GENERAL NOTES:					
1. SURVEY INFORMATION PROVIDE				,	<ol> <li>SANITARY SEWER NOTES</li> <li>1. ALL SANITARY SEWER MATERIALS AND INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE</li> </ol>
FROM REAL TIME NETWORK (RIN) OBSERVATIONS, VIM LONE 18, NAD85 (CSRS) (2010.0). DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.999610. FOR BEARING COMPARISONS, A ROTATION OF 1'04'07" CLOCKWISE WAS APPLIED TO BEARINGS ON PLAN P1, P2 AND P3 TO ROTATE TO NAD83 UTM 18.					STANDARDS AND SPECIFICATIONS OF THE CITY OF OTTAWA, ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
<ol> <li>GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL LOCATES PRIOR TO COMMENCEMENT OF CONSTRUCTION/DEMOLITION.</li> </ol>					<ol> <li>ALL SANITARY SEWERS SHALL BE PVC SDR 35, IPEX "RING-TITE" (OR EQUIVALENT), AS PER CSA STANDARD B182.2 OR LATEST AMENDMENT, UNLESS OTHERWISE NOTED.</li> </ol>
3. ALL WORK TO BE DONE BY THE PROPERTY/LEASE LINES.	ENERAL CONTRACTOR UNLES	SS NOTED OT	HERWISE WITH	HIN	<ol> <li>SANITARY SEWER TRENCH AND BEDDING SHALL BE AS PER CITY OF OTTAWA STD. S6 AND S7, CLASS 'B BEDDING UNLESS OTHERWISE NOTED.</li> </ol>
4. ALL WORKS AND MATERIALS SH SPECIFICATIONS OF THE CITY O SPECIFICATIONS (OPSS), WHER	OTTAWA, ONTARIO PROVINC				<ol> <li>ALL SANITARY LATERALS ARE TO BE PVC SDR 28, IPEX "RING-TITE" (OR EQUIVALENT), ANY COLOR EXCEPT WHITE AND MARKED WITH A 50MM X 100MM WOODEN MARKER, EXTENDING FROM THE INVERT TO 1.0 M ABOVE GRADE PAINTED RED.</li> </ol>
<ol> <li>SPECIFICATIONS (OPSS), WHERE APPLICABLE.</li> <li>THE LOCATION OF UTILITIES IS APPROXIMATE ONLY, AND THE EXACT LOCATION SHOULD BE DETERMINED BY CONSULTING THE MUNICIPAL AUTHORITIES AND UTILITY COMPANIES CONCERNED. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THE LOCATION AND STATUS OF UTILITIES AND SHALL BE RESPONSIBLE FOR ADEQUATE PROTECTION OF PLANT AND EQUIPMENT FROM DAMAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ANY SERVICES OR UTILITIES DISTURBED DURING CONSTRUCTION, TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION.</li> </ol>					<ol> <li>SEWER BEDDING AS PER CITY STANDARD S6 &amp; S7. GRANULAR 'A' BEDDING TO BE INCREASED TO 300MM WHERE SEWERS ARE BELOW THE GROUNDWATER TABLE.</li> <li>SANITARY SEWER MANHOLES SHALL BE BENCHED AS PER OPSD 701.021. SANITARY MANHOLE FRAME AND COVERS SHALL BE AS PER CITY OF OTTAWA STD. S24 AND S25. SAFETY PLATFORMS SHALL BE AS PER OPSD 404.02. DROP STRUCTURES SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA SPECIFICATIONS AND OPSD 1003.01.</li> </ol>
6. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF EXISTING SERVICES PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL CONFIRM LOCATIONS AND ELEVATIONS OF EXISTING SERVICES AND STRUCTURES TO BE CONNECTED TO AND EXISTING SERVICES THAT MAY BE DAMAGED OR CAUSE CONFLICTS PRIOR TO CONSTRUCTION OF ANY NEW SEWER, WATER AND/OR STORM WATER WORKS. ALL DIMENSIONS				TING SERVICES AND CAUSE CONFLICTS LL DIMENSIONS	7. THE CONTRACTOR SHALL CONDUCT INFILTRATION/EXFILTRATION (AS PER CURRENT OPSS) TESTING ON ALL NEWLY INSTALLED SANITARY SEWERS. THE TEST SHALL BE PERFORMED IMMEDIATELY AFTER SEWER INSTALLATION AND VIEWED BY THE ENGINEER.
SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES, INTERPRETATIONS, CHANGES AND ADDITIONS TO THESE DRAWINGS MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER, WHEN NOTED AND BEFORE PROCEEDING WITH CONSTRUCTION WORKS. DO NOT CONTINUE CONSTRUCTION IN AREAS WHERE DISCREPANCIES APPEAR UNTIL SUCH DISCREPANCIES HAVE BEEN RESOLVED.					<ol> <li>8. THE CONTRACTOR SHALL CONDUCT CCTV INSPECTION OF ALL NEWLY INSTALLED SANITARY SEWERS AND EXISTING SEWERS CONNECTED TO. THE TEST SHALL BE PERFORMED IMMEDIATELY AFTER SEWERS INSTALLED.</li> <li>9. ALL SERVICE CONNECTIONS TO BE CONSTRUCTED AS PER CITY STANDARD S11 &amp; S11.1.</li> </ol>
7. ALL ELEVATIONS ARE GEODETIC OTHERWISE SPECIFIED. ALL DR. QUESTIONABLE DIMENSIONS AF	/INGS SHOULD NOT BE SCAL	ED BY THE CO	ONTRACTOR. AN		10. THE CONTRACTOR SHALL CONSTRUCT FLEXIBLE SANITARY SEWERS IN ACCORDANCE WITH OPSD 802.010 AND 802.013. DURING CONSTRUCTION, THE CONTRACTOR SHALL PROTECT THE PIPES FROM HEAVY CONSTRUCTION EQUIPMENT. BEDDING AND BACKFILL SHALL BE COMPACTED TO A MINIMUM OF 95% SPMDD.
8. THE CONTRACTOR SHALL BE RE SAME.	PONSIBLE FOR OBTAINING A	LL PERMITS R	EQUIRED AND BI	EAR COST OF THE	11. ALL SANITARY BUILDING DRAINS TO BE EQUIPPED WITH SANITARY BACKWATER VALVES INSTALLED PER CITY OF OTTAWA STANDARD DRAWING S14.1.
9. ALL WORK SHALL BE COMPLETE REGULATIONS FOR CONSTRUCT CONSTRUCTOR AS DEFINED IN	N PROJECTS", THE GENERAL		===		<ol> <li>WITHIN THE FROST ZONE, THE BACKFILL IN THE SERVICE TRENCHES SHOULD MATCH THE SOIL ON SIDES TO MINIMIZE DIFFERENTIAL FROST HEAVING IN THE SUBGRADE.</li> <li>MINIMUM SOIL COVER TO BE 2.1M TO PROTECT SEWERS FROM FROST DAMAGE. IN AREAS WHERE ADEQUATE</li> </ol>
10. CONTRACTOR SHALL BE RESPO DISTURBED DURING CONSTRUC AUTHORITY HAVING JURISDICTI	ON TO THE SATISFACTION O				FROST COVER CANNOT BE ACHIEVED, EQUIVALENT THERMAL INSULATION TO BE INSTALLED AS PER OPSD 514.010
11. ANY AREAS BEYOND THE LIMIT	THE SITE DISTURBED DURIN				STORM SEWER NOTES
CONTRACTOR'S EXPENSE.	12. THE CONTRACTOR SHALL COMPLY WITH THE CITY OF OTTAWA REQUIREMENTS FOR TRAFFIC CONTROL WHEN				<ol> <li>ALL STORM SEWER MATERIALS AND INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE STANDARDS AND SPECIFICATIONS OF THE CITY OF OTTAWA, ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).</li> </ol>
<ul> <li>WORKING ON CITY STREETS. ALL CONSTRUCTION SIGNAGE MUST CONFORM TO THE M.T.O. MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (LATEST AMENDMENT).</li> <li>13. THE SUPPORT OF ALL UTILITIES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.</li> </ul>					<ol> <li>ALL REINFORCED CONCRETE STORM SEWER PIPE SHALL BE IN ACCORDANCE WITH CSA A257.2 (LATEST AMENDMENT). ALL NON-REINFORCED CONCRETE STORM SEWER PIPE SHALL BE IN ACCORDANCE WITH CSA A257.L (LATEST AMENDMENT). PIPE SHALL BE JOINTED WITH STD. RUBBER GASKETS AS PER CSA A257.3 (LATEST AMENDMENT).</li> </ol>
14. THERE WILL BE NO SUBSTITUTION	OF MATERIALS UNLESS WRI		VAL BY THE ENG	INEER HAS BEEN	3. ALL MAIN STORM SEWERS SHALL BE PVC SDR 35 APPROVED PER C.S.A. B182.2 OR LATEST AMENDMENT, UNLESS OTHERWISE SPECIFIED.
