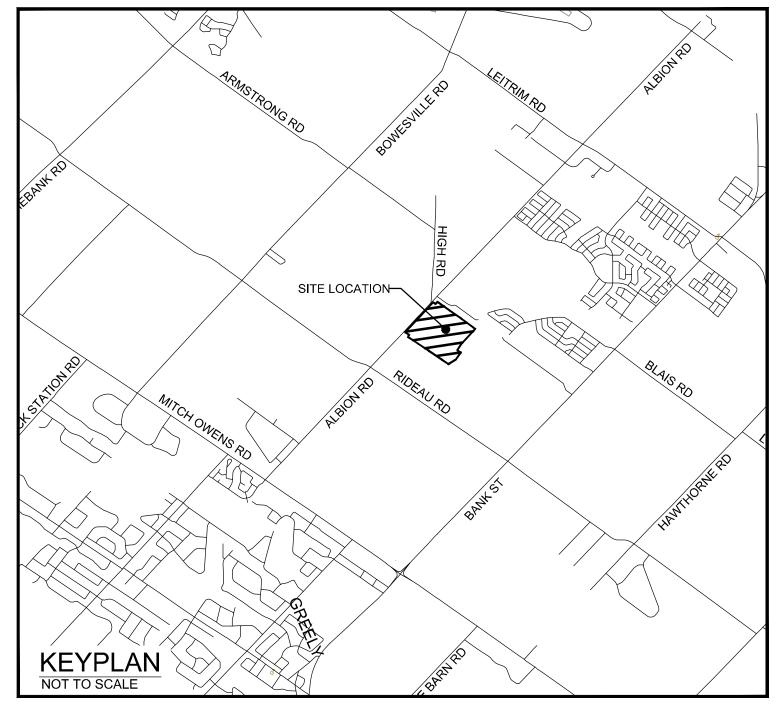
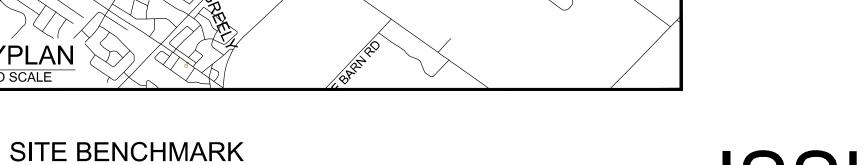
HARD ROCK OTTAWA

