RECONSTRUCTION OF EMILY STREET, LASALLE STREET AND OAK KNOLL STREET
PORT DOVER, ON

CONTRACT No. PW-EAM-25-38

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ISSUED FOR CONSTRUCTION
FEBRUARY 04, 2025

Norfolk COUNTY

GENERAL NOTES

1. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MOST CURRENT NORFOLK COUNTY STANDARDS AND SPECIFICATIONS, ONTARIO PROVISIONAL STANDARDS DRAWINGS AND SPECIFICATIONS AND ASSOCIATED AMENDMENTS; AND APPROVED MANUFACTURER'S LIST, UNLESS OTHERWISE NOTED.
2. THE LOCATION OF UNDER/ABOVE GROUND UTILITIES AND STRUCTURES SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY AND THE ACCURACY IS NOT GUARANTEED. THE CONTRACTOR SHALL DETERMINE THE LOCATION OF ALL UTILITIES AND STRUCTURES BY CONSULTING THE APPROPRIATE AUTHORITIES OR UTILITY AGENCIES. THE COUNTY DISCLAIMS ALL RESPONSIBILITY FOR THE ACCURACY AND/OR SUFFICIENCY OF THE INFORMATION. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATIONS OF ALL UTILITIES AND STRUCTURES AND SHALL ASSUME ALL LIABILITY AND ASSUME THE COSTS OF REPAIR OF DAMAGE CAUSED BY THESE ACTIVITIES.
3. THE CONTRACTOR IS TO MEET ALL THE REQUIREMENTS OF THE OWNERS OF THE UTILITIES AND MAKE SATISFACTORY ARRANGEMENTS WITH THE UTILITY COMPANIES FOR CROSSING THEIR INSTALLATIONS AND FOR PROVIDING ADEQUATE PROTECTION DURING CONSTRUCTION.
4. DIMENSIONS ARE NOT TO BE SCALED FROM THE DRAWINGS.
5. READ ALL DRAWINGS IN CONJUNCTION WITH CONTRACT SPECIFICATIONS.
6. THE LOCATION AND ELEVATION OF ALL EXISTING SERVICES AND UTILITIES ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR FOR ACCURACY PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE CONTRACT ADMINISTRATOR. DETAILS ARE NOT TO BE SCALED FROM THE DRAWINGS. IN THE CASE OF STORM, SANITARY SEWERS AND CULVERTS, THE CONTRACTOR SHALL SURVEY THE INVERTS AND SIZES TO CONFIRM THAT THERE ARE NO CONFLICTS, AND REPORT FINDINGS TO THE CONTRACT ADMINISTRATOR PRIOR TO CONSTRUCTION.
7. ALL SERVICES AND UTILITIES SHALL BE SUPPORTED AS PER THE REQUIREMENTS OF THE COUNTY OR UTILITY AGENCIES. WHERE THE STABILITY, SAFETY OR FUNCTION OF THE EXISTING ROADWAY OR UNDERGROUND FACILITIES MAY BE IMPAIRED DUE TO THE CONTRACTOR'S METHOD OF OPERATIONS, THE CONTRACTOR SHALL PROVIDE SUCH PROTECTION AS MAY BE REQUIRED INCLUDING SHEETING, SHORING AND DRIVING OF PILES WHERE NECESSARY, TO PREVENT DAMAGE EXISTING WORKS OR PROPOSED WORKS. CONSTRUCTION OF SHORING, BRACING AND PROTECTION SCHEMES SHALL CONFORM TO OPSS 404 AND 539.
8. ALL HYDRO, POWER OR TELEPHONE POLES WITHIN 2.0m FROM PIPE TRENCHES OR OPEN EXCAVATIONS SHALL BE FULLY SUPPORTED.
9. EXTREME CARE IS REQUIRED DURING EXCAVATION IN THE VICINITY OF ANY EXISTING UNDERGROUND OR OVERHEAD UTILITY IN ORDER TO AVOID DAMAGE. REPAIR TO ANY DAMAGE TO THE UTILITIES SHALL BE CONTRACTOR'S RESPONSIBILITY. REPAIR SHALL BE COMPLETED TO THE SATISFACTION OF UTILITY OWNER AND THE COUNTY.
10. CLEARING OF ANY EXISTING VEGETATION OTHER THAN THAT DETAILED ON THE CONTRACT DRAWINGS SHALL NOT BE UNDERTAKEN WITHOUT SPECIFIC WRITTEN DIRECTIONS OF THE CONTRACT ADMINISTRATOR. VERTICAL EXCAVATION, HAND EXCAVATION, AUGURING AND IMMEDIATE BACKFILLING OF ANY TRENCH SHALL BE UNDERTAKEN BY THE CONTRACTOR AS NECESSARY TO ENSURE THAT ALL REASONABLE PRECAUTIONS ARE TAKEN TO PROMOTE THE SURVIVAL OF ANY EXISTING VEGETATION. COORDINATE WITH THE CONTRACT ADMINISTRATOR AND COUNTY ARBORIST FOR ANY WORKS WITH THE DRIPLINE OF ANY TREE OVER 50mm CALIPER.
11. EXCAVATION OF ALL TRENCHES TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE OCCUPATIONAL HEALTH & SAFETY ACT (OHSA) AND REGULATIONS FOR CONSTRUCTION PROJECTS.
12. ALL ORGANIC, SUITABLE OR UNSUITABLE MATERIALS BENEATH THE ROAD ALLOWANCE MUST BE REMOVED AND THESE AREAS BACKFILLED WITH AN APPROVED FILL MATERIAL TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR.
13. SURPLUS OR UNSUITABLE EXCAVATED MATERIAL SHALL BE REMOVED AND TRANSPORTED FOR DISPOSAL OFFSITE PER THE REQUIREMENTS OF O.REG 406/19 AND AS PER THE PROJECT'S EXCESS SOILS MANAGEMENT PLAN.
14. HANDLING AND INSTALLATION OF ALL PIPES SHALL BE IN STRICT COMPLIANCE WITH THE MANUFACTURER'S GUIDELINES.
15. ALL GEOTECHNICAL BOREHOLE (BH) LOGS SHOWN ON PLAN AND PROFILE DRAWINGS ARE SCHEMATIC ONLY UNLESS OTHERWISE NOTED.
16. PRIOR TO CLOSING ANY STREET, THE CONTRACTOR SHALL OBTAIN CLEARANCE BY FILLING OUT THE COUNTY'S NOTICE OF ROAD CLOSURE FORM AND NOTIFY SCHOOL BUS OPERATORS AND EMERGENCY SERVICES OF STREETS USED FOR DETOUR AND THE DURATION OF THE DETOUR. THE CONTRACTOR MUST SUPPLY AND MAINTAIN ADEQUATE LOCAL DETOUR SIGN AND LIGHTS.
17. ACCESS TO ALL PROPERTIES SHALL BE MAINTAINED AT ALL TIMES. CONSTRUCTION STAGING ACROSS STREETS AND DRIVEWAYS SHALL BE LIMITED TO HALF AT A TIME. SHOULD TEMPORARY DRIVEWAY BLOCKAGE BE REQUIRED, THE RESIDENT OR BUSINESS SHALL BE NOTIFIED A MINIMUM OF 24 HOURS IN ADVANCE OF WORK.
18. SHOP DRAWINGS FOR SHORING, SHEETING AND BRACING SHALL BE PREPARED BY THE CONTRACTOR, BY A PROFESSIONAL ENGINEER CERTIFIED IN THE PROVINCE OF ONTARIO AND SUBMITTED FOR REVIEW TO THE CONTRACT ADMINISTRATOR PRIOR TO CONSTRUCTION.
19. THE CONTRACTOR SHALL NOT BACKFILL OR BURY ANY UTILITY OR STRUCTURE WITHOUT FIRST ENSURING THAT THE ACTUAL LOCATION OF THE SERVICE (BOTH VERTICAL AND HORIZONTAL) HAS BEEN RECORDED BY THE CONTRACT ADMINISTRATOR FOR 'AS-CONSTRUCTED' PURPOSES.
20. MAINTENANCE HOLE AND VALVE CHAMBER COVERS ARE TO BE SET FLUSH WITH FINAL GRADE PRIOR TO INSTALLING TOP LIFT ASPHALT.
21. ALL PAVEMENT OR CURB MARKINGS AND TRAFFIC STRIPING REMOVED OR DISTURBED, WHETHER PARTIALLY OR COMPLETELY BY THE CONTRACTOR'S OPERATION SHALL BE REPLACED COMPLETELY.
22. ALL EXISTING SURFACE IMPROVEMENTS SHALL BE ASSESSED BY THE CONTRACTOR PRIOR TO BEGINNING WORK AND SHALL BE REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE IF DAMAGED DURING CONSTRUCTION.
23. NO BLASTING IS PERMITTED.
24. NORFOLK COUNTY STANDARD DRAWINGS AND ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD), AS AMENDED, SHALL CONSTITUTE PART OF THE ENGINEERING DESIGN AND CONSTRUCTION CONTRACT.
25. WHERE AS NECESSARY TO ENTER PRIVATE PROPERTY TO CONNECT THE EXISTING WATER RESULTS IN A NEGATIVE IMPACT TO THE PRIVATE PROPERTY, THE PRIVATE PROPERTY MUST BE RESTORED TO EXISTING CONDITION OR BETTER, AT NO ADDITIONAL COST TO HE CONTRACT OR THE LANDOWNER.
26. THE CONTRACTOR SHALL CONSTRUCT TEMPORARY MEASURES TO CONTROL SILT FROM ENTERING THE STORM DRAINAGE SYSTEM TO THE SPECIFICATIONS OUTLINED IN THE GUIDELINES ON EROSION AND SEDIMENT CONTROL FOR URBAN CONSTRUCTION SITES PREPARED BY THE MNR. THESE MEASURES ARE TO BE INSTALLED PRIOR TO COMMENCING ANY CONSTRUCTION AND ARE TO REMAIN IN PLACE UNTIL CONSTRUCTION HAS BEEN COMPLETED TO THE SPECIFICATIONS OF THE COUNTY AND CONTRACT ADMINISTRATOR.
27. ALL TREES OR VEGETATION REMOVAL MUST BE COMPLETED IN COMPLIANCE WITH THE MIGRATORY BIRDS CONVENTION ACT. TREES AND VEGETATION REMOVAL SHALL BE COMPLETED OUTSIDE OF THE BIRD BREEDING SEASON OR FOLLOWING INSPECTION AND CONFIRMATION OF NO ACTIVE NESTS BY A QUALIFIED BIOLOGIST. IF REMOVAL TO TAKE PLACE IN THE BIRD BREEDING WINDOW, CONSULTATION WITH THE CANADIAN WILDLIFE SERVICES SHOULD TAKE PLACE.

