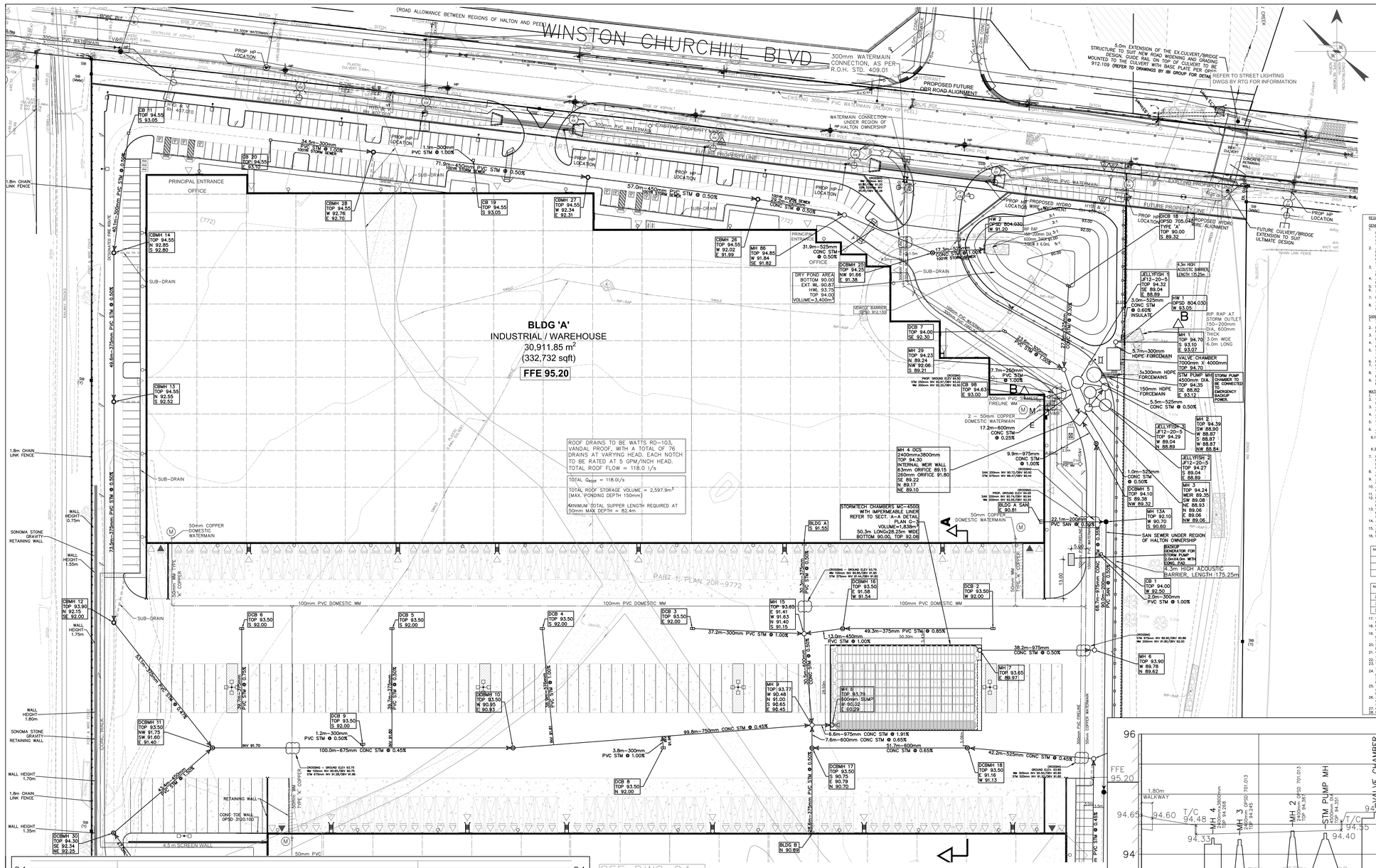
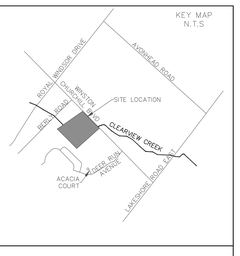




REGION OF PEEL NOTES:

- ALL MATERIALS AND CONSTRUCTION METHODS MUST CORRESPOND TO THE CURRENT PEEL PUBLIC WORKS STANDARDS AND SPECIFICATIONS.
- WATERMAIN AND / OR WATER SERVICE MATERIALS 100mm (4") AND LARGER MUST BE DR 18 PVC PIPE MANUFACTURED TO A.W.W.A. SPEC. C900-16 SPEC COMPLETE WITH TRACER WIRE. SIZE 50mm (2") AND SMALLER MUST BE TYPE 'K' SOFT COPPER PIPE PER A.S.T.M. B88-49 SPECIFICATION.
- WATERMAINS AND / OR WATER SERVICES ARE TO HAVE A MINIMUM COVER OF 2.25m. WATER SERVICES MUST MAINTAIN VERTICAL SPACING OF 1.2m (4') FROM THEM(SEWER) AND ALL OTHER UTILITIES.
- PROVISIONS FOR FLUSHING WATER LINE PRIOR TO TESTING, ETC. MUST BE PROVIDED WITH AT LEAST A 50mm (2") OUTLET ON 100mm (4") AND LARGER LINES. COPPER LINES ARE TO HAVE FLUSHING POINTS AT THE END. THE SAME. ALONG WITH A 50mm (2") OUTLET ON 100mm (4") AND LARGER LINES. PROVISION TO DRAIN ONTO A PARKING LOT OR DOWN A DRAIN. ON FIRE LINES, FLUSHING OUTLET TO BE 100mm (4") DIAMETER MINIMUM ON A HYDRANT.
- ALL CURB STOPS TO BE 3.0m (10') OFF THE FACE OF BUILDING UNLESS OTHERWISE NOTED.
- HYDRANT AND VALVE SET TO REGION STANDARD 1 – 6 – 1 DIMENSION A AND B, 0.1m (2") AND 0.6m (2') AND TO HAVE PUMPER NOZZLE.
- HYDRANTS TO BE INSTALLED TO GRADES AS SHOWN ON APPROVED SITE PLAN. COPY OF GRADE SHEET MUST BE SUPPLIED TO INSPECTOR PRIOR TO COMMENCEMENT OF WORK, WHERE REQUESTED BY INSPECTOR.
- WATERMAINS MUST HAVE A MINIMUM VERTICAL CLEARANCE OF 0.3m (12") OVER / 0.5m (20") UNDER SEWERS AND ALL OTHER UTILITIES WHEN CROSSING.
- ALL WATERMAINS MUST BE ISOLATED FROM THE ACTIVE DISTRIBUTION SYSTEM IN ORDER TO ALLOW INDEPENDENT PRESSURE TESTING AND CHLORINATING FROM EXISTING SYSTEMS.
- ALL LINE TAPPING AND OPERATION OF REGION WATER VALVES SHALL BE ARRANGED THROUGH THE REGIONAL INSPECTOR ASSIGNED OR BY CONTACTING REGION OPERATIONS COORDINATOR (905-791-7800).
- LOCATION OF ALL EXISTING UTILITIES IN THE FIELD TO BE ESTABLISHED BY THE CONTRACTOR.
- THE CONTRACTOR(S) SHALL BE SOLELY RESPONSIBLE FOR LOCATES, EXPOSING, SUPPORTING AND PROTECTING OF ALL UNDERGROUND AND OVERHEAD UTILITIES AS SHOWN ON PLANS OR AS MAY BE REQUIRED BY THE OWNERS OF SUCH UTILITIES THEIR WORK WHETHER SHOWN ON THE PLANS OR NOT, AND FOR ALL REPAIRS AND CONSEQUENCES RESULTING FROM DAMAGE TO SAME.
- THE CONTRACTOR(S) SHALL BE SOLELY RESPONSIBLE TO GIVE 72 HOURS WRITTEN NOTICE TO THE UTILITIES PRIOR TO CROSSING SUCH UTILITIES, FOR THE PURPOSE OF ALLOWING THE OWNERS OF SUCH UTILITIES TO ESTABLISH SUPERVISION FOR THE DURATION OF THE CONSTRUCTION, WITH THE CONTRACTOR RESPONSIBLE FOR ALL COSTS ARISING FROM SUCH INSPECTION.
- ALL PROPOSED WATER PIPING MUST BE ISOLATED THROUGH A TEMPORARY CONNECTION THAT SHALL INCLUDE AN APPROPRIATE CROSS-CONNECTION CONTROL DEVICE, TO PROTECT THE REGION'S WATER SUPPLY FROM POSSIBLE PREVENTION OF THE ACTIVE DISTRIBUTION SYSTEM, CONFORMING TO REGION OF PEEL STANDARDS 1-7-7 OR 1-7-8.

