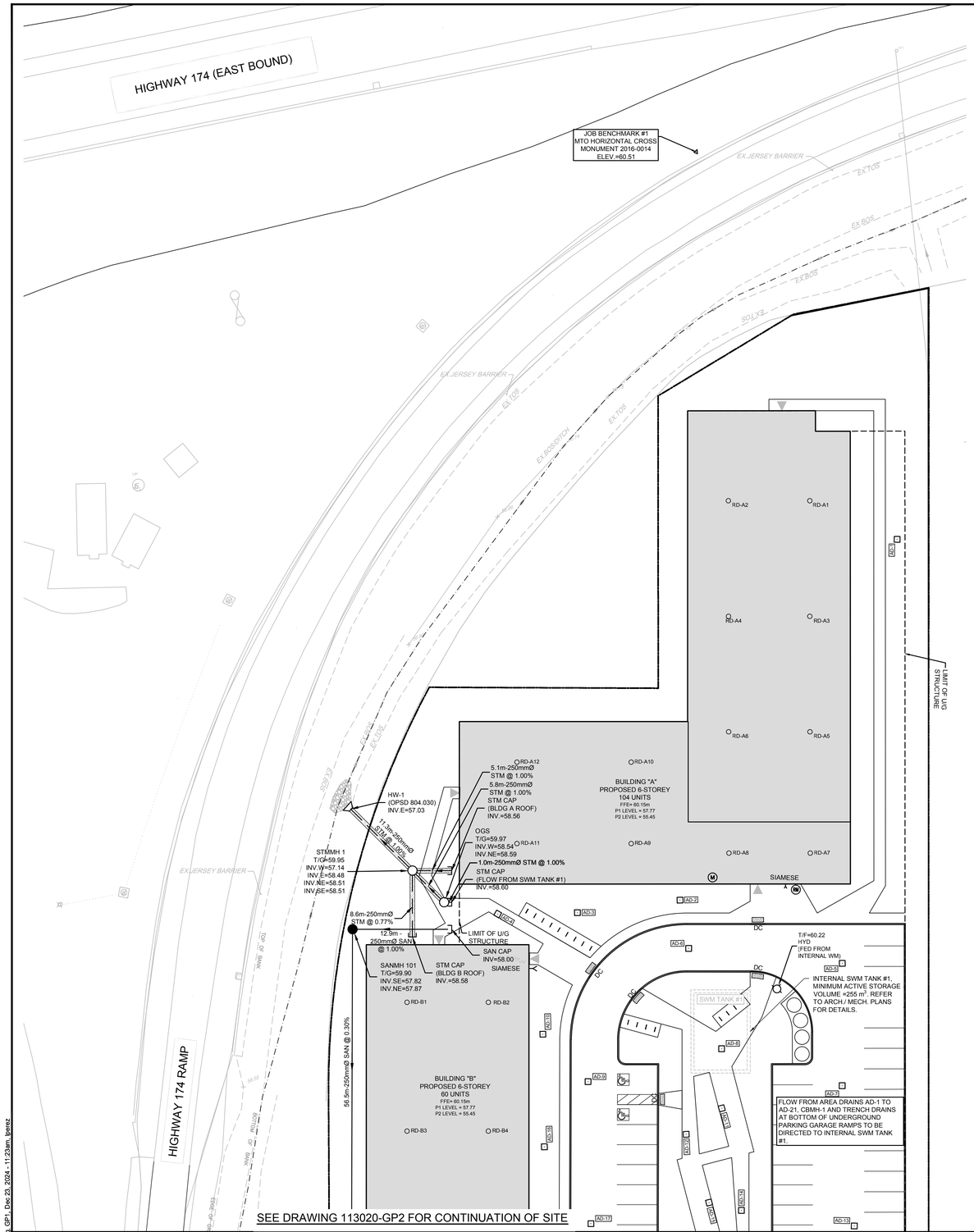
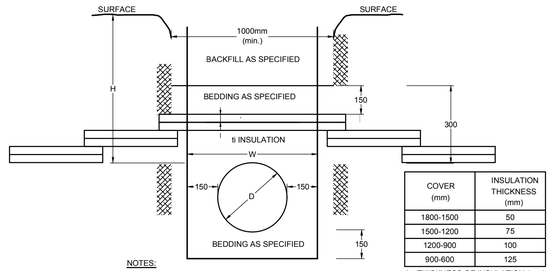


