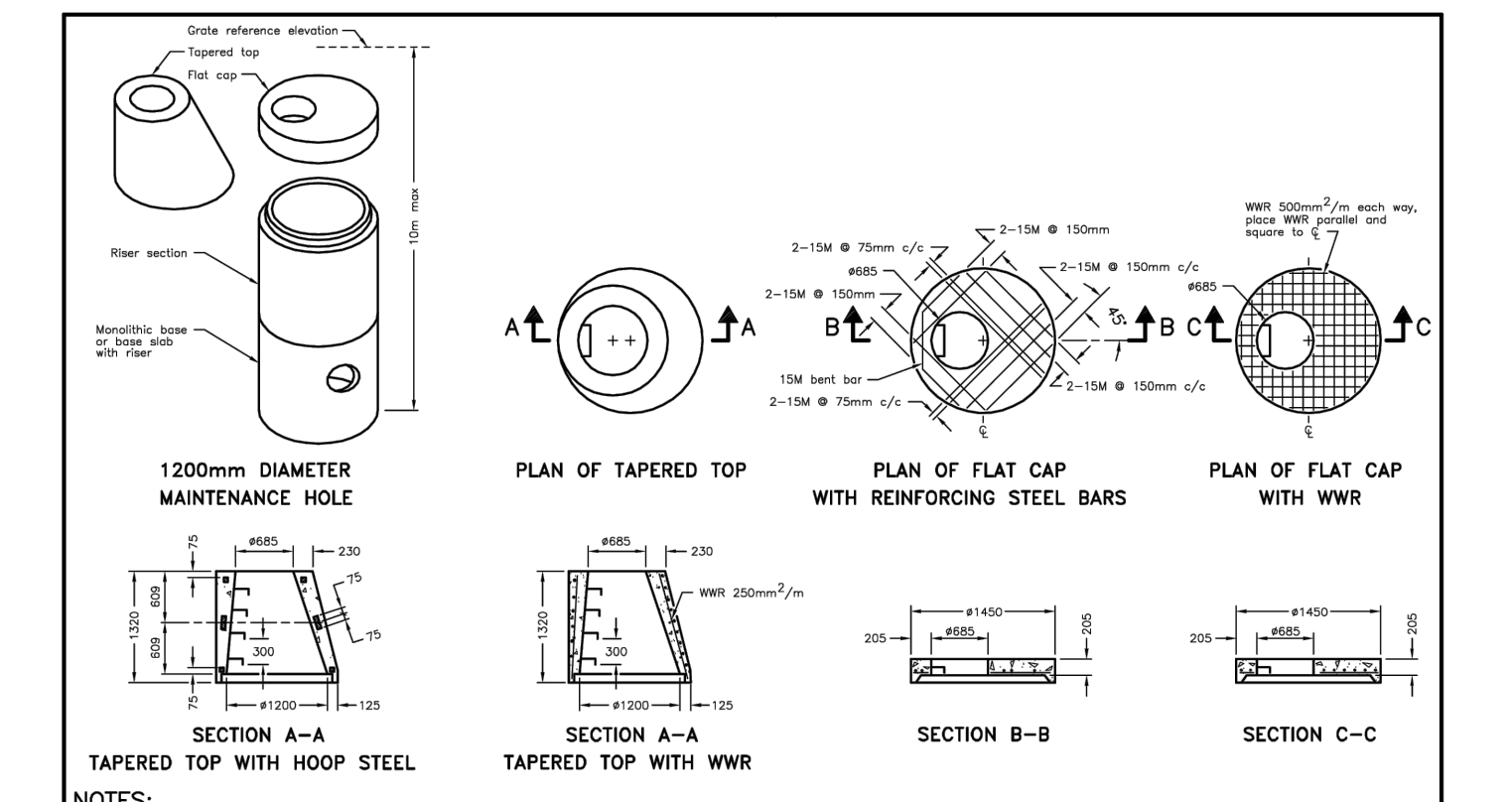
ONTARIO PROVINCIAL STANDARD DRAWING
CONCRETE BARRIER CURB
Nov 2012 Rev 2
OPSD 600.110



