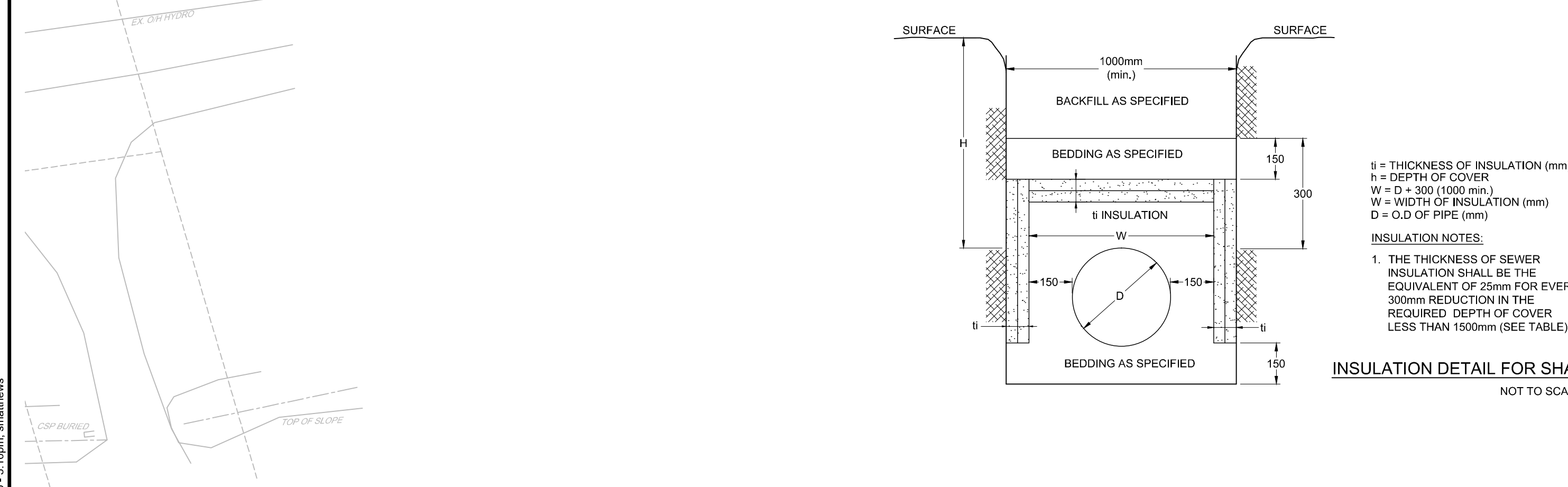
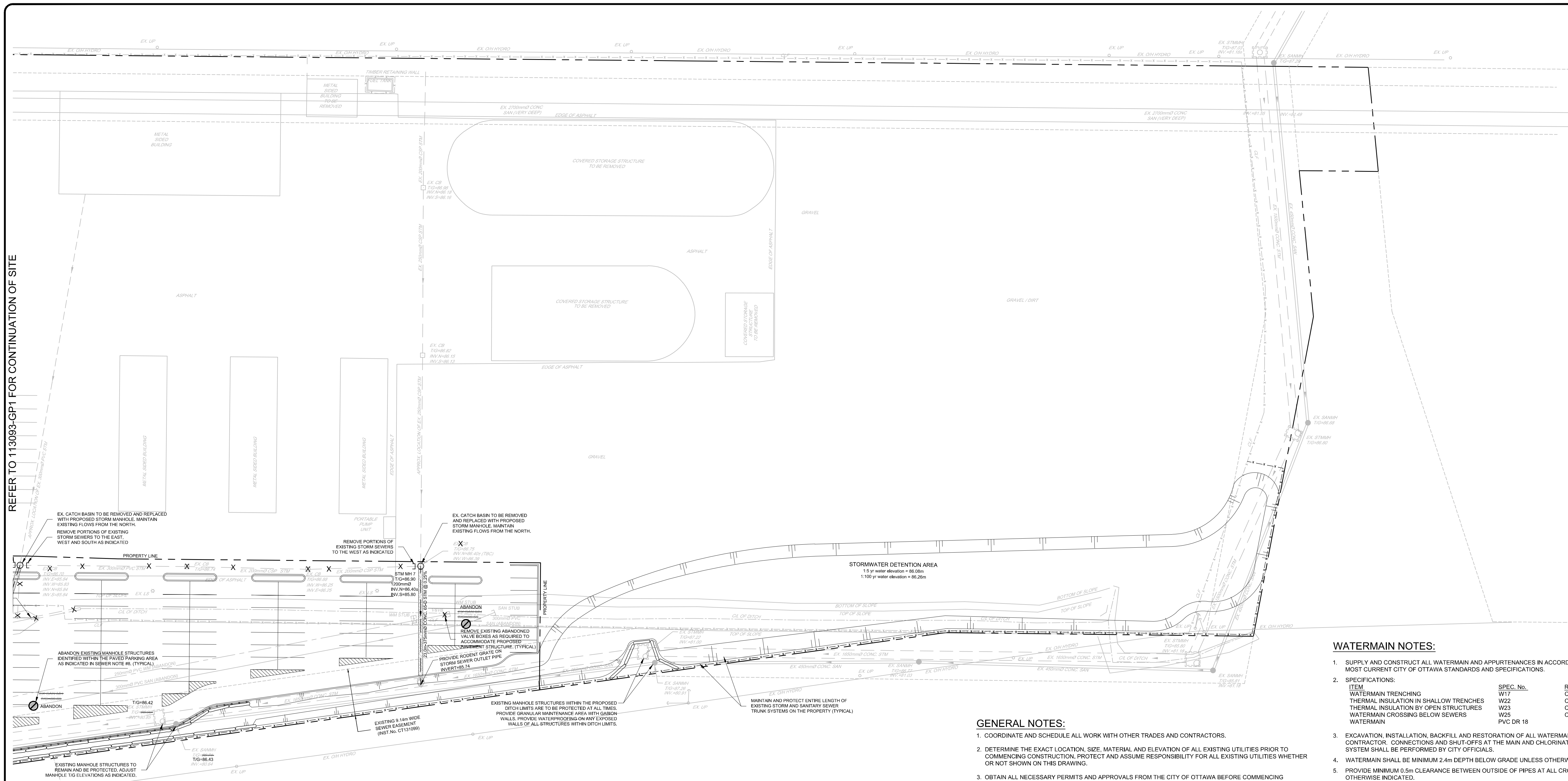
