

GENERAL NOTES

- ALL WORKS AND MATERIALS SHALL CONFORM TO THE LATEST REVISIONS OF THE STANDARDS AND SPECIFICATIONS OF THE CITY OF OTTAWA, ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS), WHERE APPLICABLE.
- THE LOCATION OF UTILITIES IS APPROXIMATE ONLY, AND THE EXACT LOCATION SHOULD BE DETERMINED BY CONSULTING THE MUNICIPAL AUTHORITIES AND UTILITY COMPANIES CONCERNED. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THE LOCATION AND STATUS OF UTILITIES AND SHALL BE RESPONSIBLE FOR ADEQUATE PROTECTION OF PLANT AND EQUIPMENT FROM DAMAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ANY SERVICES OR UTILITIES DISTURBED DURING CONSTRUCTION, TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION.
- THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF EXISTING SERVICES PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL CONFIRM LOCATIONS AND ELEVATIONS OF EXISTING SERVICES AND STRUCTURES TO BE CONNECTED TO AND EXISTING SERVICES THAT MAY BE DAMAGED OR CAUSE CONFLICTS PRIOR TO CONSTRUCTION OF ANY NEW SEWER, WATER AND/OR STORM WATER WORKS. ALL DIMENSIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES, INTERPRETATIONS, CHANGES AND ADDITIONS TO THESE DRAWINGS MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER, WHEN NOTED AND BEFORE PROCEEDING WITH CONSTRUCTION WORKS. DO NOT CONTINUE CONSTRUCTION IN AREAS WHERE DISCREPANCIES APPEAR UNTIL SUCH DISCREPANCIES HAVE BEEN RESOLVED.
- ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED. ALL DRAWINGS SHOULD NOT BE SCALED BY THE CONTRACTOR. ANY MISSING OR QUESTIONABLE DIMENSIONS ARE TO BE CONFIRMED WITH THE ENGINEER IN WRITING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED AND BEAR COST OF THE SAME.
- ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE "OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS". THE GENERAL CONTRACTOR SHALL BE DEEMED TO BE THE CONTRACTOR AS DEFINED IN THE ACT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION, BACKFILL AND REINSTATEMENT OF ALL AREAS DISTURBED DURING CONSTRUCTION TO THE SATISFACTION OF THE ENGINEER, THE CITY OF OTTAWA AND THE AUTHORITY HAVING JURISDICTION.
- ANY AREAS BEYOND THE LIMIT OF THE SITE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL COMPLY WITH THE CITY OF OTTAWA REQUIREMENTS FOR TRAFFIC CONTROL WHEN WORKING ON CITY STREETS. ALL CONSTRUCTION SIGNAGE MUST CONFORM TO THE M.T.O. MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (LATEST AMENDMENT).
- THE SUPPORT OF ALL UTILITIES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
- THERE WILL BE NO SUBSTITUTION OF MATERIALS UNLESS WRITTEN APPROVAL BY THE ENGINEER HAS BEEN OBTAINED.
- EXCESS EXCAVATED MATERIAL SHALL BE REMOVED FROM THE SITE.
- THE SITE LAYOUT IS THE RESPONSIBILITY OF THE CONTRACTOR. AS-BUILT SITE SERVICING & GRADING DRAWINGS SHALL BE MAINTAINED ON SITE BY THE CONTRACTOR.
- ALL EDGES OF DISTURBED PAVEMENT SHALL BE SAW CUT TO FORM A NEAT AND STRAIGHT LINE PRIOR TO PLACING NEW PAVEMENT.
- FOR GEOTECHNICAL INFORMATION REFER TO GEOTECHNICAL INVESTIGATION REPORT PREPARED BY PATERSON GROUP, DATED JANUARY 3, 2019, REPORT NO. PG 4184-1.
- THE CONTRACTOR SHALL APPRAISE HIS/HER SELF OF ALL SURFACE AND SUBSURFACE CONDITIONS TO BE ENCOUNTERED AND SHALL CARRY OUT THEIR OWN TEST PITS AS REQUIRED TO MAKE THEIR OWN INDEPENDENT ASSESSMENT OF GROUND CONDITIONS. THE CONTRACTOR SHALL NOT MAKE ANY CLAIM FOR ANY EXTRA COST DUE TO ANY SUCH GROUND CONDITIONS VARYING FROM THOSE ANTICIPATED BY THE CONTRACTOR.
- DO NOT CONSTRUCT USING DRAWINGS THAT ARE NOT MARKED "ISSUED FOR CONSTRUCTION".
- FOR TOPOGRAPHICAL INFORMATION REFER TO PLAN PREPARED BY FARLEY, SMITH & DENIS SURVEYING LTD. DATED MARCH 16, 2018.
- CIVIL DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, STRUCTURAL, LANDSCAPE AND LEGAL DRAWINGS.
- A SCHEMATIC DIAGRAM, INCLUDING PROPOSED ELEVATIONS, WITH DETAILS OF THE PROPOSED FOUNDATION DRAINS, STORM LATERAL CONNECTIONS AND INTERNAL MECHANICAL PUMPS, ETC. SHALL BE PREPARED BY THE MECHANICAL CONSULTANT, PRIOR TO REGISTRATION.
- DUE TO THE PROXIMITY OF THE 1220mm DIAMETER WATERMAIN WITHIN THE BASELINE ROAD RIGHT OF WAY, UNDER NO CIRCUMSTANCES SHALL BLASTING BE PROVIDED AS PART OF THE EXCAVATION PROTOCOL.