15. EXCESS EXCAVATED MATERIAL					4. THE CONTRACTOR SHALL CONSTRUCT FLEXIBLE STORM SEWERS IN ACCORDANCE WITH OPSD 802.010 AND 802.013 RIGID STORM PIPE SHALL BE CONSTRUCTED IN ACCORDANCE WITH OPSD 802.030. DURING CONSTRUCTION THE CONTRACTOR SHALL PROTECT THE PIPES FROM HEAVY CONSTRUCTION EQUIPMENT. BEDDING AND BACKFILL SHALL BE COMPACTED TO A MINIMUM OF 95% SPMDD.
16. THE SITE LAYOUT IS THE RESPO DRAWINGS SHALL BE MAINTAINI			SITE SERVICING	& GRADING	5. SEWER BEDDING AS PER CITY OF OTTAWA STANDARD S6 & S7.
17. THE CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL BEDDING OR ADDITIONAL STRENGTH PIPE IF THE MAXIMUM TRENCH WIDTH, AS SPECIFIED BY OPSD, IS EXCEEDED.					6. ALL STORM LATERALS SHALL BE PVC SDR 28, WHITE IN COLOR AND MARKED WITH A 50MM X IOOMM WOODEN MARKER EXTENDING FROM THE INVERT TO 1.0M ABOVE GRADE PAINTED GREEN.
18. ALL NECESSARY CLEARING ANE ENGINEER AND THE CITY OF OT			CONTRACTOR. R	EVIEW WITH	7. ALL SERVICE CONNECTIONS TO BE CONSTRUCTED AS PER CITY STANDARD S11 & S11.1.
19. ALL EDGES OF DISTURBED PAVI PLACING NEW PAVEMENT. THE DETAIL ON THIS DRAWING.					8. WITHIN THE FROST ZONE, THE BACKFILL IN THE SERVICE TRENCHES SHOULD MATCH THE SOIL ON SIDES TO MINIMIZE DIFFERENTIAL FROST HEAVING IN THE SUBGRADE
20. ALL BOREHOLES SHOWN ON TH	DRAWINGS ARE FOR INFORM	NATION ONLY.			9. MINIMUM SOIL COVER TO BE 2.1M TO PROTECT SEWERS FROM FROST DAMAGE. IN AREAS WHERE ADEQUATE FROST COVER CANNOT BE ACHIEVED, EQUIVALENT THERMAL INSULATION TO BE INSTALLED AS PER OPSD 514.010
21. FOR GEOTECHNICAL INFORMAT RESTAURANT #30042 PREPARED					<ol> <li>ALL STORM SERVICES TO BE EQUIPPED WITH APPROVED BACKWATER VALVES.</li> <li>STORM MANHOLE FRAME AND COVERS SHALL BE AS PER CITY OF OTTAWA STD. S24, S24.1 AND S25.</li> </ol>
22. PROPOSED PAVEMENT STRUCT GEOTECHNICAL REPORT:	E SHALL BE HEAVY DUTY PA	AVEMENT PER	RECOMMENDAT	IONS OF THE	12. SAFETY PLATFORMS SHALL BE IN ACCORDANCE WITH OPSD 404.02.
