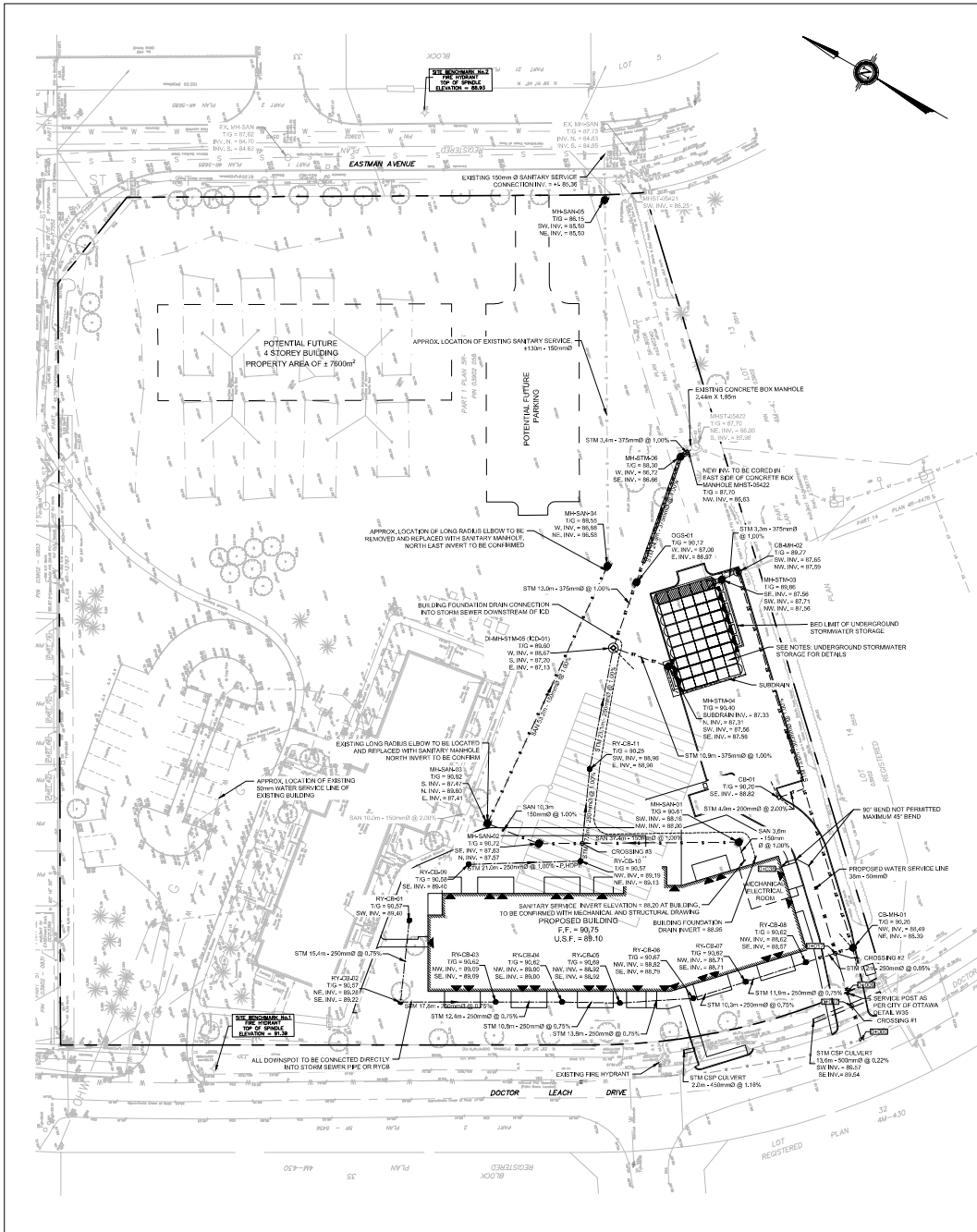
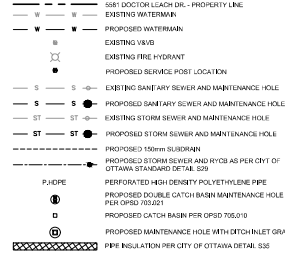