STORM AND SANITARY SEWER NOTES

1. SEWER INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS) AS AMENDED BY THE COUNTY AND AS PER THE CONTRACT DRAWINGS AND SPECIFICATIONS.
2. SERVICE CONNECTION LOCATIONS AND ELEVATIONS ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY ALL CONNECTION LOCATIONS. NEW SANITARY SERVICES SHOULD EXTEND 1.0m PAST PROPERTY LINE.
3. A MINIMUM HORIZONTAL SEPARATION OF 2.5m MUST BE MAINTAINED BETWEEN WATERMAINS AND SANITARY OR STORM SEWERS, INCLUDING SERVICE LATERALS, UNLESS OTHERWISE NOTED.
4. A MINIMUM VERTICAL SEPARATION OF 0.50m BETWEEN WATERMAINS AND SEWERS MUST BE MAINTAINED.
5. MINIMUM DEPTH OF COVER OVER THE SEWER SHALL BE 1.4m UNLESS NOTED OTHERWISE.
6. PRIVATE DRAIN CONNECTIONS SHALL BE 100mmØ PVC SDR 28 GREEN WITH CLASS B BEDDING TO OPSD 1006.010 AND OPSD 1006.020 AS APPLICABLE. CONNECTIONS ARE TO BE MADE AT THE PROPERTY LINE c/w PIPE MANUFACTURER'S WATERTIGHT CAP.
7. ALL CATCH BASIN LEADS SHALL BE 250mmØ FOR SINGLE CATCH BASINS AND 300mmØ FOR DOUBLE CATCH BASINS, UNLESS NOTED OTHERWISE. PIPE MATERIAL TO BE PVC SDR 35 BEDDED WITH CLASS B BEDDING.
8. REINFORCED CONCRETE STORM SEWER MAIN PIPE SHALL BE CLASS 65-D UNLESS NOTED OTHERWISE.
9. POLYVINYL CHLORIDE STORM SEWER SHALL BE SDR28 150MM PVC WHITE IN ACCORDANCE WITH THE REQUIREMENTS OF OPSS 410.
10. ALL PIPE SHALL HAVE A SMOOTH INTERIOR WALL.
11. FRAME AND GRATE ON SANITARY MAINTENANCE HOLES PER OPSD 401.010 TYPE A.
12. FRAME AND GRATE FOR STORM MAINTENANCE HOLES TO OPSD 401.010 TYPE B.
13. CATCH BASIN FRAME AND GRATE WITHIN ROADWAY TO OPSD 400.100. IN VEGETATE AREAS, PROVIDE FRAME AND GRATE TO OPSD 400.120.
14. CATCH BASINS TO OPSD 705.010. DOUBLE CATCH BASINS TO OPSD 705.020.
15. CATCH BASIN INSTALLATION AT CURB AND GUTTER TO OPSD 610.010.
16. CONNECTIONS TO MAIN PER OPSD 708.010
17. MAINTENANCE HOLE RISERS AND ADJUSTMENT UNITS TO OPSD 701.031 AND 704.120.
18. SUBDRAIN UNDER CURB PER OPSD 207.041. PROVIDE SUBDRAIN CONNECTIONS AT STORM STRUCTURES PER OPSD 216.021.
19. MAINTENANCE HOLE BENCHING TO OPSD 701.021.

WATERMAIN NOTES

1. WATERMAIN INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS) AS AMENDED BY THE COUNTY AND AS PER THE CONTRACT DRAWINGS AND SPECIFICATIONS.
2. A MINIMUM HORIZONTAL SEPARATION OF 2.5m MUST BE MAINTAINED BETWEEN WATERMAINS AND SANITARY OR STORM SEWERS, INCLUDING SERVICE LATERALS, UNLESS OTHERWISE NOTED.
3. A MINIMUM VERTICAL SEPARATION OF 0.50m BETWEEN WATERMAINS AND SEWERS MUST BE MAINTAINED IF WATERMAIN IS INSTALLED ABOVE THE SEWER OR 0.50m IF SEWER IS ABOVE THE WATERMAIN.
4. ALL VALVES SHALL BE APPROVED TYPE WITH NON-RISING STEM AND SHALL HAVE 50mm SQUARE STANDARD AWWA OPERATING NUT. SEE THE COUNTY'S APPROVED MANUFACTURERS PRODUCTS LIST.
5. ALL PLUGS, CAPS, TEES AND BENDS SHALL BE PROVIDED WITH THRUST BLOCKS AS PER OPSD 1103.01 AND OPSD 1103.020. IN ADDITION, ALL PVC PIPES SHALL BE MECHANICALLY RESTRAINED AS PER MANUFACTURERS SPECIFICATIONS. RESTRAINTS SHALL MEET ALL REQUIREMENTS OF UNI-BELL B-13. REFER TO THE THRUST RESTRAINT TABLE THIS DRAWING.
6. MINIMUM DEPTH OF COVER OVER THE WATERMAIN SHALL BE 1.7m UNLESS NOTED OTHERWISE.
7. ALL WATERMAIN FITTINGS SHALL HAVE MECHANICAL JOINTS IF WATERMAIN INSTALLED IS IPEX BIONAX PIPE, THEN LATEST IPEX MANUFACTURER'S APPROVED LIST HAS TO BE UTILIZED FOR ALL FITTINGS AND RESTRAINTS.
8. ANODES ARE TO BE PROVIDED ON ALL METALLIC BENDS, TEES, CROSSES, VALVES, REDUCERS, ETC., AT AT EACH WATER SERVICE CONNECTION PER COUNTY OF NORFOLK STANDARDS. REFER TO THE SUMMARY TABLE THIS DWG.
9. TWU 10 COPPER TRACER WIRE TO BE INSTALLED ON ALL NEW INSTALLATIONS OF PVC WATERMAIN PIPE FOR LOCATING PURPOSES. JOINTS IN THE WIRE BETWEEN VALVES ARE NOT PERMITTED.
10. THE CONTRACTOR SHALL TEST THE TRACING WIRE FOR CONDUCTIVITY. IF THE TRACING WIRE IS NOT CONTINUOUS FROM VALVE TO VALVE, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, REPLACE OR REPAIR THE WIRE.
11. WATERMAIN FITTINGS, INCLUDING ALL STANDARD BENDS, VALVES, AND HYDRANTS, SHALL BE MECHANICAL JOINT OR PUSH-ON JOINT INSTALLED WITH NORFOLK COUNTY APPROVED MECHANICAL RESTRAINTS.
12. CHANGES IN THE VERTICAL AND HORIZONTAL ALIGNMENT OF WATERMAINS ARE GENERALLY TO BE ACHIEVED BY THE USE OF STANDARD BENDS. WHERE THE USE OF STANDARD BENDS IS NOT POSSIBLE, CHANGES IN ALIGNMENT MAY BE BY DEFLECTION OF JOINTS AS PER MANUFACTURER'S SPECIFICATIONS. DEFLECTION OF THE WATERMAIN SHALL BE 50% OF THE MANUFACTURER'S SPECIFICATIONS. PIPE BARREL DEFLECTION IS STRICTLY PROHIBITED.
13. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY CAPS, PLUGS AND BLOW OFFS REQUIRED FOR TESTING THE NEW WATERMAIN.
14. ALL WATER CUSTOMERS SUPPLIED BY A WATERMAIN TO BE TEMPORARILY SHUT DOWN SHALL BE NOTIFIED BY THE CONTRACTOR AT LEAST 48 HOURS IN ADVANCE OF THE SHUT DOWN.
15. FIRE HYDRANTS SHALL BE CLOW M67 BRIGADIER OR CENTURY HYDRANT BY CANADA VALVE, PAINTED YELLOW.
16. ALL NEW RESIDENTIAL WATER SERVICES SHALL BE 25mmØ CROSS-LINKED POLYETHYLENE (PEX) PIPE, CSA CERTIFIED TO CSA B137.5 CONFORMING TO AWWA C904 AND SHALL BE SDR9, PRESSURE RATED AT THE FOLLOWING:

   -160 PSI AT 73.4°F (1100 KPA AT 23°C)
   -100 PSI AT 180°F (690 KPA AT 82°C)
   -80 PSI AT 200°F (55 KPA AT 93°C)S.

17. THE DEPTH OF WATER SERVICES AT PROPERTY LINE SHOULD BE A MINIMUM OF 1.7m AND A MAXIMUM OF 2.0m. THE DISTANCE BETWEEN THE GROUND ELEVATION AND THE TOP OF THE ROD SHOULD BE BETWEEN 0.5m AND 1.0m.
18. SERVICES TO BE REPLACED FROM THE MAIN TO PROPERTY LINE WITH A NEW CURB STOP AND SERVICE BOX AT THE PROPERTY LINE.
19. THE CONTRACTOR SHALL NOT OPERATE ANY VALVE OR HYDRANT ON THE MUNICIPAL WATER SYSTEM. REQUESTS FOR OPERATION OF VALVES, HYDRANTS OR OTHER APPURTENANCES SHALL BE MADE TO THE COUNTY'S WATER WORKS DEPARTMENT A MINIMUM OF 48 HOURS IN ADVANCE OF OPERATIONS BEING REQUIRED.
20. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THEY HAVE A COPIES OF, AND ARE FAMILIAR WITH, THE MOST RECENT NORFOLK COUNTY DESIGN CRITERIA, CONTRACT SPECIFICATIONS AND STANDARD DRAWINGS AND SPECIFICATIONS FOR CONNECTIONS TO EXISTING WATERMAINS, AND SWABBING, FLUSHING, DISINFECTION, LEAKAGE TESTING AND BACTERIOLOGICAL TESTING.

ROAD WORKS NOTES

1. NEW AND REPLACED CURB AND GUTTER TO BE IN ACCORDANCE WITH OPSD 600.040, AND 608.010, AS INDICATED OR AS REQUIRED TO MATCH EXISTING CONDITIONS.
2. ALL PAVEMENT DIMENSIONS MEASURED TO EDGE OF PAVEMENT.
3. ALL NEW ASPHALT SHALL BE HOT MIX, HOT LAID, ASPHALTIC CONCRETE PLACED IN ACCORDANCE WITH OPSS FORMS 310 AND 1151 LATEST AMENDMENTS.
4. RESTORATION OF EXISTING DRIVEWAYS AND/OR APPROACHES DISTURBED DURING THE COURSE OF CONSTRUCTION SHALL BE COMPLETED TO THE FOLLOWING STANDARDS:
   A) GRAVEL DRIVEWAY: MINIMUM 150mm LAYER OF GRANULAR A COMPACTED TO 100% SPMDD.
   B) ASPHALT DRIVEWAYS: 50mm HL3A COMPACTED TO 97% MARSHALL OVERLYING 150mm GRANULAR A COMPACTED TO 100% SPMDD.
   C) CONCRETE DRIVEWAYS: RESTORED WITH 150mm THICK 30MPa CONCRETE OVERLYING 150mm GRANULAR A COMPACTED TO 100% SPMDD.
   D) PAVING STONES: RESTORED WITH EXISTING SALVAGED OR AUGMENTED PAVING STONES. PROVIDE MAXIMUM 3mm JOINT WIDTHS FILLED WITH MORTAR SAND, 50mm COMPACTED DEPTH OF MORTAR SAND OR LIMESTONE SCREENINGS, AND 200mm COMPACTED DEPTH GRANULAR A COMPACTED TO 100% SPMDD.
5. BOULEVARDS SHALL BE RESTORED WITH SOD OVERLYING 150mm TOPSOIL UNLESS NOTED OTHERWISE.
6. CONTINUOUS SUBDRAIN SHALL BE INSTALLED UNDER CURB. SUBDRAIN SHALL BE BOSS 2000 PERFORATED PIPE c/w KNITTED SOCK OR APPROVED EQUIVALENT.
7. CONSTRUCTION JOINTS BETWEEN EXISTING AND NEW ASPHALT SHALL BE CONSTRUCTED IN ACCORDANCE WITH OPSS 310 AND 1212. COMPLETE WITH STEP JOINT AS DETAILED AND HOT RUBBER SEALING COMPOUND.
8. ALL MAINTENANCE HOLES WITHIN THE TRAVELED PORTION OF THE ROAD AND CATCH BASINS LOCATED AT ROAD LOW POINTS SHALL BE SET FLUSH WITH FINAL GRADE IMMEDIATELY PRIOR TO PLACEMENT OF THE FINISH COURSE ASPHALT.
9. EXISTING STREET NAMES AND TRAFFIC CONTROL SIGNS SHALL BE MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION AND RELOCATED IN ACCORDANCE WITH NORFOLK COUNTY STANDARDS IMMEDIATELY UPON COMPLETION OF BASE ASPHALT INSTALLATION.
10. DIRECT PEDESTRIAN TRAFFIC AROUND WORK SITE.
11. CONTRACTOR TO STRIP TOPSOIL FROM EXISTING DITCHES, BACKFILL WITH ONSITE SUITABLE FILL MATERIAL TO CONFORM TO GRADING PLANS. CONTRACTOR TO PLACE FILL IN DITCHES IN MAXIMUM 200mm LIFTS.

