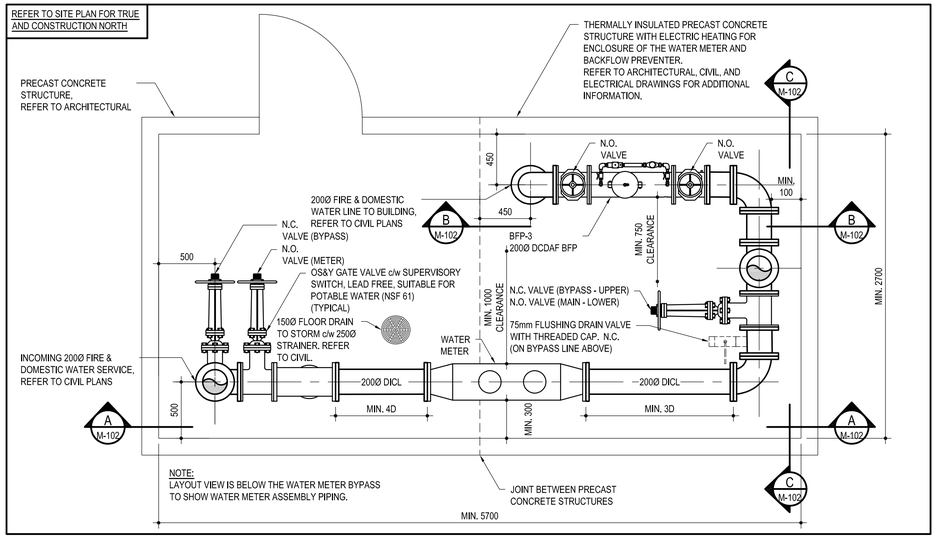
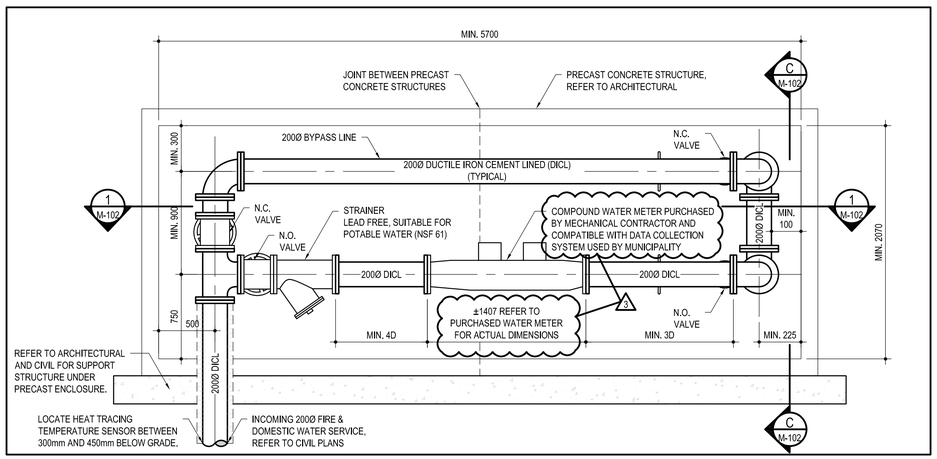


1 M-102 **WATER SERVICE BUILDING - LAYOUT**
SCALE: 1:25

0m 0.5m 1m 1.5m 2.0m 2.5m

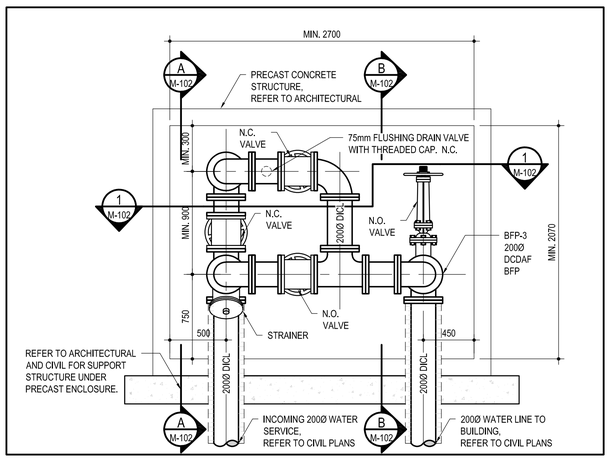
DRAWING NOTES:

1. THIS DRAWING PROVIDES THE GENERAL ARRANGEMENT FOR THE WATER METER, BACKFLOW PREVENTERS, AND PIPING WITHIN THE ABOVEGROUND, THERMALLY INSULATED, HEATED PRECAST CONCRETE STRUCTURE. THE DIMENSIONS ARE PROVIDED AS A GUIDE THE CONTRACTORS TO ASSIST WITH LAYING OUT THE PIPING, WATER METER, BACKFLOW PREVENTERS, AND OTHER EQUIPMENT WITHIN THE ENCLOSURE, THE CONTRACTORS ARE RESPONSIBLE FOR CONFIRMING ALL REQUIRED CLEARANCES AT WITHIN THE ENCLOSURE, AND PROVIDE THE REQUIRED AND INDICATED ACCESS CLEARANCES.
2. CONTRACTORS SHALL PURCHASE THE WATER METER FROM FROM THE SUPPLIER OR MANUFACTURER. THE WATER METER PACKAGE SHALL INCLUDE A REMOTE WEATHERPROOF EXTERNAL DISPLAY SUITABLE FOR MOUNTING ON THE EXTERIOR OF THE BUILDING (EXACT LOCATION OF THE EXTERNAL DISPLAY TO BE DETERMINED DURING CONSTRUCTION), CONTRACTORS ARE ALSO REQUIRED TO REVIEW, CONFIRM, COORDINATE, AND CONNECT ALL CONNECTION REQUIREMENTS TO THE WATER METER PER BY THE MUNICIPALITY'S BYLAW, WHICH INCLUDES, BUT IS NOT LIMITED TO, POWER, COMMUNICATIONS, METERING DEVICE, REMOTE METERING MODULE/SENSOR, ETC. THE MUNICIPALITY DOES NOT SELL WATER METERS.
   1. WATER METER STANDARD OF ACCEPTANCE:
      .1 KROHNE OPTIFLUX 2000F ELECTROMAGNETIC FLOW METER.
         MODEL No.: VN15 EAA447B1100200000000000.
         SIZE: 200mmØ (8"Ø).
         IP 67 RATED ENCLOSURE, NSF 61 APPROVED FOR POTABLE WATER.
      .2 REMOTE METERING MODULE:
      .1 KROHNE IFC100W REMOTE MOUNTED CONVERTER
         MODEL: NV31 4 NAC460010100000.
         ACCURACY: ± 0.3%.
         FULL BACKLIT DISPLAY OF RATE, TOTALS AND DIAGNOSTICS; 4-20 Ma OUTPUT, HART, FREQUENCY, PULSE OUTPUT AND STATUS OUTPUT; TWO TOTALIZERS; AUTO ZERO, EMPTY PIPE, LOW FLOW CUTOFF; 100 TO 230 VAC SUPPLY VOLTAGE, 25mmØ (1/2"Ø) NPT ELECTRICAL CONNECTIONS; CSA GENERAL PURPOSE INCLOSURE APPROVAL.
3. REFER TO ARCHITECTURAL, CIVIL, AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
4. REFER TO ARCHITECTURAL DRAWINGS FOR THE MODEL, DIMENSIONS, AND CONSTRUCTION OF THE PRECAST CONCRETE ENCLOSURE.
5. REFER TO CIVIL AND ARCHITECTURAL SITE PLAN DRAWINGS FOR THE LOCATION AND ORIENTATION OF THE ENCLOSURE ON THE SITE, AND CONTINUATION OF THE WATER LINE CONNECTIONS. GENERAL LAYOUT OF THE PRECAST BUILDING SHALL BE SUCH THAT THE DOORS ARE FACING THE SCHOOL.
6. REFER TO ELECTRICAL DRAWINGS FOR POWER, HEATING, LIGHTING, SYSTEMS, AND FIRE ALARM.
7. THE WATER SERVICE SHALL HAVE A DOUBLE CHECK DETECTOR ASSEMBLY FOR FIRE PROTECTION (DCVAF) INSTALLED. ADDITIONAL BACKFLOW PREVENTERS WITHIN THE BUILDING ARE REQUIRED. REFER TO MECHANICAL LAYOUT DRAWINGS.
