GENERAL NOTES:

- COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
- 2. DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME RESPONSIBILITY FOR ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON
- 3. OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA BEFORE COMMENCING CONSTRUCTION. 4. BEFORE COMMENCING CONSTRUCTION OBTAIN AND PROVIDE PROOF OF COMPREHENSIVE, ALL RISK AND OPERATIONAL LIABILITY INSURANCE FOR \$5,000,000.00. INSURANCE POLICY TO NAME OWNERS, ENGINEERS AND ARCHITECTS AS CO-INSURED.
- 5. RESTORE ALL DISTURBED AREAS ON-SITE AND OFF-SITE, INCLUDING TRENCHES AND SURFACES ON PUBLIC ROAD ALLOWANCES TO EXISTING CONDITIONS OR BETTER TO THE SATISFACTION OF THE CITY OF OTTAWA AND ENGINEER.
- 6. REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL, ORGANIC MATERIAL AND DEBRIS UNLESS OTHERWISE INSTRUCTED BY ENGINEER. EXCAVATE AND REMOVE FROM SITE ANY CONTAMINATED MATERIAL. ALL CONTAMINATED MATERIAL SHALL BE DISPOSED OF AT A LICENSED LANDFILL FACILITY.
- 7. ALL ELEVATIONS ARE GEODETIC.
- 8. REFER TO THE GEOTECHNICAL INVESTIGATION REPORT (NO. 18109580, DATED JANUARY, 2019) PREPARED BY GOLDER ASSOCIATES LTD., FOR SUBSURFACE CONDITIONS, CONSTRUCTION RECOMMENDATIONS, AND GEOTECHNICAL INSPECTION REQUIREMENTS. THE GEOTECHNICAL CONSULTANT IS TO REVIEW ON-SITE CONDITIONS AFTER EXCAVATION PRIOR TO PLACEMENT OF THE GRANULAR MATERIAL.
- 9. REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARD SURFACED AREAS AND DIMENSIONS
- 10. REFER TO THE 'DEVELOPMENT SERVICING STUDY AND STORMWATER MANAGEMENT REPORT' (R-2019-143) PREPARED BY NOVATECH ENGINEERING CONSULTANTS LTD.
- 11. SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS
- PROVIDE LINE/PARKING PAINTING.
- 13. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A SERVICING PLAN OF C-100 INDICATING ALL SERVICING AS-BUILT INFORMATION SHOWN ON THIS PLAN, AS-BUILT INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND T/G ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, T/WM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.

SEWER NOTES:

- 1. SUPPLY AND CONSTRUCT ALL SEWERS AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.

SPECIFICATIONS:		
<u>ITEM</u>	SPEC. No.	REFERENCE
CATCHBASIN (600x600mm)	705.010	OPSD
STORM / SANITARY MANHOLE (1200mmØ)	701.010	OPSD
STORM MANHOLE (1500mmØ)	701.020	OPSD
CB, FRAME & COVER	400.020	OPSD
STORM / SANITARY MH FRAME & COVER	401.010	OPSD
WATERTIGHT MH FRAME AND COVER	401.030	OPSD
SEWER TRENCH	S6	CITY OF OTTAW
SANITARY / STORM SEWER / CB LEAD	PVC DR 35	

- 3. ALL STORM AND SANITARY SERVICE LATERALS SHALL BE EQUIPPED WITH BACKFLOW PREVENTION DEVICES AS PER THE CITY OF OTTAWA STANDARD DETAILS S14 AND S14.1 OR S14.2.
- 4. INSULATE ALL PIPES (SAN/STM) THAT HAVE LESS THAN 1.5m COVER WITH HI-40 INSULATION PER INSULATION DETAIL FOR SHALLOW SEWERS. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION.
- 5. SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0%.

ENGINEER WHO SHALL SUBMIT A CERTIFIED COPY OF THE TEST RESULTS.

