

STATION	SURFACE ELEVATION	T/WM ELEVATION	COMMENTS
0+00	77.25	74.50	CONNECTION TO EX. 150mmØ WATERMAIN
0+02.5	77.30	74.55	150mmØ VALVE AND VALVE BOX
0+04.3	77.33	74.60	CROSS BELOW EX. 50mmØ GAS (+1.7m CLEARANCE)
0+05.0	77.35	74.60	CAP 1.0m FROM BUILDING FACE

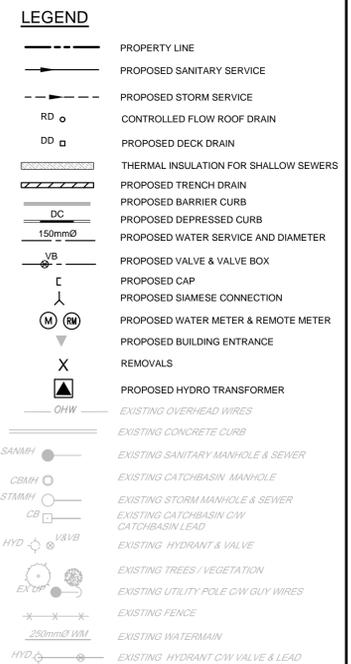
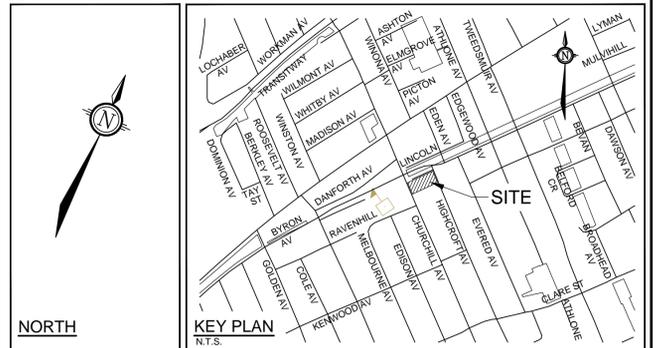
NOT FOR CONSTRUCTION

BYRON AVENUE

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 MATERIAL	PVC DR 18 (100mm AND LARGER)	
- 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. EXCAVATION, INSTALLATION OF SERVICE, BACKFILL AND RESTORATION BY THE CONTRACTOR.
- 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.



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 \$5,000,000.00. 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 MUNICIPAL AUTHORITIES.
- REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL, ORGANIC MATERIAL AND DEBRIS UNLESS OTHERWISE INSTRUCTED BY ENGINEER. EXCAVATE AND REMOVE FROM SITE ANY CONTAMINATED MATERIAL. ALL CONTAMINATED MATERIAL SHALL BE DISPOSED OF AT A LICENSED LANDFILL FACILITY.
- ALL ELEVATIONS ARE GEODETIC.
- REFER TO GEOTECHNICAL INVESTIGATION (PG4712-1) DATED FEBRUARY 25, 2019, PREPARED BY PATERSON GROUP FOR SUBSURFACE CONDITIONS, CONSTRUCTION RECOMMENDATIONS AND GEOTECHNICAL INSPECTION REQUIREMENTS, THE GEOTECHNICAL CONSULTANT IS TO REVIEW ON-SITE CONDITIONS AFTER EXCAVATION PRIOR TO PLACEMENT OF THE GRANULAR MATERIAL.
- REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARD SURFACED AREAS AND DIMENSIONS.
- REFER TO THE DEVELOPMENT SERVICING STUDY AND STORMWATER MANAGEMENT REPORT (R-2019-013) PREPARED BY NOVATECH.
- SAW CUT AND KEYGRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE-IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10).

