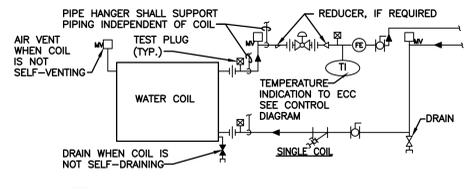


NOTES:
SEE SPECIFIER FOR DETAILED HANGER REQUIREMENTS

NOM. SIZE		MAXIMUM PIPE/TUBING SUPPORT SPACING																																	
IN. [mm]		1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24
THRU		20	25	32	40	50	65	75	100	125	150	200	250	300	350	400	450	500	20	25	32	40	50	65	75	100	125	150	200	250	300	350	400	450	500
PIPE	FT. [mm]	[2100]	[2100]	[2700]	[3000]	[3400]	[3700]	[4100]	[4900]	[5200]	[5800]	[6700]	[7000]	[7800]	[8200]	[8500]	[9100]	[9600]	20	25	32	40	50	65	75	100	125	150	200	250	300	350	400	450	500
TUBING	FT. [mm]	5	8	7	8	9	10	12	14	16	18	22	23	25	27	28	30	32	20	25	32	40	50	65	75	100	125	150	200	250	300	350	400	450	500

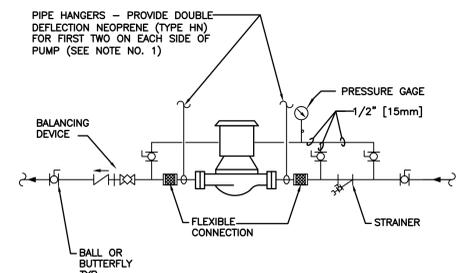
NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE.

1 PIPE HANGERS
NTS



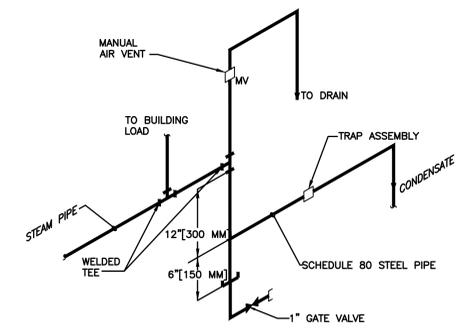
- NOTE:
- WHEN COIL IS INCLUDED IN CASING MOUNTED ON VIBRATION ISOLATORS THE FIRST 2 HANGERS FOR EACH PIPE SHALL BE SPRING & NEOPRENE TYPE. TYPE "H" FOR 4" [100mm] PIPE & SMALLER. TYPE "H-P" FOR 5" [125mm] PIPE & LARGER.
 - PIPING SHALL BE INSTALLED IN SUCH MANNER THAT IT WILL NOT BLOCK THE SWING OR USE OF ACCESS DOORS OR PANELS; NEITHER SHALL IT BLOCK THE SERVICING OF FILTERS, VALVES, OR EQUIPMENT.
 - THE FLOW ELEMENT MAY BE INSTALLED IN THE SUPPLY PIPING IF THE REQUIRED MINIMUM UPSTREAM AND DOWNSTREAM DIMENSIONS CANNOT BE OBTAINED IN THE RETURN PIPING.
 - ALL CHILLED WATER COIL CONTROL VALVES SHALL BE PRESSURE INDEPENDENT TYPE.

5 WATER COILS - PIPING CONNECTIONS
NTS

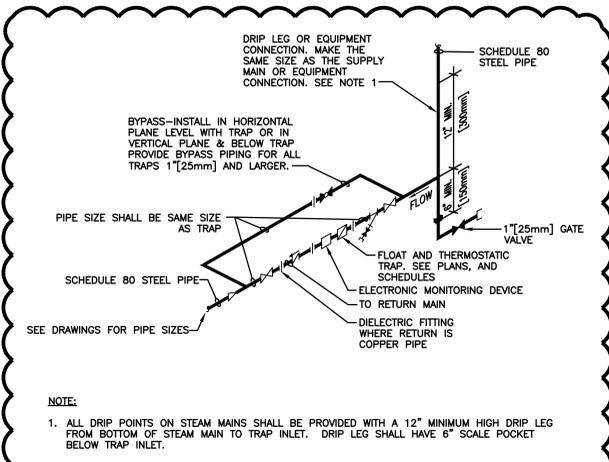


- NOTE:
- SUPPORT PUMP FROM PIPING ONLY. DO NOT SUPPORT PUMP FROM MOTOR.