LEGEND



NOTES WATERMAIN

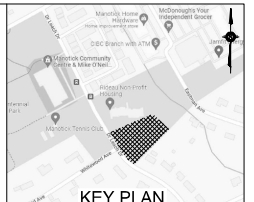
1. ALL WATERMAIN TO BE INSTALLED AT MINIMUM COVER OF 2.4m BELOW FINISHED GRADE. WHERE THE DEPTH OF COVER IS LESS THAN 2.4m, THE WATERMAIN SHALL BE INSTALLED IN A TRENCH WITH A MINIMUM COVER OF 1.2m. THE TRENCH SHALL BE BACKFILLED WITH GRANULAR MATERIAL TO THE FINISHED GRADE.
2. WATERMAIN PIPE MATERIALS TO BE CLASS PVC OR HDPE, OR APPROVED EQUIVALENT, UNLESS INDICATED OTHERWISE.
3. WATERMAIN TO BE CONSTRUCTED AS PER OPS 441 AND OPS 402.2. WATERMAIN BEDDING AND COVER MATERIALS TO BE CLASS 150 GRANULAR 'A' CONCRESSION LAYER COMPACTED TO 95% SPND.
4. A CONTINUOUS 15 GAUGE COPPER TRACER WIRE MUST BE INSTALLED OVER ALL WATERMANS. TRACER WIRE SHALL BE TIED TO ALL FIRE HYDRANTS.
5. INSTALLATION OF A WATERMAIN PIPE CROSSING A ROADWAY SHALL BE AS PER CITY OF OTTAWA DETAILS W26 AND W22.
6. IF WATERMAIN PIPE MUST BE SELECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS LESS THAN HALF THAT RECOMMENDED BY THE MANUFACTURER.
7. CATHODIC PROTECTION REQUIRED FOR ALL IRON FITTINGS AS PER OPS 1103.11, THURTELL BLOOM AND REINFORCING AS PER OPS 1103.12 AND OPS 1103.23.
8. HYDRANT INSTALLATION AS PER OPS 1103.10 AND OPS 411. HYDRANT TO COMPLY WITH ANNA C200.
9. HYDRANTS MUST HAVE THREE EXITS (TWO 45mm AND ONE 100mm) STORED OR CHARGED WITH CHARGE. ALL HYDRANTS MUST BE INSTALLED SUCH THAT THE STORED EXITS POINTS TOWARDS THE BUILDING. THE CONTRACTOR MUST ENSURE THAT THE BUILDING WATERMAIN IS LOCATED ABOVE THE FINISHED GROUND (APPROXIMATELY 150mm).
10. FIRE FLOW TESTS FOLLOWED BY COLOUR CODED HYDRANTS (AS PER NFPA-801) SHALL BE CARRIED OUT PRIOR TO SUBSTANTIAL COMPLETION OF THE WORK.
11. WATERMAIN AND HYDRANT CONTROL VALVES IN THE 150 - 300 mm RANGE WILL BE RELOCATED TO THE GATE VALVES. AVALON CDS NETWORKING. JUNT OPERATING VALVES WILL OPERATE COUNTERCLOCKWISE TO OPEN WITH A ROUGHENED STEEL VALVE. VALVE BE COMPATIBLE WITH THE STANDARD ANNA 50mm OPERATING VALVE. VALVES TO BE INSTALLED AS PER OPS 411.
12. PIPE FITTINGS (BENDS, TEES, CROSSES, REDUCERS, ETC.) WILL BE MECHANICAL JOINT (ANNA C-11) WITH CEMENT MORTAR LINING (ANNA C-15).