- 6. PIPE BEDDING, COVER AND BACKFILL ARE TO BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. THE USE OF CLEAR CRUSHED STONE AS A BEDDING LAYER SHALL NOT BE PERMITTED.
- 7. FLEXIBLE CONNECTIONS ARE REQUIRED FOR CONNECTING PIPES TO MANHOLES (FOR EXAMPLE KOR-N-SEAL, PSX: POSITIVE SEAL AND DURASEAL). THE CONCRETE CRADLE FOR THE PIPE CAN BE ELIMINATED.
- 8. THE OWNER SHALL REQUIRE THAT THE SITE SERVICING CONTRACTOR PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPSS 410.07.16, 410.07.16.04 AND 407.07.24. DYE TESTING IS TO BE COMPLETED ON ALL SANITARY SERVICES TO CONFIRM PROPER CONNECTION TO THE SANITARY SEWER MAIN. THE FIELD TESTS SHALL BE PERFORMED IN THE PRESENCE OF A CERTIFIED PROFESSIONAL
- 9. TYPICAL STORM MANHOLES AND CATCHBASIN MANHOLES ARE TO HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED. ALL CATCHBASINS ARE TO HAVE 600mm SUMPS UNLESS OTHERWISE INDICATED.
- 10. ALL CATCHBASINS, MANHOLES AND/OR CATCHBASIN MANHOLES THAT ARE TO HAVE ICD'S INSTALLED WITHIN THEM ARE
- 11. ALL WEEPING TILE CONNECTIONS TO BE MADE TO THE PROPOSED STORM SEWER SYSTEM DOWNSTREAM OF ANY INLET
- 12. THE CONTRACTOR IS TO TELEVISE (CCTV) ALL PROPOSED SEWERS, 200mmØ OR GREATER PRIOR TO BASE COURSE ASPHALT. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES. PROVIDE A COPY OF ALL CCTV INSPECTION REPORTS TO THE ENGINEER FOR REVIEW.

GRADING NOTES:

- 1. ALL TOPSOIL, ORGANIC OR DELETERIOUS MATERIAL MUST BE ENTIRELY REMOVED FROM BENEATH THE PROPOSED PAVED AREAS AS DIRECTED BY THE SITE ENGINEER OR GEOTECHNICAL ENGINEER.
- 2. EXPOSED SUBGRADES IN PROPOSED PAVED AREAS SHOULD BE PROOF ROLLED WITH A LARGE STEEL DRUM ROLLER AND INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF GRANULARS.
- 3. ANY SOFT AREAS EVIDENT FROM THE PROOF ROLLING SHOULD BE SUB-EXCAVATED AND REPLACED WITH SUITABLE MATERIAL THAT IS FROST COMPATIBLE WITH THE EXISTING SOILS AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
- 4. THE GRANULAR BASE SHOULD BE COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE. ANY ADDITIONAL GRANULAR FILL USED BELOW THE PROPOSED PAVEMENT SHOULD BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE.
- 5. MINIMUM OF 2% GRADE FOR ALL GRASS AREAS UNLESS OTHERWISE NOTED.
- 6. MAXIMUM TERRACING GRADE TO BE 3:1 UNLESS OTHERWISE NOTED.
- 7. ALL GRADES BY CURBS ARE EDGE OF PAVEMENT GRADES UNLESS OTHERWISE INDICATED.
- 8. ALL CURBS SHALL BE BARRIER CURB (150mm) UNLESS OTHERWISE NOTED AND CONSTRUCTED AS PER CITY OF OTTAWA STANDARDS (SC1.1).
- 9. REFER TO LANDSCAPE PLAN FOR PLANTING AND OTHER LANDSCAPE FEATURE DETAILS.
- 10. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GRADING PLAN INDICATING AS-BUILT ELEVATIONS OF ALL DESIGN

Erosion and Sediment Control Responsibilities

THE POSITION OF ALL POLE LINES, CONDUITS,

UNDERGROUND AND OVERGROUND UTILITIES AND

STRUCTURES IS NOT NECESSARILY SHOWN ON

THE ACCURACY OF THE POSITION OF SUCH

LOCATION OF ALL SUCH UTILITIES AND

DAMAGE TO THEM.

