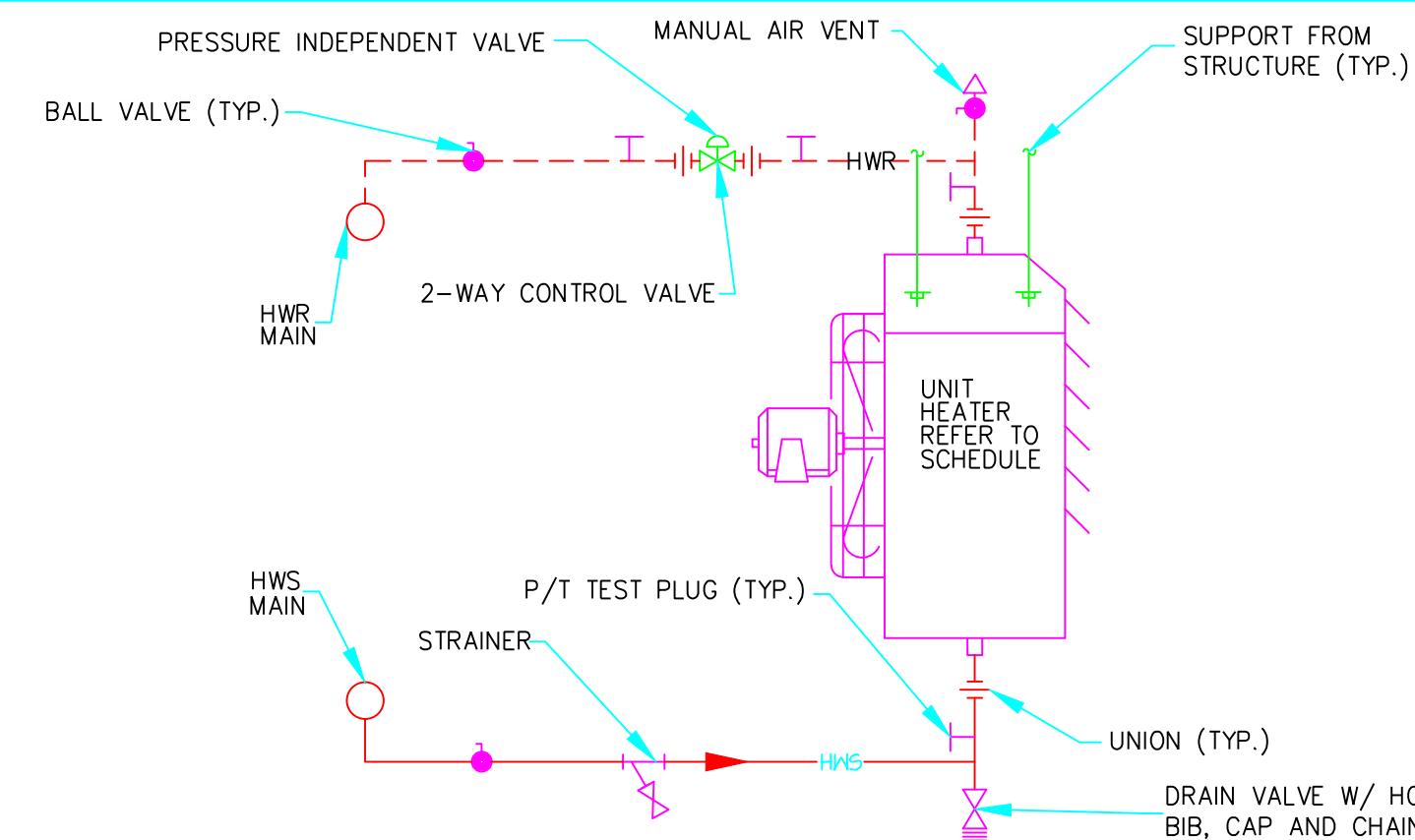
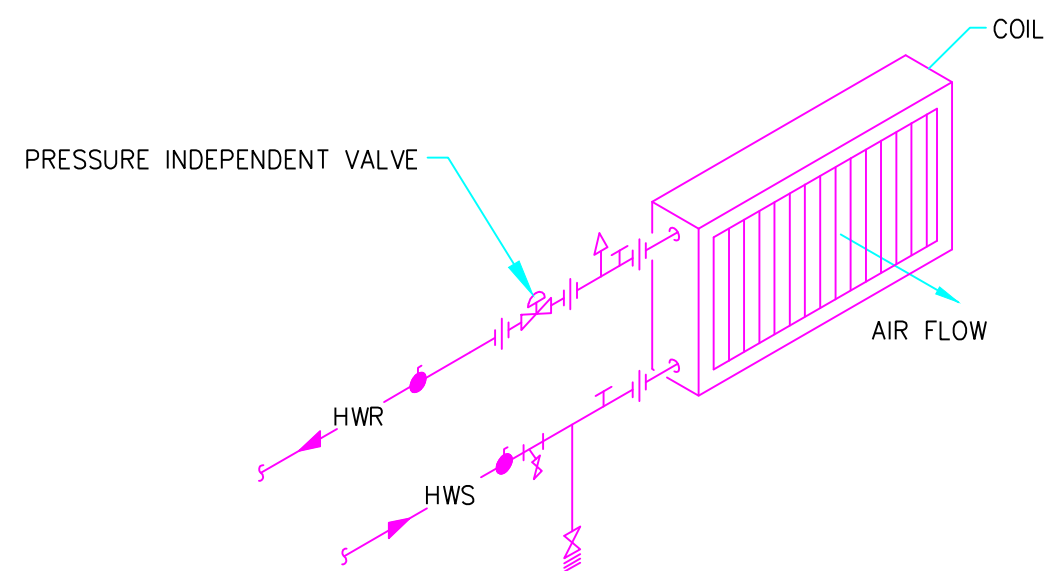