REGION OF HALTON NOTES

GENERAL NOTES:

1. THE LOCATIONS OF ALL UNDERGROUND AND ABOVEGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THESE DRAWINGS, AND, WHERE SHOWN, THE ACCURACY OF THE LOCATION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME SOLE RESPONSIBILITY FOR THEIR PROTECTION.
2. THE TOWN OF OAKVILLE, THE CONTRACTOR SHALL PROTECT THE CONSTRUCTION OF THE WORKS SHOWN HEREIN SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER AS DETERMINED BY PLANNING AND PUBLIC WORKS DEPARTMENT. ALL GRASS AND VEGETATION COVERED AREAS SHALL BE RESTORED BY SOD UNLESS OTHERWISE NOTED. ALL DISTURBED AREAS SHALL BE FINISHED TO ENSURE A GRASS COVER TO THE SATISFACTION OF THE CITY/TOWN UNLESS NOTED OTHERWISE.
3. TOWN OF OAKVILLE AND REGION OF HALTON STANDARD DRAWINGS AND O.P.S.D. WITH REGIONAL AMENDMENTS FOR SANITARY SEWERS AND WATERMAINS SHALL CONSTITUTE PART OF THE ENGINEERING DESIGN AND CONSTRUCTION CONTRACT.
4. ALL WORK SHOWN ON THE PLANS MUST BE PROVIDED APPROVAL HAS FIRST BEEN OBTAINED FROM THE TOWN ENGINEER AND/OR THE REGIONAL COMMISSIONER OF PLANNING AND PUBLIC WORKS.
5. NO BLASTING IS PERMITTED.
6. ANY AREAS WITHIN R.O.W. WHICH REQUIRE FILL IN EXCESS OF 0.50M ARE SUBJECT TO COMPACTION TESTS AND REPORTS. ALL REPORTS MUST SHOW A MIN. COMPACTION OF 95% S.P.D. AT A MAX. DEPTH OF 300mm. VALVE CHAMBER COVERS ARE TO BE SET FLUSH WITH BASE COURSE ASPHALT AND ADJUSTED TO FINAL GRADE PRIOR TO INSTALLING TOP LIFT OF ASPHALT.
7. ALL TRENCHES WITHIN EXISTING RIGHT-OF-WAY ARE TO BE BACKFILLED IN ACCORDANCE WITH TOWN OF OAKVILLE REQUIREMENTS.

SANITARY SEWER NOTES

1. SANITARY MANHOLES AS PER O.P.S.D. 701.010 WITH FRAMES AND COVERS AS PER O.P.S.D. 401.01 TYPE 'A' UNLESS OTHERWISE NOTED ON THE DRAWINGS.
2. SANITARY SERVICE CONNECTIONS TO BE PER O.P.S.D. 1006.021 AS AMENDED BY THE REGION OF HALTON. BENCHING IN SANITARY MANHOLES TO BE TO THE CREST OF THE PIPE.
3. SAFETY PLATFORMS AS PER O.P.S.D. 404.020 TO BE INSTALLED ONLY IN MANHOLES WHERE DROPS EXCEED 0.6m. ALL DROPS TO BE CONSTRUCTED TO THE LEFT OF THE FLOW WHEN LOOKING DOWN.
4. SANITARY SEWER PIPE SHALL BE PVC SDR35 CONFORMING TO A.S.T.M. D3034 UNLESS OTHERWISE NOTED.
5. SANITARY SERVICE CONNECTIONS TO BE 125MM DIA FOR SINGLE RESIDENTIAL CONNECTIONS AND 150MM DIA FOR DUAL RESIDENTIAL AND SINGLE NON-RESIDENTIAL CONNECTIONS. SANITARY SERVICE CONNECTIONS TO BE PVC.
6. MINIMUM 2% GRADE AND SHALL BE NON-WHITE IN COLOUR.
7. SERVICES TO BE MIN. 2.10M AND MAX. 2.77M DEEP AT PROPERTY LINE. RISERS SHALL BE USED FOR SERVICES DEEPER THAN 2.77M.
8. CLASS 'B' BEDDING ON ALL SEWERS AND CONNECTIONS TO BE AS PER O.P.S.D. 1005.02 UNLESS NOTED OTHERWISE.
9. GRANULAR BACKFILL AROUND MANHOLES SHALL BE COMPACTED BY MECHANICAL MEANS TO A MINIMUM OF 95% S.P.D.