EROSION CONTROL NOTES

1. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED PRIOR TO, AND MAINTAINED DURING, THE CONSTRUCTION PART TO PREVENT ENTRY OF SEDIMENT INTO LOCAL STORM SEWERS OR THE NATURAL ENVIRONMENT.
2. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DESIGNING AND PROVIDING ALL SEDIMENT CONTROL MEASURES AS MAY BE REQUIRED TO PROTECT THE WORK SITE OR THE ADJACENT LANDS, REGARDLESS OF THE SOURCE OR ORIGIN OF EROSION OR SEDIMENTS. IF THE CONTRACT ADMINISTRATOR IS NOT SATISFIED WITH THE EXTENT OF THE MEASURES TAKEN, THEY MAY DIRECT THAT ADDITIONAL CONTROLS BE PUT IN PLACE. THE CONTRACT REQUIREMENTS FOR SEDIMENT AND EROSION CONTROL SHALL BE CONSIDERED ABSOLUTE MINIMUMS. THE ULTIMATE RESPONSIBILITY TO ENSURE THAT THE MEASURES ARE ADEQUATE SHALL LIE SOLELY ON THE CONTRACTOR. ANY DAMAGE RESULTING FROM FAILURE OF THESE MEASURES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
3. ALL SEDIMENT AND EROSION CONTROLS ARE TO BE INSPECTED REGULARLY, INCLUDING PRIOR TO RAIN EVENTS. ALL INEFFECTIVE OR DAMAGED ESC MEASURES SHOULD BE MAINTAINED, REPAIRED OR REPLACED WITHIN 48 HOURS OF THE INSPECTION.
4. PERSONNEL WILL ATTEND THE SITE TO INSPECT ALL CONTROLS, ON A REGULAR BASIS, OR FOLLOWING A RAIN EVENT, TO MONITOR ALL WORKS, AND IN PARTICULAR WORKS RELATED TO EROSION AND SEDIMENT CONTROL, DEWATERING, RESTORATION. SHOULD CONCERNS ARISE, THE CONSERVATION AUTHORITY AND THE CONTRACT ADMINISTRATOR WILL BE CONTACTED.
5. ALL COLLECTED SEDIMENT TO BE REMOVED AND TRANSPORTED FOR DISPOSAL OFFSITE. CONTRACTOR TO SUBMIT OPSS FORM 180 FOR DISPOSAL SITES.
6. EROSION AND SEDIMENT CONTROL MEASURES MAY NEED TO BE UPGRADED/AMENDED AS SITE CONDITIONS CHANGE IN ORDER TO PREVENT THE RELEASE OF SEDIMENT.
7. ALL ACTIVITIES, INCLUDING EQUIPMENT MAINTENANCE AND REFUELING WILL BE CONTROLLED TO PREVENT THE ENTRY OF PETROLEUM PRODUCTS, DEBRIS, RUBBLE, CONCRETE, OR OTHER DELETERIOUS SUBSTANCES INTO THE STORM SEWER OR THE NATURAL ENVIRONMENT.
8. ALL SITE DISCHARGE, INCLUDING DEWATERING, MUST BE TREATED TO MEETING THE REQUIRED OBJECTIVES OF THE RECEIVING INFRASTRUCTURE OR WATERCOURSE (e.g. COUNTY SEWER USE BY-LAW OBJECTIVES FOR STORM OR SANITARY SEWERS, AND PROVINCIAL WATER QUALITY OBJECTIVES FOR THE NATURAL ENVIRONMENT).
9. THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE GEOTECHNICAL WORK UNDERTAKEN AND PROVIDED FOR INFORMATION BY THE CONSULTANT AND SHALL FOLLOW THE DEWATERING RECOMMENDATIONS OR REQUIREMENTS, IF NECESSARY, REQUIRED FOR CONSTRUCTION OF THE WORKS.
10. ALL DEWATERING EFFLUENT SHALL BE TREATED BEFORE RELEASE TO THE ENVIRONMENT AT LEAST 30 METRES FROM A WATERCOURSE OR WETLAND AND ALLOWED TO DRAIN THROUGH A WELL VEGETATED AREA. NO DEWATERING EFFLUENT SHALL BE SENT DIRECTLY TO ANY WATERCOURSE, WETLAND OR FOREST, OR ALLOWED TO DRAIN ONTO DISTURBED SOILS WITHIN THE WORK AREA. THESE CONTROL MEASURES SHALL BE MONITORED FOR EFFECTIVENESS AND MAINTAINED OR REVISED AT NO ADDITIONAL COST TO MEET THE OBJECTIVE OF PREVENTING THE RELEASE OF SEDIMENT LADEN WATER. USE OF ENVIRO-TANK, FILTER BAGS OR PERFORATED PIPE SHOULD BE CONSIDERED FOR TREATING DEWATERING EFFLUENT.
11. PROTECT ALL CATCHBASINS, MANHOLES AND PIPE ENDS FROM SEDIMENT INTRUSION. CATCH BASIN INSERT FILTERS SHALL BE UNDER GRATES OF ALL CATCH BASINS TO TRAP SEDIMENT. INSERTS ARE TO BE CLEANED REGULARLY AND ARE NOT TO BE REMOVED UNTIL SUCH TIME AS THE CURBS ARE CONSTRUCTED IF REQUIRED, AND THE BOULEVARDS ARE SODDED. CATCH BASIN INSERT TO BE TERRAFIX OR APPROVED EQUIVALENT.
12. ROADS TO BE CLEANED MINIMUM ONCE A WEEK OR AS INSTRUCTED BY THE CONTRACT ADMINISTRATOR. IT IS NOT ACCEPTABLE TO HAVE MUD AND DEBRIS LYING ON ROADS. ADDITIONAL ENVIRONMENTAL CONTROLS ARE TO BE PLACED AS INSTRUCTED BY THE CONTRACT ADMINISTRATOR.
13. STOCKPILES TO BE ENCLOSED WITH EROSION CONTROL SILT FENCE.

THRUST RESTRAINT TABLE

DIAMETER	MIN. NO. OF STEEL RODS (19mmØ)	MIN. LENGTH WITHIN WHICH JOINTS TO BE RESTRAINED ON EACH SIDE OF FITTINGS (m)				
		11 - 1/4°	22 - 1/2°	45°	90° & TEES	DEAD END & VALVES
100	2	4.0			4.0	8
150	2				5.5	10
200	2				7.0	13
250	2				8.5	16
300	2				10	19

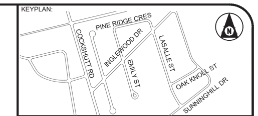
STORM SEWER STRUCTURES TABLE

STRUCTURE NAME	STRUCTURE SIZE	LID ELEV.	INV. ELEV	STRUCTURE HEIGHT
DCB2	1500mmx750mm	188.42	INV. SW = 187.15m (300mmø)	1.87m
DCB1	1500mmx750mm	188.42	INV. NE = 186.12m (300mmø)	2.90m
STMH01	1200mmø	188.59	INV. NW = 185.72m (525mmø) INV. SE = 185.69m (525mmø)	2.90m
DCB3	1500mmx750mm	188.63	INV. SW = 187.36m (300mmø)	1.87m
STMH02	1200mmø	188.74	INV. N = 186.29m (525mmø) INV. SE = 186.26m (525mmø) INV. NE = 186.35m (300mmø)	2.49m
CB1	750mmx750mm	189.50	INV. E = 187.11m (250mmø)	2.99m
CB2	750mmx750mm	189.53	INV. W = 188.26m (250mmø)	1.87m
STMH03	1200mmø	189.72	INV. N = 186.91m (450mmø) INV. E = 186.92m (450mmø) INV. S = 186.83m (525mmø)	2.89m
CB3	750mmx750mm	189.93	INV. E = 187.30m (250mmø)	3.23m
CB4	750mmx750mm	189.95	INV. W = 188.68m (250mmø)	1.87m
STMH04	1200mmø	190.15	INV. W = 187.80m (250mmø) INV. S = 187.47m (450mmø) INV. E = 187.56m (300mmø)	2.68m
DCB4	1500mmx750mm	189.13	INV. W = 188.08m (300mmø)	1.65m
DCB6	1500mmx750mm	189.34	INV. E = 188.24m (300mmø) INV. W = 188.21m (300mmø)	1.73m
DCB5	1500mmx750mm	189.34	INV. W = 188.32m (300mmø)	1.62m

TRAFFIC MANAGEMENT NOTES

1. THE CONTRACTOR IS ADVISED OF HEAVY TRAFFIC VOLUMES DURING THE MORNING AND EVENING PEAK HOURS AND MUST IMPLEMENT ALL NECESSARY MEASURES SUCH AS ENGAGING ADDITIONAL CONSTRUCTION CREWS IN ORDER TO COMPLETE THE WORK IN THE SHORTEST POSSIBLE TIME. THE WORK MUST BE SCHEDULED RESPECTING TRAFFIC FLOWS AND MUST MEET THE CONDITIONS OF THE ROAD OCCUPANCY PERMIT.
2. ALL OF THE CONTRACTOR'S OPERATIONS AND ACTIVITIES SHALL BE IN ACCORDANCE WITH THE MOST CURRENT VERSION OF THE ONTARIO TRAFFIC MANUAL (OTM), BOOK 7 (TEMPORARY CONDITIONS). "TRAFFIC CONTROL PERSONS" SHALL BE AS DEFINED IN BOOK 7 OF THE ONTARIO TRAFFIC MANUAL.
3. LAYOUTS FOR SIGNING TEMPORARY LANE CLOSURES FOR CONSTRUCTION STAGES TO BE IN ACCORDANCE WITH OTM BOOK 7.
4. WHERE REQUIRED, EXISTING LANE MARKINGS ARE TO BE REMOVED AND TEMPORARY LANE MARKINGS PAINTED. AT THE COMPLETION OF PROJECT, TEMPORARY LANE MARKINGS ARE TO BE REMOVED AND PERMANENT LANE MARKINGS REINSTATED BY PAINTING.
5. THE CONTRACTOR SHALL SCHEDULE THE WORK SO THAT THERE WILL BE NO OPEN EXCAVATION OVERNIGHT OR ON NON-WORKING DAYS, ADJACENT TO A LANE CARRYING TRAFFIC, EXCEPT WHERE A TRAFFIC BARRIER DESIGNED TO RESTRAIN ERRANT VEHICLES IS LOCATED BETWEEN THE TRAFFIC FLOW AND EXCAVATION.
6. MATERIALS SHALL NOT BE STORED WITHIN 4 METRES OF THE TRAVELED PORTION OF ANY ROAD.
7. THE CONTRACTOR SHALL PREPARE AND SUBMIT TO THE COUNTY A DETAILED TRAFFIC MANAGEMENT PLAN FOR REVIEW AT LEAST 15 DAYS PRIOR TO CONSTRUCTION. THIS IS TO BE ACCOMPANIED BY STAGING PLANS FOR THE CONTROL OF THROUGH TRAFFIC FOR THE PROJECT AND WHERE APPLICABLE, DETAILS FOR THE SAFE PASSAGE OF PEDESTRIANS THROUGH THE CONSTRUCTION AREA.
8. A TRAFFIC PROTECTION PLAN FOR WORKER SAFETY IS ALSO REQUIRED IN ACCORDANCE WITH THE OHSA.
9. EMILY STREET, LASALLE STREET AND OAK KNOLL STREET SHALL BE KEPT OPEN TO THROUGH TRAFFIC AND MAINTAINED WITH A MINIMUM OF ONE LANE FOR LOCAL TRAFFIC ONLY, EXCEPT WHEN APPROVED FOR THE INSTALLATION OF SERVICE CONNECTIONS. IT IS ANTICIPATED THAT THE CONTRACTOR WILL EXPEDITE THE SERVICE CONNECTION WORK REQUIRING FULL ROAD CLOSURE AND LIMIT ANY FULL CLOSURES TO LESS THAN ONE WORKING DAY AT A TIME.
10. THE WORK SHALL BE UNDERTAKEN IN A LOGICAL SEQUENCE THROUGHOUT THE CONSTRUCTION PERIOD AND MUST MEET CONDITIONS OF ROAD OCCUPANCY PERMIT. SAFE TRAFFIC CONTROL SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION, INCLUDING REMOVALS AND THE APPLICATION OF PAVEMENT MARKINGS AS NECESSARY TO MAINTAIN VEHICULAR TRAFFIC IN ITS DESIGNATED LANES. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING, MAINTAINING AND RELOCATING WHERE NECESSARY, SUFFICIENT SIGNS, DELINEATORS, BARRICADES, LIGHTS, ETC, AND PROVIDING TRAFFIC CONTROL PERSONS (TCP'S) AND/OR POLICE OFFICERS AS REQUIRED, SO THAT MOTORISTS AND PEDESTRIANS ARE PROPERLY DIRECTED TO ENSURE SAFETY.
11. THE CONTRACTOR SHALL PROVIDE TO THE COUNTY CONTACT DETAILS FOR A MINIMUM OF 3 STAFF MEMBERS, TO BE MADE AVAILABLE 24/7 THROUGHOUT THE DURATION OF THE PROJECT.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY APPROVALS IN ADVANCE OF COMMENCING WORK AS DETERMINED BY THE COUNTY (ROAD OCCUPANCY PERMIT ETC).
13. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL SIGNS DAMAGED OR RENDERED ILLEGIBLE ARE REINSTATED, CLEANED AND/OR REPLACED IN A TIMELY MANNER.
14. ALL TRAFFIC CONTROL DEVICES AND SIGNAGE MUST BE MAINTAINED IN THEIR REQUIRED PROPER LOCATION, CLEANED, WEIGHTED DOWN BY SANDBAGS ONLY AND MAINTAINED THROUGHOUT THE DURATION OF THE WORK.

