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 DIMENSIONS AND INVERTS MUST BE VERIFIED PRIOR TO CONSTRUCTION. IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
8. ALL ELEVATIONS ARE GEODETIC AND ARE REFERRED TO THE CGVD28 GEODETIC DATUM. BASE MAPPING IS REFERANCED TO THE MTM ZONE 9 NAD-83 (ORIGINAL) DATUM. THE SITES BENCHMARKS ARE AT THE TOP OF THE SPINDLE FIRE HYDRANTS. SITE BENCHMARK #1 IS OUTSIDE THE SOUTH-EAST (GEORGE STREET) CORNER OF THE SITE FIRE HYDRANT SPINDLE T/G=62.03. SITE BENCHMARK #2 IS OUTSIDE THE NORTH-EAST (YORK STREET) CORNER OF THE SITE FIRE HYDRANT SPINDLE T/G=60.07.
9. REFER TO GEOTECHNICAL REPORT (PG2733-3, REV.5, DATED OCTOBER 29,2024), 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.
10. REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARDSURFACE AREAS AND DIMENSIONS.
11. REFER TO SERVICING AND STORMWATER MANAGEMENT REPORT (R-2023-103) PREPARED BY NOVATECH ENGINEERING CONSULTANTS LTD.
12. SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10).
13. PROVIDE LINE/PARKING PAINTING.
14. 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.
15. 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 WILL APPLY WHERE NO CITY STANDARDS ARE AVAILABLE.
16. CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT FOR CONSTRUCTION PURPOSES.

SEWER NOTES:

1. SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
SEWER TRENCH	S6 & S7	CITY OF OTTAWA
STORM SEWER	PVC DR 35	
SANITARY SEWER	PVC DR 35	
CATCHBASIN LEAD	PVC DR 35	
INSULATION FOR SHALLOW SEWERS	S35	CITY OF OTTAWA

2. INSULATE ALL PIPES (SAN/STM) THAT HAVE LESS THAN 2.0m COVER WITH 50mmX1200mm HI-40 INSULATION. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION (REFER TO DETAIL).
3. SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0% (2.0% IS PREFERRED).
4. SEWER SERVICE CONNECTIONS PER CITY OF OTTAWA DETAILS S11 AND S11.1.
5. A MINIMUM OF 150 mm OPSS GRANULAR A SHOULD BE PLACED FOR BEDDING FOR SEWER OR WATER PIPES WHEN PLACED ON A SOIL SUBGRADE. THE BEDDING SHOULD EXTEND TO THE SPRING LINE OF THE PIPE. COVER MATERIAL, FROM THE SPRING LINE TO A MINIMUM OF 300 mm ABOVE THE OBVERT OF THE PIPE, SHOULD CONSIST OF OPSS GRANULAR A (CONCRETE OR PSM PVC PIPES) OR SAND (CONCRETE PIPE). THE BEDDING AND COVER MATERIALS SHOULD BE PLACED IN MAXIMUM 225 MM THICK LIFTS AND COMPACTED TO 98% OF THE SPMDD.
6. WHERE HARD SURFACE AREAS ARE CONSIDERED ABOVE THE TRENCH BACKFILL, THE TRENCH BACKFILL MATERIAL WITHIN THE FROST ZONE (ABOUT 1.8 M BELOW FINISHED GRADE) AND ABOVE THE COVER MATERIAL SHOULD MATCH THE SOILS EXPOSED AT THE TRENCH WALLS TO MINIMIZE DIFFERENTIAL FROST HEAVING. THE TRENCH BACKFILL SHOULD BE PLACED IN MAXIMUM 225 MM THICK LOOSE LIFTS AND COMPACTED TO A MINIMUM OF 98% OF THE MATERIAL'S SPMDD. ALL COBBLES LARGER THAN 200 MM IN THEIR LONGEST DIRECTION SHOULD BE SEGREGATED FROM RE-USE AS TRENCH BACKFILL.
7. 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.
8. 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.
9. STORM MANHOLES AND CBMHS ARE TO HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED.
10. CONTRACTOR 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.