WATERMAIN NOTES

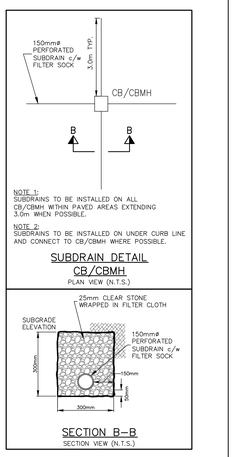
1. WATERMAINS 150MM TO 300MM DIAMETER TO BE P.V.C. CL150 (DR-18) WITH GASKETED JOINTS.
2. WATER SERVICE CONNECTIONS TO BE AS PER O.P.S.D. 1006.010 AS AMENDED BY THE REGION OF HALTON. 50MM DIA. COPPER TYPE 'K' SOFT COPPER.
3. A MIN. HORIZONTAL SEPARATION OF 2.0M MUST BE MAINTAINED BETWEEN WATERMAINS AND SANITARY OR STORM SEWERS, INCLUDING SERVICE LATERALS.
4. A MIN. VERTICAL SEPARATION OF 0.15M BETWEEN WATERMAINS AND SEWERS MUST BE MAINTAINED IF THE WATERMAIN IS ABOVE THE SEWER. IF THE WATERMAIN IS BELOW THE SEWER, THE SEPARATION
5. WATERMAIN BEDDING TO BE SUITABLE GRANULAR BEDDING MATERIAL AS PER O.P.S.D. 1102.02, CLASS 'B'.
6. ALL HYDRANTS AS PER O.P.S.D. 1105.01 TO HAVE STEAMER CONNECTIONS. HYDRANTS TO BE SUPPLIED WITH:
   6.1. TWO (2) 63.5MM (2 1/2") WITH CSA STANDARD THREAD, 63.5MM I.D., 79.4 O.D., 5 THREADS PER 25MM, 31.75MM SQUARE OPERATING NUT.
   AND
   6.2. ONE (1) 100MM (4") STORZ PUMPER CONNECTION AS PER CAN/ULC – S520, 31.75MM SQUARE OPERATING NUT, AND STORZ CAP PANTED GLOSS BLACK.
7. HYDRANTS SHALL BE INSTALLED SUCH THAT THE ROD STEAM LENGTH SHALL NOT EXCEED 1.1M MEASURED FROM THE BREAKOFF FLANGE. IF HYDRANT BARREL LENGTH EXCEEDS 1.1M THEN A HYDRANT THAT CAN BE RAISED FROM THE BOTTOM WITHOUT INCREASING ROD LENGTH IS TO BE USED.
8. ALL METALLIC WATERMAINS, FITTINGS, HYDRANTS AND RESTRAINERS TO HAVE CATHODIC PROTECTION IN ACCORDANCE WITH REGION OF HALTON STANDARD DRAWINGS #H 420.01 AND #H 420.02.
9. ALL SACRIFICIAL ANODES SHALL CONFORM TO A.S.T.M. B-418 TYPE II AND SHALL BE MADE OF HIGH GRADE ELECTROLYTIC ZINC, 99.99% PURE.
10. ANODE INSTALLATION IS NOT REQUIRED WITHIN VALVE-CHAMBERS, DRAIN CHAMBERS OR AIR RELEASE CHAMBERS.
11. ALL WELD CONNECTIONS TO BE COATED WITH 'TC MASTIC'OR APPROVED EQUIVALENT.
12. ALL WATERMAIN VALVES TO BE SUPPLIED WITH A VALVE BOX AND TRACER WIRE ATTACHMENTS. A CADWELDER AND CA-15 OR EQUIVALENT CARTRIDGE SHALL BE USED. ANODE INSTALLATION SHALL BE PERFORMED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.
13. WHERE NEW PIPE IS TO BE CONNECTED TO EXISTING DUCTILE IRON OR CAST IRON PIPE A 14.5KG MAGNESIUM ANODE IS TO BE CONNECTED TO THE FIRST LENGTH OF EXISTING PIPE, AS PER REGION STANDARD DRAWING #H 420.03.
14. ALL VALVES TO BE OPEN LEFT (COUNTER-CLOCKWISE) AND SHALL HAVE 50MM SQUARE STANDARD AWWA OPERATING NUT.
15. ALL FITTINGS, VALVES AND BENDS SHALL BE MECHANICALLY RESTRAINED AS PER MANUFACTURERS SPECIFICATIONS. RESTRAINTS SHALL MEET UNI-B-13-92.
16. RECOMMENDED RESTRAINED LENGTH ARE AS FOLLOWS:

RECOMMENDED RESTRAINED LENGTH OF PVC PIPE INSTALLED IN SAND-SILT:

NOM. PIPE SIZE	90° BEND	45° BEND	22.5° BEND	11.25° BEND	45° VERT. BEND DOWN/UP	VALVE/HYD DEAD-END
150	3.7m	1.6m	0.8m	0.4m	4.6m/7.6m	11.1m
200	4.8m	2.0m	1.0m	0.5m	2.9m/1.0m	14.4m
300	6.8m	2.5m	1.4m	0.7m	8.6m/2.9m	20.7m

NOM. PIPE SIZE	REDUCING TEE	NOM. PIPE SIZE	STRAIGHT TEE
200x150	6.2m (BRANCH ONLY)	150	8.5m (BRANCH)/2.9m (MAIN)
300x150	3.7m (BRANCH ONLY)	200	12.1m (BRANCH)/8.5m (MAIN)
300x200	8.9m (BRANCH)/1.6m (MAIN)	300	18.9m (BRANCH)/13.3m (MAIN)

17. WHERE WATERMAIN IS PLACED IN FILL OR IN PREVIOUSLY DISTURBED GROUND ALL JOINTS TO BE RESTRAINED.
18. MINIMUM DEPTH OF COVER OVER WATERMAIN SHALL BE 1.70M MEASURED FROM THE ROAD CENTRELINE ELEVATION.
19. 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 0.9M AND 1.0M.
20. WATER SERVICES CROSSING THE STORM SEWER TO HAVE MIN. 1.70M OF COVER. WHERE THIS CANNOT BE ACHIEVED, WATER SERVICE IS TO CROSS UNDER STORM SEWER.
21. GATE VALVES CONFORMING TO A.W.W.A. C500 STANDARDS ARE REQUIRED ON WATERMAINS 300MM AND SMALLER. VALVES 350MM AND LARGER TO BE BUTTERFLY VALVES.
22. VERTICAL AND HORIZONTAL ALIGNMENT OF WATERMAIN TO BE ACHIEVED BY DEFLECTION OF JOINTS AS PER MANUFACTURER'S SPECIFICATIONS. DEFLECTION IN THE BARREL IS NOT PERMITTED.
24. TRACER WIRE IS TO BE INSTALLED ON ALL NEW INSTALLATIONS OF PVC WATERMAIN PIPE FOR ALL SERVICES INCLUDING SERVICE LINES. THE TRACER WIRE SHALL BE INSTALLED ALONG THE PIPE, STRAPPED TO THE PIPE AT 6 METRE INTERVALS. JOINTS IN THE WIRE BETWEEN VALVES ARE NOT PERMITTED.
25. THE INSPECTOR MAY 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.
26. ALL WATER CUSTOMERS SUPPLIED BY A WATERMAIN TO BE SHUT DOWN SHALL BE NOTIFIED BY THE CONTRACTOR AT LEAST 24 HOURS IN ADVANCE OF THE SHUT DOWN AS PER REGION OF HALTON STANDARD PROCEDURE. THE TOWN OF OAKVILLE TO BE NOTIFIED IN ADVANCE.
27. OPERATION OF EXISTING WATERMAINS SHALL BE BY REGION OF HALTON STAFF ONLY.
28. FIRE HYDRANT CAPS SHALL BE COLOUR CODED AS PER NFPA STANDARDS.