SEE DRAWING 113020-GP2 FOR CONTINUATION OF SITE

LEGEND

- PROPERTY LINE
- PROPOSED SANITARY SERVICE
- PROPOSED STORM SERVICE
- AD-1 — PROPOSED AREA DECK DRAIN
- M / RM — PROPOSED WATER METER AND REMOTE METER
- PROPOSED BARRIER CURB
- DC — PROPOSED DEPRESSED CURB
- 150mmØ — PROPOSED WATER SERVICE AND DIAMETER
- VB — PROPOSED VALVE & VALVE BOX
- PROPOSED CAP
- PROPOSED BUILDING ENTRANCE
- X — REMOVALS
- THERMAL INSULATION FOR SHALLOW SEWERS AND WATERMAIN CROSSINGS
- RAISED PLANTER BED
- RIP RAP AS PER OPSD

- OHW — EXISTING OVERHEAD WIRES
- EXISTING CONCRETE CURB
- SANMH — EXISTING SANITARY MANHOLE & SEWER
- CBMH — EXISTING CATCHBASIN MANHOLE
- STMMH — EXISTING STORM MANHOLE & SEWER
- CB — EXISTING CATCHBASIN C/W CATCHBASIN LEAD
- HYD / VAVB — EXISTING HYDRANT & VALVE
- EXISTING TREES / VEGETATION
- EX.UP — EXISTING UTILITY POLE
- EXISTING FENCE
- 300mmØ WM — EXISTING WATERMAIN
- HYD — EXISTING HYDRANT C/W VALVE & LEAD
- FFE — FINISHED FLOOR ELEVATION
- P1 LEVEL — PARKING GARAGE LEVEL ELEVATION
- RAMP TO UNDERGROUND PARKING



COVER (mm)	INSULATION THICKNESS (mm)
1800-1500	50
1500-1200	75
1200-900	100
900-600	125

NOTES:

1. INSULATE ALL SEWER PIPES THAT HAVE LESS THAN 1.8m COVER WITH EXPANDED POLYSTYRENE INSULATION AS SHOWN.
2. THE THICKNESS OF INSULATION SHALL BE THE EQUIVALENT OF 25mm FOR EVERY 300mm REDUCTION IN THE REQUIRED DEPTH OF COVER (SEE TABLE)

ti = THICKNESS OF INSULATION (mm)
h = DEPTH OF COVER
W = D + 300 (1000 min.)
W = WIDTH OF INSULATION (mm)
D = O.D OF PIPE (mm)

PROPOSED STEPPED INSULATION DETAIL FOR SHALLOW SEWERS ONLY

NOT TO SCALE

INTERNAL SWM STORAGE TANK #1 SYSTEM

DESIGN EVENT	STORAGE SYSTEM CONTROLLED FLOW	STORAGE VOLUMES REQUIRED	STORAGE VOLUMES PROVIDED
1:2 YR	15.8 L/s	69.8 m³	>255 m³
1:5 YR		106.8 m³	
1:100 YR		254.6 m³	
1:100+20%		322.7 m³	

NOTES:

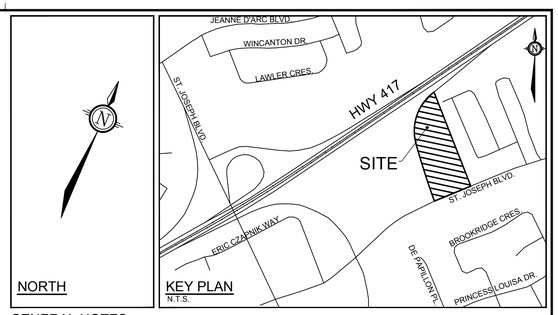
1. ALL DRAINAGE FROM AREA A-5 TO BE DIRECTED TO THE INTERNAL STORMWATER STORAGE SYSTEM. REFER TO ARCHITECTURAL AND MECHANICAL PLANS FOR DETAILS.
2. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR EXACT SIZE AND DETAILS OF INTERNAL STORMWATER STORAGE SYSTEM.
3. REFER TO MECHANICAL PLANS FOR PUMP INFORMATION AND DETAILS OF THE INTERNAL STORMWATER STORAGE SYSTEM.

