GENERAL NOTES:

1. ALL WORKS AND MATERIALS SHALL CONFORM TO THE LATEST REVISIONS OF THE STANDARDS AND SPECIFICATIONS OF THE CITY OF OTTAWA, AND ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS), AS AMENDED BY THE CITY OF OTTAWA.
2. THE CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL EXISTING UTILITIES WITHIN THE SITE AND ADJACENT WORK AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ANY SERVICES OR UTILITIES DISTURBED DURING CONSTRUCTION, TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION.
3. ALL DIMENSIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.
4. ANY AREAS BEYOND THE LIMIT OF THE SITE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION AT THE CONTRACTORS EXPENSE.
5. RELOCATION OF EXISTING SERVICES AND/OR UTILITIES SHALL BE AS SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE ENGINEER AT THE EXPENSE OF THE DEVELOPER.
6. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE "OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS". THE GENERAL CONTRACTOR SHALL BE DEEMED TO BE THE CONSTRUCTOR AS DEFINED IN THE ACT.
7. ALL CONSTRUCTION SIGNING MUST CONFORM TO THE M.T.O. MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (LATEST AMENDMENT).
8. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
9. THE SUPPORT OF ALL UTILITIES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
10. THERE WILL BE NO SUBSTITUTION OF MATERIALS UNLESS PRIOR WRITTEN APPROVAL BY THE DIRECTOR OF ENGINEERING HAS BEEN OBTAINED.
11. ALL SEWERS CONSTRUCTED WITH GRADES 0.50% OR LESS, SHALL BE INSTALLED WITH LASER AND CHECKED WITH LEVEL INSTRUMENT PRIOR TO BACKFILLING.
12. THE CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL BEDDING OR ADDITIONAL STRENGTH PIPE IF THE MAXIMUM TRENCH WIDTH, AS SPECIFIED BY OPSD, IS EXCEEDED.
13. ALL PIPE / CULVERT / SECTION SIZES REFER TO INSIDE DIMENSIONS.
14. SHOULD UNDOCUMENTED ARCHAEOLOGICAL REMAINS BE FOUND ON THE PROPERTY DURING CONSTRUCTION ACTIVITIES, CONSTRUCTION ACTIVITIES MUST BE CEASED, AND THE HERITAGE OPERATIONS UNIT OF THE ONTARIO MINISTRY OF CULTURE MUST BE NOTIFIED IMMEDIATELY.
15. STREET LIGHTING TO CITY OF OTTAWA STANDARDS.
16. ALL NECESSARY CLEARING AND GRUBBING SHALL BE COMPLETED BY THE CONTRACTOR. REVIEW WITH CONTRACT ADMINISTRATOR AND THE CITY OF OTTAWA PRIOR TO ANY TREE CUTTING.
17. CONTRACTOR SHALL PERFORM LEAKAGE TESTING, IN THE PRESENCE OF THE CONSULTANT, FOR SANITARY SEWERS IN ACCORDANCE WITH OPSS 410 AND OPSS 407. CONTRACTOR SHALL PERFORM VIDEO INSPECTION OF ALL STORM AND SANITARY SEWERS. A COPY OF THE VIDEO AND INSPECTION REPORT SHALL BE SUBMITTED TO THE CONSULTANT FOR REVIEW.
18. ALL BOREHOLES SHOWN ON THE DRAWINGS ARE FOR INFORMATION ONLY. REFER TO GEOTECHNICAL INVESTIGATION REPORT PREPARED BY PATERSON GROUP, REPORT NO. PG7998-LET.01 FOR DETAIL.
19. FOR HOUSE CONNECTIONS INSTALLED UNDER GARAGES, WHICH IS ON AN EXCEPTION BASIS ONLY, SLEEVE SHALL BE USED.
20. ALL WORKS SHALL CONFORM TO THE ENVIRONMENTAL PROTECTION PLAN FOR CARDINAL CREEK VILLAGE PHASES 3A, 3B, AND 4.
21. THE CONTRACTOR IS RESPONSIBLE FOR CONFORMANCE WITH ALL LOCAL, REGIONAL, PROVINCIAL AND FEDERAL ENVIRONMENTAL RULES, REGULATIONS, LAWS AND LEGISLATION WHILE COMPLETING THE WORKS, INCLUDING CONFORMANCE WITH ANY PROJECT SPECIFIC PERMITS.
22. FOR LOT CONNECTIONS AND CATCH BASIN LEADS BEING CONNECTED TO EXISTING SEWERS, VERTICAL TRENCHES TO BE BACKFILLED PER GEOTECHNICAL RECOMMENDATIONS, ROAD REINSTATEMENT PER CITY STD R10. CURBS, SIDEWALKS AND ASPHALT TO BE REINSTATED TO ORIGINAL CONDITIONS.