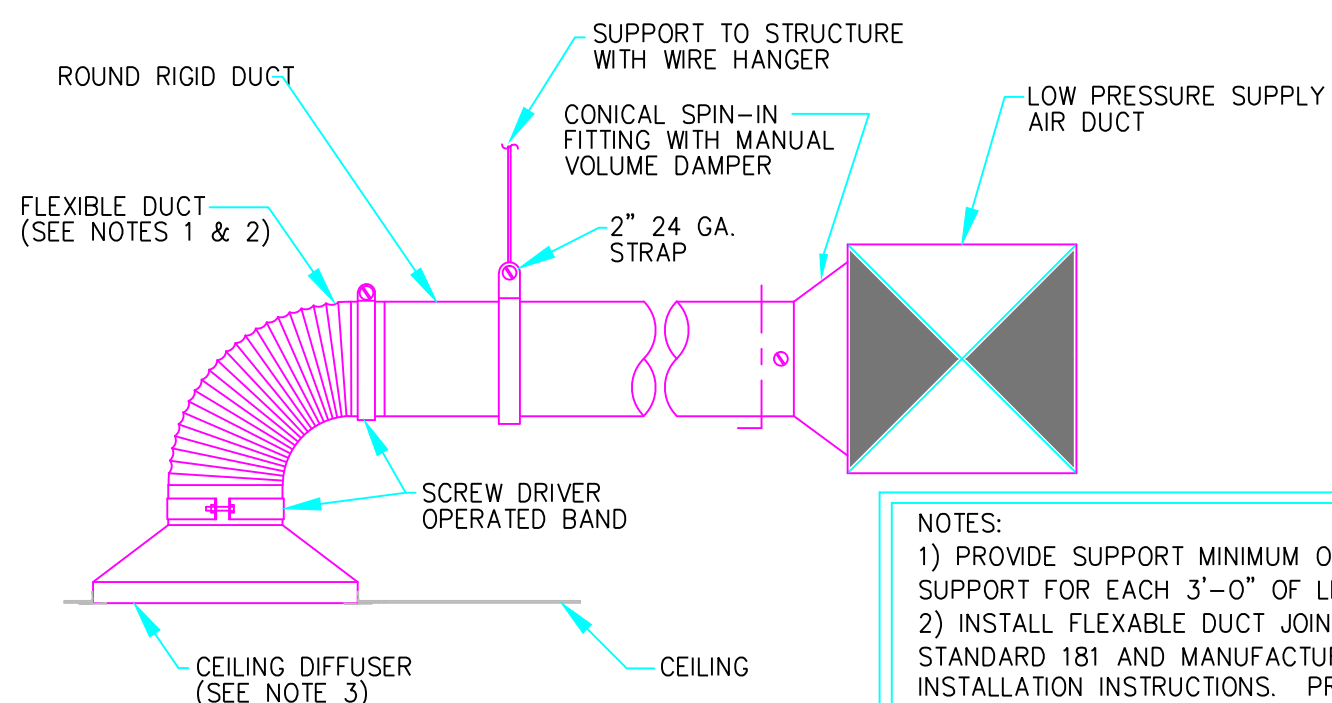
3 IN-LINE EXHAUST FAN DIAGRAM
M-05 SCALE: NONE