WATERMAIN NOTES:

1. SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
WATERMAIN TRENCHING	W17	CITY OF OTTAWA
THERMAL INSULATION IN SHALLOW TRENCHES	W22	CITY OF OTTAWA
WATERMAIN CROSSING BELOW SEWER/ABOVE SEWER	W25 / W25,2	CITY OF OTTAWA
WATERMAIN	PVC DR 18	
VALVE AND VALVE BOX	W24	CITY OF OTTAWA

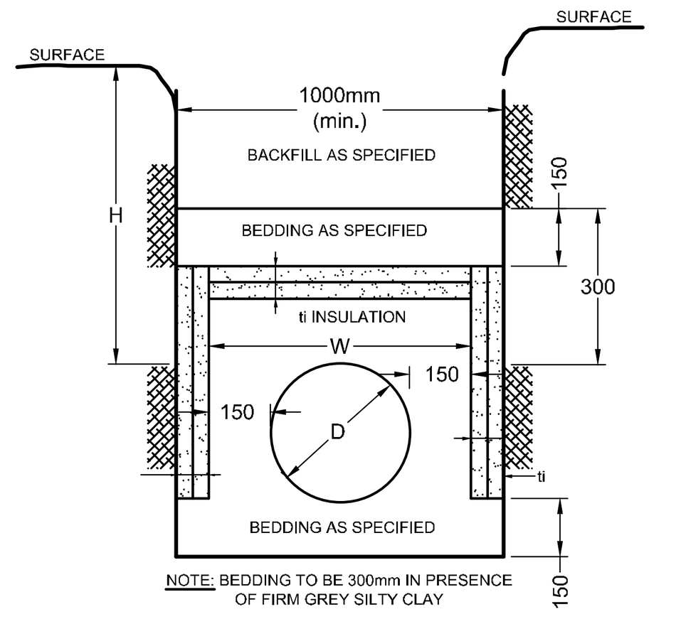
2. SUPPLY AND CONSTRUCT ALL WATERMAINS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMAINS BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAIN AND CHLORINATION OF THE WATER SYSTEM SHALL BE PERFORMED BY CITY OFFICIALS.
3. WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED. ANY WATERMAIN WITH LESS THAN 2.4m COVER TO BE INSULATED PER THE SHOWN DETAIL.
4. PROVIDE MINIMUM 0.25m ABOVE, 0.5m IF BELOW, CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS PER CITY OF OTTAWA STANDARDS W25/W25.2
5. WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.
6. CATHODIC PROTECTION REQUIRED FOR ALL IRON FITTINGS CITY OF OTTAWA STANDARD DETAILS W-39, 40, 41, 42, 43 AND 44.
7. PROVIDE THERMAL INSULATION FOR WATERMAIN AT OPEN STRUCTURES PER CITY OF OTTAWA STANDARD DETAIL W-23.
8. IF WATERMAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS LESS THAN HALF THAT RECOMMENDED BY THE MANUFACTURER.

SEWER & WATERMAIN INSULATION NOTES:

1. INSULATE ALL SEWER PIPES THAT HAVE LESS THAN 2.0m COVER AND ALL WATERMAIN WITH LESS THAN 2.4m OF COVER WITH EXPANDED POLYSTYRENE INSULATION AS PER OPSD 1109.030.
2. THE THICKNESS OF INSULATION SHALL BE THE EQUIVALENT OF 25mm FOR EVERY 300mm REDUCTION IN THE REQUIRED DEPTH OF COVER WITH 50mm MINIMUM (SEE TABLE)

COVER SEWER / WATER (mm)	INSULATION THICKNESS (mm)
2000-1700 / 2400-2100	50
1700-1400 / 2100-1800	75
1400-1100 / 1800-1500	100

T = THICKNESS OF INSULATION (mm)
W = WIDTH OF INSULATION (mm)
W = D + 300 (1000 min.)
D = O.D OF PIPE (mm)



INSULATION DETAIL FOR SHALLOW SEWERS & WATERMAIN
N.T.S

PROPOSED WATER SERVICE (1+000.0)			
STATION	SURFACE ELEVATION	T/WM ELEVATION	COMMENTS
1+000.0	61.73	59.33*	TEE CONNECTION TO EXISTING 300mmØ WATERMAIN
1+002.7	61.60	60.32	CROSS ABOVE 900mm STM AS PER CITY OF OTTAWA DETAIL W25.2 (CLEARANCE =±0.30m)
1+008.0	61.37	60.27	CROSS ABOVE 1.9m SAN AS PER CITY OF OTTAWA DETAIL W25.2 (CLEARANCE =±0.30m)
1+024.2	61.59	59.09	VALVE AND VALVE BOX
1+024.5	61.60	59.09	CAP SERVICE 1.0m FROM THE FOUNDATION WALL

