

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 AND CONSERVATION AUTHORITY 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 AND 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 AND ENGINEER.
- 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 ARCHITECTS' AND LANDSCAPE ARCHITECTS' DRAWINGS FOR BUILDING AND HARDSURFACE AREAS AND DIMENSIONS.
- REFER TO SERVICING AND STORMWATER MANAGEMENT REPORT (R-2013-039) PREPARED BY NOVATECH ENGINEERING CONSULTANTS LTD.
- 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.
- CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES INDICATING ALL SERVICING AS-BUILT INFORMATION SHOWN ON THIS PLAN. AS-BUILT INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND T/G ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, TWM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.

WATERMAIN NOTES:

- SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
WATERMAIN STANDARD TRENCH DETAIL	W17	CITY OF OTTAWA
THERMAL INSULATION FOR WATERMAIN IN SHALLOW TRENCHES	W22	CITY OF OTTAWA
WATERMAIN CROSSING BELOW SEWER	W25	CITY OF OTTAWA
WATERMAIN (FIRE PROTECTION)	PVC DR 18	
WATER MAIN (BUILDING SERVICE) POLYETHYLENE (PE)	160 PSI RATED	
- SUPPLY AND CONSTRUCT ALL WATERMANS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. 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 0.30m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS.
- WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.
- WATER DEMAND = 8,400L/day (HOULE CHEVRIER)

STATION	SURFACE ELEVATION	TOP OF WM ELEVATION	DESCRIPTION
1+00.0	93.70	91.35	PROPOSED DRY HYDRANT
1+02.1	93.76	91.35	45° HORIZONTAL BEND
1+04.2	93.76	91.35	45° HORIZONTAL BEND
1+15.9	93.88	91.35	CROSSING BELOW 200mmØ STORM SEWER (CLEARANCE = 1.85m)
1+20.0	93.88	91.35	---
1+40.0	93.91	91.35	---
1+43.5	93.91	91.35	CROSSING BELOW 200mmØ STORM SEWER (CLEARANCE = 1.85m)
1+55.5	93.97	91.35	45° HORIZONTAL BEND
1+57.6	93.97	91.35	45° HORIZONTAL BEND
1+60.0	93.85	91.35	PROPOSED DRY HYDRANT

STATION	SURFACE ELEVATION	TOP OF WM ELEVATION	DESCRIPTION
2+00.0	93.70	91.35	PROPOSED HYDRANT
2+03.0	93.92	91.35	---
2+06.0	93.95	91.35	CAP

STATION	SURFACE ELEVATION	TOP OF SLEEVE	DESCRIPTION
3+00.0	92.33	91.40	END OF FUTURE WATERMAIN SLEEVE
3+10.0	93.80	91.40	---
3+20.0	93.90	91.40	---
3+30.0	93.90	91.40	---
3+35.5	94.00	91.40	END OF FUTURE WATERMAIN SLEEVE

