

GEODETIC BM ELEV. = 214.332m
 ELEVATIONS SHOWN HERE ARE RELATED TO GEODETIC DATUM AND ARE DERIVED FROM THE CITY OF BRAMPTON CONTROL MONUMENT NO. 042920177, ELE. = 207.791, THE MINISTRY OF TRANSPORTATION CONTROL MONUMENT NO. 00820168036, ELEV. = 214.332

SITE BENCHMARK ELEV. = 215.24m
 CUT CROSS IN SIDEWALK ALONG THE SOUTHWEST LIMIT OF RUTHERFORD RD, OPPOSITE A HYDRO POLE LOCATED APPROX. 3m NORTHEAST, AND 30m NORTHWEST OF THE NORTHEASTERN CORNER OF SUBJECT PROPERTY.

NOTE TO CONTRACTOR :

DO NOT SCALE DRAWINGS.

CONTRACTORS MUST CHECK AND VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

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THE OWNER/ARCHITECT/CONTRACTOR IS ADVISED THAT M.T.E. CONSULTANTS INC. CANNOT CERTIFY ANY COMPONENT OF THE SITE WORKS NOT INSPECTED DURING CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO NOTIFY M.T.E. CONSULTANTS INC. PRIOR TO COMMENCEMENT OF CONSTRUCTION TO ARRANGE FOR INSPECTION.

NOTE:

- PROPERTY-LINE IS APPROXIMATE ONLY AND TAKEN FROM PLAN PREPARED BY J D BARNES SURVEYING MAPPING GIS DATED FEBRUARY 13TH, 2020. BEARINGS ARE UTM GRID, DERIVED FROM OBSERVED REFERENCE POINTS A, B, AND C BY REAL TIME NETWORK (RTN) OBSERVATION, UTM ZONE 17, NAD83 (CSRS) (2010.0).
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8.	ISSUED FOR TENDER	MJG	2021-08-12
7.	ISSUED FOR BUILDING PERMIT	MJG	2021-07-27
6.	ISSUED FOR 90% CD	HKE	2021-05-04
5.	REISSUED FOR SPA	HKE	2021-04-23
4.	ISSUED FOR SPA	HKE	2021-02-12
3.	ISSUED FOR 50% CONSTRUCTION DOCUMENTS	HKE	2021-02-05
2.	ISSUED FOR 100% DESIGN DEVELOPMENT	HKE	2021-01-19
1.	ISSUED FOR SCHEMATIC DESIGN	HKE	2020-12-22
No. R E V I S I O N		BY	YYYY-MM-DD



Engineers, Scientists, Surveyors

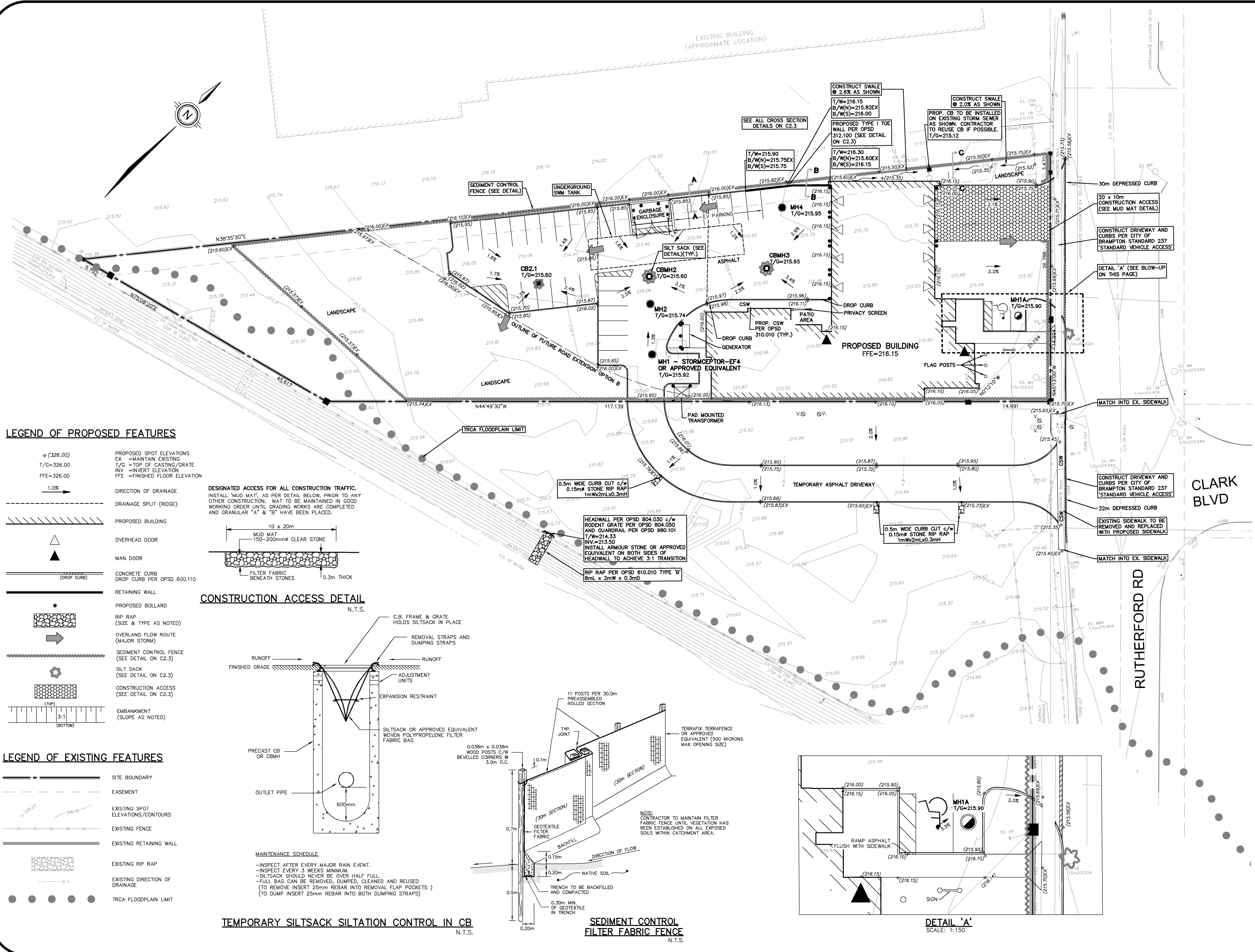
905-639-2552

NOT FOR
CONSTRUCTION

CLIENT
**SALTER PILON
 ARCHITECTURE INC.**
 151 FERRIS LANE SUITE 400 BARRIE
 PROJECT CITY FILE #: SPA-2021-0032
BRAMPTON FIRE STATION
201 NEW BUILDING
 27 RUTHERFORD ROAD SOUTH BRAMPTON

EXISTING CONDITIONS & REMOVALS PLAN

Project Manager	K.RAMSEWAK	Project No.	48015-100
Design By	LFG	Checked By	KRR
Drawn By	SWW	Checked By	LFG
Surveyed By	OTHERS	Drawing No.	C1.1
Date	Nov.26/20	Scale	1:300
Scale	1:300	Sheet 1 of 4	



KEY PLAN N.T.S.

CITY OF BRAMPTON
 QUEEN STREET E
 CLARK ROAD
 RUTHERFORD ROAD S
 ORENDA ROAD
 SITE

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2.	ISSUED FOR 100% DESIGN DEVELOPMENT	HKE	2021-01-19
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NO.	REVISION	BY	DATE

MTE
 Engineers, Scientists, Surveyors

905-639-2552

151 FERRIS LANE SUITE 400
 BRAMPTON, ONTARIO L6Y 4R2

SALTER PILON ARCHITECTURE INC.

