LEGEND

69.75 / 69.50	EXISTING ELEVATION	UP	EXISTING UTILITY POLE
69.75 / 69.50	PROPOSED/EXISTING ELEVATIONS	FH	FIRE HYDRANT
	PROPOSED CURB ELEVATION	LP	PROPOSED LAMP POST
68.75	PROPOSED ELEVATION AT BUILDING ENTRANCE		PROPOSED CURB STOP
0.0%	DRAINAGE SLOPE		PROPOSED WATER METER
	PROPOSED BOARD FENCE		PROPOSED REMOTE WATER METER
W	WATERMAIN	SA	SANITARY SERVICE CONNECTION
STM	STORM SEWER	SU / SMP	SUMP LOCATION
SAN	SANITARY SEWER	DS	PROPOSED DOWNSPOUT LOCATION
	TOP OF SLOPE		EXISTING WATER STAND POST
	PROPERTY LINE	WV	EXISTING WATER VALVE
OHW	OVERHEAD WIRES	STM	EXISTING STORM MANHOLE
	SILT FENCE	SAN	EXISTING SANITARY MANHOLE
DC	PROPOSED DEPRESSED CURB	CB	EXISTING CATCH BASIN
	PROPOSED SWALE	RYCB / CBMH	PROPOSED REAR-YARD CB / PROPOSED CATCH BASIN/MANHOLE
	OVERLAND FLOW ROUTE	CB	PROPOSED CATCH BASIN
	LOCATION OF EXISTING SERVICE CONNECTIONS	STM	PROPOSED STORM MANHOLE
	TEMPORARY BENCHMARK	SAN	PROPOSED SANITARY MANHOLE

WATER CROSSING TABLE

1	BOTTOM OF W/M = 82.45 STM OBV = 82.05± SAN OBV = 80.55±
2	BOTTOM OF W/M = 82.70 STM OBV = 82.44
3	SAN INV = 83.40 TOP OF W/M = 82.90
4	BOTTOM OF W/M = 83.40 STM OBV = 83.14
5	SAN INV = 84.40 TOP OF W/M = 83.85
6	STM INV = 84.00 TOP OF W/M = 83.50

NOTES:
- REFER TO CITY OF OTTAWA STANDARD DWG. NO. W25 FOR INSTANCES WHERE WATERMAIN CROSSING IS BELOW SEWER.
- PROVIDE INSULATION WHERE SEPARATION DISTANCES ARE LESS THAN 1m.

INLET CONTROL DEVICE TABLE

STRUCTURE	STM-MH1	CB1
MODEL	HYDROVEX 75-SVHV-1	HYDROVEX 75-SWHV-1
PIPE OUTLET	250 mm PVC SDR 35	250 mm PVC SDR 35
DISCHARGE	12.4 L/s	7.0L/s
UPSTREAM HEAD	3.4m	2.7m
HWL ABOVE ICD	85.25m	86.00m
ICD INVERT ELEVATION	82.00m	83.30m
STRUCTURE SIZE	1.2m DIA.	0.6mx0.6m
MINIMUM CLEARANCE		

SEWER NOTES:

1. SUPPLY AND CONSTRUCT ALL SEWERS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS AND ONTARIO PROVINCIAL STANDARDS FOR ROADS AND PUBLIC WORKS.
2. SPECIFICATIONS:

ITEM	SPEC. No.	CITY STD DWG No.
CATCH BASIN (600mm x 600mm)	OPSD 705.010	S2
STORM/SANITARY MANHOLE (1200ø)	OPSD 701.010	
SEWER SERVICE CONNECTION		S11 & S11.1
SANITARY BENCHING	OPSD 701.021	
CATCH BASIN & MANHOLE ADJUSTMENTS	OPSD 704.010	
STORM MANHOLE FRAME & COVER	OPSD 401.010	S24.1 & S25
CATCH BASIN FRAME & COVER	OPSD 400.020	S19, S22 & S23
SEWER TRENCH		S6 & S7
SANITARY MANHOLE FRAME & COVER	OPSD 401.030	S24 & S25

SEWER TRENCH:
SITE SERVICES EXCAVATION, BEDDING & BACKFILL AS PER THE RECOMMENDATIONS OF THE GEOTECHNICAL INVESTIGATION PREPARE BY KOLLAARD ASSOCIATES INC.