SANITARY SEWER NOTES:

- ALL SANITARY SEWER MATERIALS AND INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE STANDARDS AND SPECIFICATIONS OF THE CITY OF OTTAWA, ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
- ALL SANITARY SEWERS SHALL BE PVC SDR 35, "RING-TITE" (OR EQUIVALENT), AS PER CSA STANDARD B182.2 OR LATEST AMENDMENT, UNLESS OTHERWISE NOTED.
- SANITARY SEWER TRENCH AND BEDDING SHALL BE AS PER CITY OF OTTAWA STD. S6 AND S7, CLASS "B" BEDDING UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL CONDUCT CCTV INSPECTION OF ALL NEWLY INSTALLED SANITARY SEWERS AND EXISTING SEWERS CONNECTED TO THE TEST SHALL BE PERFORMED IMMEDIATELY AFTER SEWERS INSTALLED.
- THE CONTRACTOR SHALL CONSTRUCT FLEXIBLE SANITARY SEWERS IN ACCORDANCE WITH OPSD 802.010 AND 802.013. DURING CONSTRUCTION, THE CONTRACTOR SHALL PROTECT THE PIPES FROM HEAVY CONSTRUCTION EQUIPMENT. BEDDING AND BACKFILL SHALL BE COMPACTED TO A MINIMUM OF 95% SPMDD.
- ALL ABANDONED EXISTING SEWERS TO BE CAPPED AT THE PROPERTY LINE TO THE SATISFACTION OF THE CITY OF OTTAWA'S SEWER OPERATIONS.
- ALL SANITARY BUILDING CONNECTIONS TO BE EQUIPPED WITH A SANITARY BACKWATER VALVE. REFER TO MECHANICAL DRAWINGS.

STORM SEWER NOTES:

- ALL STORM SEWER MATERIALS AND INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE STANDARDS AND SPECIFICATIONS OF THE CITY OF OTTAWA, ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
- ALL PVC STORM SEWERS ARE TO BE SDR 35 APPROVED PER C.S.A. B182.2 OR LATEST AMENDMENT, UNLESS OTHERWISE SPECIFIED.
- THE CONTRACTOR SHALL CONSTRUCT FLEXIBLE STORM SEWERS IN ACCORDANCE WITH OPSD 802.010 AND 802.013. DURING CONSTRUCTION THE CONTRACTOR SHALL PROTECT THE PIPES FROM HEAVY CONSTRUCTION EQUIPMENT. BEDDING AND BACKFILL SHALL BE COMPACTED TO A MINIMUM OF 95% SPMDD.
- SEWER BEDDING AS PER CITY STANDARD S6 & S7.
- ALL ABANDONED EXISTING SEWERS TO BE CAPPED AT THE PROPERTY LINE TO THE SATISFACTION OF THE CITY OF OTTAWA'S SEWER OPERATIONS.
- WITHIN THE FROST ZONE, THE BACKFILL IN THE SERVICE TRENCHES SHOULD MATCH THE SOIL ON SIDES TO MINIMIZE DIFFERENTIAL FROST HEAVING IN THE SUBGRADE.
- ALL STORM SERVICES TO BE EQUIPPED WITH APPROVED BACKWATER VALVES. REFER TO MECHANICAL DRAWINGS.
- THE CONTRACTOR SHALL CONDUCT CCTV INSPECTION OF ALL NEWLY INSTALLED STORM SEWERS AND EXISTING SEWERS CONNECTED TO THE TEST SHALL BE PERFORMED IMMEDIATELY AFTER SEWERS INSTALLED.