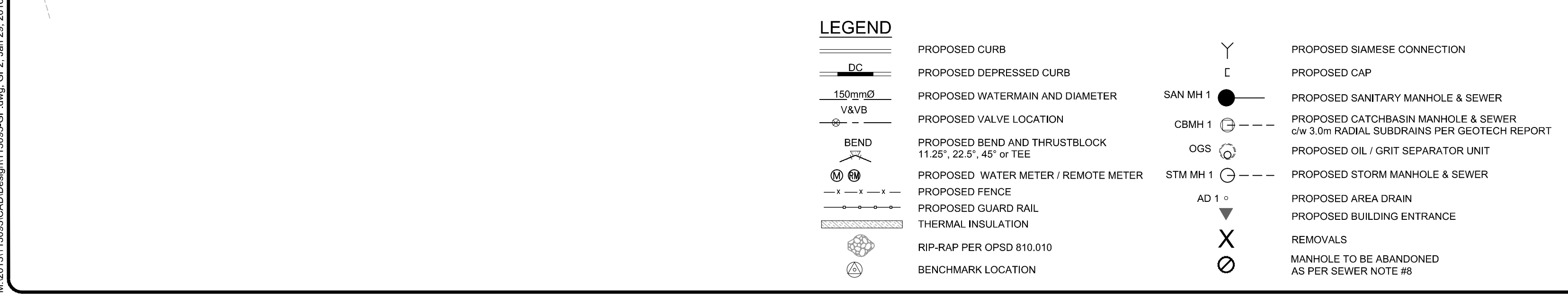