THE CONTRACT DRAWINGS, AND WHERE SHOWN,

UTILITIES AND STRUCTURES IS NOT GUARANTEED.

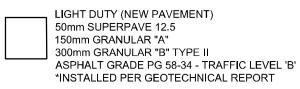
BEFORE STARTING WORK, DETERMINE THE EXACT

STRUCTURES AND ASSUME ALL LIABILITY FOR

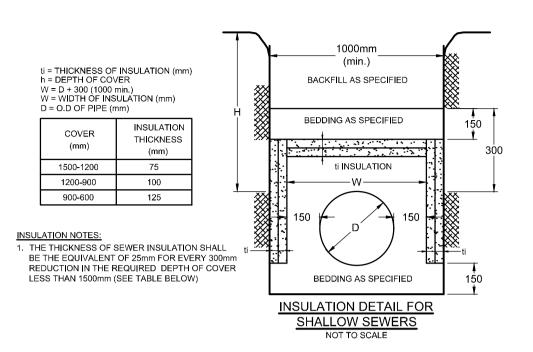
WATERMAINS, SEWERS AND OTHER

				During Construction			After Construction Prior to Final Acceptance		After Final Acceptance
	ESC Measure	Symbol	Specification	Installation Responsibility	Inspection/Maintenance Responsibility	Inspection Frequency	Approval to Remove	Removal Responsibility	Inspection/Maintenance Responsibility
	Silt Fence		OPSD 219.110	Developer's Contractor	Developer's Contractor	Weekly (as a minimum)	Consultant	Developer's Contractor	N/A
	Filter Bags	Location as Indicated in ESC Note #3	Erosion and Sediment Control Notes	Developer's Contractor	Developer's Contractor	Weekly (as a minimum)	Consultant	Developer's Contractor	N/A
	Mud Mat	мм	Drawing Details	Developer's Contractor	Developer's Contractor	Weekly (as a minimum)	Developer's Contractor	Developer's Contractor	N/A
Temporary Measures	Dust Control	Location as Required Around Site	Erosion and Sediment Control Notes	Developer's Contractor	Developer's Contractor	Weekly (as a minimum)	Consultant	Developer's Contractor	N/A
	Stabilized Material Stockpiling	Location as Required by Contractor	Erosion and Sediment Control Notes	Developer's Contractor	Developer's Contractor	Weekly (as a minimum)	Developer's Contractor	Developer's Contractor	N/A
	Sediment Basin (for flows being pumped out of excavations)	Location as Required by Contractor		Developer's Contractor	Developer's Contractor	After Every Rainstorm	Developer's Contractor	Developer's Contractor	N/A

PAVEMENT STRUCTURES:



HEAVY DUTY (NEW PAVEMENT) 40mm SUPERPAVE 12.5 50mm SUPERPAVE 19.0 150mm GRANULAR "A" 450mm GRANULAR "B" TYPE II ASPHALT GRADE PG 58-34 - TRAFFIC LEVEL 'B' * INSTALLED PER GEOTECHNICAL REPORT



INLET CONTROL DEVICE DATA TABLE - CBMH 1							
DESIGN EVENT	ICD TYPE (PLUG TYPE)	DIAMETER OF OUTLET PIPE (mm)	DESIGN FLOW (L/s)	DESIGN HEAD (m)	WATER ELEVATION (m)	VOLUME (m³)	AVAILABLE STORAGE
1:2 YR	HYDROVEX		20.7	0.38	55.62	4.8	
1:5 YR	VORTEX MODEL	300mmØ PVC	21.3	0.45	55.69	6.1	14.8 m ³
1:100 YR	200 VHV-2		35.2	1.23	56.47	14.4	

