

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 \$2,000,000.00, 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 DIMENSIONS AND INVERTS MUST BE VERIFIED PRIOR TO CONSTRUCTION. IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
- ALL ELEVATIONS ARE GEODETIC. THE SITE BENCHMARKS ARE THE FIRE HYDRANT TOP OF SPINDLE, BM NO. 1 IS LOCATED APPROXIMATELY 105m FROM MERIVALE RD AND CLYDE AVE INTERSECTION, LOCATED ON THE EAST SIDE OF CLYDE AVE. BM NO. 2 IS LOCATED AT THE EAST SIDE OF CLYDE AVE AND APPROXIMATELY 155m FROM BASELINE ROAD AND CLYDE AVE INTERSECTION (BM NO. 1 ELEV = 95.96, BM NO. 2 ELEV = 96.52). REFER TO ANNEX, OZSULLIVAN, VOLLEBERG LTD, TOPOGRAPHICAL PLAN OF SURVEY PART OF LOTS 18 AND 19, 20 AND 21 REGISTERED PLAN 30 CITY OF OTTAWA.
- REFER TO GEOTECHNICAL INVESTIGATION REPORT PATERSON GROUP, REPORT PG5561-1, DATED FEBRUARY 23, 2021 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 HARD SURFACE AREAS AND DIMENSIONS.
- REFER TO THE STORMWATER MANAGEMENT REPORT R-2023-152, DATED OCTOBER 27TH, 2023 PREPARED BY NOVATECH.
- SAW CUT AND KEYGRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10 AND R25).
- 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.
- CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT FOR CONSTRUCTION PURPOSES.

SEWER NOTES:

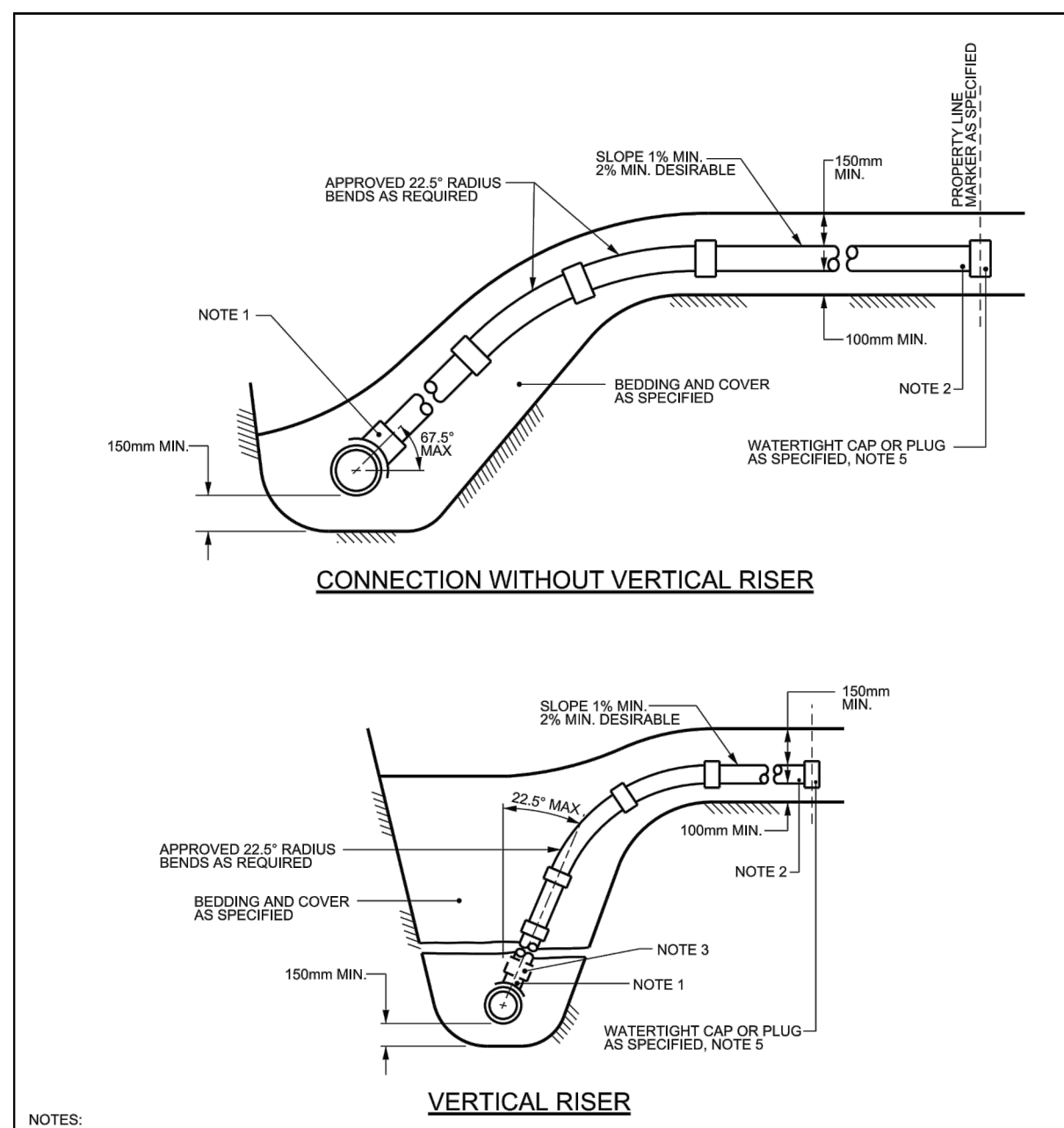
- SUPPLY AND CONSTRUCT ALL SEWERS AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
- SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
SANITARY/STORM/CATCHBASIN MANHOLE (1200)	701.010	OPSD
STORM MANHOLE (1500)	701.011	OPSD
STORM MANHOLE (1800)	701.012	OPSD
CATCHBASIN (600/600)	705.010	OPSD
DOUBLE CATCH BASIN (800 X 1450)	705.020	OPSD
CATCHBASIN FRAME AND COVER	400.029	OPSD
STORM/SANITARY MH FRAME	S25	CITY OF OTTAWA
SANITARY COVER	S24	CITY OF OTTAWA
STORM COVER (CLOSED)	S24.1	CITY OF OTTAWA
STORM COVER (OPEN)	S28.1	CITY OF OTTAWA
SEWER TRENCH	S8 S37	CITY OF OTTAWA
STORM SEWER < 450mmØ	PVC DR 35(UNLESS SPECIFIED OTHERWISE)	CITY OF OTTAWA
STORM SEWER ≥ 450mmØ	CONC 650 (UNLESS SPECIFIED OTHERWISE)	CITY OF OTTAWA
SANITARY SEWER	PVC DR 35	CITY OF OTTAWA
CATCHBASIN LEAD	PVC DR 35	CITY OF OTTAWA
CATCHBASIN COVER	S19	CITY OF OTTAWA
ROAD SUBDRAIN (CONTINUOUS)	R1	CITY OF OTTAWA
WATERTIGHT FRAME & COVER	401.030	OPSD
- 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).
- SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0% (2.0% PREFERRED).
- ALL STORM AND SANITARY LATERALS SHALL BE EQUIPPED WITH BACKFLOW PREVENTION DEVICES AS PER THE CITY OF OTTAWA STANDARD DETAILS S14 AND S14.2.
- A MINIMUM OF 150mm OF OPSD GRANULAR A SHOULD BE PLACED FOR BEDDING FOR SEWER OR WATER PIPES WHEN PLACED ON SOIL SUBGRADE. IF THE BEDDING IS PLACED ON BEDROCK, THE THICKNESS OF THE BEDDING SHOULD BE INCREASED TO 300mm FOR SEWER PIPES. THE BEDDING SHOULD EXTEND TO THE SPRING LINE OF THE PIPE. COVER MATERIAL FROM THE SPRING LINE TO A MINIMUM OF 300mm ABOVE THE OVERTOP OF THE PIPE SHOULD CONSIST OF OPSD GRANULAR A (CONCRETE OR PSM PVC PIPES) OR SAND (CONCRETE PIPES). THE BEDDING AND COVER MATERIALS SHOULD BE PLACED IN MAXIMUM 225mm THICK LIFTS AND COMPACTED TO 95% OF THE SPMD. THE USE OF CLEAR CRUSHED STONE AS A BEDDING LAYER SHALL NOT BE PERMITTED.
