

**LEGEND**

	PROPERTY LINE
	PROPOSED CURB
	PROPOSED DEPRESSED CURB
	PROPOSED CAP
	PROPOSED SANITARY SEWER AND MANHOLE
	PROPOSED STORM SEWER AND MANHOLE
	PROPOSED CATCHBASIN MANHOLE
	PROPOSED CATCHBASIN
	PROPOSED CLAY SEAL
	PROPOSED WATER SERVICE
	PROPOSED HYDRANT w/ LEAD & VALVE
	PROPOSED VALVE AND VALVE BOX
	PROPOSED BUILDING ENTRANCE
	DIRECTION OF FLOW
	PROPOSED RETAINING WALL
	PROPOSED WATER METER
	PROPOSED REMOTE METER
	PROPOSED PRESSURE REDUCING VALVE

**VERTICAL DATUM NOTE:**

ELEVATIONS SHOWN HEREON ARE GEODETIC (CGVD-1928/1978) AND ARE DERIVED FROM THE CANMET VRS NETWORK MONUMENT, OTTAWA ELEVATION=95.205.

**ICD1 - INLET CONTROL DEVICE DATA TABLE - AREA A-3**

DESIGN EVENT	ICD TYPE (PLUG TYPE)	OUTLET STRUCTURE	DIAMETER OF OUTLET PIPE (mm)	PEAK DESIGN FLOW (L/s)	DESIGN HEAD (m)	WATER ELEVATION (m)	VOLUME (m <sup>3</sup> )	AVAILABLE STORAGE
1:2 YR	IPEX TEMPEST	1500mmØ CBMH 4	200mmØ PVC	6.5	1.80	89.00	3.4	21.4 m <sup>3</sup>
1:5 YR	VORTEX LMF ICD			7.3	2.09	89.29	5.3	
1:100 YR	75			7.6	2.31	89.51	14.2	

**ICD2 - INLET CONTROL DEVICE DATA TABLE - AREA A-4**

DESIGN EVENT	ICD TYPE (PLUG TYPE)	OUTLET STRUCTURE	DIAMETER OF OUTLET PIPE (mm)	PEAK DESIGN FLOW (L/s)	DESIGN HEAD (m)	WATER ELEVATION (m)	VOLUME (m <sup>3</sup> )	AVAILABLE STORAGE
1:2 YR	IPEX TEMPEST	1200mmØ STMMH 3	250mmØ PVC	7.0	0.52	87.36	12.3	34.6 m <sup>3</sup>
1:5 YR	VORTEX LMF ICD			8.3	0.72	87.56	17.6	
1:100 YR	105			16.1	2.64	89.48	33.4	