2 HYDRONIC UNIT HEATER DIAGRAM
M-05 NOT TO SCALE

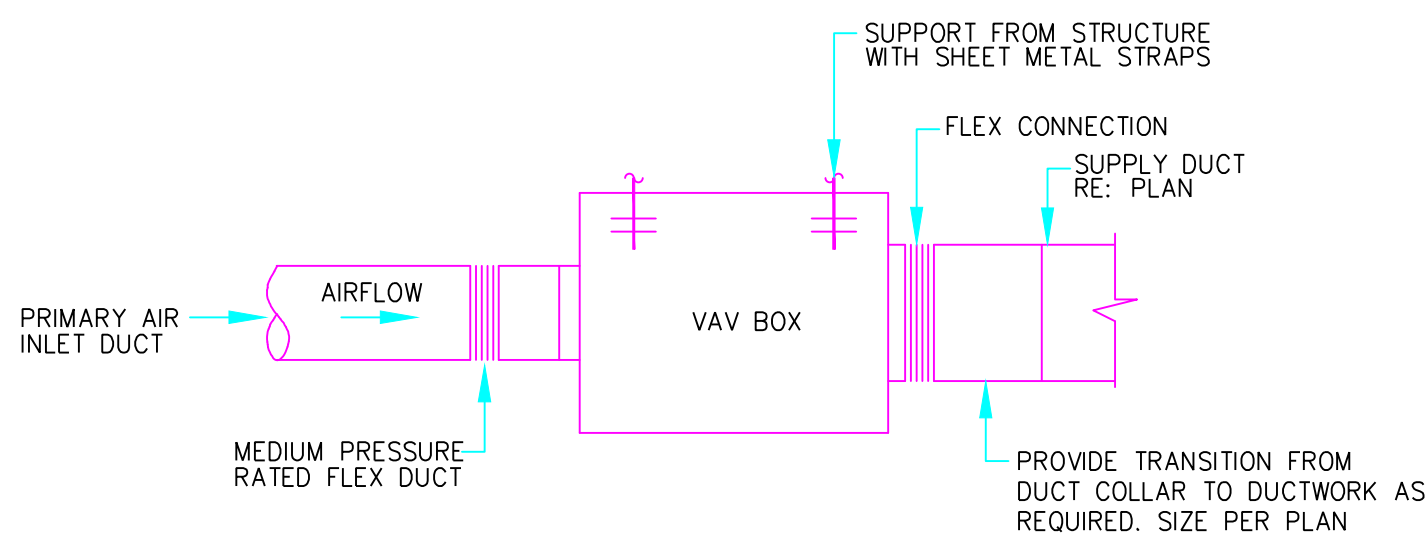


1 HEATING/COOLING COIL PIPING DIAGRAM
M-05 SCALE: NONE

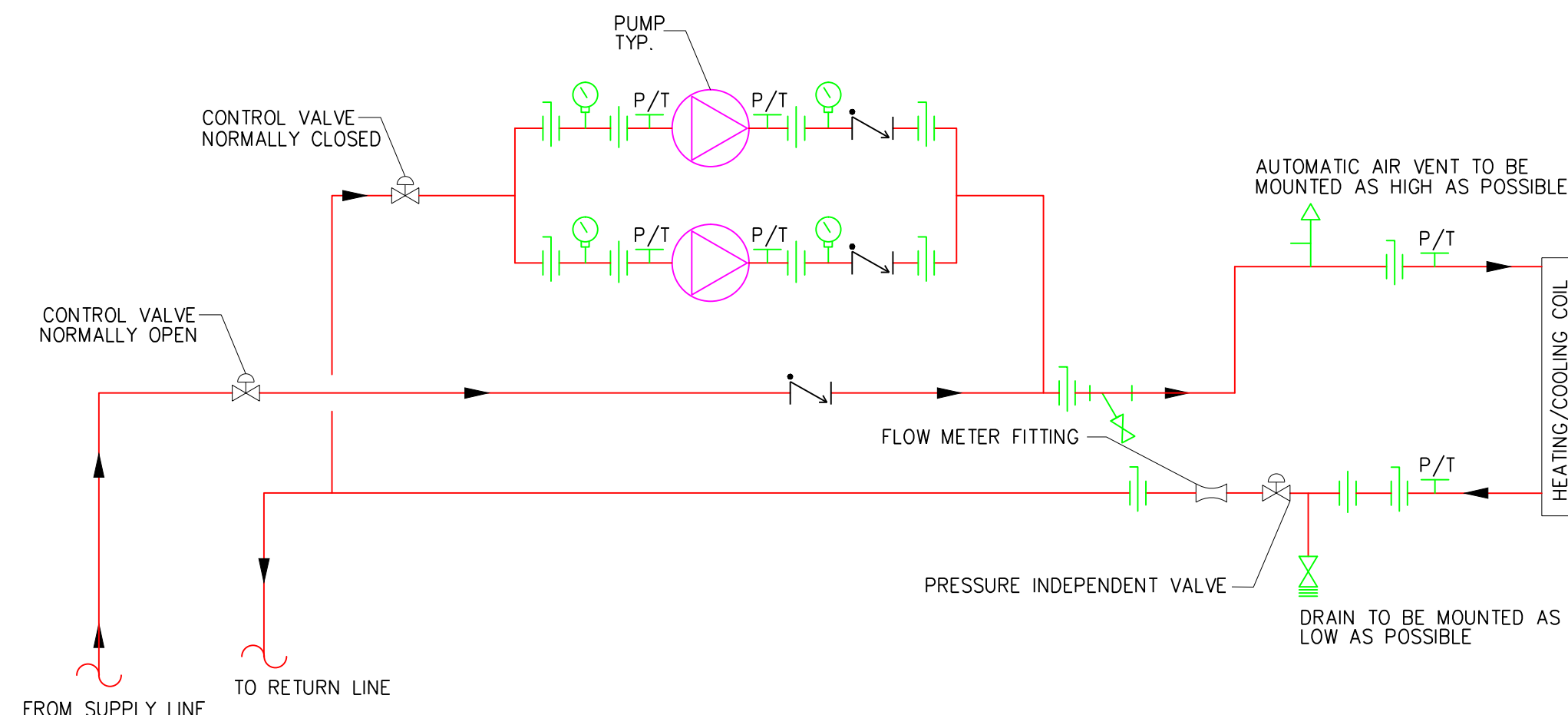


- NOTES:
- 1) PROVIDE SUPPORT MINIMUM OF ONE SUPPORT FOR EACH 3'-0" OF LENGTH
 - 2) INSTALL FLEXIBLE DUCT JOINTS PER UL STANDARD 181 AND MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE TWO WRAPS OF 181B-FX TAPE AND UL APPROVED DRAWBAND AT ALL CORE JOINTS.
 - 3) SUPPORT DIFFUSER INDEPENDENT FROM DUCTWORK WITH WIRE HANGERS WHEN REQUIRED BY LOCAL CODE.