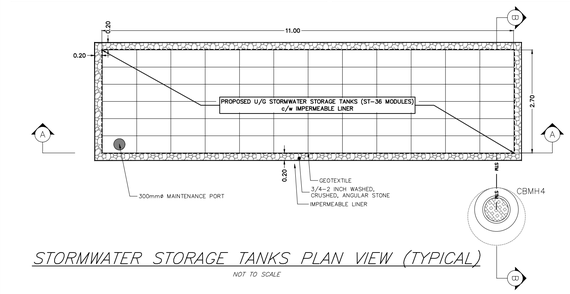
3. INSULATE ALL SEWER PIPES THAT HAVE LESS THAN 2m COVER WITH THERMAL INSULATION. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION.
4. PIPE BEDDING, COVER AND BACKFILL ARE TO BE COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY.
5. FLEXIBLE CONNECTIONS ARE REQUIRED FOR CONNECTION PIPES TO MANHOLES (FOR EXAMPLE KOR-N-SEAL, PSX: POSITIVE SEAL AND DURASEAL). SANITARY RUBBER GASKET TYPE JOINTS SHALL CONFORM TO CSA (B-182.2,3,4).
6. 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.
7. STORM MANHOLES AND CBMHS ARE TO HAVE 300mm SUMPS (AS PER SUMP DETAIL ON OPSD 701.010), UNLESS OTHERWISE INDICATED.
8. BUILDING CONTRACTOR TO PROVIDE TEMPORARY ADDITIONAL GRANULAR BACKFILL ABOVE SHALLOW CULVERTS AND STORM SEWERS TO SUPPORT HEAVY CONSTRUCTION EQUIPMENT.
9. 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 TO MUNICIPAL SATISFACTION.
10. WHERE THE SANITARY SEWER CROSSES ABOVE THE WATERMAIN, THE CONTRACTOR IS TO PROVIDE A MINIMUM OF 0.50m VERTICAL SEPARATION. ADEQUATE STRUCTURAL SUPPORT OF THE SEWER TO PREVENT SETTLING AND EXCESSIVE JOINT DEFLECTION AND ENSURE THAT THE LENGTH OF THE WATER PIPE BE CENTERED AT THE POINT OF CROSSING SO THAT THE JOINTS ARE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER.

WATERMAIN NOTES:

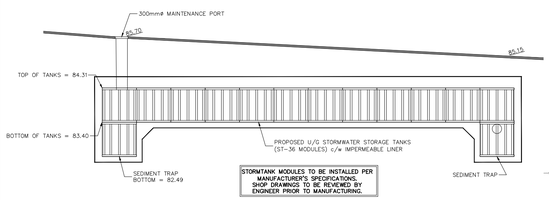
1. CITY TO SUPPLY, INSTALL & DISINFECT THE WATER SERVICE; CONTRACTOR TO EXCAVATE, BACKFILL AND REINSTATE THE ROADWAY AS PER STD DWG R10.
2. SPECIFICATIONS:

ITEM	SPEC. No.	CITY STD DWG No.
WATERMAIN BEDDING AND BACKFILL	OPSD 802.010/802.031	W17 (trench detail)
CATHODIC PROTECTION	OPSD 1109.010	W40
PRESSURE TESTING	AWWA C-605-5	
CHLORINATION	AWWA C-651-05	
WATERMAIN MATERIAL	PVC DR18 (CLASS 150)	

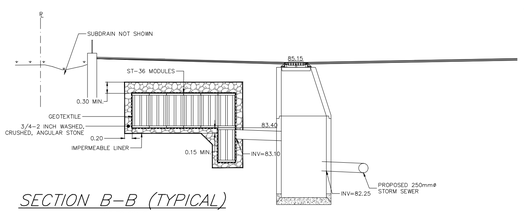
3. WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED. WHERE LESS THAN 2.4m COVER, THERMAL INSULATION IS TO BE PROVIDED AS PER CITY STD DWG W22 (in shallow trenches), W23 (At open structures).
4. A MINIMUM OF 0.5m VERTICAL CLEARANCE IS REQUIRED BETWEEN THE WATERMAINS AND ALL UTILITIES AND SEWERS. IN LOCATIONS WHERE THIS IS NOT ACHIEVABLE, MUST FOLLOW PROCEDURE F-6-1 SEC. 5.2 OF THE ONTARIO DRINKING WATER RESOURCES ACT.
5. METALLIC WARNING TAPE SHALL BE USED OVER ALL WATERMAINS.
6. INSTALL AND TEST TRACER WIRE FOR ALL PROPOSED WATERMAIN IN ACCORDANCE WITH THE CITY OF OTTAWA DESIGN STANDARDS AS SPECIFIED IN SECTION 8.28.
7. EXISTING WATERMAIN INFORMATION SHOWN IS BASED ON BEST CURRENT INFORMATION. CONTRACTOR TO VERIFY EXACT LOCATION OF WATERMAIN AND REPORT ANY DISCREPANCIES TO KOLLAARD ASSOCIATES INC.
8. WATER SHUTOFF VALVE AND VALVE BOX TO BE WITHIN THE ROAD ALLOWANCE AND LOCATED A MINIMUM OF 1.0 METRES FROM THE BUILDING FOUNDATION. TYPICAL PRIVATE SERVICE AS PER STD. DWG. W50 (with the exception that the VB/VB are to be located 1.0 m minimum from the foundation wall); VALVE BOX ASSEMBLY AS PER STD. DWG. W24.
9. CONNECTIONS AT ELBOWS AND TEEs IN WATER MAINS SHOULD BE MADE WITH THE USE OF JOINT RESTRAINERS DESIGNED FOR WATERMAIN APPLICATION. JOINT AND PIPE RESTRAINERS SHOULD MEET THE REQUIREMENTS OF AWWA C900, C905 AND C907 AND ASTM F1674-11. JOINT RESTRAINERS SHOULD BE INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS.
10. ALL CONNECTORS, RODS AND VALVE BOLTS SHALL BE STAINLESS STEEL.
11. VALVES ARE TO BE OPERATED BY CITY OF OTTAWA STAFF ONLY.
12. NO CONNECTION TO EXISTING WATER NETWORK SHALL BE COMPLETED UNTIL A WATER PERMIT IS OBTAINED FROM THE CITY OF OTTAWA AND CITY OF OTTAWA FORCES ARE ON HAND TO MAKE THE CONNECTION.