ROOF DRAIN TABLE

AREA ID *	BUILDING	ROOF DRAIN No. (WATTS MODEL)**	ROOF DRAIN OPENING SETTING	2 YEAR RELEASE RATE	APPROX. 2-YR PONDING DEPTH	5-YEAR RELEASE RATE	APPROX. 5-YEAR PONDING DEPTH	100-YEAR RELEASE RATE	APPROX. 100-YR PONDING DEPTH
A-3	A	RD 1 (RD-100-A-ADJ)	CLOSED	0.32 L/s	11 cm	0.32 L/s	12 cm	0.32 L/s	14 cm
		RD 2 (RD-100-A-ADJ)	CLOSED	0.32 L/s	11 cm	0.32 L/s	12 cm	0.32 L/s	14 cm
		RD 3 (RD-100-A-ADJ)	CLOSED	0.32 L/s	10 cm	0.32 L/s	11 cm	0.32 L/s	13 cm
		RD 4 (RD-100-A-ADJ)	CLOSED	0.32 L/s	10 cm	0.32 L/s	11 cm	0.32 L/s	13 cm
		RD 5 (RD-100-A-ADJ)	CLOSED	0.32 L/s	11 cm	0.32 L/s	12 cm	0.32 L/s	15 cm
		RD 6 (RD-100-A-ADJ)	CLOSED	0.32 L/s	11 cm	0.32 L/s	12 cm	0.32 L/s	15 cm
		RD 7 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm	0.32 L/s	14 cm
		RD 8 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm	0.32 L/s	14 cm
		RD 9 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm	0.32 L/s	12 cm
		RD 10 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm	0.32 L/s	12 cm
		RD 11 (RD-100-A-ADJ)	CLOSED	0.32 L/s	10 cm	0.32 L/s	11 cm	0.32 L/s	13 cm
		RD 12 (RD-100-A-ADJ)	CLOSED	0.32 L/s	10 cm	0.32 L/s	11 cm	0.32 L/s	13 cm
A-4	B	RD 1 (RD-100-A-ADJ)	CLOSED	0.32 L/s	9 cm	0.32 L/s	10 cm	0.32 L/s	12 cm
		RD 2 (RD-100-A-ADJ)	CLOSED	**0.32 L/s**	9 cm	**0.32 L/s**	10 cm	**0.32 L/s**	12 cm
		RD 3 (RD-100-A-ADJ)	CLOSED	0.32 L/s	9 cm	0.32 L/s	10 cm	0.32 L/s	12 cm
		RD 4 (RD-100-A-ADJ)	CLOSED	0.32 L/s	9 cm	0.32 L/s	10 cm	0.32 L/s	12 cm
		RD 5 (RD-100-A-ADJ)	CLOSED	0.32 L/s	9 cm	0.32 L/s	10 cm	0.32 L/s	12 cm
		RD 6 (RD-100-A-ADJ)	CLOSED	0.32 L/s	9 cm	0.32 L/s	10 cm	0.32 L/s	12 cm
B-2	C	RD 1 (RD-100-A-ADJ)	CLOSED	0.32 L/s	9 cm	0.32 L/s	10 cm	0.32 L/s	12 cm
		RD 2 (RD-100-A-ADJ)	**CLOSED**	**0.32 L/s**	9 cm	**0.32 L/s**	10 cm	**0.32 L/s**	12 cm
		RD 3 (RD-100-A-ADJ)	CLOSED	0.32 L/s	9 cm	0.32 L/s	10 cm	0.32 L/s	12 cm
		RD 4 (RD-100-A-ADJ)	CLOSED	0.32 L/s	9 cm	0.32 L/s	10 cm	0.32 L/s	12 cm
		RD 5 (RD-100-A-ADJ)	CLOSED	0.32 L/s	9 cm	0.32 L/s	10 cm	0.32 L/s	12 cm
		RD 6 (RD-100-A-ADJ)	CLOSED	0.32 L/s	9 cm	0.32 L/s	10 cm	0.32 L/s	12 cm
B-3	D	RD 1 (RD-100-A-ADJ)	CLOSED	0.32 L/s	11 cm	0.32 L/s	12 cm	0.32 L/s	14 cm
		RD 2 (RD-100-A-ADJ)	CLOSED	0.32 L/s	11 cm	0.32 L/s	12 cm	0.32 L/s	14 cm
		RD 3 (RD-100-A-ADJ)	CLOSED	0.32 L/s	10 cm	0.32 L/s	11 cm	0.32 L/s	13 cm
		RD 4 (RD-100-A-ADJ)	CLOSED	0.32 L/s	10 cm	0.32 L/s	11 cm	0.32 L/s	13 cm
		RD 5 (RD-100-A-ADJ)	CLOSED	0.32 L/s	11 cm	0.32 L/s	12 cm	0.32 L/s	15 cm
		RD 6 (RD-100-A-ADJ)	CLOSED	0.32 L/s	11 cm	0.32 L/s	12 cm	0.32 L/s	15 cm
		RD 7 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm	0.32 L/s	14 cm
		RD 8 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm	0.32 L/s	14 cm
		RD 9 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm	0.32 L/s	12 cm
		RD 10 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm	0.32 L/s	12 cm
		RD 11 (RD-100-A-ADJ)	CLOSED	0.32 L/s	10 cm	0.32 L/s	11 cm	0.32 L/s	13 cm
		RD 12 (RD-100-A-ADJ)	CLOSED	0.32 L/s	10 cm	0.32 L/s	11 cm	0.32 L/s	13 cm

* REFER TO THE 'DEVELOPMENT SERVICING STUDY AND STORMWATER MANAGEMENT REPORT' (R-2023-086) PREPARED BY NOVATECH FOR DRAINAGE AREA IDENTIFIERS AND STORMWATER MANAGEMENT DETAILS.