- WHERE HARD SURFACE AREAS ARE CONSIDERED ABOVE THE TRENCH BACKFILL, THE TRENCH BACKFILL MATERIAL WITHIN THE FROST ZONE (ABOUT 1.8m BELOW FINISHED GRADE) SHOULD MATCH THE SOILS EXPOSED AT THE TRENCH WALLS TO REDUCE THE POTENTIAL DIFFERENTIAL FROST HEAVING. THE TRENCH BACKFILL SHOULD BE PLACED IN MAXIMUM 300mm THICK LOOSE LIFTS AND COMPACTED TO A MINIMUM OF 95% OF THE SPMD.
- FLEXIBLE CONNECTIONS ARE REQUIRED FOR CONNECTING PIPES TO MANHOLES (FOR EXAMPLE KOR-N-SEAL, PSX: POSITIVE SEAL AND DURA-SEAL). THE CONCRETE CRADLE FOR THE PIPE CAN BE ELIMINATED.
- ALL STORM MANHOLES WITH PIPE SIZES LESS THAN 900mm ARE TO HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED. ALL STORM MANHOLES WITH PIPE SIZES 900mm AND LARGER ARE TO BE BENCHED.
- CONTRACTOR TO TELEVIEW (CCTV) ALL PROPOSED SEWERS 200mm OR GREATER IN DIAMETER PRIOR TO BASE COURSE ASPHALT TO ENSURE THAT THEY ARE CLEAN AND OPERATIONAL. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES AND RE CCTV PRIOR TO ACCEPTANCE. OBTAIN APPROVAL FROM THE CITY'S SEWER OPERATIONS, PROVIDE THE CCTV INSPECTION AND REPORT TO THE ENGINEER FOR REVIEW AND APPROVAL.
- 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 TIG ELEVATIONS, STRUCTURE LOCATIONS AND ANY ALIGNMENT CHANGES, ETC.
- 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 OPSD 410.07.16, 410.07.16.04 AND 410.07.24. 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 CATCHBASINS AND CATCHBASIN MANHOLES TO BE PROVIDED WITH MINIMUM 3 METER LONG PERFORATED SUBDRAINS EXTENDING IN TWO DIRECTIONS AT THE SUBGRADE LEVEL. SUBDRAIN IS TO BE PROVIDED AT THE TRANSITIONS BETWEEN DIFFERENT PAVEMENT COMPOSITIONS. THE SUBGRADE SURFACE SHOULD BE SHOVED TO PROMOTE WATER FLOW TO THE DRAINAGE LINES.
- ALL WORKS SHALL BE PERFORMED AS APPLICABLE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD SPECIFICATIONS, AND IN PARTICULAR O.P.S.S. 407 AND 410.