PROJECT CITY FILE #: SPA-2021-0032
BRAMPTON FIRE STATION 201 NEW BUILDING
 27 RUTHERFORD ROAD SOUTH BRAMPTON

SITE GRADING PLAN

Project Manager	Project No.
K. RAMSEWAK	48015-100

Design By	Checked By
LFG	KRR

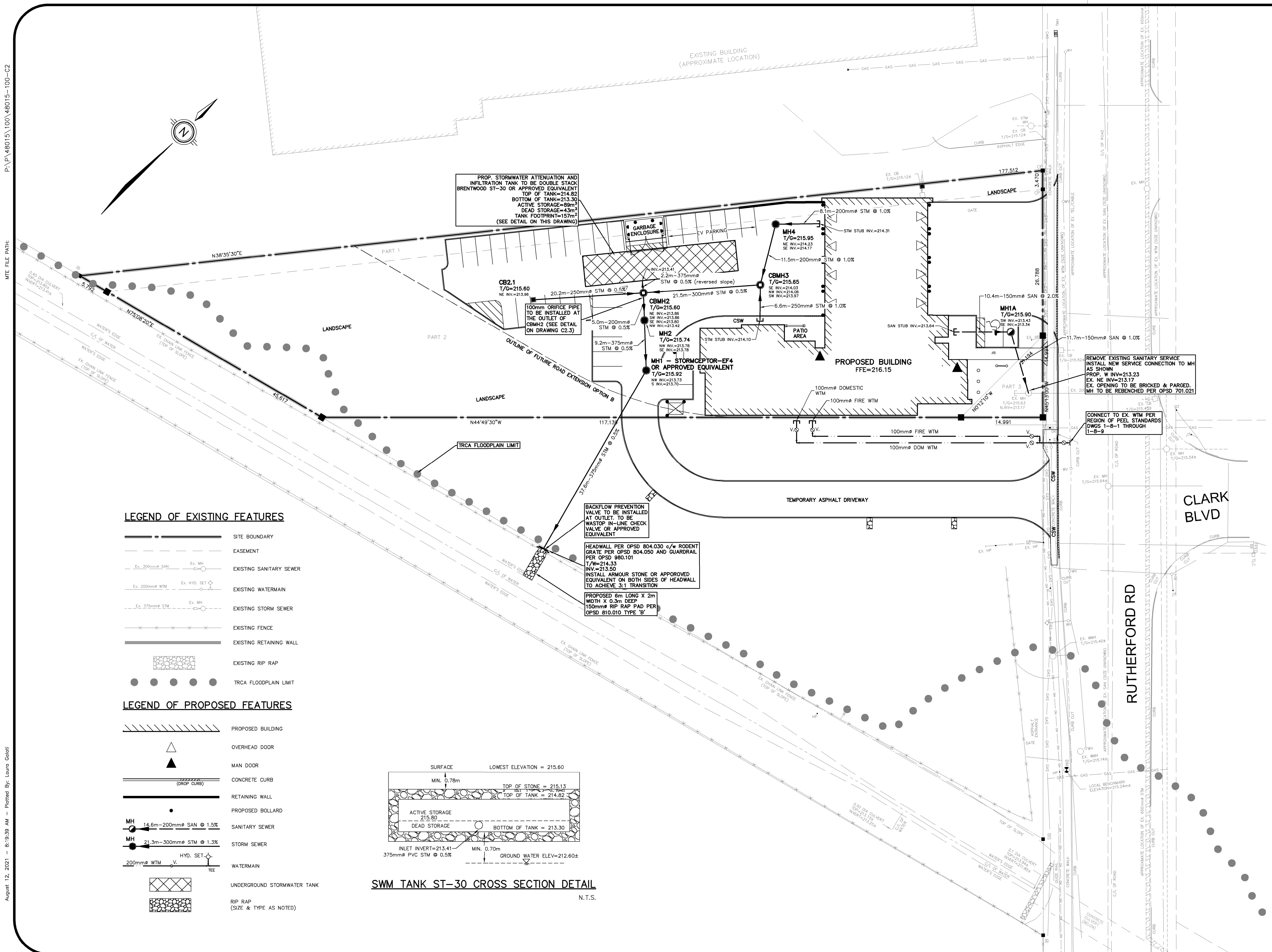
Drawn By	Checked By
SWW	LFG

Surveyed By	Drawn No.
OTHERS	

Date	Scale
Nov. 26/20	1:300

C2.1
 Sheet 2 of 4

NOT FOR CONSTRUCTION

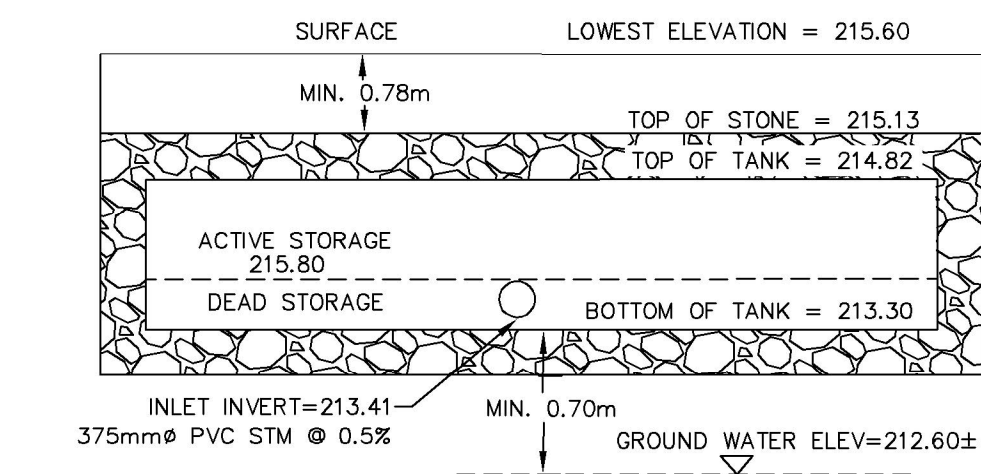


LEGEND OF EXISTING FEATURES

	SITE BOUNDARY
	EASEMENT
	EXISTING SANITARY SEWER
	EXISTING WATERMAIN
	EXISTING STORM SEWER
	EXISTING FENCE
	EXISTING RETAINING WALL
	EXISTING RIP RAP
	TRCA FLOODPLAIN LIMIT

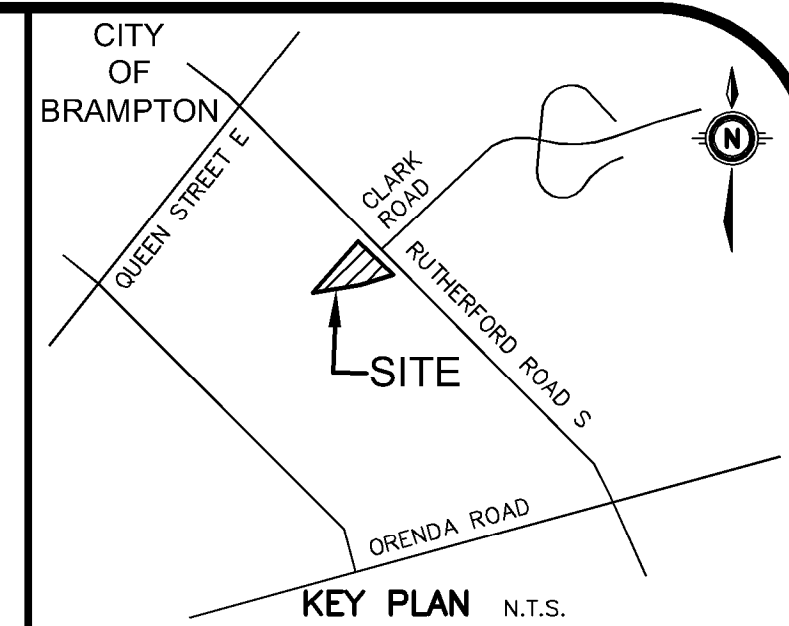
LEGEND OF PROPOSED FEATURES

	PROPOSED BUILDING
	OVERHEAD DOOR
	MAN DOOR
	CONCRETE CURB
	RETAINING WALL
	PROPOSED BOLLARD
	SANITARY SEWER
	STORM SEWER
	WATERMAIN
	UNDERGROUND STORMWATER TANK
	RIP RAP (SIZE & TYPE AS NOTED)



SWM TANK ST-30 CROSS SECTION DETAIL

N.T.S.



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Engineers, Scientists, Surveyors

905-639-2552

NOT FOR
CONSTRUCTION

CLIENT	SALTER PILON ARCHITECTURE INC.
151 FERRIS LANE SUITE 400	BRAMPTON
PROJECT	BRAMPTON FIRE STATION 201 NEW BUILDING
27 RUTHERFORD ROAD SOUTH	BRAMPTON
DRAWING	SITE SERVICING PLAN

Project Manager	K.RAMSEWAK	Project No.	48015-100
Design By	LFG	Checked By	KRR
Drawn By	SXW	Checked By	LFG
Surveyed By	OTHERS	Drawing No.	
Date	Nov.26/20		
Scale	1:300		