WATERMAIN NOTES:

- ALL WATERMAIN MATERIALS AND INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE STANDARDS AND SPECIFICATIONS OF THE CITY OF OTTAWA, ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
- NO WORK SHALL COMMENCE UNLESS A CITY WATER WORKS INSPECTOR IS ON SITE. WATERMAIN CONNECTIONS BY CITY OF OTTAWA FORCES WITH ALL EXCAVATION BACKFILL AND ROAD REINSTATEMENT BY CONTRACTOR.
- WATERMANS TRENCH AND BEDDING SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD W17, UNLESS OTHERWISE SPECIFIED. BEDDING AND COVER MATERIAL SHALL BE SPECIFIED BY PROJECT GEOTECHNICAL ENGINEER.
- CATHODIC PROTECTION IS REQUIRED ON ALL METALLIC FITTINGS AS PER CITY OF OTTAWA STD. W40. ALL ANODES SHALL BE A-24-48 AS PER CITY OF OTTAWA STD. W44.
- ALL WATERMANS TO BE INSTALLED AT MINIMUM COVER OF 2.4m.
- IF WATERMAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS LESS THAN HALF THAT RECOMMENDED BY THE MANUFACTURER.
- DISINFECTION AND TESTING OF WATERMAIN TO BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS.
- WATER METER TO BE INSTALLED AS PER W32.
- INSULATION FOR WATERMAIN CROSSING OVER AND BELOW SEWER SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. W25.2 AND W25.2, RESPECTIVELY, WHERE WATERMAIN COVER IS LESS THAN 2.4m.