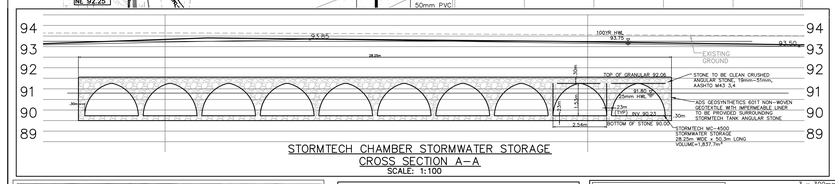


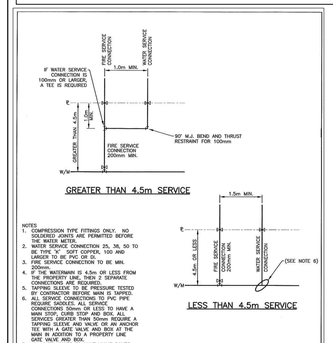
LEGEND

418.02	EXISTING ELEVATION
×120.00 EX	EXISTING ELEVATION
×120.00	PROPOSED ELEVATION
×120.00 TC	PROPOSED TOP OF CURB ELEVATION
×120.00 TW	PROPOSED TOP OF WALL ELEVATION
×120.00 BW	PROPOSED BOTTOM OF WALL ELEVATION
×120.00 SW	PROPOSED SWALE ELEVATION
	CATCHBASIN
	CATCHBASIN MANHOLE
	STORM MANHOLE
	SANITARY MANHOLE
	VALVE AND BOX
	HYDRANT AND VALVE
M	WATER METER
	REGIONAL FLOODLINE
	SECTION NUMBER
12094 / 93.50 / 93.52	REGIONAL FLOOD ELEVATION / 100YEAR FLOOD ELEVATION
	OVERLAND FLOW ROUTE
	ACOUSTIC FENCE
	VEHICLE GUARD RAIL OPSD 912.130
	SUB-DRAIN (SEE DETAIL DWG G-3)

CONTRACTOR TO BE RESPONSIBLE FOR VERIFYING THE LOCATIONS OF ALL EXISTING UNDERGROUND AND ABOVE GROUND UTILITIES AND STRUCTURES PRIOR TO COMMENCING WORK AND TO REPORT ANY DISCREPANCIES PRIOR TO PROCEEDING WITH CONSTRUCTION. VARIOUS UTILITIES CONCERNED TO BE GIVEN REQUIRED ADVANCED NOTICE PRIOR TO ANY DIGGING FOR STAKE OUT. A.M. CANDARAS ASSOCIATES INC. ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OR LOCATION OF EXISTING UTILITIES AS INDICATED ON THIS DRAWING.

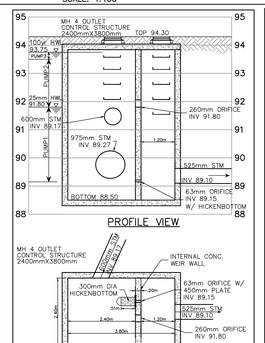
100 YEAR AND REGIONAL FLOODLINE INFORMATION TAKEN FROM CVC FLOOD HAZARD MAP FOR CLEARVIEW CREEK WATERSHED, SHEET 3

