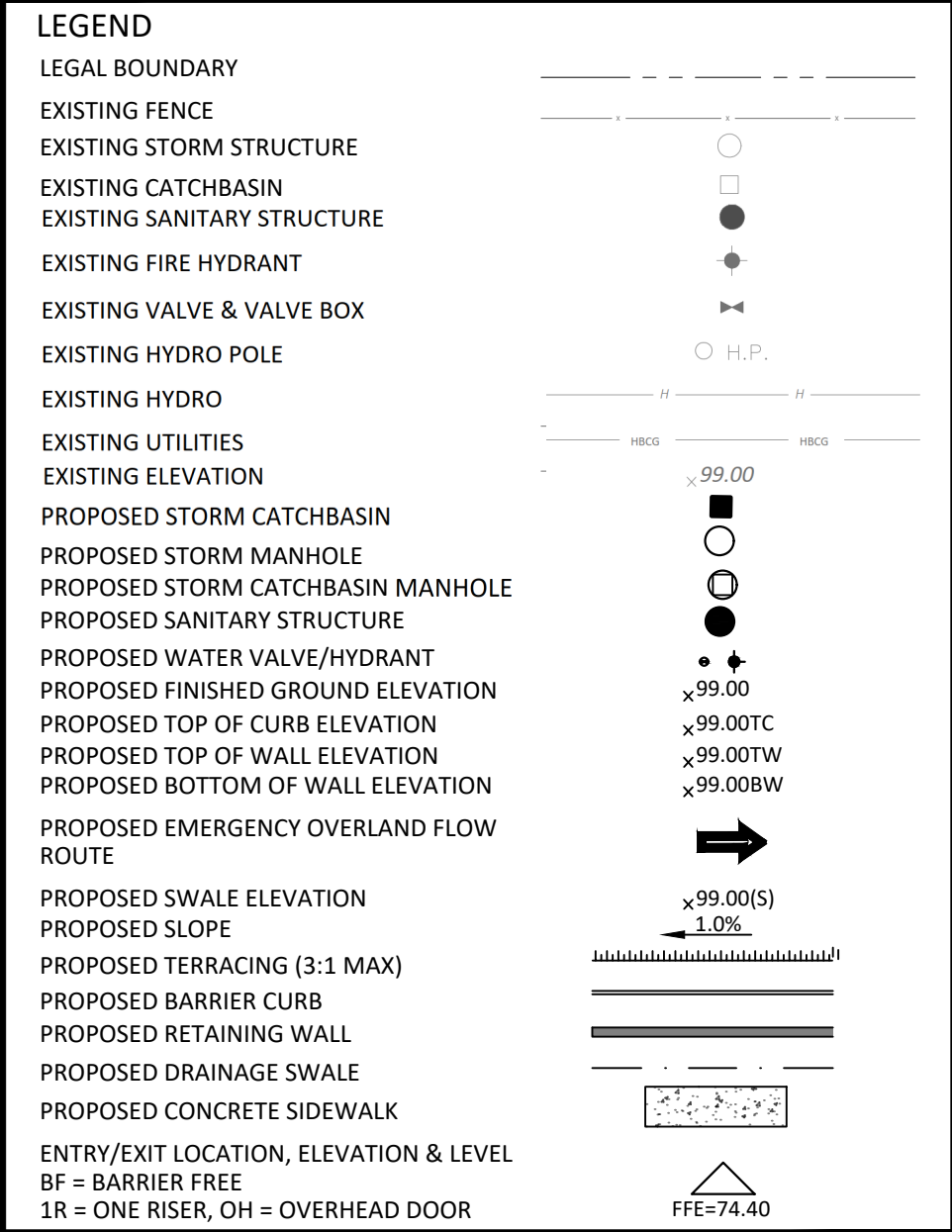


1. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND PREVENT EROSION OF EXPOSED SOILS. THE CONTRACTOR SHALL LIMIT THE AMOUNT OF EXPOSED SOIL, TEMPORARY SEDIMENT CONTROL (GEOTEXTILE INSERTS WITH AN OVERFLOW UNDER GRATE OR COVER) TO BE IMPLEMENTED DURING CONSTRUCTION ON ALL PROPOSED ROAD CATCHBASINS, REARYARD CATCHBASINS AND CATCHMENT MANHOLES AND OTHER SEDIMENT TRAPS, NO RECYCLED CURB/STREET MATERIAL SHALL BE USED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY KNOWLEDGES THAT FAILING TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.
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 SPOD 219.110, GEOTEXTILE FOR SILT FENCE PER SPOD 1860, TABLE 3.
4. EXCEPT AS PROVIDED IN PARAGRAPHS 4.1 AND 4.2, BELOW, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS FEASIBLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE DATE WHEN CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED.
  - 4.1 WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASED, THE CONTRACTOR SHALL COVER STABILIZATION MEASURES WITHIN 14 DAYS AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASED.
  - 4.2 WHERE CONSTRUCTION ACTIVITY WILL PORTION ON A PORTION OF THE SITE WITHIN 21 DAYS FROM WHEN ACTIVITIES CEASED, (E.G. THE DATE WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASED), THE CONTRACTOR SHALL STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF SITE BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY CEASED.
5. 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 SIDE 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 TO THE DEPTH OF 300 MM IMMEDIATELY UPSTREAM OF THE CONTROL MEASURE.
  - 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 OTHER MEASURES, ACCUMULATED SEDIMENT SHALL BE REMOVED AS NECESSARY TO MAINTAIN MAINTENANCE REPAIRS.