4837 ALBION ROAD, CITY OF OTTAWA ROADS, SEWERS AND WATERMAINS











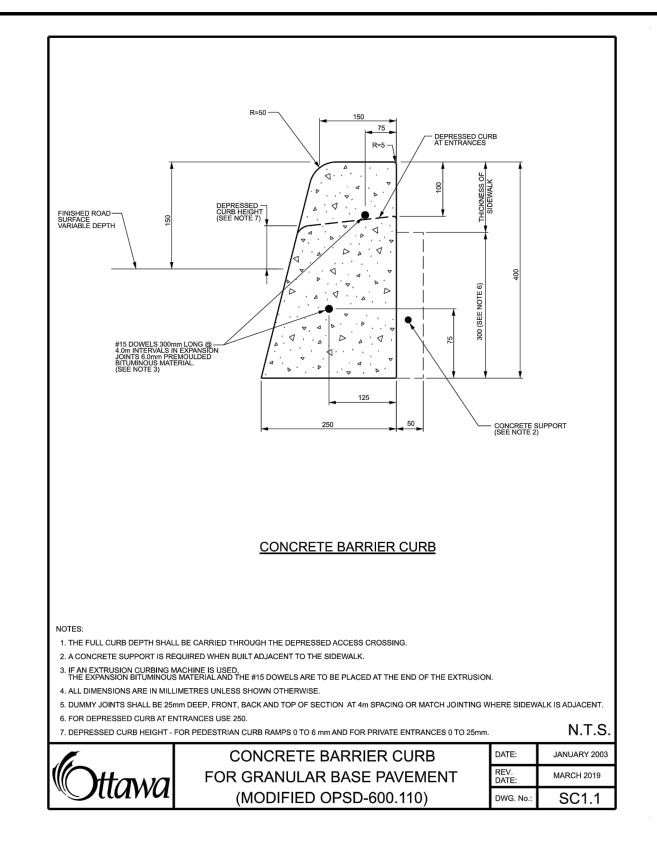


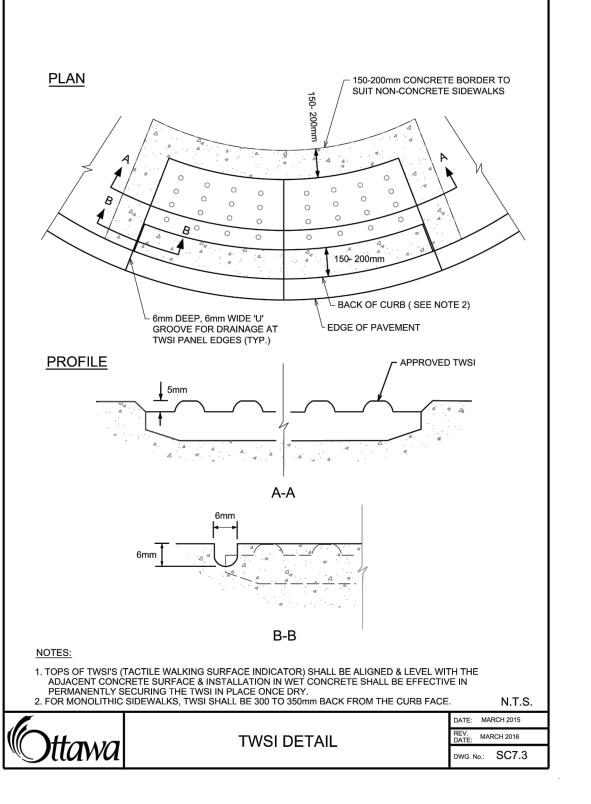
PROJECT No. 116111

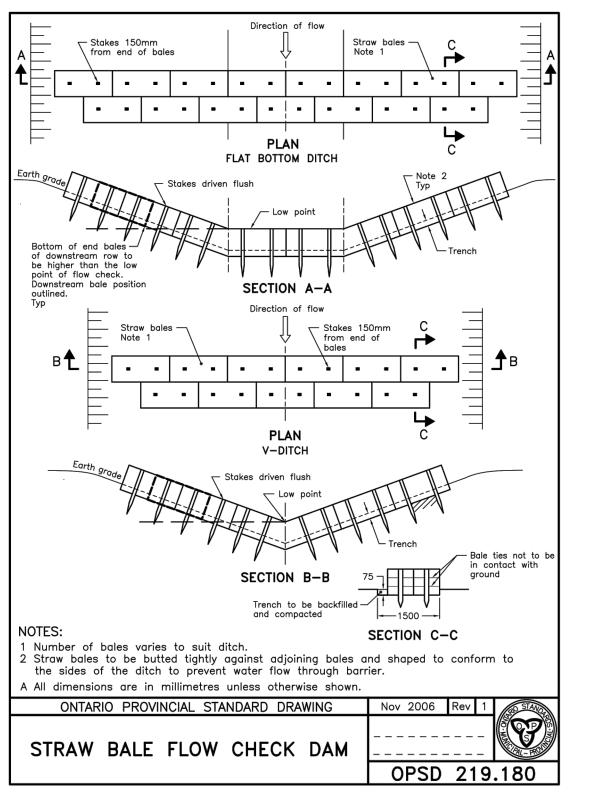