PAVEMENT STRUCTUR	COMPACTION	PARKING	HEAVY DUTY	RIGID	13. DROP STRUCTURES SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA SPECIFICATIONS AND OPSD 1003.01.
CONCRETE		AREA		225 mm	<ol> <li>STORM SEWER MANHOLES SERVING LOCAL SEWERS LESS THAN 900MM SHALL BE CONSTRUCTED WITH A 300MM SUMP. FOR STORM SEWERS 900MM AND OVER USE BENCHING IN ACCORDANCE WITH OPSD 701 .021.</li> </ol>
HL-3 SURFACE COURS	97% MARSHALL DENSITY	40mm	40mm		15. SINGLE AND DOUBLE CATCHBASINS SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. S1. AND OPSD 705.020, RESPECTIVELY.
HL-4 BINDER COURSI	97% MARSHALL DENSITY	40mm	60mm		16. SINGLE AND DOUBLE CATCHBASIN LEADS SHALL BE 200MM AND 250MMØ (MIN) RESPECTIVELY, 1.0% SLOPE (MIN.) UNLESS OTHERWISE NOTED.
GRANULAR 'A'	100% SMDD	150mm	150mm	150mm	17. ALL CATCHBASINS AND CATCHBASIN MANHOLES SHALL HAVE SUMPS WITH 300MM DEPTH, UNLESS OTHERWISE NOTED.
GRANULAR 'B' TYPE	100% SMDD	450mm	450mm	400mm	18. CONTRACTOR SHALL ENSURE THAT CATCHBASINS ARE INSTALLED AT THE LOW POINT OF SAG CURB WORKS.
EXCERPTED FROM GEOTECHNIC PREPARED BY BLUEFROG ENVIR				30042	19. THE STORM SEWER CLASSES HAVE BEEN DESIGNED BASED ON BEDDING CONDITIONS SPECIFIED. WHERE THE SPECIFIED TRENCH WIDTH IS EXCEEDED, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ADDITIONAL BEDDING, A DIFFERENT TYPE OF BEDDING OR A HIGHER PIPE STRENGTH AT HIS OWN EXPENSE AND SHALL ALSO BE RESPONSIBLE FOR EXTRA TEMPORARY AND/OR PERMANENT REPAIRS MADE NECESSARY BY THE WIDENED TRENCH.
23. THE CONTRACTOR SHALL APPR ENCOUNTERED AND SHALL CAR INDEPENDENT ASSESSMENT OF ANY EXTRA COST DUE TO ANY S	OUT THEIR OWN TEST PITS ROUND CONDITIONS. THE C	AS REQUIRED	D TO MAKE THEIF SHALL NOT MAK	R OWN E ANY CLAIM FOR	20. THE CONTRACTOR SHALL CONDUCT CCTV INSPECTION OF ALL NEWLY INSTALLED STORM SEWERS AND EXISTING SEWERS CONNECTED TO. THE TEST SHALL BE PERFORMED IMMEDIATELY AFTER SEWERS INSTALLED.
	CONTRACTOR. 24. DO NOT CONSTRUCT USING DRAWINGS THAT ARE NOT MARKED "ISSUED FOR CONSTRUCTION".				EROSION AND SEDIMENT CONTROL
25. CIVIL DRAWINGS TO BE READ IN					<ol> <li>CONTRACTOR TO INSTALL EROSION CONTROL MEASURES AS SHOWN PRIOR TO REMOVAL OF TEMPORARY DRAINAGE DITCHES AND MAINTAIN IN GOOD CONDITION UNTIL CONSTRUCTION IS COMPLETED AND VEGETATIVE COVER IS ESTABLISHED.</li> </ol>
26. ALL NECESSARY CLEARING AND GRUBBING SHALL BE COMPLETED BY THE CONTRACTOR. REVIEW WITH CONTRACT ADMINISTRATOR AND THE CITY OF OTTAWA PRIOR TO ANY TREE CUTTING.					2. ALL T FENCING TO BE INSTALLED PRIOR TO ANY AREA GRADING, EXCAVATING OR DEMOLITION COMMENCING.