8. UNOBSTRUCTED CLEARANCES AS INDICATED FOR THE WATER METER AND BACKFLOW PREVENTERS ARE TO BE MAINTAINED.
9. ALL PIPING SHALL BE FULLY SUPPORTED FROM THE FLOOR WITHIN THE ENCLOSURE. SUPPORTS ARE NOT SHOWN FOR CLARITY.
10. A FLOOR DRAIN, CONNECTED TO THE NEARBY STORM PIPING, SHALL BE PROVIDED. DRAIN SHALL BE SIZED TO SUIT THE DISCHARGE FROM THE BACKFLOW PREVENTERS, OR THAT INDICATED ON THE DRAWINGS, WHICHEVER IS GREATER. REFER TO CIVIL SITE PLAN FOR STORM PIPING FROM THE FLOOR DRAIN.
11. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION ON THE WATER METER, BACKFLOW PREVENTER, VALVES, PIPING, STRAINER, ETC.
12. PROVIDE ELECTRIC HEAT TRACING AROUND UNDERGROUND PIPING FROM INSIDE OF ENCLOSURE TO THE MECHANICAL JOINT ELBOW TRANSITIONING FROM VERTICAL PIPING TO HORIZONTAL PIPING. DEPTH OF MECHANICAL JOINT IS APPROXIMATELY 1.7m BELOW GRADE - REFER TO CIVIL DRAWINGS. REFER TO SPECIFICATIONS FOR ADDITIONAL PIPING INFORMATION.
13. THERMALLY INSULATE PIPING BELOW GRADE WITH 50mm THICK POLYURETHANE FOAM c/w TAPE WRAP SYSTEM JACKET FROM INTERIOR OF ENCLOSURE TO MECHANICAL JOINT ELBOW TRANSITIONING FROM VERTICAL PIPING TO HORIZONTAL PIPING. DEPTH OF MECHANICAL JOINT IS APPROXIMATELY 1.7m BELOW GRADE - REFER TO CIVIL DRAWINGS.
14. BELOW GRADE PIPING CAN BE FACTORY INSULATED PIPING c/w FACTORY INSTALLED HEAT TRACING, INCLUDING PROVISIONS FOR FIELD INSTALLATION OF TEMPERATURE SENSORS.
15. THERMALLY INSULATE ALL ABOVE GRADE PIPING, FITTINGS, FLANGES, VALVES, STRAINERS, BACKFLOW PREVENTERS WITHIN THE ENCLOSURE WITH 40mm THICK MINERAL FIBRE INSULATION c/w PVC JACKETING. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. INSULATION NOT SHOWN FOR CLARITY.
16. CONTRACTORS SHALL INSTALL SPOOL PIECES OF PIPING IN PLACE OF THE WATER METER, BACKFLOW PREVENTERS, AND STRAINER UNTIL THE WATERMAIN PRESSURE TESTING AND DISINFECTION IS COMPLETE. UPON COMPLETION OF THE PRESSURE TESTING AND DISINFECTION, THE CONTRACTORS SHALL DISINFECT THE WATER METER, BACKFLOW PREVENTERS AND STRAINER PER OBC, AWWA AND MUNICIPAL STANDARDS PRIOR TO INSTALLING THESE ITEMS IN LIEU OF THE SPOOL PIECES.
17. ALL PIPING AND FITTINGS IN THE WATER ENTRY BUILDING SHALL BE DUCTILE IRON CEMENT LINED (DICL), EXCEPTION FOR THE 75mm FLUSHING LINE WHICH SHALL BE COPPER c/w BRASS BUSHING WHERE IT CONNECTS TO THE DICL PIPING.
18. THE CONTRACTORS SHALL BE RESPONSIBLE FOR THE TESTING, CALIBRATION, AND CERTIFICATION OF THE INSTALLED WATER METER PER THE REQUIREMENTS OF THE MUNICIPALITY.



