WATERMAIN NOTES:

1. SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
WATERMAIN TRENCHING	WT7	CITY OF OTTAWA
THERMAL INSULATION IN SHALLOW TRENCHES	W22	CITY OF OTTAWA
THERMAL INSULATION BY OPEN STRUCTURES	W23	CITY OF OTTAWA
CONCRETE THRUST BLOCKS (UNDER 400mmØ)	W25.3	CITY OF OTTAWA
THRUST BLOCK TABLE (UNDER 400mmØ)	W25.4	CITY OF OTTAWA
WATERMAIN CROSSING BELOW SEWER	W25	CITY OF OTTAWA
WATERMAIN CROSSING ABOVE SEWER	W25.2	CITY OF OTTAWA
WATERMAIN (100mmØ AND LARGER)	PVC DR 18	
WATERMAIN (50mmØ AND SMALLER)	TYPE K COPPER	

2. SUPPLY AND CONSTRUCT ALL WATERMAINS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMAINS BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAIN AND CHLORINATION OF THE WATER SYSTEM SHALL BE PERFORMED BY CITY FORCES.
3. EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMAINS BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAIN AND CHLORINATION OF THE WATER SYSTEM SHALL BE PERFORMED BY CITY OFFICIALS. EXCAVATION, INSTALLATION OF SERVICE, BACKFILL AND RESTORATION BY THE CONTRACTOR.
4. WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED. WHERE DEPTH OF COVER IS LESS THAN 2.4m, WATERMAIN SHALL BE INSULATED PER CITY OF OTTAWA STANDARD DETAIL W22. WATERMAIN SHALL BE INSULATED BY OPEN STRUCTURES PER W23.
5. PROVIDE MINIMUM 0.25m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS.
6. WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.

GENERAL NOTES:

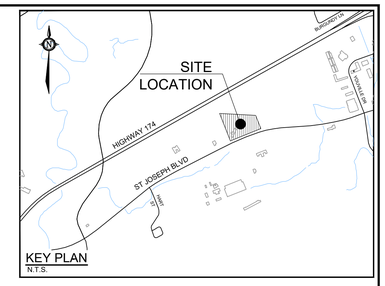
1. COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
2. DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME RESPONSIBILITY FOR ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THIS DRAWING.
3. OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA BEFORE COMMENCING CONSTRUCTION.
4. 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 CO-INSURED.
5. 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.
6. 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.
7. ALL ELEVATIONS ARE GEODETIC.
8. REFER TO GEOTECHNICAL INVESTIGATION REPORT 240798, DATED MAY 29, 2025), PREPARED BY KOLLAARD ASSOCIATES, 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.
9. REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARDSURFACE AREAS AND DIMENSIONS.
10. REFER TO SERVICING AND STORMWATER MANAGEMENT REPORT(R-2025-???) PREPARED BY NOVATECH ENGINEERING CONSULTANTS LTD.
11. SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10).
12. PROVIDE LINE/PARKING PAINTING.
13. 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 T/G ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, T/WM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.

SEWER NOTES:

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

ITEM	SPEC. No.	REFERENCE
CATCHBASIN (600x600mm)	705.010	OPSD
STORM / SANITARY MANHOLE (1200mmØ)	701.010	OPSD
STORM / SANITARY MANHOLE (1500mmØ)	701.011	OPSD
STORM / SANITARY MANHOLE (1800mmØ)	701.012	OPSD
CB, FRAME & COVER	S19	CITY OF OTTAWA
STORM / SANITARY MH FRAME & COVER	401.010 -TYPE 'A'	OPSD
CATCHBASIN MANHOLE FRAME & COVER	401.010-TYPE 'B'	OPSD
SEWER TRENCH	S6	CITY OF OTTAWA
INSULATION FOR SHALLOW SEWERS	S35	CITY OF OTTAWA
STORM SEWER	PVC DR 35 / CONC 65-D	
CATCHBASIN LEAD	PVC DR 35	