  - 5.3. ACCUMULATED SEDIMENT SHALL BE REMOVED PRIOR TO THE REMOVAL OF THE CONTROL MEASURE.
  - 5.4. ACCUMULATED SEDIMENT IS TO BE REMOVED AND DISPOSED OF AS PER SPOD 180.
6. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MONITORED TO ENSURE THEY ARE IN EFFECTIVE WORKING ORDER. THE CONDITION OF THE CONTROL MEASURES SHALL BE MONITORED PRIOR TO ANY FURTHER STORM EVENT AND FOLLOWING A STORM EVENT.
7. DUST CONTROL MEASURES SHOULD BE CONSIDERED PRIOR TO CLEARING AND GRADING. THE USE OF WATER, CALCIUM CHLORIDE FLAKES/SOLUTION OR MAGNESIUM CHLORIDE FLAKES/SOLUTION SHALL BE USED AS DUST SUPPRESSANTS AS PER SPOD 506. THIS IS TO LIMIT WIND-EROSION OF SOILS WHICH MAY TRANSPORT SEDIMENTS OFFSITE, WHERE THEY MAY BE WASHED INTO THE RECEIVING WATER BY THE NEXT RAINFALL.
8. ALL 'GREEN AREAS' TO BE TREATED WITH 150mm TOPSOIL AND SOD AS SOON AS FEASIBLE, AS PER SPOD 570.
9. ALL DISTURBED AREAS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE SPECIFIED.
10. STOCKPILED MATERIAL IS TO BE STORED AWAY FROM POTENTIAL RECEIVERS (E.G. STORM CATCHBASINS, MANHOLES), AND BE SURROUNDED BY EROSION AND SEDIMENT CONTROL MEASURES. WHEN MATERIAL IS LEFT IN PLACE IN EXCESS OF 14 DAYS.
11. IF REQUIRED, DEWATERING/SETTLING BASINS SHALL BE CONSTRUCTED AS PER SPOD 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 UTILIZED, 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.
12. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL CONFORM TO SPOD 577
13. WHERE DEWATERING IS REQUIRED, THE DISCHARGED WATER SHALL BE CONTROLLED IN ACCORDANCE WITH SPOD 518.
14. ALL SETTLING/FILTRATION BASINS SHALL BE EQUIPPED WITH TERAFIX 2ZOR GEOTEXTILE (OR APPROVED EQUIVALENT) AND SHALL BE CLEANED AND REPLACED AS REQUIRED.

