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 LOCATION PLAN  
 SCALE: 1:10,000

**LEGEND**

PROPERTY LINE	---
LIMIT OF DEVELOPMENT	---
ROAD WIDENING	---
LIMIT OF RECONSTRUCTION	---
SECURITY FENCE	---
PROPOSED GRADE	○ 148.22
EXISTING GRADE	○ 148.40EX
PROPOSED GRADE (TOP OF CURB)	○ 148.53TC
PROPOSED GRADE (BOTTOM OF CURB)	○ 148.43BC
PROPOSED CATCH BASIN	○
EMERGENCY OVERLAND FLOW ROUTE	---
PROPOSED SANITARY MANHOLE	○
PROPOSED STORM MANHOLE	○
PROPOSED PERFORATED STORM ACCESS HATCH	○
PROPOSED NOISE BARRIER	---

**LIST OF DRAWINGS**

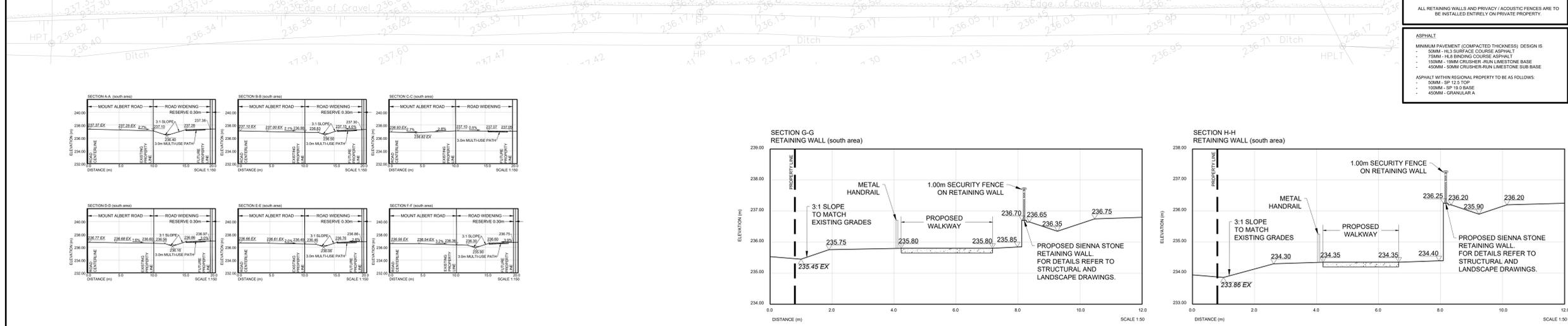
SG-01 (SITE GRADING PLAN - SOUTH SIDE)	SG-02 (SITE SERVICES PLAN - SOUTH SIDE)
EC-01 (EROSION CONTROL PLAN - SOUTH SIDE)	UP-01 (PROPOSED MUNICIPAL SANITARY SEWERS AND WATERMANS)
DD-01 (DETAIL DRAWINGS)	

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 HEMAN SHIH ARCHITECT INC.  
 28 TRISH DRIVE, RICHMOND HILL, ON L4E 5G5  
 TEL: (905) 773-8304  
 FAX: (905) 773-2718  
 WWW: WWW.HEMANSHIH.COM

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 WWW: WWW.ONTARIOSURVEYORS.COM

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 1255 BAY STREET, SUITE 500, TORONTO, ON M5R 2A6  
 TEL: (416) 591-1506  
 WWW: WWW.PLANNINGP.COM

**BENCHMARK**  
 ELEVATIONS SHOWN HEREIN ARE GEODETIC (GVD19-1978)  
 AND ARE REFERRED TO THE REGIONAL MUNICIPALITY OF YORK  
 BENCHMARK N 471-5 HAVING A PUBLISHED ELEVATION OF 224.822 METERS.



ALL RETAINING WALLS AND PRIVACY/Acoustic FENCES ARE TO BE INSTALLED ENTIRELY ON PRIVATE PROPERTY.

ASPHALT	6	ISSUED FOR ZBA, SPA & OPS	DEC 18, 2024	NM
	5	ISSUED FOR ZBA, SPA & OPS	SEP 11, 2023	NM
	4	REVISED & RE-ISSUED FOR ZBA, SPA & OPS	NOV 11, 2021	NM
	3	ISSUED FOR ZBA, SPA & OPS	JULY 05, 2021	NM
	2	ISSUED FOR ZBA, SPA & OPS	OCT 09, 2020	NM
	1	ISSUED FOR ZBA, SPA & OPS	JULY 31, 2018	NM
	NO	REVISION	DATE	BY



TOWN OF EAST GWILLIMBURY  
 REGION OF YORK FILE #SP.20.E.0272

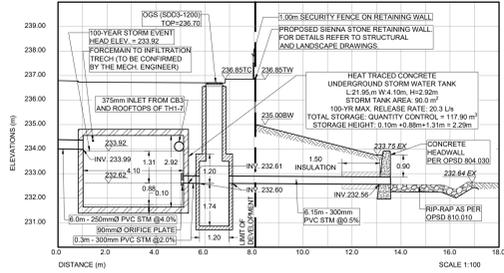
**SITE GRADING PLAN - SOUTH SIDE**  
 RESIDENTIAL USE DEVELOPMENT  
 464 MOUNT ALBERT ROAD  
 TOWN OF EAST GWILLIMBURY, ONTARIO

Team of  
**East Gwillimbury**  
 ENGINEERING DEPARTMENT

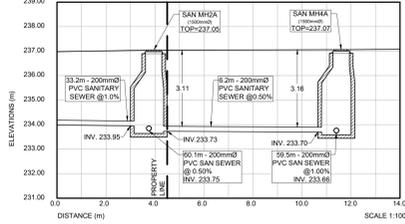


DESIGNED BY: AG	DATE: JULY 31, 2018	CHECKED BY: NM
DRAWN BY: AG	PROJECT No:	APPROVED BY: NM
SCALE: 1:150		DRAWING No:
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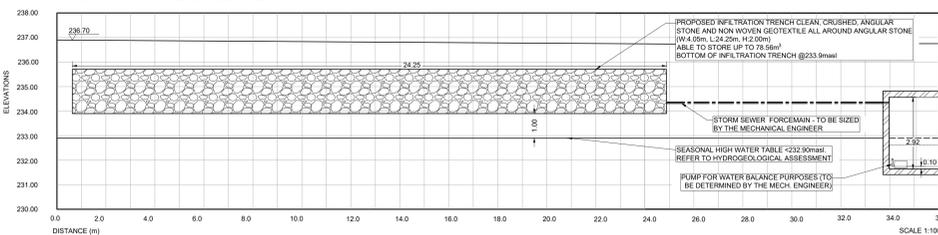
STORM TANK SECTION A-A



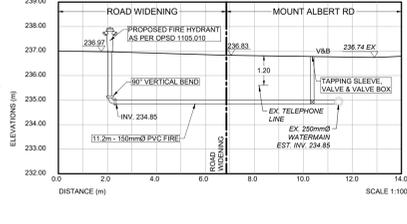
SANITARY CONNECTION SECTION B-B



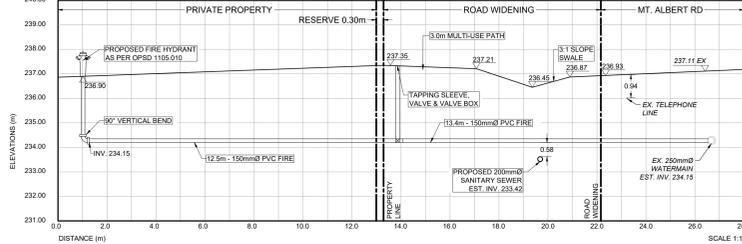
INFILTRATION TRENCH DETAIL F-F



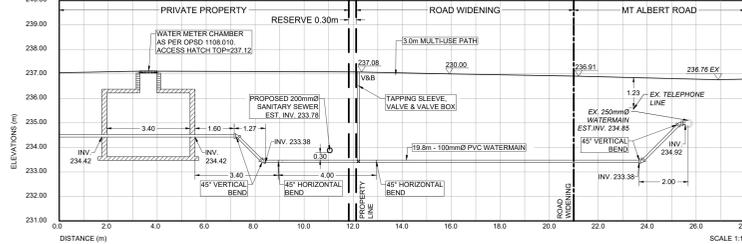
WATER CONNECTION SECTION E-E



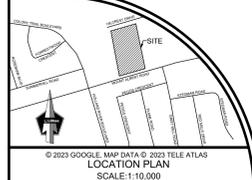
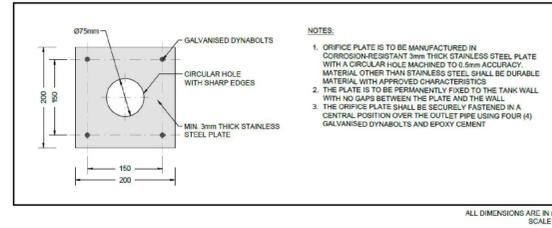
FIRE HYDRANT WATER CONNECTION SECTION C-C



