

**CONSTRUCTION NOTES:**

**1.0 REMOVALS/EROSION & SEDIMENT CONTROLS (GENERAL)**

- 1.1 NO MAINTENANCE OR REPAIR WORK ON CONSTRUCTION EQUIPMENT IS ALLOWED WITHIN 30m OF AN EXISTING WATER COURSE OR DITCH.
- 1.2 ALL SEDIMENT AND EROSION CONTROL FACILITIES AND WORKS ARE TO BE CONSTRUCTED AND IN PLACE TO THE APPROVAL OF THE SITE ENGINEER PRIOR TO ANY GRADING OPERATIONS COMMENCING. TYPICAL WORKS INCLUDE SILT FENCES AND INTERCEPTOR SWALES. ALL TEMPORARY SOIL OR DIRT STOCKPILES ARE TO BE PROVIDED WITH THE NECESSARY SEDIMENT AND EROSION CONTROL FEATURES. IF STOCKPILES ARE TO REMAIN FOR A PERIOD LONGER THAN 180 DAYS, STOCKPILES SHALL BE HYDROSEEDED AND SURROUNDED WITH SILT FENCE.
- 1.4 ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES (I.E. SILT FENCE, STRAW BALES, CLEARSTONE..ETC.) ARE TO BE KEPT ON SITE FOR EMERGENCIES AND REPAIRS.
- 1.5 EROSION AND SEDIMENT CONTROL METHODS ARE TO BE CONTINUOUSLY EVALUATED AND, WHERE NECESSARY, UPGRADES ARE TO BE IMPLEMENTED.
- 1.6 AN AFTER HOURS CONTACT NUMBER IS TO BE VISIBLY POSTED ON-SITE FOR EMERGENCIES.
- 1.7 ALL SEDIMENT CONTROL FENCING IS TO BE ERECTED PRIOR TO THE COMMENCEMENT OF ANY SITE GRADING OPERATIONS, AS PER CITY OF MISSISSAUGA STANDARD 2940.01.
- 1.8 ALL CATCHBASINS WITHIN LANDSCAPED AREAS TO HAVE SEDIMENT BARRIER (CITY OF MISSISSAUGA STANDARD 2930.02 OR 2930.03) ERECTED IMMEDIATELY AFTER CATCHBASIN INSTALLATION. SEDIMENT PROTECTION BARRIER TO BE MAINTAINED ON A REGULAR BASIS OR TO THE SATISFACTION OF THE CITY OF MISSISSAUGA.
- 1.9 ALL ROADSIDE CATCHBASINS TO HAVE SEDIMENT PROTECTION AS PER CITY OF MISSISSAUGA STANDARD 2930.04 INSTALLED IMMEDIATELY AFTER CATCHBASIN INSTALLATION. SEDIMENT PROTECTION BARRIER TO BE MAINTAINED ON A REGULAR BASIS OR TO THE SATISFACTION OF THE CITY OF MISSISSAUGA.
- 1.10 IF SITE CONSTRUCTION ACTIVITIES ARE INTERRUPTED AND/OR INACTIVITY EXCEEDS 30 DAYS, ALL STRIPPED AND/OR BARE SOIL AREAS ARE TO BE STABILIZED BY SODDING/SEEDING/MULCHING OR OTHER APPROVED METHOD, TO THE SATISFACTION OF THE CITY OF MISSISSAUGA.
- 1.11 ALL EROSION AND SEDIMENT CONTROL MEASURE ARE TO BE REGULARLY INSPECTED AND MAINTAINED, AS REQUIRED, TO THE SATISFACTION OF THE CITY OF MISSISSAUGA.
- 1.12 DURING ALL CONSTRUCTION PHASES, MUD TRACKING CONTROL, CONSISTING OF FLUSHING AND SWEEPING ROADS, IS TO BE PROVIDED FOR ALL ROADS, AS WARRANTED, IN ACCORDANCE WITH THE CITY OF MISSISSAUGA MUD TRACKING CONTROL POLICY.

- A) PRE-CONSTRUCTION
  - 1. CONTRACTOR TO ADVISE CITY WHAT STAFF ARE RESPONSIBLE FOR INCLUDING: SITE SUPERVISION CONTROL, SUPERVISION, INSPECTION AND MAINTENANCE, INCLUDING AFTER HOUR CONTACTS.
  - 2. CONTRACTOR TO PROVIDE WRITTEN INSPECTION AND MAINTENANCE SCHEDULE OF SEDIMENT CONTROL DEVICES.
  - 3. CONTRACTOR TO INSTALL ALL SEDIMENT CONTROL DEVICES AS IDENTIFIED ON THE APPROVED EROSION CONTROL PLAN PRIOR TO IMPLEMENTATION OF TOPSOIL STRIPPING OR EARTHWORKS OPERATIONS.