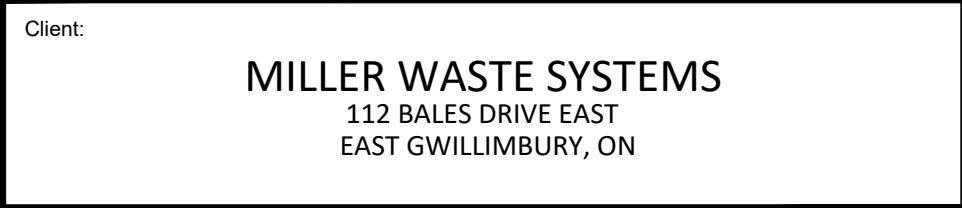
1. ALL TOPSOIL AND ORGANIC MATERIAL SHALL BE STRIPPED WITHIN THE ROADWAY PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
2. RESTORE ANY TRENCHES AND DISTURBED SURFACES OF PUBLIC ROAD ALLOWANCES TO CONDITION EQUAL OR BETTER THAN ORIGINAL CONDITION AND TO THE SATISFACTION OF TOWN AUTHORITIES.
3. PAVEMENT REINSTATEMENT FOR SERVICE AND UTILITY CUTS SHALL BE IN ACCORDANCE WITH OPSD 509.010, OPSD 310.
4. GRANULAR "A" SHALL BE PLACED TO A MINIMUM THICKNESS OF 300mm AROUND ALL STRUCTURES WITHIN PAVEMENT AREA.
5. ALL GRANULAR FOR ROADS SHALL BE COMPACTED TO A MINIMUM OF 100% SPDM.
6. ASPHALT WEAR COURSE SHALL NOT BE PLACED UNTIL THE VISUAL INSPECTION OF SEWERS & NECESSARY REPAIRS HAVE BEEN CARRIED OUT TO THE SATISFACTION OF THE ENGINEER.
7. SUB-EXCAVATE SOFT AREAS AND FILL WITH GRANULAR "B" COMPACTED IN MAXIMUM 300mm LIFTS.
8. IN AREAS OF NEW PAVEMENT CONSTRUCTION, ALL SURFICIAL TOPSOIL, AND LOOSE SOFT, WEAT, ORGANIC OR DELETERIOUS MATERIALS ARE TO BE REMOVED FROM THE PROPOSED SUBGRADE SURFACE. ANY SUBEXCAVATED AREAS SHALL BE FILLED WITH COMPACTED EARTH BORROW. THE SUBGRADE SURFACE IS TO BE PROOF ROLLED IN THE PRESENCE OF A GEOTECHNICAL ENGINEER. THE SUBGRADE SURFACE IS TO BE SHAPED AND CROWNED TO PROMOTE DRAINAGE OF THE GRANULAR MATERIALS.
9. ANY FILL REQUIRED FOR THE ACCESS ROADWAYS AND PARKING AREAS IS TO CONSIST OF MATERIAL WHICH MEETS OR EXCEEDS OPSD SPECIFICATIONS FOR GRANULAR TYPE LOW. THE MATERIALS ARE TO BE PLACED IN MAXIMUM 300mm thick lifts AND COMPACTED TO 98% SPDM MINIMUM USING VIBRATORY COMPACTION EQUIPMENT.
10. WHERE NEW PAVEMENT WILL ABUT EXISTING PAVEMENT, THE DEPTHS OF GRANULAR MATERIALS IS TO TAPER UP OR DOWN AT 5 HORIZONTAL TO 1 VERTICAL OR FLATTER, TO MATCH THE DEPTHS OF THE GRANULAR MATERIALS EXISTING IN THE EXISTING PAVEMENT.