WATER CONNECTION SECTION D-D



ORIFICE PLATE TYPICAL DETAIL



**LEGEND**

PROPERTY LINE	---
LIMIT OF DEVELOPMENT	---
ROAD WIDENING	---
LIMIT OF CONSTRUCTION	---
LIMIT OF RECONSTRUCTION	---
PROPOSED CATCH BASIN	○
PROPOSED SANITARY MANHOLE	○
PROPOSED STORM MANHOLE	○
PROPOSED PERFORMED STORM ACCESS HATCH	○
PROPOSED OR-CRT SEPARATOR	○
PROPOSED INSULATION	▨
PROPOSED VALVE AND BOX	□
WATER METER	○
PROPOSED STORM	---
PROPOSED SANITARY	---
PROPOSED WATER	---
EXISTING STORM	---
EXISTING SANITARY	---

**LIST OF DRAWINGS**

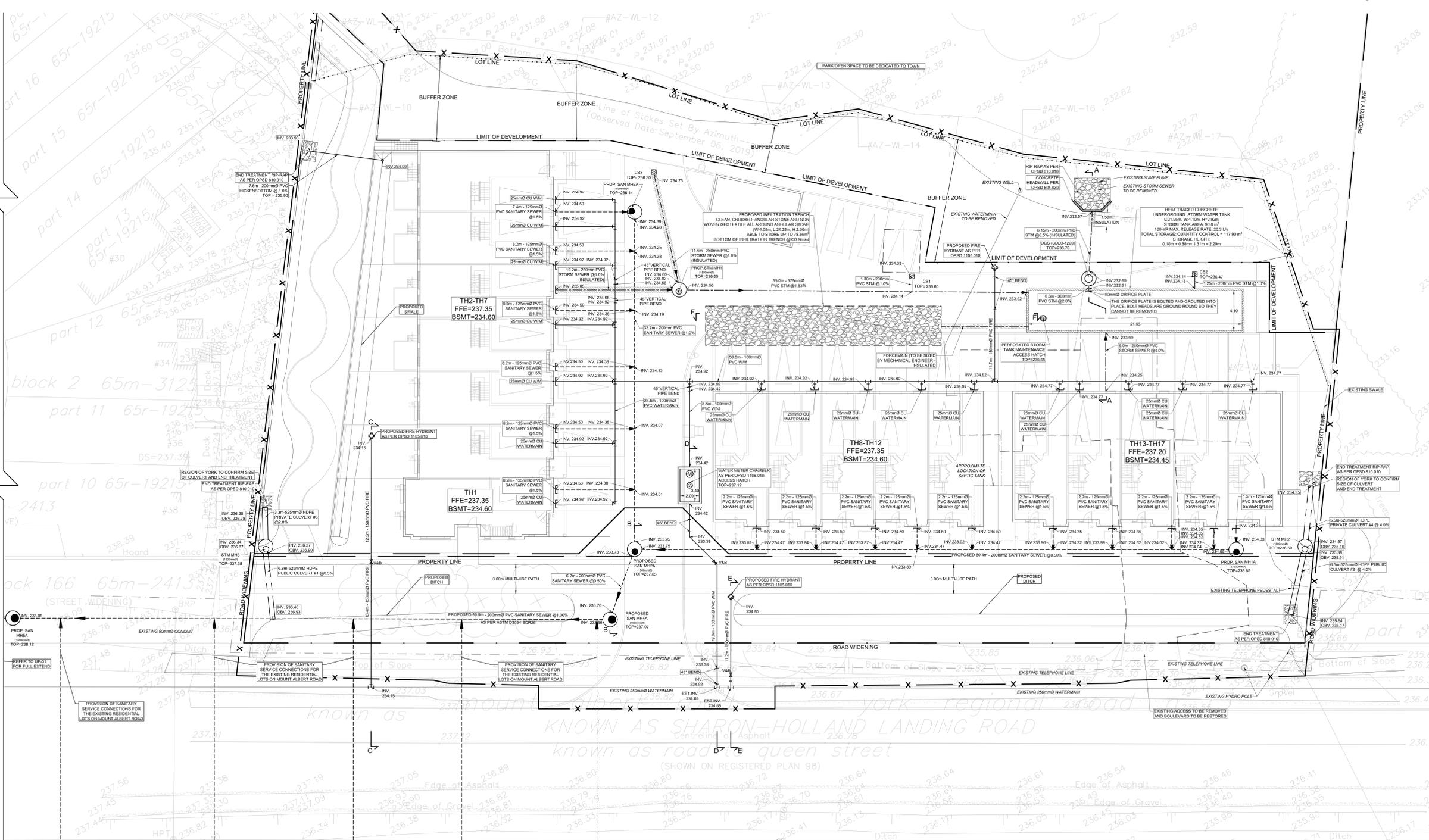
NO.	DESCRIPTION	DATE	BY
1	ISSUED FOR ZBA, SPA & DPS	DEC 18, 2024	NW
2	ISSUED FOR ZBA, SPA & DPS	SEP 11, 2023	NW
3	REVISED & RE-ISSUED FOR ZBA, SPA & DPS	NOV 11, 2021	NW
4	ISSUED FOR ZBA, SPA & DPS	JULY 06, 2021	NW
5	ISSUED FOR ZBA, SPA & DPS	OCT 09, 2020	NW
6	ISSUED FOR ZBA, SPA & DPS	JULY 31, 2019	NW
NO	REVISION	DATE	BY

**SITE PLAN INFORMATION**  
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 FAX: (905) 895-9337  
 WEB: www.onprolandsurveyors.ca

**LANDSCAPE DESIGN**  
 ELEVATIONS SHOWN HEREIN ARE GEODETIC (CGVD 1182 1978) AND ARE REFERRED TO THE REGIONAL MUNICIPALITY OF YORK BENCHMARK N 471-5 HAVING A PUBLISHED ELEVATION OF 224.822 METERS.

**BENCHMARK**  
 ELEVATIONS SHOWN HEREIN ARE GEODETIC (CGVD 1182 1978) AND ARE REFERRED TO THE REGIONAL MUNICIPALITY OF YORK BENCHMARK N 471-5 HAVING A PUBLISHED ELEVATION OF 224.822 METERS.