27. STREET LIGHTING SHALL BE TO CITY OF OTTAWA STANDARDS.					<ol> <li>EROSION PROTECTION TO BE PROVIDED AROUND ALL STORM CBS AND CBMHS. ENSURE POSITIVE DRAINAGE TOWARDS NEW CBS AND CBMHS (SUCH AS SILT SACKS - SEE DETAIL).</li> </ol>
GENERAL NOTES FOR	GRADING				<ol> <li>ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AS THE PROJECT PROGRESSES. CONTRACTOR TO PROVIDE ALL ADDITIONAL EROSION CONTROL STRUCTURES.</li> </ol>
1. IT SHALL BE THE BUILDER'S RESPONSIBILITY TO ENSURE THAT GRADING AROUND HYDRANTS, TRANSFORMERS, AND UTILITY PEDESTALS, ETC., MEET CURRENT CITY OF OTTAWA, HYDRO AND UTILITY COMPANY					<ol> <li>EROSION CONTROL STRUCTURES TO REMAIN IN PLACE UNTIL ALL DISTURBED GROUND SURFACES HAVE BEEN RE-STABILIZED.</li> </ol>
2. ALL GROUND SURFACES SHALL BE EVENLY GRADED WITHOUT PONDING AREAS AND WITHOUT LOW POINTS					6. NO ALTERNATE METHODS OF EROSION PROTECTION SHALL BE PERMITTED UNLESS APPROVED BY THE ENGINEER AND THE CITY OF OTTAWA.
<ul><li>EXCEPT WHERE APPROVED SW.</li><li>3. CONTRACTOR TO ADJUST EXIST VALVE BOXES TO FINAL GRADE</li></ul>	G CATCH BASINS, MANHOLE			AMBERS AND	<ol> <li>CONTRACTOR TO CLEAN ROADWAY AND SIDEWALKS OF SEDIMENTS RESULTING FROM CONSTRUCTION TRAFFIC FROM THE SITE EACH DAY. USE OF MUD MAT AT ENTRANCES TO MITIGATE SOIL TRANSFER OUTSIDE OF SITE (SEE DETAIL).</li> </ol>
ADJACENT BUILDINGS DURING E	<ol> <li>CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING FOUNDATIONS OF ADJACENT BUILDINGS DURING EXCAVATION AND CONSTRUCTION PERIOD.</li> <li>GRADING IN GRASSED AREAS WILL BE BETWEEN 2% TO 7%. GRADES IN EXCESS OF 7% WILL REQUIRE A</li> </ol>				8. CONTRACTOR MUST REMOVE EROSION AND SEDIMENTATION FENCING PRIOR TO COMPLETION OF PROJECT. CONTRACTOR TO HAVE EROSION AND SEDIMENTATION FENCE INSPECTED WHEN VEGETATION HAS ESTABLISHED, BUT PRIOR TO FENCE BECOMING OVERGROWN. ENGINEER'S REPRESENTATIVE TO DETERMINE IF VEGETATION HAS REACHED THE CRITICAL POINT AND WILL THEN INSTRUCT CONTRACTOR TO REMOVE FENCE.
MAXIMUM 3:1 TERRACING.					9. CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL AND HAVE APPROPRIATE EQUIPMENT ON THE SITE TO
					IMPLEMENT DUST CONTROL MEASURES AT THE DISCRETION OF THE CITY OF OTTAWA.

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## DRCED CONCRETE STORM SEWER PIPE SHALL BE IN ACCORDANCE WITH CSA A257.2 (LATEST IT). ALL NON-REINFORCED CONCRETE STORM SEWER PIPE SHALL BE IN ACCORDANCE WITH CSA A257. L IENDMENT). PIPE SHALL BE JOINTED WITH STD. RUBBER GASKETS AS PER CSA A257.3 (LATEST

## AND SEDIMENT CONTROL

## WATERMAIN NOTES

- 1. ALL WATERMAIN MATERIALS AND INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE STANDARDS AND SPECIFICATIONS OF THE CITY OF OTTAWA, ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
- 2. NO WORK SHALL COMMENCE UNLESS A CITY WATER WORKS INSPECTOR IS ON SITE. WATERMAIN CONNECTIONS BY CITY OF OTTAWA FORCES WITH ALL EXCAVATION BACKFILL AND ROAD REINSTATEMENT BY CONTRACTOR.