1. ASPHALT MATERIALS SHALL COMPLY WITH OPSS 310. PER GEOTECHNICAL REPORT PROVIDED BY PINCHIN.
2. PARKING AREAS HEAVY-DUTY PAVEMENT STRUCTURE:  
50mm SURFACE COURSE ASPHALTIC CONCRETE HL-3 (OPSS 1150)  
50mm BINDER COURSE ASPHALTIC CONCRETE HL-8 (OPSS 1150)  
300mm GRANULAR 'A' BASE (OPSS 1010)  
450mm GRANULAR 'B' SUB-BASE (OPSS 1010)
3. DRIVEWAY AREAS HEAVY-DUTY PAVEMENT STRUCTURE:  
50mm SURFACE COURSE ASPHALTIC CONCRETE HL-3 (OPSS 1150)  
85mm BINDER COURSE ASPHALTIC CONCRETE HL-8 (OPSS 1150)  
300mm GRANULAR 'A' BASE (OPSS 1010)  
600mm GRANULAR 'B' SUB-BASE (OPSS 1010)

2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT GRADING AROUND HYDRANTS, TRANSFORMERS, AND UTILITY PEDESTALS, ETC., MEET CURRENT HYDRAULIC AND UTILITY COMPANY REQUIREMENTS.
3. ALL GRADING SURFACES SHALL BE EVENLY GRADED WITHOUT PONDING AREAS AND WITHOUT LOW POINTS EXCEPT WHERE APPROVED SWALE OR CATCH BASIN OUTLETS ARE PROVIDED.
4. CONTRACTOR TO ADJUST EXISTING CATCH BASINS, MANHOLES, FIRE HYDRANTS, VALVE CHAMBERS AND VALVE BOXES TO FINAL GRADE AS REQUIRED.
5. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING FOUNDATIONS OF ADJACENT BUILDINGS DURING EXCAVATION AND CONSTRUCTION PERIOD.
6. GRADING IN GRASSED AREAS WILL BE BETWEEN 2% TO 7%. GRADES IN EXISTING OF 7% WILL REQUIRE A MAXIMUM 3:1 TERRACING.
7. ALL PVIOUS/LAWN AREAS TO BE TREATED WITH 100mm TOPSOIL & SEED OR SOD AS SOON AS FEASIBLE, EXCEPT WHERE NOTED.