- B) DURING CONSTRUCTION (SITE AND BUILDING WORKS)
  - 1. CONTRACTOR TO ENSURE TOPSOIL, STRIPPING, GRADING AND UNDERGROUND WORKS CONFORM TO APPROVED GRADING, SERVING AND EROSION CONTROL PLANS.
  - 2. SITE ENGINEER TO CONDUCT REQUIRED WEEKLY INSPECTION, MAINTENANCE AND REPORTING OF SEDIMENT CONTROLS TO THE CITY STAFF.
  - 3. CONTRACTOR TO STABILIZE SITE AS REQUIRED THROUGHOUT SITE CONSTRUCTION SCHEDULE (C) POST CONSTRUCTION (INCLUDING BUILDING CONSTRUCTION)

- C) POST-CONSTRUCTION
  - 1. CONTRACTOR TO COMPLETE FINAL SITE STABILIZATION AND RE-VEGETATION WORKS.
  - 2. CONTRACTOR TO REMOVE ALL SEDIMENT CONTROL DEVICES AFTER THE SITE IS STABILIZED TO A CONDITION EQUAL TO, OR BETTER THAN, PRE-CONSTRUCTION.
  - 3. FOLLOWING COMPLETION OF CONSTRUCTION AND AS DIRECTED BY SITE ENGINEER, ALL EROSION AND SEDIMENT CONTROL WORKS ARE TO BE REMOVED INCLUDING ANY ACCUMULATED SEDIMENT.

**2.0 EROSION & SEDIMENT CONTROLS (MAINTENANCE)**

- 2.1 SILT FENCE MUST BE INSPECTED WEEKLY FOR RIPS OR TEARS, BROKEN STAKES, BLOW-OUTS AND ACCUMULATION OF SEDIMENT.
- 2.2 SILT FENCE MUST BE INSPECTED IMMEDIATELY AFTER EVERY RAIN STORM EVENT OR AS DIRECTED BY SITE ENGINEER.
- 2.3 SEDIMENT MUST BE REMOVED FROM SILT FENCE WHEN ACCUMULATION REACHES 50% OF THE HEIGHT OF THE FENCE.
- 2.4 ALL SILT FENCES MUST BE REMOVED ONLY WHEN THE ENTIRE SITE IS STABILIZED AND AS DIRECTED BY THE SITE ENGINEER.
- 2.5 ALL SILT FENCES INSTALLED AT THE LIMIT OF THE DEVELOPMENT ARE TO BE PLACED DIRECTLY ON THE PROPERTY LINE OR AS DIRECTED BY SITE ENGINEER.

**3.0 CONSTRUCTION (GENERAL)**

- 3.1 ALL WORKS TO BE CONSTRUCTED IN ACCORDANCE WITH CURRENT ONTARIO BUILDING CODE, CITY OF MISSISSAUGA STANDARDS, REGION OF PEEL UTILITIES/OPSD & OPSS, WHERE CONFLICT OCCURS, CITY OF MISSISSAUGA STANDARDS TO GOVERN FOR STORMWATER, ROADWORKS & INTERNAL GRADING; REGION OF PEEL STANDARDS TO GOVERN FOR SANITARY & WATERMAIN INSTALLATION.
- 3.2 ALL TOPSOIL & EARTH EXCAVATION TO BE REMOVED TO AN APPROVED SITE.
- 3.3 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DETAILED LAYOUT OF THE WORK.
- 3.4 ALL PROPERTY BARS TO BE PRESERVED AND REPLACED BY O.L.S. AT CONTRACTOR'S EXPENSE IF REMOVED DURING CONSTRUCTION.
- 3.5 THE CONTRACTOR SHALL MAKE HIS OWN ARRANGEMENTS FOR THE SUPPLY OF TEMPORARY WATER & POWER.
- 3.6 IF REQUIRED, DEWATERING TO BE CARRIED OUT IN ACCORDANCE WITH OPSS-517 & 518 TO MAINTAIN ALL TRENCHES IN A DRY CONDITION. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING M.E.C.P. PERMIT IF REQUIRED.
- 3.7 ALL ENGINE DRIVEN PUMPS TO BE ADEQUATELY SILENCED, SUITABLE FOR OPERATION IN A RESIDENTIAL DISTRICT.
- 3.8 THE UTILITIES SHOWN ON PLANS ARE APPROXIMATE ONLY & CONTRACTOR TO CONFIRM LOCATIONS IN ADVANCE OF CONSTRUCTION.
- 3.9 THE CONTRACTOR IS RESPONSIBLE TO NOTIFY ALL UTILITY COMPANIES PRIOR TO COMMENCING WORK & CO-ORDINATE CONSTRUCTION ACCORDINGLY.
- 3.10 THE LOCATION AND ELEVATION OF ALL EXISTING SERVICES AND UTILITIES ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RESTORATION AND/OR REPAIR OF EXISTING UTILITIES DISTURBED DURING CONSTRUCTION.