GUARD HOUSE ROOF DRAIN TABLE: AREA R-1 (ROOF DRAIN 1)							
AREA ID *	ROOF DRAIN No. (WATTS MODEL)	ROOF DRAIN OPENING SETTING	1:5 YEAR RELEASE RATE	APPROX. 5-YR PONDING DEPTH	1:100 YEAR RELEASE RATE	APPROX. 100-YR PONDING DEPTH	
R-1	RD 1 (RD-100-A-ADJ)	1/4 EXPOSED	0.79 L/s	10 cm	0.87 L/s	14 cm	
	BHC ROOF DRAIN TABLE: AREA R-2 (ROOF DRAINS 2 to 12)						
AREA ID *	ROOF DRAIN No. (WATTS MODEL)	ROOF DRAIN OPENING SETTING	1:5 YEAR RELEASE RATE	APPROX. 5-YR PONDING DEPTH	1:100 YEAR RELEASE RATE	APPROX. 100-YR PONDING DEPTH	
R-2	RD 2 (RD-100-A-ADJ)	1/4 EXPOSED	0.79 L/s	10 cm	0.87 L/s	14 cm	
R-2	RD 3 (RD-100-A-ADJ)	1/4 EXPOSED	0.79 L/s	10 cm	0.87 L/s	14 cm	
R-2	RD 4 (RD-100-A-ADJ)	1/4 EXPOSED	0.79 L/s	10 cm	0.87 L/s	14 cm	
R-2	RD 5 (RD-100-A-ADJ)	1/4 EXPOSED	0.79 L/s	10 cm	0.87 L/s	14 cm	
R-2	RD 6 (RD-100-A-ADJ)	CLOSED	0.32 L/s	10 cm	0.32 L/s	13 cm	
R-2	RD 7 (RD-100-A-ADJ)	CLOSED	0.32 L/s	10 cm	0.32 L/s	14 cm	
R-2	RD 8 (RD-100-A-ADJ)	CLOSED	0.32 L/s	9 cm	0.32 L/s	13 cm	
R-2	RD 9 (RD-100-A-ADJ)	CLOSED	0.32 L/s	11 cm	0.32 L/s	14 cm	
R-2	RD 10 (RD-100-A-ADJ)	CLOSED	0.32 L/s	11 cm	0.32 L/s	14 cm	
R-2	RD 11 (RD-100-A-ADJ)	CLOSED	0.32 L/s	10 cm	0.32 L/s	14 cm	
R-2	RD 12 (RD-100-A-ADJ)	1/4 EXPOSED	0.79 L/s	10 cm	0.87 L/s	14 cm	
R-2	TERRACE DECK DRAINS	UN-CONTROLLED	4.2 L/s		7.9 L/s		

* REFER TO THE 'DEVELOPMENT SERVICING STUDY AND STORMWATER MANAGEMENT REPORT' (R-2019-143) PREPARED BY NOVATECH FOR DRAINAGE AREA IDENTIFIERS AND STORMWATER MANAGEMENT DETAILS.

**ALL CONTROLLED FLOW ROOF DRAINS FOR THE PROPOSED BUILDING TO BE WATTS 'ADJUSTABLE ACCUTROL' ROOF DRAINS.

EROSION AND SEDIMENT CONTROL NOTES:

THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY

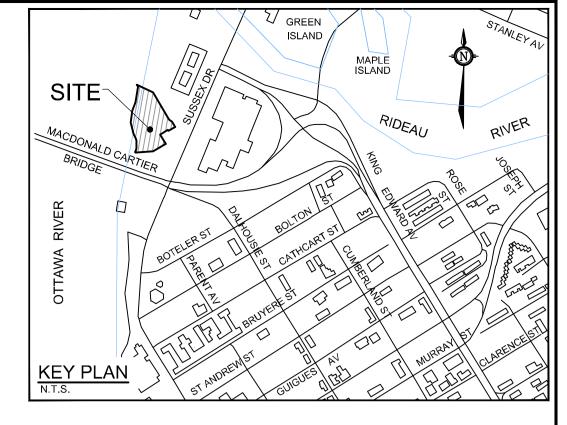
- 1. ALL EROSION AND SEDIMENT CONTROLS ARE TO BE INSTALLED TO THE SATISFACTION OF THE ENGINEER AND THE CITY OF OTTAWA. THEY ARE TO BE APPROPRIATE TO THE SITE CONDITIONS, PRIOR TO UNDERTAKING ANY SITE ALTERATIONS (FILLING, GRADING, REMOVAL OF VEGETATION, ETC.) AND DURING ALL PHASES OF SITE PREPARATION AND CONSTRUCTION. THESE PRACTICES ARE TO BE IMPLEMENTED IN ACCORDANCE WITH THE CURRENT BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL AND SHOULD INCLUDE AS A MINIMUM THOSE MEASURES INDICATED ON THE PLAN.
- 2. EROSION AND SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED DURING CONSTRUCTION IN ACCORDANCE WITH THE "GUIDELINES ON EROSION AND SEDIMENT CONTROL FOR URBAN CONSTRUCTION SITES" (GOVERNMENT OF ONTARIO, MAY 1987). THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MEETING ALL REGULATORY AGENCY REQUIREMENTS.
- 3. TO PREVENT SURFACE EROSION FROM ENTERING ANY STORM SEWER SYSTEM DURING CONSTRUCTION, FILTER CLOTH WILL BE PLACED UNDER GRATES OF NEARBY CATCHBASINS AND STRUCTURES. A LIGHT DUTY SILT FENCE BARRIER WILL ALSO BE INSTALLED AROUND THE CONSTRUCTION AREA (WHERE APPLICABLE). THESE CONTROL MEASURES WILL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
- 4. TO LIMIT EROSION: MINIMIZE THE AMOUNT OF EXPOSED SOILS AT ANY GIVEN TIME, RE-VEGETATE EXPOSED AREAS AND SLOPES AS SOON AS POSSIBLE AND PROTECT EXPOSED SLOPES WITH NATURAL OR SYNTHETIC MULCHES.
- 5. FOR MATERIAL STOCKPILING: MINIMIZE THE AMOUNT OF EXPOSED MATERIALS AT ANY GIVEN TIME; APPLY TEMPORARY SEEDING, TARPS, COMPACTION AND/OR SURFACE ROUGHENING AS REQUIRED TO STABILIZE STOCKPILED MATERIALS THAT WILL NOT BE USED WITHIN 14
- 6. THE SEDIMENT CONTROL MEASURES SHALL ONLY BE REMOVED WHEN. IN THE OPINION OF THE ENGINEER. THE MEASURES ARE NO LONGER REQUIRED. NO CONTROL MEASURES MAY BE PERMANENTLY REMOVED WITHOUT PRIOR AUTHORIZATION FROM THE ENGINEER.
- 7. THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE ENGINEER ANY ACCIDENTAL DISCHARGES OF SEDIMENT MATERIAL INTO ANY STORM SEWER SYSTEM. APPROPRIATE RESPONSE MEASURES, INCLUDING ANY REPAIRS TO EXISTING CONTROL MEASURES OR THE IMPLEMENTATION OF ADDITIONAL CONTROL MEASURES, SHALL BE CARRIED OUT BY THE CONTRACTOR WITHOUT DELAY.
- 8. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.
- 9. ROADWAYS ARE TO BE SWEPT AS REQUIRED OR AS DIRECTED BY THE ENGINEER AND/OR THE MUNICIPALITY.

REVISION

10. THE CONTRACTOR SHALL ENSURE PROPER DUST CONTROL IS PROVIDED WITH THE APPLICATION OF WATER (AND IF REQUIRED. CALCIUM CHLORIDE) DURING DRY PERIODS. MONITOR DUST LEVELS DURING SITE PREPARATION/EXCAVATION, AND CONSTRUCTION ACTIVITIES, AND WHEN DUST LEVELS BECOME VISUALLY APPARENT SPRAY WATER TO MINIMIZE THE RELEASE OF DUST FROM GRAVEL, PAVED AREAS AND EXPOSED SOILS. USE CHEMICAL DUST SUPPRESSANTS ONLY WHERE NECESSARY ON PROBLEM AREAS.