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.
STORM SERVICE	PVC DR 35
SANITARY SERVICE	PVC DR 35
SEWER TRENCH	BEDDING (GRANULAR 'A') COVER (GRANULAR 'A' OR GRANULAR 'B' TYPE I WITH MAXIMUM PARTICLE SIZE=25mm)
- THE SANITARY SERVICE LATERAL SHALL BE EQUIPPED WITH BACKFLOW PREVENTERS WITHIN THE BUILDING FOOTPRINT AS PER CITY OF OTTAWA STANDARD DETAILS S14.1 OR S14.2. REFER TO MECHANICAL PLANS FOR DETAILS.
- 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 SEWER PIPES THAT HAVE LESS THAN 1.5m COVER WITH UP TO 125mm THICK HI-40 RIGID INSULATION.
- CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES INDICATING ALL APPLICABLE SERVICING AS-BUILT INFORMATION SHOWN ON THIS PLAN. AS-BUILT INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND TIG ELEVATIONS, STRUCTURE LOCATIONS AND ANY ALIGNMENT CHANGES, ETC.
- 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 OPSS 410.07.16, 410.07.16.04 AND 407.07.24. DYE TESTING IS TO BE COMPLETED ON ALL SANITARY SEWERS 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.

DESIGN EVENT	CONTROLLED FLOW FROM STORAGE TANK	STORAGE TANK VOLUME	
		REQUIRED	PROVIDED
1.5 YR	9.9 L/s	18.1 m³	> 45.0 m³
1:100 YR	11.8 L/s	44.0 m³	

NOTES:

- ALL DRAINAGE FROM AREA R-1 (PROPOSED ROOFTOP OPEN AREA) AND ALL ROOFTOP/PATIO DRAINS TO BE DIRECTED TO THE INTERNAL STORMWATER STORAGE TANK. REFER TO THE ARCHITECTURAL AND MECHANICAL PLANS FOR DETAILS.
- REFER TO STRUCTURAL PLANS FOR EXACT SIZE AND DETAILS OF INTERNAL STORMWATER STORAGE TANK.
- REFER TO ARCHITECTURAL AND MECHANICAL PLANS FOR LOCATION AND CONNECTIONS TO INTERNAL STORMWATER STORAGE TANK.

DESIGN EVENT	PRE-DEVELOPMENT CONDITIONS		POST-DEVELOPMENT CONDITIONS			
	UNCONTROLLED FLOW (L/s)	ALLOWABLE RELEASE RATE (L/s)	A-0 FLOW (L/s)	R-1 FLOW (L/s)	TOTAL FLOW (L/s)	REDUCTION IN FLOW (L/s OR %)
1.5 YR	36.8	27.7	6.9	9.9	16.8	20.0 or 54%
1:100 YR	71.0	27.7	13.5	11.8	25.3	45.7 or 64%

* REDUCED FLOW COMPARED TO PRE-DEVELOPMENT UNCONTROLLED CONDITIONS

DESIGN EVENT	ICD TYPE (HYDROVEX MODEL)	DIAMETER OF OUTLET PIPE (mm)	DESIGN FLOW (L/s)	DESIGN HEAD (m)	WATER ELEVATION (m)	VOLUME (m³)	AVAILABLE STORAGE
1.5 YR	HYDROVEX (100 VHV-1)	200mmØ PVC	9.9	0.99	74.69	18.1	> 45 m³
1:100 YR			11.8	1.39	75.09	44.0	

PRELIMINARY

OWNER INFORMATION
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 165 PRETORIA AVENUE,
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 CONTACT: SIMON SI
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 SIMONSI@ROYALLEPAGE.CA

SCALE: 1:150

FOR REVIEW ONLY

DESIGN: FST / SM
 CHECKED: FST
 DRAWN: SM
 CHECKED: FST / SM
 APPROVED: FST

1 ISSUED FOR SITE PLAN APR 5/19 FST

No. REVISION DATE BY

FOR REVIEW ONLY

PROFESSIONAL ENGINEER
 F.S. THAUVERTE
 100041399
 APR 5, 2019
 PROVINCE OF ONTARIO

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LOCATION
 CITY OF OTTAWA
 472 BYRON PLACE - BYRON PLACE APARTMENTS

DRAWING NAME
 GENERAL PLAN OF SERVICES

PROJECT No.
 118024

REV
 REV #1

DRAWING No.
 118024-GP

NOTE:
 THE POSITION OF ALL POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND 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.

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