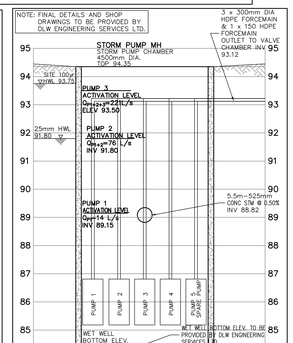


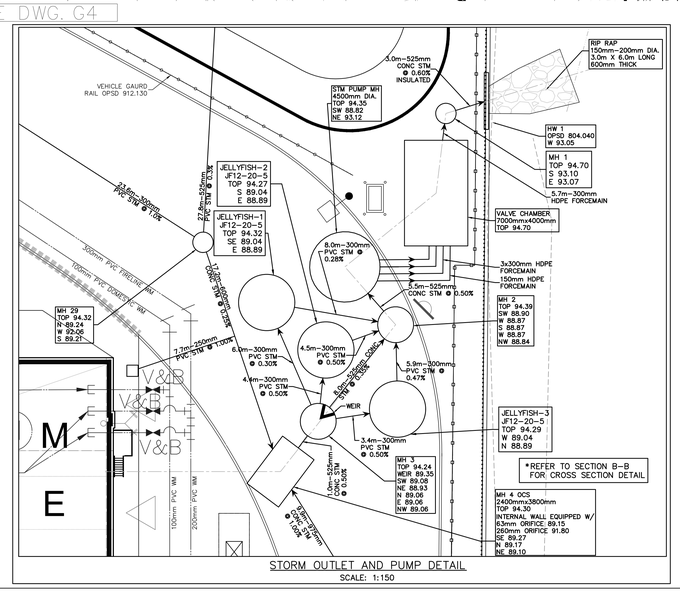


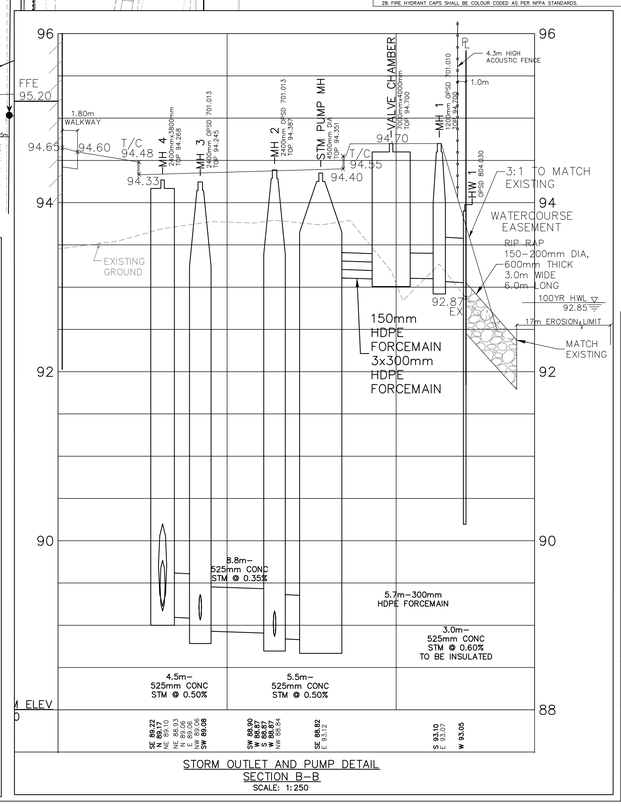
NOTES:
1. COMPRESSION TYPE FITTINGS ONLY. NO SOLDERED JOINTS ARE PERMITTED BEFORE THE WATER METER.
2. WATER SERVICE CONNECTION 25, 38, 50 TO BE TYPE 'K' SOFT COPPER COIL. 100 AND LARGER TO BE PVC OR DR 18.
3. FIRE SERVICE CONNECTION TO BE MIN. 150mm.
4. IF THE WATERMAIN IS 4.5m OR LESS FROM THE PROPERTY LINE, THEN 2 SEPARATE CONNECTIONS ARE REQUIRED.
5. ALL SERVICE CONNECTIONS TO BE MADE BY CONTRACTOR BEFORE MAIN IS TAPPED.
6. ALL SERVICE CONNECTIONS TO PVC PIPE REQUIRE SADDLES. ALL SERVICE CONNECTIONS 50mm AND LARGER TO HAVE A MAIN STOP, CURB STOP AND BOX. ALL SERVICES GREATER THAN 50mm REQUIRE A CURB STOP, BOX AND ISOLATION VALVE TEE WITH A GATE VALVE AND BOX AT THE MAIN IN ADDITION TO A PROPERTY LINE GATE VALVE AND BOX.
7. ALL GATE VALVES TO HAVE VALVE BOXES.
8. DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.

THE REGIONAL MUNICIPALITY OF HALTON
PUBLIC WORKS DEPARTMENT
WATER SERVICE AND FIRE SERVICE CONNECTION INSTALLATIONS
Date: August 2018 | Rev. 2 | NTS
REGION STANDARD RH 409.010









No.	Date	By	REVISIONS
4	DEC 14/23	RPA	FOURTH SUBMISSION
3	DEC 19/22	FP	THIRD SUBMISSION
2	DEC 15/21	FP	SECOND SUBMISSION
1	APR 9/21	FP	FIRST SUBMISSION

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772 WINSTON CHURCHILL BLVD.

SPA 1601.029/01
Region of Peel No. C602647

TOWN OF OAKVILLE
REGION OF HALTON

BELOW GROUND SITE SERVICING AND SWM PLAN - EAST SITE AREA

SCALE: 1:500	DATE: SEPT 2022	PROJ No.	2256
DRAWN: F.P.	CHK'D: A.M.C.	PLAN No.	G-3
DESIGNED: A.M.C.	SHEET 3 OF 6		