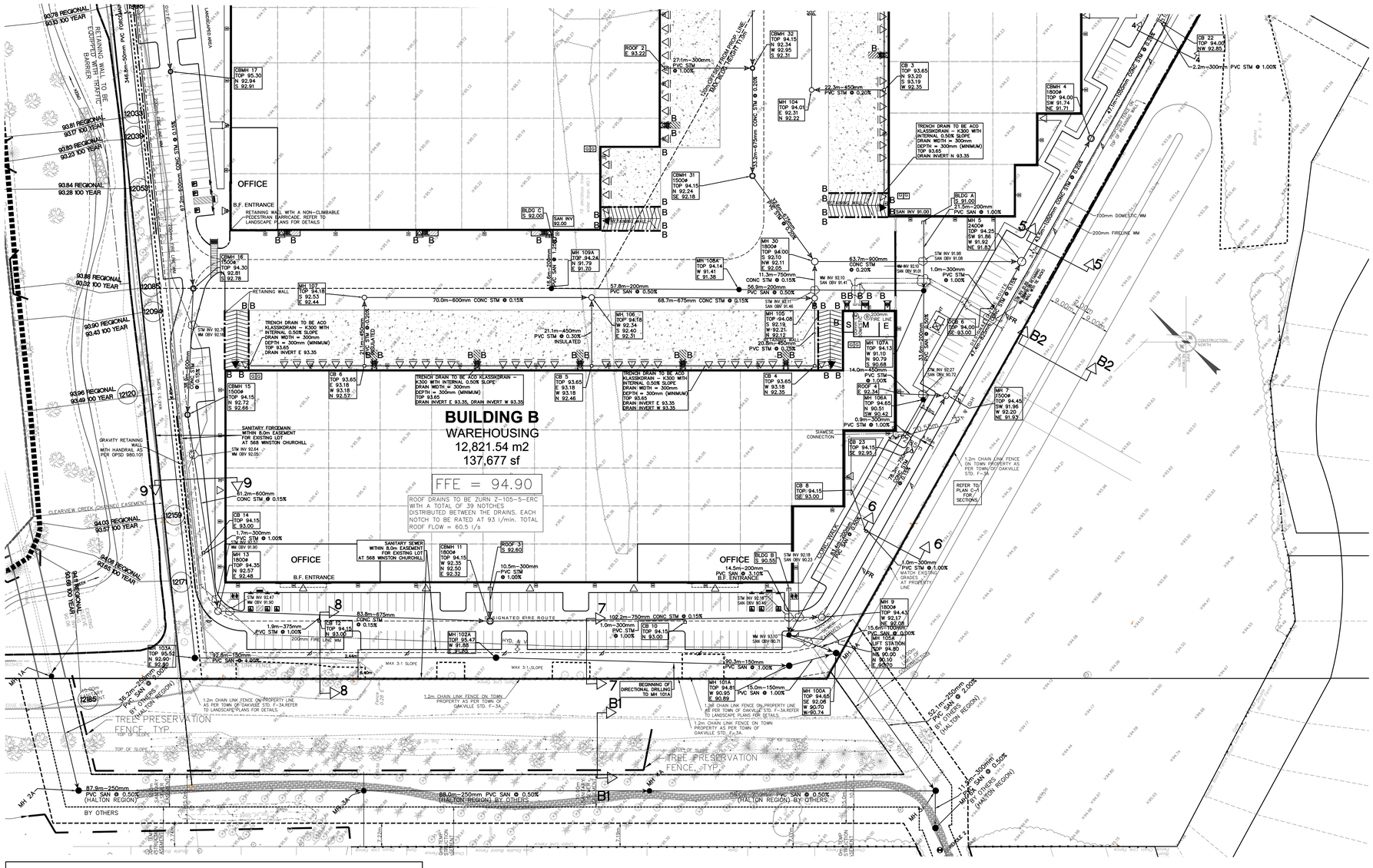
SEE DWG. G-1



REFER TO PLAN C-1 FOR SECTIONS.

ALL MH 1200Ø UNLESS OTHERWISE NOTED.

