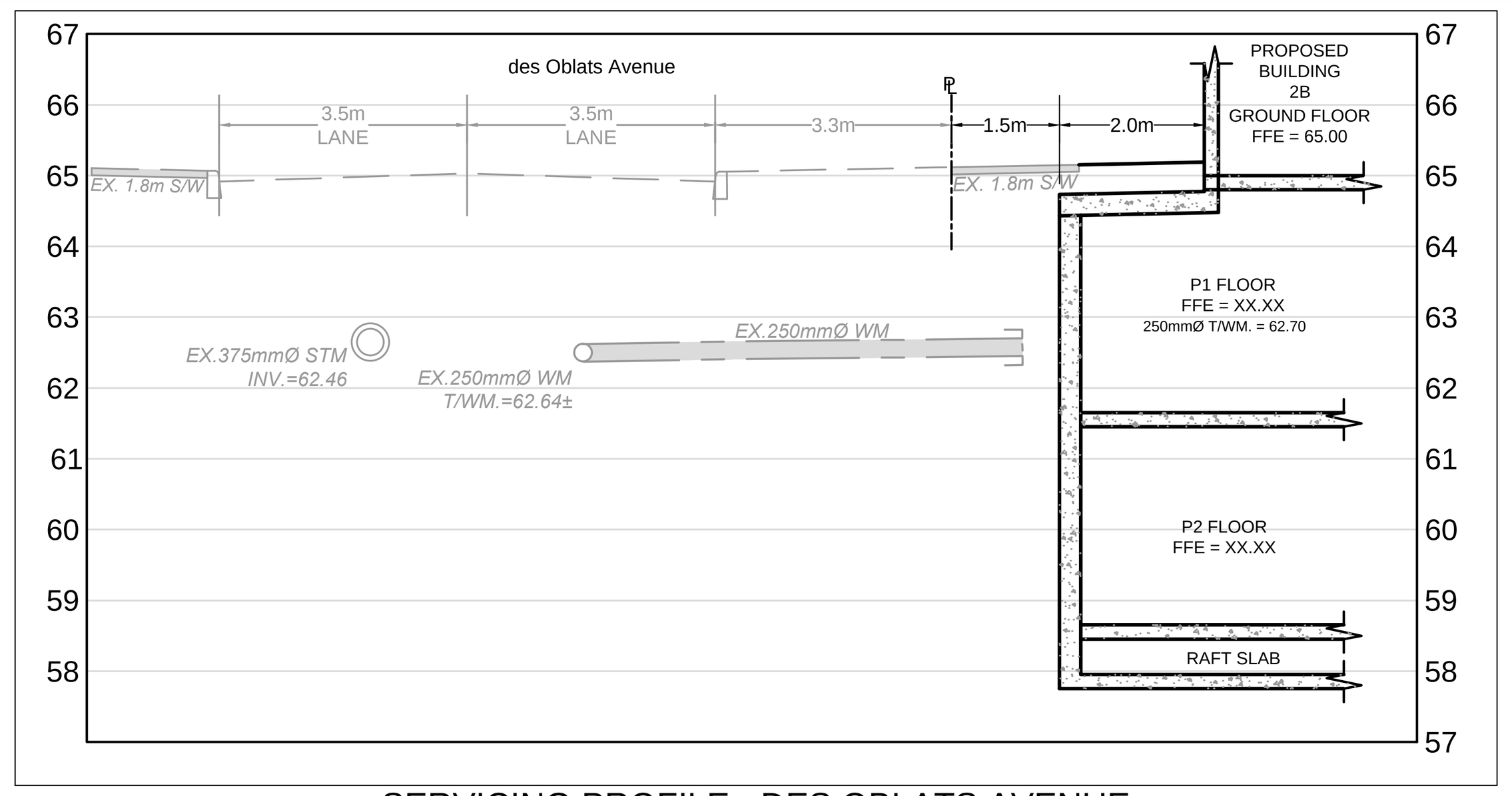
