

**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 LAYDOWN OF GRANULARS.
3. ANY SOFT AREAS EVIDENT FROM THE PROOF ROLLING SHOULD BE SUBCUTTED AND REPLACED WITH SUITABLE MATERIAL THAT IS PROST COMPATIBLE WITH THE FINISHING SOILS AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
4. THE GRANULAR BASE SHOULD BE COMPACTED TO AT LEAST 100% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE. ANY ADDITIONAL GRANULAR FILL USED BELOW THE HIGH GRADE 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 150mm CURB (150mm) UNLESS OTHERWISE NOTED AND CONSTRUCTED AS PER QTY OF OTTAWA STANDARDS (SCT. 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 GRADES SHOWN ON THIS PLAN.

**EROSION AND SEDIMENT CONTROL NOTES:**

1. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE. EROSION CONTROL ACTIVITIES SHALL INCLUDE: LIFTING THE AMOUNT OF EXPOSED SOIL, USING FILTER CLOTH UNDER THE GRATES OF CATCH BASINS AND MANHOLES, INSTALLING SILT FENCES AND OTHER SEDIMENT TRAPS.
2. AT THE DISCRETION OF THE PROJECT MANAGER OR MUNICIPAL STAFF, ADDITIONAL SILT CONTROL DEVICES SHALL BE INSTALLED AT DESIGNATED LOCATIONS.
3. FOR SILT FENCE BARRIER USE OPSD 219.110. GEOTEXTILE FOR SILT FENCE SHALL BE ACCORDING TO OPSD 1860, TABLE 3.
4. EXCEPT AS PROVIDED IN PARAGRAPHS 4.1.1 TO 4.1.3 BELOW, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS FEASIBLE. PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY IS TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 21 DAYS AFTER THE CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED.
5. WHERE THE INTENTION OF STABILIZATION MEASURES IS BY THE 5TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASED IS PRECEDDED BY SNOW COVER, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS FEASIBLE.
6. WHERE CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN 21 DAYS FROM WHEN ACTIVITIES CEASED, (E.G. THE TOTAL TIME PERIOD THAT CONSTRUCTION ACTIVITY IS TEMPORARILY CEASED IS LESS THAN 21 DAYS) THEN STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF SITE BY THE 5TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY CEASED.
7. SEDIMENT THAT IS ACCUMULATED BY THE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED IN A MANNER THAT AVOIDS ESCAPE OF THE SEDIMENT TO THE DOWNSTREAM END OF THE CONTROL MEASURE AND AVOIDS DAMAGE TO THE CONTROL MEASURE. SEDIMENT SHALL BE REMOVED TO THE LEVEL OF THE GRADE EXISTING AT THE TIME THE CONTROL MEASURE WAS CONSTRUCTED AND BE ACCORDING TO THE FOLLOWING:
  - 5.1. FOR LIGHT DUTY SEDIMENT BARRIERS ACCUMULATED SEDIMENT SHALL BE REMOVED ONCE IT REACHES THE LESSER OF THE FOLLOWING:
    - 5.1.1. A DEPTH OF ONE HALF THE EFFECTIVE HEIGHT OF THE CONTROL MEASURE.
    - 5.1.2. A DEPTH OF 300 MM IMMEDIATELY UPSTREAM OF THE CONTROL MEASURE.
  - 5.2. FOR ALL CONTROL MEASURES ACCUMULATED SEDIMENT SHALL BE REMOVED AS NECESSARY TO PERFORM MAINTENANCE REPAIRS.
  - 5.3. ACCUMULATED SEDIMENT SHALL BE REMOVED IMMEDIATELY PRIOR TO THE REMOVAL OF THE CONTROL MEASURE.
  - 5.4. ACCUMULATED SEDIMENT IS TO BE REMOVED AND DISPOSED OF AS PER OPSD 180.
8. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MONITORED TO ENSURE THEY ARE BEING EFFECTIVE WORKING CROSS. THE CONDITION OF THE CONTROL MEASURES SHALL BE MONITORED PRIOR TO ANY FORECAST STORM EVENT AND FOLLOWING A STORM EVENT.
9. MUST CONTROL MEASURES SHOULD BE CONSIDERED PRIOR TO CLEANING AND GRADING. THE USE OF WATER, CALCIUM CHLORIDE FLAKES/SOLUTION OR MAGNESIUM CHLORIDE FLAKES/SOLUTION SHALL BE USED AS DUST SUPPRESSANTS AS PER OPSD 598. THIS IS TO LIMIT EROSION OF SOILS WHICH MAY TRANSPORT STORMWATER OFF SITE, WHERE THEY MAY BE WASHED INTO THE RECEIVING WATER BY THE NEXT STORM EVENT.
10. ALL GREEN AREAS TO BE TREATED WITH 150mm TOPSOIL AND 800 AS SOON AS FEASIBLE, AS PER OPSD 57.
11. TOPSOIL TO BE STRIPPED AND STOCKPILED FOR REHABILITATION CLEAN FILL TO BE PLACED IN ALL AREAS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
12. ALL DISTURBED AREAS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE SPECIFIED.
13. STOCKPILED MATERIAL IS TO BE STORED AWAY FROM POTENTIAL RECEIVERS (E.G. STORM CATCH BASINS, MANHOLES) AND BE SURROUNDED BY EROSION CONTROL MEASURES WHERE MATERIAL IS TO BE LEFT IN PLACE IN EXCESS OF 14 DAYS.
14. IF REQUIRED, DEWATERING/SETTLING CATCH BASINS SHALL BE CONSTRUCTED AS PER OPSD 219.240 AND LOCATED ON FLAT GRADE UPSTREAM OF OTHER EXISTING MITIGATION MEASURES. WATERCOURSES SHALL NOT BE DIVERTED, OR BLOCKED, AND TEMPORARY WATERCOURSES CROSSINGS SHALL NOT BE CONSTRUCTED OR UNLID, UNLESS OTHERWISE SPECIFIED IN THE CONTRACT. IF CLOSURE OF ANY PERMANENT WATER PASSAGE IS NECESSARY THE CONTRACTOR SHALL RELEASE ANY STRANDED FISH TO THE OPEN PORTION OF THE WATERCOURSE WITHOUT HARM.
15. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL CONFORM TO OPSD 57.
16. WHERE DEWATERING IS REQUIRED, THE DISCHARGED WATER SHALL BE CONTROLLED IN ACCORDANCE WITH OPSD 518.
17. ALL SETTLING/ TREATMENT BASINS SHALL BE EQUIPPED WITH TERRAPAK 270R GEOTEXTILE (OR APPROVED EQUIVALENT) AND SHALL BE CLEANED AND REPLACED AS REQUIRED.
18. FOR POTENTIAL SPILLS, THE CONTRACTOR SHALL HAVE ON SITE AT ALL TIMES AN EMERGENCY SPILL KIT THAT WILL INCLUDE AS A MINIMUM THE FOLLOWING:
  - 1. 10-15 LIT X 1 L ABSORBENT PAD.
  - 1. 100 L ZONAL ABSORBENT MATERIAL.
  - 1. 100 GLOVES.
  - 1. 100 GLOVES.
  - 1. 100 GLOVES.