**ALL CONTROLLED FLOW ROOF DRAINS FOR THE PROPOSED BUILDING TO BE WATTS 'ADJUSTABLE ACCUTROL' ROOF DRAINS.



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 MUNICIPAL AUTHORITIES AND OWNER.
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 GEOTECHNICAL INVESTIGATION REPORT (REF.NO. PG5091-1, REVISION 1, DATED NOVEMBER 6, 2019, AND TREE PLANTING SETBACK RECOMMENDATIONS (REF NO. PG5091-MEMO-01), 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 PRIOR TO PLACEMENT OF THE GRANULAR MATERIAL.
9. REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARD SURFACED AREAS AND DIMENSIONS.
10. REFER TO THE 'DEVELOPMENT SERVICING STUDY AND STORMWATER MANAGEMENT REPORT' (R-2023-086) PREPARED BY NOVATECH.
11. SAW CUT AND KEYGRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE-IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10).
12. 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, T/WM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.
13. PROVIDE LINE/PARKING PAINTING AS REQUIRED PER THE ARCHITECTURAL SITE PLAN.

SEWER NOTES:

1. SUPPLY AND CONSTRUCT ALL SEWERS AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
2. SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
CATCHBASIN (600X600MM)	705.010	OPSD
STORM / SANITARY MANHOLE (1200MMØ)	701.010	OPSD
CB, FRAME & COVER	400.020	OPSD
STORM / SANITARY MH FRAME & COVER	401.010	OPSD
WATERTIGHT MH FRAME AND COVER	401.030	OPSD
SEWER TRENCH	S6	CITY OF OTTAWA
EXTERIOR MECHANICAL AREA DECK DRAIN	FD-490-F-4 (OR APPROVED EQUIVALENT)	WATTS CANADA
STORM SEWER	PVC DR 35, CONC. (> 450mmØ)	
SANITARY SEWER	PVC DR 35	
CATCHBASIN LEAD	PVC DR 35	

3. 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.
4. THE STORM SERVICE LATERAL SHALL BE EQUIPPED WITH A BACKFLOW PREVENTER WITHIN THE BUILDING FOOTPRINT AS PER CITY OF OTTAWA STANDARD DETAILS S14. REFER TO MECHANICAL PLANS FOR DETAILS.
5. SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0%.
6. 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.
7. FOR ON-SITE SEWERS, INSULATE ALL PIPES (SAN / STM) THAT HAVE LESS THAN 1.5m COVER WITH HI-40 INSULATION PER INSULATION DETAIL FOR SHALLOW SEWERS. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION. FOR OFF-SITE SEWERS, INSULATE ALL PIPES (SAN / STM) THAT HAVE LESS THAN 1.8m COVER WITH HI-40 INSULATION PER INSULATION DETAIL FOR SHALLOW SEWERS. PROVIDE 150MM CLEARANCE BETWEEN PIPE AND INSULATION.
8. 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.
9. TYPICAL STORM MANHOLES AND CATCHBASIN MANHOLES ARE TO HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED.
10. THE CONTRACTOR IS TO TELEVISE (CCTV) ALL PROPOSED SEWERS, 200mmØ OR GREATER PRIOR TO BASE COURSE ASPHALT. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES. PROVIDE A COPY OF ALL CCTV INSPECTION REPORTS TO THE ENGINEER FOR REVIEW.
11. 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 T/G ELEVATIONS, STRUCTURE LOCATIONS AND ANY ALIGNMENT CHANGES, ETC.
12. 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.

WATERMAIN NOTES:

1. SUPPLY AND CONSTRUCT ALL WATERMAIN AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
2. SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
WATERMAIN TRENCHING	W17	CITY OF OTTAWA
FIRE HYDRANT INSTALLATION	W19	CITY OF OTTAWA
THERMAL INSULATION IN SHALLOW TRENCHES	W22	CITY OF OTTAWA
INSULATION ADJACENT TO OPEN STRUCTURES	W23	CITY OF OTTAWA
VALVE BOX ASSEMBLY	W24	CITY OF OTTAWA
WATERMAIN	PVC DR 18	
WATERMAIN CROSSING BELOW SEWER	W25	CITY OF OTTAWA
WATERMAIN CROSSING ABOVE SEWER	W25.2	CITY OF OTTAWA

3. 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. EXCAVATION, INSTALLATION OF SERVICE, BACKFILL AND RESTORATION BY THE CONTRACTOR.
4. WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED.
5. PROVIDE MINIMUM 0.5m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS, UNLESS OTHERWISE INDICATED.
6. WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.