**TOWN OF EAST GWILLIMBURY**  
 REGION OF YORK FILE #SP.20.E.0272

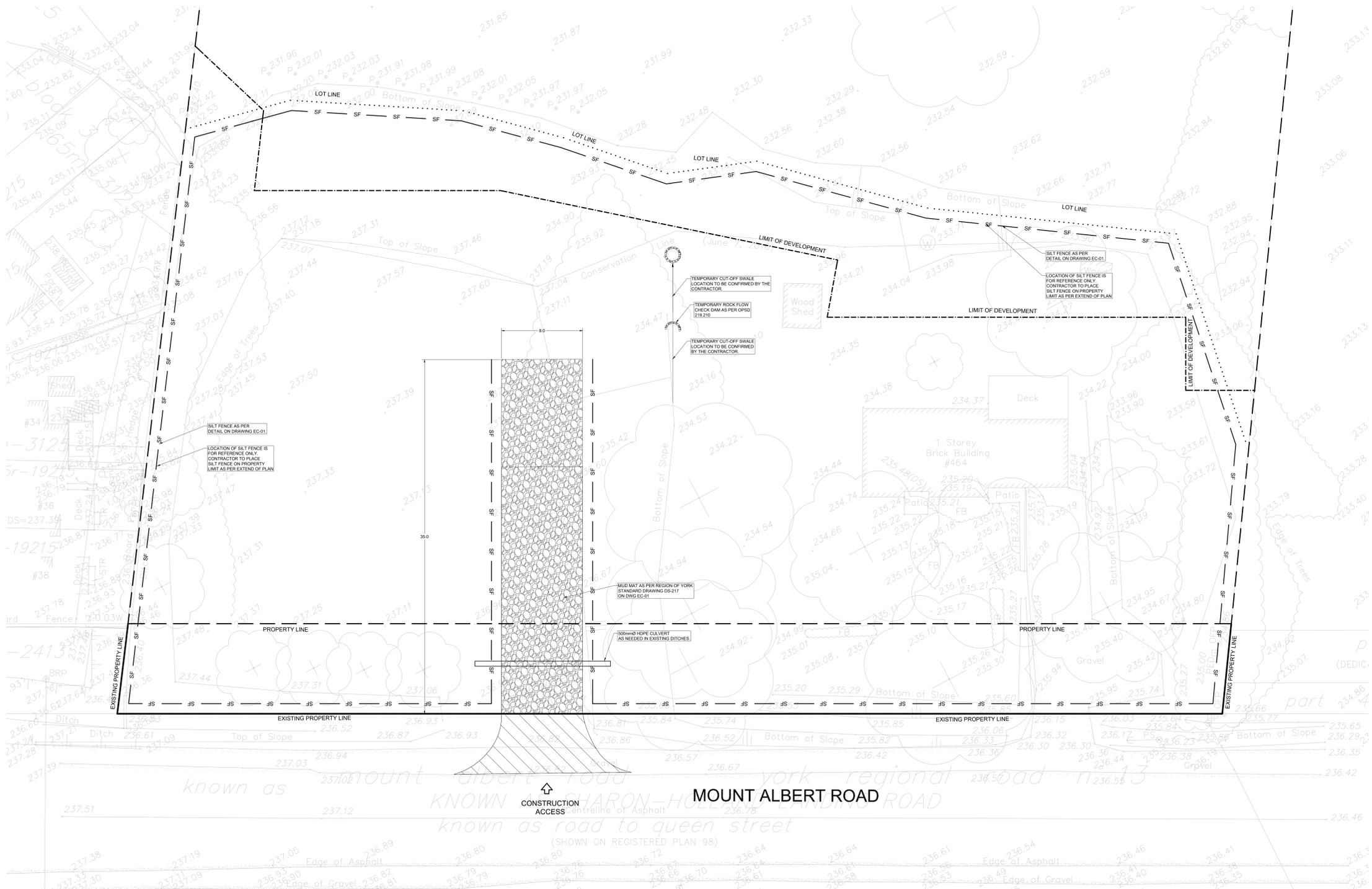
**SITE SERVICING PLAN - SOUTH SIDE**  
 RESIDENTIAL USE DEVELOPMENT  
 464 MOUNT ALBERT ROAD  
 TOWN OF EAST GWILLIMBURY, ONTARIO

**East Gwillimbury**  
 ENGINEERING DEPARTMENT

**Lithos**

151 Burnhamway Road, Toronto, Ontario, M4A 1T1

DESIGNED BY: AC	DATE: JULY 31, 2019	CHECKED BY: MW
DRAWN BY: AC	PROJECT NO:	APPROVED BY: MW
SCALE: 1:150, 1:100		DRAWING NO:
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LOCATION PLAN  
SCALE: 1:10,000

**LEGEND**

PROPERTY LINE	---
LIMIT OF DEVELOPMENT	----
LOT LINE	.....
TEMPORARY SEDIMENT CONTROL FENCE	—○—
TEMPORARY CONSTRUCTION ACCESS	⇄
TEMPORARY GRAVEL MUD MAT	▨

**LIST OF DRAWINGS**

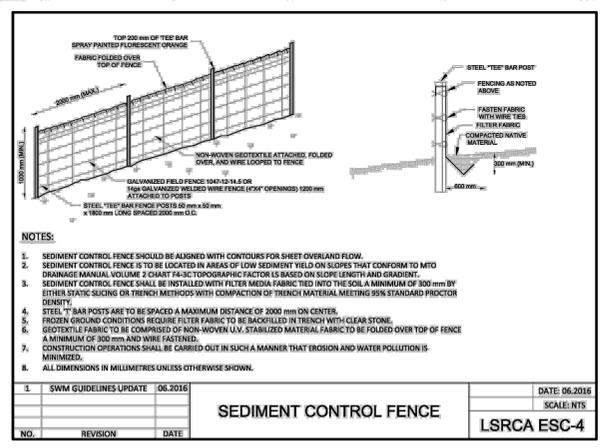
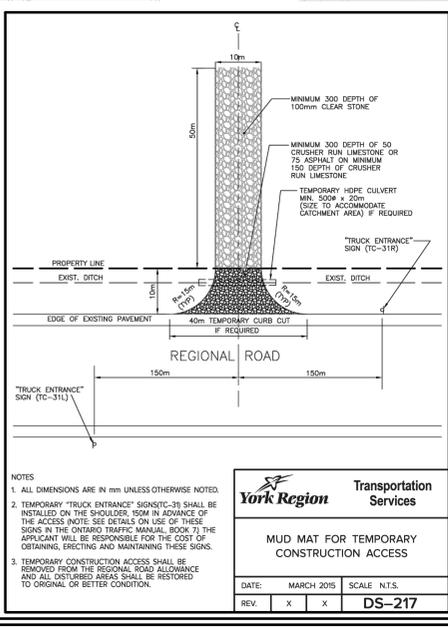
SG-01	SITE GRADING PLAN - SOUTH SIDE
SP-01	SITE SERVICES PLAN - SOUTH SIDE
EC-01	EROSION CONTROL PLAN - SOUTH SIDE
UP-01	PROPOSED MUNICIPAL SANITARY SEWERS AND WATERMAIN
DO-01	DETAIL DRAWINGS

**SITE PLAN INFORMATION**  
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1255 BAY STREET, SUITE 500, TORONTO, ON M5R 2A9  
Tel: (416) 975-1656  
Web: www.planpart.ca

**BENCHMARK**  
ELEVATIONS SHOWN HEREON ARE GEODETIC (CGVD-1928 1978) AND ARE REFERRED TO THE REGIONAL MUNICIPALITY OF YORK BENCHMARK N 471-S HAVING A PUBLISHED ELEVATION OF 224.822 METERS.



**NOTES:**

1. SEDIMENT CONTROL FENCE SHOULD BE ALIGNED WITH CONTOURS FOR SHEET OVERLAND FLOW.
2. SEDIMENT CONTROL FENCE IS TO BE LOCATED IN AREAS OF LOW SEDIMENT YIELD ON SLOPES THAT CONFORM TO MTD DRAINAGE MANUAL VOLUME 2 CHART BASIC TOPOGRAPHIC FACTOR IS BASED ON SLOPE LENGTH AND GRADING.
3. SEDIMENT CONTROL FENCE SHALL BE INSTALLED WITH FILTER MEDIA FABRIC TIED INTO THE SOIL A MINIMUM OF 300mm BY EITHER STAKE SIZING OR TRENCH METHODS WITH COMPACTED FILL MATERIAL MEETING SINK STANDARD PROCTOR DENSITY.
4. STEEL "Y" BAR POSTS ARE TO BE SPACED A MAXIMUM DISTANCE OF 2000mm ON CENTER.
5. FROZEN GROUND CONDITIONS REQUIRE FILTER FABRIC TO BE BACKFILLED IN TRENCH WITH CLEAR STONE.
6. GEOTEXTILE FABRIC TO BE COMPRISED OF NON-WOVEN U.V. STABILIZED MATERIAL FABRIC TO BE FOLDED OVER TOP OF FENCE A MINIMUM OF 100mm AND WIRE FASTENED.
7. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
8. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE SHOWN.

1	SWM GUIDELINES UPDATE	06.2016	DATE: 06.2016
			SCALE: N.T.S.
			LSRCA ESC-4

**NOTES:**

1. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE NOTED.
2. TEMPORARY "TRUCK ENTRANCE" SIGNS (TC-311) SHALL BE INSTALLED ON THE SHOULDERS 150m IN ADVANCE OF THE ACCESS (NOTE: SEE DETAILS ON USE OF THESE SIGNS IN THE ONTARIO TRAFFIC MANUAL, BOOK 7) THE APPLICANT WILL BE RESPONSIBLE FOR THE COST OF OBTAINING, ERECTING AND MAINTAINING THESE SIGNS.
3. TEMPORARY CONSTRUCTION ACCESS SHALL BE REMOVED FROM THE REGIONAL ROAD ALLOWANCE AND ALL DISTURBED AREAS SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.

**York Region Transportation Services**

**MUD MAT FOR TEMPORARY CONSTRUCTION ACCESS**

DATE: MARCH 2015 SCALE: N.T.S.