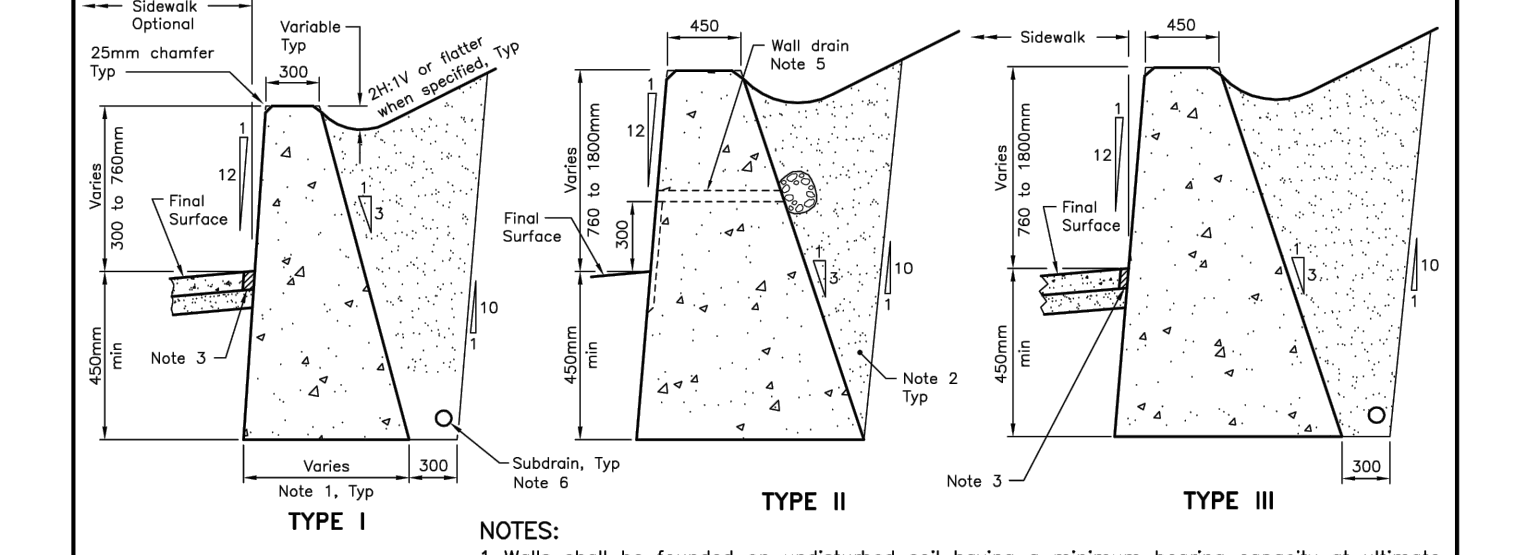
ONTARIO PROVINCIAL STANDARD DRAWING
CONCRETE BARRIER CURB WITH SIDEWALK
Nov 2012 Rev 2
OPSD 600.110