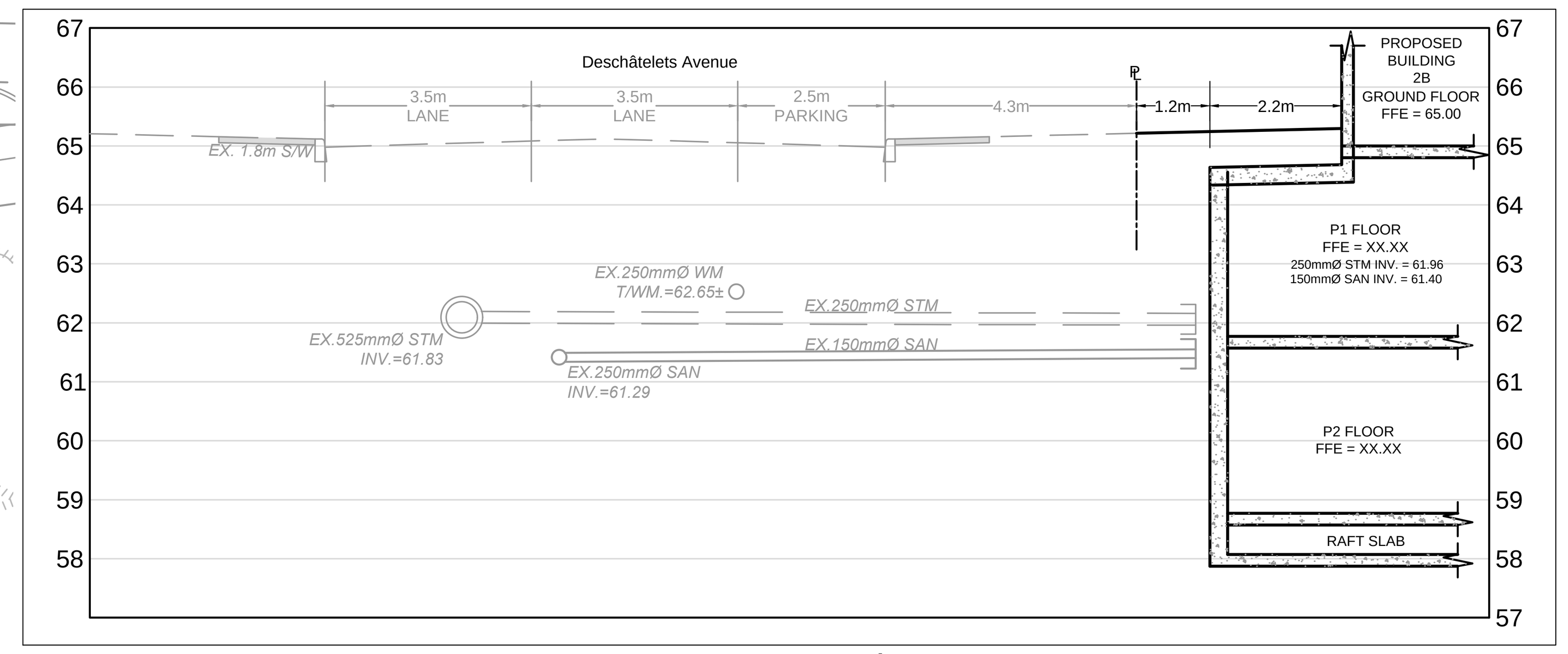


