

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 COINSURED.
- COMPLETE ALL WORKS IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS USING THE CURRENT GUIDELINES, BYLAWS AND STANDARDS INCLUDING MATERIALS OF CONSTRUCTION, DISINFECTION AND ALL RELEVANT REFERENCES TO OPS, OPS & AWWA GUIDELINES - ALL CURRENT VERSIONS AND AS AMENDED.
- 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 THE GEOTECHNICAL INVESTIGATION REPORT, NO. PR4011-1, REV. 1, DATED MAY 31, 2021, 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.
- REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARD SURFACED AREAS AND DIMENSIONS.
- REFER TO THE DEVELOPMENT SURVEY STUDY AND STORMWATER MANAGEMENT REPORT (R-2020-09) PREPARED BY NOVATECH.
- 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 SERVING PLAN ON 1:1917-GP INDICATING ALL SERVING AS-BUILT INFORMATION SHOWN ON THE SERVING PLAN, AS-BUILT INFORMATION, VALVE, PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND TO ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, T.Y.W. 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 - ALL CURRENT VERSIONS AND AS AMENDED.
- SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
CATCHBASIN (600x600mm)	705.010	OPSD
STORM / CATCHBASIN MANHOLE (1200mmØ)	701.010	OPSD
CB FRAME & COVER	701.012	OPSD
STORM / SANITARY MH FRAME & COVER	400.020	OPSD
WATER TIGHT MH FRAME AND COVER	401.010	OPSD
SEWER TRENCH	401.030	OPSD
SANITARY / STORM SEWER / CB LEAD	PVC DR 35	CITY OF OTTAWA
STORM SURFACE PIPE (1.0m DIAMETER AND OVER)	CONCRETE 65-D	CITY OF OTTAWA
- THE WEAVING TILE SERVICE SHALL BE EQUIPPED WITH A BACKFLOW PREVENTION DEVICE AS PER THE CITY OF OTTAWA STANDARD DETAIL S18, AS INDICATED ON THE PLAN 11917-GP.
- INSULATE ALL PIPES (SANSTM) THAT HAVE LESS THAN 1.5m COVER WITH HI-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 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 SERVING CONTRACTOR PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPS 410.07.16, 410.07.16.04 AND 407.24. 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 SIGNIFY A CERTIFIED COPY OF THE TEST RESULTS.
- TYPICAL STORM MANHOLES AND CATCHBASIN MANHOLES ARE TO HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED. ALL CATCHBASINS, MANHOLES AND/OR CATCHBASIN MANHOLES THAT ARE TO HAVE ICDS INSTALLED WITHIN THEM ARE TO HAVE 600mm Sumps.
- ALL WEAVING TILE CONNECTIONS TO BE MADE TO THE PROPOSED STORM SEWER SYSTEM DOWNSTREAM OF ANY INLET CONTROL DEVICES.
- THE CONTRACTOR IS TO ELECTIVE (C/V) 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.

GRADING NOTES:

- ALL TOPSOIL, ORGANIC OR DELETERIOUS MATERIAL MUST BE ENTIRELY REMOVED FROM BENEATH THE PROPOSED PAVED AREAS AS DIRECTED BY THE SITE ENGINEER OR GEOTECHNICAL ENGINEER.
- EXPOSED SUBGRADES IN PAVED AREAS SHOULD BE PROOF ROLLED WITH A LARGE STEEL DRUM ROLLER AND INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF GRANULAR MATERIAL.
- ANY SOFT AREAS EVIDENT FROM THE PROOF ROLLING SHOULD BE SUB-EXCAVATED AND REPLACED WITH SUITABLE MATERIAL THAT IS FROST COMPATIBLE WITH THE EXISTING SOILS AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
- THE GRANULAR BASE SHOULD BE COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE. ANY ADDITIONAL GRANULAR FILL USED BELOW THE PROPOSED PAVEMENT SHOULD BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE.
- MINIMUM OF 2% GRADE FOR ALL GRASS AREAS UNLESS OTHERWISE NOTED.
- MAXIMUM TERRACING GRADE TO BE 3:1 UNLESS OTHERWISE NOTED.
- ALL GRADES BY CURBS ARE EDGE OF PAVEMENT GRADES UNLESS OTHERWISE INDICATED.
- ALL CURBS SHALL BE BARRIER CURB (150mm) UNLESS OTHERWISE NOTED AND CONSTRUCTED AS PER CITY OF OTTAWA STANDARDS (SC1.1).
- REFER TO LANDSCAPE PLAN FOR PLANTING AND OTHER LANDSCAPE FEATURES.
- CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GRADING PLAN INDICATING DETAIL ELEVATIONS OF ALL DESIGN GRADES SHOWN ON PLAN 11917-GR.