REFER TO 113093-GP1 FOR CONTINUATION OF SITE



COVER (mm)	INSULATION THICKNESS (mm)
1500-1200	50
1200-900	75
900-600	100

INSULATION DETAIL FOR SHALLOW SEWERS ONLY  
NOT TO SCALE



- GENERAL NOTES:**
- COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
  - 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.
  - OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA BEFORE COMMENCING CONSTRUCTION.
  - 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.
  - 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.
  - REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL UNLESS OTHERWISE INSTRUCTED BY ENGINEER. EXCAVATE AND REMOVE FROM SITE ALL ORGANIC MATERIAL AND DEBRIS.
  - ALL ELEVATIONS ARE GEODETIC.
  - REFER TO GEOTECHNICAL SUBSURFACE INVESTIGATION REPORT NO. PG3635-1 PREPARED BY PATERSON GROUP INC. FOR SUBSURFACE CONDITIONS, CONSTRUCTION RECOMMENDATIONS, AND GEOTECHNICAL INSPECTION REQUIREMENTS. THE GEOTECHNICAL CONSULTANT IS TO REVIEW ON-SITE CONDITIONS AFTER EXCAVATION FOR ALL PARKING ACCESS/ ROADWAY ACCESS, PRIOR TO PLACEMENT OF THE GRANULAR MATERIAL.
  - REFER TO THE 'DEVELOPMENT SERVICING STUDY AND STORMWATER MANAGEMENT REPORT' No. R-2015-048 PREPARED BY NOVATECH.
  - REFER TO ARCHITECTS DRAWING FOR BUILDING AND HARD SURFACE AREAS AND DIMENSIONS.
  - SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10)
  - PROVIDE LINE/PARKING PAINTING.

**INLET CONTROL DEVICE DATA - STM MH 5**

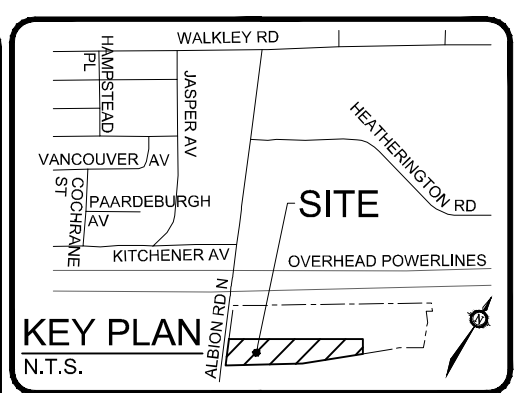
TEMPEST VORTEX ICD	DIAMETER OF OUTLET PIPE	DESIGN FLOW	DESIGN HEAD	WATER ELEVATION
IPEX LMF 95	300mm Ø	7.4 L/s	0.83 m	85.98 m

- WATERMAIN NOTES:**
- SUPPLY AND CONSTRUCT ALL WATERMAIN AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
  - SPECIFICATIONS:
 

ITEM	SPEC. No.	REFERENCE
WATERMAIN TRENCHING	W17	CITY OF OTTAWA
THERMAL INSULATION IN SHALLOW TRENCHES	W22	CITY OF OTTAWA
THERMAL INSULATION BY OPEN STRUCTURES	W23	CITY OF OTTAWA
WATERMAIN CROSSING BELOW SEWERS	W25	CITY OF OTTAWA
WATERMAIN	PVC DR 18	CITY OF OTTAWA
  - EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMANS BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAIN AND CHLORINATION OF THE WATER SYSTEM SHALL BE PERFORMED BY CITY OFFICIALS.
  - WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED.
  - PROVIDE MINIMUM 0.5m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS, UNLESS OTHERWISE INDICATED.
  - WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.

- SEWER NOTES:**
- SUPPLY AND CONSTRUCT ALL SEWERS AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
  - SPECIFICATIONS:
 