STATION	SURFACE ELEVATION	T/WM ELEVATION	COMMENTS
0+00	57.60±	55.20± *	CONNECTION TO EX. 150mmØ WM
0+00.3	57.58	55.18	200 x 150 REDUCER
0+00.6	57.55	55.15	22.5° VERTICAL BEND
0+01.8	57.35	54.65	22.5° VERTICAL BEND
0+03.4	57.05	54.65	CROSS NEW HA-HA DITCH (2.4m COVER BELOW DITCH)
0+07.5	57.65	54.60	11.25° HORIZONTAL BEND
)+18.5-0+22.7	56.83-57.00	54.55	BULK WATER METER IN R4 CHAMBER
0+27.3	56.75	54.75 **	150mmØ HYDRANT TEE
0+28.2	56.75	54.80 **	22.5° HORIZONTAL BEND
0+32.5	56.73	55.00 **	CROSS ABOVE EX. 300Ø SAN (±0.5m CLEARANCE)
0+34.2	56.74	54.80 **	22.5° HORIZONTAL BEND
0+36.1	56.75	54.60 **	PROPERTY LINE / 200mmØ VALVE & VALVE BOX
0+41.1	56.72	54.32	CROSS BELOW 250mmØ STM (±0.9m CLEARANCE)
0+54.0	56.64	54.24	25mmØ SERVICE TEE (1+00)
0+54.9	56.64	54.24	45° HORIZONTAL BEND
0+58.5	56.64	54.24	45° HORIZONTAL BEND
0+75.0	56.55	54.05	CROSS BELOW 200Ø SAN (±0.5m CLEARANCE)
0+77.6	56.55	54.05	150mmØ HYDRANT TEE
0+90.6	56.47	54.07	200 x 200 x 200 SERVICE TEE (2+00)
0+92.1	56.47	54.07	200mmØ VALVE & VALVE BOX
0+100.5	56.67	54.07	CROSS BELOW 200Ø SAN (±0.6m CLEARANCE)
0+102.8	56.67	54.07	45° HORIZONTAL BEND
0+105.3	56.60	54.07	200 x 100 REDUCER
0+105.8	56.60	54.06	CROSS BELOW RETAINING WALL
0+107.6	56.45±	54.05± *	CONNECTION TO EX. 100mmØ WM
1+00	56.64	54.24	25mmØ SERVICE TEE (0+54.0) - ROLL CONNECTION TO CROSS SA
1+02.5	56.64	53.85	CROSS BELOW 200mmØ SAN (±0.5m CLEARANCE)
1+04.0	56.64	53.95	CROSS BELOW 300mmØ STM (±1.3m CLEARANCE)
1+05.0	56.65	54.15	25mmØ STAND POST
1+09.6	56.75	54.25	45° HORIZONTAL BEND
1+10.3	56.80	54.25	45° HORIZONTAL BEND
1+10.7	56.80	54.25	25mmØ CAP FOR BUILDING SERVICE
2+00	56.47	54.07	200 x 200 x 200 SERVICE TEE (0+90.6)
2+01.0	56.49	54.09	200mmØ VALVE & VALVE BOX
2+15.1	56.68	54.28	22.5° HORIZONTAL BEND
2+16.3	56.70	54.30	CROSS BELOW 250mmØ STM (±1.1m CLEARANCE)
2+25.7	56.75	54.30	22.5° HORIZONTAL BEND
2+38.0	57.20	54.35	200 x 150 REDUCER
2+38.6	57.22	54.35	45° HORIZONTAL BEND
2+39.4	57.25	54.35	45° HORIZONTAL BEND
2+39.7	57.25	54.35	150mmØ CAP FOR BUILDING SERVICE

** PROVIDE THERMAL INSULATION AS PER CITY OF OTTAWA DETAIL W23 ADJACENT TO OPEN STRUCTURES.



BENCHMARK INFO

TOP OF SPINDLE OF EXISTING ON-SITE FIRE HYDRANT LOCATED ALONG THE SOUTH SIDE OF THE EXISTING SITE ACCESS ROAD. GEODETIC ELEVATION = 57.41m.

REFER TO PLANS C-100 AND C-200 FOR LOCATION OF JOB BENCHMARKS.