PAVEMENT STRUCTURES:

- LIGHT DUTY PAVEMENT
 - 50mm HL-2 or SUPERPAVE 12.5
 - 150mm GRANULAR "A"
 - 300mm GRANULAR "B" TYPE II
 - ASPHALT GRADE PG 58-4 - TRAFFIC LEVEL "B"
 - INSTALLED PER GEOTECHNICAL REPORT
- HEAVY DUTY PAVEMENT
 - 40mm HL-3 or SUPERPAVE 12.5
 - 50mm HL-3 or SUPERPAVE 19.0
 - 150mm GRANULAR "A"
 - 450mm GRANULAR "B" TYPE II
 - ASPHALT GRADE PG 58-4 - TRAFFIC LEVEL "B"
 - INSTALLED PER GEOTECHNICAL REPORT
- HEAVY DUTY PAVEMENT - ROADWAY RE-INSTATEMENT
 - MATCH EXISTING GRANULAR STRUCTURE OF ROADWAY IN TRENCHES
 - MATCH EXISTING ASPHALT THICKNESSES IN TRENCHES
 - NEW ASPHALT GRADE PG 58-4
 - PROVIDE FULL ROAD WIDTH ASPHALT OVERLAY, MIN. 40mm DEPTH AS SHOWN INCLUDING INTERSECTION OF LEES & ROBINSON AVENUES.
 - REFER TO AMENDED ROAD ACTIVITY BY-LAW 2003-445.

EROSION AND SEDIMENT CONTROL NOTES:

- THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERBODIES DURING CONSTRUCTION AND THAT THE CONTRACTOR KNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.
- ALL EROSION AND SEDIMENT CONTROLS ARE TO BE INSTALLED TO THE SATISFACTION OF THE ENGINEER AND THE CITY OF OTTAWA. THEY ARE TO BE APPROPRIATE TO THE SITE CONDITIONS, PRIOR TO UNDERTAKING ANY SITE ALTERATIONS (FILLING, GRADING, REMOVAL OF VEGETATION, ETC.) AND DURING ALL PHASES OF SITE PREPARATION AND CONSTRUCTION. THESE PRACTICES ARE TO BE IMPLEMENTED IN ACCORDANCE WITH THE CURRENT BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL AND SHOULD INCLUDE AS A MINIMUM THOSE MEASURES INDICATED ON THE PLAN.
 - EROSION AND SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED DURING CONSTRUCTION IN ACCORDANCE WITH THE "GUIDELINES ON EROSION AND SEDIMENT CONTROL FOR URBAN CONSTRUCTION SITES" (GOVERNMENT OF ONTARIO, MAY 1987). THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MEETING ALL REGULATORY AGENCY REQUIREMENTS.
 - TO PREVENT SURFACE EROSION FROM ENTERING ANY STORM SEWER SYSTEM DURING CONSTRUCTION, FILTER BAGS WILL BE PLACED UNDER GRATES OF NEARBY CATCHBASINS AND STRUCTURES. A LIGHT DUTY SILT FENCE BARRIER WILL ALSO BE INSTALLED AROUND THE CONSTRUCTION AREA (WHERE APPLICABLE). THESE CONTROL MEASURES WILL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
 - TO LIMIT EROSION: MINIMIZE THE AMOUNT OF EXPOSED SOILS AT ANY GIVEN TIME, RE-VEGETATE EXPOSED AREAS AND SLOPES AS SOON AS POSSIBLE AND PROTECT EXPOSED SLOPES WITH NATURAL OR SYNTHETIC MULCHES.
 - FOR MATERIAL STOCKPILING: MINIMIZE THE AMOUNT OF EXPOSED MATERIALS AT ANY GIVEN TIME, APPLY TEMPORARY SEEDING, TARPS, COMPACTION AND/OR SURFACE ROUGHENING AS REQUIRED TO STABILIZE STOCKPILED MATERIALS THAT WILL NOT BE USED WITHIN 14 DAYS.
 - THE SEDIMENT CONTROL MEASURES SHALL ONLY BE REMOVED WHEN, IN THE OPINION OF THE ENGINEER, THE MEASURES ARE NO LONGER REQUIRED. NO CONTROL MEASURES MAY BE PERMANENTLY REMOVED WITHOUT PRIOR AUTHORIZATION FROM THE ENGINEER.
 - THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE ENGINEER ANY ACCIDENTAL DISCHARGES OF SEDIMENT MATERIAL INTO ANY STORM SEWER SYSTEM. APPROPRIATE RESPONSE MEASURES, INCLUDING ANY REPAIRS TO EXISTING CONTROL MEASURES OR THE IMPLEMENTATION OF ADDITIONAL CONTROL MEASURES, SHALL BE CARRIED OUT BY THE CONTRACTOR AT HIS OWN EXPENSE.
 - THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERBODIES, DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.
 - ROADWAYS ARE TO BE SWEEP AS REQUIRED OR AS DIRECTED BY THE ENGINEER AND/OR THE MUNICIPALITY.
 - THE CONTRACTOR SHALL ENSURE PROPER DUST CONTROL IS PROVIDED WITH THE APPLICATION OF WATER (AND IF REQUIRED, CALCIUM CHLORIDE) DURING DRY PERIODS. MONITOR DUST LEVELS DURING SITE PREPARATION/EXCAVATION, AND CONSTRUCTION ACTIVITIES, AND WHEN DUST LEVELS BECOME VISUALLY APPARENT SPRAY WATER TO MINIMIZE THE RELEASE OF DUST FROM GRAVEL, PAVED AREAS AND EXPOSED SOILS. USE CHEMICAL DUST SUPPRESSANTS ONLY WHERE NECESSARY ON PROBLEM AREAS.

WATERMAIN NOTES:

- SUPPLY AND CONSTRUCT ALL WATERMANS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS - ALL CURRENT VERSIONS AND AS AMENDED; EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMANS BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAIN BY CITY OF OTTAWA FORCES, CHLORINATION OF THE WATER SYSTEM SHALL BE PERFORMED BY THE CONTRACTOR IN THE PRESENCE OF THE CITY OF OTTAWA FORCES.
- SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
WATERMAIN TRENCHING	W17	CITY OF OTTAWA
HYDRANT INSTALLATION	W18	CITY OF OTTAWA
THERMAL INSULATION IN SHALLOW TRENCHES	W22	CITY OF OTTAWA
THERMAL INSULATION AT OPEN STRUCTURES	W24	CITY OF OTTAWA
VALVE BOX ASSEMBLY	W25	CITY OF OTTAWA
WATERMAIN CROSSING BELOW SEWER	W25.2	CITY OF OTTAWA
DISTRICT METERING CHAMBER	W3	CITY OF OTTAWA
- WATERMAIN MATERIAL
 - PVC DR 18
 - PEX / TYPE "X" SOFT COPPER
- WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED.
- PROVIDE MINIMUM 0.5m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS, WHERE POSSIBLE UNLESS OTHERWISE INDICATED.
- WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, WHERE UNLESS OTHERWISE INDICATED.