BENCHMARK NOTES:

1. ELEVATIONS SHOWN ARE GEODETIC AND ARE REFERRED TO THE CGVD28 GEODETIC DATUM.
2. IT IS THE RESPONSIBILITY OF THE USER OF THIS INFORMATION TO VERIFY THAT THE JOB BENCHMARK HAS NOT BEEN ALTERED OR DISTURBED AND THAT IT'S RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION SHOWN ON THIS DRAWING.
3. BENCHMARK WAS PROVIDED ONPLAN OF SURVEY PART OF LOT 33, CONCESSION 1 (OLD SURVEY) GEOGRAPHIC TOWNSHIP OF CUMBERLAND, CITY OF OTTAWA, SURVEYED BY STANTEC GEOMATICS LTD.

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.

OWNER INFORMATION
8417709 CANADA INC.
430 boulevard de l'hôpital, Suite 310
Gatineau, QC J8V 1T7
NAME: PAUL-ANDRÉ CHARBONNEAU
PHONE: (819) 955-8032

EMAIL: paul-andre@chartro.ca

No.	REVISION	DATE	BY
2.	REVISED PER CITY COMMENTS	DEC 23/24	FST
1.	ISSUED FOR SPC APPLICATION	JUL 19/24	FST

SCALE 1:300

1:300
0 3 6 9 12

DESIGN CV
CHECKED FST
DRAWN CV
CHECKED FST
APPROVED FST

FOR REVIEW ONLY

LICENSED PROFESSIONAL ENGINEER — F.S. THAUVETTE — 100041299 — Dec 23, 2024 — 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
3459 & 3479 ST. JOSEPH BOULEVARD