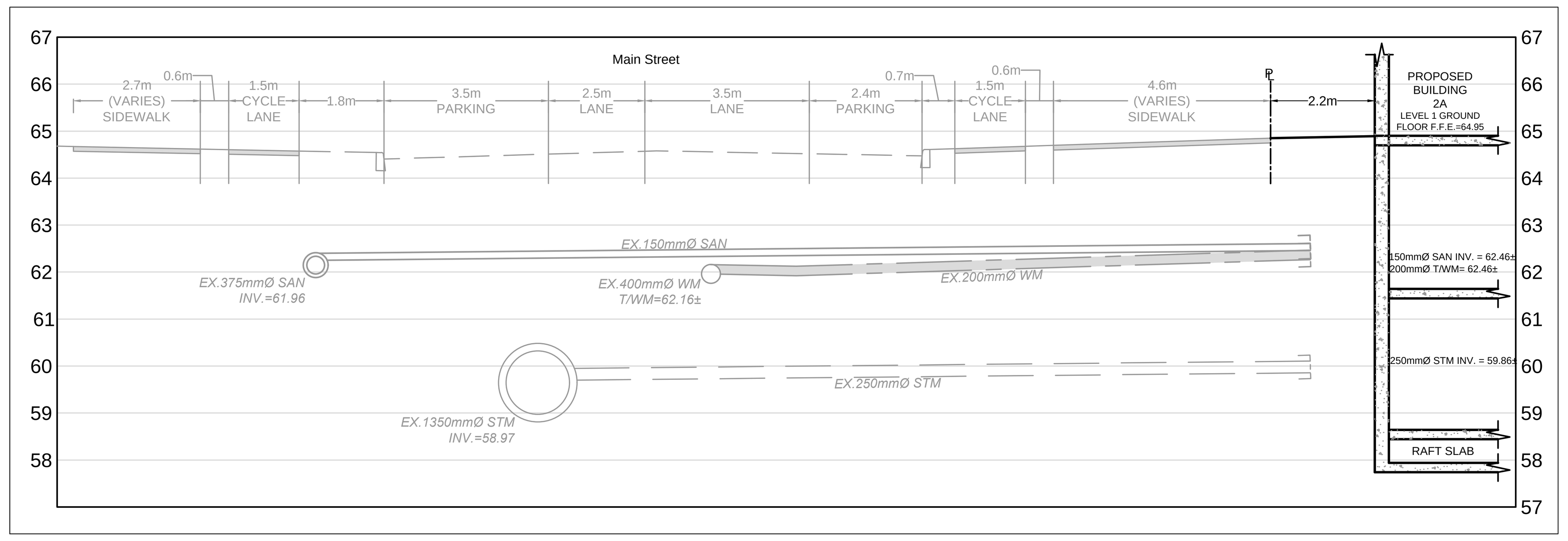
SERVICING PROFILE - DES OBLATS AVENUE

1:100



SERVICING PROFILE - DESCHÂTELETS AVENUE

1:100



SERVICING PROFILE - MAIN STREET

1:100

PROPOSED BUILDING 2A - ROOF DRAIN TABLE

AREA ID	ZURN SPECIFICATION	NOTCHES	POST DEVELOPMENT ZURN ROOFDRAIN CONTROL PARAMETERS					
			1:5 - YEAR EVENT			1:100 - YEAR EVENT		
			HEAD(m)	Q(l/s)	VOL(m^3)	HEAD(m)	Q(l/s)	VOL(m^3)
TOP ROOF	AS REQUIRED	-	-	-	-	-	-	-
REMAINDER OF ROOF	N/A	-	-	-	-	-	-	-
	TOTAL			-	-	-	-	-

ROOF AREA TOP ROOF WILL HAVE CONTROLLED ROOF DRAINS, REMAINDER OF ROOF TO HAVE UNCONTROLLED ROOF DRAINS AND WILL DIRECT CONTROLLED / UNCONTROLLED RUNOFF TO THE TANK VIA THE BUILDINGS INTERNAL PIPES BEFORE OUTLETTING TO THE STREET AT 80L/s/ha.

PROPOSED BUILDING 2B - ROOF DRAIN TABLE

AREA ID	ZURN SPECIFICATION	NOTCHES	POST DEVELOPMENT ZURN ROOFDRAIN CONTROL PARAMETERS					
			1:5 - YEAR EVENT			1:100 - YEAR EVENT		
			HEAD(m)	Q(l/s)	VOL(m^3)	HEAD(m)	Q(l/s)	VOL(m^3)
TOP ROOF	AS REQUIRED	-	-	-	-	-	-	-
REMAINDER OF ROOF	N/A	-	-	-	-	-	-	-
	TOTAL			-	-	-	-	-

ROOF AREA TOP ROOF WILL HAVE CONTROLLED ROOF DRAINS, REMAINDER OF ROOF TO HAVE UNCONTROLLED ROOF DRAINS AND WILL DIRECT CONTROLLED / UNCONTROLLED RUNOFF TO THE TANK VIA THE BUILDINGS INTERNAL PIPES BEFORE OUTLETTING TO THE STREET AT 55.09L/s.