WATERMAIN NOTES:

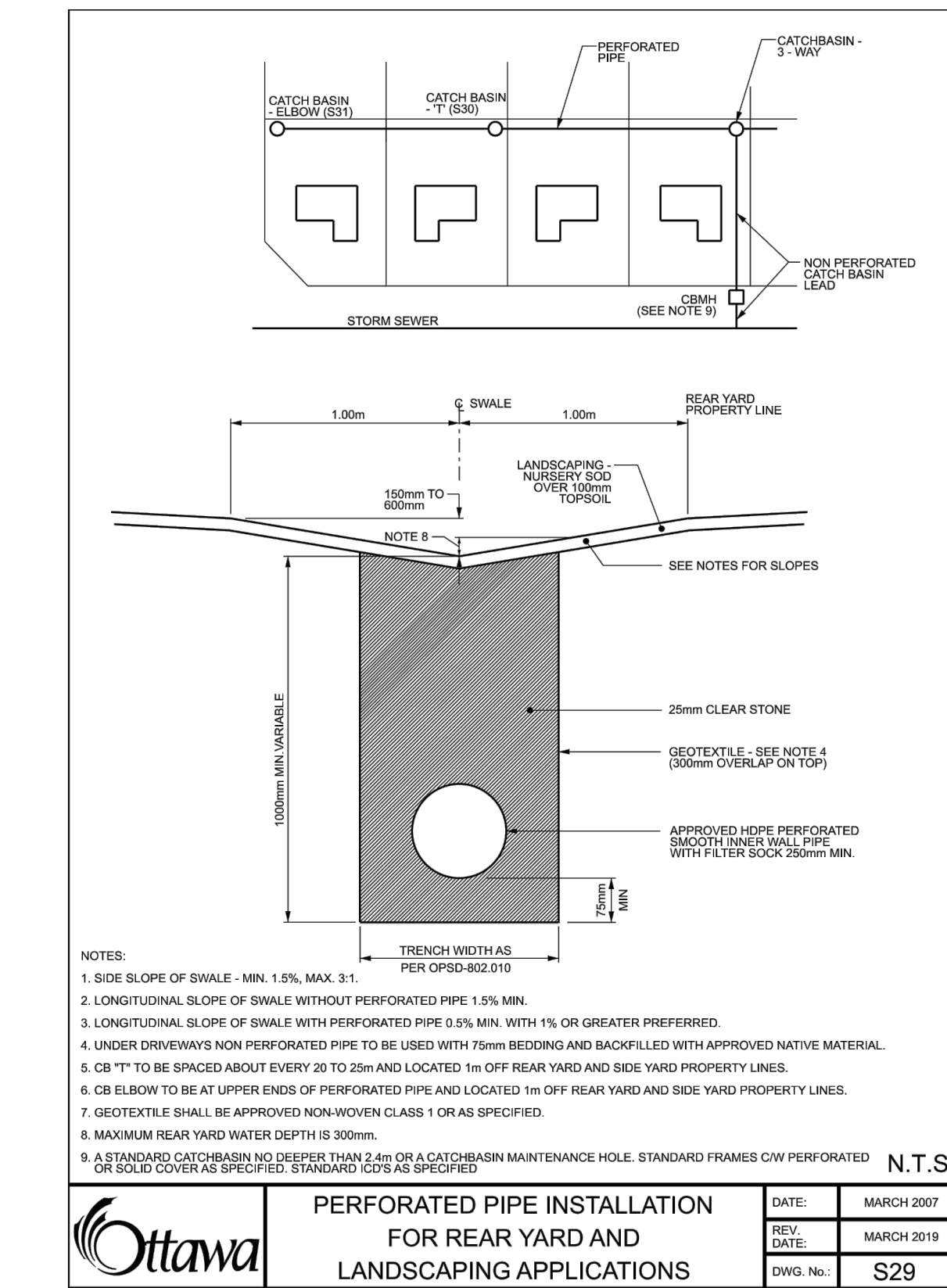
- SUPPLY AND CONSTRUCT ALL WATERMAIN AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
- SPECIFICATIONS:

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
WATERMAIN CROSSING BELOW SEWER	W25	CITY OF OTTAWA
WATERMAIN CROSSING ABOVE SEWER	W25.2	CITY OF OTTAWA
HYDRANT	WSD-24	CITY OF OTTAWA
VALVE AND VALVE BOX	WSD-19	CITY OF OTTAWA
WATERMAIN	PVC DR 18	CITY OF OTTAWA
- SUPPLY AND CONSTRUCT ALL WATERMANS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARD 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. ANY WATERMAIN WITH LESS THAN 2.4m COVER TO BE INSULATED PER THE SEWER AND WATERMAIN NOTES AND DETAIL.
- PROVIDE MINIMUM CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS AS PER CITY DETAILS W25 AND W25.2. WATERMAIN MUST HAVE A MINIMUM VERTICAL CLEARANCE OF 0.25m OVER AND 0.50m UNDER SEWERS AND ALL OTHER UTILITIES WHEN CROSSING.
- WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.
- CATHODIC PROTECTION REQUIRED FOR ALL IRON FITTINGS CITY OF OTTAWA STANDARD DETAILS WSD-30, 40, 41, 42, 43 AND 44.
- IF WATERMAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS LESS THAN HALF THAT RECOMMENDED BY THE MANUFACTURER.



- NOTES:**
- ALL DIAMETERS OF SERVICE CONNECTIONS THAT HAVE NOMINAL DIAMETERS NO GREATER THAN 50% OF THE NOMINAL DIAMETER OF THE RIGID MAIN PIPE SHALL BE MADE USING A BELL END INSERT AS PER S11.2 OR AN APPROVED RUBBER GASKETED RISER, INSTALLED ABOVE THE SPRING LINE.
 - SANITARY SERVICE CONNECTIONS TO STORM SEWERS SHALL BE 100mm TO 150mm UNLESS OTHERWISE SPECIFIED OTHERWISE. PERMITTED PIPE AND FITTINGS TO BE APPROVED CSA 813000 SERIES PRODUCTS UNLESS SPECIFIED OTHERWISE.
 - APPROVED CONTROLLED SETTLEMENT JOINTS OPTIONAL FOR SERVICE CONNECTIONS TO MAIN SEWERS UP TO 5m DEPTH. WHERE APPROVED CONNECTIONS TO SEWERS OVER 5m DEPTH REQUIRE APPROVED CONTROLLED SETTLEMENT JOINTS.
 - VERTICAL RISER SHALL BE SAME AS SERVICE PIPE UNLESS OTHERWISE SPECIFIED.
 - CAP OR PLUG AT THE PROPERTY LINE SHALL BE ADEQUATELY BRACED TO WITHSTAND TESTING PRESSURE.
 - FOR SERVICES BRANCHES 375mm DIA. OR LESS, APPROVED "CORNER TEES" MAY BE USED.
 - APPROVED CUT-IN TOOL MUST BE USED FOR FIELD MADE CONNECTIONS.
 - ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.