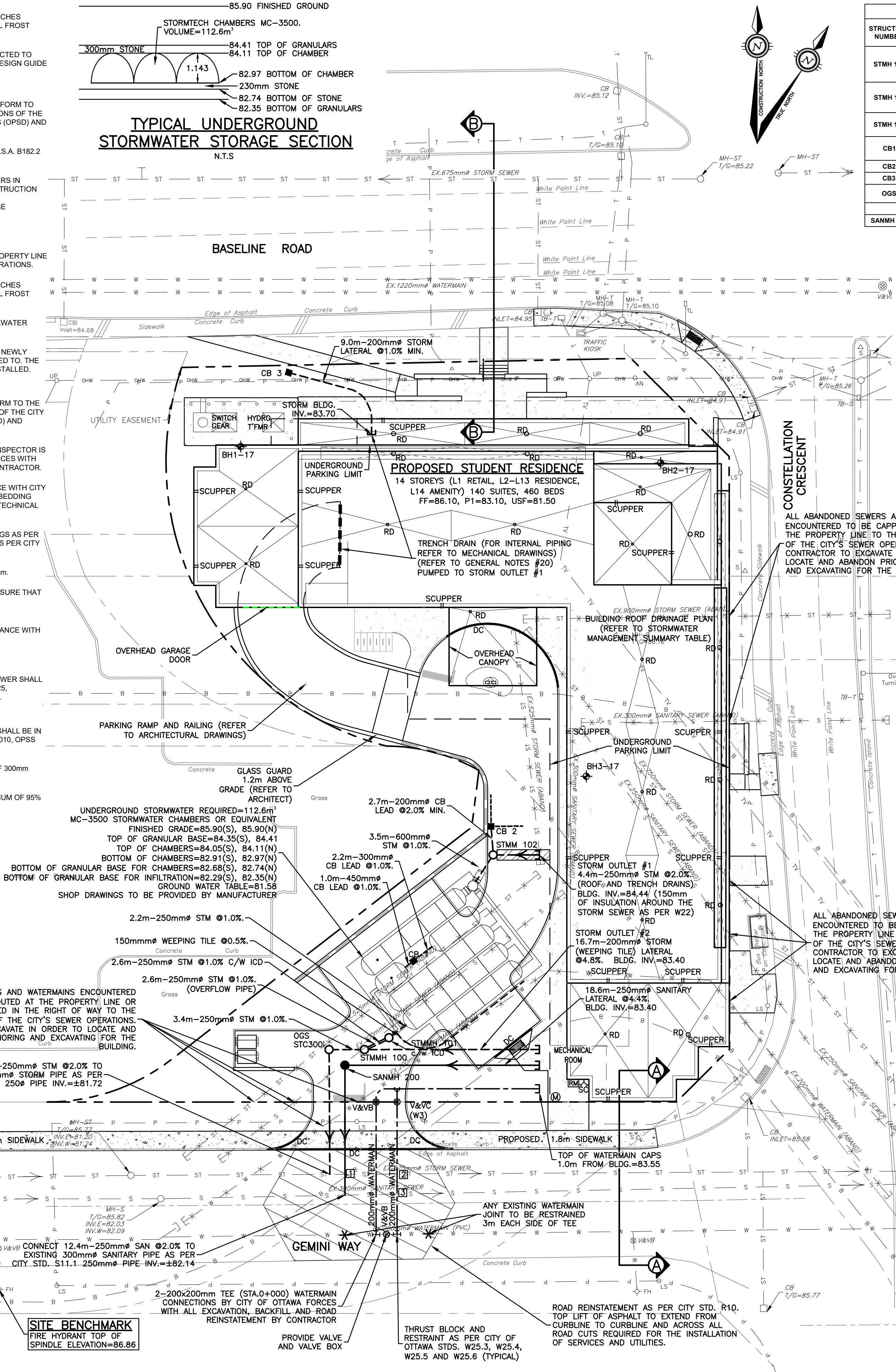
ROAD NOTES:

- PAVEMENT REINSTATEMENT FOR SERVICE AND UTILITY CUTS SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. R10 AND OPSD 505.010, OPSS 310.
- GRANULAR "A" SHALL BE PLACED TO A MINIMUM THICKNESS OF 300mm AROUND ALL STRUCTURES WITHIN PAVEMENT AREA.
- ALL GRANULAR FOR ROADS SHALL BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR MAXIMUM DRY DENSITY.
- PAVEMENT STRUCTURE:
PARKING AREAS:
- 50mm SUPERPAVE 12.5 ASPHALTIC CONCRETE
- 150mm GRANULAR "A" CRUSHED LESTONE (OPSS 1010)
- 300mm GRANULAR "B" TYPE II (OPSS 1010)
PAVEMENT DESIGN TYPE:
ACCESS LANES AND HEAVY DUTY AREA:
- 40mm SUPERPAVE 12.5 ASPHALTIC CONCRETE
- 50mm SUPERPAVE 19.0 ASPHALTIC CONCRETE
- 150mm GRANULAR "A" CRUSHED LESTONE (OPSS 1010)
- 450mm GRANULAR "B" TYPE II (OPSS 1010)
GEMINI WAY:
- 40mm SUPERPAVE 12.5 ASPHALTIC CONCRETE
- 50mm SUPERPAVE 19.0 ASPHALTIC CONCRETE
- 150mm GRANULAR "A" CRUSHED LESTONE (OPSS 1010)
- 450mm GRANULAR "B" TYPE II (OPSS 1010)

WATERMAIN / SEWER CROSSING TABLE										
LOCATION	FINISHED GRADE (m)	SANITARY SEWER		STORM SEWER		WATERMAIN		CLEARANCES (mm)		
		INV ELEV (m)	DIA (mm)	INV ELEV (m)	DIA (mm)	OBV ELEV (m)	INV ELEV (m)		OBV ELEV (m)	
1	85.73	82.30	250	82.55	81.19	ex. 675	81.87	430mm (San Above)		
2	85.73				81.18	ex. 675	81.86	1350mm (Water Above)		
3	89.43	81.97	ex. 300	82.27			83.21	200	83.41	940mm (Water Above)

