MECHANICAL SYMBOLS

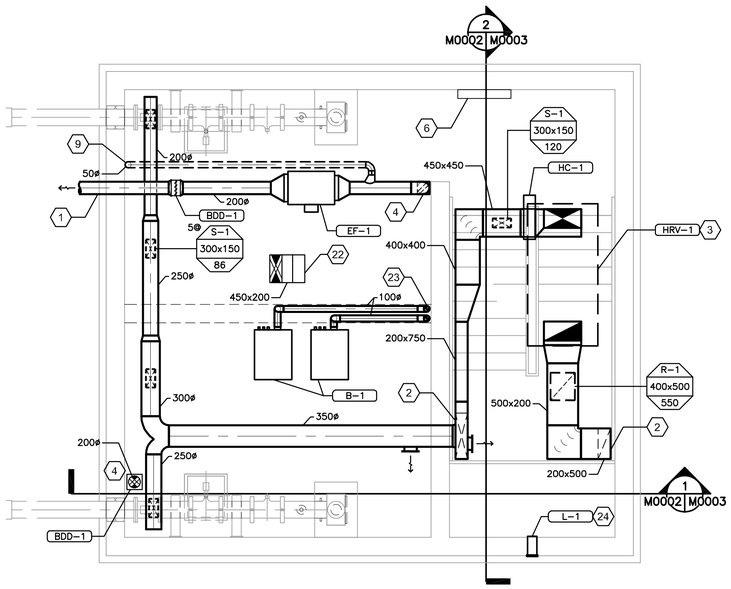
- W x H — RECTANGULAR DUCT
- ###ø — ROUND DUCT
- SQUARE ELBOW TURN (SUPPLY UP/DOWN)
- SQUARE ELBOW TURN (RETURN UP/DOWN)
- SQUARE ELBOW TURN (EXHAUST UP/DOWN)
- ELBOW, ROUND, SMOOTH RADIUS (UP/DOWN)
- TEE, 45 DEG., RECTANGULAR MAIN AND BRANCH
- TEE, 45 DEG., RECTANGULAR MAIN AND BRANCH, SQUARE TO ROUND
- ELBOW, RECTANGULAR, SMOOTH RADIUS WITHOUT VANES (1.5 R/W DEFAULT)
- ELBOW, ROUND, SMOOTH RADIUS (1.5 R/W DEFAULT)
- ELBOW, RECTANGULAR, MITERED WITH TURNING VANES
- ELBOW, 90 DEG., RECTANGULAR WYE
- TRANSITION, RECTANGULAR, PYRAMIDAL (30° CONTRACTUAL ANGLE DEFAULT)
- TRANSITION, RECTANGULAR, SIDE (30° CONTRACTUAL ANGLE DEFAULT)
- THERMOSTAT
- GRILLES (RETURN / SUPPLY)
- AIR FLOW ARROWS
- BALANCING DAMPER
- HORIZONTAL UNIT HEATER (REFER TO SCHEDULE)
- QUANTITY / TYPE / SIZE (mm) / VOLUME (L/s) — AIRFLOW TAG (REFER TO SCHEDULE)
- AA–1 — EQUIPMENT TAG
- DOMESTIC COLD WATER
- DOMESTIC HOT WATER
- SAN — SANITARY DRAIN (BELOW GRADE OR FLOOR)
- SAN — SANITARY DRAIN (ABOVE GRADE OR FLOOR)
- G — NATURAL GAS
- PIPE BREAK
- FLOW ARROW
- PIPING ELBOW DOWN
- PIPING ELBOW UP
- PIPING TEE UP
- PIPING TEE DOWN
- PIPING TEE
- SANITARY/STORM PIPING DOWN
- SANITARY/STORM PIPING UP
- SANITARY/STORM TEE UP
- SANITARY/STORM TEE DOWN
- SANITARY/STORM BRANCH
- CO — STANDARD CLEAN–OUT IN LINE END OF RUN
- CO — STANDARD CLEAN–OUT THROUGH FLOOR END OF RUN
- CO — STANDARD CLEAN–OUT THROUGH FLOOR IN LINE
- FIXTURE TRAP
- FD — FLOOR DRAIN
- HB — HOSE BIBB
- GATE VALVE
- SWING GATE CHECK VALVE
- BALL VALVE
- BACKFLOW PREVENTER DOUBLE CHECK TYPE
- M — WATER METER
- RELIEF (R) OR SAFETY (S) VALVE
- PUMP (REFER TO SCHEDULE)
- HOSE REEL
- PLUMBING FIXTURES
- FIRE EXTINGUISHER