13. COUPLES MUST BE COMPRESSOR TYPE WITH MINIMUM PRESSURE RATING OF 1035 kPa. COUPLES MUST BE MUELLER 11-2945.
14. VALVE BOXES MUST BE COMPLETE PULL-Y METAL BOX 3 PCE SLIDING TYPE WITH GLIDE PLATES.
15. WATERMANS MUST BE THOROUGHLY FLUSHED AND CLEANED TO REMOVE ALL DIRT AND DEBRIS PRIOR TO THE CONNECTION PROCESS.
16. ALL WATERMANS SHALL BE HYDROLOGICALLY AND BACTERIOLOGICALLY TESTED AS PER PROVINCIAL AND MUNICIPAL REGULATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL REQUIREMENTS ARE FOLLOWED.
17. THE DETECTION PROCEDURE WHICH FOLLOWS INTERNAL FLUSHING AND CLEANING METHODS OF CHLORINE IN THE WATERMAIN NETWORK. DETECTION MUST BE PERFORMED BY THE CONTRACTOR USING METHOD APPROVED BY THE CITY OF OTTAWA. DETECTION MUST BE IN ACCORDANCE WITH MINISTRY OF ENVIRONMENT AND CLIMATE CHANGE GUIDELINES. DOSSAGE MUST BE 100 ppm WITH MINIMUM FREQUENCY OF 20 ppm AFTER 24 HOURS. DETECTANT MUST BE SUPPLIED BY THE CONTRACTOR AND MUST BE AN APPROVED TESTING AND TEST RESULTS MUST BE SUBMITTED BY CITY OF OTTAWA PERSONNEL.
18. ALL DETECTANT WATER IS TO BE REMOVED FROM THE NEW WATERMAIN AND REPLACED WITH DISTRIBUTION SYSTEM WATER PRIOR TO PRESSURE TESTING OF THE WATERMAIN.
19. PRESSURE TESTING OF ALL WATERMANS AND APPURTENANCES NOTED AS BY THE CONTRACTOR MUST BE PERFORMED BY THE CONTRACTOR USING METHOD MEETING THE APPROVAL OF THE CITY OF OTTAWA. TESTING AND RESULTS MUST BE WITNESSED BY CITY OF OTTAWA PERSONNEL.
20. MARKS AND SERVICES MUST BE PRESSURE TESTED AT 1035 kPa (150 psi) IN ACCORDANCE WITH ANNA C-6042 (MINIMUM REQUIREMENTS).
21. LEAKAGE TESTS MUST BE CONDUCTED AS PER ANNA C-6042 (MINIMUM REQUIREMENTS).
22. ONCE THE DETECTION AND PRESSURE TESTING RESULTS HAVE BEEN APPROVED, THE CONTRACTOR MUST ENSURE THAT ALL WATERMANS ARE FLUSHED UNTIL THE CHLORINE LEVEL IN THE WATER IS SIMILAR TO THE LEVEL OF CHLORINE IN THE MUNICIPAL WATERMAIN NETWORK IN THE AREA.
23. BACTERIOLOGICAL TESTING MUST CONSIST OF TWO SAMPLINGS TWENTY FOUR HOURS APART. IF BACTERIOLOGICAL SAMPLING IS UNSATISFACTORY THE WATERMAIN MAY BE PLACED ON LINE.
24. ALL WATERMAIN VALVES TO BE OPERATED BY THE CITY OF OTTAWA ONLY.