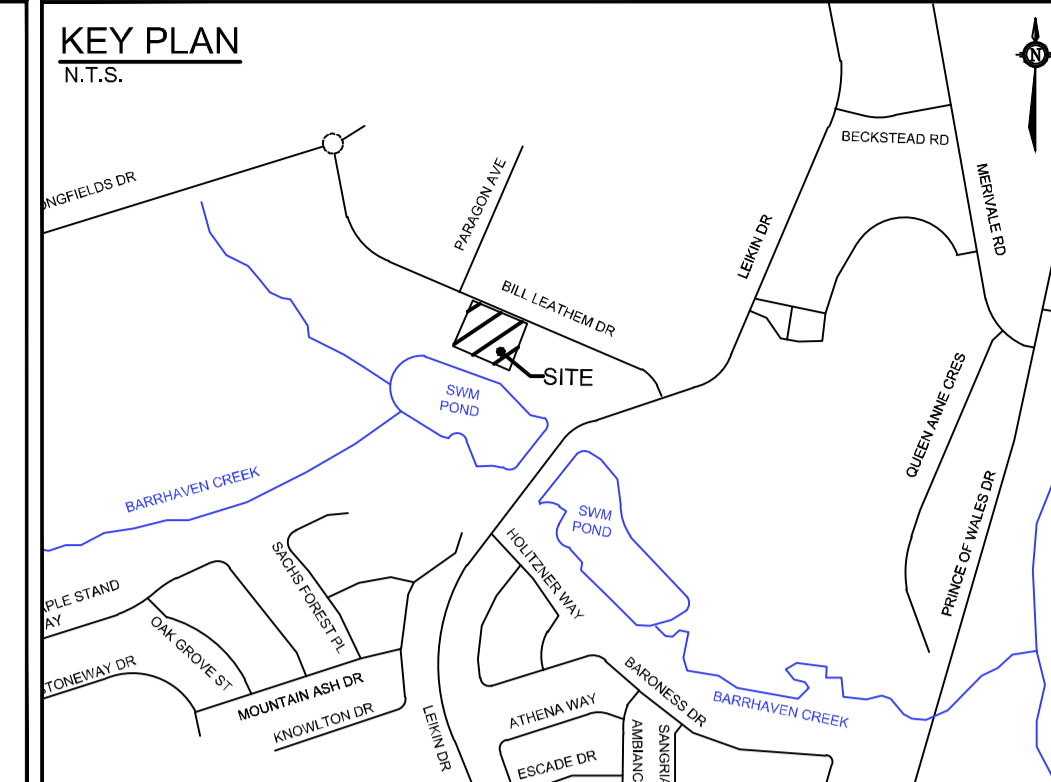
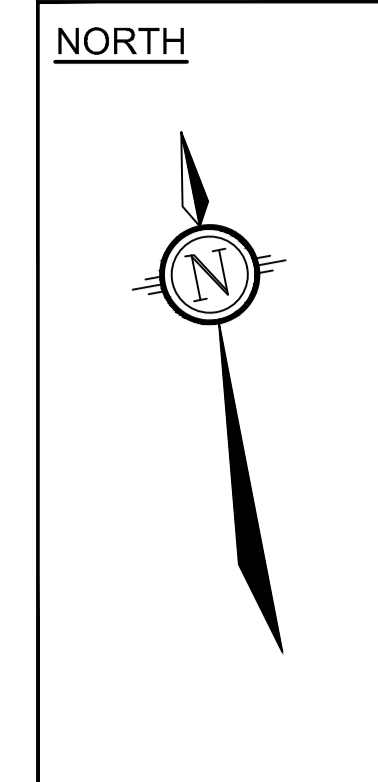
**ICD3 - INLET CONTROL DEVICE DATA TABLE - AREA A-5**

DESIGN EVENT	ICD TYPE (PLUG TYPE)	OUTLET STRUCTURE	DIAMETER OF OUTLET PIPE (mm)	PEAK DESIGN FLOW (L/s)	DESIGN HEAD (m)	WATER ELEVATION (m)	VOLUME (m <sup>3</sup> )	AVAILABLE STORAGE
1:2 YR	CIRCULAR PLUG	1200mmØ CBMH 3	250mmØ PVC	14.1	0.86	87.63	16.9	58.5 m <sup>3</sup>
1:5 YR	TYPE 84mm ORIFICE			21.3	1.96	88.73	21.4	
1:100 YR				25.1	2.71	89.48	52.8	

**PROPOSED 100mmØ WATER SERVICE TABLE**

STATION	SURFACE ELEVATION	TWM ELEVATION	COMMENTS
0+00.0	89.37±	87.16±	CONNECT TO EXISTING 300mmØ WATERMAIN
0+03.2	89.45	87.07	CROSS OVER 250mmØ SAN (2.3m CLEARANCE)
0+06.3	89.37	86.99	CROSS OVER 1200mmØ STM (0.25m CLEARANCE)
0+16.4	89.70	87.30	100mmØ V&VB
0+21.6	89.69	87.29	22.5° HORIZONTAL BEND
0+26.6	89.61	87.21	22.5° HORIZONTAL BEND
0+40.0	90.03	87.63	CAP 1.0m FROM FOUNDATION WALL

- \* CONNECT TO EXISTING 300mmØ WATERMAIN. EXACT ELEVATIONS TO BE FIELD DETERMINED.
- \*\* PROVIDE THERMAL INSULATION AS PER CITY OF OTTAWA DETAIL W22 WHERE PIPE COVER IS LESS THAN 2.4m.