REV	x	x	DS-217
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NO	REVISION	DATE	BY
1	ISSUED FOR ZBA, SPA & DPS	SEP 11, 2023	NH
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5	ISSUED FOR ZBA, SPA & DPS	OCT 09, 2020	NH
6	ISSUED FOR ZBA, SPA & DPS	JULY 31, 2019	NH



TOWN OF EAST GWILLIMBURY  
REGION OF YORK FILE #SP.20.E.0272

**EROSION CONTROL PLAN - SOUTH SIDE**  
RESIDENTIAL USE DEVELOPMENT  
464 MOUNT ALBERT ROAD  
TOWN OF EAST GWILLIMBURY, ONTARIO



150 Burnside Road, Toronto, Ontario M4A 1Y1

DESIGNED BY: AG	DATE: JULY 31, 2016	CHECKED BY: NH
DRAWN BY: AG	PROJECT No:	APPROVED BY: NH
SCALE: 1:150		DRAWING No:

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UD22-061 EC-01



- GENERAL NOTES:**
- ALL DIMENSIONS IN METERS, EXCEPT PIPE DIAMETER, WHICH IS IN MILLIMETERS, UNLESS OTHERWISE SPECIFIED.
  - ALL SERVICES TO BE TO THE TOWN OF EAST GWILLIMBURY ENGINEERING DEPARTMENT STANDARDS AND SPECIFICATIONS AND TO THE SATISFACTION OF THE TOWN ENGINEER.
  - LOCATIONS OF EXISTING SERVICES NOT GUARANTEED. CONTRACTOR TO NOTIFY UTILITY COMPANIES FORTY-EIGHT (48) HOURS NOTICE PRIOR TO COMMENCEMENT OF ANY WORK.
  - FOR DIMENSIONS AND DETAILS NOT SHOWN, SEE STANDARD DRAWING REFERRED TO ON THE PROFILE.
  - ALL EXCAVATIONS MUST BE CARRIED OUT ACCORDING TO THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS 2007 FOR CONSTRUCTION PROJECTS.
  - SEWER AND WATERMAIN TRENCHES TO BE BACKFILLED TO TOWN OF EAST GWILLIMBURY STANDARDS AND COMPACTED TO A MINIMUM OF 98% STANDARD PROCTOR DENSITY.
  - ALL STANDARD DRAWINGS ARE TO BE OPSD MOST RECENT REVISION UNLESS OTHERWISE SPECIFIED.

**SITWORKS/ROADWORKS:**

- THE SUBGRADE MUST BE STRIPPED OF ALL TOPSOIL, LOOSE FILL AND DELETERIOUS MATERIALS AND COMPACTED TO HAVE A MINIMUM 98% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPACD).
- THE SUBGRADE MUST BE SHAPED AND CROWNED TO ALLOW DRAINAGE TO ADEQUATELY SPACES CATCHBASINS INSTALLED WITH ADEQUATELY FILTERED SUBDRAINS OR TO PERMETER SWALES OR DITCHES LEADING TO A POSITIVE OUTLET.
- ROAD SUBGRADE COMPONENTS SHOULD BE PLACED AND COMPACTED IN ACCORDANCE WITH OPS 310 TO A MINIMUM OF 92% OF THE MARSHALL MAXIMUM RELATIVE DENSITY (MRD) AND ASPHALT SAMPLES SHOULD BE TAKEN FOR COMPLIANCE TESTING.
- THE PAVEMENT GRANULAR COMPONENTS MAY THEN BE PLACED IN A MAXIMUM 300mm (12 INCH) LOOSE LIFTS AND COMPACTED TO A MINIMUM 98% OF SPACD.
- PAVEMENT THICKNESS AND COMPACTED TO BE AS FOLLOWS:

COMPACTION REQUIRED	
ITEM	COMPACTION REQUIRED (% OF STANDARD PROCTOR DENSITY)
GRANULAR "A"	MINIMUM 100%
GRANULAR "B"	MINIMUM 98%
HL-8 OR HL-8	MINIMUM 98%
HL-3	MINIMUM 98%

LIGHT DUTY CAR PARKING	
ITEM	COMPACTED THICKNESS
GRANULAR "A"	150 mm
GRANULAR "B"	225 mm
HL-8 OR HL-8	50 mm
HL-3	40 mm

HEAVY DUTY LOADING AND ACCESS ROUTES	
ITEM	COMPACTED THICKNESS
GRANULAR "A"	150 mm
GRANULAR "B"	300 mm
HL-8 OR HL-8	60 mm
HL-3	40 mm

- CURBS - URBAN - TOWN STANDARDS OPSD 600.070 (TWO-STAGE CURB)  
ESTATE RESIDENTIAL - TOWN STANDARD OPSD 600.100
- INTERSECTIONS OF CURBS AND SIDEWALKS SHALL BE DERESSED, AS PER STANDARD OPSD 310.030.
- ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER BY THE CONTRACTOR.
- SUB-DRAINS ARE TO BE INSTALLED THROUGHOUT.
- ALL NEW SIGNS WILL BE TYPE IV HIGH REFLECTIVITY SIGNS, WILL BE MADE OF STEEL AND WILL INCLUDE THE TOWN NAME AND YEAR OF MANUFACTURE ON THE BORDER OF THE SIGN. SIGN RETRO-REFLECTIVITY IS DETERMINED USING AUTO-TABLE 2A.3 (THE STANDARDS IN THE OTHER REFER TO NEW SIGN RETRO-REFLECTIVITY).
- ALL SEDIMENT CONTROL MEASURES SUCH AS SEDIMENT CONTROL, FENCE, TEMPORARY PONDS, CONSTRUCTION ACCESS MATS, SEDIMENT TRAPS, SWALES AND CHECK DAMS MUST BE INSTALLED PRIOR TO THE COMMENCEMENT OF SITE WORKS.
- SEDIMENT CONTROLS SHOULD BE INSPECTED ON A REGULAR BASIS AND AFTER EVERY SIGNIFICANT RAINFALL EVENT. REPAIRS TO SEDIMENT MEASURES MUST BE COMPLETED IN A TIMELY MANNER TO PREVENT SEDIMENT MIGRATION.
- ADDITIONAL MATERIALS SUCH AS CLEAR STONE, FILTER FABRIC, PUMPS, HOLES AND SILTS/TOO TO BE KEPT ON-SITE AT ALL TIMES FOR CONDUCTING REPAIRS TO SEDIMENT CONTROL MATERIALS.
- ALL DISTURBED AREAS LEFT INACTIVE FOR MORE THAN THIRTY DAYS ARE TO BE STABILIZED.
- THE STABILIZATION SEED MIXTURE IS TO BE APPLIED AT A MINIMUM RATE OF 25 kg/ha.
- ENGINEERING CHANGES TO THE ESC MEASURES MAY BE NEEDED AS SITE CONTINUOUS CHANGE THROUGH THE CONSTRUCTION PROCESS. THESE UPDATES MUST REFLECT BEST MANAGEMENT PRACTICES TO CONTROL SEDIMENT AND EROSION. ADDITIONAL MEASURES MAY BE REQUIRED AS DIRECTED BY AN ENGINEER THROUGHOUT THE CONSTRUCTION PROCESS.
- THE CONSTRUCTION ENTRANCE MAT IS TO BE INSTALLED AS THE FIRST STEP IN THE SITE ALTERATION PROCESS.
- SEDIMENT CONTROL FENCE IS TO BE INSTALLED DOWN-SLOPE OF ALL DISTURBED AREAS. A DOUBLE ROW OF SEDIMENT CONTROL FENCE IS TO BE INSTALLED SURROUNDING ALL NATURAL HERITAGE FEATURES AND AS DIRECTED BY THE SITE ENGINEER. SEDIMENT CONTROL FENCE IS TO BE AS PER LSRCA STANDARD ESC-01 ESC-05 AS A MINIMUM LIGHT DUTY SEDIMENT CONTROL FENCE IS NOT APPLICABLE.
- TEMPORARY SEDIMENT TRAPS ARE TO BE CONSTRUCTED AT THE BEGINNING OF THE SITE GRADING AND IF THE SITE DRAINAGE CHANGES DURING CONSTRUCTION IT MAY BE NECESSARY FOR TEMPORARY SWALES TO BE CONSTRUCTED TO DIRECT FLOW TO THE TEMPORARY SEDIMENT TRAPS DURING ROUGH GRADING AND AS CONSTRUCTION PROGRESSES.
- IF STOCKPILES ARE USED ON-SITE FOR THE STORAGE OF EXCESS MATERIAL, THEY ARE TO BE IN ACCORDANCE WITH DETAIL DRAWING LSRCA ESC-6 OR BETTER.
- ANY DEWATERING OCCURRING ON-SITE MUST BE IN ACCORDANCE WITH THE APPROVED DEWATERING PLAN. ADDITIONAL DEWATERING REQUIREMENTS MAY BE DEEMED NECESSARY AND SHALL BE IMPLEMENTED AS DIRECTED BY THE ENGINEER, CONTRACT ADMINISTRATOR OR LOCAL MUNICIPALITY.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR CLEAN-UP AND RESTORATION, INCLUDING ALL COST, DUE TO THE RELEASE OF SEDIMENT FROM THE SITE.
- LOW IMPACT DEVELOPMENT (LID) MEASURES ARE NOT TO BE USED AS SEDIMENT CONTROL DEVICES.
- ADDITIONAL SEDIMENT CONTROL DEVICES MAY BE DEEMED NECESSARY AND AS SITE CONDITIONS CHANGE AND SHALL BE INSTALLED AS DIRECTED BY THE SITE ENGINEER, CONTRACT ADMINISTRATOR OF LOCAL MUNICIPALITY.