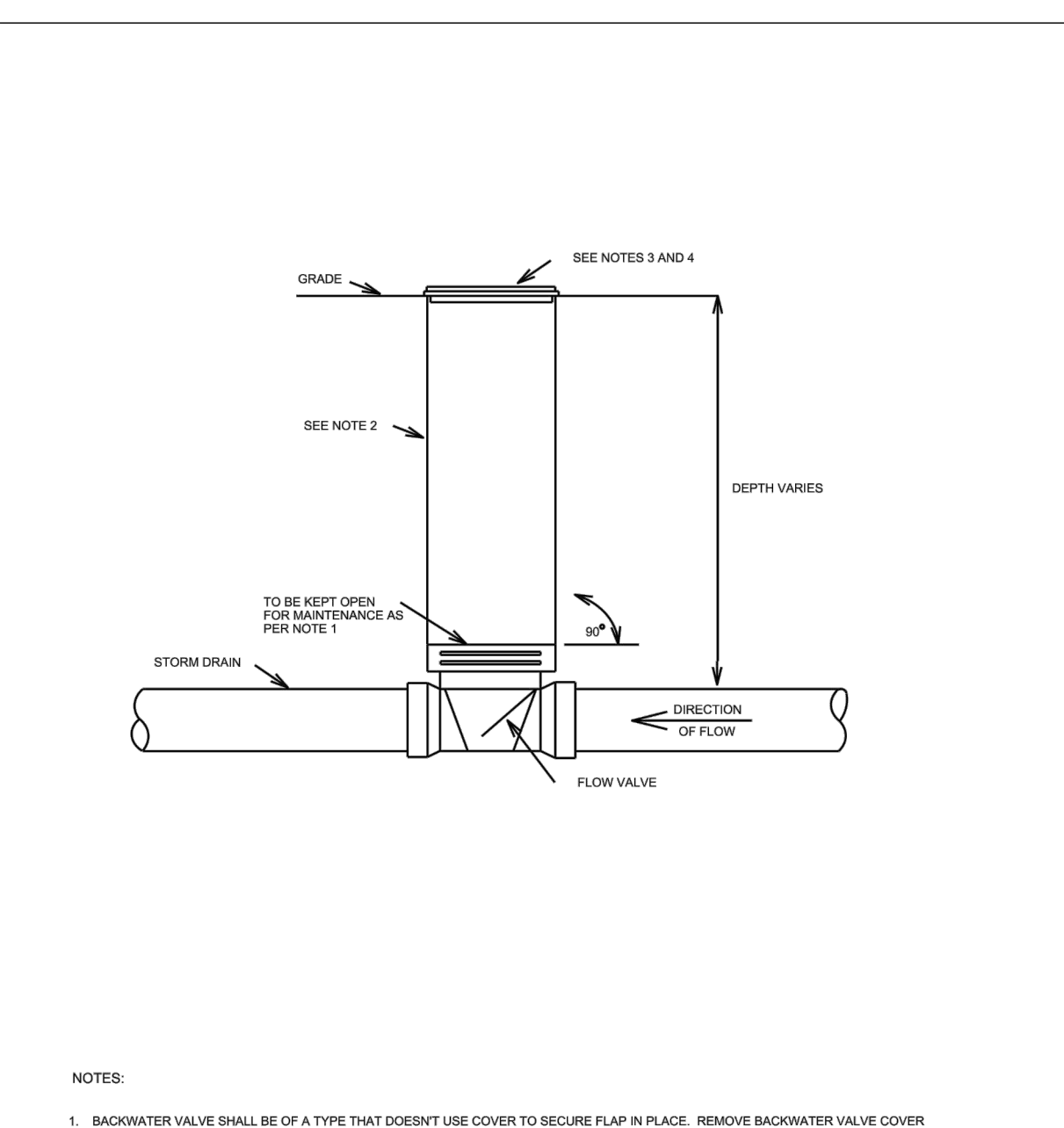
Ottawa	SEWER SERVICE CONNECTIONS FOR RIGID MAIN SEWER PIPE (MODIFIED OPSD-1006.010)	DATE: MARCH 2018	N.T.S.
		REV. DATE: MARCH 2014	
		DWG. No.: S11	