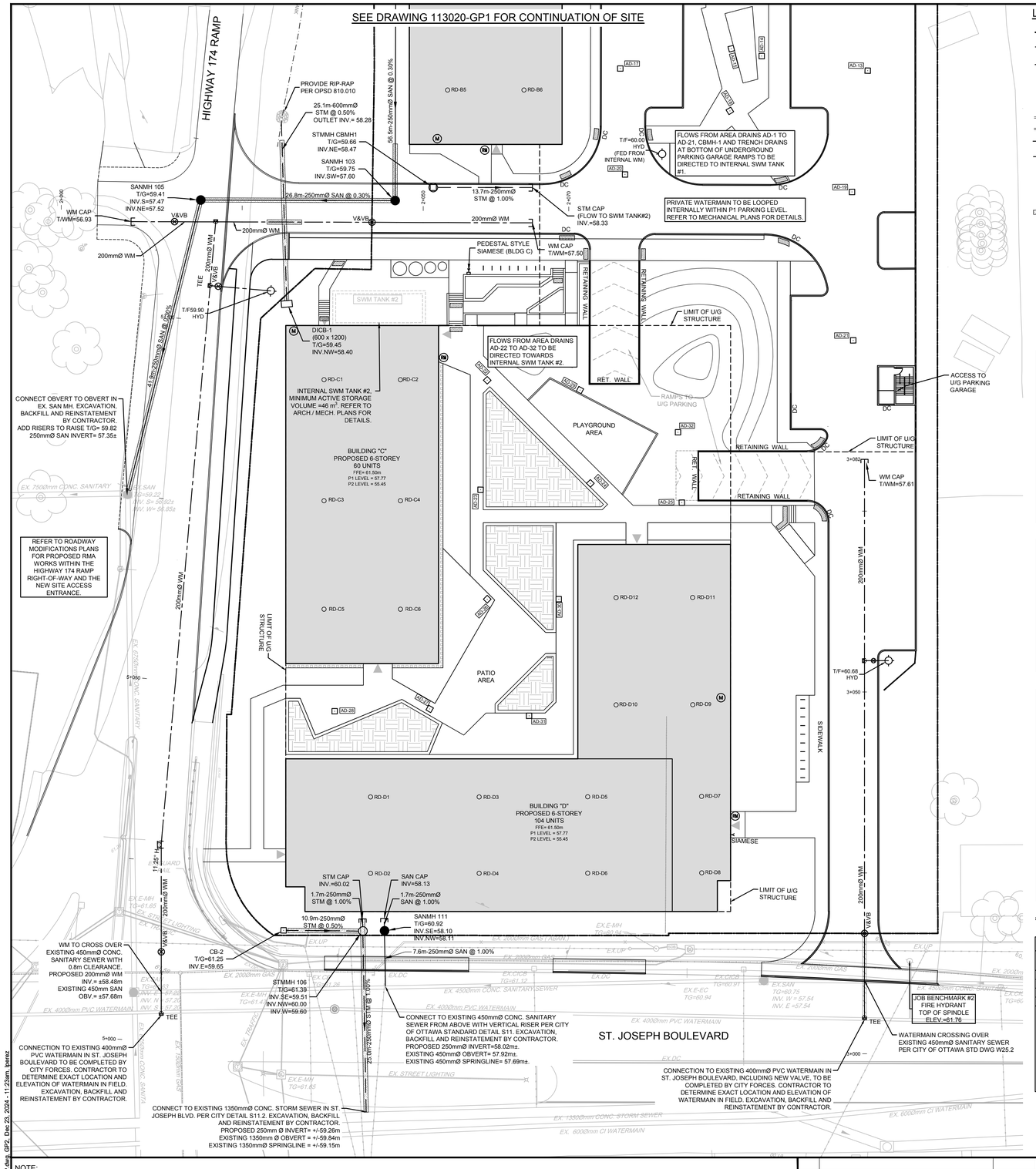
DRAWING NAME
GENERAL PLAN OF SERVICES

PROJECT No. 113020-00
REV. REV.# 2
DRAWING No. 113020-GP1

PLAN NBR # 19167

M:\2013\113020\CAD\Design\113020-GP.dwn, GP1, Dec 23, 2024 - 11:23am, lperez

D07-12-24-0069



LEGEND

- PROPERTY LINE
- PROPOSED SANITARY SERVICE
- PROPOSED STORM SERVICE
- AD-1 PROPOSED AREA DECK DRAIN
- M RM PROPOSED WATER METER AND REMOTE METER
- PROPOSED BARRIER CURB
- DC PROPOSED DEPRESSED CURB
- 150mmØ PROPOSED WATER SERVICE AND DIAMETER
- VB PROPOSED VALVE & VALVE BOX
- PROPOSED CAP
- PROPOSED BUILDING ENTRANCE
- X REMOVALS
- THERMAL INSULATION FOR SHALLOW SEWERS AND WATERMAIN CROSSINGS
- RAISED PLANTER BED
- RIP RAP AS PER OPSD 801.010
- CLEAR STONE

- OHW EXISTING OVERHEAD WIRES
- EXISTING CONCRETE CURB
- SANMH EXISTING SANITARY MANHOLE & SEWER
- CBMH EXISTING CATCHBASIN MANHOLE
- STMMH EXISTING STORM MANHOLE & SEWER
- CB EXISTING CATCHBASIN C/W CATCHBASIN LEAD
- V&VB HYD EXISTING HYDRANT & VALVE
- EXISTING TREES / VEGETATION
- EX. UP EXISTING UTILITY POLE
- EXISTING FENCE
- 300mmØ WM EXISTING WATERMAIN
- HYD EXISTING HYDRANT C/W VALVE & LEAD
- FFE FINISHED FLOOR ELEVATION
- P1 LEVEL PARKING GARAGE LEVEL ELEVATION
- RAMP TO UNDERGROUND PARKING

PROPOSED 200mmØ WATER SERVICE TABLE

Station	F/G ELEVATION	TOP OF WATERMAIN	DESCRIPTION
5+003.93	61.60	✱ 58.68	200mmØ WM CONNECTION TEE TO EX. 400mmØ PVC WM
5+006.89	61.59	58.68	WATERMAIN OVER EX. 450mmØ SAN. SEWER (±0.8m CLEARANCE)
5+009.61	61.58	58.67	WATERMAIN UNDER EX. 200mmØ GAS LINE (±1.2m CLEARANCE)
5+012.42	61.55	58.67	200mmØ VALVE AND VALVE BOX
5+015.98	61.48	58.67	WATERMAIN UNDER STREET LIGHT DUCT (±1.4m CLEARANCE)
5+027.19	61.18	58.66	11.25° HORIZONTAL BEND
5+050.00	60.33	57.91	—
5+075.00	59.89	57.43	—
5+104.90	59.52	57.07	TEE CONNECTION FOR FIRE HYDRANT
5+113.75	59.41	56.96	TEE CONNECTION FOR 200mmØ WATERMAIN

PROPOSED 200mmØ WATER SERVICE TABLE

Station	F/G ELEVATION	TOP OF WATERMAIN	DESCRIPTION
2+009.65	59.48	56.93	CAP FOR FUTURE EXTENSION TO THE WEST
2+014.39	59.47	56.94	200mmØ VALVE AND VALVE BOX
2+015.65	59.47	56.94	WATERMAIN UNDER PROPOSED 250mmØ SAN. SEWER (±0.5m CLEARANCE)
2+017.24	59.41	56.96	TEE CONNECTION FOR 200mmØ WATERMAIN
2+030.82	59.64	✱✱ 57.08	WATERMAIN UNDER PROPOSED 600mmØ CULVERT (±1.2m CLEARANCE)
2+042.92	59.83	57.23	200mmØ VALVE AND VALVE BOX
2+065.09	59.90	57.50	CAP 1.0m FROM FOUNDATION WALL