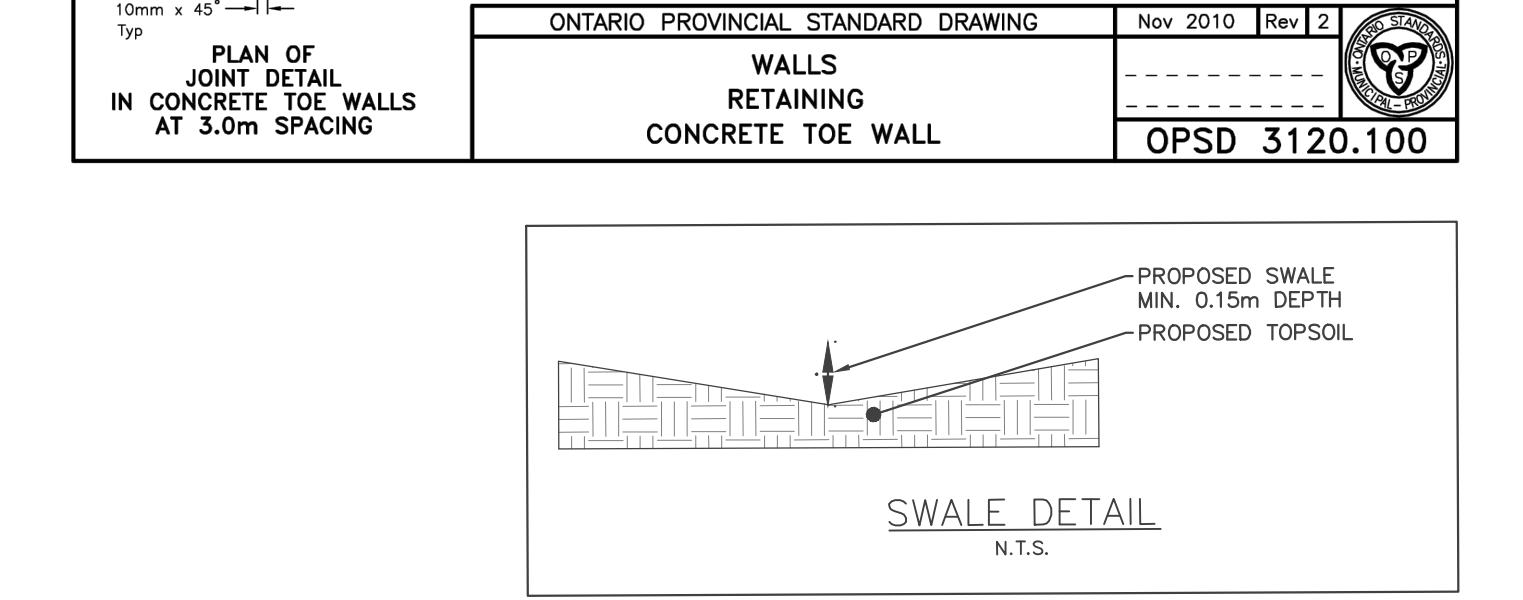
ONTARIO PROVINCIAL STANDARD DRAWING
ASPHALT REINSTATEMENT
Nov 2012 Rev 2
OPSD 600.110



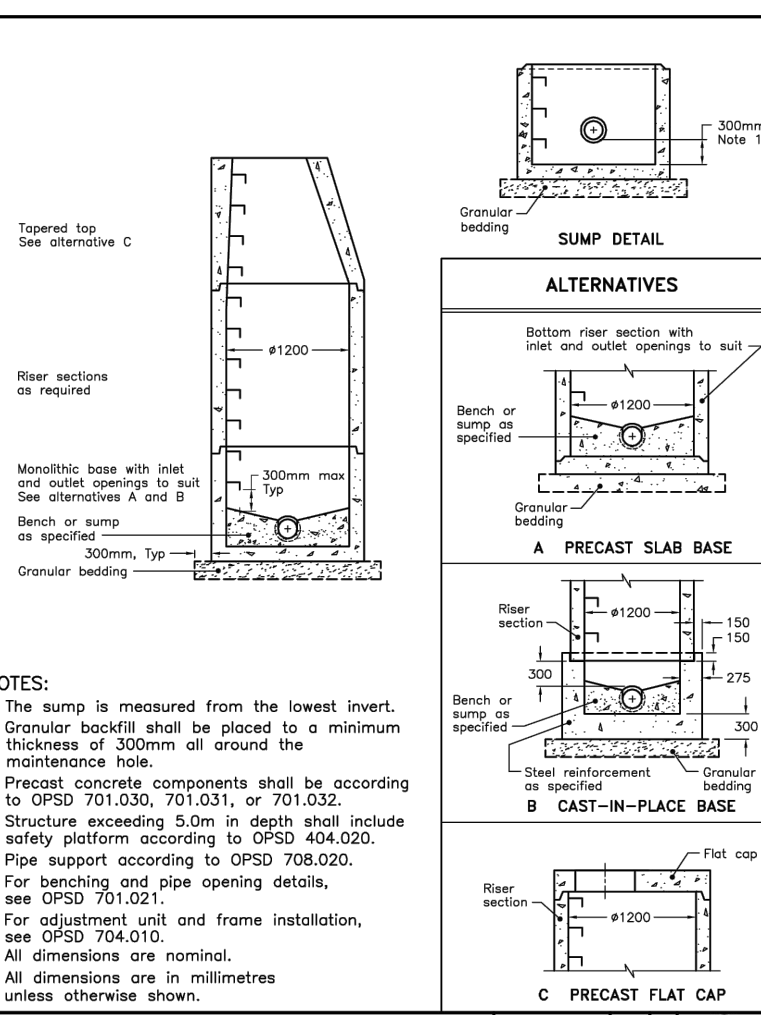
ONTARIO PROVINCIAL STANDARD DRAWING
PRECAST CONCRETE MAINTENANCE HOLE COMPONENTS
1200mm DIAMETER TAPERED TOP AND FLAT CAP
Nov 2014 Rev 4
OPSD 701.030