- 3.11 ALL AREAS BEYOND THE SITE PLAN WHICH ARE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION AT THE EXPENSE OF THE CONTRACTOR.
- 3.12 ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE "OCCUPATIONAL HEALTH AND SAFETY ACT". THE GENERAL CONTRACTOR SHALL BE DEEMED TO BE THE CONSTRUCTOR AS DEFINED IN THE ACT.
- 3.13 ALL DIMENSIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.
- 3.14 ROAD AND BOULEVARD RESTORATION AS PER CITY OF MISSISSAUGA ROAD CUT PERMIT.
- 3.15 THE GEOTECHNICAL SUITABILITY OF ALL THE FILL MATERIAL WILL BE ASSESSED BY THE GEOTECHNICAL ENGINEER.
- 3.16 CONTRACTOR SHALL PROVIDE A DIGITAL AS-BUILT SURVEY OF ROAD MATERIAL DEPTHS BASED ON SUB-BASE MATERIAL.
- 3.17 CONTRACTOR SHALL FLUSH AND VIDEO STORM SEWERS UPON INSTALLATION AND PROVIDE VIDEO TO ENGINEER.
- 3.18 CONTRACTOR SHALL PROVIDE A DIGITAL AS-BUILT SURVEY OF ALL UNDERGROUND AND ABOVEGROUND WORKS TO THE SATISFACTION OF THE ENGINEER. THIS INCLUDES A FULL TOPOGRAPHIC SURVEY OF THE AS-BUILT GRADES.

**4.0 INSTALLATION & RESTORATION (OPEN CUT)**

- 4.1 BACKFILL MATERIALS SHALL BE OPSS GRANULAR 'A', GRANULAR 'B' & UNSHRINKABLE FILL PLACED AT THE SPECIFIED DEPTHS AS PER STANDARD 2220.030. ALL GRANULAR MATERIAL SHALL CONFORM WITH OPSS 1010 & THE UNSHRINKABLE FILL SHALL CONFORM TO OPSS 1359. STEEL PLATES SHALL BE SECURED OVER THE EXCAVATION FOR A MINIMUM OF 24 HOURS AFTER WHICH THE GRANULAR MATERIALS CAN BE PLACED. ALL GRANULAR MATERIAL SHALL BE PLACED IN 150mm LIFTS AND COMPACTED TO 100% STANDARD PROCTOR DENSITY.
- 4.2 AFTER BACKFILLING THE UTILITY TRENCH, A MIN. 300mm TOTAL ASPHALT REMOVAL SHALL BE CUT ON ALL SIDES OF THE TRENCH INTO THE EXISTING PAVEMENT STRUCTURE. THE PAVEMENT STRUCTURE MATERIALS SHALL MATCH THE EXISTING PAVEMENT MATERIAL TYPES.
- 4.3 ASPHALT RESTORATION SHALL BE A MINIMUM OF 40mm HL-3 & 50mm HL-8 & SHALL MATCH THE EXISTING PAVEMENT STRUCTURE. ALL ASPHALT RESTORATION SHALL BE IN COMPLIANCE WITH OPSS 310. ALL HOT-MIX MATERIAL SHALL CONFORM TO OPSS 1149, 1150 AND/OR 1154. EXPOSED ASPHALT AND CONCRETE FACES SHALL BE CLEANED AND COATED WITH AN RS-1 (OR EQUIVALENT) ASPHALT EMULSION & ALLOW TO 'BREAK' PRIOR TO COMMENCING ASPHALT PLACEMENT.
- 4.4 WHEN THE REMAINING ASPHALT, FROM THE EDGE OF PAVEMENT TO THE SAWCUT IS 1.5m OR LESS, THE EXISTING ASPHALT WILL BE REMOVED FULL DEPTH & REPAVED AS PER NOTE 3. WHEN TWO OR MORE ROAD CUTS ARE REQUIRED AT A GIVEN SITE AND THE CUTS ARE LESS THAN 2.5m APART THE ENTIRE AREA MUST HAVE FULL DEPTH ASPHALT RESTORATION FROM THE OUTER LIMITS OF ALL REPAIRS.
- 4.5 SIDEWALK RESTORATION SHALL BE A MINIMUM OF 1 FULL BAY INCLUDING EXPANSION JOINT MATERIALS. ALL CONCRETE SHALL BE AS PER OPSS 351. ALL SIDEWALKS SHALL BE 130mm THICK SUB-DRAINS UNDER THE CURB SHALL BE RESTORED TO ENSURE THEIR OPERATION AND SHALL BE PLACED AS PER CITY OF MISSISSAUGA STANDARD DRAWING NUMBER 2240.040.
- 4.7 WHERE THE CURB HAS BEEN UNDERMINED TO FACILITATE SERVICING INSTALLATION THE CURB SHALL BE REMOVED AND REPLACED. CURB RESTORATION SHALL BE MINIMUM OF 2.0m OR SHALL EXTEND 0.5m BEYOND THE OUTER TRENCH EDGES WHICH EVER IS GREATER. ALL CONCRETE SHALL BE AS PER OPSS 353.
- 4.8 ALL GRASSED BOULEVARDS SHALL BE RE-INSTATED WITH NUMBER 1 NURSERY SOO PLACED ON TOP OF 100mm OF TOPSOIL. ALL SOO SHALL BE PLACED WITH STAGGERED JOINTS, BE ROLLED, AND WHERE APPLICABLE, STAKED INTO THE GROUND.