KEYPLAN:



STAMP:

J. F. J. AUCKLAND
100230199
LICENSED PROFESSIONAL ENGINEER
PROVINCE OF ONTARIO

BENCHMARK:
THIS SURVEYED ON JULY 2024 BY SMC GEOMATICS.
VERTICAL CONTROL ESTABLISHED BY MONUMENT BM NL IN HP AT SOUTH EAST CORNER OF EMILY ST AND INGLEWOOD DR.
HORIZONTAL CONTROL ESTABLISHED BY LEICA RTK SMARTNET.

THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND UTILITY LOCATIONS AND REPORT ALL ERRORS AND OMISSIONS PRIOR TO COMMENCING WORK.

THIS DRAWING IS NOT TO BE SCALED.

NO.	BY	DATE	ISSUE / REVISION
1	AB	2026/02/04	ISSUED FOR CONSTRUCTION

WT INFRASTRUCTURE
PRACTICAL INNOVATION

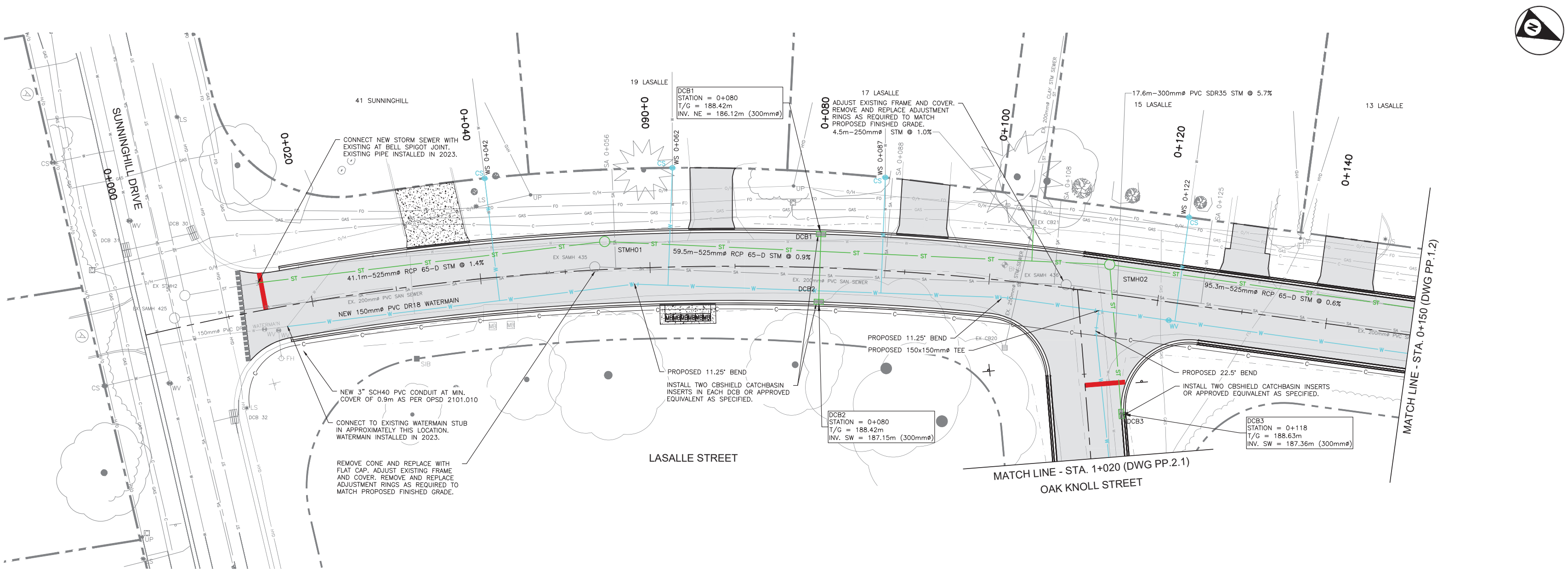
CLIENT: Norfolk COUNTY

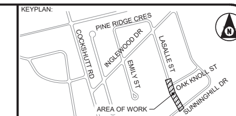
PROJECT NAME:
RECONSTRUCTION OF EMILY STREET, LASALLE STREET, AND OAK KNOLL STREET

CLIENT REF: PW-EAM-25-38

TITLE:
GENERAL NOTES AND SPECIFICATIONS

PROJECT NO:	SCALE:	DATE:	
24-2012	AS SHOWN	2026-02-04	IF THIS BAR IS NOT 25mm LONG, ADJUST THE PLOTTING SCALE.
DESIGNED BY: JA	DRAWN BY: AK	CHECKED BY: AT	25mm
DRAWING No: G.1			SHEET #: 2 OF 24





NOTES:

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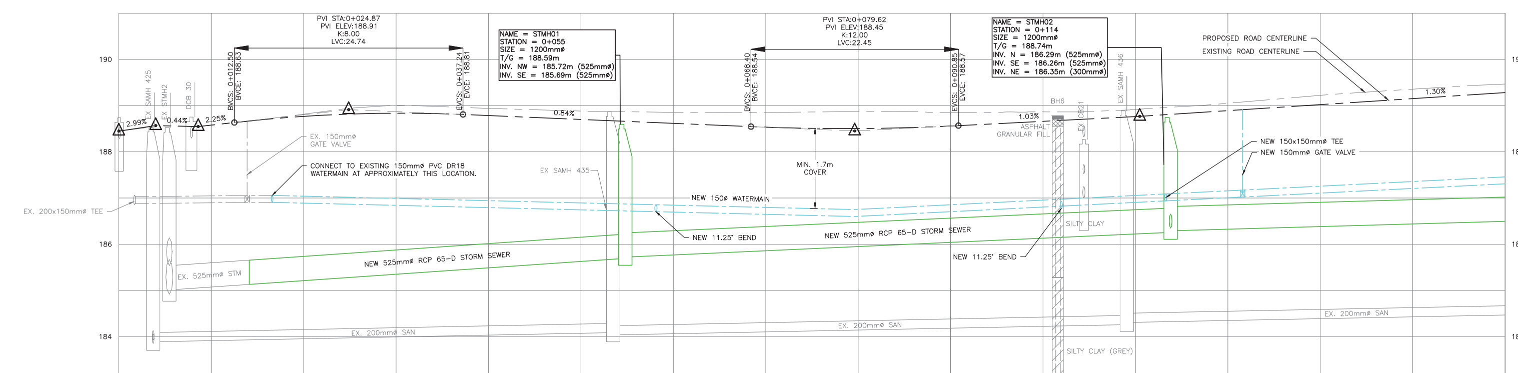

STATION	0+000	0+020	0+040	0+060	0+080	0+100	0+120	0+140	0+150
CENTERLINE GRADE — EXISTING	188.45	188.81	188.94	188.85	188.87	188.86	189.05	189.36	189.47
CENTERLINE GRADE — FINISHED	188.45	188.77	188.78	188.62	188.50	188.66	188.89	189.15	189.28
TOP OF WATERMAIN — EXISTING		187.04	186.94	186.84	186.75	186.95	187.16	187.36	187.46
TOP OF WATERMAIN — NEW		187.04	186.94	186.84	186.75	186.95	187.16	187.36	187.46

EXISTING STORM SEWER INVERT	185.01; 185.13; EXISTING 8.75m 525mmø STORM SEWER @ 1.37%
STORM SEWER INVERT	185.13N; NEW 41.1m 525mmø RCP 65–D STORM SEWER c/w CLASS B BEDDING @ 1.4%; 185.69S; 185.72N; NEW 59.5m 525mmø RCP 65–D STORM SEWER c/w CLASS B BEDDING @ 0.9%; 186.26S; 186.29N; 186.35E; NEW 95.3m 525mmø RCP 65–D STORM SEWER c/w CLASS B BEDDING @ 0.6%; 186.38N
EXISTING SANITARY SEWER INVERT	183.89; EXISTING 49.9m 200mmø SANITARY SEWER @ 0.4%; 184.09; 184.04; EXISTING 55.6m 200mmø SANITARY SEWER @ 0.4%; 184.26; 184.31; EXISTING 78.4m 200mmø SANITARY SEWER @ 0.4%; 184.62

STAMP: LICENSED PROFESSIONAL ENGINEER J. F. J. AUCKLAND PROVINCE OF ONTARIO

BENCHMARK:
THIS SURVEYED ON JULY 2024 BY SMC GEOMATICS.
VERTICAL CONTROL ESTABLISHED BY MONUMENT BM NL IN HP AT SOUTH EAST CORNER OF EMILY ST AND INGLEWOOD DR.
HORIZONTAL CONTROL ESTABLISHED BY LEICA RTK SMARTNET.