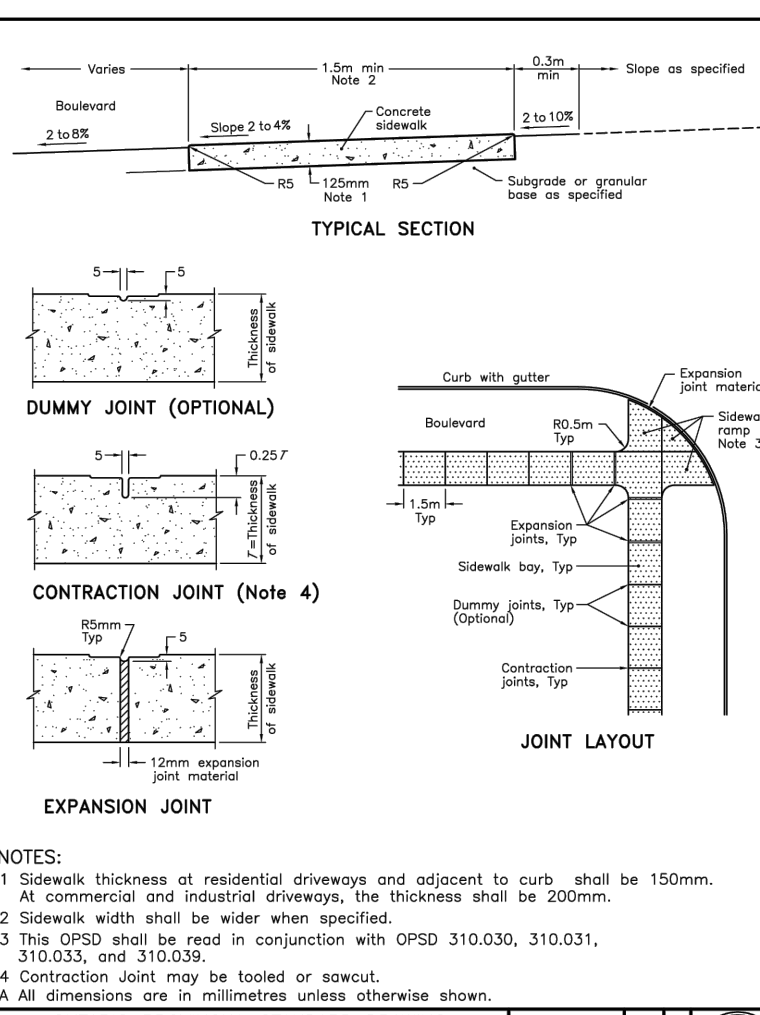
ONTARIO PROVINCIAL STANDARD DRAWING
WALLS RETAINING CONCRETE TOE WALL
Nov 2010 Rev 2
OPSD 3120.100