**5.0 DRIVEWAY & PARKING**

- 5.1 GRANULAR 'A' & 'B' BASE TO BE COMPACTED TO 98% OF THE MATERIAL'S RESPECTIVE SPMD OR AS APPROVED BY GEOTECHNICAL ENGINEER.
- 5.2 THE TOP 1.0m OF THE SUB-BASE SHALL BE COMPACTED TO A MINIMUM OF 98% OF STANDARD PROCTOR DENSITY WITHIN 2% OF OPTIMUM MOISTURE CONTENT.
- 5.3 SUBGRADE TO BE PROOF ROLLED & CERTIFIED PRIOR TO PLACING GRANULAR MATERIAL.
- 5.4 DRIVEWAYS TO BE CONSTRUCTED WITH MINIMUM 150mm GRANULAR A BASE, 50mm H.L.B BINDER COURSE ASPHALT & 25mm H.L.3.F SURFACE COURSE ASPHALT.
- 5.5 ALL GRANULAR AND ASPHALT MATERIAL PLACEMENT TO BE IN ACCORDANCE WITH OPSS 314 & OPSS 310.
- 5.6 ALL GRANULAR CONNECTIONS TO BE CONSTRUCTED IN ACCORDANCE WITH CITY OF MISSISSAUGA STANDARD 2220.050.
- 5.7 ALL CONCRETE SIDEWALKS TO BE CONSTRUCTED IN ACCORDANCE WITH CITY OF MISSISSAUGA STANDARD 2240.010.
- 5.8 ALL PEDESTRIAN SIDEWALK ENTRANCES AT INTERSECTIONS TO BE CONSTRUCTED IN ACCORDANCE WITH OPSD 350.010.

**6.0 SANITARY SERVICES**

- 6.1 SANITARY SEWER BEDDING SHALL BE CLASS 'B' BEDDING AS PER REGION OF PEEL STD. 2-3-1, UNLESS OTHERWISE NOTED.
- 6.2 TRENCH BACKFILL TO SELECT NATIVE MATERIAL AS APPROVED BY ENGINEER OR IMPORTED GRANULAR MATERIAL.
- 6.3 BEDDING & EMBEDMENT MATERIAL TO BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
- 6.4 CLEAR STONE WRAPPED WITH FILTER FABRIC CAN BE SUBSTITUTED FOR EMBEDMENT MATERIAL IF APPROVED BY THE GEOTECHNICAL ENGINEER.
- 6.5 SANITARY SEWER, UNLESS OTHERWISE NOTED, SHALL BE PVC SDR 35 WITH MINIMUM PIPE STIFFNESS OF 520kPa MANUFACTURED TO C.S.A. STANDARD B182.2 (A.S.T.M. SPECIFICATION D 3034) WITH RUBBER GASKETED BELL AND SPIGOT JOINTS.
- 6.6 SEWERS CONSTRUCTED WITH GRADES 0.5% OR LESS, SHALL BE INSTALLED USING A LASER AND CHECKED PRIOR TO BACKFILL AT THE CONTRACTORS EXPENSE.
- 6.7 NO ENCROACHMENT WILL BE ALLOWED ONTO PRIVATE LANDS.
- 6.8 SANITARY SEWERS TO BE VIDEO INSPECTED AFTER INSTALLATION COMPLETION, PRIOR TO ASPHALT PLACEMENT AND AFTER LANDSCAPE COMPLETION. FLUSHING OF SEWER WILL BE REQUIRED IF DEBRIS IS FOUND IN THE PIPES, TO THE SATISFACTION OF THE ENGINEER. (MINIMUM OF 3 SEPARATE VIDEO INSPECTIONS)