Check and verify all dimensions before proceeding with the work	Do not scale drawings
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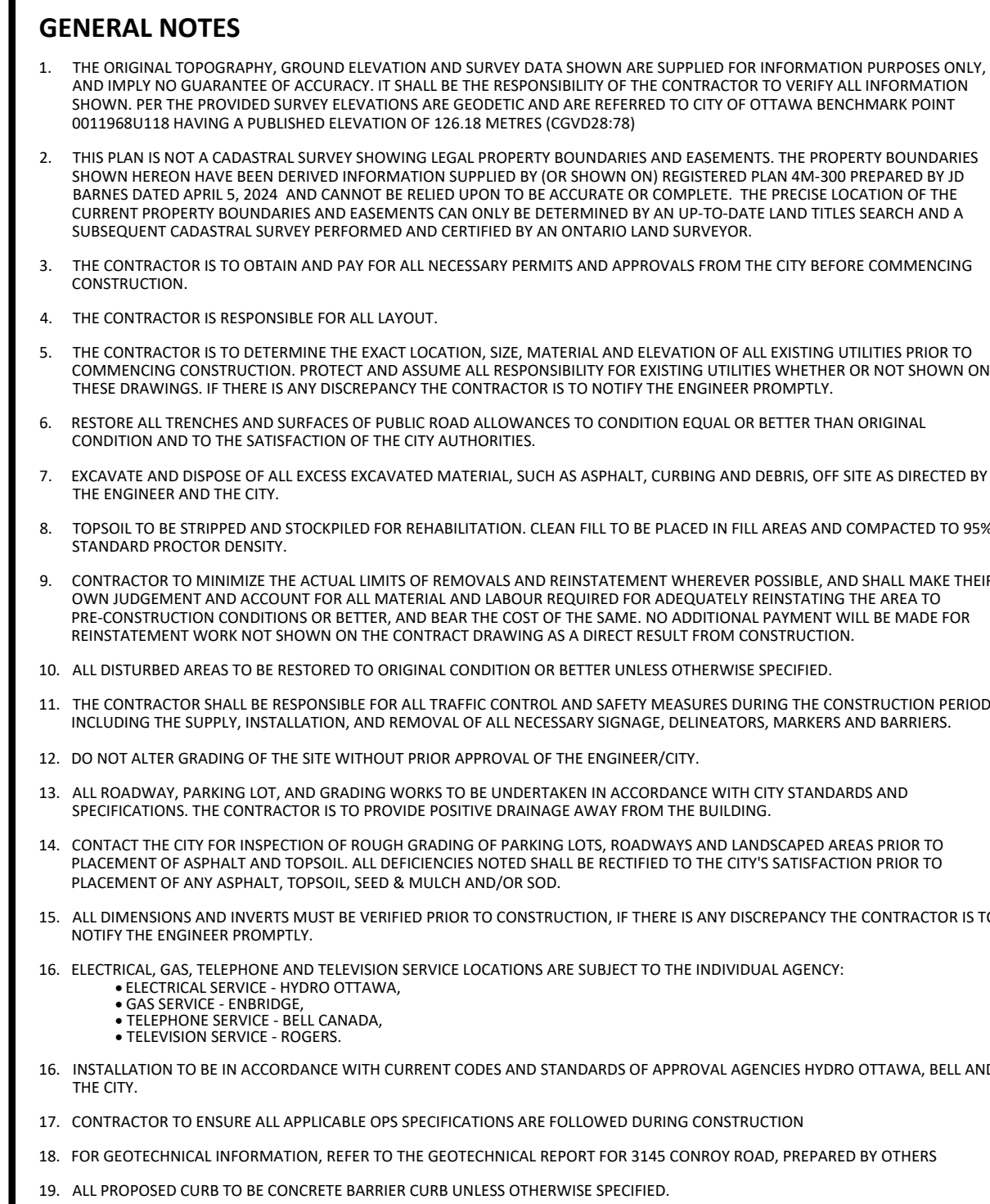
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**SITE GRADING, DRAINAGE, EROSION &  
SEDIMENT CONTROL PLAN**

Scale:	1:750	Project Number:	CO-25-1505
Drawn By:	RP		
Checked By:	JB	Drawing Number:	C101
Designed By:	RP		

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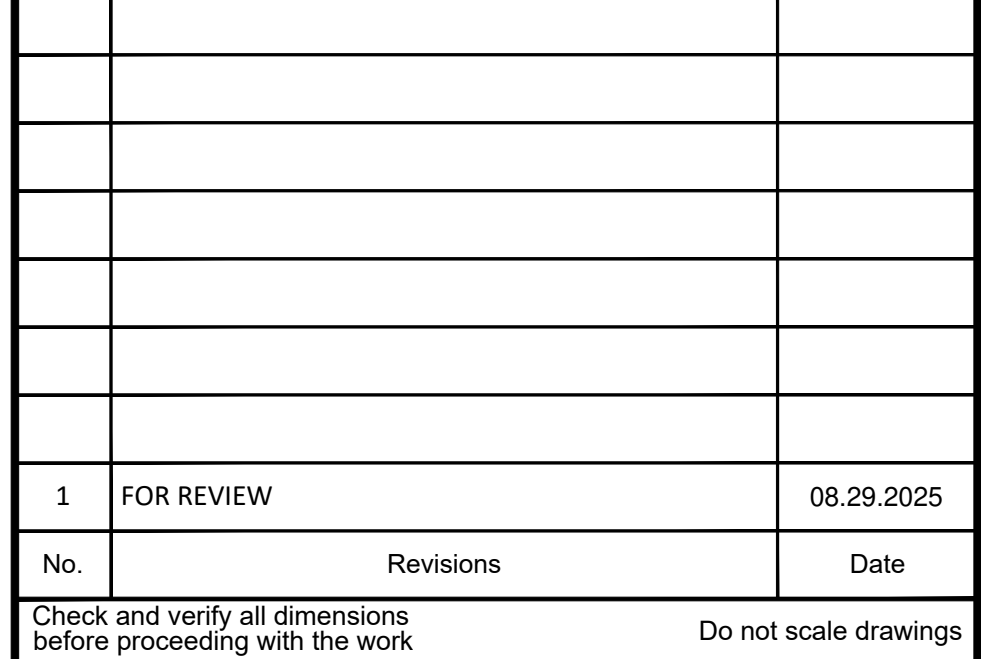