**SANITARY SEWERS:**

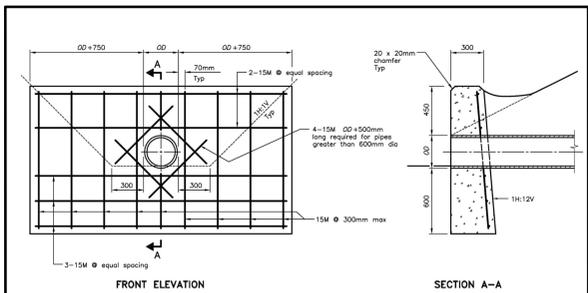
- WHEN SANITARY SEWER DOES NOT HAVE SUFFICIENT COVER (I.E. 2.3M CLEAR COVER), THE SANITARY SEWER MUST BE INSULATED AS PER OPSD 1109.030.
- PIPE:
  - ALL PVC GRAVITY SEWER PIPE SHALL CONFORM TO CSA SPECIFICATION B182.1 OR B182.2 (OR MOST RECENT REVISION) DR 35 WITH LOCK-N-RUBBER SEALING RING.
  - ALL HOUSE SERVICES SHALL BE CONNECTED TO SEWER WITH TEES. PIPE: 125 MM PVC, CW 125 X 100 SEALED CLEANOUT AT PROPERTY LINE AND EXTENSION PIPE: 1 METRES INTO PROPERTY WITH SEALED CAP. PIPE TO BE GREEN IN COLOUR, MARKER TO BE PAINTED GREEN.
  - ALL SEWER CONNECTIONS TO MANHOLES SHALL BE DONE BY MEANS OF A PVC MANHOLE ADAPTER.
  - THE BEDDING MATERIAL SHALL EXTEND TO OVERLAP OF PIPE WITH 300 MM SAND COVER ABOVE PIPE AND COMPACTION TESTS ARE REQUIRED BEFORE THE TRENCH IS BACKFILLED. BACKFILL TO BE COMPACTED TO MINIMUM 98% STANDARD PROCTOR DENSITY.
- MANHOLES:
  - MANHOLES TO BE STANDARD DRAWINGS OPSD 701.010 TO 701.015 (INCLUSIVE).
  - ALL SANITARY MANHOLES TO BE PRE-BENCHED MONOLITHIC BASE, WITH SEALED CONNECTIONS FOR ALL PIPES.
  - MANHOLE LIDS IN CUL-DE-SAC LOCATIONS AND AT ALL LOW POINTS TO BE WATER-TIGHT TYPE.
- BEDDING - SEWER BEDDING TO BE TO STANDARD DRAWING OPSD 802.033, CLASS "B" (UNLESS OTHERWISE NOTED AND APPROVED).
- MARKERS - ALL CONNECTIONS TO BE MARKED WITH 50 MM X 100 MM X 2.4 M STAKES PAINTED GREEN.
- LATERALS - ALL LATERALS SHALL BE CONSTRUCTED ACCORDING TO STANDARD DRAWINGS OPSD 1006.01 AND 1006.02.

**STORM SEWERS:**

- ALL CONCRETE PIPE SHALL HAVE SEALED JOINTS WITH GASKETS AND CLASS AS SHOWN ON DRAWINGS.
- ALL PVC GRAVITY SEWER PIPE SHALL CONFORM TO CSA SPECIFICATION B182.1 OR B182.2 (OR MOST RECENT REVISION) DR 35 WITH LOCK-N-RUBBER SEALING RING.
- WHEN STORM SEWER DOES NOT HAVE SUFFICIENT COVER (I.E. 2.3M CLEAR COVER), THE STORM SEWER MUST BE INSULATED AS PER OPSD 1109.030.
- MANHOLES:
  - MANHOLES TO BE STANDARD DRAWINGS OPSD 701.010 TO 701.015 (INCLUSIVE).
  - ALL STORM MANHOLES TO BE BENCHED THROUGHOUT TO THE CROWN OF ALL PIPES ON A VERTICAL PROJECTION FROM SPRING LINE, AS PER STANDARD DRAWINGS, EXCEPT AS OTHERWISE NOTED.
- BEDDINGS:
  - SEWER BEDDING TO BE TO STANDARD DRAWING OPSD 802.030, CLASS "B" BEDDING OR APPROVED BY THE TOWN ENGINEER.
- CATCHBASINS:
  - LEADS FOR A SINGLE CATCHBASIN TO BE 200 MM AND FOR A DOUBLE CATCHBASIN 300 MM.
  - ALL CATCHBASINS TO BE CONNECTED TO THE STORM SEWER BY TEES WHERE POSSIBLE. STANDARD DRAWINGS OPSD 705.010 TO 705.040. ALL REAR LOT CATCHBASINS TO BE INSTALLED WITHOUT SUMP BUT ALTERNATIVELY SUMP TO BE FILLED WITH CONCRETE TO OUTLET WATER.
- ALL STORM OUTFALLS THAT EMPTY INTO A DITCH OR WATERCOURSE MUST BLEND WITH THE FLOW OF SAME.
- ALL PVC JOINTS AT MANHOLES SHALL BE DONE BY MEANS OF A PVC MANHOLE ADAPTER.
- SERVICE CONNECTION 150 MM PVC, CW 150 X 125 SEALED CLEANOUT AT PROPERTY LINE AND EXTENSION PIPE 1.5 METRES INTO PROPERTY WITH SEALED CAP. PIPE TO BE WHITE IN COLOUR, MARKER TO BE PAINTED WHITE.