C2.2

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1. GENERAL

- 1.1. THIS/THESE PLAN/S IS/ARE NOT FOR CONSTRUCTION UNTIL SIGNED AND SEALED BY ENGINEER AND APPROVED BY THE LOCAL MUNICIPALITY.
- 1.2. THESE PLANS ARE TO BE USED FOR SERVING AND GRADING ONLY; ANY OTHER INFORMATION SHOWN IS FOR ILLUSTRATION PURPOSES ONLY. THESE PLANS MUST NOT BE USED TO SITE THE PROPOSED BUILDING.
- 1.3. NO CHANGES ARE TO BE MADE WITHOUT THE APPROVAL OF THE DESIGN ENGINEER.
- 1.4. THESE PLANS ARE NOT TO BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE PERMISSION OF MTE CONSULTANTS INC.
- 1.5. PRIOR TO CONSTRUCTION, THE CONTRACTOR MUST:
 - 1.5.1. CHECK AND VERIFY ALL EXISTING CONDITIONS, LOCATIONS AND ELEVATIONS WHICH INCLUDES BUT IS NOT LIMITED TO THE BENCHMARK ELEVATIONS, EXISTING SERVICE CONNECTIONS AND EXISTING INVERTS. REPORT ALL DISCREPANCIES TO THE ENGINEER PRIOR TO PROCEEDING.
 - 1.5.2. OBTAIN ALL UTILITY LOCATES AND REQUIRED PERMITS AND LICENSES.
 - 1.5.3. VERIFY THAT THE FINISHED FLOOR ELEVATIONS AND BASEMENT FLOOR ELEVATIONS (WHICH MAY APPEAR ON THIS PLAN) COMPLY WITH THE FINAL ARCHITECTURAL DRAWINGS.
 - 1.5.4. CONFIRM ALL DRAWINGS USED FOR CONSTRUCTION ARE OF THE MOST RECENT REVISION.
- 1.6. THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR ANY DAMAGE TO EXISTING WORKS. THE CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF ALL DAMAGED AND/OR DISTURBED PROPERTY WITHIN THE MUNICIPAL RIGHT-OF-WAY TO LOCAL MUNICIPALITY STANDARDS.
- 1.7. ALL WORKS ON A MUNICIPAL RIGHT-OF-WAY WITH THE EXCEPTION OF WATERMAIN TAPPING TO BE INSTALLED BY THE OWNER'S CONTRACTOR AT OWNER'S EXPENSE IN ACCORDANCE WITH THE LOCAL MUNICIPALITY'S "PROCEDURE FOR OFF-SITE WORKS" BY PRIVATE CONTRACTOR. THE OWNER AND CONTRACTOR ARE TO ENSURE OFF-SITE WORKS PERMIT IS IN PLACE PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF ALL AFFECTED PROPERTY TO ORIGINAL CONDITION. ALL BOULEVARD AREAS SHALL BE RESTORED WITH 150mm TOPSOIL AND SOD.
- 1.8. ALL UNDERGROUND SERVICES ARE TO BE CONSTRUCTED IN FULL COMPLIANCE WITH THE ONTARIO PROVINCIAL BUILDING CODE (PART 7, PLUMBING), THE ONTARIO PROVINCIAL STANDARD SPECIFICATIONS (OPSS), AND THE REQUIREMENTS OF THE LOCAL MUNICIPALITY AND THE REGIONAL MUNICIPALITY OF WATERLOO; WHICH CODES AND REGULATIONS SHALL SUPERSEDE ALL OTHERS.
- 1.9. CONTRACTOR IS RESPONSIBLE FOR CONTACTING ENGINEER 48 HRS PRIOR TO COMMENCING WORK TO ARRANGE FOR INSPECTION. ENGINEER TO DETERMINE DEGREE OF INSPECTION AND TESTING REQUIRED FOR CERTIFICATION OF UNDERGROUND SERVICE INSTALLATION AS MANDATED BY ONTARIO BUILDING CODE, DIVISION C, PART 1, SECTION 1.2.2, GENERAL REVIEW. FAILURE TO NOTIFY ENGINEER WILL RESULT IN EXTENSIVE POST CONSTRUCTION INSPECTION AT CONTRACTORS EXPENSE.
- 1.10. SANITARY AND STORM SEWERS AND SERVICES TO HAVE A MINIMUM 1.4m COVER TO TOP OF PIPE. WHERE COVER TO TOP OF PIPE IS DEFICIENT, CONTRACTOR SHALL INSTALL SHALLOW BURIED PIPE IN ACCORDANCE WITH APPLICABLE "SEWER PIPE INSULATION DETAIL" INDICATED IN DRAWING DETAILS. CONTACT DESIGN ENGINEER FOR "SEWER PIPE INSULATION DETAIL" IF REQUIRED.
- 1.11. PLAN TO BE READ IN CONJUNCTION WITH SWM BRIEF AND DRAWINGS C2.1 AND C2.2 PREPARED BY MTE CONSULTANTS INC. AND LANDSCAPE PLAN.
- 1.12. SITE PLAN INFORMATION TAKEN FROM PLAN PREPARED BY SALTER PILON ARCHITECTURE DATED 2021-01-19.
- 1.13. EXISTING TOPOGRAPHIC AND LEGAL INFORMATION TAKEN FROM PLAN PREPARED BY J.D.BARNES LTD, DATED 2018-05-07. MTE ASSUMES THAT ALL TOPOGRAPHICAL INFORMATION IS AN ACCURATE REPRESENTATION OF CURRENT CONDITIONS.
- 1.14. CONTRACTOR TO OBTAIN WRITTEN PERMISSION FROM ADJACENT PROPERTY OWNER PRIOR TO ENTERING UPON NEIGHBOURING LANDS TO UNDERTAKE ANY WORK. COPIES OF THESE LETTERS OF CONSENT SHALL BE SUBMITTED TO THE DEPARTMENT OF PUBLIC WORKS FOR APPROVAL PRIOR TO ANY WORK BEING PERFORMED. FAILURE TO COMPLY WITH THE ABOVE IS AT CONTRACTOR'S OWN RISK.
- 1.15. SITE SERVING CONTRACTOR TO TERMINATE ALL SERVICES 1 METRE FROM FOUNDATION WALL.
- 1.16. FILTER FABRIC TO BE TERRAFIX 200R OR APPROVED EQUAL.
- 1.17. MAXIMUM GRASSSED SLOPE TO BE 3:1. SLOPES GREATER THAN 3:1 TO BE LANDSCAPED WITH LOW MAINTENANCE GROUND COVER.
- 1.18. SIDE SLOPES OF ALL STOCKPILES OR EXTRACTION FACES TO BE MAINTAINED AT 70 DEGREES OR LESS BETWEEN EARLY APRIL AND LATE AUGUST TO DETER BANK SLOTTOWS FROM NESTING.
- 1.19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC AND SAFETY MEASURES DURING THE CONSTRUCTION PERIOD INCLUDING THE SUPPLY, INSTALLATION AND REMOVAL OF NECESSARY SIGNALS, DELINEATORS, MARKERS, AND BARRIERS. ALL SIGNS, ETC. SHALL CONFORM TO THE STANDARDS OF THE LOCAL MUNICIPALITY AND THE MTO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- 1.20. THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.
- 1.21. CONTRACTOR TO MAINTAIN A 'CONFINED TRENCH CONDITION' IN ALL SEWER AND SERVICE TRENCHES.
- 1.22. FOLLOWING COMPLETION OF PROPOSED WORKS AND PRIOR TO OCCUPANCY INSPECTION, ALL STORM AND SANITARY SEWERS ARE TO BE FLUSHED, AND ALL CATCHBASIN AND CATCHBASIN MANHOLE SUMPS ARE TO BE CLEANED OF DEBRIS AND SILT.

2. STORM SEWERS

- 2.1. PIPE BEDDING FOR RIGID PIPE TO BE CLASS "B" AS PER OPSD 802.030, OR 802.032, OR 802.031, PIPE BEDDING FOR FLEXIBLE PIPE TO BE AS PER OPSD 802.010, BEDDING MATERIAL AND COVER MATERIAL TO BE GRANULAR "A", TRENCH BACKFILL TO BE NATIVE MATERIAL REPLACED IN 300mm LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
- 2.2. STORM SEWERS 200mmØ TO 375mmØ SHALL BE POLYVINYL CHLORIDE (PVC) PIPE DR35 ASTM-D3034 OR RIBBED PVC SEWER PIPE CSA B182.4-M90 ASTM-F794 WITH INTEGRAL BELL AND SPIGOT UTILIZING FLEXIBLE ELASTOMERIC SEALS. RIBBED PVC NOT TO BE USED WITHIN RIGHT-OF-WAY.
- 2.3. FACTORY FABRICATED WYES SHALL BE USED FOR ALL SERVICE CONNECTIONS.
- 2.4. MANHOLES AND MANHOLE CATCHBASINS TO BE 1200mmØ PRECAST WITH ALUMINUM STEPS AT 300mm CENTRES AS PER OPSD 701.010 UNLESS OTHERWISE SPECIFIED.
- 2.5. CATCHBASINS TO BE 600mm SQUARE PRECAST AS PER OPSD 705.010.
- 2.6. ALL STORM STRUCTURES TO HAVE A MINIMUM 600mm DEEP SUMP. WHEN THE STRUCTURE INCLUDES THE INSTALLATION OF A SNOUT (OR APPROVED EQUIVALENT) THE SUMP DEPTH TO BE MIN 2.5 TIMES THE OUTLET PIPE DIAMETER SIZE.