3. CONSTRUCT ALL SEWERS, CATCH BASINS, MANHOLES AND APPURTENANCES IN ACCORDANCE WITH OPSD STANDARDS AND SPECIFICATIONS, AS WELL AS CITY.
4. SEWER TRENCHING AND BEDDING SHALL CONFORM TO OPSD 802.010 AND 802.013 UNLESS NOTED OTHERWISE.
5. BEDDING SHALL BE A MINIMUM 150mm OF GRANULAR "A", COMPACTED TO MINIMUM 95% STANDARD PROCTOR DRY DENSITY. CLEAN SLOPE BEDDING SHALL NOT BE PERMITTED.
6. SUB-BEDDING, IF REQUIRED SHALL CONSIST OF 450mm OF COMPACTED GRANULAR "B" TYPE
7. BACKFILL TO AT LEAST 300mm ABOVE TOP OF PIPE WITH GRANULAR "A" OR GRANULAR "B"
8. TO MINIMIZE DIFFERENTIAL FROST HEAVING, TRENCH BACKFILL (FROM PAVEMENT SUBGRADE TO 2.0 METRES BELOW FINISHED GRADE) SHALL MATCH EXISTING SOIL CONDITIONS.
9. SANITARY SEWERS AND CONNECTIONS 150mmØ AND SMALLER TO BE PVC SDR-35.
10. SEWERS AND CONNECTIONS 200mmØ AND LARGER TO BE PVC SDR-35. BEDDING TO BE TYPE "B" EXCEPT AT RISERS, UNLESS NOTED OTHERWISE.
11. SEWERS AND WATERMANS LOCATED PARALLEL TO EACH OTHER SHOULD BE CONSTRUCTED IN SEPARATE TRENCHES, WHEN IT IS POSSIBLE OR NOT PRACTICAL TO MAINTAIN VERTICAL AND/OR HORIZONTAL SEPARATION PER MEET STANDARDS. ALL SEWERS SHOULD BE CONSTRUCTED OF WIDEST MANHOLE CITY PIPE. PRESSURE TESTING IN PLACE AT A PRESSURE OF 350 kPa (50 psi) WITHOUT LEAKAGE USING THE TESTING METHODOLOGY IN ONTARIO PROVINCIAL STANDARD SPECIFICATION 701 (OPSF 701) OF THE OPS.
12. INSULATE ALL STORM AND SANITARY SEWERS/SERVICES THAT HAVE LESS THAN 2.0m of COVER WITH THERMAL INSULATION AS PER CITY DETAIL S35, OPTION A.
13. SEWER CONNECTIONS ARE TO BE MADE ABOVE THE SPRINGLINE OF THE SEWERMAN AS PER CITY OF OTTAWA STANDARD DRAWING S31.5.1.1 & S31.2.
14. SUPPLY AND INSTALL ALL PIPING AND APPURTENANCES AS SHOWN AND DETAILLED TO WITHIN 1.0m OF THE END OF SERVICE TO BE PROPERLY CAPPED AND LOCATED WITH 2"x4"X8" LONG MARKER.
15. CONTRACTOR TO FURNISH (CTV) ALL PROPOSED SEWERS ON SITE, OUTLET CONNECTION OF 150mm & Pipes 150mmØ OR GREATER PRIOR TO BASE COURSE ASPHALT. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES.
16. DYE TESTING IS TO BE COMPLETED ON SANITARY SERVICE TO CONFIRM PROPER CONNECTION TO SANITARY SEWER MAN.