Erosion and Sediment Control Responsibilities:

ESIC Measure	Symbol	Specification	Installation Responsibility	Inspection/Verification Responsibility	Inspection Frequency	Approval to Remove	Removal Responsibility	Inspection/Verification Responsibility
Silt Fence (Light Duty)	---	OPSD 215.110	Developer's Contractor	Developer's Contractor	Weekly	Consultant	Developer's Contractor	N/A
Filter Bag	---	Location as Indicated on ESIC Note #s	Developer's Contractor	Developer's Contractor	Weekly (as a minimum)	Consultant	Developer's Contractor	N/A
Mud Mat	---	Drawing Details	Developer's Contractor	Developer's Contractor	Weekly (as a minimum)	Developer's Contractor	Developer's Contractor	N/A
Dust Control	---	Location as Required	Developer's Contractor	Developer's Contractor	Weekly (as a minimum)	Consultant	Developer's Contractor	N/A
Stabilized Material Stockpiling	---	Location as Required	Developer's Contractor	Developer's Contractor	Weekly (as a minimum)	Developer's Contractor	Developer's Contractor	N/A
Sediment Basin (for flows being captured out of excavations)	---	Location as Required by Contractor	Developer's Contractor	Developer's Contractor	After Every Rampart	Developer's Contractor	Developer's Contractor	N/A

CRITICAL SEWER PIPE CROSSING TABLE

CROSSING	LOWER PIPE	HIGHER PIPE	CLEARANCE	SURFACE ELEVATION
375mmØ STM OBV-60.03	250mmØ SAN INV-61.51	± 1.5m	64.58 m	
300mmØ STM OBV-60.80	200mmØ SAN INV-61.87	± 1.0m	64.93 m	
1050mmØ STM OBV-61.05	150mmØ US WM-61.45	± 0.3m	63.67 m	
250mmØ SAN OBV-60.95	150mmØ US WM-61.45	± 0.5m	63.69 m	
1050mmØ STM OBV-63.45	150mmØ US WM-64.25	± 0.7m	66.85 m	
250mmØ SAN OBV-63.20	150mmØ US WM-64.25	± 0.95m	66.80 m	

SEE 11917-GP PLAN FOR SEWER CROSSING LOCATIONS A and B on SEWERS "C, D, E and F" on WATERMAIN.