Ottawa	PERFORATED PIPE INSTALLATION FOR REAR YARD AND LANDSCAPING APPLICATIONS	DATE: MARCH 2007	N.T.S.
		REV. DATE: MARCH 2019	
		DWG. No.: S29	

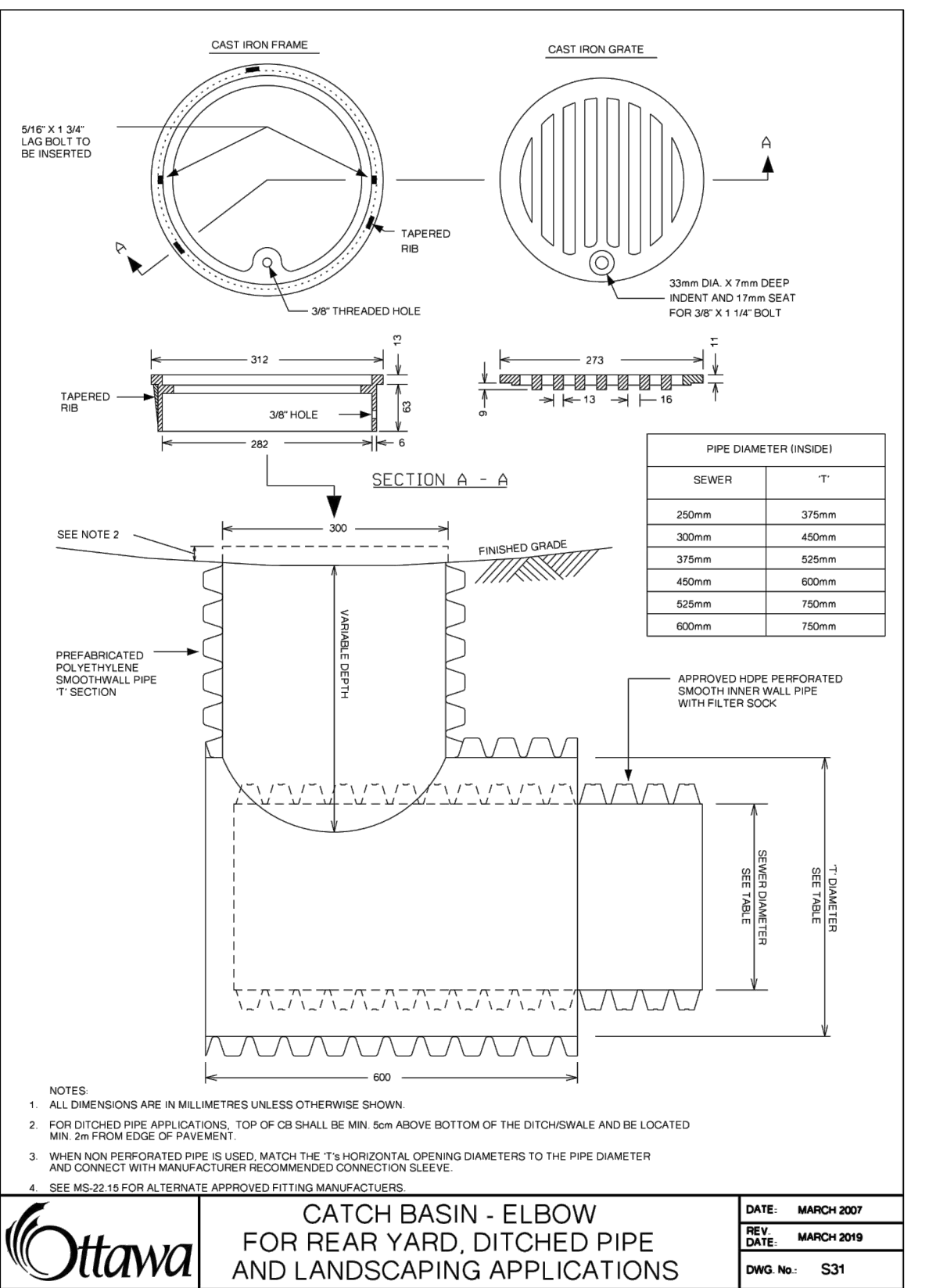
SEWER & WATERMAIN INSULATION NOTES:

- 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.
 - 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)
 $D =$ O.D. OF PIPE (mm)
- INSULATION DETAIL FOR SHALLOW SEWERS & WATERMAIN**

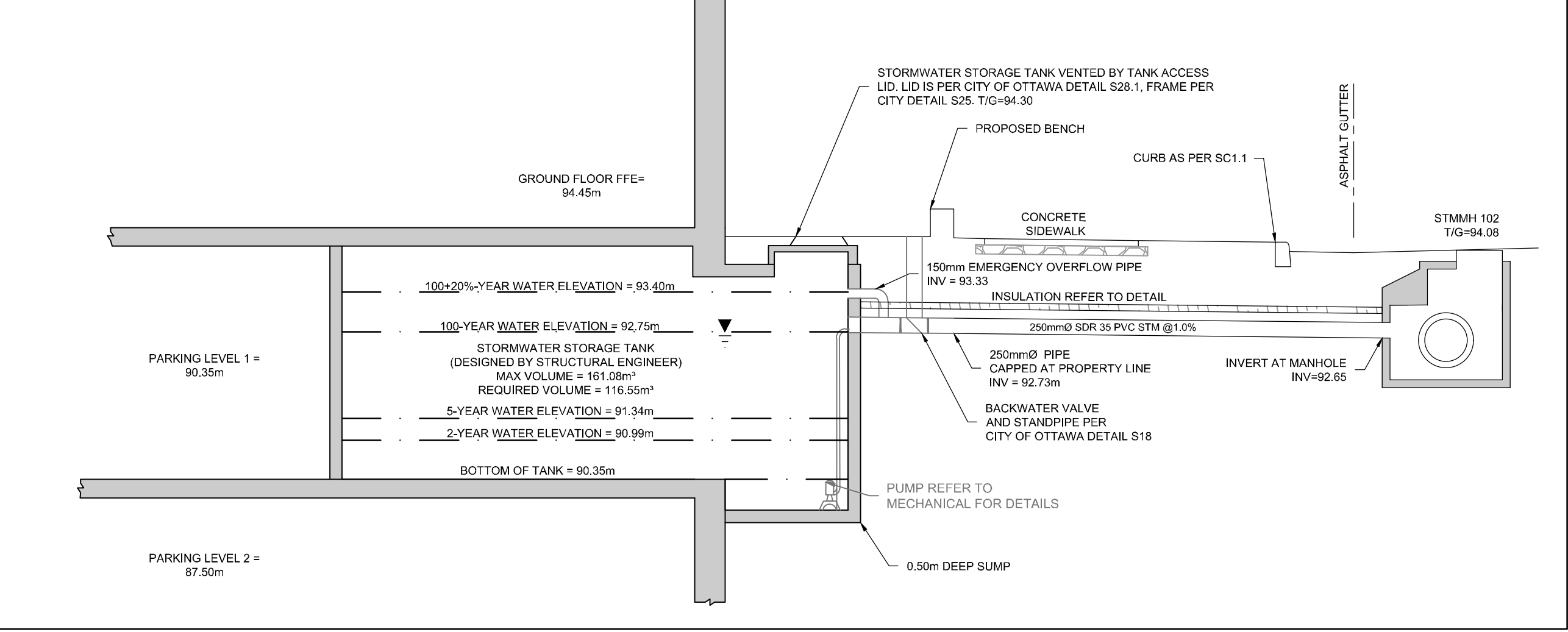


- NOTES:**
- BACKWATER VALVE SHALL BE OF A TYPE THAT DOESN'T USE COVER TO SECURE FLAP IN PLACE. REMOVE BACKWATER VALVE COVER TO ENABLE VALVE MAINTENANCE AND ACCESS.
 - TO PREVENT AD-FREEZING DAMAGE, STANDPIPE SHALL BE ONE PIECE, NO MECHANICAL JOINTS, AND WRAPPED IN POLY OR OTHER SUITABLE MATERIAL. CONNECTION OF STANDPIPE TO MAIN SHALL BE KEVLET GASKETED WITH A GASKET MEETING OPPOSITE CSA STANDARDS.
 - FOR STANDPIPES LOCATED IN GRASSY AREA, COVERS SHALL BE WATERTIGHT AND REMOVABLE TO PERMIT INFILTRATION AND ALLOW ACCESS. TO SHALL BE FLUSH WITH OR SLIGHTLY ABOVE SURFACE DEPENDING ON PROPERTY OWNERS PREFERENCE.
 - FOR STANDPIPES LOCATED IN PAVED AREA USE A SUITABLE COVER.
 - SEE MS 30.15 FOR APPROVED PRODUCTS.

Ottawa	TYPICAL DEPRESSED DRIVEWAY BACKWATER VALVE AND STANDPIPE DETAIL	DATE: MARCH 2007	N.T.S.
		REV. DATE: MARCH 2014	
		DWG. No.: S18	



Ottawa	CATCH BASIN - ELBOW FOR REAR YARD AND LANDSCAPING APPLICATIONS	DATE: MARCH 2007	N.T.S.
		REV. DATE: MARCH 2019	
		DWG. No.: S31	



AREA DRAIN TABLE (PHASE 1)		
AD No.	TIG ELEVATION	INVERT
1001	94.35	REFER TO MECHANICAL FOR CONNECTION DETAILS

LANDSCAPE DRAIN TABLE (PHASE 1)		
LD. No.	TIG ELEVATION	INVERT
2000	94.70	NE=93.20
2001	94.25	SW=93.66