ISSUED FOR SITE PLAN APPROVAL

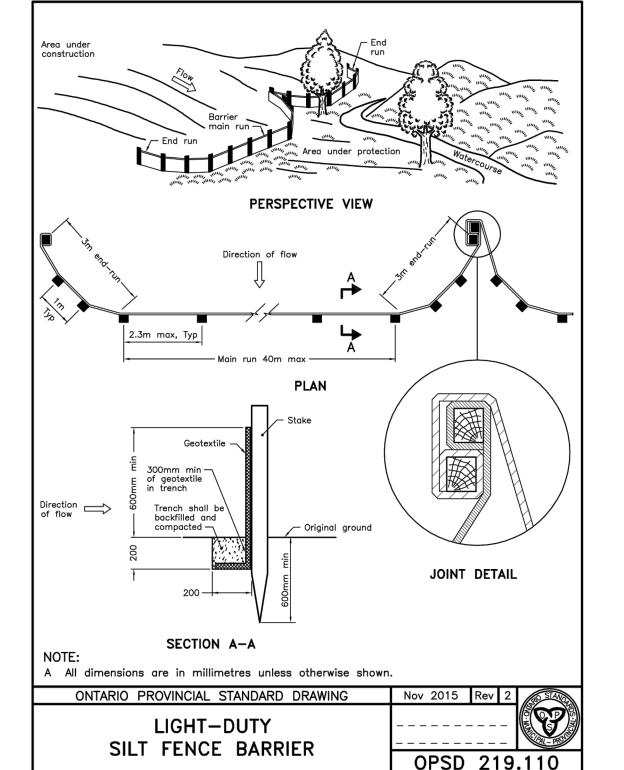
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016\116111\CAD\Design\116111-COV.dwg, COV-B1, Nov 18, 2019 - 12:43pm, a









INLET CONTROL DEVICE TABLE:

TEMPEST INLET CONTROL DEVICE TABLE

100-YR EVENT

8.2

111.2

8.4

19.0

8.5

8.2

22.5

22.0

21.9

8.6

6.1

6.2

4.0

9.7

6.3

6.3

6.4

9.2

9.9

10.1

6.0

6.2

6.2

9.4

7.2

7.1

7.1

7.2

7.3

10.4

14.9

12.0

12.7

HEAD (m) | FLOW (L/s

2.26

1.82

2.35

2.60

1.77

2.26

1.75

1.92

2.28

2.72

1.90

1.42

1.37

1.37

1.65

1.42

1.42

1.47

1.71

1.31 1.38

1.40

1.41

1.59

1.85

1.96

1.80

1.89

1.90

1.39

0.82

0.92

STRUCTURE | TEMPEST ICD |

EX-CB117

EX-CB131

EX-CB137

EX-CB14

EX-CB60

EX-CB72

EX-CB82

EX-CB84

EX-MH105

EX-MH112

PR-CB10

PR-CB13

PR-CB14

PR-CB16/17

PR-CB18

PR-CB21

PR-CB24

PR-CB29

PR-CB32

PR-CBMH104

PR-CBMH105

PR-CBMH107

PR-CBMH108

PR-CBMH109

PR-CBMH110

PR-CBMH112

PR-CBMH114

PR-CBMH118

PR-MH100

PR-TD01

PR-TD02

PR-CBMH115

PR-CBMH106

EX-CB64

MODEL

N/A

N/A

N/A

N/A

N/A

N/A

78

63

93

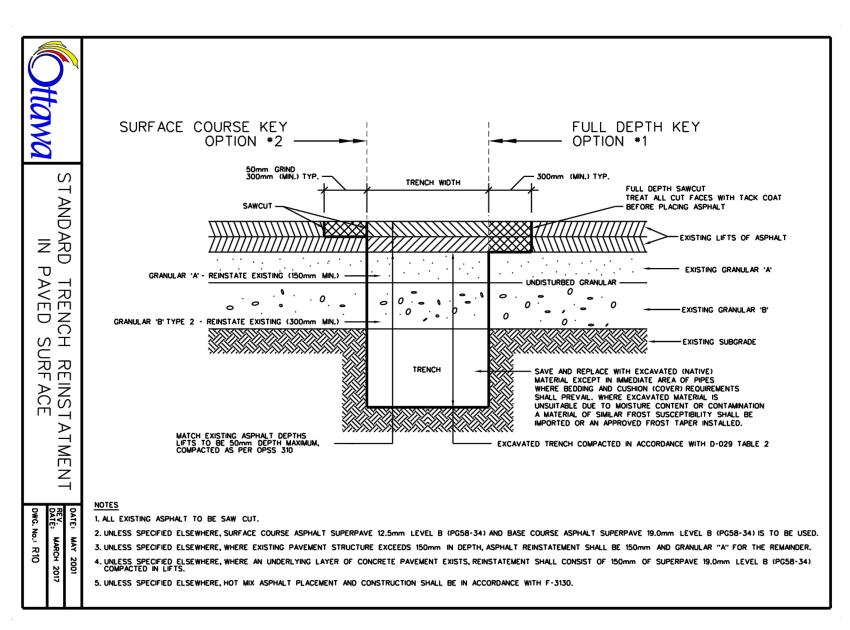
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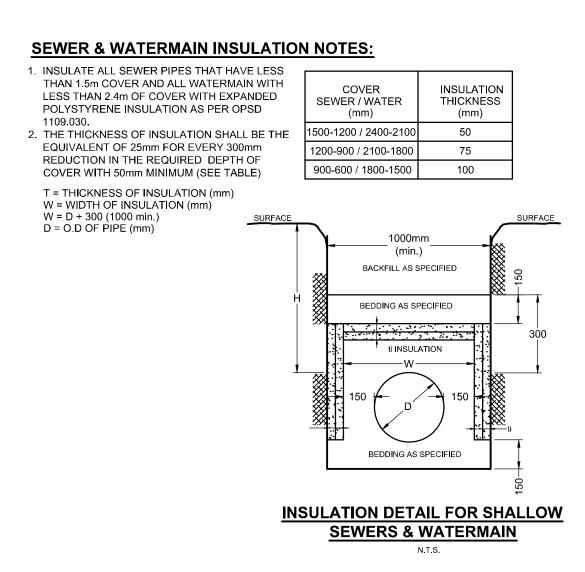
MHF 80