**7.0 WATERMANS**

- 7.1 THESE NOTES ARE TO BE READ IN CONJUNCTION WITH REGION OF PEEL STANDARDS. IF ANY DISCREPANCIES ARISE, THE REGION OF PEEL STANDARDS WILL GOVERN.
- 7.2 BEDDING & EMBEDMENT TO REGION OF PEEL STANDARD - 1-5-1. WATERMAIN SUPPORT BRIDGING DISTURBED GROUND TO REGION OF PEEL STANDARD - 1-5-2.
- 7.3 TRENCH BACKFILL TO BE SELECT NATIVE MATERIAL AS APPROVED BY ENGINEER OR IMPORTED GRANULAR MATERIAL.
- 7.4 SERVICE CONNECTIONS TO REGION OF PEEL STD. 1-8-3. FIRE LINE AND DOMESTIC CONNECTION TO REGION OF PEEL STD. 1-8-3.
- 7.5 BEDDING & EMBEDMENT MATERIAL TO BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S SPMD.
- 7.6 MINIMUM COVER ON WATERMAIN AND SERVICES TO BE 1.7m BELOW FINISH GRADE.
- 7.7 CLEARANCE BETWEEN WATERMAIN AND SEWERS TO BE A MINIMUM OF 0.5m VERTICAL WHERE WATER MAIN IS ABOVE SEWER OR 2.5m MINIMUM HORIZONTAL SEPARATION.
- 7.8 SERVICES TO BE DIRECT TAP.
- 7.9 FOLLOWING TESTING, CONTRACTOR SHALL OPERATE EACH WATER SERVICE TO VERIFY FULL FLOW AND PRESSURE AT THE CURB STOP TO THE SATISFACTION OF THE ENGINEER.
- 7.10 VALVE & BOX- MUELLER A769 WITH GUIDE PLATE; CLOW-BIBBY VB 1100/RB645.
- 7.11 MECHANICAL JOINT FITTINGS - ANSI A21.5.3 (A.W.W.A C153) SPECIFICATIONS; HYPROTEC FITTING SHALL BE USED WITH HYPROTEC PIPE INSTALLATION.
- 7.12 ALL PVC WATERMANS SHALL BE EQUAL TO AWWA C-900 CLASS 150, DR 18.
- 7.13 ALL PVC WATERMANS SHALL BE INSTALLED WITH A 12 GAUGE STRANDED COPPER TWO TRACER WIRE IN ACCORDANCE WITH REGION OF PEEL STANDARDS.
- 7.14 VALVE IN BOXES SHALL BE INSTALLED AS PER REGION OF PEEL STD. 1-3-8. MAINLINE VALVES TO BE RESTRAINED AS PER REGION OF PEEL STD. 1-3-5A.
- 7.15 CATHODIC PROTECTION IS REQUIRED ON ALL METALLIC FITTINGS AS PER REGION OF PEEL STANDARDS.
- 7.16 THE OPERATION OF EXISTING WATERMAIN VALVES SHALL BE CONDUCTED AS REQUIRED BY THE REGION OF PEEL.
- 7.17 THE NEW WATERMAIN TO BE TAPPED FOR WATER SERVICES MUST BE ISOLATED FROM THE EXISTING WATERMAIN TO MAINTAIN PRESSURE IN THE NEW MAIN DURING INSTALLATION OF SERVICES.
- 7.18 FIRE HYDRANTS SHALL BE MANUFACTURED IN ACCORDANCE WITH AWWA STANDARD C-502, SHALL BE LISTED WITH ULC AND FM, AND BE PROVIDED WITH THE FOLLOWING:
  - 2 (ONLY) 63.5mm HOSE NOZZLES WITH CSA STANDARD THREAD, 5TPI, 73.4mm OD, MUELLER CODE 12B;
  - 1 (ONLY) 100mm STORZ PUMPER CONNECTION AS PER ULC S-520.
- 7.19 HYDRANTS OPEN COUNTER CLOCKWISE (OPEN LEFT), 31.75mm NUTS.
- 7.20 FIRE HYDRANTS SHALL BE LOCATED AND PLACED IN ACCORDANCE WITH THE NATIONAL BUILDING CODE AND SCHEDULE 'A' OF THE CITY OF MISSISSAUGA BY-LAW 1036-81. HYDRANTS THAT MAY BE SUBJECT TO VEHICLE DAMAGE SHALL BE PROTECTED WITH 100mm DIAMETER, CONCRETE FILLED, STEEL PIPE BOLLARDS.
- 7.21 UPON COMPLETION OF THE HYDRANT FLOW TESTING, COPIES OF THE FLOW TEST RESULTS ARE TO BE DISTRIBUTED TO THE FOLLOWING VIA E-MAIL OR HARD COPY:
  - ENGINEER
  - BUILDING INSPECTOR