STORM NOTES:

1. ALL REINFORCED CONCRETE STORM SEWER PIPE SHALL BE IN ACCORDANCE WITH CSA A257.2 (LATEST AMENDMENT). ALL NON-REINFORCED CONCRETE STORM SEWER PIPE SHALL BE IN ACCORDANCE WITH CSA A257.1 (LATEST AMENDMENT). PIPE SHALL BE JOINTED WITH STD. RUBBER GASKETS AS PER CSA A257.3 (LATEST AMENDMENT).
2. ALL STORM SEWER TRENCH AND BEDDING SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. S6 AND S7 CLASS 'B' UNLESS OTHERWISE SPECIFIED. BEDDING AND COVER MATERIAL SHALL BE SPECIFIED BY PROJECT GEOTECHNICAL ENGINEER.
3. ALL PVC STORM SEWERS ARE TO BE SDR 35 APPROVED PER C.S.A. B182.2 OR LATEST AMENDMENT, UNLESS OTHERWISE SPECIFIED.
4. ALL STORM LATERALS SHALL BE PVC SDR 28, WHITE IN COLOR AND MARKED WITH A 50mm x 100mm WOODEN MARKER EXTENDING FROM THE INVERT TO 1.0m ABOVE GRADE PAINTED GREEN. HOUSE CONNECTIONS SHALL BE 2.0 m MIN. BELOW FINISHED GRADE AT STREET LINE WHERE POSSIBLE. SINGLE CONNECTIONS SHALL BE 100mm DIA..
5. ALL STORM SERVICES TO BE EQUIPPED WITH APPROVED BACKWATER VALVES.
6. STORM MANHOLE FRAME AND COVERS SHALL BE AS PER CITY OF OTTAWA STD. S24.1 AND S25.
7. SAFETY PLATFORMS SHALL BE IN ACCORDANCE WITH OPSD 404.02.
8. DROP STRUCTURES SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA SPECIFICATIONS AND OPSD 1003.01.
9. STORM SEWER MANHOLES SERVING LOCAL SEWERS LESS THAN 900mm SHALL BE CONSTRUCTED WITH A 300mm SUMP. FOR STORM SEWERS 900mm AND OVER USE BENCHING IN ACCORDANCE WITH OPSD 701.021.
10. SINGLE AND DOUBLE CATCHBASINS SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. S1. AND OPSD 705.020, RESPECTIVELY. FRAMES AND GRATE SHALL BE AS PER CITY OF OTTAWA STD. S19 FOR REAR LOT CATCHBASINS (SEE ICD DATA TABLE ON DWG 6 FOR DETAILS), AND STREET CATCHBASINS. CATCHBASIN MANHOLE COVERS SHALL BE AS PER CITY OF OTTAWA STD. S28.1.
11. CURB INLET TYPE CATCH BASIN (CICB) SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. S3. FRAME AND GRATE SHALL BE AS PER CITY OF OTTAWA STD. S22 AND S23. UNLESS OTHERWISE NOTED.
12. SINGLE AND DOUBLE CATCHBASIN LEADS SHALL BE 200mm AND 250mm DIA (MIN.), RESPECTIVELY, AT 1.0% SLOPE (MIN.) UNLESS OTHERWISE NOTED.
13. ALL CATCHBASINS AND CATCHBASIN MANHOLES SHALL HAVE SUMPS WITH 600mm DEPTH, UNLESS OTHERWISE NOTED. LANDSCAPE CATCHBASINS IN REAR YARDS TO BE SUMPLESS.
14. CONTRACTOR SHALL ENSURE THAT CATCHBASINS ARE INSTALLED AT THE LOW POINT OF SAG CURB WORKS.
15. THE STORM SEWER CLASSES HAVE BEEN DESIGNED BASED ON BEDDING CONDITIONS SPECIFIED ABOVE. WHERE THE SPECIFIED TRENCH WIDTH IS EXCEEDED, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ADDITIONAL BEDDING, A DIFFERENT TYPE OF BEDDING OR A HIGHER PIPE STRENGTH AT HIS OWN EXPENSE AND SHALL ALSO BE RESPONSIBLE FOR EXTRA TEMPORARY AND/OR PERMANENT REPAIRS MADE NECESSARY BY THE WIDENED TRENCH.
16. THE MINIMUM DIAMETER FOR REAR LOT PERFORATED PIPE IS 250mm, REFER TO CITY STD. S29 FOR DETAIL, UNLESS OTHERWISE NOTED.
17. FOR TWO OR MORE REAR LOT CATCH BASINS CONNECTED IN SERIES, THE LEAD FROM THE LAST REAR LOT CB TO THE STORM SEWER SHALL BE SOLID PIPE.
18. RLCB LEAD DRAINAGE EASEMENTS SHOULD BE 2.4m AND CLEAR OF ANY ROOF OVERHANGS, 1st STOREY (5m) AND FOOTINGS.