PROPOSED 250mmØ WATERMAIN TABLE - EAST / WEST SITE LOOP

STATION	SURFACE ELEVATION	T.Y.W. ELEVATION	COMMENTS
4+000	69.93*	67.50 *	TEE CONNECTION TO NEW 300mmØ WATERMAIN EXTENSION
4+002.8	70.10	67.45	22.5° VERTICAL BEND
4+005.4	70.12	66.34	22.5° VERTICAL BEND
4+006.7	70.05	66.34 ***	CROSS BELOW EX.600mmØ WM [L5=47.34m] (±1.0m CLEARANCE)
4+008.0	69.90	66.34	22.5° VERTICAL BEND
4+010.4	69.75	67.35	22.5° VERTICAL BEND
4+018.0	69.30	66.90	22.5° HORIZONTAL BEND
4+020.0	69.29	66.89	CROSS BELOW EX. BELL DUCT (±1.2m CLEARANCE)
4+020.8	69.28	66.88	CROSS BELOW EX. BELL DUCT (±1.5m CLEARANCE)
4+021.8	69.27	66.87	CROSS BELOW EX. COMMS DUCT (±1.5m CLEARANCE)
4+022.1	69.27	66.87	22.5° HORIZONTAL BEND
4+023.1	69.26	66.86	250mmØ VALVE & VALVE BOX @ PROPERTY LINE
4+028.2	69.05	66.65	250 x 250 x 250 TEE
4+050	68.05	66.65	---
4+075	67.15	64.75	---
4+095.8	66.25	63.85	150 x 250 x 250 BUILDING SERVICE TEE
4+097.1	66.19	63.79	250mmØ VALVE & VALVE BOX
4+098.3	66.13	63.73	150 x 250 x 250 BUILDING SERVICE TEE
4+118.5	65.15	61.64 ***	CROSS BELOW 250mmØ STM [Obv=63.03m] (±1.4m CLEARANCE)
4+121.0	65.10	61.49 ***	CROSS BELOW 200mmØ SAN [Inv=61.98m] (±0.5m CLEARANCE)
4+125	64.93	61.80	---
4+132.9	64.80	62.40	22.5° HORIZONTAL BEND
4+136.6	64.70	62.30 ***	CROSS ABOVE 200mmØ STM [Obv=60.77m] (±1.3m CLEARANCE)
4+140.8	64.56	62.16	22.5° HORIZONTAL BEND
4+150	64.10	61.70	---
4+164.1	63.78	61.68 **	45° HORIZONTAL BEND
4+165.5	63.77	61.67 **	45° HORIZONTAL BEND
4+166.9	63.74	61.64 **	150mmØ HYDRANT TEE
4+168.5	63.73	61.63 **	45° HORIZONTAL BEND
4+169.9	63.71	61.61 **	45° HORIZONTAL BEND
4+171.4	63.70	61.60 **	150 x 250 x 250 BUILDING SERVICE TEE
4+172.6	63.69	61.59 **	250mmØ VALVE & VALVE BOX
4+173.9	63.68	61.58 **	150 x 250 x 250 BUILDING SERVICE TEE
4+175.5	63.66	61.57 **	INSULATE IN PROXIMITY TO OPEN STRUCTURE
4+197.2	64.48	62.08	250 x 250 x 250 TEE (H-900)
4+199.8	64.50	62.10 ***	CROSS ABOVE 200mmØ STM [Obv=60.70m] (±1.2m CLEARANCE)
4+203.3	64.65	62.20 **	250 x 250 x 250 TEE (H-102.5)
4+204.8	64.68	62.18 **	250mmØ VALVE & VALVE BOX
4+212.5	64.93	61.40 ***	CROSS BELOW 200mmØ SAN [Inv=61.90m] (±0.5m CLEARANCE)
4+214.0	64.96	61.52 ***	CROSS ABOVE 200mmØ STM [Obv=60.87m] (±0.4m CLEARANCE)
4+225	65.43	62.43	---
4+239.5	66.12	63.72	150mmØ HYDRANT TEE
4+242.5	66.17	63.77 **	INSULATE IN PROXIMITY TO OPEN STRUCTURE
4+252.0	66.70	64.30 ***	CROSS ABOVE 200mmØ STM [Obv=62.92m] (±1.1m CLEARANCE)
4+254.1	66.80	64.40	150 x 250 x 250 BUILDING SERVICE TEE
4+255.4	66.85	64.45	250mmØ VALVE & VALVE BOX
4+256.6	66.90	64.50	150 x 250 x 250 BUILDING SERVICE TEE
4+262.6	67.30	64.90	22.5° HORIZONTAL BEND
4+268.6	67.50	65.10	22.5° HORIZONTAL BEND
4+275	67.80	65.40	---
4+300	68.75	66.35	---
4+305.7	69.05	66.65	250 x 250 x 250 TEE
4+308.7	69.15	66.75	22.5° HORIZONTAL BEND
4+313.3	69.35	66.95	DISTRICT METER AREA CHAMBER @ PROPERTY LINE
4+317.5	69.48	67.08	50 x 250 x 250 PARK SERVICE TEE
4+319.5	69.57	67.17	45° HORIZONTAL BEND
4+323.8	69.87	67.19	CROSS BELOW EX. COMMS DUCT (±1.5m CLEARANCE)
4+325.3	69.90	67.20	CROSS BELOW EX. BELL DUCTS (±1.6m CLEARANCE)
4+326.1	69.93	67.23	22.5° HORIZONTAL BEND
4+328.6	70.02	67.25 **	CONNECTION TO EX. 150mmØ WM T.V.S. with 250x150 REDUCER

- CONNECTIONS TO EXISTING 150mmØ AND NEW 300mmØ WATERMANS. EXACT ELEVATIONS TO BE FIELD DETERMINED.
- PROVIDE THERMAL INSULATION AS PER CITY OF OTTAWA DETAILS W22 IN SHALLOW TRENCHES WHERE COVER IS LESS THAN 2.4m AND/OR W23 ADJACENT TO OPEN STRUCTURES.
- PIPE CROSSINGS WITH WATERMANS ARE TO BE IN ACCORDANCE WITH CITY STANDARDS W25 AND W25.2 TO AVOID CONFLICTS, WHERE POSSIBLE.