PROPOSED 200mmØ WATER SERVICE TABLE

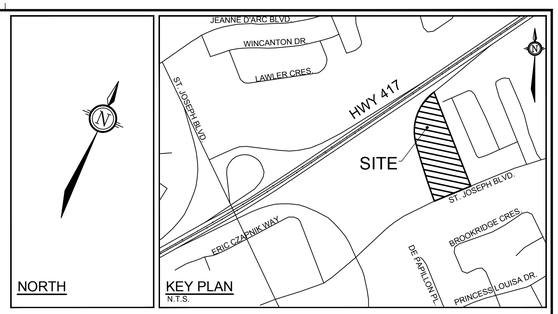
Station	F/G ELEVATION	TOP OF WATERMAIN	DESCRIPTION
3+005.00	60.75	✱ ✱✱ 58.35	200mmØ WM CONNECTION TO EX. 400mmØ PVC WM
3+006.20	60.73	✱✱ 58.35	11.25° VERTICAL BEND
3+008.70	60.69	✱✱ 58.78	11.25° VERTICAL BEND
3+009.95	60.67	✱✱ 58.78	WATERMAIN CROSSING OVER EX. 450mmØ CONC. SAN (±0.5m CLEARANCE)
3+011.20	60.73	✱✱ 58.78	11.25° VERTICAL BEND
3+011.97	60.76	✱✱ 58.66	WATERMAIN UNDER EX. GAS LINE (±1.1m CLEARANCE)
3+012.60	60.79	✱✱ 58.56	11.25° VERTICAL BEND
3+015.44	60.93	✱✱ 58.54	WATERMAIN CROSSING UNDER ABANDONED GASLINE (±0.9m CLEARANCE)
3+016.64	60.98	58.54	200mmØ VALVE AND VALVE BOX
3+030.00	60.91	58.47	—
3+054.34	60.34	57.93	TEE CONNECTION FOR FIRE HYDRANT
3+080.00	60.03	57.63	—
3+082.16	60.01	57.61	CAP 1.0m FROM FOUNDATION WALL

✱ CONNECTIONS TO EXISTING 400mmØ PVC. EXACT ELEVATIONS TO BE FIELD DETERMINED.
✱✱ PROVIDE THERMAL INSULATION AS PER CITY OF OTTAWA DETAIL W22 IN SHALLOW TRENCHES AND/OR CITY OF OTTAWA DETAIL W23 ADJACENT TO OPEN STRUCTURES.

INTERNAL SWM STORAGE TANK #2 SYSTEM

DESIGN EVENT	STORAGE SYSTEM CONTROLLED FLOW	STORAGE VOLUMES REQUIRED	STORAGE VOLUMES PROVIDED
1:2 YR	3.8 L/s	11.8 m³	>46 m³
1:5 YR		18.3 m³	
1:100 YR		45.9 m³	
1:100+20%		58.5 m³	

NOTES:
1. ALL DRAINAGE FROM AREA B-4 TO BE DIRECTED TO THE INTERNAL STORMWATER STORAGE SYSTEM. REFER TO ARCHITECTURAL AND MECHANICAL PLANS FOR DETAILS.
2. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR EXACT SIZE AND DETAILS OF INTERNAL STORMWATER STORAGE SYSTEM.
3. REFER TO MECHANICAL PLANS FOR PUMP INFORMATION AND DETAILS OF THE INTERNAL STORMWATER STORAGE SYSTEM.



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 MUNICIPAL AUTHORITIES AND OWNER.
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 GEOTECHNICAL INVESTIGATION REPORT (REF.NO. PG5091-1, REVISION 1, DATED NOVEMBER 6, 2019, AND TREE PLANTING SETBACK RECOMMENDATIONS (REF.NO. PG5091-MEMO-01), 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 PRIOR TO PLACEMENT OF THE GRANULAR MATERIAL.
9. REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARD SURFACED AREAS AND DIMENSIONS.
10. REFER TO THE 'DEVELOPMENT SERVICING STUDY AND STORMWATER MANAGEMENT REPORT' (R-2023-086) PREPARED BY NOVATECH.
11. SAW CUT AND KEYGRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE-IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10).
12. 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, T/WM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.
13. PROVIDE LINE/PARKING PAINTING AS REQUIRED PER THE ARCHITECTURAL SITE PLAN.

SEWER NOTES:

1. SUPPLY AND CONSTRUCT ALL SEWERS AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
2. SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
CATCHBASIN (600X600MM)	705.010	OPSD
STORM / SANITARY MANHOLE (1200MMØ)	701.010	OPSD
CB, FRAME & COVER	400.020	OPSD
STORM / SANITARY MH FRAME & COVER	401.010	OPSD
WATERTIGHT MH FRAME AND COVER	401.030	OPSD
SEWER TRENCH	S6	CITY OF OTTAWA
EXTERIOR MECHANICAL AREA DECK DRAIN	FD-490-F-4 (OR APPROVED EQUIVALENT)	WATTS CANADA
STORM SEWER	PVC DR 35, CONC. (> 450mmØ)	
SANITARY SEWER	PVC DR 35	
CATCHBASIN LEAD	PVC DR 35	