SANITARY NOTES:

1. ALL SANITARY SEWER INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE CITY OF OTTAWA AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS) AS AMENDED BY THE CITY OF OTTAWA.
2. ALL SANITARY SEWERS SHALL BE PVC SDR 35, IPEX "RING-TITE" (OR EQUIVALENT), AS PER CSA STANDARD B182.2 OR LATEST AMENDMENT, UNLESS OTHERWISE NOTED.
3. SANITARY SEWER TRENCH AND BEDDING SHALL BE AS PER CITY OF OTTAWA STD. S6 AND S7, CLASS 'B' BEDDING UNLESS OTHERWISE NOTED.
4. ALL SANITARY LATERALS ARE TO BE PVC SDR 28, IPEX "RING-TITE" (OR EQUIVALENT), ANY COLOR EXCEPT WHITE AND MARKED WITH A 50mm x 100mm WODDEN MARKER, EXTENDING FROM THE INVERT TO 1.0 m ABOVE GRADE PAINTED RED. HOUSE CONNECTIONS SHALL BE 2.75m BELOW FINISHED GRADE AT STREET LINE WHERE POSSIBLE. SINGLE CONNECTIONS SHALL BE 135mm DIA..
5. ALL SANITARY SERVICES ARE TO BE EQUIPPED WITH APPROVED BACKWATER VALVES.
6. SAFETY PLATFORMS SHALL BE AS PER OPSD 404.02.
7. DROP STRUCTURES SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA SPECIFICATIONS AND OPSD 1003.01.
8. SANITARY SEWER MANHOLES SHALL BE BENCHED AS PER OPSD 701.021.
9. SANITARY MANHOLE FRAME AND COVERS SHALL BE AS PER CITY OF OTTAWA STD. S24 AND S25, EXCEPT FOR WHERE IN PONDING AREAS, WHERE WATERTIGHT FRAME AND COVERS SHALL BE EAST JORDAN CAMPRESSION 41420049W01 AS PER CITY OF OTTAWA MS-22.15 (OR APPROVED EQUIVALENT)

WATER NOTES:

1. ALL WATERMAIN INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE CITY OF OTTAWA AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS) AS AMENDED BY THE CITY OF OTTAWA.
2. ALL PVC WATERMAINS SHALL BE EQUAL TO AWWA C-900 CLASS 150, SDR 18, OR APPROVED EQUAL.
3. WATERMAIN TRENCH AND BEDDING SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD W17, UNLESS OTHERWISE SPECIFIED. BEDDING AND COVER MATERIAL SHALL BE SPECIFIED BY PROJECT GEOTECHNICAL ENGINEER.
4. ALL PVC WATERMAINS SHALL BE INSTALLED WITH #8 RWU90 TRACER WIRE IN ACCORDANCE WITH CITY OF OTTAWA STD. W36.
5. WATER SERVICES ARE TO BE TYPE K SOFT COPPER AS PER CITY OF OTTAWA STD. W26. OR POLYETHYLENE WATER SERVICES, UNLESS OTHERWISE SPECIFIED. SINGLE SERVICES SHALL BE 20mm DIA. AND 25mm DIA. FOR COPPER AND POLYETHYLENE SERVICES, RESPECTIVELY. 50mm DIA. COPPER SHALL BE USED FOR PARK SERVICES. FOR NON METALLIC APPROVED MATERIALS, WATER SERVICES SHALL BE COMPLETE WITH A 12 GAUGE TWO STRANDED COPPER, LIGHT COLOURED, PLASTIC COATED TRACER WIRE INSTALLED WITH AND ALONG THE SERVICE PIPE AND BROUGHT TO THE SURFACE AT EACH SERVICE BOX. AND ATTACHED TO THE PIPE AND OUTSIDE OF EACH SERVICE BOX BY MEANS OF TAPE OR RUBBER GROMMET. WATER SERVICES SHALL BE MARKED WITH A "50mm x 100mm", EXTENDING FROM THE INVERT TO 1.0m ABOVE GRADE PAINTED BLUE. CURB STOPS SHALL BE INSTALLED AT THE PROPERTY LINE.
6. CATHODIC PROTECTION IS REQUIRED ON ALL METALLIC FITTINGS AS PER CITY OF OTTAWA STD. W40 AND W42.
7. CONTRACTOR TO SUPPLY HYDRANT EXTENSION TO ADJUST THE LENGTH OF HYDRANT BARREL.
8. FIRE HYDRANTS SHALL BE INSTALLED AS PER CITY OF OTTAWA STD. W19, AND LOCATED AS PER CITY STD. W18.
9. VALVE IN BOXES SHALL BE INSTALLED AS PER CITY OF OTTAWA STD. W24.
10. 50mm DIAMETER WATERMAINS SHALL BE TYPE 'K' COPPER TUBING. WATERMAIN INSTALLATION IN CUL-DE-SAC TO BE INSTALLED AS PER CITY OF OTTAWA STD. W37.
11. WATERMAIN IN FILL AREAS TO BE INSTALLED WITH RESTRAINED JOINTS AS PER CITY OF OTTAWA STD. W25.5 AND W25.6.
12. THRUST BLOCKING OF WATERMAIN TO BE INSTALLED AS PER CITY OF OTTAWA STD. W25.3 AND W25.4.
13. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY CAPS, PLUGS AND BLOW-OFFS AND NOZZLES REQUIRED FOR TESTING AND DISINFECTION OF THE WATERMAIN.
14. INSULATION FOR WATERMAIN CROSSING OVER AND BELOW SEWER SHOULD BE IN ACCORDANCE WITH CITY OF OTTAWA STD. W25.2 AND W25, RESPECTIVELY, WHERE WATERMAIN COVER IS LESS THAN 2.4m.
15. WHERE THE SEPARATION BETWEEN SERVICES AND MANHOLES IS LESS THAN 1.2m, WATER SERVICES ARE TO BE INSULATED AS PER CITY OF OTTAWA STD. W23.
16. AS PER MOE GUIDELINE, THE MINIMUM VERTICAL CLEARANCE BETWEEN WATERMAIN AND SEWER / UTILITY IS 0.50m. FOR CROSSING UNDER SEWER, ADEQUATE STRUCTURAL SUPPORT FOR THE SEWERS IS REQUIRED TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING. THE LENGTH OF WATER PIPE SHALL BE CENTRED AT THE POINT OF CROSSING SO THAT THE JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER.
17. FOR STUBS DESIGNED FOR FUTURE WATERMAIN CONNECTION, THE END OF THE PIPE SHOULD BE CAPPED TO MAKE IT WATERTIGHT AND THRUST RESTRAINT ADDED ACCORDING TO CITY STANDARD.
18. ALL WATER SERVICES CROSSING SEWERS ARE TO BE INSTALLED AS PER CITY OF OTTAWA STD. W38
19. BOUNDARY VALVE CHAMBER SHALL BE INSTALLED AS PER CITY OF OTTAWA STD. W3.3

ROADWORK NOTES:

1. ALL TOPSOIL AND ORGANIC MATERIAL SHALL BE STRIPPED WITHIN THE ROAD ALLOWANCE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
2. CONCRETE CURB SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. SC1.1 (BARRIER CURB) AND SC1.3 (MOUNTABLE CURB). PROVISION SHALL BE MADE FOR CURB DEPRESSIONS AT SIDEWALKS, DRIVEWAYS, AND MAYOR STORM SYSTEM LOCATIONS (AS SPECIFIED)
3. ROAD SUBDRAINS SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. R1 AND PER GEOTECHNICAL INVESTIGATION REPORT BY PROJECT GEOTECHNICAL ENGINEER.
4. CONCRETE SIDEWALK SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. SC3 AND SC1.4.
5. PAVEMENT REINSTATEMENT FOR SERVICE AND UTILITY CUTS SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. R10 AND OPSD 509.010, OPSS 310.
6. GRANULAR "A" SHALL BE PLACED TO A MINIMUM THICKNESS OF 300mm AROUND ALL STRUCTURES WITHIN PAVEMENT AREA.
7. ALL GRANULAR FOR ROADS SHALL BE COMPACTED TO A MINIMUM OF 99% STANDARD PROCTOR DENSITY.
8. ASPHALT WEAR COURSE SHALL NOT BE PLACED UNTIL THE VIDEO INSPECTION OF SEWERS & NECESSARY REPAIRS HAVE BEEN CARRIED OUT TO THE SATISFACTION OF THE CONSULTANT.
9. SUB-EXCAVATE SOFT AREAS AND FILL WITH GRANULAR 'B' COMPACTED IN MAXIMUM 300 mm LIFTS.
10. PEDESTRIAN CURB RAMP WITH BOULEVARD SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. SC7.
11. PAVEMENT DESIGN TYPE

    LOCAL ROADS (STREET 1)
    - 40mm HL-3 OR SUPERPAVE 12.5 ASPHALTIC CONCRETE
    - 50mm HL-8 OR SUPERPAVE 19.0 ASPHALTIC CONCRETE
    - 150mm GRANULAR "A" CRUSHED STONE
    - 400mm GRANULAR "B" TYPE II

    SUBGRADE - EITHER IN SITU SOILS OR OPSS I OR II MATERIAL PLACED OVER IN SITU SOIL.

    RESIDENTIAL DRIVEWAYS
    - 50mm HL-3 OR SUPERPAVE 12.5 ASPHALTIC CONCRETE
    - 150mm GRANULAR "A" CRUSHED STONE
    - 300mm GRANULAR "B" TYPE II

    SUBGRADE - EITHER IN SITU SOILS OR OPSS I OR II MATERIAL PLACED OVER IN SITU SOIL.

GRADING NOTES:

1. A FLAT AREA HAVING A WIDTH OF 0.6m SHALL BE PROVIDED AT THE BOUNDARY LIMITS ADJACENT DEVELOPED PROPERTIES IN ORDER THAT THE EXISTING BOUNDARY ELEVATIONS SHALL BE MAINTAINED.
2. ALL ROOF DOWNSPOUTS SHALL DISCHARGE TO THE GROUND ONTO SPLASH PADS AND SHALL NOT BE CONNECTED TO THE STORM SEWER, OR THE BUILDING FOUNDATION DRAIN AND SHOULD NOT BE DIRECTED TO NEIGHBOURING PROPERTIES.
3. PRIOR TO THE COMMENCEMENT OF THE SITE GRADING WORKS, ALL SILTATION CONTROL DEVICES SHALL BE INSTALLED AND OPERATIONAL. THE CONTRACTOR SHALL MAINTAIN ALL WORKS UNTIL SERVICING CONSTRUCTION IS COMPLETED TO THE SATISFACTION OF THE ENGINEER AND THE CITY OF OTTAWA.
4. ALL SWALES SHALL BE 0.15m DEEP WITH 3:1 SIDE SLOPES UNLESS OTHERWISE INDICATED. THE MINIMUM LONGITUDINAL SLOPE IS 1% AND 1.5% WITH INSTALLATION OF SUBDRAIN OR WITHOUT, RESPECTIVELY.
5. TOP OF GRATE (T/G) ELEVATIONS FOR ALL STREET CATCHBASINS SHOWN ON PLANS, REFER TO THE ELEVATIONS AT GUTTER OR EDGE OF PAVEMENT, WHERE APPLICABLE.
6. A GEOTECHNICAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO IS TO INSPECT ALL SUBGRADE SURFACES FOR FOOTING AND PAVEMENT STRUCTURES PRIOR TO CONSTRUCTION

RETAINING WALL NOTES:

1. ALL RETAINING WALLS SHALL BE CONCRETE, CONCRETE PRODUCT WITH TIE-BACK SYSTEM OR HEAVY BLOCK SYSTEM, UNLESS OTHERWISE NOTED.
2. ALL RETAINING WALLS ARE TO BE DESIGNED, APPROVED AND STAMPED BY A CONSULTING ENGINEER SPECIALIZING IN STRUCTURAL ENGINEERING.
3. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS CERTIFIED BY A STRUCTURAL ENGINEER.
4. DURING CONSTRUCTION, THE CONTRACTOR SHALL RETAIN A STRUCTURAL ENGINEER TO PROVIDE FULL TIME INSPECTION OF THE RETAINING WALL. DAILY INSPECTION REPORTS SHALL BE FORWARDED TO THE CONSULTANT FOR FURTHER DISTRIBUTION TO THE COMMISSIONER OF WORKS.
5. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE A CERTIFICATE FROM A STRUCTURAL ENGINEER CERTIFYING THAT THE WALL HAS BEEN CONSTRUCTED IN CONFORMANCE WITH THE APPROVED ENGINEERING DRAWINGS AND THE CERTIFIED SHOP DRAWINGS.
6. FENCES ARE REQUIRED FOR WALLS HIGHER THAN 0.6m.

EROSION AND SEDIMENT CONTROL NOTES:

1. PRIOR TO TOPSOIL STRIPPING, EARTHWORKS, OR UNDERGROUND CONSTRUCTION, EROSION AND SEDIMENT CONTROLS SHALL BE IMPLEMENTED TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION.
2. SEDIMENT CONTROL FENCE SHALL BE CLEANED AND MAINTAINED IN GOOD REPAIR BY CONTRACTOR.
3. SEDIMENT CONTROL FENCE TO REMAIN IN PLACE UNTIL THE WORKING AREA HAS BEEN STABILIZED AND REVEGETATED.
4. ACCUMULATED SEDIMENT TO BE REMOVED OFF SITE PRIOR TO THE REMOVAL OF SEDIMENT CONTROL FENCE.
5. CONTRACTOR TO INSTALL AND MAINTAIN MUD MAT AT CONSTRUCTION ACCESS IN ORDER TO PREVENT MUD TRACKING ONTO ADJACENT ROADS. MUD MAT TO BE MINIMUM 30m LONG AND 10.0m WIDE AND SHALL CONSIST OF 0.3m OF 50mm CLEAR STONE.
6. EROSION AND SEDIMENT CONTROL MEASURES MAY BE MODIFIED IN THE FIELD AT THE DISCRETION OF THE CITY OF OTTAWA SITE INSPECTOR OR CONSERVATION AUTHORITY.

SPILLS CONTROL NOTES:

1. ALL CONSTRUCTION EQUIPMENT SHALL BE REFUELED, MAINTAINED AND STORED NO LESS THAN 30 METERS FROM THE WATERCOURSES, STREAMS, CREEKS, WOODLOTS AND ANY ENVIRONMENTALLY SENSITIVE AREAS, OR AS OTHERWISE SPECIFIED.
2. THE CONTRACTOR MUST IMPLEMENT ALL NECESSARY MEASURES IN ORDER TO PREVENT LEAKS, DISCHARGES OR SPILLS OF POLLUTANTS, DELETERIOUS MATERIALS, OR OTHER SUCH MATERIALS OR SUBSTANCES WHICH WOULD OR COULD CAUSE AN ADVERSE IMPACT TO THE NATURAL ENVIRONMENT.
3. IN THE EVENT OF A LEAK, DISCHARGE OR SPILL OF A POLLUTANT, DELETERIOUS MATERIAL OR OTHER SUCH MATERIAL OR SUBSTANCE WHICH WOULD OR COULD CAUSE AN ADVERSE IMPACT TO THE NATURAL ENVIRONMENT, THE CONTRACTOR SHALL:

   A. IMMEDIATELY NOTIFY THE APPROPRIATE FEDERAL, PROVINCIAL AND LOCAL GOVERNMENT MINISTRIES, DEPARTMENTS, AGENCIES AND AUTHORITIES OF THE INCIDENT IN ACCORDANCE WITH ALL CURRENT LAWS, LEGISLATION, ACTS, BY-LAWS, PERMITS, APPROVALS, ETC.