CAUTION

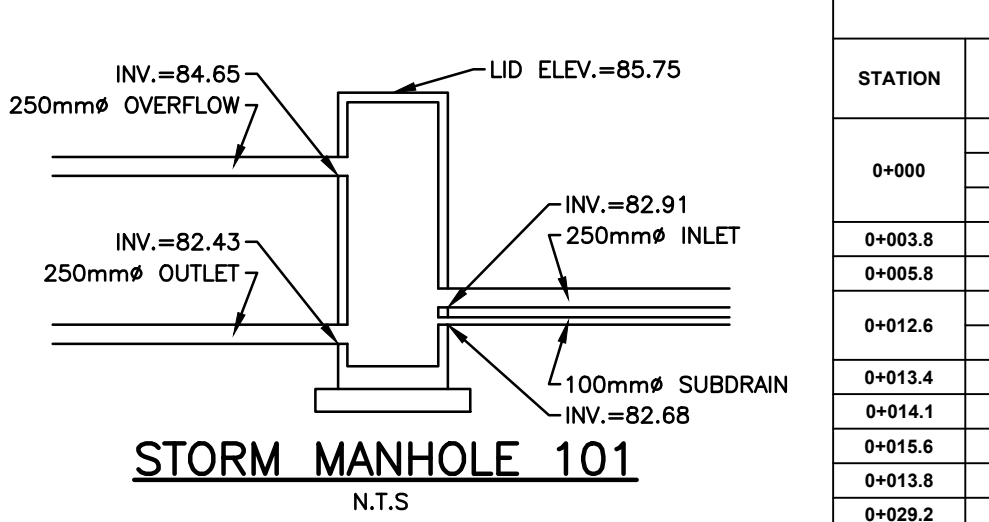
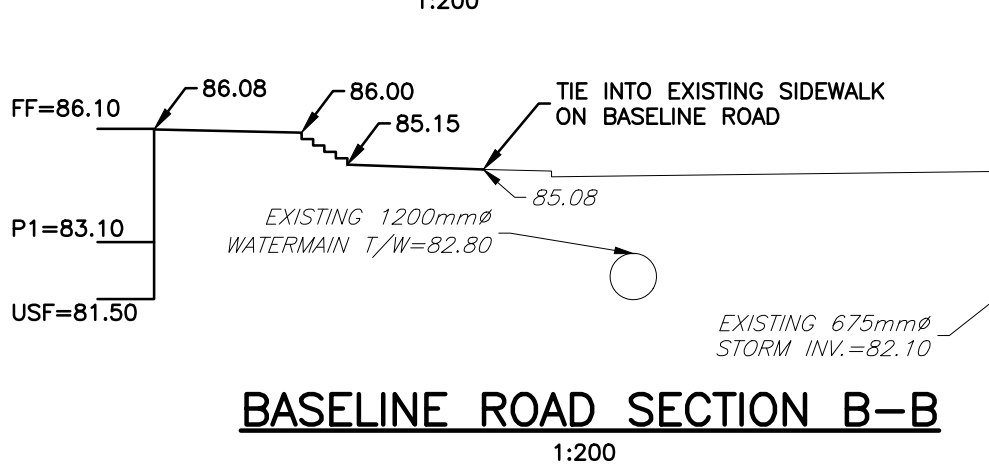
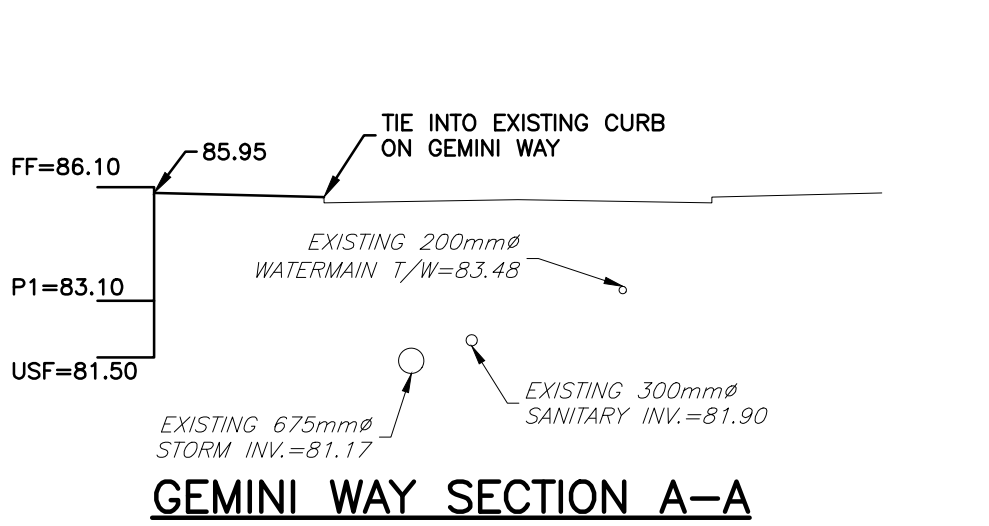
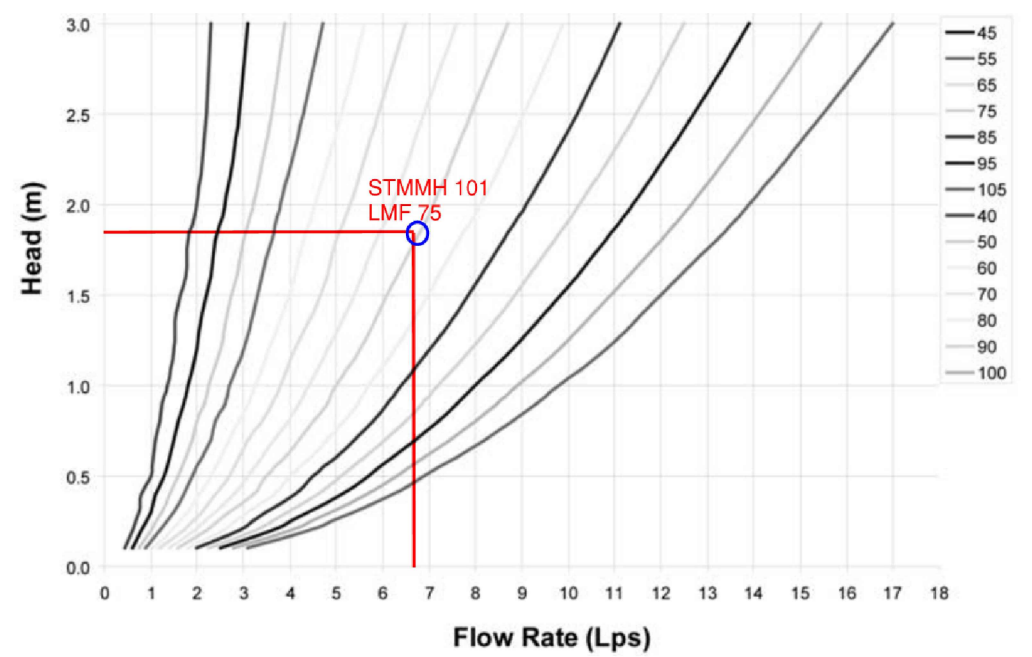
THE POSITION OF ALL POLE LINES, CONDUITS, WATERMANS, SEWERS AND UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.