6 IN-LINE PUMPS - CONNECTIONS
NTS

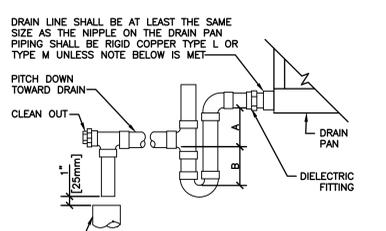


7 END OF STEAM LINE DRIP TRAP
NTS



- NOTE:
- ALL DRIP POINTS ON STEAM MAINS SHALL BE PROVIDED WITH A 12" MINIMUM HIGH DRIP LEG FROM BOTTOM OF STEAM MAIN TO TRAP INLET. DRIP LEG SHALL HAVE 6" SCALE POCKET BELOW TRAP INLET.

8 FLOAT AND THERMOSTATIC STEAM TRAP ASSEMBLY (LPR ONLY)
NTS

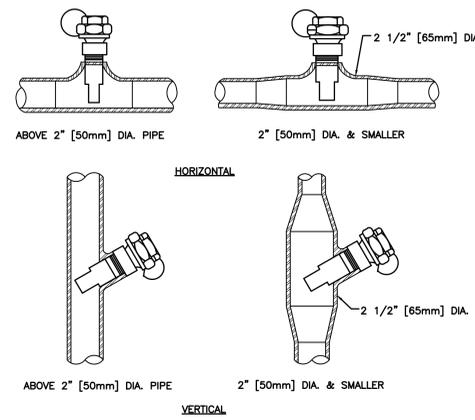


- NOTE:
- CPVC PIPE MAY BE USED ONLY IF APPROVED BY LOCAL VA AND IS INDOORS AND DOES NOT PASS THROUGH RATED BARRIERS.
 - DIELECTRIC FITTING TO BE USED WHEN TWO DISSIMILAR METALS ARE TO BE CONNECTED.

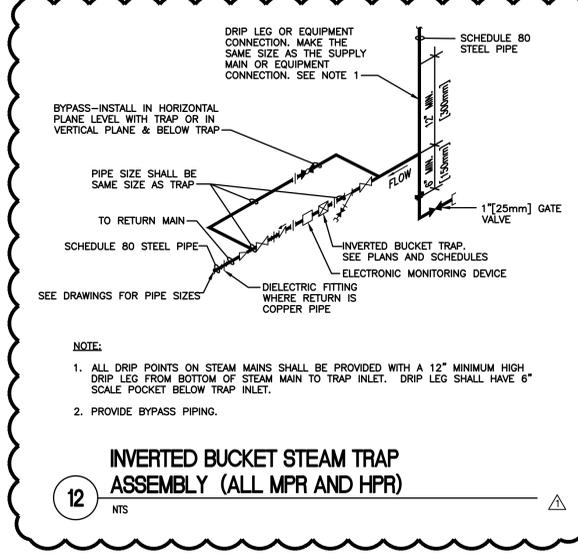
UNIT TYPE	A	B
DRAW THRU	2" [50mm] PLUS X	X
BLOW THRU	1" [25mm] MINIMUM	2X