   B. TAKE IMMEDIATE MEASURES TO CONTAIN THE MATERIAL OR SUBSTANCE, AND TO TAKE SUCH MEASURES AS THEY DEEM APPROPRIATE TO MITIGATE AGAINST THE ANY ADVERSE IMPACTS TO THE NATURAL ENVIRONMENT.

   C. THE CONTRACT SHALL RESTORE THE AFFECTED AREA TO ORIGINAL CONDITION OR BETTER, ALL TO THE SATISFACTION OF THE AUTHORITIES HAVING JURISDICTION.

GEOTECHNICAL REPORT/MEMO:

1. REFER TO:
   - GEOTECHNICAL INVESTIGATION REPORT PG7998-LET.01 DATED JUNE 15TH, 2026

INFORMATION PRESENTED ON THESE DRAWINGS HAS BEEN INTERPOLATED FROM THE GEOTECHNICAL REPORT/MEMOS AND ACCURACY IS NOT GUARANTEED. CONTRACTORS ARE ADVISED TO READ THE GEOTECHNICAL REPORT/MEMO AND ASSUME THEIR OWN CONCLUSIONS.

CITY OF OTTAWA
SEWER AND WATERMAIN INSTALLATION
CALCULATION OF THICKNESS OF INSULATION

Depth (m)	Ti (mm)	Using Ti (mm)		As per City Standard (W22):	
				Ti=	(2400 - H) / 12
0.60	150	150			
0.65	146	150			
0.70	142	150			
0.75	138	150	where:		
0.80	133	150		Ti =	Thickness of Insulation (mm), 50mm min.
0.85	129	150		H =	H Depth of Cover above OD (mm)
0.90	125	125			
0.95	121	125			
1.00	117	125			
1.05	113	125			
1.10	108	125			
1.15	104	125			
1.20	100	100			
1.25	96	100			
1.30	92	100			
1.35	88	100			
1.40	83	100			
1.45	79	100			
1.50	75	75			
1.55	71	75			
1.60	67	75			
1.65	63	75			
1.70	58	75			
1.75	54	75			
1.80	50	50			
1.85	46	50			
1.90	42	50			
1.95	38	50			
2.00	33	50			
2.05	29	50			
2.10	25	50			
2.15	21	50			
2.20	17	50			
2.25	13	50			
2.30	8	50			
2.35	4	50			

LEGEND

WATERMAIN

CROSS
45° BEND
LATERAL
HYDRANT, VALVE & VB — 200mm ø WM — V&C — V&B
TEE
VALVE & VC
VALVE & VB
22.5° BEND
11.25° BEND
REDUCER
CAP

SANITARY

MAINTENANCE HOLE — 200mm ø SAN — MH202A
CAP

STORM

STREET CATCHBASIN & LEAD — 375mm ø ST
MAINTENANCE HOLE — MH202
CURB INLET CATCHBASIN & LEAD
CATCHBASIN/ MAINTENANCE HOLE — CBMH201
INTERCONNECTED CATCH BASIN & LEADS
CONCRETE COLLAR
SINGLE SERVICE LOCATION (ST, SAN & WM)
SINGLE SERVICE LOCATION (SAN & WM)
SINGLE SERVICE LOCATION (ST, SAN & WM)
TEE CATCHBASIN
PERFORATED PIPE
ELBOW CATCHBASIN — 600ø CSP
DITCH AND CULVERT
CONCRETE SIDEWALK — 1.8m CONC. SIDEWALK
CURB & DEPRESSED CURB — DC — BARRIER — MOUNTABLE
ASPHALT SIDEWALK — 1.8m ASPH. SIDEWALK
TACTILE WALKING SURFACE INDICATOR (AS PER CITY OF OTTAWA STD. SC6, SC7, SC7.1, SC7.2, SC7.3)
1.8m HIGH CHAINLINK FENCE (UNLESS OTHERWISE NOTED)
NOISE BARRIER (2.2m UNLESS OTHERWISE NOTED) — 87.78BF — 85.58BF
1.8m HIGH WOOD PRIVACY BARRIER
1.2m HIGH DECORATIVE FENCE
PHASING LIMITS
PROPERTY BOUNDARY
BOREHOLE (BH)
TEST PIT (TP)
AUGER HOLE (AH)
MONITORING WELL LOCATION
CONCEPTUAL WELL LOCATION
(AS PER GEOTECHNICAL REPORT)
CONTOUR — 91.00
PROPOSED ELEVATION — 92.52
EXISTING ELEVATION — 92.49
TOP OF GRATE ELEVATION — T/G 92.55
PROPOSED TERRACING
SURFACE SLOPE — 2.0%
FLOW DIRECTION
MAJOR OVERLAND FLOW DIRECTION