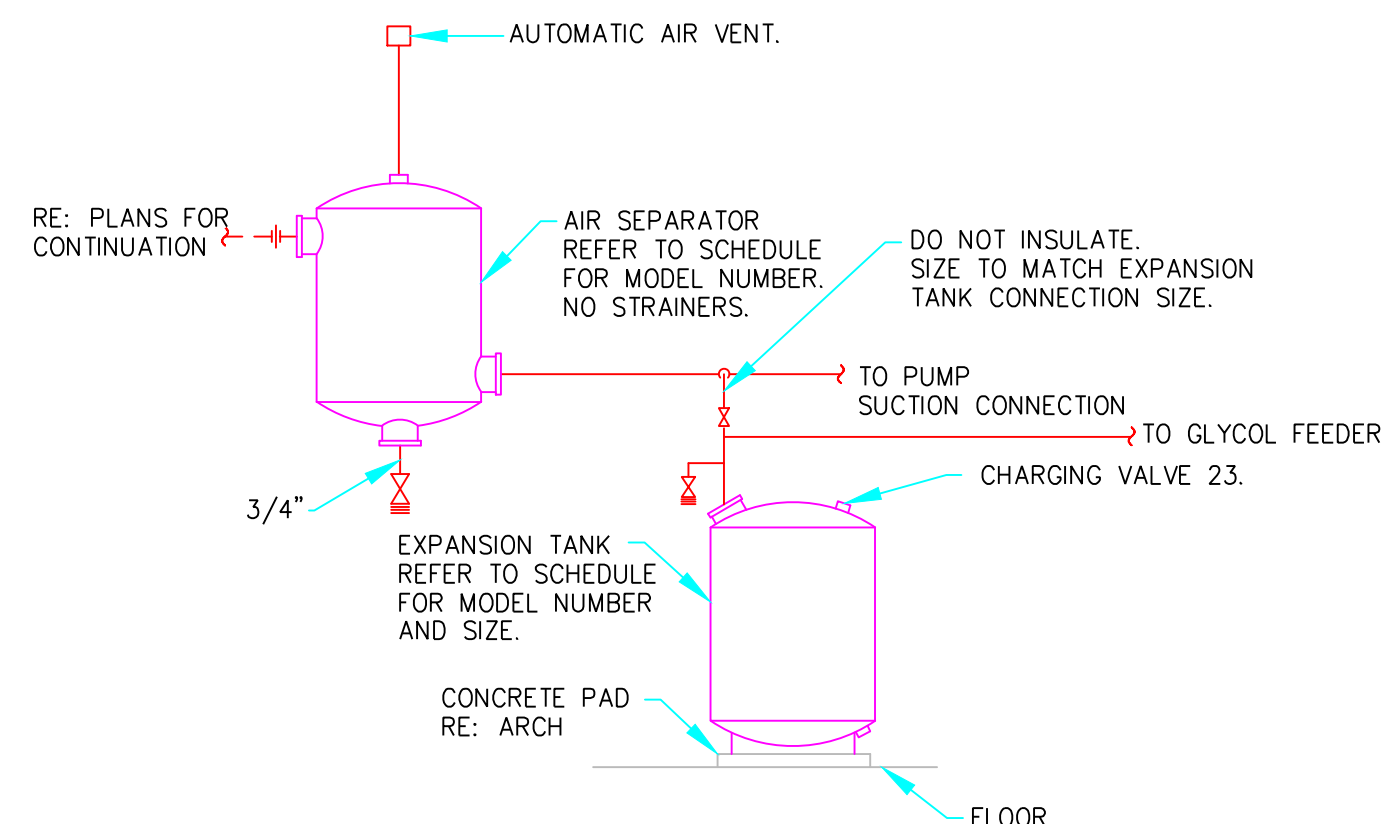
6 AIR DEVICE DIAGRAM
M-05 NOT TO SCALE



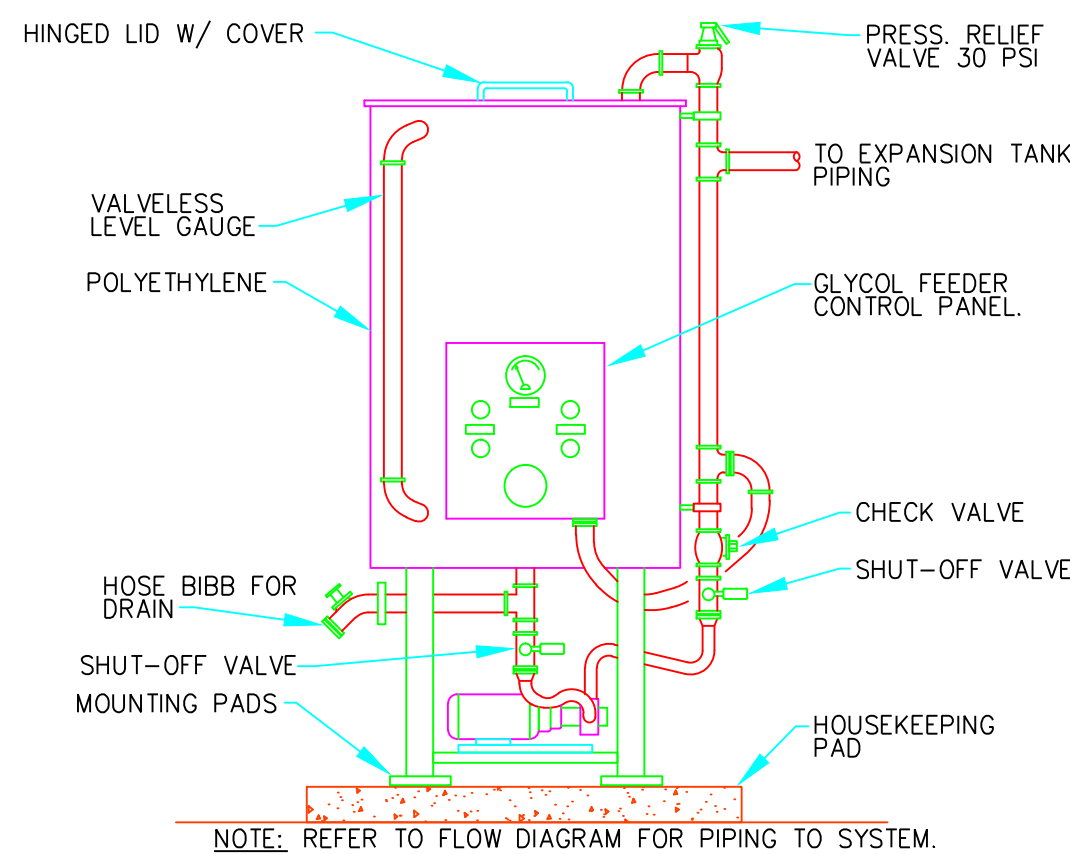
5 VAV BOX DIAGRAM
M-05 NOT TO SCALE



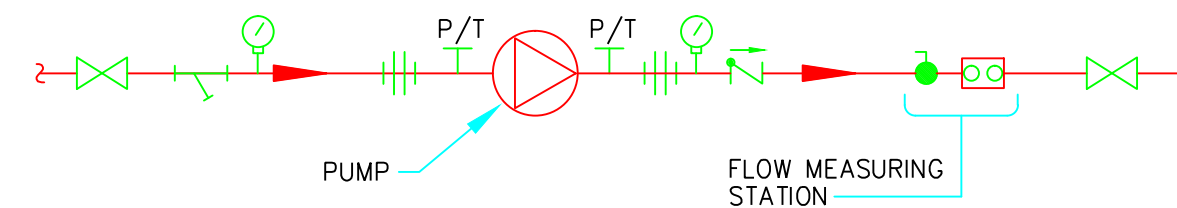
4 MAU-5 COIL PIPING DIAGRAM
M-05 NOT TO SCALE



9 HEATING WATER DIAPHRAGM EXPANSION TANK DIAGRAM
M-05 NOT TO SCALE


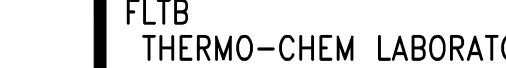


8 GLYCOL FEEDER DIAGRAM
M-05 SCALE: NONE



7 IN-LINE PUMP PIPING DIAGRAM
M-05 NOT TO SCALE

NO.		REVISIONS					DATE	BY	APP'D.	BAE	NO.	REVISIONS					DATE	BY	APP'D.	BAE	FILE INFORMATION				ENGINEERING REVIEW						
0	50% CONSTRUCTION DOCUMENTS						8-25-11	-	-	-	-	-						-	-	-	-	USER: DLD		DATE: 1/20/12	TIME: .	XREF'S: .			DESIGNER	DLD	DATE
1	90% CONSTRUCTION DOCUMENTS						9-30-11	-	-	-	-	-						-	-	-	-	DWG. FILE:		LAYOUT: .			ENGINEER	DLD			
2	100% CONSTRUCTION DOCUMENTS						11-3-11	-	-	-	-	-						-	-	-	-	DWG. FOLDER:						CHECKED BY	MTM		