CONSTRUCTION NOTES AND SPECIFICATIONS

- 2.7. MANHOLE AND CATCHBASIN, FRAMES, GRATES, CASTINGS AND LIDS TO BE QUALITY GREY IRON ASTM A48 CLASS 30B.
- 2.8. STORM MANHOLE LIDS TO BE PER OPSD 401.010 - TYPE 'B' CATCHBASIN AND CATCHBASIN MANHOLE GRATES TO BE PER OPSD 400.100. DITCH INLET CATCHBASIN GRATES TO BE PER OPSD 403.010.
- 2.9. ADJUSTMENT UNITS FOR STORM STRUCTURES TO BE IN ACCORDANCE WITH OPSD 704.010 OR 704.011.
- 2.10. STORM SEWERS AND SERVICES TO HAVE MINIMUM 1.4m COVER TO TOP OF PIPE. WHERE COVER TO TOP OF PIPE IS DEFICIENT, CONTRACTOR SHALL INSTALL SHALLOW BURIED SEWER PIPE IN ACCORDANCE WITH APPLICABLE "SEWER PIPE INSULATION DETAIL" INDICATED IN DRAWING DETAILS. INSULATION SHALL BE RIGID EXTRUDED POLYSTYRENE (EPS) BOARD, WITH A THICKNESS SUFFICIENT TO PROVIDE AN RSI-1.76 (R10) INSULATING FACTOR (TYPICALLY 50-65mm). INSULATION BOARD WIDTH SHALL BE 1.8m FOR UP TO 200mm NOMINAL PIPE DIAMETER, 2.4m FOR 201mm-800mm DIAMETER AND 3.0m FOR 801mm-1400mm. ALL JOINTS SHALL BE TIGHTLY BUTTED TOGETHER (TAPE OR OTHERWISE SECURE JOINTS TO RESIST MOVEMENT DURING BACKFILL COVER). RIGID EPS BOARD SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 140kPa (20psi), AND A MAXIMUM WATER ABSORPTION RATE OF 2.0% BY VOLUME. ACCEPTABLE PRODUCTS ARE DOW STYROFOAM-SM OR -HI (FULL LINE), OWENS CORNING FOAMULAR (200, 250, OR HIGHER), PLASTISPAN HD-M28 OR OTHER ENGINEER-APPROVED EQUIVALENT.

3. SANITARY SEWERS

- 3.1. PIPE BEDDING FOR RIGID PIPE TO BE CLASS "B" AS PER OPSD 802.030, PIPE BEDDING FOR FLEXIBLE PIPE TO BE AS PER OPSD 802.010, BEDDING MATERIAL AND COVER MATERIAL TO BE GRANULAR "A", TRENCH BACKFILL TO BE NATIVE MATERIAL REPLACED IN 300mm LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
- 3.2. SANITARY SEWERS 150mmØ AND SMALLER SHALL BE POLYVINYL CHLORIDE (PVC) PIPE DR28 ASTM-D3034 WITH INTEGRAL BELL AND SPIGOT UTILIZING FLEXIBLE ELASTOMERIC SEALS.
- 3.3. MANHOLES TO BE 1200mmØ PRECAST WITH ALUMINUM STEPS AT 300mm CENTRES AS PER OPSD 701.010 UNLESS OTHERWISE SPECIFIED.
- 3.4. MANHOLES TO BE BENCHED PER OPSD 701.021.
- 3.5. SANITARY MANHOLE LIDS TO BE PER OPSD 401.010 -TYPE 'A'.
- 3.6. MANHOLE FRAMES, CASTINGS AND LIDS TO BE QUALITY GREY IRON ASTM A48 CLASS 30B.
- 3.7. ADJUSTMENT UNITS FOR SANITARY STRUCTURES TO BE IN ACCORDANCE WITH OPSD 704.010 OR 704.011.
- 3.8. FACTORY FABRICATED WYES SHALL BE USED FOR ALL SERVICE CONNECTIONS.
- 3.9. SANITARY SEWERS AND SERVICES TO HAVE MINIMUM 1.4m COVER ON TOP OF PIPE. WHERE COVER TO TOP OF PIPE IS DEFICIENT, CONTRACTOR SHALL INSTALL SHALLOW BURIED PIPE IN ACCORDANCE WITH APPLICABLE "SEWER PIPE INSULATION DETAIL" INDICATED IN DRAWING DETAILS. INSULATION SHALL BE RIGID EXTRUDED POLYSTYRENE (EPS) BOARD, WITH A THICKNESS SUFFICIENT TO PROVIDE AN RSI-1.76 (R10) INSULATING FACTOR (TYPICALLY 50-65mm). INSULATION BOARD WIDTH SHALL BE 1.8m FOR UP TO 200mm NOMINAL PIPE DIAMETER, 2.4m FOR 201mm-800mm DIAMETER AND 3.0m FOR 801mm-1400mm. ALL JOINTS SHALL BE TIGHTLY BUTTED TOGETHER (TAPE OR OTHERWISE SECURE JOINTS TO RESIST MOVEMENT DURING BACKFILL PLACEMENT). RIGID EPS BOARD SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 140kPa (20psi), AND A MAXIMUM WATER ABSORPTION RATE OF 2.0% BY VOLUME. ACCEPTABLE PRODUCTS ARE DOW STYROFOAM-SM OR -HI (FULL LINE), OWENS CORNING FOAMULAR (200, 250, OR HIGHER), PLASTISPAN HD-M28 OR OTHER ENGINEER-APPROVED EQUIVALENT.
- 3.10. CONTRACTOR RESPONSIBLE FOR TESTING OF SANITARY SEWERS IN ACCORDANCE WITH OPSS 410.

4. WATERMAINS

- 4.1. PIPE BEDDING FOR RIGID PIPE TO BE CLASS "B" AS PER OPSD 802.030, PIPE BEDDING FOR FLEXIBLE PIPE TO BE AS PER OPSD 802.010, BEDDING MATERIAL AND COVER MATERIAL TO BE GRANULAR "A", TRENCH BACKFILL TO BE NATIVE MATERIAL REPLACED IN 300mm LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
- 4.2. WATERMAINS 100mmØ AND LARGER SHALL BE PVC C900 CLASS 150 INSTALLED WITH MINIMUM 2.0 METRES OF COVER. FITTINGS 100mmØ AND LARGER SHALL BE PVC CLASS 150 (DR18) CSA B137.3.
- 4.3. WATERMAIN FITTINGS TO BE SUPPLIED WITH MECHANICAL JOINT RESTRAINTS. FOR WATERMAIN PIPE SIZES 150mmØ OR LESS ALL PIPE JOINTS TO BE RESTRAINED WITHIN 5.0m FROM ALL FITTINGS, IN EACH DIRECTION, UNLESS SHOWN OTHERWISE ON THE CONTRACT DRAWINGS. FOR WATERMAIN PIPE SIZES GREATER THAN 150mmØ ALL PIPE JOINTS TO BE RESTRAINED WITHIN 10.0m FROM ALL FITTINGS, IN EACH DIRECTION, UNLESS SHOWN OTHERWISE ON THE CONTRACT DRAWINGS. ALL TEES TO HAVE MINIMUM 2.0m SOLID PIPE LENGTH ON EACH RUN OF THE TEE, OR PROVIDE A THRUST BLOCK PER OPSD 1103.010.
- 4.4. ALL METALLIC FITTINGS (EXCLUDING CURB/MAIN STOP AND BRASS FITTINGS) AND APPURTENANCES INCLUDING SADDLES, VALVES, TEES, BENDS ETC ARE TO BE WRAPPED WITH AN APPROVED PETROLATUM SYSTEM CONSISTING OF PASTE, MASTIC AND TAPE. PARTICULAR ATTENTION SHALL BE PAID TO ANODE INSTALLATION. CONTRACTOR TO REFER TO THE MOST RECENT EDITION OF THE LOCAL MUNICIPALITY AND AREA MUNICIPALITIES DESIGN GUIDELINES AND SUPPLEMENTAL SPECIFICATIONS FOR MUNICIPAL SERVICES.
- 4.5. WATERMAIN VALVES 100mmØ AND LARGER SHALL BE AS PER AWWA C509 - MURRAY 42560-23 OR APPROVED EQUIVALENT (OPEN LEFT) INCLUDING VALVE BOX AND 2.3kg ANODE INCLUDING ANODE PROTECTION INSTALLED PER LOCAL MUNICIPALITY STANDARDS.
- 4.6. PVC WATERMAIN SHALL HAVE TWO STRANDED COPPER, AWG8 TRACER WIRE STRAPPED TO TOP AT 5 METRE INTERVALS. TRACER WIRE SHALL BE BROUGHT TO THE SURFACE AT ALL HYDRANTS AND CAD WELDED TO THE LOWER FANGE OF THE HYDRANT.
- 4.7. MAIN STOPS, CURB STOPS AND COUPLINGS SHALL BE AWWA C-800 COPPER TO COPPER FLANGED OR COMPRESSION CONNECTION OR APPROVED EQUIVALENT.
- 4.8. SERVICE BOXES TO BE FERGUSON ECLIPSE TYPE FIGURE 222 SIZE NO. 9 OR APPROVED EQUIVALENT COMPLETE WITH ROD AND PLUG.
- 4.9. WATER CONNECTIONS MAY BE PLACED IN THE SAME TRENCH WITH A STORM OR SANITARY CONNECTION ONLY IF A MINIMUM VERTICAL SEPARATION OF 500mm IS MAINTAINED BETWEEN THE WATER SERVICE AND ANY OTHER PIPE, IN ACCORDANCE WITH SECTION 7.3.5.7.(2)(a)(i) OF THE ONTARIO BUILDING CODE.
- 4.10. ALL WATERMAINS AND SERVICES TO HAVE MINIMUM 2.0m COVER ON TOP OF PIPE. WHERE COVER TO TOP OF PIPE IS DEFICIENT, CONTRACTOR SHALL INSTALL SHALLOW BURIED PIPE IN ACCORDANCE WITH APPLICABLE "WATER PIPE INSULATION DETAIL" INDICATED IN DRAWING DETAILS. INSULATION SHALL BE RIGID EXTRUDED POLYSTYRENE (EPS) BOARD, WITH A THICKNESS SUFFICIENT TO PROVIDE AN RSI-3.52 (R20) INSULATING FACTOR (TYPICALLY 100-130mm). INSULATION BOARD WIDTH SHALL BE 2.4m FOR UP TO 200mm NOMINAL PIPE DIAMETER, 3.0m FOR 201mm-305mm DIAMETER, INSULATION BOARD SHALL BE INSTALLED WITH MINIMUM 2-LAYERS, OVERLAPPED MINIMUM 300mm AT ALL JOINTS. ALL JOINTS SHALL BE TIGHTLY BUTTED TOGETHER (TAPE OR OTHERWISE SECURE JOINTS TO RESIST MOVEMENT DURING BACKFILL PLACEMENT). RIGID EPS BOARD SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 140kPa (20psi), AND A
- 4.11. ALL WATERMAINS AND SERVICES TO HAVE MINIMUM 2.0m COVER ON TOP OF PIPE. WHERE COVER TO TOP OF PIPE IS DEFICIENT, CONTRACTOR SHALL INSTALL SHALLOW BURIED PIPE IN ACCORDANCE WITH APPLICABLE "WATER PIPE INSULATION DETAIL" INDICATED IN DRAWING DETAILS. INSULATION SHALL BE RIGID EXTRUDED POLYSTYRENE (EPS) BOARD, WITH A THICKNESS SUFFICIENT TO PROVIDE AN RSI-3.52 (R20) INSULATING FACTOR (TYPICALLY 100-130mm). INSULATION BOARD WIDTH SHALL BE 2.4m FOR UP TO 200mm NOMINAL PIPE DIAMETER, 3.0m FOR 201mm-305mm DIAMETER, INSULATION BOARD SHALL BE INSTALLED WITH MINIMUM 2-LAYERS, OVERLAPPED MINIMUM 300mm AT ALL JOINTS. ALL JOINTS SHALL BE TIGHTLY BUTTED TOGETHER (TAPE OR OTHERWISE SECURE JOINTS TO RESIST MOVEMENT DURING BACKFILL PLACEMENT). RIGID EPS BOARD SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 140kPa (20psi), AND A