**8.0 STORM SEWERS**

- 8.1 BEDDING & EMBEDMENT MATERIAL TO BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S SPMD.
- 8.2 BEDDING & EMBEDMENT TO OPSD 802.010 (FLEXIBLE PIPE) GRANULAR 'A' EMBEDMENT.
- 8.3 WHERE COVER OVER THE OVERT OF THE SEWER IS LESS THAN 1.20m, INSTALL 50mm THICKNESS OF STYROFOAM SM INSULATION MATERIAL, FOR EACH 300mm COVER DEFICIT, PER PIPE INSULATION DETAIL.
- 8.4 CATCHBASINS TO HAVE MIN. 600mm SUMPS PER OPSD 705.010.
- 8.5 STORM SEWERS TO BE VIDEO INSPECTED AFTER INSTALLATION COMPLETION, PRIOR TO ASPHALT PLACEMENT AND AFTER LANDSCAPE COMPLETION. FLUSHING OF SEWER WILL BE REQUIRED IF DEBRIS IS FOUND IN THE PIPES, TO THE SATISFACTION OF THE ENGINEER. (MINIMUM OF 3 SEPARATE VIDEO INSPECTIONS)

**REGION OF PEEL NOTES:**

- 1. ALL MATERIALS AND CONSTRUCTION METHODS MUST CORRESPOND TO THE CURRENT PEEL PUBLIC WORKS STANDARDS AND SPECIFICATIONS.
- 2. WATERMAIN AND/OR WATER SERVICE MATERIALS 100mmø (4") AND LARGER MUST BE PVC DR-18 (AWWA C900-16). SIZE 50mmø (2") & SMALLER MUST BE COPPER TYPE 'K' (ASTM-B88-49)
- 3. WATERMANS AND/OR WATER SERVICES ARE TO HAVE A MINIMUM COVER OF 1.7m (5'6") WITH A MINIMUM HORIZONTAL SPACING OF 1.2m (4') FROM THEMSELVES AND ALL OTHER UTILITIES.
- 4. PROVISIONS FOR FLUSHING WATER LINE PRIOR TO TESTING, ETC., MUST BE PROVIDED WITH AT LEAST A 50mmø (2") OUTLET ON 100mmø (4") AND LARGER LINES. COPPER LINES ARE TO HAVE FLUSHING POINTS AT THE END, THE SAME SIZE AS THE LINE. THEY MUST ALSO BE HOSED OR PIPED TO ALLOW WATER TO DRAIN ONTO A PARKING LOT OR DOWN A DRAIN, ON FIRE LINES, FLUSHING OUTLET TO BE 100mmø (4") MINIMUM ON A HYDRANT.
- 5. ALL CURB STOPS TO BE 3.0m(10') OFF THE FACE OF THE BUILDING UNLESS OTHERWISE NOTED.
- 6. HYDRANT AND VALVE SET TO REGION STANDARD 1-6-1 DIMENSION 'A' & 'B', 0.7m (2') AND 0.9m (3') AND TO HAVE PUMPER NOZZLE.
- 7. WATERMANS TO BE INSTALLED TO GRADES SHOWN ON APPROVED SITE PLAN. COPY OF GRADE SHEET MUST BE SUPPLIED TO INSPECTOR PRIOR TO COMMENCEMENT OF WORK, WHERE REQUESTED BY INSPECTOR.
- 8. WATERMANS MUST HAVE A VERTICAL CLEARANCE OF 0.3m (12") OVER / 0.5m (20") UNDER SEWERS AND ALL OTHER UTILITIES WHEN CROSSING.
- 9. ALL PROPOSED WATER PIPING MUST BE ISOLATED FROM EXISTING LINES IN ORDER TO ALLOW INDEPENDENT PRESSURE TESTING AND CHLORINATING FROM EXISTING SYSTEMS.
- 10. ALL LIVE TAPPING AND OPERATION OF REGION WATER VALVES SHALL BE ARRANGED THROUGH THE REGIONAL INSPECTOR ASSIGNED, OR BY CONTRACTING THE OPERATIONS AND MAINTENANCE DIVISION.
- 11. LOCATION OF ALL EXISTING UTILITIES IN THE FIELD TO BE ESTABLISHED BY THE CONTRACTOR.
- 12. THE CONTRACTOR(S) SHALL BE SOLELY RESPONSIBLE FOR LOCATES, EXPOSING, SUPPORTING AND PROTECTING OF ALL UNDERGROUND AND OVERHEAD UTILITIES AND STRUCTURES EXISTING AT THE TIME OF CONSTRUCTION IN THE AREA OF THEIR WORK, WHETHER SHOWN ON THE PLANS OR NOT AND FOR ALL REPAIRS AND CONSEQUENCES RESULTING FROM DAMAGE TO SAME.
- 13. THE CONTRACTOR(S) SHALL BE SOLELY RESPONSIBLE TO GIVE 72 HOURS WRITTEN NOTICE TO UTILITIES PRIOR TO CROSSING SUCH UTILITIES, FOR THE PURPOSE OF INSPECTION BY THE CONCERNED UTILITY. THIS INSPECTION WILL BE FOR THE DURATION OF THE CONSTRUCTION, WITH THE CONTRACTOR RESPONSIBLE FOR ALL COSTS ARISING FROM SUCH INSPECTION.
- 14. ALL PROPOSED WATER PIPING MUST BE ISOLATED THROUGH A TEMPORARY CONNECTION THAT SHALL INCLUDE AN APPROPRIATE CROSS-CONNECTION CONTROL DEVICE, CONSISTENT WITH DEGREE OF HAZARD, FOR BACKFLOW PREVENTION OF THE ACTIVE DISTRIBUTION SYSTEM, CONFORMING TO REGION OF PEEL STANDARDS 1-7-7 OR 1-7-8.