STRUCTURE NUMBER	TYPE	LID ELEV (m)	INVERT IN (m) and DIA (mm)	INVERT OUT (m) and DIA (mm)	STRUCTURE	SIZE	REFERENCE	FRAME	COVER	Comment
STMH 100	STORM	85.77	82.39 (250)	82.07 (250)	1200 DIA	OPSD 701.010	Ottawa S25	Ottawa S24.1		Overflow pipe
STMH 101	STORM	85.75	82.91 (250)	82.43 (250)	1200 DIA	OPSD 701.010	Ottawa S25	Ottawa S24.1		100 Subrain / 250 Overflow
STMH 102	STORM	85.72	82.68 (190)	84.65 (250)	1200 DIA	OPSD 701.010	Ottawa S25	Ottawa S24.1		
CB1	STORM	85.60	82.91 (450)	82.91 (450)	600 X 600	OPSD 705.010	Ottawa S19	Ottawa S19		
CB2	STORM	85.70	84.40 (200)	84.40 (200)	600 X 600	OPSD 705.010	Ottawa S19	Ottawa S19		
CB3	STORM	85.2	83.80 (200)	83.80 (200)	600 X 600	OPSD 705.010	Ottawa S19	Ottawa S19		
OGS	OILGRIT SEP	85.78	82.035 (250)	81.96 (250)	1200 DIA	STORMCEPTOR STC 300		Custom	Custom	
SANMH 200	SANITARY	85.78	82.59 (250)	82.53 (250)	1200 DIA	OPSD 701.010	Ottawa S25	Ottawa S24		