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NO.	BY	DATE	ISSUE / REVISION
1	AB	2026/02/04	ISSUED FOR CONSTRUCTION

WT INFRASTRUCTURE PRACTICAL INNOVATION

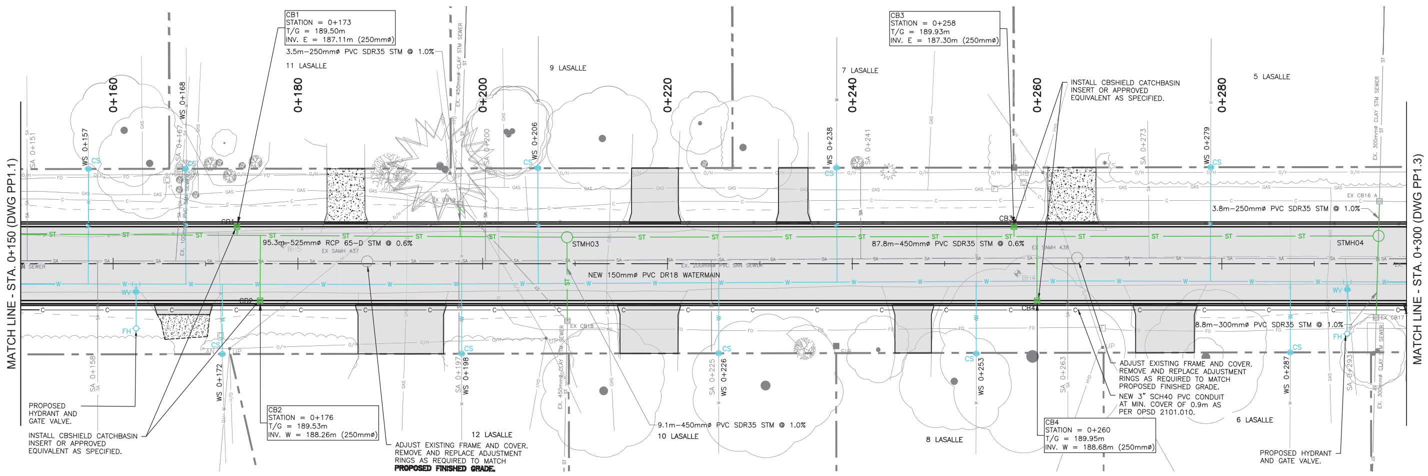
CLIENT: Norfolk County

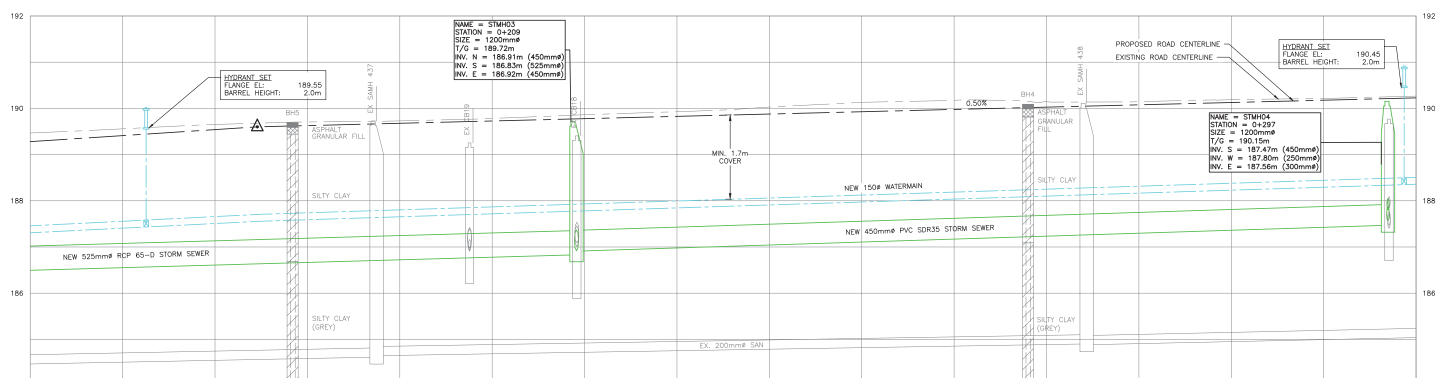
PROJECT NAME: RECONSTRUCTION OF EMILY STREET, LASALLE STREET, AND OAK KNOLL STREET

CLIENT REF: PW-EAM-25-38

TITLE: LASALLE ST PLAN AND PROFILE STA. 0+000 TO STA. 0+150

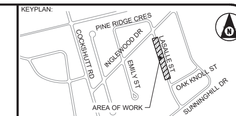
PROJECT NO:	SCALE:	DATE:	
24-2012	1:250	2026-02-04	IF THIS BAR IS NOT 25mm LONG, ADJUST THE PLOTTING SCALE.
DESIGNED BY: JA	DRAWN BY: AK	CHECKED BY: AT	25mm
DRAWING No: PP.1.1			SHEET #: 10 OF 24





STATION		0+160	0+180	0+200	0+220	0+240	0+260	0+280	0+300	STATION
CENTERLINE GRADE (EXISTING / FINISHED)	189.47 / 189.28	189.56 / 189.41	189.71 / 189.63	189.78 / 189.73	189.93 / 189.83	190.13 / 189.93	190.14 / 190.03	190.19 / 190.13	190.27 / 190.23	CENTERLINE GRADE (EXISTING / FINISHED)
TOP OF WATERMAIN (EXISTING / NEW)	187.46 / 187.46	187.56 / 187.56	187.74 / 187.74	187.87 / 187.87	188.00 / 188.00	188.12 / 188.12	188.25 / 188.25	188.38 / 188.38	188.51 / 188.51	TOP OF WATERMAIN (EXISTING / NEW)
EXISTING STORM SEWER INVERT										EXISTING STORM SEWER INVERT
STORM SEWER INVERT	186.29N	NEW 95.3m 525mmø RCP 65–D STORM SEWER c/w CLASS B BEDDING @ 0.6%		186.83S 186.91N 186.19E	NEW 87.8m 450mmø PVC SDR35 STORM SEWER c/w CLASS B BEDDING @ 0.6%				187.47S 187.80W 187.56E	STORM SEWER INVERT
EXISTING SANITARY SEWER INVERT	184.31	EXISTING 78.4m 200mmø SANITARY SEWER @ 0.4%	184.62 184.65	EXISTING 76.9m 200mmø SANITARY SEWER @ 0.3%			184.90 184.88	EXISTING 77.6m 200mmø SANITARY SEWER @ 0.4%	185.22	EXISTING SANITARY SEWER INVERT

KEYPLAN:



NOTES:

1. SERVICE CONNECTION LOCATIONS AND ELEVATIONS ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY ALL CONNECTION LOCATIONS.
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STAMP:

LICENSED PROFESSIONAL ENGINEER
J. F. J. AUCKLAND
100230199
PROVINCE OF ONTARIO

BENCHMARK:

THIS SURVEYED ON JULY 2024 BY SMC GEOMATICS.
VERTICAL CONTROL ESTABLISHED BY MONUMENT BM NL IN HP AT SOUTH EAST CORNER OF EMILY ST AND INGLEWOOD DR.
HORIZONTAL CONTROL ESTABLISHED BY LEICA RTK SMARTNET.

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NO.	BY	DATE	ISSUE / REVISION
1	AB	2026/02/04	ISSUED FOR CONSTRUCTION

WT INFRASTRUCTURE
PRACTICAL INNOVATION

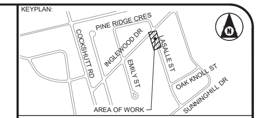
CLIENT: Norfolk COUNTY

PROJECT NAME: RECONSTRUCTION OF EMILY STREET, LASALLE STREET, AND OAK KNOLL STREET

CLIENT REF: PW-EAM-25-38

TITLE: LASALLE ST
PLAN AND PROFILE
STA. 0+150 TO STA. 0+300

PROJECT NO:	SCALE:	DATE:	IF THIS BAR IS NOT 25mm LONG, ADJUST THE PLOTTING SCALE.
24-2012	1:250	2026-02-04	
DESIGNED BY: JA	DRAWN BY: AK	CHECKED BY: AT	25mm
DRAWING No: PP.1.2			SHEET #: 11 OF 24



NOTES:

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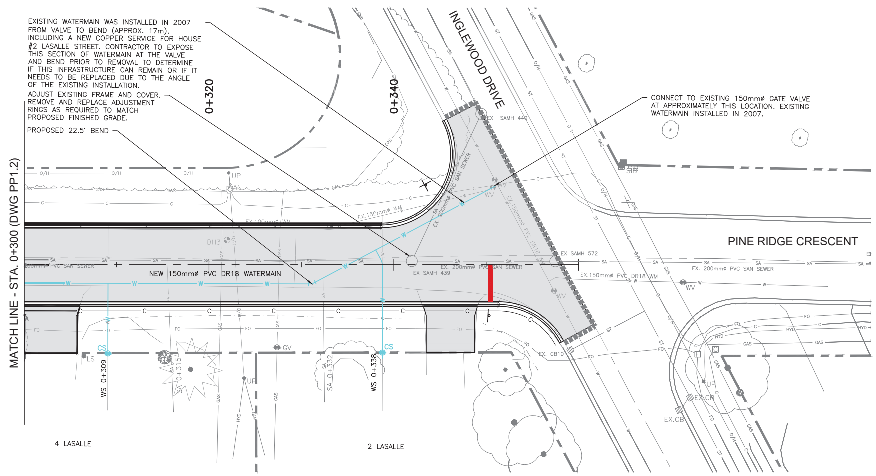

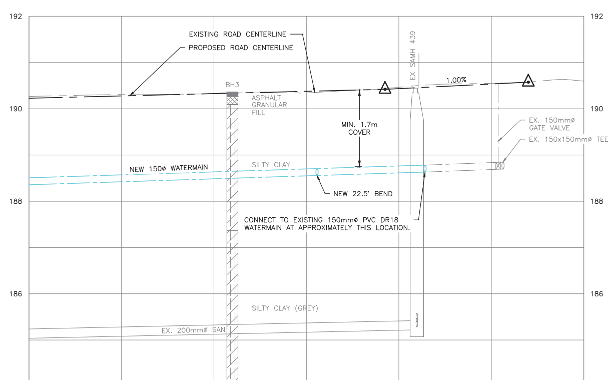

STATION	0+300	0+320	0+340	0+360	STATION
CENTERLINE GRADE — EXISTING	190.27	190.33	190.46	190.60	CENTERLINE GRADE — EXISTING
CENTERLINE GRADE — FINISHED	190.23	190.33	190.43		CENTERLINE GRADE — FINISHED
TOP OF WATERMAIN — EXISTING	188.51	188.64	188.76		TOP OF WATERMAIN — EXISTING
TOP OF WATERMAIN — NEW	188.51	188.64	188.76		TOP OF WATERMAIN — NEW
EXISTING STORM SEWER INVERT					EXISTING STORM SEWER INVERT
STORM SEWER INVERT					STORM SEWER INVERT
EXISTING SANITARY SEWER INVERT	184.88	EXISTING 77.6m 200mmø SANITARY SEWER @ 0.4%	185.22		EXISTING SANITARY SEWER INVERT

STAMP: LICENSED PROFESSIONAL ENGINEER J. F. J. AUCKLAND 100230159 PROVINCE OF ONTARIO

BENCHMARK:
THIS SURVEYED ON JULY 2024 BY SMC GEOMATICS.
VERTICAL CONTROL ESTABLISHED BY MONUMENT BM NL IN HP AT SOUTH EAST CORNER OF EMILY ST AND INGLEWOOD DR.
HORIZONTAL CONTROL ESTABLISHED BY LEICA RTK SMARTNET.