MAXIMUM WATER ABSORPTION RATE OF 2.0% BY VOLUME. ACCEPTABLE PRODUCTS ARE DOW STYROFOAM-SM OR -HI (FULL LINE), OWENS CORNING FOAMULAR (200, 250, OR HIGHER), PLASTISPAN HD-M28 OR OTHER ENGINEER-APPROVED EQUIVALENT.

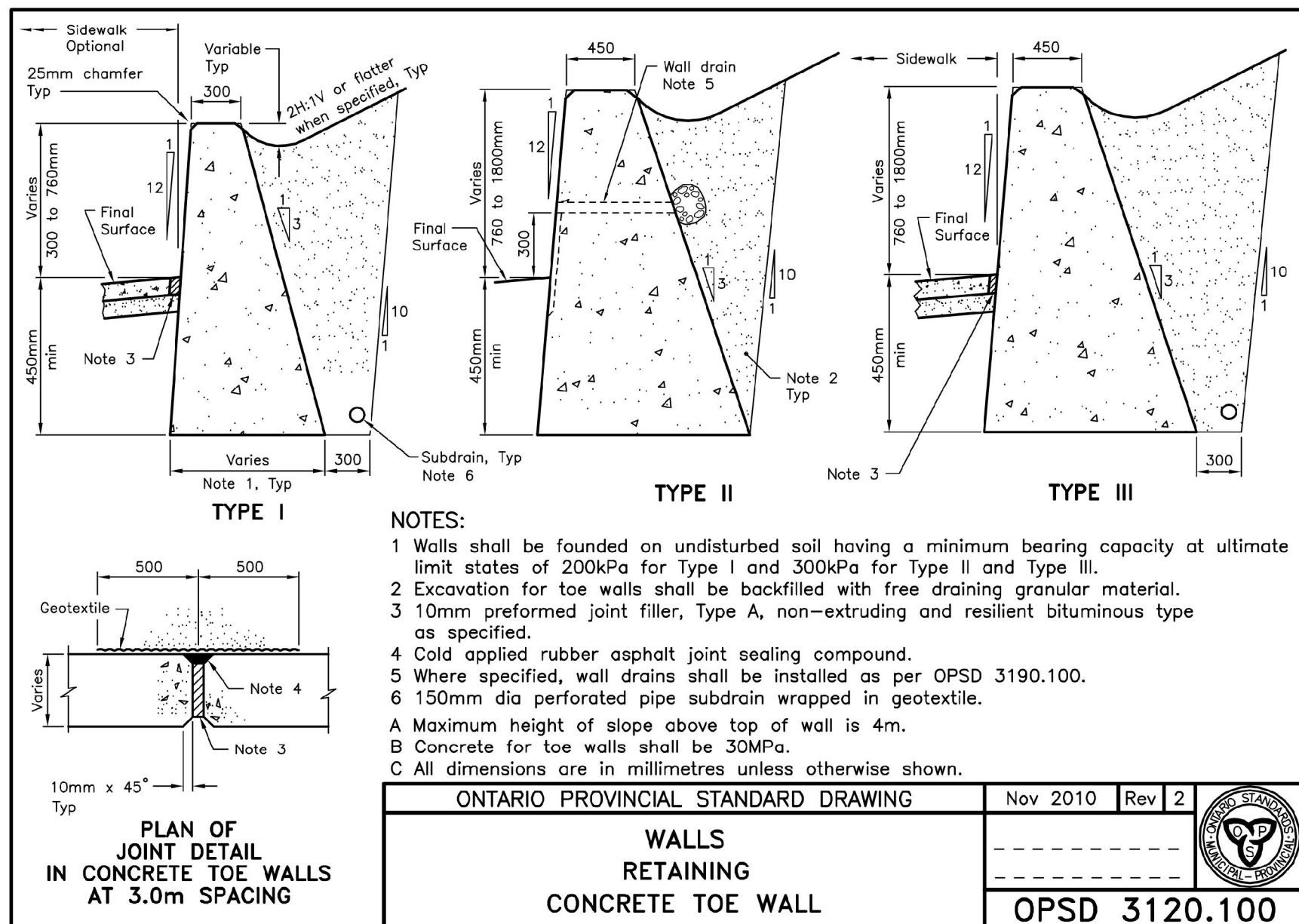
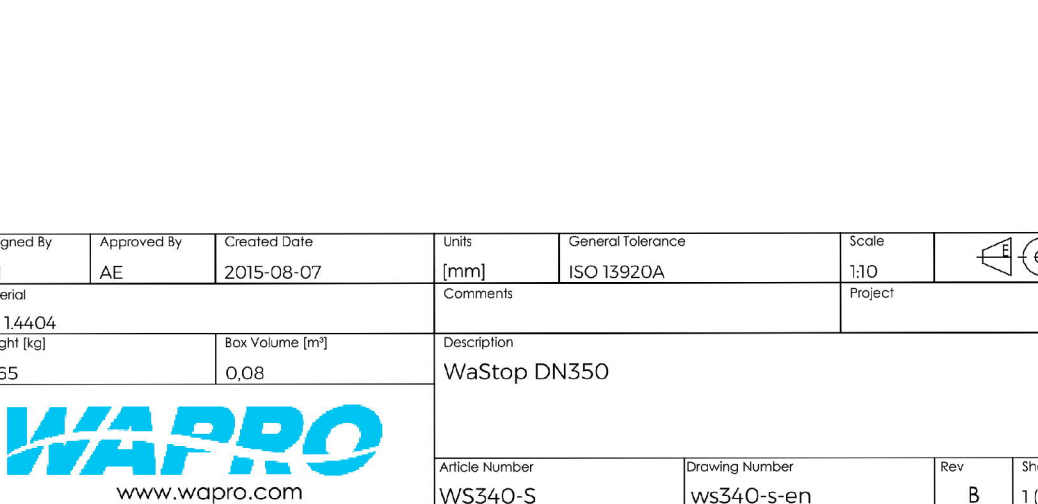
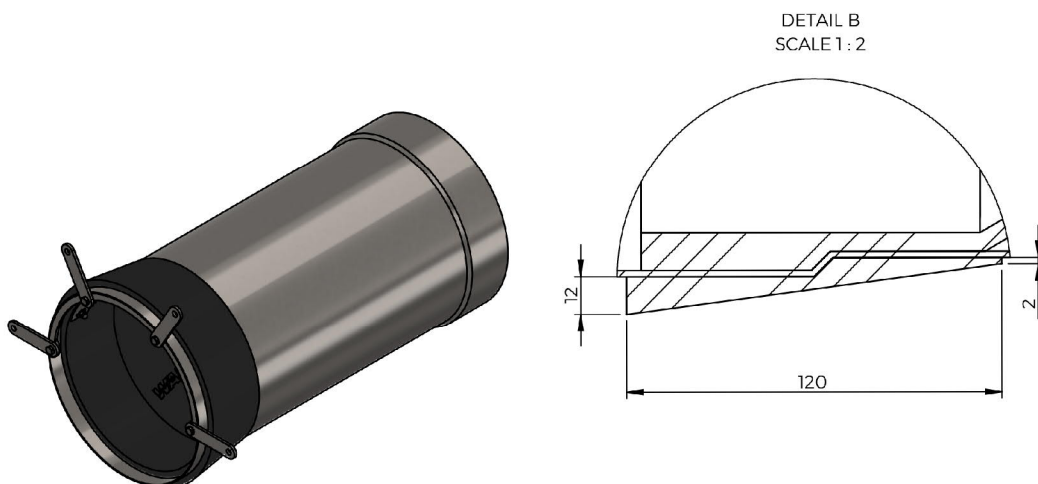
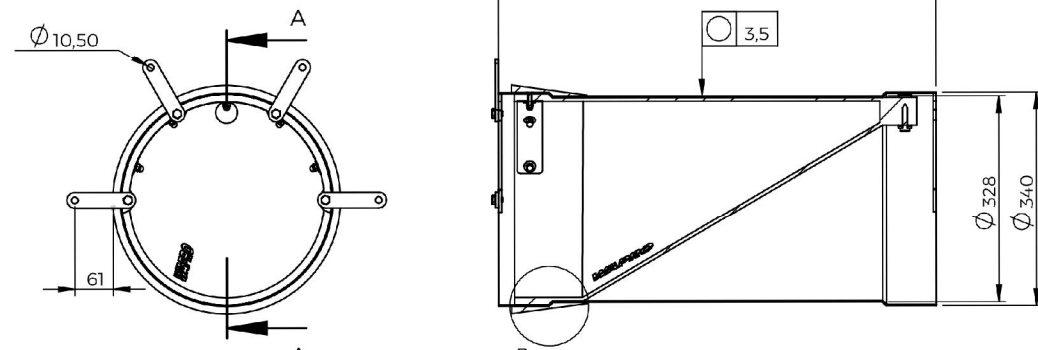
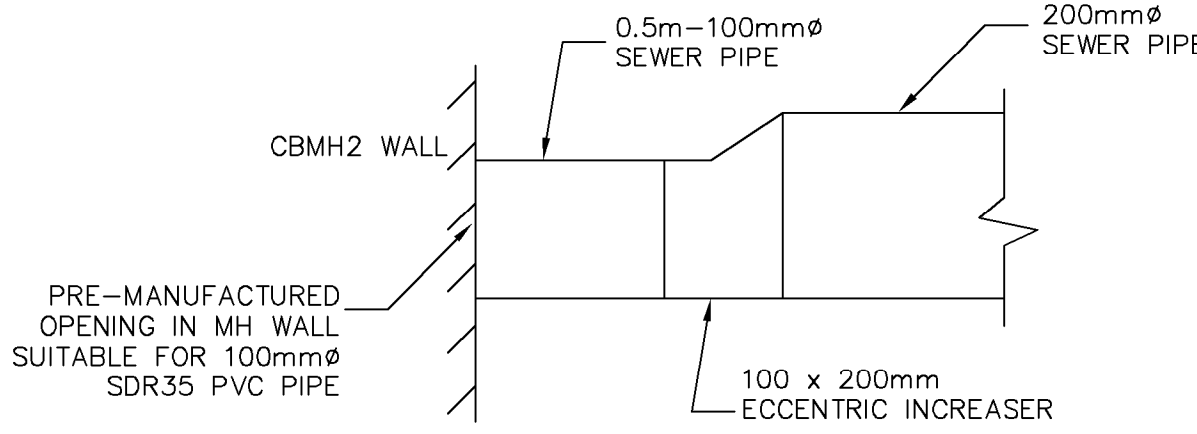
- 4.12. ALL WATERMAIN TO BE PRESSURE TESTED IN ACCORDANCE WITH OPSS 441. DISINFECT ALL WATERMAIN IN ACCORDANCE WITH AWWA C 651-99 INCLUDING CHLORINATION, BACKFLOW PREVENTOR AND 24-HOUR DUPLICATE SAMPLING. ALL TESTING AND DISINFECTION TO BE COMPLETED UNDER THE SUPERVISION OF THE ENGINEER. (CONTRACTOR TO SUBMIT WATER COMMISSIONING PLAN IN ACCORDANCE WITH DOSSMS. THIS PLAN MUST BE APPROVED BY THE LOCAL MUNICIPALITY PRIOR TO ANY WATERMAIN WORK).
- 4.13. PRIOR TO OCCUPANCY, CONTRACTOR MUST COMMISSION FIRE FLOW TEST FOR PRIVATE ON-SITE HYDRANT. PROVIDE RESULT TO DESIGN ENGINEER.