3	FOR CONSTRUCTION						1-20-12	-	-	-	-	-						-	-	-	-	ACAD VERSION: AUTOCAD 2010						A/E APPROVED BY	-	-	
-	-						-	-	-	-	-	-						-	-	-	-	PLATFORM: WINDOWS XP						NREL APPROVED BY	-	-	
-	-						-	-	-	-	-	-						-	-	-	-	BORDER: ZBD22340-3.DWG		PLOT SCALE: 1:1	UNITS: ARCH			BLDG. AREA ENG.	-	-	
-	-						-	-	-	-	-	-						-	-	-	-	PLOT INFO.: NREL.STB									

		FLTB THERMO-CHEM LABORATORY 101 CONVERSION MECH TASK ORDER 13 MECHANICAL DIAGRAMS		
N.E.P. ENGINEERING 3585 S. Yosemite St. Denver, CO 80227 (303) 556-1633 info@nep-eng.com	NREL National Renewable Energy Laboratory 1617 Cole Boulevard Golden, Colorado 80401-3393 Operated for the U.S. Department of Energy by Midwest Research Institute • Battelle • Bechtel	DRAWING NO. PREFIX FLTB-135-	DRAWING NO. M-05	REVISION NO. 3
NREL PROJECT NO. EX2010034	NREL WORK ORDER NO. 13	A/E PROJECT NO. 11261		