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NO.	BY	DATE	ISSUE / REVISION
1	AB	2026/02/04	ISSUED FOR CONSTRUCTION

WT INFRASTRUCTURE PRACTICAL INNOVATION

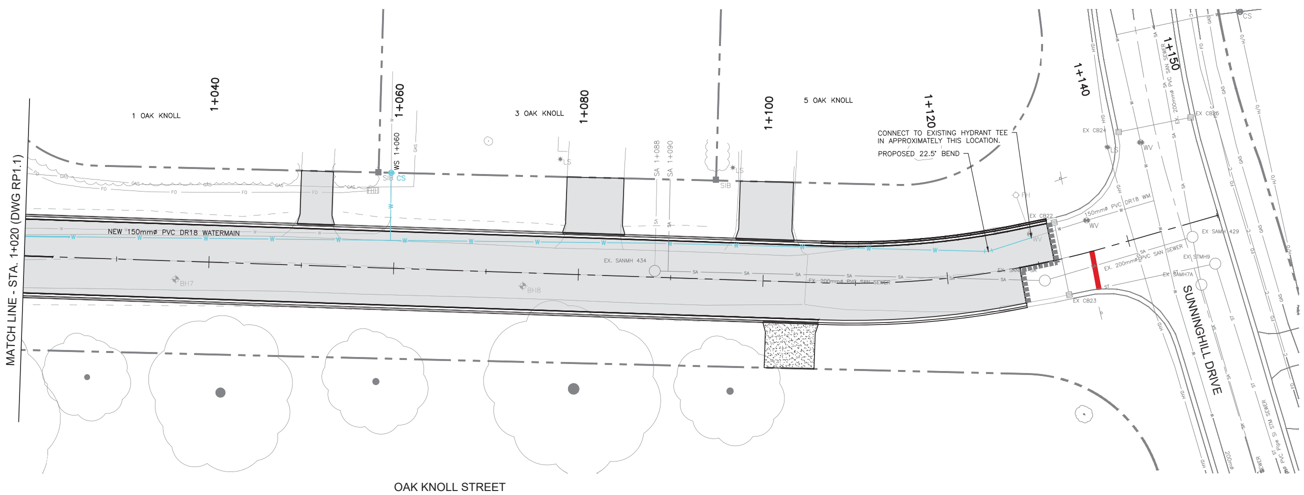
CLIENT: Norfolk County

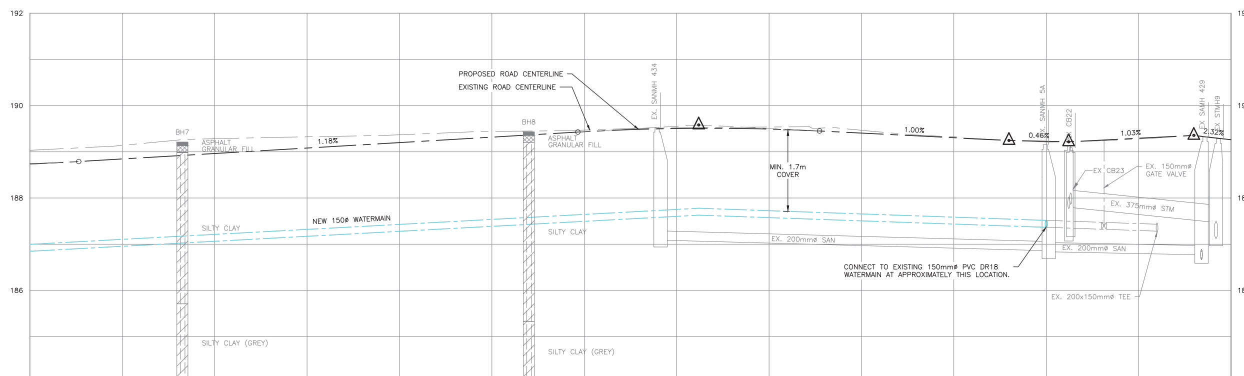
PROJECT NAME:
RECONSTRUCTION OF EMILY STREET, LASALLE STREET, AND OAK KNOLL STREET

CLIENT REF: PW-EAM-25-38

TITLE:
LASALLE ST
PLAN AND PROFILE
STA. 0+300 TO STA. 0+360

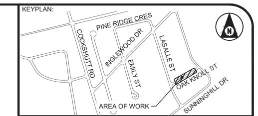
PROJECT NO:	SCALE:	DATE:	IF THIS BAR IS NOT 25mm LONG, ADJUST THE PLOTTING SCALE.
24-2012	1:250	2026-02-04	
DESIGNED BY: JA	DRAWN BY: AK	CHECKED BY: AT	25mm
DRAWING No: PP.1.3			SHEET #: 12 OF 24





STATION		1+040	1+060	1+080		1+100	1+120	1+140	1+150	STATION
EXISTING / FINISHED CENTERLINE GRADE	189.03 / 188.74	189.28 / 188.96	189.37 / 189.20	189.47 / 189.44		189.54 / 189.49	189.32 / 189.31	189.28 / 189.29	189.26 / 189.26	CENTERLINE GRADE EXISTING / FINISHED
EXISTING / NEW TOP OF WATERMAIN	187.00 / 187.00	187.21 / 187.21	187.43 / 187.43	187.64 / 187.64		187.73 / 187.73	187.59 / 187.59			TOP OF WATERMAIN EXISTING / NEW
EXISTING STORM SEWER INVERT								187.80 EXISTING 16.16m 375mmø STORM SEWER @ 2.04%	187.47	EXISTING STORM SEWER INVERT
STORM SEWER INVERT										STORM SEWER INVERT
EXISTING SANITARY SEWER INVERT					187.09	EXISTING 42.2m 200mmø SANITARY SEWER @ 0.5%	186.86	186.84 EXISTING 16.7m 200mmø SANITARY SEWER @ 0.4%	186.77	EXISTING SANITARY SEWER INVERT

KEYPLAN:



NOTES:

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STAMP:

BENCHMARK:
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VERTICAL CONTROL ESTABLISHED BY MONUMENT BM NL IN HP AT SOUTH EAST CORNER OF EMILY ST AND INGLEWOOD DR.
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NO.	BY	DATE	ISSUE / REVISION
1	AB	2026/02/04	ISSUED FOR CONSTRUCTION

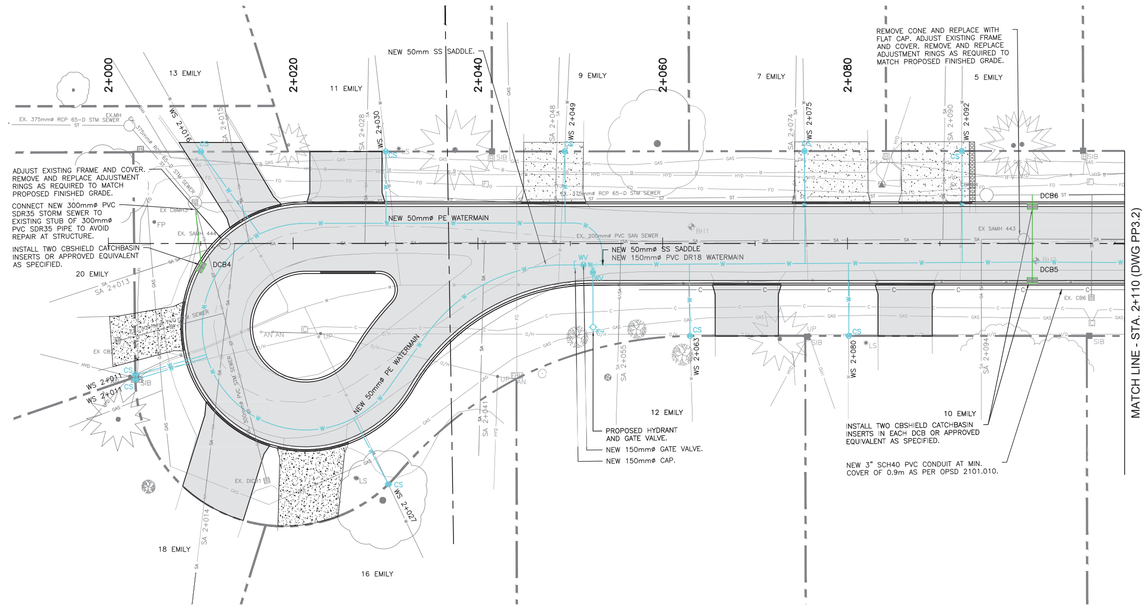
CLIENT:

PROJECT NAME:
RECONSTRUCTION OF EMILY STREET, LASALLE STREET, AND OAK KNOLL STREET

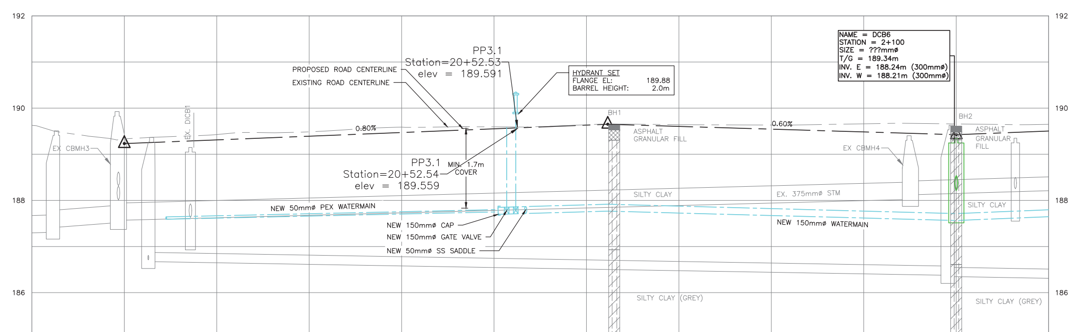
CLIENT REF: PW-EAM-25-38

TITLE:
OAK KNOLL ST
PLAN AND PROFILE
STA. 1+000 TO STA. 1+150

PROJECT NO:	SCALE:	DATE:	IF THIS BAR IS NOT 25mm LONG, ADJUST THE PLOTTING SCALE.
24-2012	1:250	2026-02-04	25mm
DESIGNED BY: JA	DRAWN BY: AK	CHECKED BY: AT	
DRAWING No: PP.2.1			SHEET #: 13 OF 24

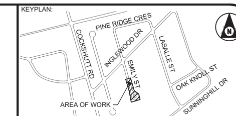


EMILY STREET



STATION	2+000	2+020	2+040	2+060	2+080	2+100	2+110	STATION
EXISTING / FINISHED CENTERLINE GRADE	189.63	189.43 / 189.31	189.59 / 189.47	189.64 / 189.63	189.63 / 189.54	189.66 / 189.42	189.65 / 189.50	CENTERLINE GRADE EXISTING / FINISHED
EXISTING / NEW TOP OF WATERMAIN	EXISTING 26.73m 375mmø STORM SEWER @ 0.60%	187.67 / 187.67	187.75 / 187.75	187.90 / 187.90	187.82 / 187.82	187.71 / 187.71	187.80 / 187.80	TOP OF WATERMAIN EXISTING / NEW
EXISTING STORM SEWER INVERT	187.15, 187.31, 187.41, 187.52, 187.57			EXISTING 85.69m 375mmø STORM SEWER @ 0.53%		188.02, 188.12	188.54	EXISTING STORM SEWER INVERT
STORM SEWER INVERT	EXISTING 10.96m 375mmø STORM SEWER @ 1.00%					EXISTING 69.84m 300mmø STORM SEWER @ 0.60%		STORM SEWER INVERT
EXISTING SANITARY SEWER INVERT	186.67			EXISTING 86.5m 200mmø SANITARY SEWER @ 0.3%		EXISTING 84.1m 200mmø SANITARY SEWER @ 0.4%; 186.38, 186.35	186.04	EXISTING SANITARY SEWER INVERT

KEYPLAN:



NOTES:

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5. PROVIDE AND MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES AS SPECIFIED THROUGHOUT CONSTRUCTION.

STAMP:

LICENSED PROFESSIONAL ENGINEER
J. F. J. AUCKLAND
100230199
PROVINCE OF ONTARIO

BENCHMARK:
THIS SURVEYED ON JULY 2024 BY SMC GEOMATICS.
VERTICAL CONTROL ESTABLISHED BY MONUMENT BM NL IN HP AT SOUTH EAST CORNER OF EMILY ST AND INGLEWOOD DR.
HORIZONTAL CONTROL ESTABLISHED BY LEICA RTK SMARTNET.

THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND UTILITY LOCATIONS AND REPORT ALL ERRORS AND OMISSIONS PRIOR TO COMMENCING WORK.

THIS DRAWING IS NOT TO BE SCALED.