*PROVIDE THERMAL INSULATION AS PER CITY OF OTTAWA DETAIL W22 WHERE COVER IS LESS THAN 2.4m

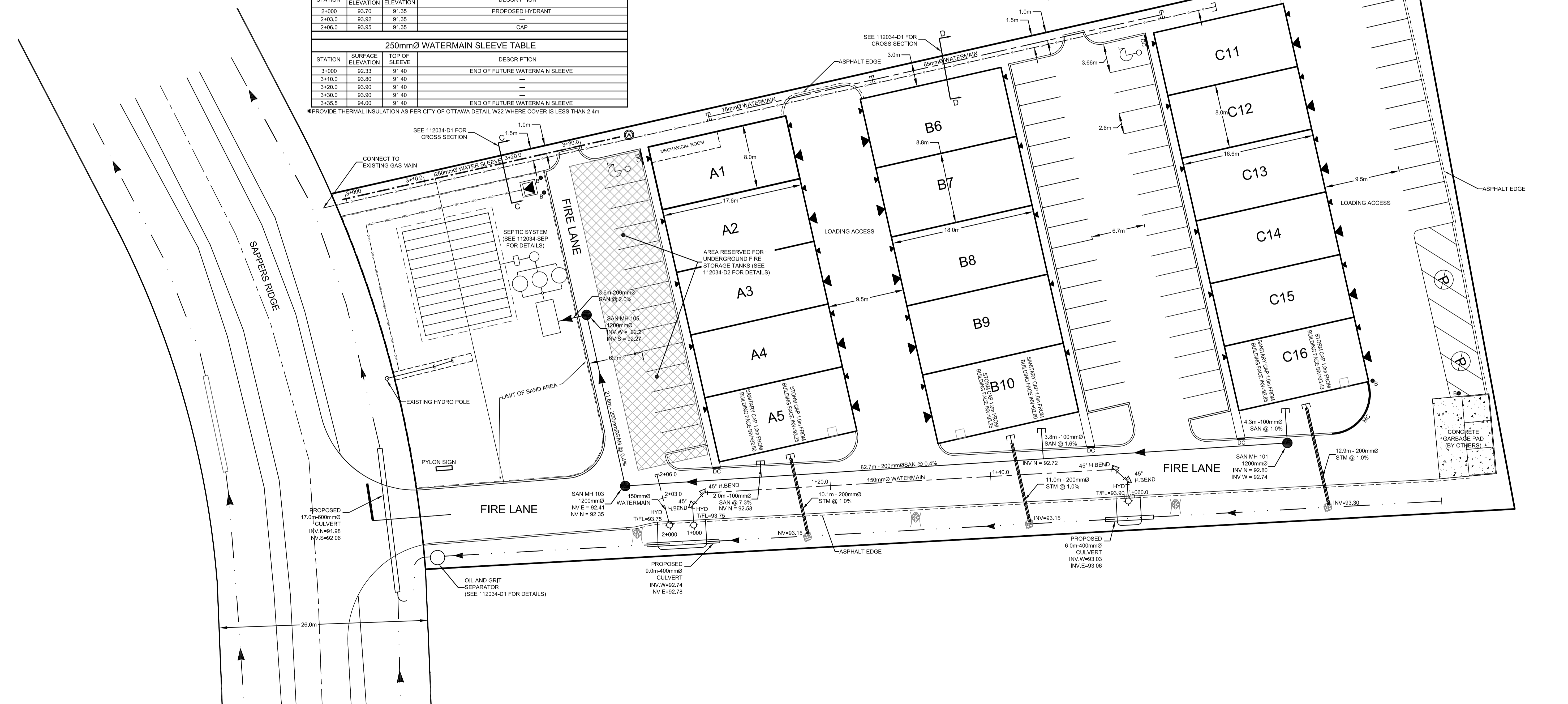
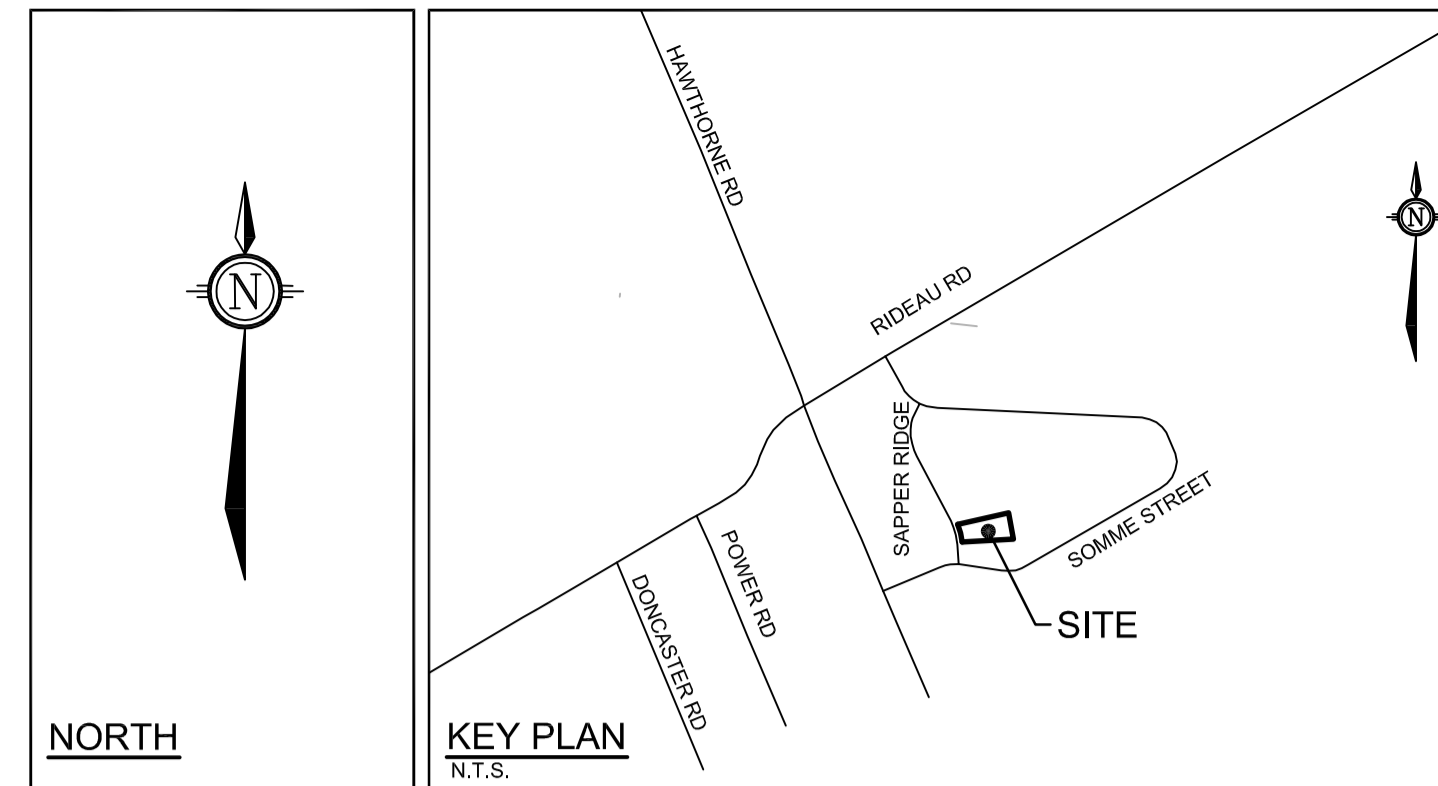
SEWER NOTES:

- SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
PRECAST CONCRETE MAINTENANCE HOLE, 1200mmØ	701.010	OPSD
CAST IRON SQUARE FRAME WITH SQUARE OVERFLOW TYPE DISHED GRATE FOR CATCH BASINS, HERRING BONE OPENINGS	401.010	OPSD
SEWER TRENCH - BEDDING (GRANULAR A) COVER (GRANULAR A OR GRANULAR B TYPE I, WITH MAXIMUM PARTICLE SIZE=25mm)		
SANITARY SEWER	PVC DR 35	
STORM SEWER	PVC DR 35	
- INSULATE ALL PIPES (SAN/STM) THAT HAVE LESS THAN 1.5m COVER WITH 50mmX1200mm HI-40 INSULATION. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION.
- SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0% UNLESS OTHERWISE INDICATED.
- PIPE BEDDING, COVER AND BACKFILL ARE TO BE COMPACTED TO AT LEAST xx% 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-SEAL, PSX: POSITIVE SEAL AND DURASEAL). THE CONCRETE CRADLE FOR THE PIPE CAN BE ELIMINATED.

LEGEND

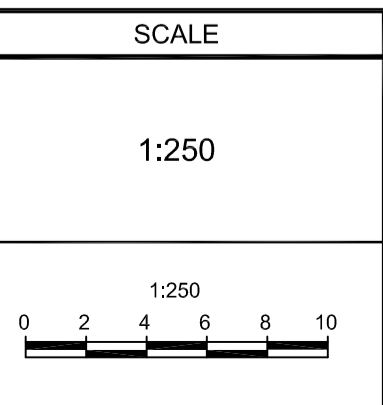
- PROPOSED BARRIER CURB
- DC PROPOSED DEPRESSED CURB
- MC PROPOSED MOUNTABLE CURB
- ASPHALT EDGE (PERMALOC - SEE 112034-D1 FOR DETAILS)
- 150mmØ PROPOSED WATERMAIN AND DIAMETER
- HYD T/FL=93.75 PROPOSED DRY HYDRANT
- PROPOSED BEND AND THRUSTBLOCK 11.25°, 22.5°, 45° or TEE
- SAN MH 101 PROPOSED SANITARY MH & SEWER
- PROPOSED INSULATED STORM OUTLET
- DIRECTION OF FLOW
- PROPOSED WATER SLEEVE (250mmØ)
- PROPOSED PROTECTIVE BOLLARD
- TRANSFORMER (BY OTHERS)
- EXISTING HYDRO POLE C/W GUY WIRES
- PROPOSED UNDERGROUND HYDRO, BELL AND FUTURE CABLE CONDUIT
- PROPOSED GAS CONDUIT
- PROPOSED RIP RAP
- PROPOSED GARAGE DOOR
- PROPOSED DOORWAY
- PROPOSED INTERIOR OIL AND GRIT SEPARATOR (BY OTHERS)
- AREA RESERVED FOR UNDERGROUND FIRE STORAGE TANK
- EXISTING WELL (APPROXIMATE LOCATION)



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.

REFER TO DETAIL PLANS 112034-D1 & 112034-D2 FOR ADDITIONAL NOTES AND DETAILS

No.	REVISION	DATE	BY
3.	ISSUED FOR SITE PLAN APPROVAL	FEB 10/14	LAB
2.	ISSUED FOR DISCUSSION	MAY 1/13	DJC
1.	ISSUED FOR DISCUSSION	APR 10/13	DJC



DESIGN LAB
CHECKED SMG
DRAWN DJC
CHECKED LAB
APPROVED SMG

FOR REVIEW ONLY

LICENSED PROFESSIONAL ENGINEER
A. BOWLEY
100081118
Feb 10 2014
PROVINCE OF ONTARIO

LICENSED PROFESSIONAL ENGINEER
S.W. GORDON
Feb 10 2014
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CITY OF OTTAWA
35 SAPPERS RIDGE - APEX SOUTH BUSINESS CENTRE

GENERAL PLAN OF SERVICES

PROJECT NO: 112034B-1
REV: REV # 3
DRAWING NO: 112034-GP

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