PROPOSED 250mmØ WATERMAIN TABLE - NORTH / SOUTH SITE LOOP

STATION	SURFACE ELEVATION	T.Y.W. ELEVATION	COMMENTS
5+000	64.48	62.08	250 x 250 x 250 TEE (4+197.2)
5+001.0	64.46	62.10 **	250mmØ VALVE & VALVE BOX
5+002.5	64.45	62.10 ***	CROSS ABOVE 300mmØ STM [Obv=60.10m] (±1.75m CLEARANCE)
5+004.5	64.45	62.15 ***	CROSS ABOVE 250mmØ SAN [Obv=61.62m] (±0.3m CLEARANCE)
5+005.6	64.45	62.15 **	22.5° HORIZONTAL BEND
5+008.0	64.43	62.03	22.5° HORIZONTAL BEND
5+009.5	64.40	62.10	150mmØ HYDRANT TEE
5+025	64.05	61.65 **	---
5+040.4	63.72	61.32 ***	CROSS BELOW 200mmØ STM [Inv=61.91m] (±0.6m CLEARANCE)
5+048.3	63.76	61.28	45° HORIZONTAL BEND
5+049.3	63.75	61.25	150mmØ HYDRANT TEE
5+049.7	63.75	61.25	45° HORIZONTAL BEND
5+050.6	63.60	61.20	250mmØ VALVE & VALVE BOX
5+051.4	63.60	61.20 ***	CROSS ABOVE 375mmØ STM [Obv=59.58m] (±1.35m CLEARANCE)
5+052.9	63.60	61.20	45° HORIZONTAL BEND
5+054.3	63.58	61.18	45° HORIZONTAL BEND
5+062.3	63.53	61.13 **	INSULATE IN PROXIMITY TO OPEN STRUCTURE
5+075	63.88	61.48	---
5+078.8	64.08	61.68 ***	CROSS ABOVE 200mmØ STM [Obv=59.83m] (±1.6m CLEARANCE)
5+091.9	64.50	62.10	150 x 250 x 250 BUILDING SERVICE TEE
5+093.2	64.55	62.15	250mmØ VALVE & VALVE BOX
5+094.4	64.60	62.20	150 x 250 x 250 BUILDING SERVICE TEE
5+098.0	64.68	62.32 ***	CROSS ABOVE 250mmØ SAN [Obv=61.82m] (±0.25m CLEARANCE)
5+100.0	64.68	62.25 ***	CROSS ABOVE 300mmØ STM [Obv=60.55m] (±1.45m CLEARANCE)
5+102.5	64.65	62.20	250 x 250 x 250 TEE (4+203.3)

- CONNECTIONS TO EXISTING 150mmØ AND NEW 300mmØ WATERMANS. EXACT ELEVATIONS TO BE FIELD DETERMINED.
- PROVIDE THERMAL INSULATION AS PER CITY OF OTTAWA DETAILS W22 IN SHALLOW TRENCHES WHERE COVER IS LESS THAN 2.4m AND/OR W23 ADJACENT TO OPEN STRUCTURES.
- PIPE CROSSINGS WITH WATERMANS ARE TO BE IN ACCORDANCE WITH CITY STANDARDS W25 AND W25.2 TO AVOID CONFLICTS, WHERE POSSIBLE.

INLET CONTROL DEVICE DATA TABLE: AREA A-2.1 (TANK 1)

DESIGN EVENT	ICD TYPE (PLUG TYPE)	DIAMETER OF OUTLET PIPE (mm)	PEAK DESIGN FLOW (L/s)	DESIGN HEAD (m)	DESIGN ELEVATION (m)	WATER ELEVATION (m)	VOLUME (m³)	AVAILABLE STORAGE
1.2 YR								