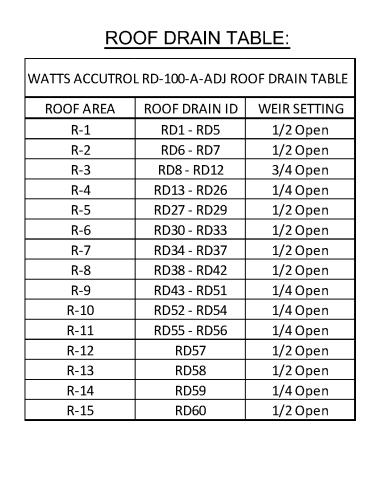
MHF 82

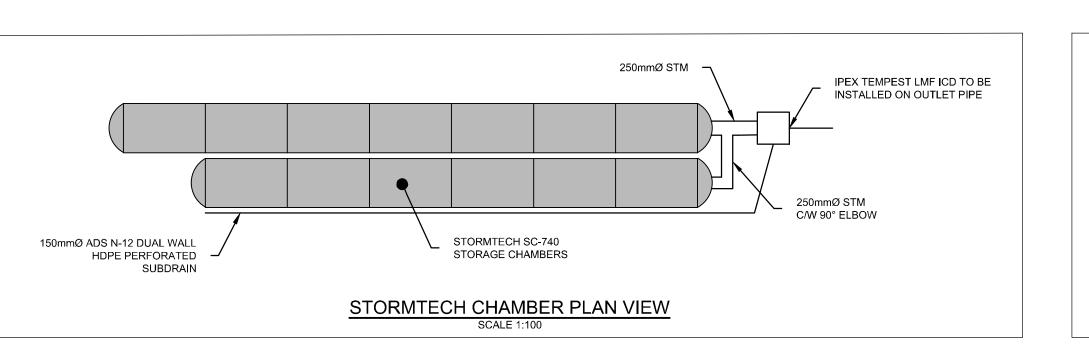
MHF 82

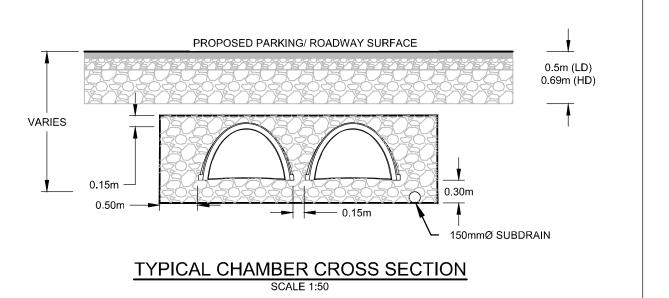
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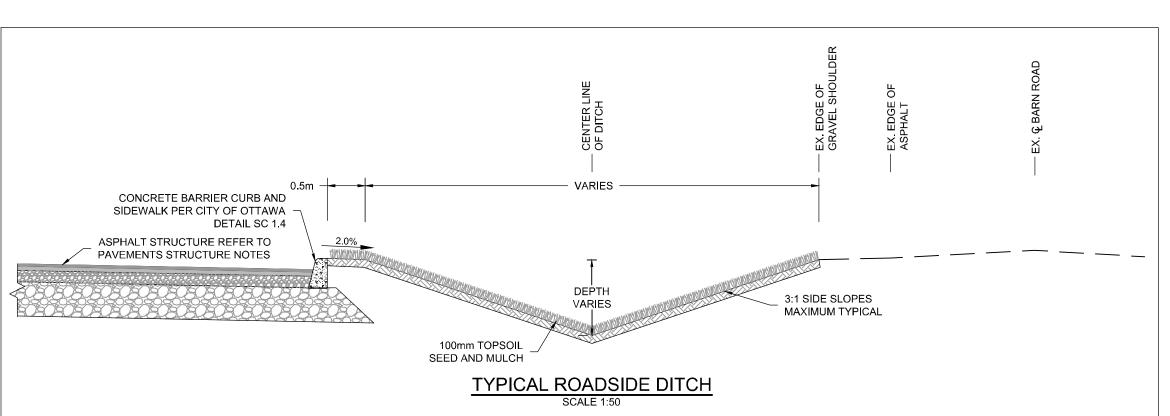