5. EROSION AND SEDIMENT CONTROL

- 5.1. CONTRACTOR TO INSTALL EROSION CONTROL MEASURES AS SHOWN PRIOR TO CONSTRUCTION AND MAINTAIN IN GOOD CONDITION UNTIL CONSTRUCTION IS COMPLETED AND ALL DISTURBED GROUND SURFACES HAVE BEEN RESTABILIZED EITHER BY PAVING OR RESTORATION OF VEGETATIVE COVER.
- 5.2. ALL SEDIMENT CONTROL FENCING TO BE INSTALLED PRIOR TO ANY AREA GRADING, EXCAVATING OR DEMOLITION COMMENCING.
- 5.3. EROSION CONTROL FENCING TO BE INSTALLED AROUND BASE OF ALL STOCKPILES. ALL STOCKPILES TO BE KEPT 2.5m MINIMUM FROM PROPERTY LINE.
- 5.4. EROSION PROTECTION TO BE PROVIDED AROUND ALL STORM AND SANITARY MHs AND CBS.
- 5.5. CONSTRUCTION ACCESS (MUD MAT) TO BE PROVIDED ON-SITE AT ALL LOCATIONS WHERE CONSTRUCTION VEHICLES EXIT SITE. CONSTRUCTION ACCESS (MUD MAT) SHALL BE A MINIMUM OF 3.0m WIDE, 15.0m LONG (LENGTH MAY VARY DEPENDING ON SITE LAYOUT) AND 0.3m DEEP AND SHALL CONSIST OF 200mm CLEAR STONE MATERIAL OR APPROVED EQUIVALENT. PROPOSED EROSION FENCING TO TIE INTO MUD MAT. CONTRACTOR TO ENSURE ALL VEHICLES LEAVE THE SITE VIA THE MUD MAT AND THAT THE MAT IS MAINTAINED IN A MANNER TO MAXIMIZE EFFECTIVENESS AT ALL TIMES.
- 5.6. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AS SITE DEVELOPMENT PROGRESSES. CONTRACTOR TO PROVIDE ALL ADDITIONAL EROSION CONTROL STRUCTURES.
- 5.7. EROSION CONTROL STRUCTURES TO REMAIN IN PLACE UNTIL ALL DISTURBED GROUND SURFACES HAVE BEEN RESTABILIZED.
- 5.8. NO ALTERNATE METHODS OF EROSION PROTECTION SHALL BE PERMITTED UNLESS APPROVED BY THE ENGINEER AND THE LOCAL MUNICIPALITY'S DEPARTMENT OF PUBLIC WORKS.
- 5.9. CONTRACTOR TO CLEAN ROADWAY AND SIDEWALKS OF SEDIMENTS RESULTING FROM CONSTRUCTION TRAFFIC FROM THE SITE EACH DAY.
- 5.10. CONTRACTOR MUST REMOVE EROSION AND SEDIMENTATION FENCING PRIOR TO COMPLETION OF PROJECT. CONTRACTOR TO HAVE EROSION AND SEDIMENTATION FENCE INSPECTED WHEN VEGETATION HAS ESTABLISHED, BUT PRIOR TO FENCE BECOMING OVERGROWN. ENGINEER'S REPRESENTATIVE TO DETERMINE IF VEGETATION HAS REACHED THE CRITICAL POINT AND WILL THEN INSTRUCT CONTRACTOR TO REMOVE FENCE.

6. MAINTENANCE RECOMMENDATIONS

- 6.1. DURING THE COURSE OF CONSTRUCTION CONTRACTOR TO REMOVE SEDIMENT AND CONTAMINANTS FROM STORMWATER MANAGEMENT FACILITIES MONTHLY. FOLLOWING CONSTRUCTION CONTRACT COMPLETION, OWNER TO HIRE QUALIFIED CONTRACTOR TO REMOVE SEDIMENT AND CONTAMINANTS ANNUALLY AND REINSTATE STORMWATER MANAGEMENT FACILITIES ACCORDING TO THE DESIGN OUTLINED ON THIS PLAN, AS REQUIRED.
- 6.2. EROSION CONTROL STRUCTURES TO BE MONITORED REGULARLY AND ANY DAMAGE REPAIRED IMMEDIATELY. SEDIMENTS TO BE REMOVED WHEN ACCUMULATIONS REACH A MAXIMUM OF 1/3 THE HEIGHT OF THE FENCE.
- 6.3. OWNER'S REPRESENTATIVE TO MONITOR EROSION CONTROL STRUCTURES TO ENSURE FENCING IS INSTALLED AND MAINTENANCE IS PERFORMED TO CITY REQUIREMENTS.
- 6.4. THE PROPOSED STORMCEPTOR(STC) WILL REQUIRE REGULAR ANNUAL MAINTENANCE. OWNER TO ENTER INTO A MAINTENANCE AGREEMENT WITH A SUITABLE CONTRACTOR TO COMPLETE THIS WORK.
- 6.5. THE PROPOSED SNOUT/S WILL REQUIRE REGULAR MAINTENANCE DURING AND AFTER CONSTRUCTION IN ACCORDANCE WITH THE MAINTENANCE RECOMMENDATIONS OUTLINED IN SNOUT BEST MANAGEMENT PRODUCTS INC. DOCUMENT. THIS INCLUDES BUT IS NOT LIMITED TO REMOVAL OF SEDIMENT FROM THE SUMP, REMOVAL OF FLOATABLES AND TRASH, AND ANNUAL INSPECTION OF THE ANTI-SIPHON VENT, ACCESS HATCH AND TRASH SCREEN. OWNER TO ENTER INTO A MAINTENANCE AGREEMENT WITH A SUITABLE CONTRACTOR TO COMPLETE THIS WORK.