3. ALL STORM AND SANITARY SERVICE LATERALS SHALL BE EQUIPPED WITH BACKFLOW PREVENTION DEVICES AS PER THE CITY OF OTTAWA STANDARD DETAILS S14 AND S14.1 OR S14.2.
4. INSULATE ALL PIPES (SAN/STM) THAT HAVE LESS THAN 2.0m COVER WITH HI-40 INSULATION PER CITY OF OTTAWA STANDARD DETAIL S35.
5. SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0%.
6. 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 A BEDDING LAYER SHALL NOT BE PERMITTED.
7. 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.
8. 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.
9. ALL STORM MANHOLES AND CATCHBASIN MANHOLES ARE TO HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED. ALL CATCHBASINS ARE TO HAVE 600mm SUMPS UNLESS OTHERWISE INDICATED. ALL CATCHBASINS TO HAVE 3.0m OF FILTER-CLOTH WRAPPED 100mm PVC PERFORATED SUBDRAIN IN AN UPGRADIENT DIRECTION PER GEOTECHNICAL RECOMMENDATIONS.
10. ALL CATCHBASINS, MANHOLES AND/OR CATCHBASIN MANHOLES THAT ARE TO HAVE ICD'S INSTALLED WITHIN THEM ARE TO HAVE 600mm SUMPS.
11. ALL WEEPING TILE CONNECTIONS TO BE MADE TO THE PROPOSED STORM SEWER SYSTEM DOWNSTREAM OF ANY INLET CONTROL DEVICES.
12. 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
13. 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 T/G ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, T/WM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.

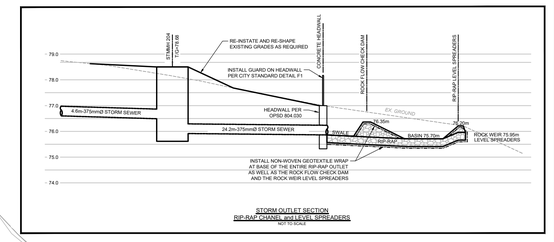


LEGEND

- PROPERTY LINE
- PROPOSED CURB
- PROPOSED DEPRESSED CURB
- PROPOSED CAP
- PROPOSED SANITARY SEWER AND MANHOLE
- PROPOSED STORM SEWER AND MANHOLE
- PROPOSED INSULATION PER CITY STANDARD S35
- PROPOSED CATCHBASIN MANHOLE
- PROPOSED CATCHBASIN
- PROPOSED WATER SERVICE
- PROPOSED HYDRANT c/w LEAD & VALVE
- PROPOSED VALVE AND VALVE BOX
- PROPOSED BUILDING ENTRANCE
- DIRECTION OF FLOW
- PROPOSED RETAINING WALL
- PROPOSED WATER METER AND REMOTE METER
- PROPOSED PRESSURE REDUCING VALVE
- *EXISTING UTILITY POLE C/W GUY WIRES*
- *EXISTING WATERMAIN C/W VALVE & VALVE CHAMBER*
- *EXISTING HYDRANT C/W VALVE & LEAD*
- *EXISTING SANITARY MANHOLE & SEWER*
- *EXISTING STORM MANHOLE & SEWER*
- *EXISTING CATCHBASIN*
- REMOVALS

ROOF DRAIN TABLE: AREA R-1 (FOR DRAINS RD A1 to RD A6)

AREA ID *	ROOF DRAIN No. (WATTS MODEL)	WEIR SETTING	1:5 YEAR RELEASE RATE	APPROX. 5 YR PONDING DEPTH	1:100 YEAR RELEASE RATE	APPROX. 100 YR PONDING DEPTH
A-3	RD 1 (RD-100-A-ADJ)	1/4 EXPOSED	0.79 L/s	10 cm	0.87 L/s	13 cm
A-3	RD 2 (RD-100-A-ADJ)	1/4 EXPOSED	0.79 L/s	10 cm	0.87 L/s	13 cm
A-3	RD 3 (RD-100-A-ADJ)	1/4 EXPOSED	0.79 L/s	10 cm	0.87 L/s	13 cm
A-3	RD 4 (RD-100-A-ADJ)	1/2 EXPOSED	0.95 L/s	10 cm	1.10 L/s	13 cm
A-3	RD 5 (RD-100-A-ADJ)	1/2 EXPOSED	0.95 L/s	10 cm	1.10 L/s	13 cm
A-3	RD 6 (RD-100-A-ADJ)	3/4 EXPOSED	1.10 L/s	10 cm	1.34 L/s	13 cm
A-3	RD 7 (RD-100-A-ADJ)	1/4 EXPOSED	0.79 L/s	10 cm	0.87 L/s	13 cm
A-3	RD 8 (RD-100-A-ADJ)	1/4 EXPOSED	0.79 L/s	10 cm	0.87 L/s	13 cm
A-3	RD 9 (RD-100-A-ADJ)	1/4 EXPOSED	0.79 L/s	10 cm	0.87 L/s	13 cm
TOTALS	-	-	7.74 L/s	-	8.76 L/s	-