WATERMAIN TABLE - DES OBLATS AVE (A)

(MIN COVER = 2.4m)

STATION	SURFACE ELEVATION	TOP OF WM ELEVATION	DESCRIPTION
0+000	64.99±	62.58± ✱	CONNECT TO EXISTING 250mmØ WATERMAIN
0+05.2	65.14±	62.74±	WATER VALVE AT PROPERTY LINE
0+06.2	65.16±	62.76±	CAP

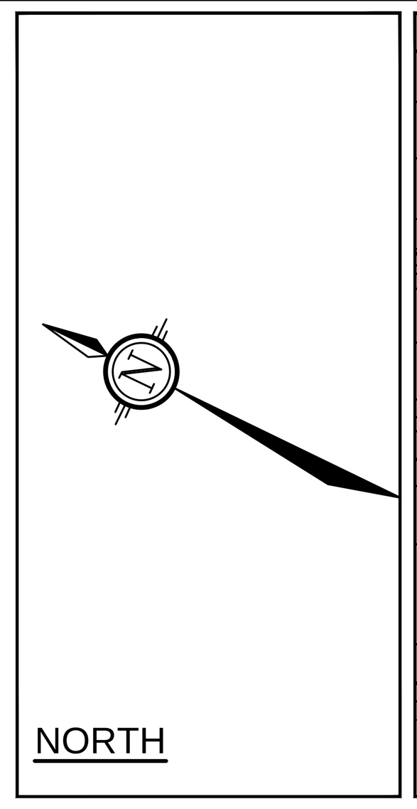
✱ EXACT DEPTH OF EXISTING WATERMAIN TO BE DETERMINED AT TIME OF EXCAVATION, CONTRACTOR TO CONFIRM TOP OF WATERMAIN. PROVIDE THERMAL INSULATION AS PER CITY OF OTTAWA DETAIL W23 WHERE COVER IS LESS THAN 2.4m

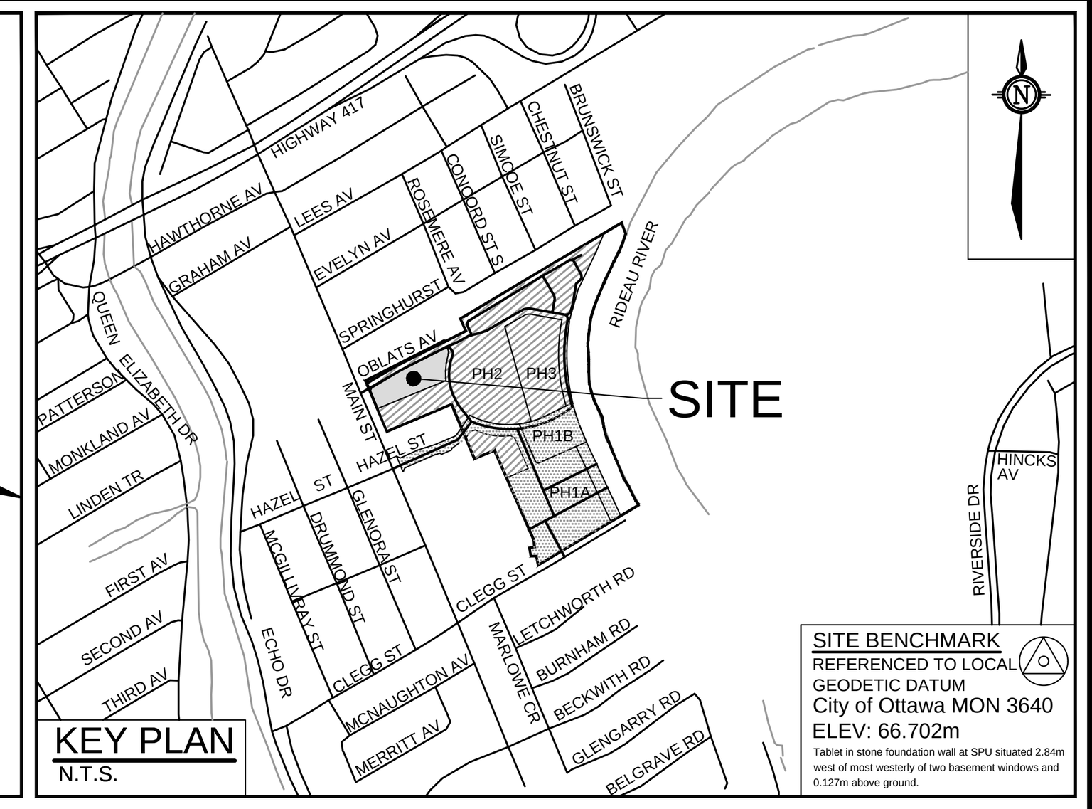
WATERMAIN TABLE - MAIN STREET (B)