THE EXISTING GRADES SHOWN ON THE PLANS ARE TAKEN DIRECTLY FROM TOPOGRAPHICAL SURVEY PLAN (Ref. # 18151-18 BHC), PREPARED BY ANNIS, O'SULLIVAN, VOLLEBEKK SIGNED AND DATED DECEMBER 7, 2018.

THE BOUNDARY INFORMATION IS TAKEN FROM THE SAME TOPO SURVEY PLAN AND WAS COMPILED BY THE OLS BASED ON PLANS 4R-14198 AND 4R-16305.

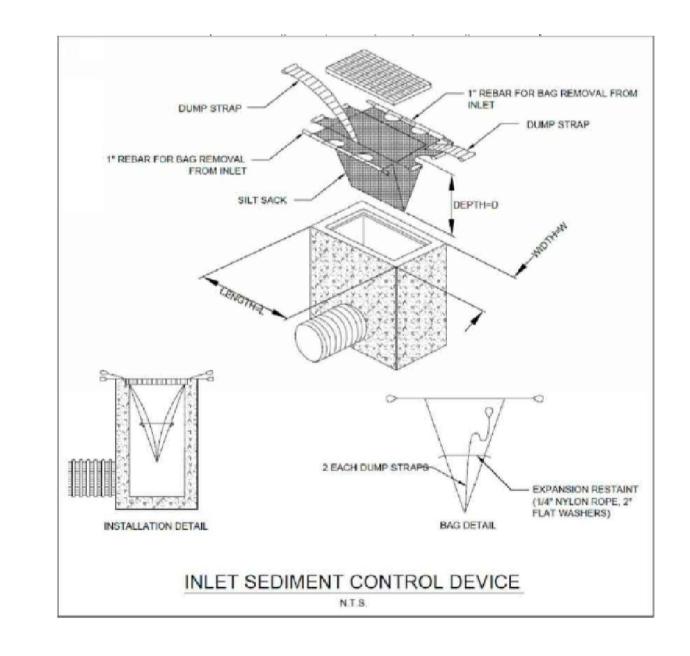
SURROUNDING BACKGROUND TOPO INFORMATION BEYOND THE LIMITS OF THE SITE SURVEY ARE SHOWN FROM CITY OF OTTAWA 1:2000 MAPPING FOR CONTEXT ONLY.

WATERMAIN NOTES:

- 1. SUPPLY AND CONSTRUCT ALL WATERMAINS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMAINS BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAIN BY CITY OF OTTAWA FORCES. CHLORINATION OF THE WATER SYSTEM SHALL BE PERFORMED BY THE CONTRACTOR IN THE PRESENCE CITY OF OTTAWA FORCES.
- 2. SPECIFICATIONS:

<u>ITEM</u>	SPEC. No.	REFERENCE
WATERMAIN TRENCHING	W17	CITY OF OTTAW
HYDRANT INSTALLATION	W19	CITY OF OTTAW
THERMAL INSULATION IN SHALLOW TRENCHES	W22	CITY OF OTTAW
THERMAL INSULATION AT OPEN STRUCTURES	W23	CITY OF OTTAW
VALVE BOX ASSEMBLY	W24	CITY OF OTTAW
WATERMAIN CROSSING BELOW SEWER	W25	CITY OF OTTAW
BULK WATER METER CHAMBER	W32.1	CITY OF OTTAW
WATERMAIN	PVC DR 18 or TYPE 'K'	SOFT COPPER

- 3. WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED.
- 4. PROVIDE MINIMUM 0.5m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS.
- 5. WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.



THIS PLAN IS TO BE READ IN CONJUNCTIN WITH PLANS C-100 AND C-200

SCALE SM / FS 1:300 ISSUED FOR SITE PLAN APPROVAL NOV 8/19 ISSUED FOR NCC REVIEW NOV 1/19 FS

DATE

FOR REVIEW ONLY F.S. THAUVETTI 100041389

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CITY of OTTAWA BRITISH HIGH COMMISSION - EARNSCLIFFE DRAWING NAME

NOTES. DETAILS & TABLES

119116 REV#2

CITY PLAN #