GENERAL NOTES

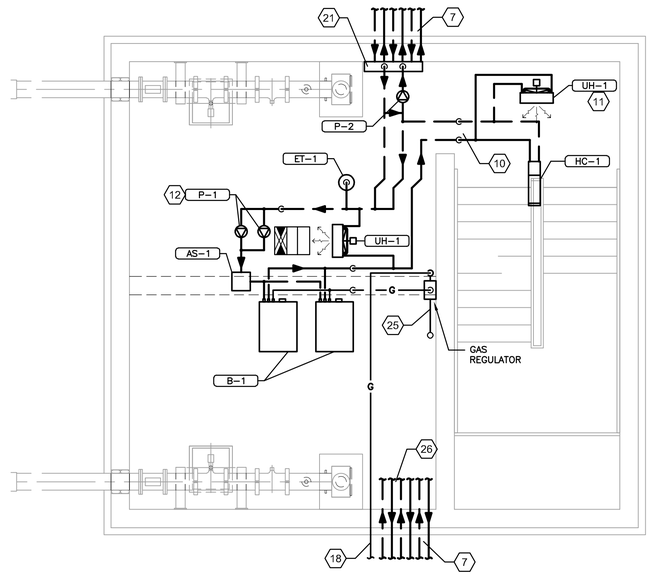
1. COORDINATE WITH OTHER TRADES.
2. CONFORM TO SPECIFICATIONS FOR DUCTWORK, MATERIALS, AND INSTALLATION.
3. SEE DRAWINGS 9,10,11/M0004–02 FOR DUCTWORK MOUNTING DETAILS.
4. PROVIDE 25mm THERMAL INSULATION FOR ALL SUPPLY AIR AND OUTSIDE AIR DUCTWORK.
5. PROVIDE 50mm THERMAL INSULATION FOR ALL DUCTWORK EXPOSED TO OUTSIDE.
6. SEE ARCHITECTURAL AND STRUCTURAL FOR ALL WALL AND ROOF PENETRATIONS.
7. SUPPORT ALL HYDRONIC AND DOMESTIC WATER PIPING FROM WALL AT HIGH LEVEL. MAINTAIN APPROPRIATE HEAD CLEARANCES WHEN CROSSING WALKWAYS.
8. SEE DRAWING M0005 FOR HEAT RECOVERY VENTILATOR, DOMESTIC WATER, AND HYDRONIC SYSTEM SCHEMATIC DIAGRAMS (INCL. PIPE SIZES).
9. INSTALL ONE O/A TEMPERATURE SENSOR ON NORTH WALL.
10. PROVIDE PLUMBING VENTS AND CLEANOUTS AS PER CODE.
11. INSTALL FIRE EXTINGUISHERS IN ACCORDANCE WITH NFPA 10– STANDARD FOR PORTABLE FIRE EXTINGUISHERS.
12. ALL SANITARY PIPE GREATER THAN 75ø @1% SLOPE. UNLESS SPECIFIED.
13. ALL SANITARY PIPE EQUAL OR SMALLER THAN 75ø @2% SLOPE. UNLESS SPECIFIED.
14. PROVIDE BALANCING DAMPERS TO ALL SUPPLY/RETURN DIFFUSERS.
15. ALL HANGING RODS, BRACKETS, FLOOR SUPPORTS, AND SUPPORT ACCESSORIES TO BE TYPE 316L STAINLESS STEEL.