BUILDING ENVELOPE

92.31
6
TOP OF FOUNDATION ELEVATION — 90.55
FINISHED FLOOR ELEVATION — 90.85
UNDERSIDE OF FOOTING ELEVATION — 88.03
NUMBER OF RISERS — 38
UNITS REQUIRING PRESSURE REDUCING VALVES — 97.31 PRV
WALKOUT UNITS — W.O.
SLAB ON GRADE — 500
SANITARY DRAINAGE BOUNDARY
UPSTREAM MH TO DOWNSTREAM MH — 43A - 44A
AREA IN HECTARES — 0.78 / 61
POPULATION
STORM DRAINAGE BOUNDARY
UPSTREAM MH TO DOWNSTREAM MH — 43 - 44
AREA IN HECTARES — 0.37 / 0.51
RUNOFF COEFFICIENT

BUILDING ENVELOPE

PONDING AREA
PONDING AREA ID — PA-1
PROPOSED SILT FENCE
PROPOSED SNOW FENCE
PROPOSED ROCK FLOW CHECK DAM
PROPOSED STRAW BALE BARRIER
PROPOSED STRAW BALE BARRIER WITH FILTER CLOTH
FILTER CLOTH FOR EXISTING STRUCTURE
PROPOSED RIP RAP TREATMENT
JOINT UTILITY TRENCH (HYDRO, BELL, CABLE) — H,B,C
DENOTES NUMBER OF UTILITY DUCTS — 2H,1B,1C
CONCRETE ENCASED DUCT
STREET LIGHT CABLE — SL
NATURAL GAS LINE — G
SERVICE ENTRANCE HYDRO, BELL, CABLE
END WALL BOX
CABLE PEDESTAL — C
CABLE GRADE LEVEL BOX — CGLB
BELL PEDESTAL — B
BELL GRADE LEVEL BOX FOR SPLICING — BGLB
BELL CENTRAL SPLITTING POINT — CSP
HYDRO TRANSFORMER
HYDRO MAINTENANCE HOLE — HO
HYDRO POLE — HP
HYDRO POLE c/w GUY WIRE — HP
STREET LIGHT DISCONNECT — SD
STREET LIGHT STANDARD — L.S.
COMMUNITY MAILBOX — CMB
BUS STOP LOCATION c/w ASPHALT BOULEVARD — BUS
TREE

NOT FOR CONSTRUCTION

TOPOGRAPHIC INFORMATION

TOPOGRAPHIC INFORMATION PROVIDED BY STANTEC GEOMATICS LTD., PROJECT No. 161614995-111. SURVEY DATED APRIL 28, 2026.

LEGAL INFORMATION

M-PLAN PROVIDED BY STANTEC GEOMATICS LTD., PROJECT No. 161614995-132, RECEIVED ON JULY 3, 2026.

ELEVATION NOTE

ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO GEODETIC DATUM AND ARE DERIVED FROM THE CAN-NET VRS NETWORK MONUMENT: OTTAWA ELEVATION=95.230.

No.	BY	DATE	DESCRIPTION
1	S.M.	26-07-13	1st SUBMISSION

Ottawa — CITY OF OTTAWA

PROJECT No. 25-1480

LICENSED PROFESSIONAL ENGINEER — S. L. MERRICK — 100186523 — 2026-07-13 — PROVINCE OF ONTARIO

Tamarack (Cardinal Creek) Corporation

CARDINAL CREEK VILLAGE

PHASE 8

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Fax. (613) 836-7183
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GENERAL NOTES

DRAWN BY: K.N	CHECKED BY: S.M.	SHEET NO.
DESIGNED BY: C.B	CHECKED BY: S.M	1
SCALE:	DATE: JULY 2026	

CITY PLAN No. XXXXXX

CITY FILE No. XXXXXX