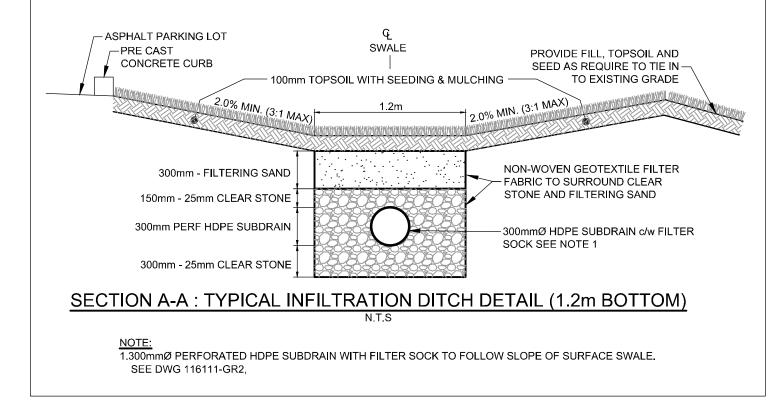


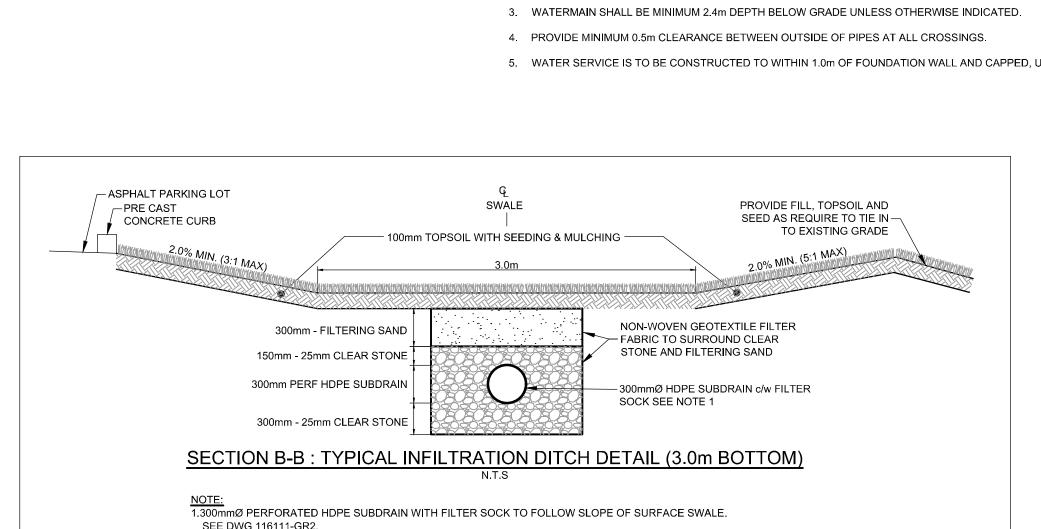












GENERAL NOTES

- 1. 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 THIS DRAWING.
- 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 \$2,000,000.00. INSURANCE POLICY TO NAME OWNERS, ENGINEERS AND ARCHITECTS AS CO-INSURED AND THE CITY OF OTTAWA AS THIRD PARTY.
- 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
- 6. REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL UNLESS OTHERWISE INSTRUCTED BY ENGINEER. EXCAVATE AND REMOVE FROM SITE ALL ORGANIC MATERIAL AND DEBRIS. ALL CONTAMINATED MATERIAL (IF ANY) SHALL BE DISPOSED OF AT A LICENSED LANDFILL FACILITY.
- 7. ALL ELEVATIONS ARE GEODETIC. THE SITE BENCHMARK IS THE FIRE HYDRANT TOP OF SPINDLE LOCATED A---- (ELEV. = -----). REFER TO --------. TOPOGRAPHIC PLAN OF PART OF LOTS --AND --CONCESSION ----- GEOGRAPHICAL -----, CITY OF OTTAWA).
- 8. REFER TO GEOTECHNICAL REPORT No. PG4315-2 PREPARED BY PATERSON GROUP, DATED OCTOBER 30, 2019, 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 THE DEVELOPMENT SERVICING STUDY AND STORMWATER MANAGEMENT REPORT No. R2019-196 DATED NOVEMBER 20, 2019 PREPARED BY NOVATECH.
- 11. SAW CUT AND KEYGRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10). ALL ROAD CUTS TO BE REINSTATED WITH FULL MILL OVERLAY AS
- 12. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES AND GRADING PLAN INDICATING ALL SERVICING AS-BUILT INFORMATION SHOWN ON THE PLANS. AS-BUILT
- INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND T/G ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, T/WM ELEVATIONS, ANY ALIGNMENT CHANGES, AND ALL SURFACE ELEVATION AS BUILT GRADES

GRADING NOTES

1) ALL TOPSOIL, ORGANIC OR DELETERIOUS MATERIAL MUST BE ENTIRELY REMOVED FROM BENEATH THE PROPOSED PAVED AREAS.

10. REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARD SURFACE AREAS AND DIMENSIONS.

- 2) EXPOSED SUBGRADES IN PROPOSED PAVED AREAS SHOULD BE PROOF ROLLED WITH A LARGE STEEL DRUM ROLLER AND INSPECTED BY THE GEOTECHNICAL CONSULTANT.
- 3) ANY SOFT AREAS EVIDENT FROM THE PROOF ROLLING SHOULD BE SUBEXCAVATED AND REPLACED WITH SUITABLE MATERIAL THAT IS FROST COMPATIBLE WITH THE EXISTING SOILS. 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) GRADE AND/OR FILL BEHIND PROPOSED CURB AND BETWEEN BUILDINGS AND CURBS, WHERE REQUIRED TO PROVIDE POSITIVE DRAINAGE. 6) MINIMUM OF 2% GRADE FOR ALL GRASS AREAS UNLESS OTHERWISE NOTED.
- 7) ALL CURBS SHALL BE BARRIER CURB (150mm) UNLESS OTHERWISE NOTED AND CONSTRUCTED AS PER CITY OF OTTAWA STANDARDS (SC1.1).
- 8) AS PER PRIVATE APPROACH BY-LAW NO. 2004-447 SECTION 26 (h) THE GRADE OF ANY PART OF A PRIVATE APPROACH TO A BUILDING MAY BE GREATER THAN 6% BUT SHALL NOT EXCEED 12% PROVIDED THAT A SUBSTANCE MELTING DEVICE SUFFICIENT TO KEEP THE PRIVATE APPROACH FREE OF ICE AT ALL TIMES IS INSTALLED AND PROPERLY MAINTAINED BY THE OWNER.

EROSION AND SEDIMENT CONTROL NOTES:

- REFER TO ESC PLAN 116111-ESC FOR FURTHER DETAILS
- 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 AGENCY.
- 1) THE OWNER AGREES TO PREPARE AND IMPLEMENT AN EROSION AND SEDIMENT CONTROL PLAN TO THE SATISFACTION OF THE CITY OF OTTAWA, 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 IN ACCORDANCE WITH THE CURRENT BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL SUCH AS BUT NOT LIMITED TO INSTALLING FILTER CLOTHS ACROSS MANHOLE/CATCHBASIN LIDS TO PREVENT
- SEDIMENTS FROM ENTERING STRUCTURES AND INSTALL AND MAINTAIN A LIGHT DUTY SILT FENCE BARRIER AS REQUIRED. 2) THE CONTRACTOR SHALL PLACE FILTER BAGS UNDER THE CATCHBASIN AND MANHOLE GRATES FOR THE DURATION OF CONSTRUCTION AND WILL REMAIN IN PLACE DURING ALL PHASES OF CONSTRUCTION.
- 3) SILT FENCING FOR ENTIRE PERIMETER OF SITE, SHALL BE UTILIZED TO CONTROL EROSION FROM THE SITE DURING CONSTRUCTION.
- 4) THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY
- 5) PROVIDE MUD MATS AT ALL CONSTRUCTION ACCESS POINTS TO MINIMIZE SEDIMENT TRANSPORT OFFSITE.
- 6) EROSION AND SEDIMENT CONTROL MEASURES MAY BE MODIFIED IN THE FIELD AT THE DISCRETION OF THE CITY OF OTTAWA SITE INSPECTOR OR CONSERVATION AUTHORITY.

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		
STORM / SANITARY MANHOLE (1200Ø)	701.010	OPSD		
STORM MANHOLE (1500Ø)	701.011	OPSD		
CATCHBASIN (600x600mm)	705.010	OPSD		
CB, FRAME & COVER	400.020	OPSD		
STORM / SANITARY MH FRAME	S25	CITY OF OTTAWA		
SANITARY COVER	S24	CITY OF OTTAWA		
STORM COVER (CLOSED)	S24.1	CITY OF OTTAWA		
STORM COVER (OPEN)	S28.1	CITY OF OTTAWA		
SEWER TRENCH	S6 & S7	CITY OF OTTAWA		
STORMTECH CHAMBERS	SC-740	ADS Inc.		
STORM SEWER < 450mmØ	PVC SDR 35 (UNL	PVC SDR 35 (UNLESS SPECIFIED OTHERWISE)		
STORM SEWER >= 450mmØ	CONC 65D (UNLE	CONC 65D (UNLESS SPECIFIED OTHERWISE)		
STORM INFILTRATION CHAMBERS	SC-740	STORMTECH		
SANITARY SEWER	PVC DR 35	CITY OF OTTAWA		