STORMWATER STORAGE TANKS PLAN VIEW (TYPICAL)
NOT TO SCALE



SECTION A-A (TYPICAL)
NOT TO SCALE



SECTION B-B (TYPICAL)
NOT TO SCALE

SITE SERVICING PLAN
SCALE = 1:250

DRAWING NUMBER: 190867-SER

KEY PLAN N.T.S.

SCALE:
0 1 2 3 4 5 10 15 20
1:250 METRES

GENERAL NOTES:

1. All dimensions are in metres; all elevations are in metres and are geodetic. TBM = top of spindle of existing fire hydrant on Trailsedge Way. Elevation = 85.68. Geodetic datum reference: CGVD-1928;1978.
2. This is not a legal survey. Boundary and topographic information were derived from FARLEY, SMITH & DENIS SURVEYING LTD Fil no. 253-17.
3. Contractor is responsible for location and protection of utilities.
4. All dimensions to be verified on site by contractor prior to construction.
5. Any changes made to this plan must be verified and approved by Kollaard Associates Inc.
6. Client is responsible for acquiring all necessary permits. This drawing is not for construction until a building permit has been granted.
7. The proposed grades have been set and verified for site grading control only. The grade raise at the building location should be verified with regard to subsurface conditions by qualified geotechnical personnel after completion of the excavation.
8. The underside of footing elevation has been set based on the information available and may not have accounted for actual ground water conditions at the exact house location and should be verified by qualified geotechnical personnel upon completion of the excavation.
9. A geotechnical engineer should be retained to provide recommendations with respect to the sub-grade conditions prior to footing installation.
10. The owner agrees to prepare and implement an erosion and sediment control plan to the satisfaction of the City of Ottawa, 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 in accordance with the current Best Management Practices for Erosion and Sediment Control such as, and not limited to installing filter cloths across manhole/catchbasin lids to prevent sediments from entering structures and install and maintain a light duty silt fence barrier as required.
11. All materials and construction to be in accordance with City of Ottawa standards and Ontario Provincial Standards and Specifications; sewer and watermain material types; disinfection, provide minimum 2.4 metres of cover for water services, cathodic protection, City of Ottawa insulation specifications for watermain, pipe bedding, reinstatement of disturbed areas and leakage testing.
12. Reference to Kollaard File No. 190867 for Servicing and Stormwater Management Design and Geotechnical Reports.

No.	REVISION	DATE	BY
6	REVISIONS PER 4th REVIEW COMMENTS	NOV. 15/2022	ML
5	REVISIONS PER 3rd REVIEW COMMENTS	AUG. 15/2022	ML
4	REVISIONS PER NEW SITE PLAN AND REVIEW COMMENTS	APR. 13/2022	ML
3	ISSUED FOR SPC RE-SUBMISSION	APR. 22/2021	ML
2	REVISIONS PER SITE PLAN AND 1ST REVIEW COMMENTS	MAR. 29/2021	ML
1	ISSUED FOR SPC APPLICATION	JUNE 30/2020	ML
#	REVISION ITEM / DESCRIPTION	REV. DATE	INT.

Kollaard Associates Engineers
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KEMPTVILLE, ONTARIO
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http://www.kollaard.ca

CLIENT:
TEAK DEVELOPMENTS
31 WOODVIEW CRESCENT
OTTAWA, ON K1B 3B1

PROJECT:
PROPOSED RESIDENTIAL DEVELOPMENT

LOCATION:
6173 RENAUD ROAD
CITY OF OTTAWA, ON
K1W 0K9

LICENSED PROFESSIONAL ENGINEER
NOV. 15, 2022
S.E. deWit
100079612
PROVINCE OF ONTARIO

DESIGNED BY:	CHECKED BY:
SD	SD
DRAWN BY:	APPROVED BY:
ML	SD

DATE: NOV. 11, 2019

KOLLAARD FILE NUMBER: 190867

DRAWING NUMBER: 190867-SER

DRAWING NAME: SITE SERVICING PLAN

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