WHERE X = STATIC PRESSURE IN PAN

10 AIR HANDLING UNIT DRAIN TRAP DETAIL
NTS

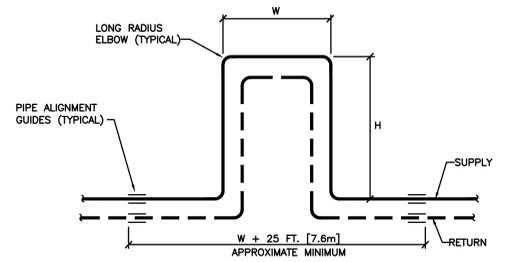


11 INSTALLATION OF THERMOMETER WELLS
NTS



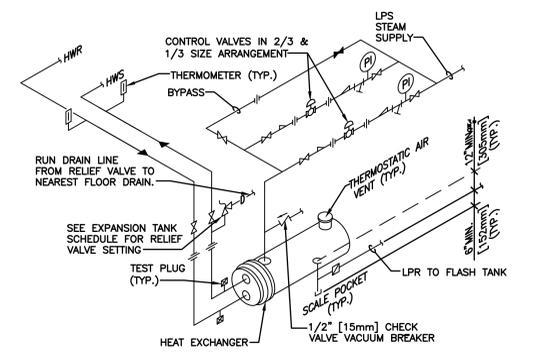
- NOTE:
- ALL DRIP POINTS ON STEAM MAINS SHALL BE PROVIDED WITH A 12" MINIMUM HIGH DRIP LEG FROM BOTTOM OF STEAM MAIN TO TRAP INLET. DRIP LEG SHALL HAVE 6" SCALE POCKET BELOW TRAP INLET.
 - PROVIDE BYPASS PIPING.

12 INVERTED BUCKET STEAM TRAP ASSEMBLY (ALL MPR AND HPR)
NTS



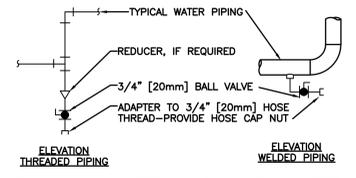
EXPANSION LOOP		
LOOP NO.	W	H
1	10'[3m]	10'[3m]

13 EXPANSION LOOP DETAIL
NTS



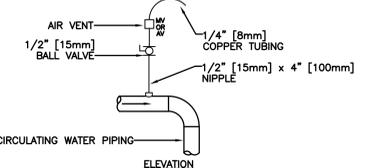
- NOTE:
- PROVIDE SADDLE SUPPORTS AND LEGS FOR HEAT EXCHANGER. MOUNTING HEIGHT SHALL BE ADJUSTED TO FACILITATE GRAVITY RETURN OF STEAM CONDENSATE.
 - MAKE THE BYPASS THE SAME SIZE AS THE CONNECTIONS TO THE CONTROL VALVES.
 - CONTROL VALVES SHALL BE IN A 2/3 AND 1/3 SIZE ARRANGEMENT.

4 HEAT EXCHANGER - STEAM TO HOT WATER
NTS



TYPICAL CHILLED AND HOT WATER PIPING DRAIN VALVE CONNECTIONS

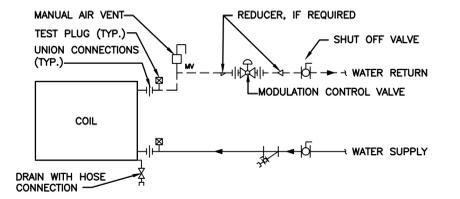
- NOTE:
- DRAIN ALL LOW POINTS AS INDICATED ABOVE.
 - WHERE SCALE POCKETS ARE SHOWN ON PIPE RISER DIAGRAMS AND/OR PLANS LOCATE DRAIN AT BOTTOM OF SCALE POCKET.



TYPICAL MANUAL AIR VENT

- NOTE:
- VENT ALL HIGH POINTS INDICATED ABOVE.
 - IF AUTOMATIC AIR VENTS ARE USED, PIPE DISCHARGE TO DRAIN.

9 DRAIN VALVE AND AIR VENT CONNECTIONS (HYDRONIC SYSTEMS)
NTS



14 TERMINAL UNIT WATER COILS - PIPING CONNECTIONS
NTS

CONSULTANTS: Barton Associates. Consulting Engineers Susquehanna Commerce Center Tel: (717) 848-7054 North Building Web: www.ba-inc.com 221 West Philadelphia Street York, PA 17401 <i>We Make Buildings Work.</i>		ARCHITECT/ENGINEERS: SAA architects		Drawing Title DETAILS		Project Title BOILER PLANT UPGRADE PHASE IV		Project Number 613-12-401		Office of Construction and Facilities Management	
ADDENDUM #1 Revisions: 9.04.12 Date		YORK HARRISBURG STATE COLLEGE PROJECT No. 2011130.01 DRAWN BY: RGC DESIGNED BY: RGC CHECKED BY: DJB		Approved Project Director		Location VAMC MARTINSBURG, WV		Building Number 320		Department of Veterans Affairs	
						Date 5.31.12		Drawing Number 320-M501		Dwg. of--	

100% CONSTRUCTION DOCUMENTS SUBMISSION

