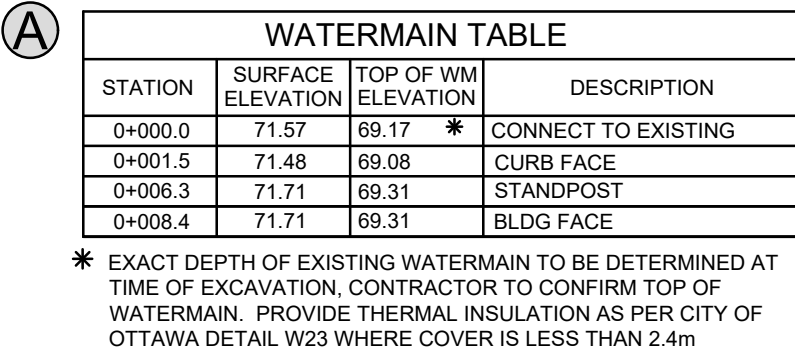




- 1) COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
- 2) DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME RESPONSIBILITY FOR ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THIS DRAWING.
- 3) OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA BEFORE COMMENCING CONSTRUCTION.
- 4) BEFORE COMMENCING CONSTRUCTION OBTAIN AND PROVIDE PROOF OF COMPREHENSIVE, ALL RISK AND OPERATIONAL LIABILITY INSURANCE FOR \$2,000,000.00 INSURANCE POLICY TO NAME OWNERS, ENGINEERS AND ARCHITECTS AS CO-INSURED.
- 5) RESTORE ALL DISTURBED AREAS ON-SITE AND OFF-SITE, INCLUDING TRENCHES AND SURFACES ON PUBLIC ROAD ALLOWANCES TO EXISTING CONDITIONS OR BETTER TO THE SATISFACTION OF THE CITY OF OTTAWA AND ENGINEER.
- 6) REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL, ORGANIC MATERIAL, AND LANDFILL OTHER THAN THAT INSTRUCTED BY ENGINEER. EXCAVATE AND REMOVE FROM SITE ANY CONTAMINATED MATERIAL. ALL CONTAMINATED MATERIAL SHALL BE DISPOSED OF AT A LICENSED LANDFILL FACILITY.
- 7) ALL ELEVATIONS ARE GEODETIC.
- 8) REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARDSURFACE AREAS AND DIMENSIONS.
- 9) REFER TO STORMWATER MANAGEMENT REPORT (R-2011-110) PREPARED BY NOVATECH ENGINEERING CONSULTANTS LTD.
- 10) SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10).
- 11) PROVIDE LINE/PARKING PAINTING.
- 12) CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES INDICATING THE SERVICE TO BE PROVIDED. INFORMATION SHOWN ON THIS PLAN AS WELL AS INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND TIE ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRAULIC LOCATIONS, TWM ELEVATION CHANGES AND ANY ALTERNATE CHANGES.
- 13) REFER TO GEOTECHNICAL REPORT (No. PG 2232-1, DATED NOV. 24, 2010) PREPARED BY PATERSON GROUP FOR SUBSURFACE CONDITIONS, CONSTRUCTION RECOMMENDATIONS, AND GEOTECHNICAL INSPECTION REQUIREMENTS. THE CONSULTANT SHALL CONSULT WITH AND REVIEW ON-SITE CONDITIONS AFTER EXCAVATION PRIOR TO PLACEMENT OF THE GRANULAR MATERIAL.
- 14) ALL MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS AND ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS. ONTARIO PROVINCIAL STANDARDS WILL APPLY WHERE THERE ARE NO STANDARDS SET BY THE CITY OF OTTAWA.
- 15) ALL PRIVATE APPROACHES MUST BE CONSTRUCTED AS PER CITY SPECIFICATION SC13.

ITEM	SPEC. NO.	REFERENCE
CATCHBASIN (600x600mm)	705.010	OPSD
STORM / SANITARY MANHOLE (1200x0)	400.020	OPSD
18" FRAME & COVER	400.020	OPSD
STORM / SANITARY MH FRAME & COVER	401.010	OPSD
SEWER TRENCH - BEDDING (GRANULAR A)		OPSD
COVER (GRANULAR A OR GRANULAR B TYPE I, WITH MAXIMUM PARTICLE SIZE=25mm)		OPSD
STORM SEWER	PVC DR 35	
SANITARY SEWER	PVC DR 35	
CATCHBASIN LEAD	PVC DR 35	
INSULATE ALL PIPES (SANITARY) THAT HAVE LESS THAN 2.0m COVER WITH 50mmX200mm H40 INSULATION. PROVIDE 150mm LEAKAGE BETWEEN PIPE AND INSULATION.		
SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0%.		
PIPE BEDDING, COVER AND BACKFILL ARE TO BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. THE USE OF CLEAR CRUSHED STONE AS A BEDDING LAYER SHALL NOT BE PERMITTED.		
FLEXIBLE CONNECTIONS ARE REQUIRED FOR CONNECTING PIPES TO MANHOLES (FOR EXAMPLE KOR-N-SNAIL, PSX, POSITIVE SEAL AND DURA SEAL). THE CONCRETE CRADLE FOR THE PIPE CAN BE ELIMINATED.		
THE OWNER SHALL REQUIRE THAT THE SITE SERVISING CONTRACTOR PERFORM FIELD TESTS FOR QUALITY CONTROL, OF ALL SANITARY SEWERS. LEAKAGE TESTING SHALL BE PERFORMED IN ACCORDANCE WITH OPSDS 410.07.16, 410.07.16.04 AND 407.04.2. DYE TESTING IS TO BE COMPLETED ON ALL SANITARY SERVICES TO CONFIRM PROPER CONNECTION TO THE SANITARY SEWER MAIN. THE FIELD TESTS SHALL BE PERFORMED IN THE PRESENCE OF A CERTIFIED PROFESSIONAL ENGINEER WHO SHALL SUBMIT A CERTIFIED COPY OF THE TEST RESULTS.		
STORM MANHOLES AND CBHMS ARE TO HAVE 300mm SLIPS UNLESS OTHERWISE INDICATED.		
CONTRACTOR TO TELEVIEW (CCTV) ALL PROPOSED SEWERS.		
FINAL PORT BACKWATER VALVES ARE REQUIRED ON THE SANITARY SERVICES, INSTALLED AS PER THE MANUFACTURERS RECOMMENDATIONS AND A BACKWATER VALVE IS REQUIRED ON THE EXISTING SANITARY DRAINAGE DRAINING FORWARD BUILDING. INSTALLED AS PER STD. DWG S14.		
REINSTATE ALL EXISTING PAVEMENT CURBS AND BOULEVARDS.		
ALL EXISTING SANITARY AND STORM SERVICES TO BE CAPPED AT THE PROPERTY LINE TO THE SATISFACTION OF THE CITY OF OTTAWA SEWER OPERATIONS.		