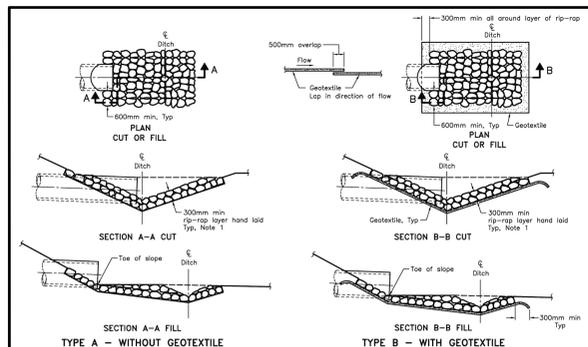
**WATERMAIN:**

- WATERMAIN TO BE AWWA C200 (THICK WALL PIPE) MINIMUM CLASS 150 (DR 18). WATERMAIN IS TO BE WRAPPED WITH 14-GAUGE STAINLESS STEEL WIRE TO BE BENCHED TO GRADE AT ALL MANHOLE VALVES AND HYDRANT SECONDARY VALVES. ALL BRIDGES ARE TO BE DONE ABOVE GRADE OR USING A MOISTURE-PROOF SEAL. TOP OF WATERMAIN SHALL BE MINIMUM 1.1 M BELOW CENTRELINE OF ROAD GRADE.
- HYDRANTS AND VALVES AS PER TOWN STANDARD DRAWING NO. OPSD 1105.010. ALL HYDRANTS ARE TO BE SELF-DRAINING UNLESS IN AREAS WITH HIGH WATER TABLE. ALL HYDRANTS ARE TO BE EQUIPPED WITH ONE (1) FOUR-INCH FERRULE FITTING WITH MANUFACTURER'S "TIGHT" FITTING. TOWN-APPROVED HYDRANTS ARE CANADA VALVE (CANVA) ONLY.
- SERVICES:
  - RESIDENTIAL - SERVICES TO BE 25 MM TYPE "N" COPPER, AS PER STANDARD DRAWING OPSD 1104.011 AND HAVE A MINIMUM COVER OF 4.8 M.
  - ALL SERVICES SHALL BE SINGLE SERVICES TO THE MIDDLE OF THE LOT.
- MARKERS - ALL CONNECTIONS TO BE MARKED WITH 50 MM X 100 MM X 2.4 M STAKES. PAINTED BLUE FOR WATER.
- ALL CURB STOPS, MAIN STOPS AND COUPLINGS ARE TO BE COMPRESSION-TYPE FITTINGS, I.E. CARBIDE SADDLE COUPLINGS SHALL BE USED. ALL SERVICES TO BE APPROVED BY THE TOWN ENGINEER COMPLETE WITH STAINLESS STEEL RODS AND BRASS PIN.
- ALL BENDS AND TEES MUST BE OPSD 1103.010 AND 1103.020 AND BLOCKED TO UNDISTURBED BENCHED MECHANICAL RESTRAINING JOINTS ARE FORWARDED THROUGH TO THE TOWN ENGINEER.
- WHEN WATERMAIN DOES NOT HAVE SUFFICIENT COVER DUE TO OTHER APPURTENANCES, I.E. CATCHBASINS, ETC. THE WATERMAIN MUST BE INSULATED IN ACCORDANCE WITH OPSD 1109.030.
- ALL MECHANICAL CONNECTIONS TO BE PROTECTED AGAINST CORROSION THROUGH THE USE OF CORROSION PROTECTIVE TREATMENT. THIS IS TO BE USED ON 10% OF ALL JOINTS IN PER CONNECTION AND ARE TO BE USED IN ADDITION TO STANDARD FASTENING NUTS NOT IN PLACE OF STANDARD NUTS.



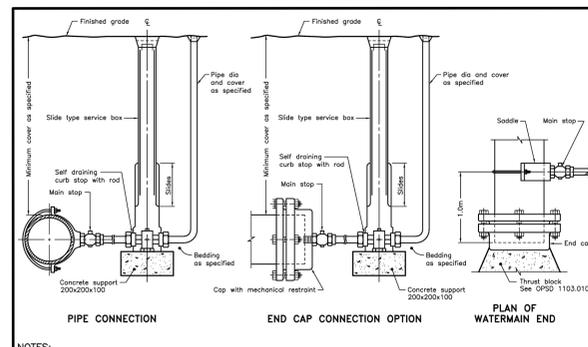
**LEGEND:**  
 OD - Outside diameter of pipe  
**NOTES:**  
 A This OPSD to be read in conjunction with OPSD 3940.150.  
 B If a steel grate is required, refer to OPSD 804.05.  
 C Class of concrete: 30MPa.  
 D Cover to reinforcing bars 70mm ± 20mm.  
 E All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2017 Rev 2  
**CONCRETE HEADWALL**  
 FOR PIPE LESS THAN 900mm DIAMETER  
 OPSD 804.030



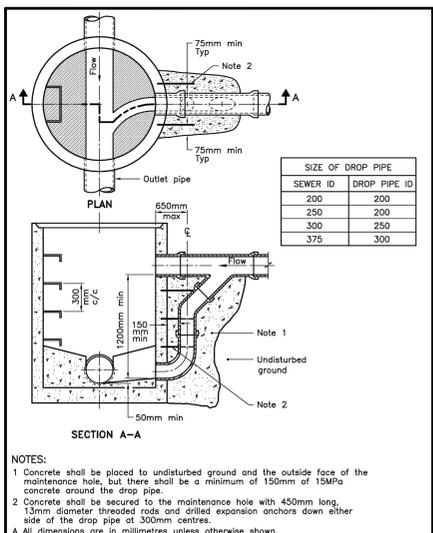
ONTARIO PROVINCIAL STANDARD DRAWING Nov 2018 Rev 3  
**GENERAL RIP-RAP LAYOUT**  
 FOR SEWER AND CULVERT OUTLETS  
 OPSD 810.010

**NOTES:**  
 1 The thickness of the rip-rap layer shall be at least 1.5 times the rip-rap mean diameter.  
 A All dimensions are in millimetres unless otherwise shown.



ONTARIO PROVINCIAL STANDARD DRAWING Nov 2018 Rev 3  
**BLOW OFF INSTALLATION**  
 OPSD 1104.030

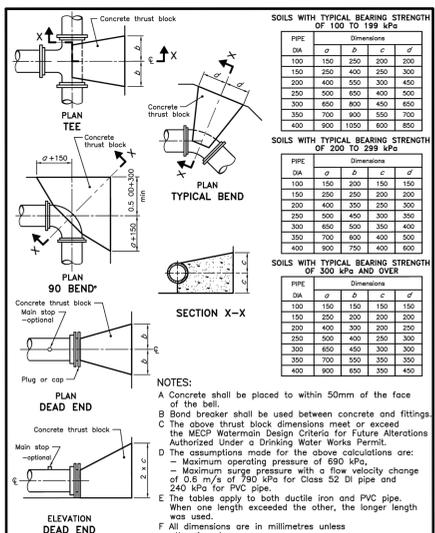
**NOTES:**  
 A Backfill material within 500mm of service box shall be native or imported, as specified.  
 B Refer to applicable regulations for end of pipe treatment.  
 C All dimensions are in millimetres unless otherwise shown.



ONTARIO PROVINCIAL STANDARD DRAWING Nov 2016 Rev 3  
**CAST-IN-PLACE**  
**MAINTENANCE HOLE DROP STRUCTURE WYE**  
 OPSD 1003.020

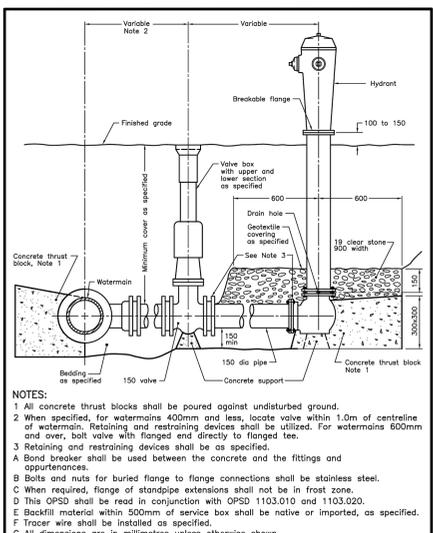
**SIZE OF DROP PIPE**

SEWER ID	DROP PIPE ID
200	200
250	250
300	250
300	250
375	300



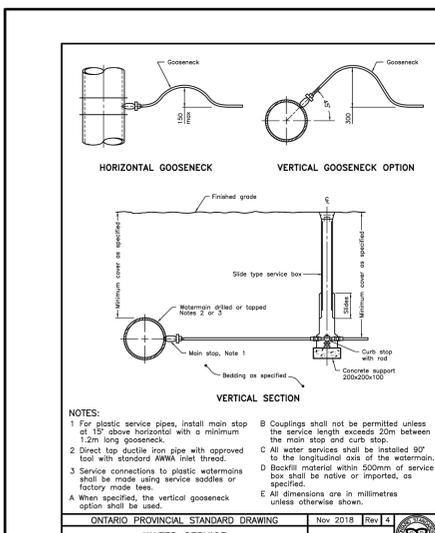
ONTARIO PROVINCIAL STANDARD DRAWING Nov 2018 Rev 3  
**CONCRETE THRUST BLOCKS**  
 FOR TEES, PLUGS, AND HORIZONTAL BENDS  
 OPSD 1103.010

**NOTES:**  
 A Concrete shall be placed to within 50mm of the face of the block.  
 B Bond breaker shall be used between concrete and fittings.  
 C The above thrust block dimensions meet or exceed the MFCP 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 0.5 m/s of 780 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.