CATCHBASIN MANHOLE TABLE				
CBMH ID	STATION	SIZE (mm)	TIG ELEV (m)	INVERT (m)
110	1+088.37	1200	94.60	NE=92.89

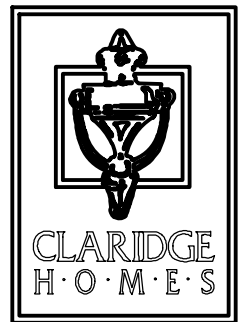
CATCHBASIN TABLE (PHASE 1)					
CB ID	STATION	SIZE (mm)	TIG ELEV (m)	INVERT (m)	ICD DIA (mm)
01	1+047.58	610X1450	93.97	NE=92.77	152
02	1+047.58	610X1450	93.97	SW=92.77	178
03	1+095.34	610X610	94.87	NE=93.67	83
04	1+095.34	610X610	94.87	SW=93.67	83

STM MANHOLE TABLE (PHASE 1)					
MANHOLE ID	STATION	SIZE (mm)	TIG ELEV (m)	INVERT (m)	INVERT (m)
101	1+024.07	1500mmØ	94.08	NE=92.24	SE=92.23
102	1+035.35	1800mmØ	94.08	NW=92.35	SE=92.27
				SW=92.65	NE=92.65
103	1+067.70	1500mmØ	94.06	NW=92.50	SE=92.42
				SW=92.77	NE=92.77
104	1+087.85	1500mmØ	94.68	NW=92.73	SE=92.58
				NE=92.88	SW=92.80

2023/12/12 09:45 AM Design/121009-NDGP1 - Oct-27-2023 - 3:29pm - dmpgsm

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.

CLARIDGE HOMES
 505 PRESTON STREET,
 2ND FLOOR
 OTTAWA, ONTARIO
 K1S 4N7



NOT FOR CONSTRUCTION

No.	REVISION	DATE	BY
3.	ISSUED PHASE 1 ONLY	OCT 27/2023	GJM
2.	REVISED AND ISSUED FOR CITY APPROVAL	DEC 09/2022	GJM
1.	ISSUED WITH SITE PLAN APPLICATION	SEPT 03/2021	JAG

SCALE

ARM

GJM

C.J.F./ARM

ARM

GJM

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LOCATION
 1500 MERIVALE
 1500 MERIVALE, CITY OF OTTAWA

DRAWING NAME
NOTES AND DETAILS GENERAL SERVICING (PHASE 1)

PROJECT No.: 121009
 REV: Rev#3
 DRAWING No.: 121009-NDGP1

CITY FILE No. D07-12-21-0162