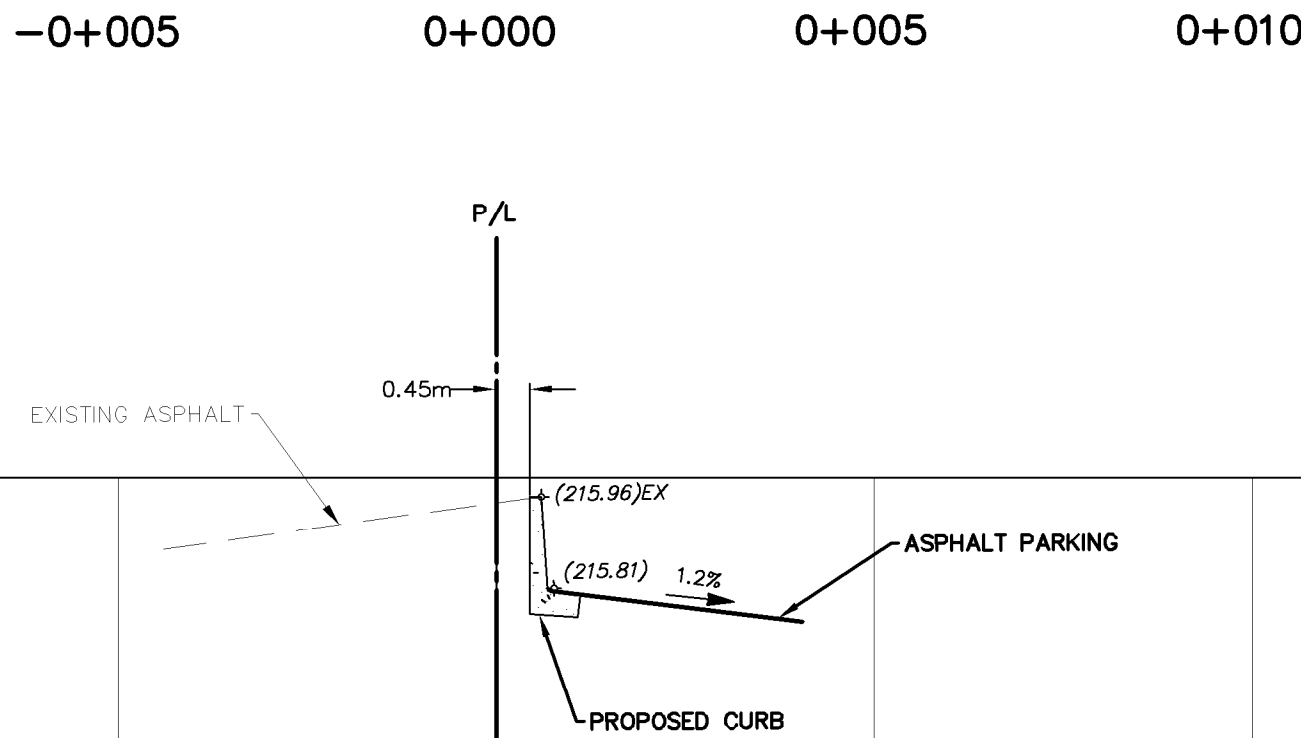


NOTES:

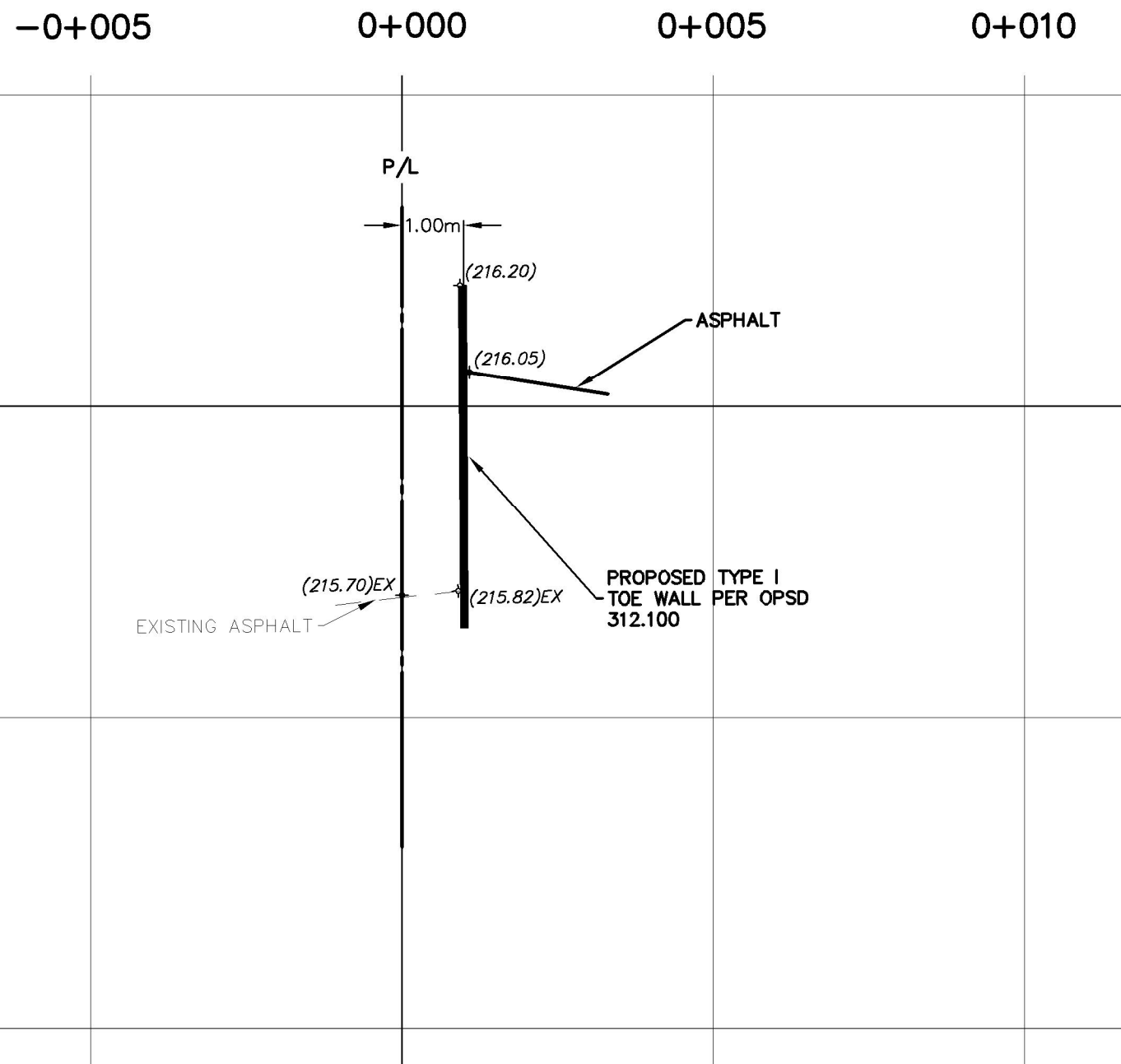
- 1 Walls shall be founded on undisturbed soil having a minimum bearing capacity at ultimate limit states of 200kPa for Type I and 300kPa for Type II and Type III.
- 2 Excavation for toe walls shall be backfilled with free draining granular material.
- 3 10mm preformed joint filler, Type A, non-extruding and resilient bituminous type as specified.
- 4 Cold applied rubber asphalt joint sealing compound.
- 5 Where specified, wall drains shall be installed as per OPSD 3190.100.
- 6 150mm dia perforated pipe subdrain wrapped in geotextile.
- A Maximum height of slope above top of wall is 4m.
- B Concrete for toe walls shall be 30MPa.
- C All dimensions are in millimetres unless otherwise shown.