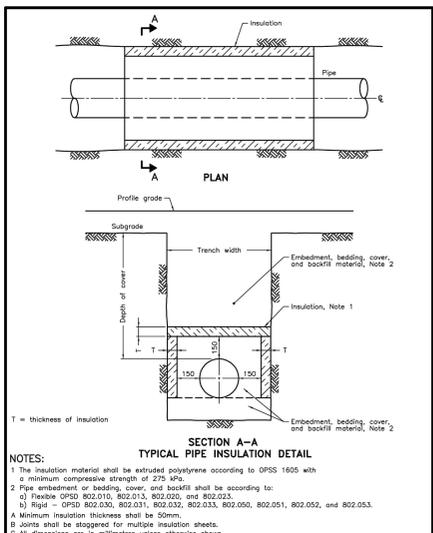
ONTARIO PROVINCIAL STANDARD DRAWING Nov 2018 Rev 3  
**HYDRANT INSTALLATION**  
 OPSD 1105.010

**NOTES:**  
 1 All concrete thrust blocks shall be poured against undisturbed ground.  
 2 When specified, for watermains 400mm and less, locate valve within 1.0m of centreline of watermain. Retaining and restraining devices shall be utilized. For watermains 600mm and over, ball valve with flanged end directly to flanged tee.  
 3 Retaining and restraining devices shall be as specified.  
 A Bond breaker shall be used between the concrete and the fittings and appurtenances.  
 B Bolts and nuts for buried flange to flange connections shall be stainless steel.  
 C When required, flange of standpipe extensions shall not be in frost zone.  
 D This OPSD shall be read in conjunction with OPSD 1103.010 and 1103.020.  
 E Backfill material within 500mm of service box shall be native or imported, as specified.  
 F Tracer wire shall be installed as specified.  
 G All dimensions are in millimetres unless otherwise shown.



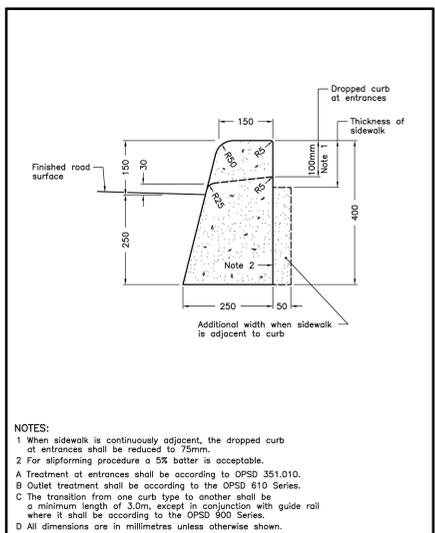
ONTARIO PROVINCIAL STANDARD DRAWING Nov 2018 Rev 2  
**WATER SERVICE CONNECTION**  
 19 and 25mm DIAMETER SIZES  
 OPSD 1104.010

**NOTES:**  
 1 For plastic service pipes, install main stop of 15 above horizontal with a minimum 1.2m long gooseneck.  
 2 Direct tap ductile iron pipe with approved tool with standard AWWA inlet thread.  
 3 Service connections to plastic watermains shall be made using service boxes or factory made tees.  
 A When specified, the vertical gooseneck option shall be used.  
 B Couplings shall not be permitted unless the service length exceeds 20m between the main stop and curb stop.  
 C All water services shall be installed 90° to the longitudinal axis of the watermain.  
 D Backfill material within 500mm of service box shall be native or imported, as specified.  
 E All dimensions are in millimetres unless otherwise shown.



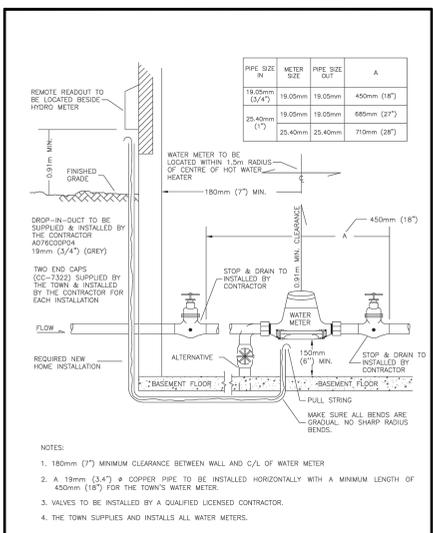
ONTARIO PROVINCIAL STANDARD DRAWING Nov 2015 Rev 0  
**INSULATION FOR SEWERS AND WATERMANS IN SHALLOW TRENCHES**  
 OPSD 1109.030

**NOTES:**  
 1 The insulation material shall be extruded polystyrene according to OPSD 1605 with a minimum compressive strength of 275 kPa.  
 2 Pipe embedment or bedding, cover, and backfill shall be according to:  
 a) Flexible OPSD 802.010, 802.013, 802.020, and 802.023.  
 b) Rigid OPSD 802.030, 802.031, 802.032, 802.033, 802.050, 802.051, 802.052, and 802.053.  
 C Minimum insulation thickness shall be 50mm.  
 D Soils shall be staggered for multiple insulation sheets.  
 E All dimensions are in millimetres unless otherwise shown.



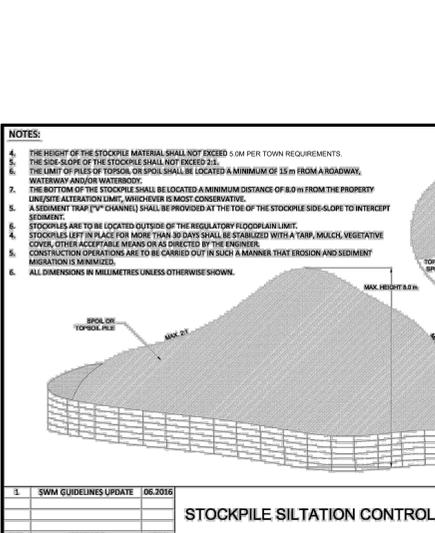
ONTARIO PROVINCIAL STANDARD DRAWING Nov 2012 Rev 2  
**CONCRETE BARRIER CURB**  
 OPSD 600.110

**NOTES:**  
 1 When sidewalk is continuously adjacent, the dropped curb at entrances shall be reduced to 75mm.  
 2 For sloping procedure a 5% batter is acceptable.  
 A Treatment at entrances shall be according to OPSD 351.010.  
 B Outlet treatment shall be according to the OPSD 610 Series.  
 C The transition from one curb type to another shall be a minimum length of 3.0m, except in conjunction with guide rail where it shall be according to the OPSD 900 Series.  
 D All dimensions are in millimetres unless otherwise shown.



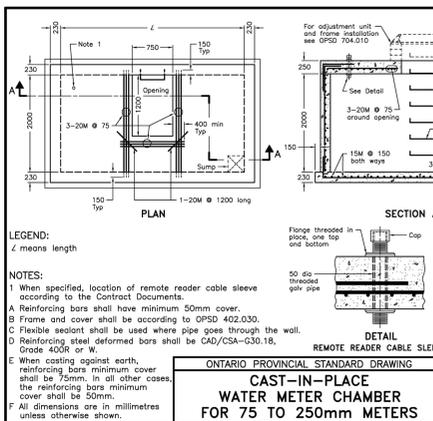
ONTARIO PROVINCIAL STANDARD DRAWING Nov 2012 Rev 2  
**TYPICAL RESIDENTIAL WATER METER INSTALLATION**  
 OPSD 600.110

**NOTES:**  
 1. 180mm (7") MINIMUM CLEARANCE BETWEEN WALL AND C/L OF WATER METER  
 2. a) 19mm (3/4") COPPER PIPE TO BE INSTALLED HORIZONTALLY WITH A MINIMUM LENGTH OF 450mm (18") FOR THE QUARTER WATER METER.  
 3. VALVES TO BE INSTALLED BY A QUALIFIED LICENSED CONTRACTOR.  
 4. THE TOWN SUPPLIES AND INSTALLS ALL WATER METERS.