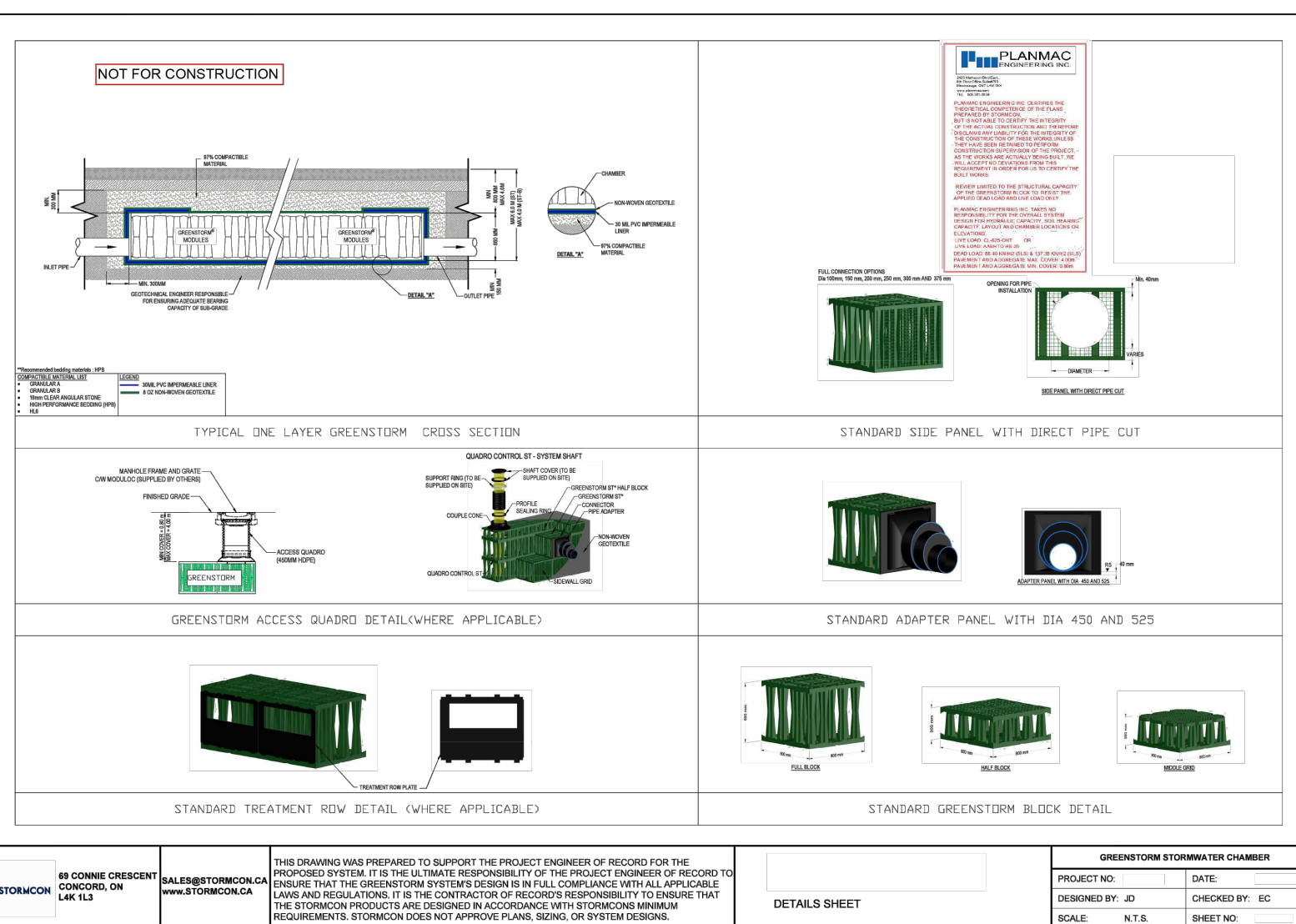
ONTARIO PROVINCIAL STANDARD DRAWING
SWALE DETAIL
N.T.S.



ONTARIO PROVINCIAL STANDARD DRAWING
PRECAST CONCRETE MAINTENANCE HOLE
1200mm DIAMETER
Nov 2014 Rev 1
OPSD 701.010



ONTARIO PROVINCIAL STANDARD DRAWING
CONCRETE SIDEWALK
Nov 2014 Rev 1
OPSD 310.010



ONTARIO PROVINCIAL STANDARD DRAWING
GREENSTORM ACCESS GUARD DETAILS (WHERE APPLICABLE)
Nov 2014 Rev 1
OPSD 310.010

<p>THIS DRAWING HAS BEEN PREPARED TO SUPPORT THE PROJECT FUNDING OF RECORD FOR THE PROJECT SYSTEM. IT IS THE TRAVEL RESPONSIBILITY OF THE PROJECT FUNDING OF RECORD TO ENSURE THAT THE SYSTEM DESIGN AND CONSTRUCTION IS IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THAT THE SYSTEM DESIGN AND CONSTRUCTION IS IN ACCORDANCE WITH ALL APPLICABLE REQUIREMENTS FROM WHICH THEY APPLY. PLEASE REFER TO THE SYSTEM DESIGN.</p>	<p>DESIGNER/FORMER/OWNER</p> <p>PROJECT NO. DATE DRAWN BY: IO CHECKED BY: IO SCALE: N.T.S. SHEET NO. 2</p>
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