REGION OF HALTON NOTES

GENERAL NOTES

1. THE LOCATION OF ALL UNDERGROUND AND ABOVEGROUND UTILITIES AND STRUCTURES IS NOT GUARANTEED. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES BEFORE STARTING WORK. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.
2. ALL AREAS DISTURBED BY THE CONTRACTOR DURING THE CONSTRUCTION OF THE WORKS SHOWN ON THESE PLANS SHALL BE RESTORED TO THE SATISFACTION OF THE REGIONAL TREASURER AND PUBLIC WORKS DEPARTMENT. ALL GRASS AND VEGETATION COVERED AREAS SHALL BE RESTORED BY PLACING 100MM OF TOPSOIL AND NO. 1 NURSERY SOD TO ESTABLISH A GRASS COVER TO THE SATISFACTION OF THE REGIONAL TREASURER AND STEWARDS.
3. SUBMIT OF SUBMIT AND BUILD ENGINEERING 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. ALTERNATIVE MATERIALS MAY BE ACCEPTABLE, PROVIDED APPROVAL HAS FIRST BEEN OBTAINED FROM 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 0.30M ARE SUBJECT TO COMPACTION TESTS AND SUCH TESTS MUST SHOW A MIN. COMPACTION OF 95% S.P.D. AT ALL DEPTHS.
7. MANHOLE AND VALVE CHAMBER COVERS ARE TO BE SET FLUSH WITH BASE COURSE ASPHALT AND MUST ALLOW FOR FINAL ASPHALT RESURFACING TO BE SET FLUSH.
8. 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. BENDING IN MANHOLES TO BE AS PER O.P.S.D. 701.021 AS AMENDED BY THE REGION OF HALTON. MAXIMUM DEFLECTION ALLOWED IS 90 DEGREES FOR 200mm AND 150mm.
3. SAFETY PLATFORMS AS PER O.P.S.D. 404.020 TO BE INSTALLED ONLY IN MANHOLES WHERE DEPTHS EXCEED 5.0M AS DIRECTED BY THE REGION AND AS INDICATED ON THE PROFILE DRAWINGS.
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:
6. SANITARY SEWER PIPE AND SHALL BE NON-WHITE IN COLOUR.
6. SERVICES TO BE MIN. 2.1M AND MAX. 2.7M DEEP AT PROPERTY LINE. RISERS SHALL BE USED WHERE NOTED AS PER OPSD 1006.02.
7. BEDDING AND BACKFILL BEDDING ON ALL SEWERS AND CONNECTIONS TO BE AS PER O.P.S.D. 1005.02 UNLESS NOTED OTHERWISE.
8. 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. 1104.01. PIPE FOR ALL SERVICE CONNECTIONS UP TO 50MM DIA. SHALL BE TYPE 'K' SOFT COPPER TUBING.
3. A MIN. HORIZONTAL SEPARATION OF 2.5M MUST BE MAINTAINED BETWEEN WATERMAINS AND SEWERS WHERE WATERMAIN IS INSTALLED ABOVE SEWER.
4. A MIN. VERTICAL SEPARATION OF 0.45M BETWEEN WATERMAINS AND SEWERS MUST BE MAINTAINED IF WATERMAIN IS INSTALLED ABOVE SEWER OR 0.50M IF SEWER IS ABOVE WATERMAIN.
5. WATERMAIN BEDDING TO BE SUITABLE GRANULAR BEDDING MATERIAL AS PER O.P.S.D. 1102.01, 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.
   6.2. ONE (1) 100MM (4") STORZ PUMPER CONNECTION AS PER CAN/ULC #S-520, 31.75MM SQUARE OPERATING NUT, AND STORZ CAP PAINTED GLOSS BLACK.
7. HYDRANTS SHALL BE INSTALLED SUCH THAT THE ROD STEM LENGTH SHALL NOT EXCEED 1.7M MEASURED FROM THE FINISHED GRADE TO THE HYDRANT OPERATING NUT. HOWEVER, IF THE 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 PW-420.01 AND PW-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 'PC MASTIC'OR APPROVED EQUIVALENT.
12. FOR ALL ANODES CONNECTED TO NEW PIPE, FITTINGS OR TO EXISTING METALLIC WATERMAINS. A TEST STATION SHALL BE INSTALLED AT THE ANODE CONNECTION. THE 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 OF HALTON STANDARD DRAWING RH-420.01.
14. ALL BOLTS SHALL BE LEFT (COUNTER-CLOCKWISE) AND SHALL HAVE 50MM SQUARE STANDARD ARMA OPERATING NUT.
15. ALL PLUGS, CAPS, TEES, AND BENDS SHALL BE MECHANICALLY RESTRAINED AS PER MANUFACTURERS SPECIFICATIONS. RESTRAINTS SHALL MEET M-19-1-92.
16. RECOMMENDED RESTRAINED LENGTH ARE AS FOLLOWS:

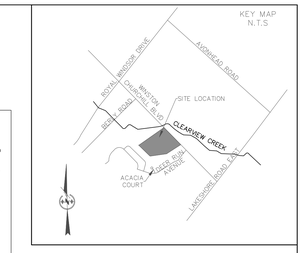
RECOMMENDED RESTRAINED LENGTH OF PVC PIPE INSTALLED IN SAND-SILT:

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/1.6m	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	6.2m/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)/6.5m (MAIN)
300x200	6.9m (BRANCH)/1.8m (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 AS PER NOTE 16.
18. MINIMUM DEPTH OF COVER OVER WATERMAIN SHALL BE 1.7M MEASURED FROM THE ROAD CENTRELINE ELEVATION.
19. THE LOCATION OF 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. ALL VALVES SHALL OPEN LEFT (COUNTER-CLOCKWISE) UNLESS OTHERWISE REQUIRED ON WATERMAINS 300MM AND UNDER. LINE GATE VALVES SHALL HAVE AUGER OF SCREW TYPE VALVE BOXES.
22. ALL WATERMAIN FITTINGS SHALL HAVE MECHANICAL JOINTS.
23. ALL PIPE DEFLECTIONS ALLOWED SHALL NOT EXCEED THOSE 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 LOCATING PURPOSES. A SOLID TO GAUGE 14ILL COPPER WIRE IS TO 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 SPECIFICATIONS. NOTIFICATION SHALL TAKE PLACE UNDER THE ENGINEER'S DIRECTION.
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.

KEY MAP
N.T.S



LEGEND

- CATCHBASIN
- CATCHBASIN MANHOLE
- STORM MANHOLE
- SANITARY MANHOLE
- VALVE AND BOX
- HYDRANT AND VALVE
- STORM
- SANITARY
- WATERMAIN
- BACKFLOW PREVENTOR
- WATER METER
- EXISTING ELEVATION
- EXISTING REGIONAL FLOODLINE
- REGIONAL FLOODLINE
- SECTION NUMBER
- TREE PROTECTION
- FENCE

100 YEAR AND REGIONAL FLOODLINE INFORMATION TAKEN FROM PLAN PREPARED BY CVC FLOOD HAZARD MAP.

ARCHITECT PROFESSIONAL ENGINEER
2023-12-13
A. M. CANDARAS
PROVINCE OF ONTARIO

No.	Date	By	REVISIONS
11	DEC.13/23	J.M.N.	ISSUED FOR SIXTH SUBMISSION
10	AUG.30/23	J.M.N.	ISSUED FOR FIFTH SUBMISSION
9	JUNE 6/23	J.M.N.	ISSUED FOR COORDINATION
8	JAN.17/22	J.M.N.	ISSUED FOR FOURTH SUBMISSION
7	JAN.02/22	J.M.N.	ISSUED FOR COORDINATION
6	NOV.25/21	J.M.N.	ISSUED FOR THIRD SUBMISSION
5	NOV.09/21	J.M.N.	ISSUED FOR COORDINATION

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560, 570 AND 580 WINSTON CHURCHILL BLVD.

TOWN OF OAKVILLE
REGION OF HALTON

SITE SERVICING AND STORMWATER MANAGEMENT PLAN - SOUTH

SCALE: 1:500	DATE: MAY 2019	PROJ No.	
DRAWN: A.D.D.	CHK'D: A.M.C.	PLAN No.	G-2
DESIGNED: A.M.C.	SHEET 2 OF 2		