STORM OUTLET SECTION
RIP-RAP CHANNEL and LEVEL SPREADERS
NOT TO SCALE

200mmØ WATERMAIN TABLE

CHAINAGE	FINISHED GRADE	TOP OF WATERMAIN	COMMENT
1+000.0	79.36	±76.96	CONNECT TO EXISTING WITH 45° HORIZ BEND
1+002.7	79.26	76.86	45° HORIZONTAL BEND
1+014.1	79.14	76.74	45° HORIZONTAL BEND
1+015.4	79.10	76.70	200mm x 200mm TEE CONNECTION
1+021.4	78.82	76.42	VALVE AND VALVE BOX
1+050.0	78.80	76.40	TOP OF WATERMAIN
1+070.1	78.94	76.54	45° HORIZONTAL BEND
1+072.9	78.86	76.46	45° HORIZONTAL BEND
1+096.4	78.80	76.40	45° HORIZONTAL BEND
1+109.0	78.55	76.15	45° HORIZONTAL BEND
1+121.3	78.15	75.75	11.25° HORIZONTAL BEND
1+126.1	78.05	75.65	22.5° HORIZONTAL BEND
1+134.3	77.85	75.45	VALVE AND VALVE BOX
1+135.7	77.80	75.40	CAP AT BUILDING

200mmØ WATERMAIN TABLE

CHAINAGE	FINISHED GRADE	TOP OF WATERMAIN	COMMENT
2+000.0	79.09	76.69	200mm x 200mm TEE CONNECTION
2+006.0	78.94	76.54	VALVE AND VALVE BOX
2+025.0	78.68	76.28	TOP OF WATERMAIN
2+050.0	78.74	76.34	TOP OF WATERMAIN
2+067.4	78.69	76.29	45° HORIZONTAL BEND
2+070.0	78.67	76.27	45° HORIZONTAL BEND
2+071.0	78.65	76.25	HYDRANT TEE
2+078.3	78.61	76.21	VALVE AND VALVE BOX
2+087.9	78.91	76.51	CONNECT TO EXISTING

PROPOSED CONSTRUCTION AREA OUTLINE IN RED

PROPOSED CONSTRUCTION AREA OUTLINE IN RED

EXISTING 3-STOREY 160 BED LONG-TERM CARE HOME
FFE: 78.05

NEW 2.5-STOREY 64-BED LONG-TERM CARE ADDITION
FFE: 79.20

CONSTRUCTION LAYDOWN AREA

ENTRANCE 1

ENTRANCE 2

ENTRANCE 3

ENTRANCE 4

EXISTING ENTRANCE IN GREEN

EXISTING ENTRANCE IN GREEN

EDGE OF BIKE LANE

EDGE OF BIKE LANE

EDGE OF BIKE LANE

TIE IN TO WATERMAIN TO CLOSE 1 DRIVING & BIKE LANE FOR 2 DAYS.

ST JOSEPH BOULEVARD

CLOSURE OF BIKE LANE FOR TWO WEEKS TO MAKE NEW ENTRANCES AND RESTORATION

ENTRANCE 1 & 4 RIGHT IN AND RIGHT OUT DRIVING
NO CHANGES TO ENTRANCE 4
ENTRANCE 3 IS ENTER ONLY IN TO SITE
ENTRANCE 2 IS EXIT ONLY
ENTRANCE 2&3 FOR MAIN DELIVERIES TO SITE

NOTE:
THE POSITION OF ALL POLE LINES, CONDUITS, WATERMAINS, 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.

No.	REVISION	DATE	BY
3	ISSUED FOR CLASS C	OCT 01/25	MS
2	ISSUED FOR SPC APPLICATION	SEPT 16/25	MS
1	ISSUED FOR CLASS D	JULY 24/25	MS

SCALE 1:300 (1:300, 0 3 6 9 12)

DESIGN MS / LSC
CHECKED MS
DRAWN LSC
CHECKED MS
APPROVED MS

NOVATECH
Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6
Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com

LOCATION
CITY OF OTTAWA
1533 & 1541 ST JOSEPH BOULEVARD

DRAWING NAME
GENERAL PLAN OF SERVICES

PROJECT No. 125033
REV. REV # 3
DRAWING No. 125033-GP

PLAN81.DWG - 1000mm x 707mm