- 3. ALL PVC WATERMAINS SHALL BE EQUAL TO AWWA C-900 CLASS 150, SDR 18, OR APPROVED EQUAL.
- 4. WATERMAINS TRENCH AND BEDDING SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD W17, UNLESS OTHERWISE SPECIFIED. BEDDING AND COVER MATERIAL SHALL BE SPECIFIED BY PROJECT GEOTECHNICAL ENGINEER.
- 5. ALL PVC WATERMAINS SHALL BE INSTALLED WITH A 10 GAUGE STRANDED COPPER TWU OR RWU TRACER WIRE IN ACCORDANCE WITH CITY OF OTTAWA STD. W36.
- 6. WATER SERVICES ARE TO BE TYPE K SOFT COPPER AS PER CITY OF OTTAWA STD. W26 UNLESS OTHERWISE SPECIFIED. ALL WATER SERVICES CROSSING SEWERS ARE TO BE INSTALLED AS PER CITY OF OTTAWA STD. W38. WATER SERVICES SHALL BE MARKED WITH A "50MM X IOOMM", EXTENDING FROM THE INVERT TO 1.0M ABOVE GRADE PAINTED BLUE. STAND POSTS/SHUT-OFFS SHALL BE INSTALLED AT THE PROPERTY LINE.
- 7. CATHODIC PROTECTION IS REQUIRED ON ALL METALLIC FITTINGS AS PER CITY OF OTTAWA STD. W40 AND W42.
- 8. VALVE BOXES SHALL BE INSTALLED AS PER CITY OF OTTAWA DETAIL W24.
- 9. ALL FIRE HYDRANTS TO BE INSTALLED AS PER CITY STANDARD W19 AND LOCATED AS PER CITY STANDARD W18 AND/OR CITY STANDARD CROSS SECTIONS.
- 10. ALL WATERMAINS TO BE INSTALLED AT MINIMUM COVER OF 2.4M.
- 11. THRUST BLOCKS AND RESTRAINT AS PER CITY OF OTTAWA DWGS: W25.3 AND W25.4, W25.5 AND W25.6.
- 12. IF WATERMAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS LESS THAN HALF THAT RECOMMENDED BY THE MANUFACTURER.
- 13. DISINFECTION AND TESTING OF WATERMAIN TO BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS.
- 14. WATER METERS TO BE INSTALLED AS PER W30 FOR WATER SERVICES.
- 15. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY CAPS, PLUGS AND BLOW-OFFS AND NOZZLES REQUIRED FOR TESTING AND DISINFECTION OF THE WATERMAN.
- 16. INSULATION FOR WATERMAIN CROSSING OVER AND BELOW SEWER SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. W25.2 AND W25, RESPECTIVELY, WHERE WATERMAN COVER IS LESS THAN 2.4M.
- 17. WHERE THE SEPARATION BETWEEN SERVICES AND MANHOLES IS LESS THAN 1.2M, WATER SERVICES ARE TO BE INSULATED AS PER CITY OF OTTAWA STD. W23.
- 18. AS PER CITY GUIDELINE, THE MINIMUM VERTICAL CLEARANCE BETWEEN WATERMAIN AND SEWER / UTILITY IS 0.25M FOR CROSSING OVER THE SEWER, AS PER CITY STD W25.2. FOR CROSSING UNDER SEWER, THE MINIMUM VERTICAL CLEARANCE IS 0.50M AS PER CITY STD. W25. FOR CROSSING UNDER SEWER, ADEQUATE STRUCTURAL SUPPORT FOR THE SEWERS IS REQUIRED TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING. THE LENGTH OF WATER PIPE SHALL BE CENTERED AT THE POINT OF CROSSING SO THAT THE JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER.

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