1. CONSTRUCT ALL WATERMANS AND APPURTENANCES IN ACCORDANCE WITH CITY STANDARDS AND SPECIFICATIONS.
2. WATERMANS AND/OR WATER SERVICES ARE TO HAVE A MINIMUM COVER OF 2.4M. INSULATE ALL WATERMANS AND SERVICES TO HAVE LESS THAN 2.4m cover with thermal insulation as per city detail W2.
3. IF THE WATERMAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS EQUAL TO OR LESS THAN THAT WHICH IS RECOMMENDED BY THE MANUFACTURER AND CITY OF OTTAWA STANDARDS W3S AND W2S.2.
4. THERMAL INSULATION OF WATERMANS AT OPEN STRUCTURES AS PER CITY DETAIL W23.
5. WORK TO BE OPERATED BY CITY STAFF ONLY.
6. NO VALVE SHALL COMMENCE UNLESS A CITY WORKERS INSPECTOR IS ON SITE. NO CONNECTION TO EXISTING WATER NETWORK SHALL BE COMPLETED UNTIL A WATER PERMIT IS OBTAINED FROM THE CITY OF OTTAWA TO BE COMPLETED BY CITY FORCES. EXCAVATION BACKFILLING AND REINSTATEMENT TO BE COMPLETED BY SITE SERVING CONTRACTOR.
7. CONCRETE THRUST BLOCKS TO CONFORM TO CITY STANDARD W23.5.
8. WATERMAIN 100-300mm TO BE CLASS 150 DR-18 PCV OR APPROVED EQUIVALENT.
9. ALL P.V.C WATERMAIN SHALL BE INSTALLED WITH A 1/2 GAGE STRANDED COPPER W/10 OR RW/10 TRACER WIRE IN ACCORDANCE WITH CITY STANDARD W36.
10. FIRE HYDRANTS SHALL CONFORM TO CITY STANDARDS W18, W19, AND W20.
11. VALVE BOXES SHALL CONFORM TO CITY STANDARD W24.
12. 300mm P.V.C VALVES AND SMALLER TO BE INSTALLED WITH VALVE BOXES AS PER CITY STANDARD W24. 400mm P.V.C VALVES AND LARGER TO BE INSTALLED WITH BUTTERFLY VALVES AND VALVE CHAMBERS AS PER CITY STANDARD W24.
13. AS PER CITY GUIDELINE, THE MINIMUM VERTICAL CLEARANCE BETWEEN WATERMAIN AND CROSSING UTILITY IS 0.25m FOR CROSSING OVER THE SEWER. AS PER CITY DETAIL W2S.2 FOR CROSSING UNDER SEWER, THE MINIMUM VERTICAL CLEARANCE IS 0.5m AS PER CITY DETAIL W2S.2 FOR CROSSING UNDER SEWER. ADEQUATE STRUCTURAL SUPPORT FOR THE SEWERS IS REQUIRED TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING. THE LENGTH OF WATER PIPE TO BE COVERED SHALL BE SUFFICIENT TO ENSURE THAT THE JOINTS WILL BE EQUIVALENT AND AS FAR AS POSSIBLE FROM THE SEWER.

CROSSING CONFLICT TABLE		
LOCATION	DESCRIPTION	SEPARATION
1	150mmØ SAN SERVICE INV 80.88	1.92
	750mmØ STM SEWER OBV 78.96	
2	150mmØ WTR SEWER INV 81.73	2.70
	750mmØ STM SEWER OBV 79.02	
3	400mmØ WTR MAIN INV 82.03	4.58
	300mmØ STM SEWER OBV 77.45	



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Project:

**PROPOSED OFFICE/INDUSTRIAL BUILDING**  
3145 CONROY ROAD  
OTTAWA, ON

Drawing Title:		SITE SERVICING PLAN	
Scale:	1:750	Project Number:	CO-25-1505
Drawn By:	RP		
Checked By:	JB	Drawing Number:	C102
Designed By:	RP		

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