

REGION OF HALTON NOTES

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 GENERAL NOTES

 1. THE LOCATION 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 ALL LIABILITY FOR DAMAGE TO THEM.

 2. ALL AREAS DISTURBED BY THE CONTRACTOR DURING 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 PLACING 100MM OF TOPSOIL AND NO. 1 NURSERY SOD TO ESTABLISH 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. ALTERNATIVE MATERIALS MAY BE ACCEPTABLE, 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 0.30M 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 ADJUSTED TO FINAL GRADE PRIOR TO INSTALLING TOP LIFT OF ASPHALT.

 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. BENCHING IN MANHOLES TO BE AS PER O.P.S.D. 701.021 AS AMENDED BY THE REGION OF HALTON.
 BENCHING IN SANITARY MANHOLES TO BE TO THE OBVERT OF THE PIPE.

 3. 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. 4. SANITARY SEWER PIPE SHALL BE PVC SDR35 CONFORMING TO A.S.T.M. D3034 UNLESS OTHERWISE
 NOTED 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 CONNECTIONS TO BE

 6. MINIMUM 2% GRADE AND SHALL BE NON-WHITE IN COLOUR.

 7. 6. SERVICES TO BE MIN. 2.15M AND MAX. 2.75M DEEP AT PROPERTY LINE. RISERS SHALL BE USED WHERE NOTED AS PER OPSD 1006.01.

 8. 7. CLASS 'B'BEDDING ON ALL SEWERS AND CONNECTIONS TO BE AS PER O.P.S.D. 1005.02 UNLESS NOTED OTHERWISE

 9. 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 SANITARY OR STORM SEWERS, INCLUDING SERVICE LATERALS.

 4. A MIN. VERTICAL SEPARATION OF 0.15M 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 18.
- 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 ½") 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 #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 BREAK-OFF FLANGE. IF HYDRANT BARREL LENGTH EXCEEDS 1.7M THEN A HYDRANT THAT CAN BE RAISED FROM THE BOTTOM WITHOUT INCREASING ROD LENGTH IS TO BE USED.
- USED.

 8. ALL METALLIC WATERMAINS, FITTINGS, HYDRANTS AND RESTRAINERS TO HAVE CATHODIC PROTECTION IN ACCORDANCE WITH REGION OF HALTON STANDARD DRAWINGS RH 420.01 AND RH 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.
- 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. FOR ALL ANODES CONNECTED TO NEW PIPE, FITTINGS OR TO EXISTING METALLIC WATERMAINS, 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 OF HALTON STANDARD DRAWING RH 420.01.
 14. ALL VALVES TO OPEN LEFT (COUNTER—CLOCKWISE) AND SHALL HAVE 50MM SQUARE STANDARD AWWA OPERATING NUT.
 15. ALL PLUGS, CAPS, TEES, AND BENDS SHALL BE MECHANICALLY RESTRAINED AS PER MANUFACTURERS SPECIFICATIONS. RESTRAINTS SHALL MEET UNI—B—13—92.
 16. RECOMMENDED RESTRAINED LENGTH ARE AS FOLLOWS:

	SIZE	BEND	BEND	BEND	BEND	DOWN/UP	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	8.6m/2.9m	20.7m
	NOM. PIPE SIZE	REDUCING TEE			NOM. PIPE SIZE	STRAIGHT TEE	

- 6.2m (BRANCH ONLY) 150 8.5m (BRANCH)/2.9m (MAIN) 300x150 3.7m (BRANCH ONLY) 200 12.1m (BRANCH)/6.5m (MAIN)
 300x200 8.9m (BRANCH)/1.8m (MAIN) 300 18.9m (BRANCH)/13.3m (MAIN) 7. WHERE WATERMAIN IS PLACED IN FILL OR IN PREVIOUSLY DISTURBED GROUND ALL JOINTS TO BE
- MECHANICALLY RESTRAINED.

 18. MINIMUM DEPTH OF COVER OVER WATERMAIN SHALL BE 1.70M MEASURED FROM THE ROAD 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 0.5M 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 UNDER. LINE GATE VALVES SHALL HAVE AUGER OF SCREW TYPE VALVE BOXES.

 22. ALL WATERMAIN FITTINGS SHALL HAVE MECHANICAL JOINTS.
 23. 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 LOCATING PURPOSES. A SOLID 10 GAUGE T.W.U. 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.
- 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.

REFER TO PLAN C-1 | ALL MH 12000 UNLESS | FOR SECTIONS. OTHERWISE NOTED.

KEY MAP N.T.S SITE LOCATION

<u>LEGEND</u>

CATCHBASIN CATCHBASIN MANHOLE STORM MANHOLE SANITARY MANHOLE EXISTING SANITARY MANHOLE MECHANICAL ROOM

EXISTING ELEVATION ×120.00 EX EXISTING ELEVATION PROPOSED ELEVATION

X120.00 BW PROPOSED BOTTOM OF WALL ELEVATION X120.00 SW PROPOSED SWALE ELEVATION

EXISTING REGIONAL FLOODLINE REGIONAL FLOODLINE

X120.00 TC PROPOSED TOP OF CURB ELEVATION

×120.00 TW PROPOSED TOP OF WALL ELEVATION

SECTION NUMBER

TREE PROTECTION

——— FENCE

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



	10	AUG.30/23	J.M.N.	ISSUED FOR FIFTH SUBMISSION		
	9	JUNE 6/23	J.M.N.	ISSUED FOR COORDINATION		
	8	JUN.17/22	J.M.N.	ISSUED FOR FOURTH SUBMISSION		
	7	JUN.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		
	4	FEB.26/21	J.M.N.	ISSUED FOR SECOND SUBMISSION		
Г	No.	Date	Ву	REVISIONS		
			a.m.candaras associates inc. consulting engineers 8551 Weston rd., suite 203 Woodbridge ont. L4L 9R4 905-850-8020 Fax 905-850-8099 Email: civil@amcai.com			

560, 570 AND 580 WINSTON CHURCHILL BLVD.

> TOWN OF OAKVILLE REGION OF HALTON

> > GRADING PLAN - SOUTH

SCALE: 1:500 DATE: MAY 2019 DRAWN: A.D.D. CHK'D: A.M.C. DESIGNED: A.M.C. SHEET 2 OF 2

w	$Q_{100YR} = CAIN$ = (0.90) = 4,066. $Q_{5YR} = CAIN$	(8.10ha)(114.2mm/hr)2.778	- Q _{remaining} Q _{weir}	$Q_{G} = (Q_{100YR} - Q_{5YR})$ = $(4,066.5 \text{ l/s} - 2,312.7 \text{ l/s})$ = $1,753.8 \text{ l/s}$ = $CLH^{3/2}$ = $(1.7)(20.0 \text{m WIDE})(0.20 \text{m})^{3/2}$ = $3,041.0 \text{ l/s}$	E				
	28.70m WIDE SCREEN WALL								
94.90 HIGH SCREEN WALL	94.40	200mm DEPTH - 20.00m	WIDE SCREEN WALL C	94.40	4.50m HIGH SCREEN WALL BLDG A F.F.E. 94.90				
	[*] 94.20	OVERLAND SPILLWAY S	SCREEN WALL CU SCALE: 1:100	JRB CUT DETAIL	· · · · · · · · · · · · · · · · · · ·				