MECHANICAL KEYNOTES

1. CONNECT EXHAUST TO BURIED VENT PIPING. SEE SITE PLAN FOR CONTINUATION.
2. DUCTWORK RISER TO EXTEND TO ROOF LEVEL. SEE DRAWING M0003 FOR SECTION VIEWS.
3. LOCATE HEAT RECOVERY VENTILATOR ON ROOF CURB PROVIDED BY ARCHITECTURAL. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.
4. PROVIDE MANUALLY–OPERATED DAMPER TO BE CLOSED WHEN SERVICING EXHAUST FAN. WELD 15x15 WIRE MESH AT END OF DUCT INSIDE HOLDING TANK.
5. PROVIDE FLUSHING PIPE FOR HOLDING TANK. SEE DRAWING 7/M0004–01 FOR DETAILS.
6. LOCATE HRV–1 CONTROL PANEL AT TOP LEVEL OF STAIRCASE, INSIDE ENTRY DOOR.
7. HYDRONIC PIPING TO MANHOLE PADS. SEE MECHANICAL SITE PLAN, DRAWING 1/M0001, FOR CONTINUATION.
8. SLOPE FLOOR TO FLOOR DRAINS. COORDINATE WITH STRUCTURAL.
9. CONNECT SANITARY VENT TO HOLDING TANK EXHAUST DUCT.
10. HYDRONIC PIPING RISERS UP TO ROOF LEVEL TO SERVE UNIT HEATER (UH–1) AND HEATING COIL (HC–1).
11. UNIT HEATER SUSPENDED FROM ROOF AT TOP LEVEL OF STAIRCASE.
12. SEE DRAWING 4/M0004–01 FOR PUMP INSTALLATION DETAILS.
13. CONNECT TO DOMESTIC WATER SERVICE, SEE SITE PLAN FOR CONTINUATION. SEE DRAWING 6/M0004–01 FOR WATER SERVICE ENTRY DETAIL.
14. CONNECT WATER LINE FROM TRAP PRIMER (TP–1) TO COMMON SANITARY TRAP. SEE DRAWINGS 1,5/M0004–01 FOR DETAILS.
15. LOCATE FIRE EXTINGUISHER AT TOP LEVEL OF STAIRCASE ADJACENT TO EXTERIOR DOOR.
16. SANITARY LINE TO DRAIN INTO HOLDING TANK. SEE DRAWING 1/M0004–01 FOR DETAILS.
17. PIPING FROM SUMP PIT TO PENETRATE LOWER WALL INTO HOLDING TANK AT HIGH LEVEL FOR SUMP DRAINAGE. SEE DRAWING M0003 FOR SECTION VIEWS.
18. NATURAL GAS SERVICE FROM METER ON LEACHATE BUILDING. SEE CIVIL SITE PLAN FOR CONTINUATION.
19. PROVIDE 25mmø DRAINAGE PIPING FROM HEATING COIL (HC–1) AND HEAT RECOVERY VENTILATOR (HRV–1) TO FUNNEL FLOOR DRAIN (FD–2) AT TOP LEVEL OF STAIRCASE. SEE DRAWING M0003 FOR SECTION VIEWS.
20. 500x500x700 SUMP PIT LOCATED AT BOTTOM LEVEL OF STAIRCASE. SEE DRAWING 15/M0004–02 FOR DETAILS. COORDINATE WITH STRUCTURAL.
21. HYDRONIC MANIFOLD.
22. COMBUSTION AIR INTAKE TO PENETRATE ROOF. CONFORM TO CURRENT MANITOBA GAS CODE. SEE DRAWING M0003 FOR SECTION VIEWS.
23. BOILER FLUE VENTS TO PENETRATE ROOF. PIPE CONDENSATE FROM VENT CLEANOUT THROUGH NEUTRALIZER KIT TO NEAREST FLOOR DRAIN. CONFORM TO CURRENT MANITOBA GAS CODE. SEE DRAWING M0003 FOR SECTION VIEWS.
24. PROVIDE LOUVER FOR VENTILATION AIR. CONFORM TO CURRENT MANITOBA GAS CODE.
25. PROVIDE GAS PRESSURE REGULATOR. PIPE CONDENSATE FROM REGULATOR TO NEAREST FLOOR DRAIN. PIPE GAS RELIEF VENT FROM REGULATOR THROUGH ROOF. CONFORM TO CURRENT MANITOBA GAS CODE.
26. CONNECT HYDRONIC PIPING TO MANIFOLD. SEE DRAWING M0005.