A M-102 **SECTION A-A**
SCALE: 1:25

0m 0.5m 1m 1.5m 2.0m 2.5m



C M-102 **SECTION C-C**
SCALE: 1:25

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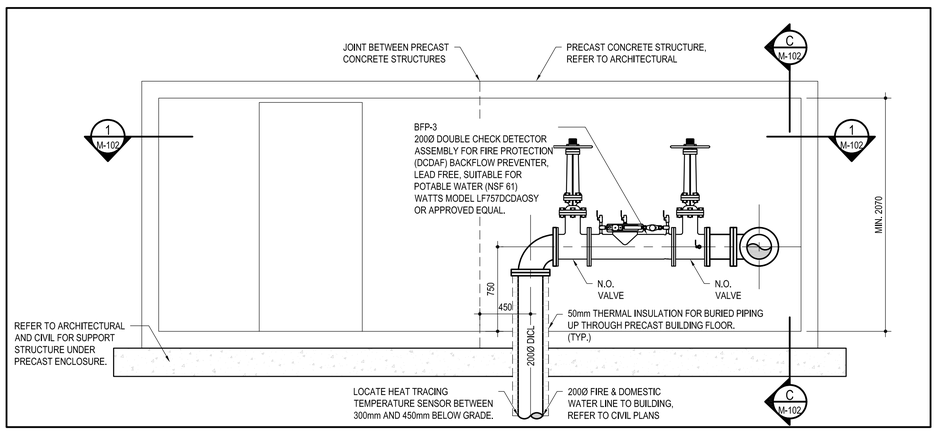

B M-102 **SECTION B-B**
SCALE: 1:25

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CONTRACT DRAWINGS
CONTRACT DRAWINGS FOR MECHANICAL WORK ARE IN PART DIAGRAMMATIC. INTENDED TO CONVEY THE SCOPE OF WORK AND GENERAL ARRANGEMENT FOR MECHANICAL SYSTEMS AND EQUIPMENT. CONTRACTOR TO COORDINATE LAYOUT OF MECHANICAL SYSTEMS WITH ARCHITECTURAL, STRUCTURAL, AND ELECTRICAL BUILDING COMPONENTS, AS WELL AS OTHER MECHANICAL SYSTEMS. PROVIDE ADDITIONAL PIPING, DUCTING, FITTINGS, SUPPORTS, ETC., REQUIRED TO FACILITATE THE WORK. NO EXTRA PAYMENTS ARISING FROM FAILURE TO MAKE THIS COORDINATION WILL BE CONSIDERED.

NOTES:

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KEYPLAN

No.	BY	REVISIONS/SUBMISSIONS	DATE
3	PM	ISSUED FOR SPC REVISIONS	2025-05-02
2	PM	ISSUED FOR TENDER AND CONSTRUCTION	2025-03-07
1	PM	ISSUED FOR SITE PLAN CONTROL	2025-02-19

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175 Talbot Street, Picton, Ontario

DRAWING
MECHANICAL - WATER ENTRY BUILDING LAYOUT AND SECTIONS

SCALE
AS INDICATED

PROFESSIONAL SEAL
LICENSED PROFESSIONAL ENGINEER
P. J. O. MCKEE
100139470
2025-05-02
PROVINCE OF ONTARIO

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