SEWER TABLE									
STRUCTURE		TYPE	INVERT ELEV (m)		NOMINAL DIA. (mm)	LENGTH (m)	Type	Class	Comment
U/S	D/S		U/S	D/S					
BLDG	STMH 102	STORM	84.44	84.35	250	4.4	PVC	PVC DR35	
STMH 102	ADS - DrainBasin	STORM	83.00	82.97	600	3.5	PVC	PVC DR35	
U/G CHAMBERS	STMH 101	STORM	82.91	82.90	250	2.2	HDPE		
		STORM	82.68	82.68	100	15.0	HDPE		PERF SUBDRAIN
STMH 101	STMH 100	STORM	84.65	84.60	250	2.6	PVC	PVC DR35	OVERFLOW PIPE
			82.43	82.39	250	2.6	PVC	PVC DR35	
STMH 100	OGS	STORM	82.07	82.04	250	3.4	PVC	PVC DR35	
OGS	MAIN SEWER	STORM	81.96	81.72	250	11.9	PVC	PVC DR35	
BLDG	STMH 100	STORM	83.40	82.54	200	16.7	PVC	PVC DR35	
CB1	U/G CHAMBERS	STORM	83.6	83.58	300	2.2	HDPE		
			82.92	82.91	450	1	HDPE		
CB2		STMH 102	STORM	84.40	84.35	200	2.7	PVC	PVC DR35
CB3	BLDG	STORM	83.80	83.70	200	9	PVC	PVC DR35	
BLDG	SANMH 200	SANITARY	83.40	82.59	250	18.6	PVC	PVC DR35	
SANMH 200	MAIN SEWER	SANITARY	82.53	82.14	250	12.4	PVC	PVC DR35	

CONTROL LOCATION	5-YEAR FLOW (L/s)	100-YEAR FLOW (L/s)	MAX HEAD (m)	100-YEAR STORAGE (m³)	CONTROL METHOD	MANUFACTURER	MODEL
ROOF DRAINS (22)	13.1	16.10	0.15	37.40	FLOW CONTROLLED ROOF DRAINS	WATTS	ACUTROL ADJUSTABLE 1 WEIR PER DRAIN SET @ 50% POSITION
STMH 101	3.1	6.60	1.80	116.00	ICD - INSERT	IPEX	TEMPEST LMF-75



STATION	DESCRIPTION	GROUND ELEVATION (m)	TOP OF WATERMAIN. ELEV (m)	AS-BUILT (m)
0+000	200x200 TEE	85.86	83.46	
	200x200 TEE	85.86	83.46	
	200 VALVE & VALVE BOX	85.86	83.46	
0+003.8	CROSSING SANITARY SEWER	85.81	83.41	
0+005.8	CROSSING STORM SEWER	85.81	83.41	
0+012.6	200 VALVE AND VALVE CHAMBER (W3)	85.80	83.40	
0+013.4	45-DEG BEND	86.80	83.40	
0+014.1	45-DEG BEND	86.80	83.40	
0+015.6	200 X 200 TEE	86.80	83.40	
0+013.8	2 - 45 BENDS AND 1 - T CONNECTION	86.79	83.39	
0+029.2	CAP - 1M FROM BUILDING	86.95	83.55	

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