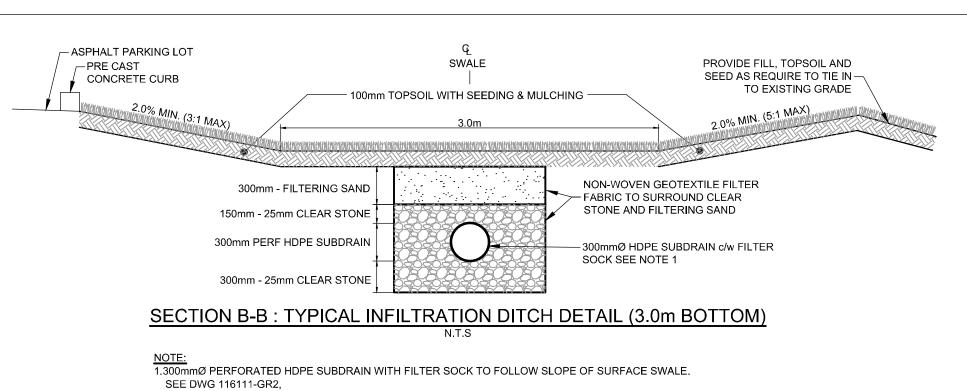
- 3. SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0%.
- 3. ALL STORM AND SANITARY SERVICE LATERALS SHALL BE EQUIPPED WITH BACKFLOW PREVENTION DEVICES AS PER THE CITY OF OTTAWA STANDARD DETAILS S14 AND S14.1 OR S14.2.
- 4. ALL WEEPING TILE CONNECTIONS TO BE MADE TO THE PROPOSED STORM SEWER SYSTEM DOWNSTREAM OF ANY INLET CONTROL DEVICES.
- 5. INSULATE ALL PIPES (SAN/STM) THAT HAVE LESS THAN 1.5m COVER PER INSULATION DETAIL FOR SHALLOW SEWERS. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION.
- 6. 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. 7. STORM MANHOLES AND CBMHS ARE TO HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED
- 8. ALL CATCHBASINS, MANHOLES AND/OR CATCHBASIN MANHOLES THAT ARE TO HAVE ICD'S INSTALLED WITHIN THEM ARE TO HAVE 600mm SUMPS.
- 9. ALL CATCHBASINS AND CATCHBASIN MANHOLES ARE TO BE PROVIDED WITH MINIMUM 3 METER LONG PERFORATED SUBDRAINS WHICH EXTEND IN TWO DIRECTIONS LONGITUDINALLY AT THE SUBGRADE LEVEL. 10. CONTRACTOR 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 AND RE CCTV PRIOR TO ACCEPTANCE. 11. 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 ENGINEER WHO SHALL SUBMIT A CERTIFIED COPY OF THE TEST RESULTS.

WATERMAIN NOTES

SPECIFICATIONS:

WATERMAIN TRENCHING THERMAL INSULATION IN SHALLOW TRENCHES CITY OF OTTAWA WATERMAIN CROSSING BELOW SEWER

- 2. 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 AND CHLORINATION OF THE WATER SYSTEM SHALL BE PERFORMED BY CITY OFFICIALS
- 5. WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.



FOR REVIEW ONLY

Mat HIREHORIAK

100211256

NOV 20/19



HEAVY DUTY PAVEMENT 40mm SP 12.5 150mm OPSS GRANULAR "A" 450mm OPSS GRANULAR "B" TYPE II LIGHT DUTY PAVEMENT 50mm SP 12.5 150mm OPSS GRANULAR "A"

300mm OPSS GRANULAR "B" TYPE II

THE POSITION OF ALL 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, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

			SCALE	DESIGN	
				MJH	
				CHECKED	
			AS NOTED	CJR	
				DRAWN	
				MJR	
				CHECKED	
				CJR	
ISSUED FOR SITE PLAN APPROVAL	NOV 20/19	CJR		APPROVED	
REVISION	DATE	BY		JLS	



4837 ALBION ROAD, CITY OF OTTAWA HARD ROCK OTTAWA

> DRAWING NAME **NOTES AND DETAILS**

REV#1

116111-ND