1 M0002 HVAC PLAN
1:50



2 M0002 HYDRONIC PLAN
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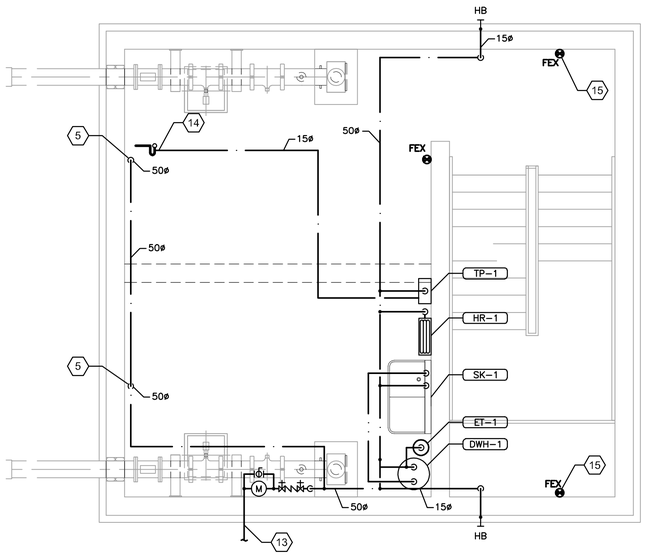

3 M0002 PLUMBING & FIRE PROTECTION PLAN
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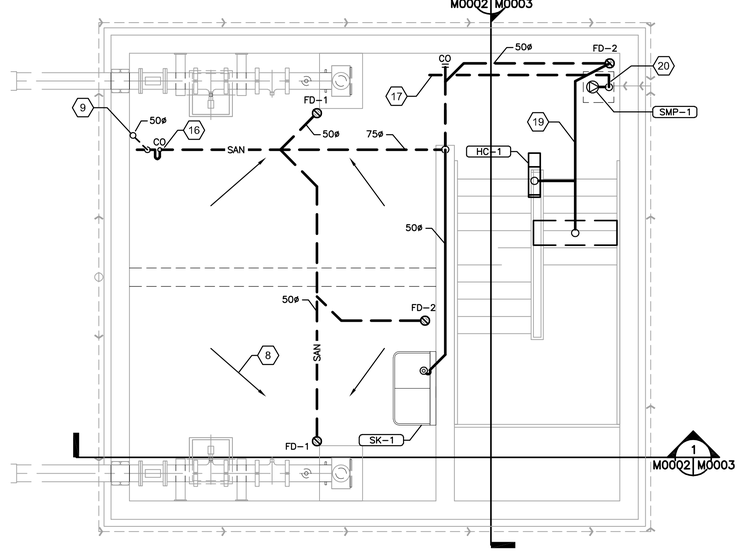

4 M0002 SANITARY PLAN
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Certificate of Authorization
Stantec Consulting Ltd.
No. 1301 Date:

LOCATION APPROVED
UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE — DATE

NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

B.M. ELEV.

NO.	REVISIONS	DATE	BY
A	ISSUED FOR TENDER	10.02.16	L.W.

Stantec Consulting Ltd.
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Tel 204–489–5900 Fax 204–453–9012

DESIGNED BY	L.W.	CHECKED BY	A.B.
DRAWN BY	J.L.T.	APPROVED BY	A.B.
HOR. SCALE: / VERTICAL:	AS NOTED	RELEASED FOR CONSTRUCTION:	
DATE	09.11.13	DATE	

ENGINEER'S SEAL

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

NORTH END WATER POLLUTION CONTROL CENTRE
HAULED WASTEWATER RECEIVING FACILITIES
HAULED WASTEWATER RECEIVING BUILDING
MECHANICAL PLANS

BID OPPORTUNITY NO.	CITY DRAWING NUMBER	SHEET	OF
822–2009	1–0101A–M0002–001	1	1

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2010–02–08 11:19AM By: jtonge