(MIN COVER = 2.4m)

STATION	SURFACE ELEVATION	TOP OF WM ELEVATION	DESCRIPTION
0+000	64.56±	62.16± ✱	CONNECT TO EXISTING 400mmØ WATERMAIN
0+05.0	64.62±	62.22±	-
0+11.7	64.85±	62.45±	WATER VALVE AT PROPERTY LINE
0+12.7	64.87±	62.47±	CAP

✱ EXACT DEPTH OF EXISTING WATERMAIN TO BE DETERMINED AT TIME OF EXCAVATION, CONTRACTOR TO CONFIRM TOP OF WATERMAIN. PROVIDE THERMAL INSULATION AS PER CITY OF OTTAWA DETAIL W23 WHERE COVER IS LESS THAN 2.4m





LEGEND

- SITE BOUNDARY
- PROPOSED STORM SEWER AND DIRECTION OF FLOW
- PROPOSED SANITARY SEWER AND DIRECTION OF FLOW
- PROPOSED WATERMAIN
- V&VB PROPOSED VALVE AND VALVE BOX
- PROPOSED HYDRO METER LOCATION
- PROPOSED REMOTE METER LOCATION
- PROPOSED WATER METER LOCATION
- PROPOSED REMOTE METER LOCATION
- PROPOSED SANITARY / STORM MONITORING TEST PORT
- PROPOSED RETAINING WALL
- PROPOSED BUILDING ENTRANCE
- CB 1 PROPOSED CATCHBASIN
- AD 1 PROPOSED AREA DRAIN
- PROPOSED SIAMESE CONNECTION
- PROPOSED STREETLIGHT
- PROPOSED TREES / SHRUBS
- PROPOSED BOLLARD (SEE LANDSCAPE PLANS)
- STM MH EXISTING STORM MANHOLE AND SEWER
- SAN MH EXISTING SANITARY MANHOLE AND SEWER
- EXISTING WATERMAIN
- B EXISTING UNDERGROUND BELL
- C EXISTING UNDERGROUND ROGERS CABLE
- H EXISTING UNDERGROUND HYDRO
- G EXISTING UNDERGROUND GAS
- EXISTING ABANDONED UNDERGROUND GAS
- VVB EXISTING VALVE AND VALE BOX
- EXISTING FIRE HYDRANT
- EX.CB EXISTING CATCHBASIN
- T/G EXISTING TOP OF GRATE
- EX UP EXISTING UTILITY POLE C/W GUY WIRES
- EXISTING STREETLIGHT
- EXISTING TREES
- PROPOSED CONCRETE LIMITS

GENERAL NOTES:

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 $5,000,000.00. 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 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.

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 SERVICING DESIGN BRIEF 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 GRADING PLAN INDICATING THE AS-BUILT ELEVATION OF EVERY DESIGN GRADE SHOWN ON THIS PLAN.

13) REFER TO GEOTECHNICAL REPORT (NO. 1668819, DATED JUNE 2017) PREPARED BY GOLDER ASSOCIATES 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.

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 AND SPECIFICATIONS WILL APPLY WHERE NO CITY STANDARDS ARE AVAILABLE.

15) ALL PRIVATE APPROACHES MUST BE CONSTRUCTED AS PER CITY SPECIFICATION SC13.

SEWER NOTES:

1) SPECIFICATIONS:

ITEM		SPEC. No.	REFERENCE
SEWER SERVICE CONNECTION - RIGID PIPE		S11	CITY OF OTTAWA
SEWER SERVICE ABANDONMENT		S11.4	CITY OF OTTAWA
SEWER TRENCH -	BEDDING (GRANULAR A)	S6, S7, W17	CITY OF OTTAWA / OPSD
	COVER (GRANULAR A OR GRANULAR B TYPE I, WITH MAXIMUM PARTICLE SIZE=25mm)	S6, S7, W17	CITY OF OTTAWA / OPSD
STORM SEWER	PVC DR 35		
SANITARY SEWER	PVC DR 35		

2) INSULATE ALL PIPES (SAN/STM) THAT HAVE LESS THAN 1.5m COVER WITH 50mmX1200mm HI-40 INSULATION. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION.

3) SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0%.

4) 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.

5) 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.

6) 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 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.

7) FULL PORT BACKWATER VALVES ARE REQUIRED ON THE SANITARY SERVICES. INSTALLED AS PER THE MANUFACTURERS RECOMMENDATIONS AND A BACKWATER VALVE IS REQUIRED ON THE STORM SERVICES / FOUNDATION DRAINS FOR EACH BUILDING; INSTALLED AS PER STD. DWG S14.

8) CONTRACTOR TO TELEVISE (CCTV) ALL PROPOSED SEWERS/LATERALS.

9) REINSTATE ALL EXISTING PAVEMENT, CURB AND BOULEVARDS AS PER CITY OF OTTAWA R10.

10) ALL EXISTING SANITARY AND STORM SERVICES ARE TO BE CAPPED AT THE PROPERTY LINE TO THE SATISFACTION OF THE CITY OF OTTAWA'S SEWER OPERATION.

11) MONITORING TEST PORTS FOR BUILDING SERVICES TO BE INSTALLED IN PARKING GARAGE.

WATERMAIN NOTES:

1) SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
WATERMAIN TRENCHING	W17	CITY OF OTTAWA
THERMAL INSULATION IN SHALLOW TRENCHES	W22	CITY OF OTTAWA
VALVE BOX ASSEMBLY	W24	CITY OF OTTAWA
CONNECTION DETAIL FROM EXISTING TO NEW WM	W25.1	CITY OF OTTAWA
WATERMAIN CROSSING BELOW SEWER	W25	CITY OF OTTAWA
WATERMAIN CROSSING OVER SEWER	W25.2	CITY OF OTTAWA
WATERMAIN (150mmØ)	PVC DR 18	
WATERMAIN (50mmØ)	TYPE 'K' COPPER	
THERMAL INSULATED AT OPEN STRUCTURE	W23	CITY OF OTTAWA
WATER SERVICE INSTALATION 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 AND RESTORATION OF ALL WATERMAINS 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 WHEN WATERMAIN IS BELOW AND MINIMUM 0.25m CLEARANCE WHEN WATERMAIN IS ABOVE.

5) WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.

6) WATER DEMAND = A.D.D = T.B.D. L/sec, M.D.D = T.B.D. L/sec, M.H.D = T.B.D. L/sec

7) ALL EXISTING WATER SERVICES TO BE BLANKED AT MAIN BY CITY FORCES. EXCAVATION AND REINSTATEMENT BY CONTRACTOR.

8) WATERMAINS TO BE INTERCONNECTED FOR REDUNDANCY.

NOTE:
THE POSITION OF ALL POLE LINES, CONDUITS, WATERMAINS, 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.

PRELIMINARY NOT FOR CONSTRUCTION

No.	REVISION	DATE	BY
5.	REVISED AS PER CITY COMMENTS	MAR 21/19	JAG
4.	REVISED PER CITY COMMENTS	DEC 7/18	JAG
3.	ISSUED FOR COORDINATION	NOV 30/18	JAG
2.	REVISED PER CITY COMMENTS	OCT 9/18	JAG
1.	ISSUED WITH SITE PLAN APPLICATION	MARCH 9/18	JAG

SCALE 1:300

DESIGN JAG · CHECKED MSP · DRAWN MTM · CHECKED JAG · APPROVED JGR

FOR REVIEW ONLY

LICENSED PROFESSIONAL ENGINEER D.D. BLAIR 100122737 PROVINCE OF ONTARIO

REGISTERED PROFESSIONAL ENGINEER J.G. RIDDELL 21/3/19 PROVINCE OF ONTARIO

NOVATECH
Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6
Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com

LOCATION
CITY OF OTTAWA
Greystone Village Buildings 2A-2B

DRAWING NAME
GENERAL PLAN OF SERVICES

PROJECT No. 114025-00
REV # 5
DRAWING No. 114025-GP(2A/2B)

D07-12-18-0040

#17825