NOTES SEWER

1. CONTRACTOR TO CONFIRM ELEVATION OF EXISTING STORM AND SANITARY SEWERS AT PROPOSED CONNECTION POINTS AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE COMMENCING ANY WORK.
2. ALL WORK SHALL BE PERFORMED AS APPLICABLE IN ACCORDANCE WITH OPS 407, AND 415.
3. PIPE MATERIAL TO BE PVC SDR35 AND CONFORMING TO OPS 341. UNLESS INDICATED OTHERWISE, PVC SEWERS TO BE INSTALLED PER OPS 402.2. UNLESS INDICATED OTHERWISE, LIMESTONE BEDDING COMPACTED TO 95% SPND.
4. ALL SEWERS WITH LESS THAN 1.4 METERS OF COVER ARE SUBJECT TO INSULATION DETAIL. USE OF THE CITY OF OTTAWA CHIMING CODE.
5. HRP BACKLIE MATERIAL TO BE APPROVED NATIVE MATERIAL OR SELECT SUBGRADE MATERIAL IN CONFORMANCE WITH OPS 215.
6. ALL MAINTENANCE HOLES AND CATCH BASIN MAINTENANCE HOLES TO BE 1200mm AS PER OPS 391.2. UNLESS INDICATED OTHERWISE, MAINTENANCE HOLES AND CATCH BASIN MAINTENANCE HOLES TO BE INSTALLED PER OPS 407.
7. ALL CATCH BASINS TO BE CONSTRUCTED AS PER OPS 407. UNLESS INDICATED OTHERWISE, CATCH BASINS TO BE INSTALLED PER OPS 407.
8. EXCAVATING BACKFILLING AND CONNECTING REQUIRED FOR MAINTENANCE HOLES, CATCH BASIN MAINTENANCE HOLES, AND CATCH BASINS TO BE COMPLETED AS PER OPS 407. THIS ARE TO BE BACKFILLED WITH OPS 407. UNLESS INDICATED OTHERWISE, JOINTS BETWEEN SECTIONS TO BE WRAPPED WITH NON-WOVEN GEOTEXTILE.
9. FOR SANITARY STRUCTURES: CAST IRON MAINTENANCE HOLE COVER AS PER OPS 407.10 TYPE A.
10. FOR STORM STRUCTURES: CAST IRON CATCH BASIN MAINTENANCE HOLE COVER AS PER OPS 407.10 TYPE B.
11. SANITARY MAINTENANCE HOLES REQUIRE BENCHING AS PER OPS 701.02.1.
12. THE CONTRACTOR IS RESPONSIBLE FOR MARKING OR ARRANGING ALL CONNECTIONS TO THE EXISTING SEWERS AS PER MUNICIPAL REQUIREMENTS. PRIOR TO CONNECTION, THE CONTRACTOR MUST PROVIDE TO THE CONSULTANT ENGINEER AND THE CITY FOR APPROVAL. ALL TEST RESULTS PERFORMED ON THE INTERNAL SERVICES.
13. ADVISE THE CITY PUBLIC WORKS AT LEAST 24 HOURS IN ADVANCE BEFORE ANY CONNECTION TO THE CITY SERVICES. COORDINATE WITH CITY OF OTTAWA AS REQUIRED.
14. TERMINATE AND PLUG ALL SERVICE CONNECTIONS AT 1.0m FROM EDGE OF THE BUILDING.
15. ALL SEWERS TO BE C.C.T.V. INSPECTED BY THE CONTRACTOR AS PER OPS 409.2.2. CORNER OF THE INSPECTION POINT MUST BE PROVIDED TO THE CONSULTANT AND THE C.C.T.V. INSPECTION IN VIDEO FORMAT ONLY.
16. SUBGRADE AND ROCKS WILL BE PRE-MAINTAINED WITH CATCH BASINS AND MAINTENANCE HOLES.
17. THE STORMWATER IS QUALITY REQUIREMENTS WILL BE ACHIEVED BY INSTALLING A STORAGE/EXFILTRATION OR EQUIVALENT TO ACHIEVE SIX TIMES REMOVAL. THE OIL SPLIT SEPARATION TO HAVE A MINIMUM CAPACITY OF 100 L. AN OR. CAPACITY OF 205 L. AND FOR A MINIMUM TREATMENT FLOW RATE OF 2 L/S.
18. OGS WILL REQUIRE PERIODIC MAINTENANCE AND CLEANING AS PER MANUFACTURERS SPECIFICATIONS. TYPICAL CLEANING INTERVAL IS ONCE A YEAR. ANNUAL CLEANING AGREEMENT NEEDS TO BE WITNESSED BY THE CITY.
19. BUILDING SANITARY SEWERS TO BE INSTALLED WITH A BACKFLOW VALVE AS PER CITY OF OTTAWA STANDARD DETAIL S14.2.
20. BUILDING FOUNDATION DRAIN TO BE INSTALLED WITH A BACKFLOW VALVE AS PER CITY OF OTTAWA STANDARD DETAIL 14.

NOTES UNDERGROUND STORMWATER STORAGE

1. UNDERGROUND STORMWATER STORAGE SYSTEM CHAMBER TYPE OR EQUIVALENT STORAGE REQUIREMENT 24m.
2. CHAMBER TYPE STORMWATER STORAGE OR EQUIVALENT.
3. BOTTOM OF GRANULAR AND LAYERS A PREPARED SUBFLOOR FINISH 87.3m.
4. TOP OF CHAMBER ELEVATION 87.2m.
5. TOP OF CHAMBER ELEVATION 86.9m.
6. TOP OF SYSTEM TO BE A MINIMUM OF 720mm BELOW PARKING LOT PAVEMENT STRUCTURE.