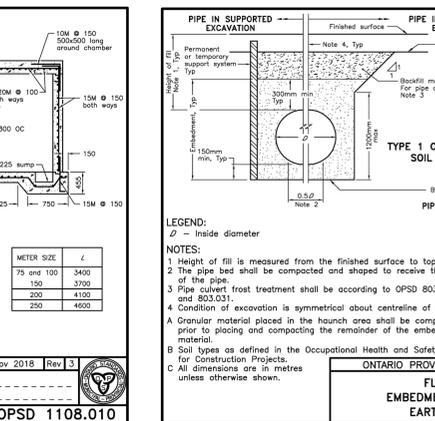
ONTARIO PROVINCIAL STANDARD DRAWING Nov 2018 Rev 0  
**STOCKPILE SILTATION CONTROL**  
 LSRCA ESC-6

**NOTES:**  
 4. THE HEIGHT OF THE STOCKPILE MATERIAL SHALL NOT EXCEED 5.0M PER TOWN REQUIREMENTS.  
 5. THE SIDE SLOPE OF THE STOCKPILE SHALL NOT EXCEED 2:1.  
 6. THE LIMIT OF PILES OF TOPSOIL OR SOIL SHALL BE LOCATED A MINIMUM OF 15m FROM A ROADWAY, WATERWAY AND/OR WATERCOURSE.  
 7. THE BOTTOM OF THE STOCKPILE SHALL BE LOCATED A MINIMUM DISTANCE OF 8.0m FROM THE PROPERTY LINE/ALTERATION LIMIT, WHICHEVER IS MOST CONSERVATIVE.  
 8. A SEDIMENT TRAP (V" CHANNEL) SHALL BE PROVIDED AT THE TOE OF THE STOCKPILE SIDE-SLOPE TO INTERCEPT SEDIMENT.  
 9. STOCKPILES ARE TO BE LOCATED OUTSIDE OF THE REGULATORY FLOODPLAIN LIMIT.  
 10. STOCKPILES LEFT IN PLACE FOR MORE THAN 90 DAYS SHALL BE STABILIZED WITH A TARP, MULCH, VEGETATIVE COVER, OTHER ACCEPTABLE MEANS OR AS DIRECTED BY THE ENGINEER.  
 11. CONSTRUCTION OPERATIONS ARE TO BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND SEDIMENT MIGRATION IS MINIMIZED.  
 12. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE SHOWN.



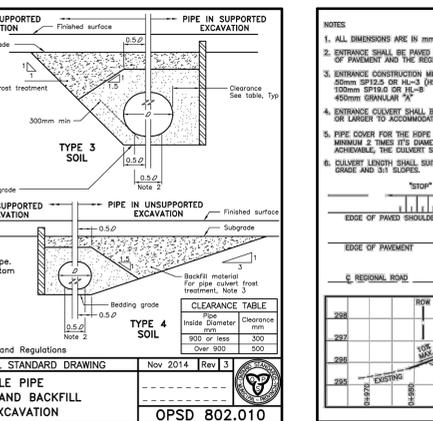
ONTARIO PROVINCIAL STANDARD DRAWING Nov 2018 Rev 3  
**CAST-IN-PLACE WATER METER CHAMBER FOR 75 TO 250mm METERS**  
 OPSD 1108.010

**NOTES:**  
 1 When specified, location of remote reader cable sleeve according to the Contract Documents.  
 A Reinforcing bars shall have minimum 50mm cover.  
 B Frame and cover shall be according to OPSD 402.030.  
 C Flexible bedjoint shall be used where pipe goes through the wall.  
 D Reinforcing steel deformed bars shall be C40/CSA-1030.18.  
 E Grade 400R or W.  
 F When casting against earth, reinforcing bars minimum cover shall be 75mm. In all other cases, the reinforcing bars minimum cover shall be 50mm.  
 G All dimensions are in millimetres unless otherwise shown.



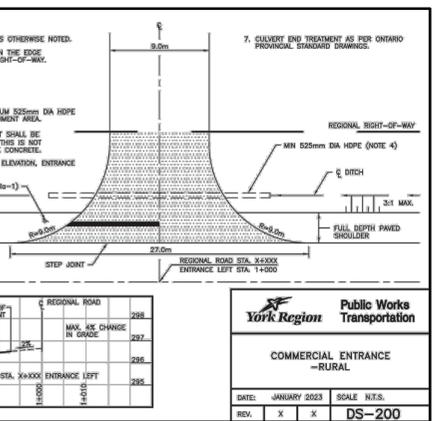
ONTARIO PROVINCIAL STANDARD DRAWING Nov 2014 Rev 3  
**FLEXIBLE PIPE EMBEDMENT AND BACKFILL IN EARTH EXCAVATION**  
 OPSD 802.010

**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.  
 A Granular material placed in the haunch area shall be compacted prior to placing and composing the remainder of the embedment.  
 B Soil types as defined in the Occupational Health and Safety Act and Regulations.  
 C All dimensions are in metres unless otherwise shown.



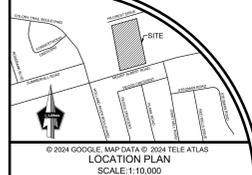
ONTARIO PROVINCIAL STANDARD DRAWING Nov 2014 Rev 3  
**CLEARANCES TABLE**  
 OPSD 802.010

METER SIZE	CL
75 and 100	3400
150	3700
200	4100
250	4500



ONTARIO PROVINCIAL STANDARD DRAWING Nov 2014 Rev 3  
**COMMERCIAL ENTRANCE - RURAL**  
 OPSD 802.010

**NOTES:**  
 1. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE NOTED.  
 2. ENTRANCE SHALL BE PAVED BETWEEN THE EDGE OF PAVEMENT AND THE REGIONAL RIGHT-OF-WAY.  
 3. ENTRANCE CURB/RETAINING MINIMUMS: 50mm SP15.0 OR HL-3 (HE) 150mm SP15.0 OR HL-3 (HE) 450mm GRANULAR "A"  
 4. ENTRANCE CURB SHALL BE MINIMUM 525mm DIA HOPE  
 5. PIPE COVER FOR THE HOPE CULVERT SHALL BE MINIMUM 2 TIMES ITS DIAMETER, IF THIS IS NOT ACHIEVABLE, THE COVER SHALL BE CONCRETE.  
 6. CULVERT LENGTH SHALL SUIT DITCH ELEVATION, ENTRANCE GRADE AND 5% SLOPE.  
 7. CULVERT END TREATMENT AS PER ONTARIO PROVINCIAL STANDARD DRAWINGS.



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 LOCATION PLAN  
 SCALE: 1:10,000

- LIST OF DRAWINGS**
- SE-01 (SITE GRADING PLAN - SOUTH SIDE)
  - SE-01 (SITE SERVICES PLAN - SOUTH SIDE)
  - ES-01 (EROSION CONTROL PLAN - SOUTH SIDE)
  - UP-01 (PROPOSED MUNICIPAL SANITARY SEWERS AND WATERMANS) DD-01 (DETAIL DRAWINGS)

**SITE PLAN INFORMATION**

HEMAN SHIH ARCHITECT INC.  
 26 TRISH DRIVE, RICHMOND HILL, ON L4E 0C5  
 TEL: (905) 734-0064  
 FAX: (905) 732-2718  
 WWW: WWW.HEMANSHI.COM

**SURVEY INFORMATION**

LLOYD & PURCELL LTD.  
 1228 CORMACK STREET, UNIT 28, NEWMARKET, ON L8Y 8T1  
 TEL: (905) 856-6416  
 FAX: (905) 856-8987  
 WWW: WWW.ONTARIOSURVEYSURV.COM

**LANDSCAPE DESIGN**

THE PLANNING PARTNERSHIP  
 1255 BAY STREET, SUITE 500, TORONTO, ON M5R 2A9  
 TEL: (416) 975-1056  
 WWW: WWW.PLANNING.PA

**BENCHMARK**

ELEVATIONS SHOWN HEREIN ARE GEODETIC (CGVD-1108/1978) AND ARE REFERRED TO THE REGIONAL MUNICIPALITY OF YORK BENCHMARK R 471-15 HAVING A PUBLISHED ELEVATION OF 224.822 METERS.

NO.	REVISION	DATE	BY
1	ISSUED FOR ZBA, SPA & DPS	DEC 18, 2024	NM
2	ISSUED FOR ZBA, SPA & DPS	SEP 11, 2023	NM
3	REVISIONS RE-ISSUED FOR ZBA, SPA & DPS	NOV 11, 2021	NM
4	ISSUED FOR ZBA, SPA & DPS	JULY 05, 2021	NM
1	ISSUED FOR ZBA, SPA & DPS	OCT 09, 2020	NM
2	ISSUED FOR ZBA, SPA & DPS	JULY 31, 2018	NM
NO.	REVISION	DATE	BY



TOWN OF EAST GWILLIMBURY  
 REGION OF YORK FILE #SP.20.E.0272

**DETAIL DRAWINGS**

RESIDENTIAL SITE DEVELOPMENT  
 148 MOON ALBERT ROAD  
 TOWN OF EAST GWILLIMBURY, ONTARIO



**Lithos**

150 Burnside Road, Toronto, Ontario M4A 1Y1

DESIGNED BY:	DATE:	CHECKED BY:
DRAWN BY: AG	JULY 31, 2018	APPROVED BY: NM
SCALE: 1:100	PROJECT No:	DRAWING No:
REV. X X X	SCALE INTS.	DS-200

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