PROPOSED WATER SERVICE (2+000.0)			
STATION	SURFACE ELEVATION	T/WM ELEVATION	COMMENTS
2+000.0	61.73	59.33*	TEE CONNECTION TO EXISTING 300mmØ WATERMAIN
2+002.7	61.55	60.32	CROSS ABOVE 900mm STM AS PER CITY OF OTTAWA DETAIL W25.2 (CLEARANCE =±0.31m)
2+008.0	61.31	60.27	CROSS ABOVE 1.9m SAN AS PER CITY OF OTTAWA DETAIL W25.2 (CLEARANCE =±0.31m)
2+024.2	61.48	59.08	VALVE AND VALVE BOX
2+024.5	61.49	59.09	CAP SERVICE 1.0m FROM THE FOUNDATION WALL

* CONTRACTOR TO CONFIRM THE ELEVATION OF THE EXISTING WATER STUB AND NOTIFY THE ENGINEER IF DIFFERENT

PIPE CROSSING TABLE			
CROSSING	LOWER PIPE	HIGHER PIPE	CLEARANCE
1	1980x1500mmØ SAN OBV = 59.81 ✱	250mmØ STM INV = 60.11	±0.30m
2	1980x1500mmØ SAN OBV = 59.82 ✱	150mmØ WTM INV = 60.12	±0.30m
3	900mmØ STM OBV = 59.87 ✱	150mmØ WTM INV = 60.17	±0.30m
4	1980x1500mmØ SAN OBV = 59.81 ✱	150mmØ WTM INV = 60.12	±0.31m
5	900mmØ STM OBV = 59.86 ✱	150mmØ WTM INV = 58.82	±0.31m

✱ DENOTES OUTSIDE DIAMETER

EXISTING SANITARY MANHOLE TABLE

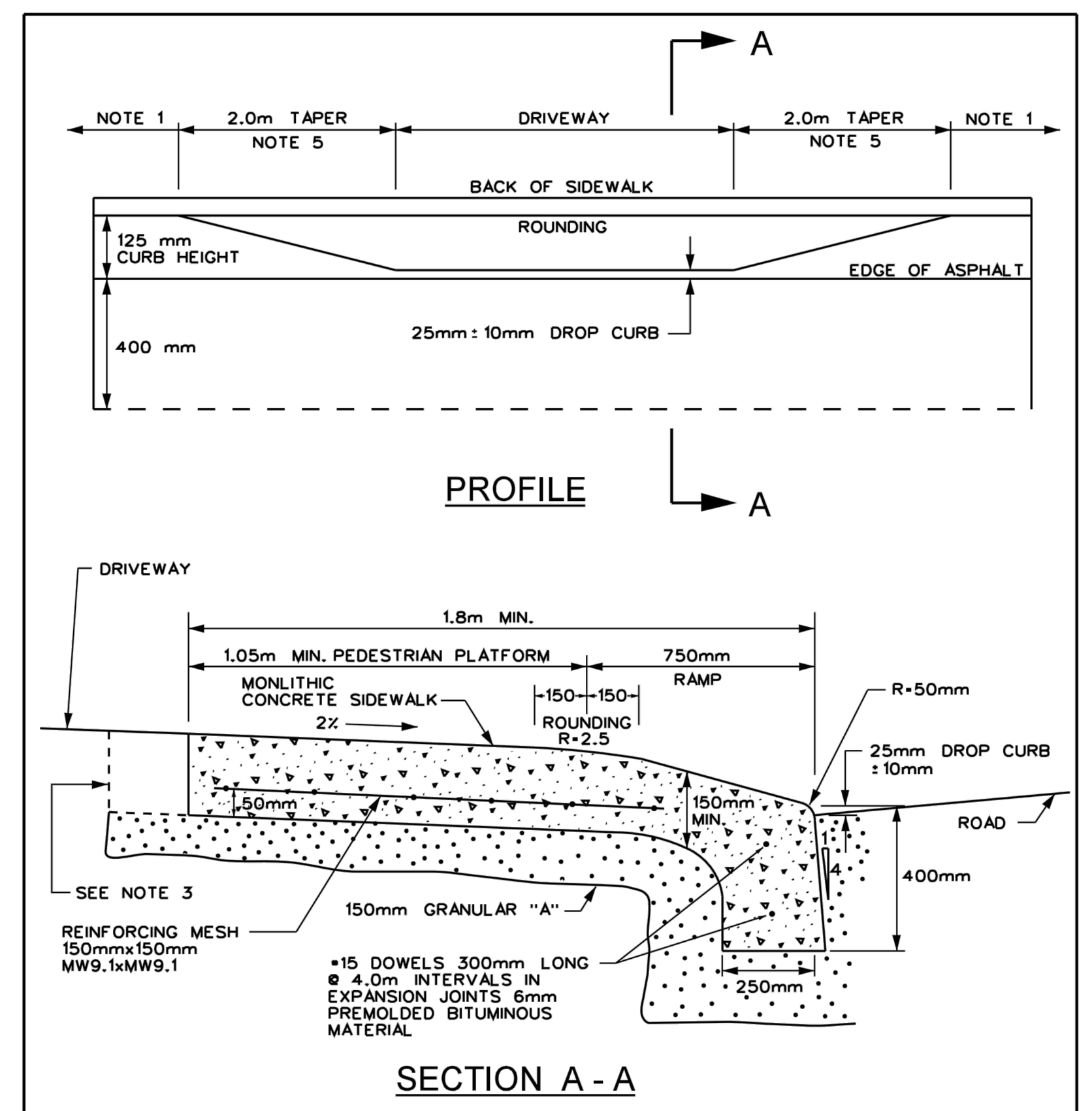
NO.	PIPE	CITY PLAN TOP GRATE	CITY PLAN INVERTS
200	SAN-1.98mx1.5m BOX BRICK	62.66	58.28
201	SAN-1.98mx1.5m BOX BRICK	59.29	55.33
202	N/S: SAN-450mmΦ CONCRETE W: SAN-300mmΦ	59.15	N=55.66 S=55.68 W=55.81
203	N: SAN-525mmΦ CONCRETE S: SAN-450mmΦ CONCRETE	59.20	N=55.64 S=55.60
204	SAN-525mmΦ CONCRETE	59.20	N=55.57 S=55.63
205	SAN-525mmΦ CONCRETE	58.85	S=55.48