3. 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.
4. THE STORM SERVICE LATERAL SHALL BE EQUIPPED WITH A BACKFLOW PREVENTER WITHIN THE BUILDING FOOTPRINT AS PER CITY OF OTTAWA STANDARD DETAILS S14. REFER TO MECHANICAL PLANS FOR DETAILS.
5. SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0%.
6. 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.
7. FOR ON-SITE SEWERS, INSULATE ALL PIPES (SAN / STM) THAT HAVE LESS THAN 1.5m COVER WITH HI-40 INSULATION PER INSULATION DETAIL FOR SHALLOW SEWERS. PROVIDE 150MM CLEARANCE BETWEEN PIPE AND INSULATION. FOR OFF-SITE SEWERS, INSULATE ALL PIPES (SAN / STM) THAT HAVE LESS THAN 1.8m COVER WITH HI-40 INSULATION PER INSULATION DETAIL FOR SHALLOW SEWERS. PROVIDE 150MM CLEARANCE BETWEEN PIPE AND INSULATION.
8. 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.
9. TYPICAL STORM MANHOLES AND CATCHBASIN MANHOLES ARE TO HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED.
10. THE CONTRACTOR IS TO TELEVISE (CCTV) ALL PROPOSED SEWERS, 200mmØ OR GREATER PRIOR TO BASE COURSE ASPHALT. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES. PROVIDE A COPY OF ALL CCTV INSPECTION REPORTS TO THE ENGINEER FOR REVIEW.
11. 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 T/G ELEVATIONS, STRUCTURE LOCATIONS AND ANY ALIGNMENT CHANGES, ETC.
12. 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.

WATERMAIN NOTES:

1. SUPPLY AND CONSTRUCT ALL WATERMAIN AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
2. SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
WATERMAIN TRENCHING	W17	CITY OF OTTAWA
FIRE HYDRANT INSTALLATION	W19	CITY OF OTTAWA
THERMAL INSULATION IN SHALLOW TRENCHES	W22	CITY OF OTTAWA
INSULATION ADJACENT TO OPEN STRUCTURES	W23	CITY OF OTTAWA
VALVE BOX ASSEMBLY	W24	CITY OF OTTAWA
WATERMAIN	PVC DR 18	
WATERMAIN CROSSING BELOW SEWER	W25	CITY OF OTTAWA
WATERMAIN CROSSING ABOVE SEWER	W25.2	CITY OF OTTAWA

3. 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. EXCAVATION, INSTALLATION OF SERVICE, BACKFILL AND RESTORATION BY THE CONTRACTOR.
4. WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED.
5. PROVIDE MINIMUM 0.5m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS, UNLESS OTHERWISE INDICATED.
6. WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.

BENCHMARK NOTES:

1. ELEVATIONS SHOWN ARE GEODETIC AND ARE REFERRED TO THE CGVD28 GEODETIC DATUM.
2. IT IS THE RESPONSIBILITY OF THE USER OF THIS INFORMATION TO VERIFY THAT THE JOB BENCHMARK HAS NOT BEEN ALTERED OR DISTURBED AND THAT IT'S RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION SHOWN ON THIS DRAWING.
3. BENCHMARK WAS PROVIDED ONPLAN OF SURVEY PART OF LOT 33, CONCESSION 1 (OLD SURVEY) GEOGRAPHIC TOWNSHIP OF CUMBERLAND, CITY OF OTTAWA, SURVEYED BY STANTEC GEOMATICS LTD.

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.

OWNER INFORMATION
8417709 CANADA INC.
430 boulevard de l'hôpital, Suite 310
Gatineau, QC J8V 1T7
NAME: PAUL-ANDRÉ CHARBONNEAU
PHONE: (819) 955-8032

EMAIL: paul-andre@chartro.ca

No.	REVISION	DATE	BY
2.	REVISED PER CITY COMMENTS	DEC 23/24	FST
1.	ISSUED FOR SPC APPLICATION	JUL 19/24	FST

SCALE 1:300
1:300
0 3 6 9 12

DESIGN CV/LP
CHECKED FST
DRAWN CV/LP
CHECKED FST
APPROVED FST

FOR REVIEW ONLY

LICENSED PROFESSIONAL ENGINEER F.S. THAUVETTE 100041399 Dec 23, 2024 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
3459 & 3479 ST. JOSEPH BOULEVARD

DRAWING NAME
GENERAL PLAN OF SERVICES

PROJECT No. 113020-00
REV REV # 2
DRAWING No. 113020-GP2

D07-12-24-0069
PLAN NBR # 19167

M:\2013\113020\CAD\Design\113020-GP.dwg, GP2, Dec 23, 2024 - 11:23am, lperez