1) SPECIFICATIONS:	SPEC. No.	REFERENCE
ITEM		
WATERMAIN TRENCHING	W17	CITY OF OTTAWA
INTERNAL INSULATION IN SHALLOW TRENCHES	W22	CITY OF OTTAWA
WATERMAIN CROSSING BELOW SEWER	W25	CITY OF OTTAWA
WATERMAIN (150mm)	PVC R 18	PVC R COPPER
WATERMAIN (50mm)	W23	CITY OF OTTAWA
TRENCH INSULATED AT OPEN STRUCTURE	W23	CITY OF OTTAWA
19mm WATER SERVICE CONNECTIONS	W30	CITY OF OTTAWA
50mm WATER SERVICE CONNECTIONS	W30	CITY OF OTTAWA
WATER SERVICE INSTALLATION AT SEWER CROSSING	W38	CITY OF OTTAWA
2) SUPPLY AND CONSTRUCT ALL WATERMAINS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARD AND SPECIFICATIONS. EXCAVATION, INSTALLATION, BACKFILL, TESTING AND COMPLETION SHALL BE MANAGED BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAIN AND CHLORINATION OF THE WATER SYSTEM SHALL BE PERFORMED BY CITY OFFICIALS.		
3) WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED. OTHERWISE THERMAL INSULATION IS REQUIRED AS PER STD. DWG W22.		
4) PROVIDE MINIMUM 0.50m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS.		
5) WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1M OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.		
6) ALL EXISTING WATER SERVICES TO BE SHUT ANKEN AT MAIN BY CITY FORCES.		



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| | SITE PROPERTY LINE |
| | MISC LEGAL LINE (EASEMENT, PROPERTY LINES) |
| | REFER TO LEGAL PLAN FOR DETAILS |
| | PROPOSED SEWER |
| | PROPOSED SIDEWALK |
| | PROPOSED CURB |
| | PROPOSED DEPRESSED CURB |
| | SWALE c/w SUBDRAIN |
| | DIRECTION OF FLOW |
| | PROPOSED SANITARY SERVICE |
| | PROPOSED STORM SEWER AND MANHOLE |
| | PROPOSED STORMWATER MANAGEMENT PIPE |
| | PROPOSED CATCHBASIN MANHOLE |
| | PROPOSED CATCHBASIN |
| | PROPOSED LANDSCAPE DRAIN |
| | PROPOSED WATER MAIN |
| | PROPOSED VALVE AND VALVE BOX |
| | PROPOSED TOP OF BOTTOM FLANGE |
| | EXISTING UTILITY POLE c/w GUY WIRES |
| | EXISTING WATERMAIN c/w VALVE & LEAD CHAMBER |
| | EXISTING HYDRANT c/w VALVE & LEAD |
| | EXISTING COMBINED MANHOLE & SEWER |

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|--|--------------------------------|
| <i>STM</i> <i>MH</i>  | EXISTING STORM MANHOLE & SEWER |
| <i>CB</i>  | EXISTING CATCHBASIN |
|  <i>X</i>  | EXISTING FENCE |
|  | EXISTING TRAFFIC SIGNAL |
|  <i>T</i>  | EXISTING TRAFFIC WIRE |
|   | EXISTING GAS MAIN |
|  <i>COM</i>  | EXISTING COMBINED SEWER |
|   | EXISTING HYDRO |
|  <i>OHW</i>  | EXISTING OVERHEAD HYDRO |
|  <i>SL</i>  | EXISTING STREETLIGHT WIRE |
|  <i>LS</i> | EXISTING LIGHT STANDARD |

NOTE:
CONTRACTOR TO CONFIRM ELEVATIONS OF
SEWERS IN STREET BEFORE EXTENDING INTO
SITE . NOTIFY ENGINEER OF ANY
DISCREPANCIES IMMEDIATELY.

		SCALE	DESIGN ART
		1 : 100	CHECKED GJ
M			DRAWN RJ
M			CHECKED ART
M			APPROVED GJ
Y			

PROJECT No.	110166-00
REV	REV.#04
DRAWING No.	110166-GF