**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 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 GEOTECHNICAL REPORT OTT-24002638-A0, DATED MAY 29, 2024, PREPARED BY EXP ENGINEERING, 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 HARDSURFACE AREAS AND DIMENSIONS.
- REFER TO STORMWATER MANAGEMENT REPORT (R-2024-029) 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 TIG ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, TWM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.

**SEWER NOTES:**

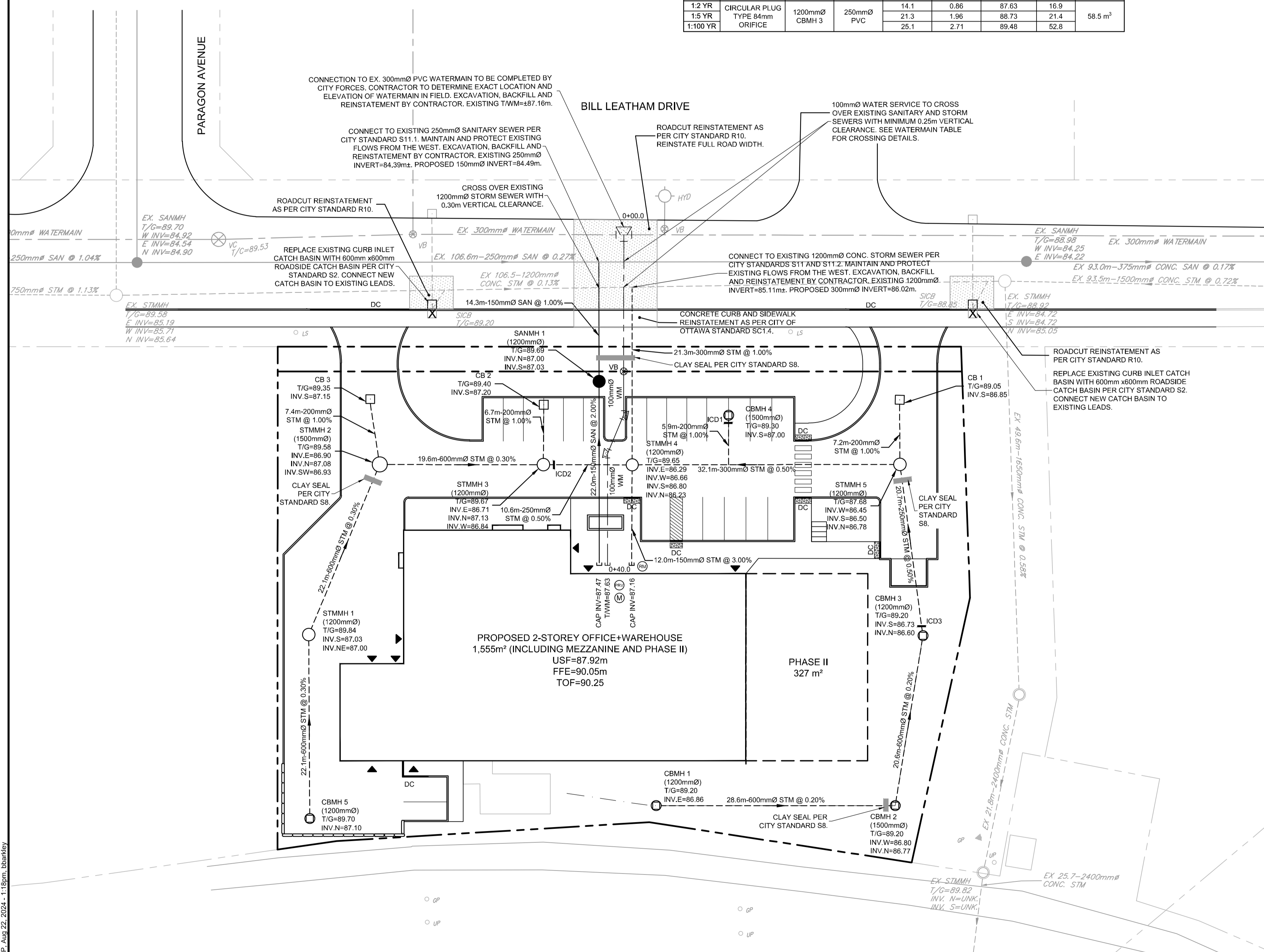
- SUPPLY AND CONSTRUCT ALL SEWERS AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
- SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
CATCHBASIN (600x600mm)	705.010	OPSD
STORM / SANITARY MANHOLE (1200mmØ)	701.010	OPSD
STORM / SANITARY MANHOLE (1500mmØ)	701.011	OPSD
CB, FRAME & COVER	S19	CITY OF OTTAWA
STORM / SANITARY MH FRAME & COVER	401.010 -TYPE 'A'	CITY OF OTTAWA
CATCHBASIN MANHOLE FRAME & COVER	401.010 -TYPE 'B'	CITY OF OTTAWA
SEWER TRENCH	S6	CITY OF OTTAWA
DROP STRUCTURE	1003.010	OPSD
STORM SEWER	PVC DR 35 / CONC 65-D	
CATCHBASIN LEAD	PVC DR 35	
- ALL STORM AND SANITARY SERVICE LATERALS SHALL BE EQUIPPED WITH BACKFLOW PREVENTION DEVICES AS PER THE CITY OF OTTAWA STANDARD DETAILS S14 AND S14.1 OR S14.2.
- INSULATE ALL PIPES (SAN/STM) THAT HAVE LESS THAN 2.0m COVER WITH H-40 INSULATION PER INSULATION DETAIL FOR SHALLOW SEWERS. 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%.
- 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.
- 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.
- 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 OPS5 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.
- ALL STORM MANHOLES AND CATCHBASIN MANHOLES ARE TO HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED. ALL CATCHBASINS ARE TO HAVE 600mm SUMPS UNLESS OTHERWISE INDICATED. ALL CATCHBASINS TO HAVE 3.0m OF FILTER-CLOTH WRAPPED 100mm PVC PERFORATED SUBDRAIN IN AN UPGRADIENT DIRECTION PER GEOTECHNICAL RECOMMENDATIONS.
- ALL CATCHBASINS, MANHOLES AND/OR CATCHBASIN MANHOLES THAT ARE TO HAVE ICD'S INSTALLED WITHIN THEM ARE TO HAVE 600mm SUMPS.
- ALL WEeping TILE CONNECTIONS TO BE MADE TO THE PROPOSED STORM SEWER SYSTEM DOWNSTREAM OF ANY INLET CONTROL DEVICES.
- CONTRACTOR TO TELEVISION (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.
- 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 TIG ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, TWM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.