ITEM	SPEC. No.	REFERENCE
STMSAN/CATCHBASIN MANHOLE (1200Ø / 1200x1200)	701.010 / M-4	OPSDM-COIN (or APPROVED EQ)
STMSAN/CATCHBASIN FRAME AND COVER	401.010	OPSD
WATERTIGHT MANHOLE FRAME AND COVER	401.030	OPSD
CATCHBASIN (600x600)	705.010	OPSD
CATCHBASIN FRAME AND COVER	400.020	OPSD
STORM SEWER	PVC DR 35 / CONC. 65Ø	
SANITARY SEWER	PVC DR 35	
SUBDRAIN	HDPE PERF. / NON-PERF. PIPE	
SEWER TRENCH	BEDDING (GRANULAR 'A') COVER (GRANULAR 'A' OR GRANULAR 'B' TYPE I WITH MAX. PARTICLE SIZE=25mm)	
  - ALL STORM AND SANITARY SERVICE LATERALS SHALL BE EQUIPPED WITH BACKFLOW PREVENTERS AS PER THE CITY OF OTTAWA STANDARD DETAILS S14 AND S14.1 OR S14.2.
  - 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.
  - INSULATE ALL SANITARY AND STORM SEWER PIPES THAT HAVE LESS THAN 1.5m COVER WITH H-40 RIGID INSULATION. REFER TO SHALLOW SEWER INSULATION DETAIL ON DRAWING 113093-GP2. PROVIDE FROST TAPERS AS PER OPSD 803.031.
  - FLEXIBLE CONNECTIONS ARE REQUIRED FOR CONNECTING PIPES TO MANHOLES (FOR EXAMPLE KOR-N-SEAL, PSX: POSITIVE SEAL AND DURASEAL). THE CONCRETE CRADLE FOR THE PIPE CAN BE ELIMINATED.
  - ALL STORM MANHOLES AND CATCHBASIN MANHOLES ARE TO HAVE MINIMUM 300mm SUMP UNLESS OTHERWISE INDICATED. ALL CATCHBASINS ARE TO HAVE MINIMUM 600mm SUMP UNLESS OTHERWISE INDICATED. ALL STORM MANHOLES AND CATCHBASIN MANHOLES THAT HAVE ICDs INSTALLED WITHIN THE OUTLET PIPES ARE TO HAVE MINIMUM 600mm SUMP TO ACCOMMODATE THE ICD.
  - EXISTING SANITARY MANHOLES THAT ARE IDENTIFIED ON THE PLANS TO BE ABANDONED WITHIN THE NEW PAVED PARKING AREA ARE TO HAVE THE FRAME AND GRATES REMOVED ALONG WITH ANY RISER SECTIONS NECESSARY TO COMPLETE THE GRANULAR SUB-BASE FOR THE PAVEMENT. FILL THE BASE OF THE MANHOLES WITH 2" STONE TO THE OBVERT OF THE ABANDONED PIPES. FILL THE REMAINDER OF THE MANHOLE WITH SAND TO THE REQUIRED SUB-BASE ELEVATION.
  - CONTRACTOR TO TELEPHONE (CCTV) ALL PROPOSED SEWERS, 250mmØ OR GREATER TO ENSURE THAT THEY ARE CLEAN AND OPERATIONAL. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES. OBTAIN APPROVAL FROM THE CITY'S SEWER OPERATIONS.
  - THE OWNER SHALL REQUIRE THAT THE SITE SERVICING CONTRACTOR PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPSD 410.07.16, 410.07.16.04 AND 407.07.24. 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.
  - CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES INDICATING ALL APPLICABLE SERVING AS-BUILT INFORMATION SHOWN ON THIS PLAN. AS-BUILT INFORMATION MUST INCLUDE: SEWER AND WATER PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND T/G ELEVATIONS, STRUCTURE LOCATIONS AND ANY ALIGNMENT CHANGES, ETC.



The position of all pole lines, conduits, watermains, sewers and other underground and above ground utilities and structures is not necessarily shown on the contract drawings, and where shown, the accuracy of the position of such utilities and structures is not guaranteed. Before starting work, determine the exact location of all such utilities and structures and assume all liability for damage to them.

**SITE BENCHMARK**  
REFERENCED TO LOCAL GEODETIC DATUM AS INDICATED ON DRAWING. SEE EXISTING VERTICAL CONTROL MONUMENT NO. 3451 (TABLE ON FOUNDATION ON SOUTHWEST CORNER OF BUILDING LOCATED AT 309 ALBION ROAD NORTH).

**OWNER INFORMATION**  
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200 BARIBEAU STREET  
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Facsimile (613) 254-5867  
Website www.novatech-eng.com

NO.	DATE	ISSUED FOR	REVISION
1	JAN. 27, 2016	ISSUED FOR SITE PLAN APPROVAL	

**S.J.L.**  
**S. J. LAWRENCE**  
ARCHITECT INCORPORATED  
18 Deskin Street, Suite 205, Nepean, ON K2E 8B7  
Tel: (613) 739-7770 Fax: (613) 739-7703  
Email: sjl@sjlarchitect.com

DESIGNED BY	DESIGNED BY
SM	SM / FST
DATE	CHECKED BY
JANUARY 2016	FST
SCALE	PLotted
1:400	JAN. 27, 2016

**AHLUL-BAYT CENTRE OTTAWA**  
3095 ALBION ROAD NORTH  
OTTAWA, ONTARIO

NOVATECH JOB NO.: 113093-00

**GENERAL PLAN OF SERVICES**

113093-GP2