**LOCATION PLAN**

NTS

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**LEGEND**

PROPERTY LINE

LINE OF CONSTRUCTION

SECTION OF SURFACE WATER DRAINAGE

PROPOSED GRADE

PROPOSED GRADE (TOP OF WALL)

PROPOSED GRADE (BOTTOM OF WALL)

PROPOSED GRADE (TOP OF CURB)

PROPOSED GRADE (BOTTOM OF CURB)

EXISTING GRADE

PROPOSED STORMWATER MANHOLE

PROPOSED SANITARY MANHOLE

PROPOSED CATCH BASIN

EXISTING CATCH BASIN

EXISTING MANHOLE

EMERGENCY OVERLAND FLOW ROUTE

SILT FENCE

TEMPORARY SEDIMENT TRAP

**LIST OF DRAWINGS**

50-47 (SITE GRADING, DRAINAGE AND EROSION CONTROL PLAN)

50-48 (SITE SERVING PLAN)

**SITE PLAN INFORMATION**

TEN FOUR ARCHITECTURE INC.

18 EGLINTON AVE. EAST - SUITE 406

TORONTO, ONTARIO, M4P 1K6

1-416-465-1024, F-416-465-1024

**SURVEY INFORMATION**

ASSOCIATION OF ONTARIO LAND SURVEYORS

100 MCNICOLL AVENUE

TORONTO, ONTARIO, M7M 3M6

1-416-465-1024, F-416-465-1024

**BENCHMARK**

ELEVATIONS SHOWN HERE ARE GEODETIC AND WERE ESTABLISHED USING LEICA DISTOMETER AND ARE TRANSFORMED TO ORTHOMETRIC HEIGHTS USING HTX4.