TOPOGRAPHIC INFORMATION & BENCHMARK

SURVEY COMPLETED BY ANNA C. SULLIVAN, VOLLECK & CO. ON JUNE 1ST, 2022. ELEVATIONS SHOWN ARE GEODETIC AND ARE REFERRED TO THE CGVD25 GEODETIC DATUM. ELEVATIONS ARE GRID, MTL ZONE 18N AND UTM ZONE 18N.

SITE BENCHMARK #1 LOCATED SOUTH OF CNW891 ENTRANCE ON DOCTOR LEACH DRIVE. FIRE HYDRANT TOP OF SPINDLE ELEVATION = 87.30

SITE BENCHMARK #2 LOCATED NORTH CHIMNEY ENTRANCE ON EASTMAN AVENUE. FIRE HYDRANT TOP OF SPINDLE ELEVATION = 86.91

SEE DRAWING C-102 OR C-108 TO SEE BOTH BENCHMARK ON PLAN VIEW

APPROVED
By Allison Hamlin at 11:31 am, Jul 28, 2026

ALLISON HAMLIN
MANAGER, DEVELOPMENT WORK ALL WARDS
PLANNING, DEVELOPMENT & BUILDING SERVICES
DEPARTMENT, CITY OF OTTAWA

NO.	DATE	REVISIONS
01	2026-07-28	RE-DESIGNED FOR SPA
02	2026-07-28	RE-DESIGNED FOR SPA
03	2026-07-28	RE-DESIGNED FOR SPA
04	2026-07-28	ISSUED FOR CIRCULATION
05	2026-07-28	ISSUED FOR CIRCULATION



CLV GROUP
485 BANK STREET, SUITE 200
OTTAWA, ON K2P 1Z2

MANOTICK AFFORDABLE SENIORS RESIDENCE - 5581 DR. LEACH DRIVE, MANOTICK, ON

SITE SERVICE PLAN	
DESIGNED BY	P.C.
PROJECT NO.	478221
DRAWN BY	P.C.
CHECKED BY	M.T.
DATE	FEBRUARY 2024
SCALE	1:400
DRAWING NO.	C-102
DATE	SS

WATER SERVICE LINE					
STATION	SURFACE ELEVATION	W/M DEPTH	TOP OF W/M AT ELEV.	INV. OF W/M ELEV.	NOTES
0+000	90.18	EXISTING	EXISTING	EXISTING	CONNECTION TO EXISTING WATERMAIN
0+007	90.22	2.40	87.82	87.67	OR-01 REFER TO CROSSING TABLE
0+009	90.30	2.40	87.90	87.85	SERVICE POST
0+017	90.26	2.40	87.86	87.71	OR-02 REFER TO CROSSING TABLE
0+038	90.58	2.40	88.18	88.03	WATER CAP WITH CONCRETE THRUST BLOCK

CROSSING TABLE			
CROSSING NO.	TOP OF PIPE ELEV. AT CROSSING	PIPE INV. ELEV. AT CROSSING	CLEARANCE (m)
CR-01	WM. TOP 87.82	STM. INV 89.56	1.74
CR-02	WM. TOP 87.86	STM. INV 88.52	0.66
CR-03	SAN. TOP 87.68	STM. INV 89.10	1.42

ICD SCHEDULE (ORIFICE)						
ICD ID	LOCATION	PIPE OUTLET INVERT (m)	FLOW 50/100 (L/s)	HEAD 50/100 (m)	EQUIVALENT DIAMETER (mm)	MODEL
01	DMH-H2M-05	87.13	4.3 / 6.1	0.89 / 1.25	45	VORTEX FLOW CONTROL

ICD SHOP DRAWING SHALL BE SUBMITTED TO PARSONS BEFORE COMMENCING ANY WORK
ICD INSTALLATION AS PER CITY OF OTTAWA DETAIL STANDARD 64.1 (VORTEX ICD INSTALLATION) APPROVED MATERIAL SPECIFICATION AS PER MS-02.15