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

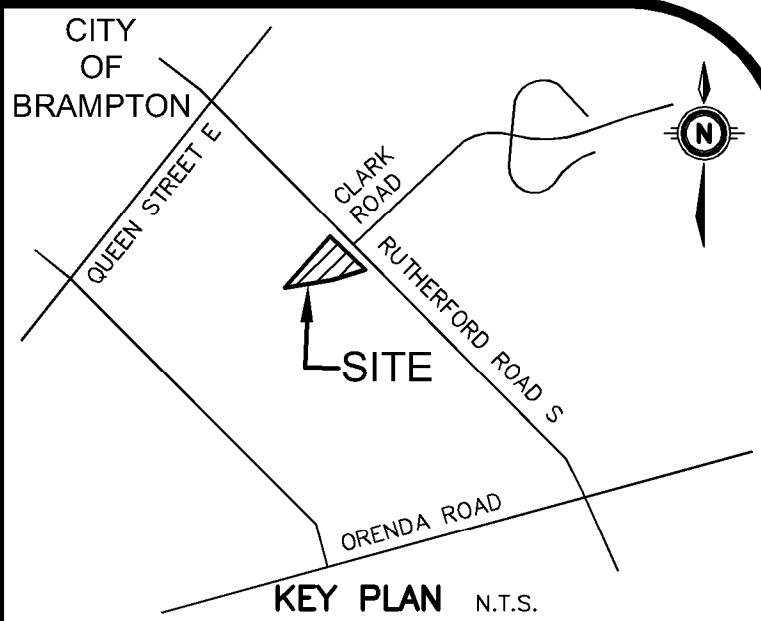
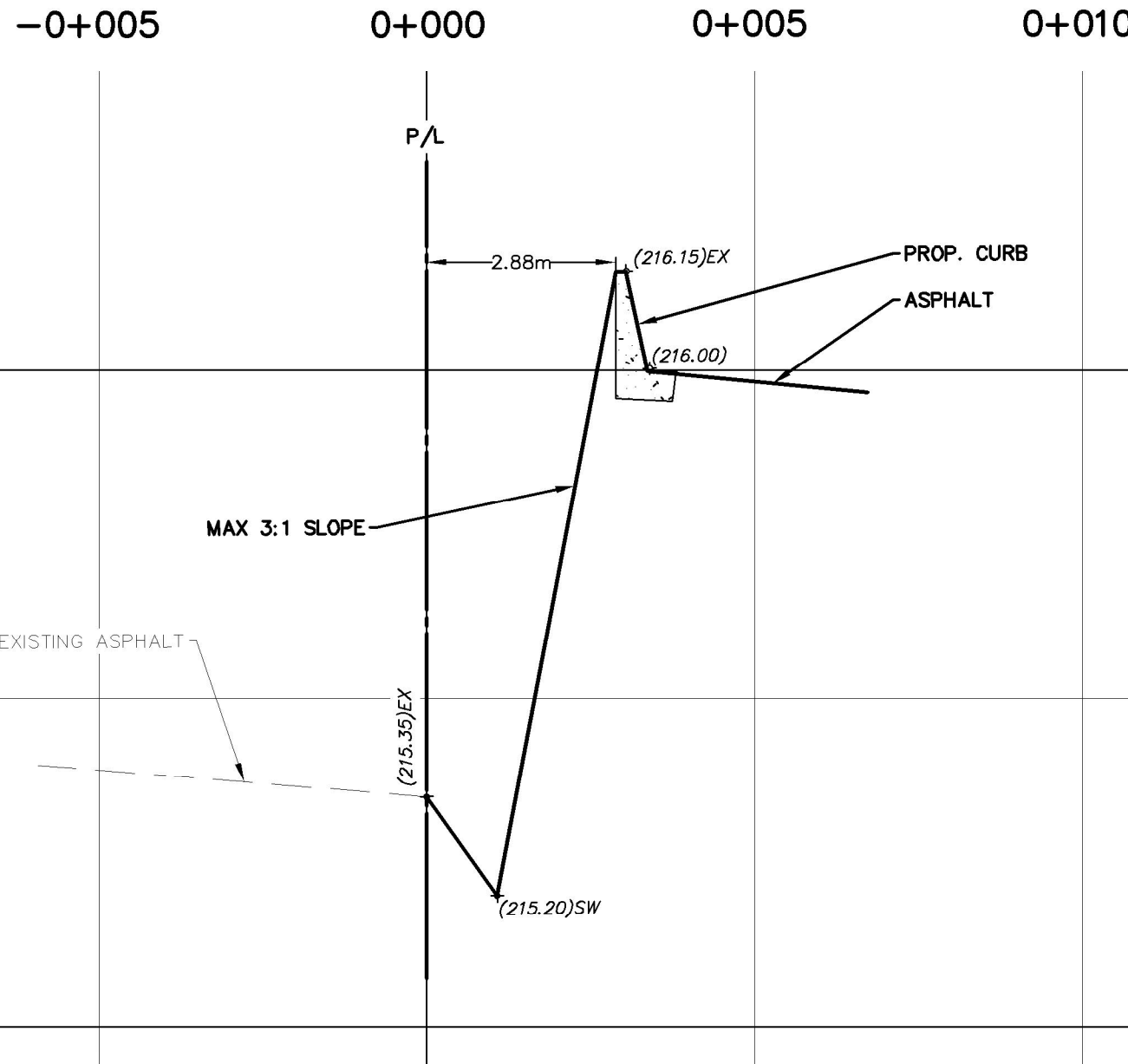
CROSS SECTION A-A

SCALE H 1:100
V 1:10

CROSS SECTION B-B

SCALE 1:100H
1:10V

CROSS SECTION C-C

SCALE 1:100H
1:10V

GEODETIC BM ELEV. = 214.332m
ELEVATIONS SHOWN HERE ARE RELATED TO GEODETIC DATUM AND ARE DERIVED FROM THE CITY OF BRAMPTON CONTROL MONUMENT NO. 042920177, ELEV. = 207.791, THE MINISTRY OF TRANSPORTATION CONTROL MONUMENT NO. 00820168036, ELEV.=214.332

SITE BENCHMARK ELEV. = 215.24m
OUT CROSS IN SIDEWALK ALONG THE SOUTHWEST LIMIT RUTHERFORD RD, OPPOSITE A HYDRO POLE LOCATED APPROX. 3m NORTHEAST, AND 30m NORTHWEST OF THE NORTHEASTERN CORNER OF SUBJECT PROPERTY.

NOTE TO CONTRACTOR :

DO NOT SCALE DRAWINGS.
CONTRACTORS MUST CHECK AND VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
ALL DRAWINGS REMAIN THE PROPERTY OF THE ENGINEER AND SHALL NOT BE REPRODUCED OR REUSED WITHOUT THE ENGINEER'S WRITTEN PERMISSION.

THE OWNER/ARCHITECT/CONTRACTOR IS ADVISED THAT M.T.E. CONSULTANTS INC. CANNOT CERTIFY ANY COMPONENT OF THE SITE WORKS NOT INSPECTED DURING CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO NOTIFY M.T.E. CONSULTANTS INC. PRIOR TO COMMENCEMENT OF CONSTRUCTION TO ARRANGE FOR INSPECTION.

NOTE:

1. PROPERTY-LINE IS APPROXIMATE ONLY AND TAKEN FROM PLAN PREPARED BY J D BARNES SURVEYING MAPPING GIS DATED FEBRUARY 13TH, 2020. BEARINGS ARE UTM GRID, DERIVED FROM OBSERVED REFERENCE POINTS A, B, AND C BY REAL TIME NETWORK (RTN) OBSERVATION, UTM ZONE 17, NAD83 (CSRS) (2010.0).
2. EXISTING TOPOGRAPHICAL INFORMATION PROVIDED BY J D BARNES SURVEYING MAPPING GIS DATED FEBRUARY 13TH.
3. INVERTS DENOTED WITH "±" ARE TAKEN FROM DWGS PROVIDED BY J D BARNES SURVEYING MAPPING GIS AND ARE CONSIDERED APPROXIMATE ONLY. CONTRACTOR TO FIELD VERIFY AND REPORT ANY DISCREPANCIES TO ENGINEER.

8.	ISSUED FOR TENDER	MAY	2021-08-12
7.	ISSUED FOR BUILDING PERMIT	MAY	2021-07-27
6.	ISSUED FOR 80% CD	HKE	2021-05-04
5.	REISSUED FOR SPA	HKE	2021-04-23
4.	ISSUED FOR SPA	HKE	2021-02-12
3.	ISSUED FOR 50% CONSTRUCTION DOCUMENTS	HKE	2021-02-05
2.	ISSUED FOR 100% DESIGN DEVELOPMENT	HKE	2021-01-19
1.	ISSUED FOR SCHEMATIC DESIGN	HKE	2020-12-22
NO. REVISION		BY	YYYY-MM-DD



Engineers, Scientists, Surveyors

905-639-2552

CLIENT
SALTER PILON ARCHITECTURE INC.
151 FERRIS LANE SUITE 400 BARRIE
PROJECT CITY FILE # SP-2021-0032
BRAMPTON FIRE STATION
201 NEW BUILDING
27 RUTHERFORD ROAD SOUTH BRAMPTON
DRAWING

NOTES AND DETAILS PLAN

Project Manager	K.RAMSEWAK	Project No.	48015-100
Design By	LFG	Checked By	KRR
Drawn By	SWX	Checked By	LFG
Surveyed By	OTHERS	Drawing No.	
Date	Nov.26/20		
Scale	1:300		

C2.3

Sheet 4 of 4