EXISTING STORM MANHOLE TABLE

NO.	PIPE	CITY PLAN TOP GRATE	CITY PLAN INVERTS
100	STM-900mmΦ CONCRETE	62.50	W=59.89 E=59.20
101	STM-900mmΦ CONCRETE	61.20	W=58.47 E=57.71
102	N/S: STM-1200mmΦ CONCRETE W: STM-900mmΦ CONCRETE	59.12	N=55.66 S=55.66 W=56.51
103	STM-1200mmΦ CONCRETE	59.07	S=55.64

EXISTING COMBINED MANHOLE TABLE

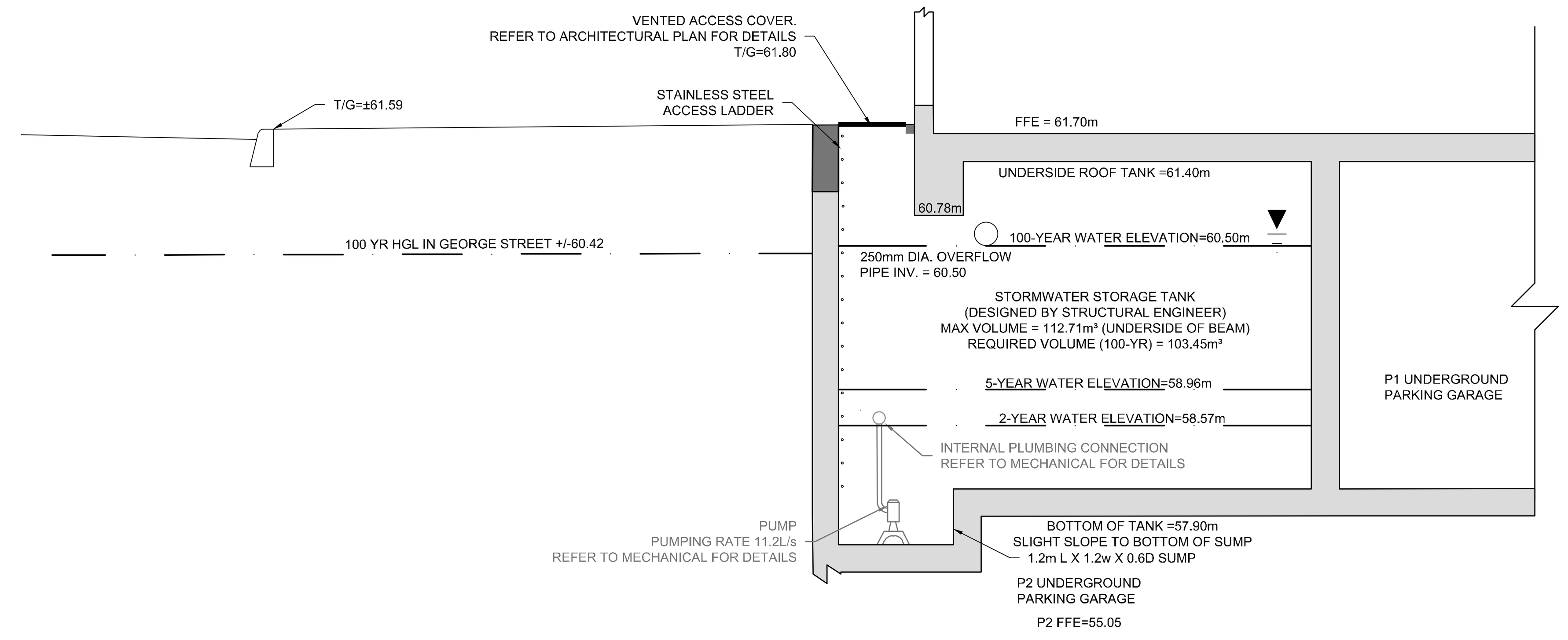
NO.	PIPE	CITY PLAN TOP GRATE	CITY PLAN INVERTS	FIELD SURVEY TOP GRATE	FIELD SURVEY INVERTS
300	COMB-1.98mx1.5m BOX BRICK	59.11	55.15	------	------



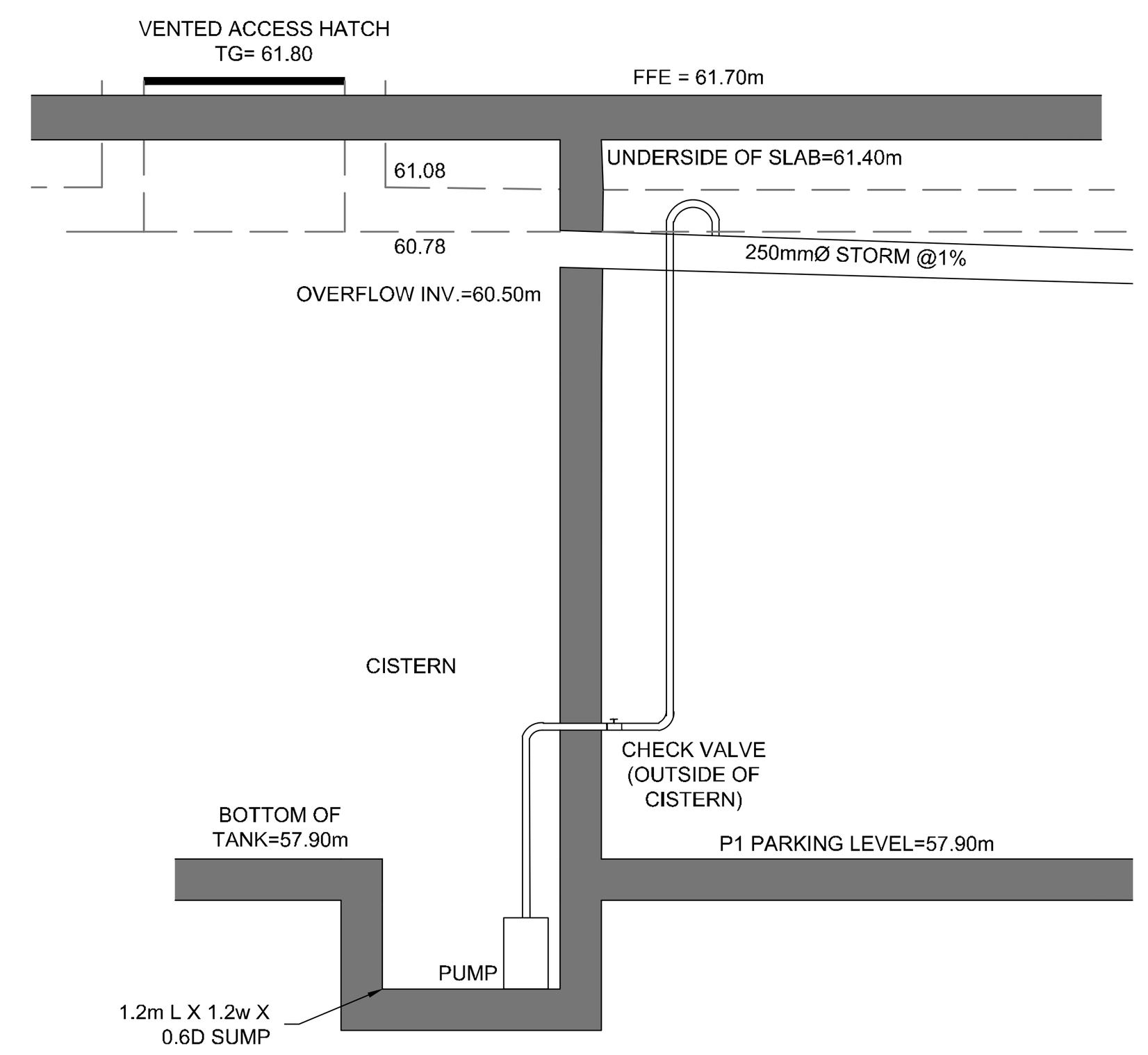
NOTES:

1. TYPICAL MONOLITHIC CONCRETE CURB AND SIDEWALK AS PER SC2, EXCEPT USE 125mm CURB HEIGHT.
2. DEPRESSIONS AT INTERSECTIONS AS PER SC6.
3. FOR WIDER SIDEWALKS, PEDESTRIAN PLATFORM TO BE INCREASED ACCORDINGLY.
4. NOT APPLICABLE FOR PROFILE GRADES OVER 5%.
5. TAPERS TO BE 1.5m WHEN ON-STREET PARKING IS PERMITTED.
6. WHERE VEHICLE ACCESS FOR ADJACENT PROPERTIES IS LESS THAN 3.0m APART, DO NOT APPLY TAPER; RAMP ACCESS IS CONTINUOUS - SEE SC13.1.

Ottawa — RAMP STYLE VEHICLE ACCESS CROSSING
DATE: MARCH 2006
REV. DATE: MARCH 2015
DWG. No.: SC13



GP CISTERN SCHEMATIC - CONNECT TO GEORGE STREET
NTS



GP CISTERN OVERFLOW SCHEMATIC
NTS

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.

CLARIDGE HOMES

CLARIDGE HOMES
505 PRESTON STREET,
OTTAWA , ONTARIO
K1S 4N7.

CLARIDGE H·O·M·E·S

No.	REVISION	DATE	BY
10.	REVISED PER CITY COMMENTS	JAN 23/25	GJM
9.	REVISED SPA TO INCLUDE ENTIRE PARKING GARAGE FOR 141 GEORGE, 110 & 116 YORK	SEPT 24/24	GJM
8.	ISSUED FOR TENDER	MAY 16/24	GJM
7.	ISSUED FOR CONSTRUCTION	MAY 2/24	GJM
6.	WATER SERVICING ALTERATIONS	MAR 22/24	GJM
5.	REVISED PER CITY COMMENTS	MAR 20/24	GJM
4.	REVISED PER CITY COMMENTS	MAR 12/24	GJM
3.	ISSUED FOR TENDER	FEB 02/24	GJM
2.	ISSUED FOR PERMIT	DEC 21/23	GJM
1.	ISSUED FOR FOUNDATION PERMIT	AUG 11/23	GJM

SCALE: AS SHOWN

DESIGN: ARM/CJF
CHECKED: ARM
DRAWN: ARM/CJF
CHECKED: ARM
APPROVED: GJM

LICENSED PROFESSIONAL ENGINEER
G.J. MacDONALD
Jan. 23, 2025
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
141 GEORGE STREET

DRAWING NAME
NOTES AND DETAILS

PROJECT No. 112142
REV: REV #10
DRAWING No. 112142-ND

D07-12-12-0199

PLAN81.DWG - 1000mmx707mm
#16814

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