**WATERMAIN NOTES:**

- 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
CONCRETE THRUST BLOCKS (UNDER 400mmØ)	W25.3	CITY OF OTTAWA
THRUST BLOCK TABLE (UNDER 400mmØ)	W25.4	CITY OF OTTAWA
WATERMAIN	PVC DR 18	
- 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 FORCES.
- 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. WHERE DEPTH OF COVER IS LESS THAN 2.4m, WATERMAIN SHALL BE INSULATED PER CITY OF OTTAWA STANDARD DETAIL W22. WATERMAIN SHALL BE INSULATED BY OPEN STRUCTURES PER W23.
- PROVIDE MINIMUM 0.25m 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.



**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.

No.	REVISION	DATE	BY
2	REVISED PER CITY COMMENTS	AUG 22/24	MS
1	ISSUED FOR SITE PLAN APPLICATION	MAY 31/24	MS

DESIGN	BB
CHECKED	MS
DRAWN	BB
CHECKED	MS
APPROVED	MS

**FOR REVIEW ONLY**

SCALE: 1:300

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LOCATION  
CITY OF OTTAWA  
100 BILL LEATHAM DRIVE

DRAWING NAME  
**GENERAL PLAN OF SERVICES**

PROJECT No. 124011  
REV # 2  
DRAWING No. 124011-GP

M:\2024\124011\124011-GP.dwg, GP, Aug 22, 2024, 1:18pm, bbarabaky