**CONTRACTOR:**

**AS-BUILT SURVEY**

- THE CONTRACTOR IS TO SUPPLY ALL AS-BUILT INFORMATION TO THE ENGINEER UPON COMPLETION OF WORKS. AS-BUILT INFORMATION TO INCLUDE A FULL TOPOGRAPHIC SURVEY OF THE SITE. THE AS-BUILT TO ALSO INCLUDE, BUT NOT LIMITED TO, LAYOUT OF ALL SEWERS AND WATERMAIN, INVERTS AND TOP OF COVER/GRATES AT STRUCTURES, HEADWALLS AND ANY STORM WATER MANAGEMENT FEATURES.
- THE AS-BUILT TO ALSO INCLUDE BUT NOT LIMITED TO CURBS, SIDEWALKS LONGITUDINAL AND CROSSFALL SLOPES, CENTER LINE OF ROADS AND EDGE OF PAVEMENT TO CHECK CROSS FALLS AND ROAD/PARKING LOT GRADES, HANDICAP RAMPS , ETC.. ANY DEVIATIONS FROM THE ORIGINAL DESIGN ARE TO BE INCLUDED IN THE AS-BUILT DRAWINGS. INFORMATION IS TO BE SUPPLIED TO THE CONTRACT ADMINISTRATOR IN BOTH CAD & PDF FORMATS.
- THE CONTRACTOR TO INCLUDE IN THEIR SCOPE TO CONFIRM CONDITIONS OF ANY WATERMAIN ELEMENTS ( HYDRANTS, VALVE BOXES, WATER CHAMBERS, ETC ) A MINIMUM THREE TIES IN TO EXISTING ABOVE GROUND VISIBLE PERMANENT REPERERS (I.E. EXISTING POLES, CATCHBASINS, ETC.).

**PERMITS**

- THE CONTRACTOR IS RESPONSIBLE FOR APPLYING, RECEIVING AND PAYING FOR ALL PERMITS REQUIRED TO CONSTRUCT THE WORKS INCLUDED IN CONTRACT. THE CONTRACTOR SHALL ALSO COMPLY WITH ALL CONDITIONS DICTATED BY SUCH PERMITS AT NO EXTRA COST TO THE OWNER.
- CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS PRIOR TO COMMENCING CONSTRUCTION. ALL PERMITS AND ASSOCIATED DRAWINGS AND CONDITIONS MUST BE ON-SITE AND AVAILABLE UPON REQUEST.

**TESTING**

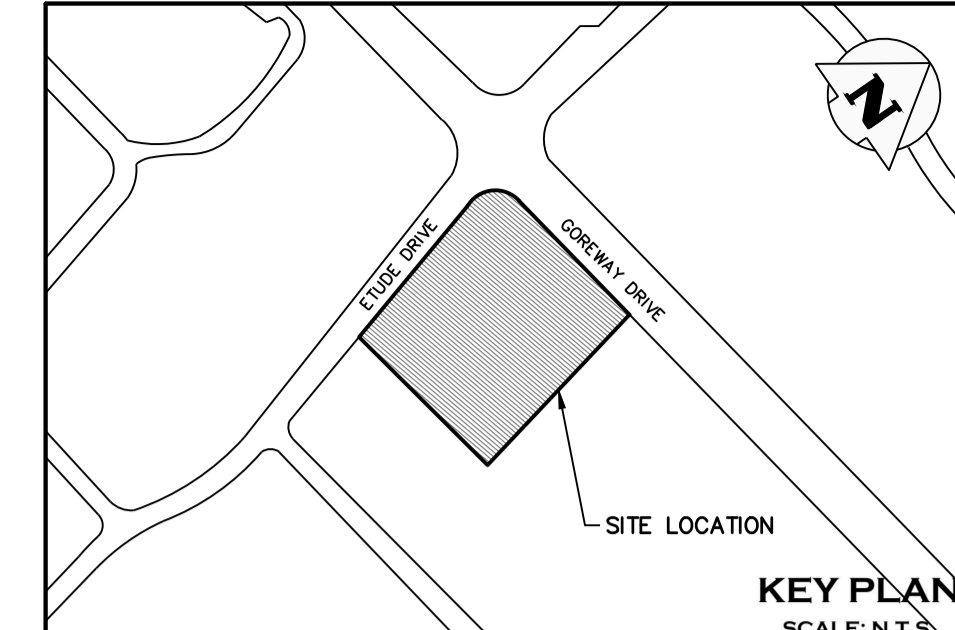
THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED TESTING BY THE MUNICIPALITY AND/OR ENGINEER AS APPLICABLE WHICH INCLUDES BUT NOT LIMITED TO:

**STORM AND SANITARY SEWERS**

- PRECONSTRUCTION FLUSH & VIDEO OF EXISTING PRIVATE OR MUNICIPAL SEWERS TO CONFIRM CONDITIONS OF ANY SEWER TIES IN, TO THE SATISFACTION OF THE ENGINEER/MUNICIPALITY AS APPLICABLE.
- FLUSH & VIDEO ALL STORM AND SANITARY SEWERS AND PROVIDE THREE PHYSICAL COPIES OF REPORTS AND VIDEOS. THIS INCLUDES MAINLINE SEWERS, LATERALS, LEADS & SERVICES UP TO THE STUB. THE CCTV INSPECTION, INCLUDING FLUSHING AND CLEANING, IS TO BE CARRIED OUT AS DETAILED IN OPSS 409. ONE FLUSH & CCTV VIDEO ROUND IS TO BE COMPLETED AFTER THE PLACEMENT OF BASE ASPHALT. SECOND ROUND OF FLUSH & CCTV TO BE COMPLETED AFTER THE PLACEMENT OF TOP ASPHALT AND COMPLETION OF ALL LANDSCAPING. THIS ITEM TO ALSO INCLUDE THE CLEANING OF ALL STRUCTURES.
- MANDREL TESTING PER THE OPSS FOR ALL FLEXIBLE SANITARY AND STORM PIPES AFTER INSTALLATION, PRIOR BASE ASPHALT PLACEMENT.
- AIR TESTING FOR SANITARY SEWERS & STRUCTURES PRIOR BASE ASPHALT PLACEMENT, IF REQUESTED BY MUNICIPALITY.

**WATERMAIN:**

- THE CONTRACTOR TO INCLUDE IN THEIR SCOPE, THIRD PARTY TESTING INCLUDING REPORTS FOR ALL APPLICABLE WATERMAIN TESTING INCLUDING BUT NOT LIMITED TO FLUSHING, SWABBING, PRESSURE TESTING, CHLORINATION, BACKFLOW PREVENTOR TESTING, CONTINUITY TESTING & HYDRANT FLOW TESTING.



0	ISSUED FOR 1st SUBMISSION SPA	2021/JUN/24
No.	ISSUE / REVISION	YYYY/MM/DD

**ELEVATION NOTE:**  
ELEVATIONS SHOWN HEREON ARE DERIVED FROM THE CANADIAN GEODETIC DATUM BENCHMARK No. 448  
ELEVATION = 162.55m

**SURVEY NOTES:**  
SURVEY COMPLETED J.H. GELBLOOM SURVEYING LIMITED. (2017/MAY/08)  
PROJECT No.: 17-089

BEARINGS ARE UTM GRID, DERIVED FROM RTN OBSERVATIONS  
UTM ZONE 17, NAD83 (GRS) (2010.0)  
DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.9996781

**SITE PLAN NOTES:**  
DESIGN ELEMENTS ARE BASED ON SITE PLAN BY JARDIN DESIGN GROUP INC.  
DRAWING No.: A-01a, REV.7 (2021/MAY/26)  
PROJECT No.: 17-18

**DRAWING NOTES:**  
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THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, LEVELS, AND DATUMS ON SITE AND REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO CONSTRUCTION.  
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EXISTING INVERTS FROM AS-BUILT DRAWINGS 20065-D, 40529-D



Project  
**7170 GOREWAY DRIVE**  
CITY OF MISSISSAUGA

Drawing  
**CONSTRUCTION NOTES AND DETAILS**

**NOT FOR CONSTRUCTION**

Stamp

2800 HIGH POINT DRIVE  
SUITE 100  
MILTON, ON L9T 6P4  
905-875-0026  
905-875-4915 F  
WWW.CFCROZIER.CA

**CROZIER**  
CONSULTING ENGINEERS

Drawn	D.D.	Design	H.L. / N.R.S.	Project No.	<b>1346-4573</b>	
Check	N.R.S.	Check	N.C.	Scale	1:250	
					Dwg.	<b>C104</b>