NO.	REVISION	DATE	BY
1.	ISSUED FOR SITE PLAN APPLICATION (SPA)	MAR-21, 2017	NA
2.	SPA REVISION 1	NOV-17, 2017	NA
3.	ISSUED FOR SITE PLAN APPLICATION (SPA)	MAR-21, 2017	NA
NO.	REVISION	DATE	BY

CITY OF OTTAWA

**SITE GRADING, DRAINAGE & EROSION CONTROL PLAN**

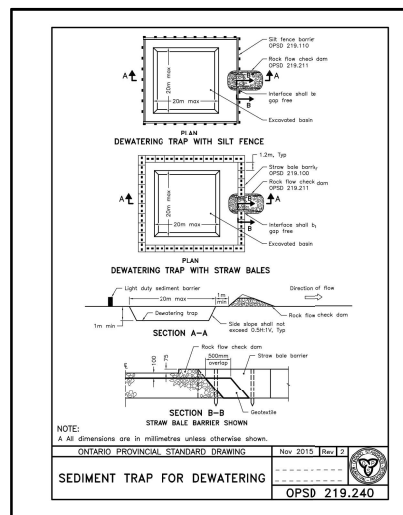
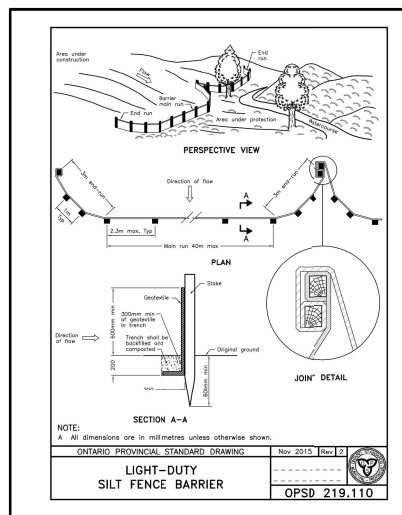
OFFICE DEVELOPMENT

231 COBBOUR STREET

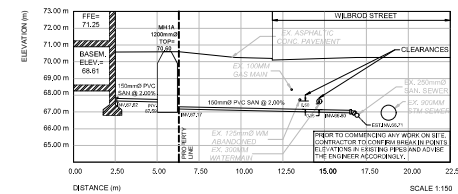
OTTAWA, ONTARIO

**Lithos**

DESIGNED BY: MS	DATE: JULY, 2015	CHECKED BY: NM
DRAWN BY: MS	PROJECT No:	APPROVED BY: NM
SCALE: 1:100		DRAWING No:
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SCHEDULE OF ONTARIO PROVINCIAL STANDARD DRAWINGS			
No.	TITLE	DATE	REV.
219.110	LIGHT DUTY SILT FENCE BARRIER	NOV. 2015	2
219.240	DEWATERING TRAP	NOV. 2015	2
405.010	MAINTENANCE HOLE STEPS, HOLLOW	NOV. 2013	3
509.010	PAVEMENT REINSTATEMENT FOR UTILITY CUTS	NOV. 2013	2
701.010	PRECAST CONCRETE MAINTENANCE HOLE, 1200MM DIAMETER	NOV. 2014	5
701.021	MAINTENANCE HOLE BENCHING AND PIPE OPENING DETAILS	NOV. 2014	4
701.030	PRECAST CONCRETE MAINTENANCE HOLE COMPONENTS, 1200MM DIAMETER TAPERED TOP AND FLAT CAP	NOV. 2014	4
701.031	PRECAST CONCRETE MAINTENANCE HOLE COMPONENTS, 1200MM DIAMETER TAPERED TOP AND FLAT CAP	NOV. 2014	2
704.010	PRECAST CONCRETE ADJUSTMENT UNITS FOR MAINTENANCE HOLES, CATCH BASINS, AND VALVE CHAMBERS	NOV. 2014	3
1006.020	SEWER SERVICE CONNECTIONS FOR REID MAIN PIPE BOMBS	NOV. 2016	3



WATERMAIN NOTES

4. CONSTRUCT ALL WATERMANS AND APPURTENANCES IN ACCORDANCE WITH OSD STANDARDS AND SPECIFICATIONS AS WELL AS CITY STANDARDS AS INDICATED.
5. INDUSTRIAL-COMMERCIAL SERVICE CONNECTIONS TO BE 50mm COPPER PIPE AND GALLERIES TO BE 100MM TYPE K CSD.
6. WATERMANS AND THERMAL SERVICES ARE TO HAVE A MINIMUM COVER OF 2m, OTHERWISE THERMAL INSULATION IS REQUIRED AS PER CITY DW No. 22.
7. IF THE WATERMAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS EQUAL TO OR LESS THAN THE 10MM CH RECOMMENDED BY THE MANUFACTURER.
8. USE APPROVED SADDLE CONNECTION WITH MAIN (COMPENSATOR) STOP AS PER STD DWG W02.
9. CONNECTION TO EXISTING BY CITY, DUCT/VENT, BACKFLOWING AND REINSTATEMENT BY CONTRACTOR.
10. THERMAL INSULATION OF WATERMANS AT OPEN STRUCTURES AS PER STD DWG W22.
11. THERMAL INSULATION OF WATERMANS UNDER ROAD SURF DITCHES AS PER STD DWG W22.

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