NO.	BY	DATE	ISSUE / REVISION
1	AB	2026/02/04	ISSUED FOR CONSTRUCTION

WT INFRASTRUCTURE
PRACTICAL INNOVATION

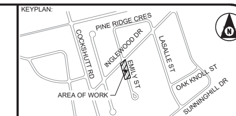
CLIENT: Norfolk COUNTY

PROJECT NAME:
RECONSTRUCTION OF EMILY STREET, LASALLE STREET, AND OAK KNOLL STREET

CLIENT REF: PW-EAM-25-38

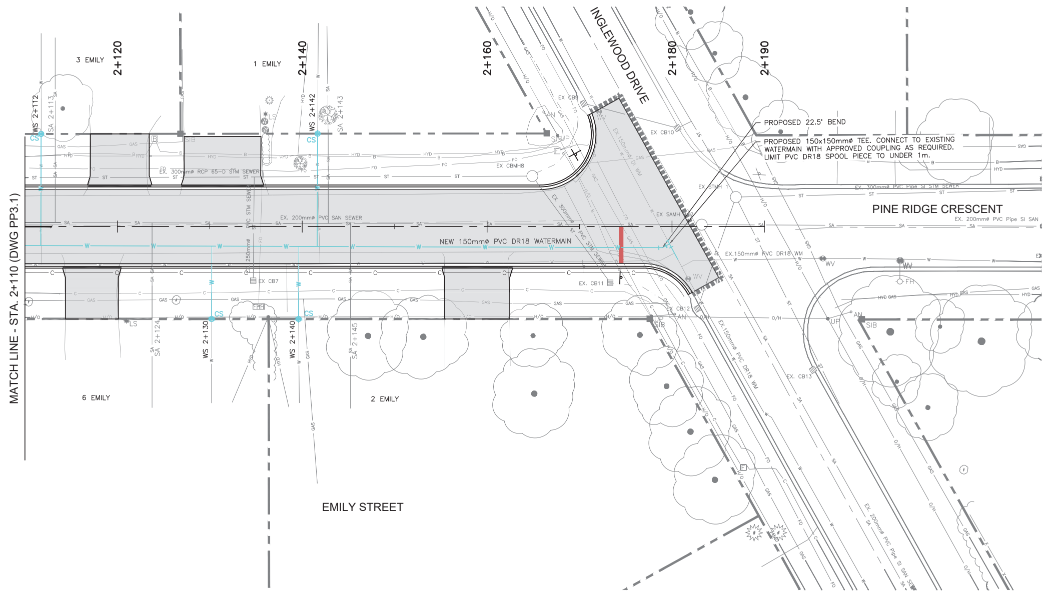
TITLE:
EMILY ST
PLAN AND PROFILE
STA. 2+000 TO STA. 2+100

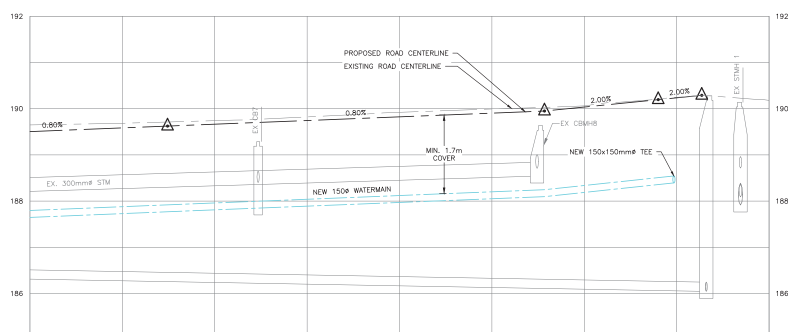
PROJECT NO:	SCALE:	DATE:	IF THIS BAR IS NOT 25mm LONG, ADJUST THE PLOTTING SCALE.
24-2012	1:250	2026-02-04	
DESIGNED BY: JA	DRAWN BY: AK	CHECKED BY: AT	25mm
DRAWING No: PP.3.1			SHEET #: 14 OF 24



NOTES:

1. SERVICE CONNECTION LOCATIONS AND ELEVATIONS ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY ALL CONNECTION LOCATIONS.
2. CONTRACTOR TO COORDINATE THIRD PARTY SUPPORT OF ALL UTILITIES AND UTILITY POLES ADJACENT TO THE AREA OF WORK.
3. CURB STOPS FOR THE WATER SERVICE CONNECTIONS ARE TO BE LOCATED AT THE PROPERTY LINE UNLESS INDICATED OTHERWISE. EXISTING SERVICE CONNECTIONS ARE TO BE RECONFIGURED AS REQUIRED.
4. PROVIDE TREE PROTECTION ZONES AS SPECIFIED AND AS DETAILED IN THE ARBORIST REPORT APPENDED TO THE SPECIFICATION.
5. PROVIDE AND MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES AS SPECIFIED THROUGHOUT CONSTRUCTION.





STATION			2+120	2+140	2+160	2+180	2+190	STATION
CENTERLINE GRADE	EXISTING	189.65	189.68	189.82	189.99	190.25	190.18	EXISTING
	FINISHED	189.50	189.58	189.74	189.90	190.23		FINISHED
TOP OF WATERMAIN	EXISTING	187.80	187.88	188.04	188.20			EXISTING
	NEW	187.80	187.88	188.04	188.20			NEW
EXISTING STORM SEWER INVERT		188.12	EXISTING 69.84m 300mmø STORM SEWER @ 0.60%		188.54			EXISTING STORM SEWER INVERT
STORM SEWER INVERT								STORM SEWER INVERT
EXISTING SANITARY SEWER INVERT		186.35	EXISTING 84.1m 200mmø SANITARY SEWER @ 0.4%			186.04		EXISTING SANITARY SEWER INVERT

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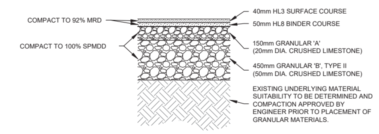
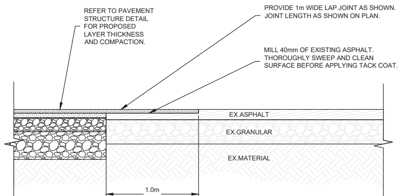
PLAN AND PROFILE
STA. 2+100 TO STA. 2+180

PROJECT NO:	SCALE:	DATE:	IF THIS BAR IS NOT 25mm LONG, ADJUST THE PLOTTING SCALE.
24-2012	1:250	2026-02-04	
DESIGNED BY: JA	DRAWN BY: AK	CHECKED BY: AT	25mm
DRAWING No: PP.3.2			SHEET #: 15 OF 24



FULL DEPTH RECONSTRUCTION PAVEMENT STRUCTURE DETAIL

SCALE: NTS

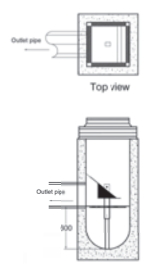


LAP JOINT DETAIL

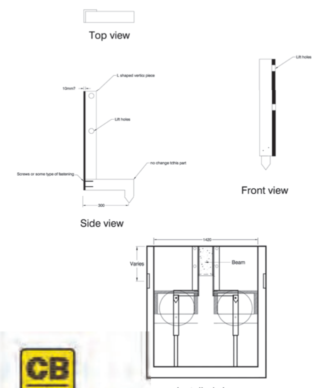
SCALE: NTS

Notes

1 Recommended depth t/g - invert = 1.2m
  Maximum depth t/g - invert = 2.4m
1. CB Shield to be installed in non frozen conditions.
2. The frame and cover should be well aligned with the catchbasin.
3. The sump must be clean before installation
4. The grate is at the same elevation as pipe invert.
5. Pipes must be cut flush with inside walls



600 x 600 CB
CB Shield (600mm Sump)



This spacer bars are to keep two single units standing upright inside a double catchbasin.

DCB c/w CB Shields

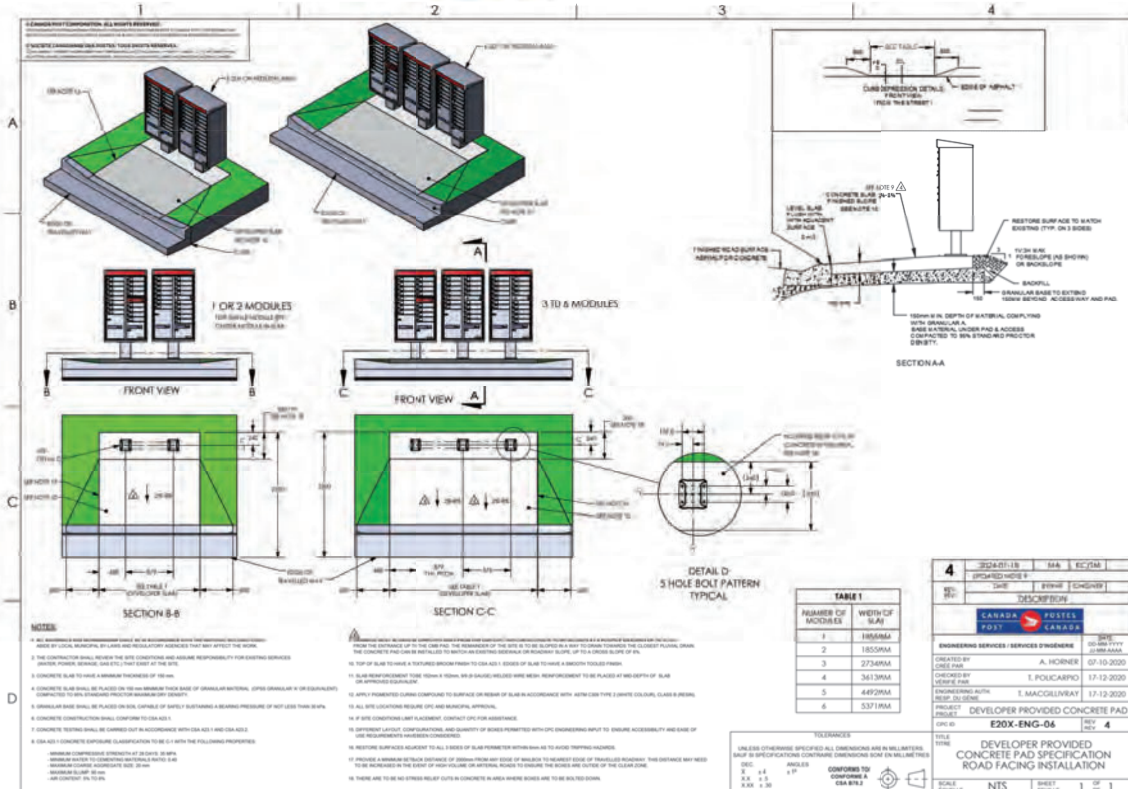
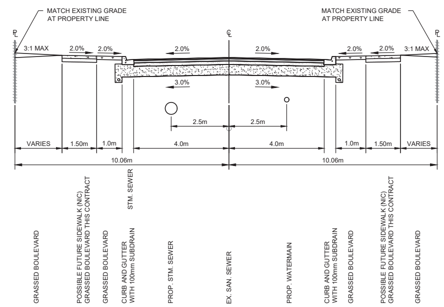


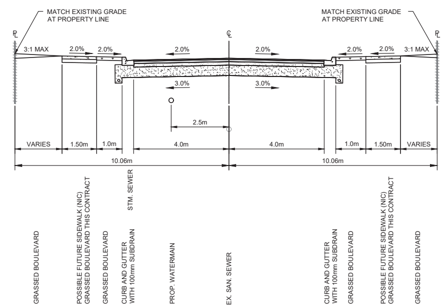
TABLE 1

NUMBER OF MODULES	WIDTH OF SLAB
1	1855MM
2	1855MM
3	2734MM
4	3613MM
5	4492MM
6	5371MM



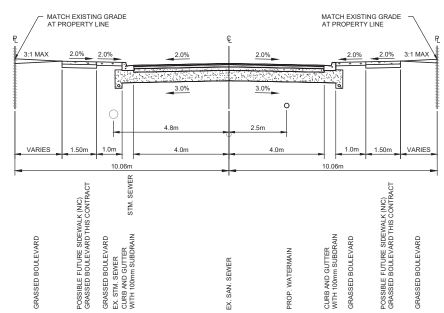
TYPICAL ROAD CROSS-SECTION - LASALLE STREET

SCALE: NTS



TYPICAL ROAD CROSS-SECTION - OAK KNOLL STREET

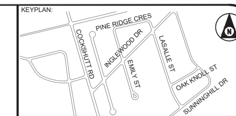
SCALE: NTS



TYPICAL ROAD CROSS-SECTION - EMILY STREET

SCALE: NTS

KEYPLAN:



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CLIENT REF: EIS-ENG-25-38

TITLE:
DETAILS

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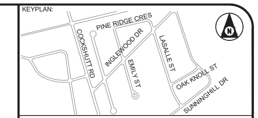
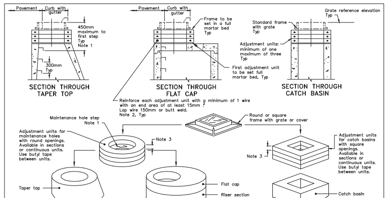
DRAWING No: DS.1			SHEET #: 16 OF 24

KEYPLAN:



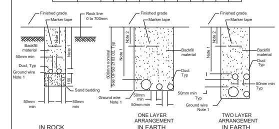


NOTES:
1 If first step is in an adjustment unit, the adjustment unit shall be of the type manufactured with a step in place.
2 Centre reinforcing in adjustment unit ±10mm.
3 Round and square adjustment units are available in sizes of 50, 75, 100, 150, and 300mm.
A Adjustment units shall not extend beyond the outside edge of the structure.
B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2014	Rev 3
PRECAST CONCRETE ADJUSTMENT UNITS FOR MAINTENANCE HOLES, CATCH BASINS, AND VALVE CHAMBERS	OPSD 704.010	

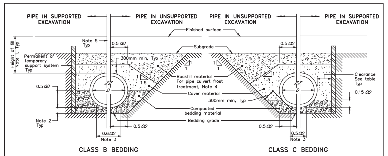
MINIMUM TRENCH WIDTH FOR ONE LAYER AND TWO LAYER DUCT ARRANGEMENT

No. OF 100 mm DUCTS	No. OF LAYERS	NUMBER OF 50 mm DUCTS										
		0	1	2	3	4	5	6	7	8	9	10
0	1	N/A	150	205	300	460	610	N/A	N/A	N/A	N/A	N/A
	2	N/A	N/A	N/A	N/A	205	300	350	460	460	610	610
1	1	150	255	460	610	610	N/A	N/A	N/A	N/A	N/A	N/A
	2	N/A	N/A	205	255	300	460	460	610	610	610	N/A
2	1	300	460	610	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2	150	255	255	460	460	610	610	610	N/A	N/A	N/A
3	1	460	610	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2	300	300	460	460	610	610	610	N/A	N/A	N/A	N/A
4	1	610	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2	300	460	460	610	610	N/A	N/A	N/A	N/A	N/A	N/A



NOTES:
1 Ground wire shall be installed in the duct or trench as specified in the Contract Documents.
2 Depth of marker tape shall be as specified in the Ontario Electrical Safety Code.
A Cable brick or concrete slab shall be installed where specified in the Contract Documents. See OPSD 2100.050.
B This OPSD shall be read in conjunction with OPSD 2103.02.
C Contractor has the option of installing one or two layer duct arrangement.
D N/A - Not Applicable, undesirable or exceeding equipment limits.
E All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2013	Rev 1
DUCT INSTALLATION IN TRENCHES	OPSD 2101.01	

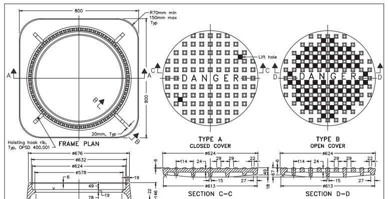


NOTES:
1 Height of fill is measured from the finished surface to top of pipe.
2 The minimum bedding depth below the pipe shall be 0.15D. In no case shall this dimension be less than 150mm or greater than 300mm.
3 The pipe bed shall be compacted and shaped to receive the bottom of the pipe.
4 Pipe culvert frost treatment shall be according to OPSD 803.030 and 803.031.
5 Condition of excavation is symmetrical about centreline of pipe.
A Soil types as defined in the Occupational Health and Safety Act and Regulations for Construction Projects.
B All dimensions are in metres unless otherwise shown.

LEGEND:
D – Inside diameter
OD – Outside diameter

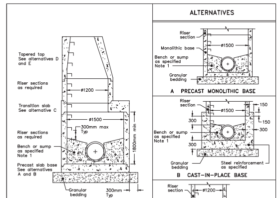
CLEARANCE TABLE	
Pipe Inside Diameter mm	Clearance mm
900 or less	300
Over 900	500

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2015	Rev 3
RIGID PIPE BEDDING, COVER, AND BACKFILL TYPE 3 SOIL – EARTH EXCAVATION	OPSD 802.031	



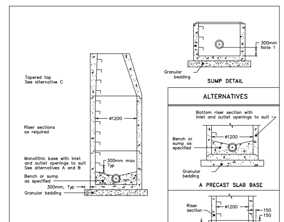
NOTES:
A Covers shall be Type A or Type B, as specified.
B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2013	Rev 3
CAST IRON, SQUARE FRAME WITH CIRCULAR CLOSED OR OPEN COVER FOR MAINTENANCE HOLES	OPSD 401.010	



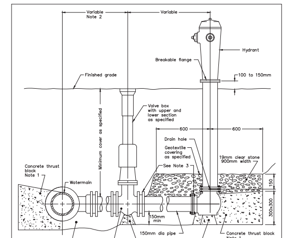
NOTES:
1 For sump detail, see OPSD 701.010.
A Granular backfill shall be placed to a minimum thickness of 300mm all around the maintenance hole.
B Precast concrete components shall be according to OPSD 701.030, 701.031, 701.040, 701.041, 703.011, 703.021, and 706.010.
C Structures exceeding 5.0m in depth shall include safety platform according to OPSD 404.020 or 404.021.
D Pipe support shall be according to OPSD 708.020.
E For benching and pipe opening details, see OPSD 701.021.
F For adjustment unit and frame installation, see OPSD 704.010.
G All dimensions are nominal.
H All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2014	Rev 5
PRECAST CONCRETE MAINTENANCE HOLE 1500mm DIAMETER	OPSD 701.011	



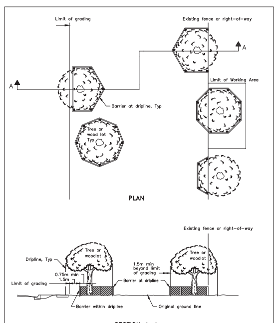
NOTES:
1 The sump is measured from the lowest invert.
A Granular backfill shall be placed to a minimum thickness of 300mm all around the maintenance hole.
B Precast concrete components shall be according to OPSD 701.030, 701.031, or 701.032.
C Structure exceeding 5.0m in depth shall include safety platform according to OPSD 404.020.
D Pipe support according to OPSD 708.020.
E For benching and pipe opening details, see OPSD 701.021.
F For adjustment unit and frame installation, see OPSD 704.010.
G All dimensions are nominal.
H All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2014	Rev 5
PRECAST CONCRETE MAINTENANCE HOLE 1200mm DIAMETER	OPSD 701.010	

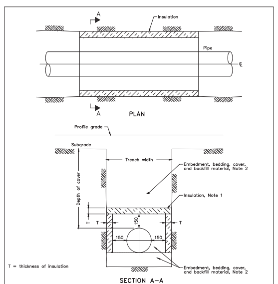


NOTES:
1 All concrete thrust blocks shall be poured against undisturbed ground.
2 When specified, for watermains 400mm and less, locate valve within 1.0m of centreline of watermain. Retaining and restraining devices shall be utilized. For watermains 600mm and over, bolt valve with flanged end directly to flanged tee.
3 When specified, retaining and restraining devices shall be utilized, in addition to thrust blocks.
A Bond breaker shall be used between the concrete and the fittings and appurtenances.
B Bolts and nuts for buried flange to flange connections shall be stainless steel.
C When required, flange of standpipe extensions shall not be in frost zone.
D This OPSD shall be read in conjunction with OPSD 1103.010 and 1103.020.
E Backfill material within 500mm of service box shall be native or imported, as specified.
F All dimensions are in millimetres unless otherwise shown.

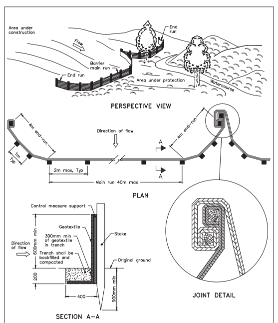
ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2013	Rev 2
HYDRANT INSTALLATION	OPSD 1105.010	



ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2007	Rev 0
BARRIER FOR TREE PROTECTION	OPSD 220.010	

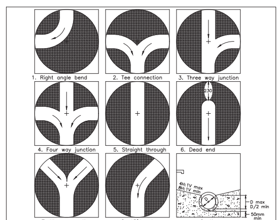


ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2015	Rev 0
INSULATION FOR SEWERS AND WATERMAINS IN SHALLOW TRENCHES	OPSD 1109.030	



NOTE:
A All dimensions are in millimetres unless otherwise shown.

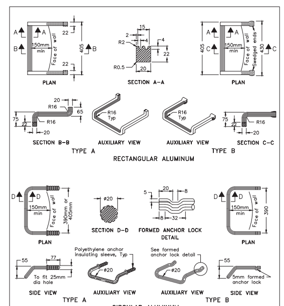
ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2015	Rev 2
HEAVY-DUTY SILT FENCE BARRIER	OPSD 219.130	



MAXIMUM SIZE HOLE IN THE WALL IN PRECAST RISER SECTIONS

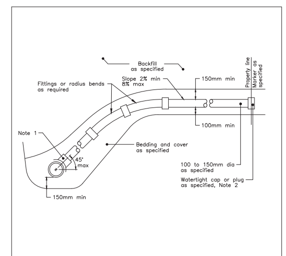
Maintenance Hole Diameter	No. 1-4	No. 5 and 6	No. 8	No. 7 Inlet Hole	No. 7 Outlet Hole
1200	700	860	780	700	860
1500	860	1220	960	860	1170
1800	1220	1485	1220	1220	1485
2400	1485	2020	1760	1485	2020
3000	1930	2450	2300	1930	2450
3600	2470	3085	2730	2470	3085

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2014	Rev 4
MAINTENANCE HOLE BENCHING AND PIPE OPENING ALTERNATIVES	OPSD 701.021	



NOTES:
A All aluminum components shall be 6000 series structural aluminum.
B All aluminum in contact with concrete shall be thoroughly coated with asphalt paint.
C All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2013	Rev 3
MAINTENANCE HOLE STEPS SOLID	OPSD 405.020	



NOTES:
1 Sewer service connections to the main pipe sewer shall be made using factory made tees or wyes, strap-on-saddles, or other approved saddles.
2 Cap or plug at property line shall be adequately braced.
A Maintenance holes shall be used at the main sewer to connect service connections greater than or equal to 200mm.
B For new construction, saddles shall be installed on the main pipe before that pipe is laid.
C Approved cut-in tool shall be used for field made connections.
D All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2011	Rev 2
SEWER SERVICE CONNECTIONS FOR FLEXIBLE MAIN PIPE SEWER	OPSD 1006.020	

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