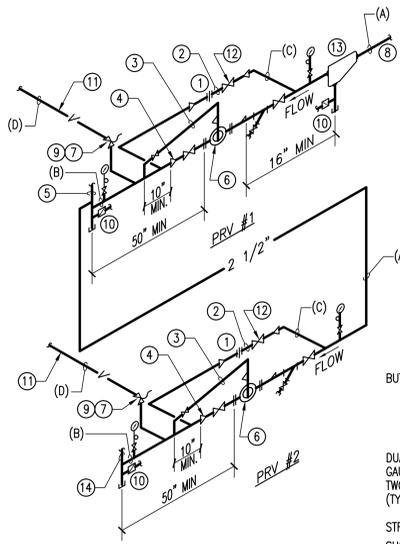


**NOTES:**

(STEAM PRESSURE REDUCING STATION SINGLE VALVE ONLY)

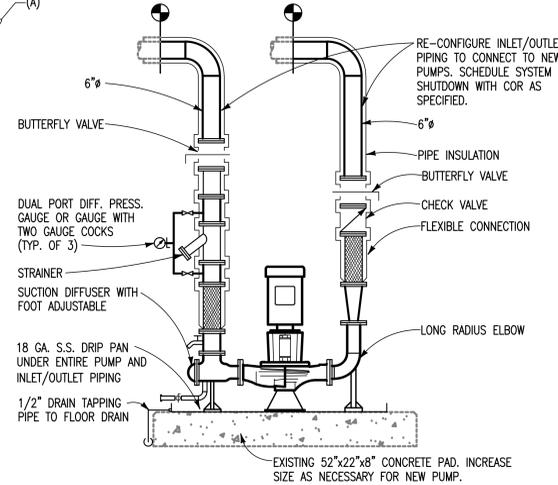
- 1 PROVIDE NECESSARY UNIONS TO REMOVE PRV WHEN PRV HAS SCREWED CONNECTIONS. (TYPICAL)
- 2 BYPASS-INSTALL IN HORIZONTAL PLANE LEVEL WITH PRV.
- 3 PILOT CONTROL LINE. PITCH AWAY FROM PILOT. NO WATER POCKETS PERMITTED.
- 4 INCREASER, IF REQUIRED.
- 5 3" S-70 TO SPS.
- 6 PRV-EXTERNAL PILOT CONTROLLED, DIAPHRAGM OPERATED FOR SCHEDULED PRESSURE AND MAXIMUM LOAD.
- 7 SAFETY VALVES SHALL BE SIZED SO AS TO RELIEVE AT PRESSURES OF 5-10 PSIG IN EXCESS OF DELIVERED PRESSURES OF PRV'S AND TO HAVE A CAPACITY EQUAL TO THE MAXIMUM CAPACITY OF PRV IT IS TO RELIEVE. VENT PIPE SHALL BE NO LESS THAN ONE PIPE SIZE LARGER THAN SAFETY VALVE DISCHARGE AND SHALL FURTHER BE SIZED SO THAT FRICTIONAL RESISTANCE OR VENT DOES NOT EXCEED VELOCITY PRESSURE AT SAFETY VALVE OUTLET. VENTS FROM SAFETY VALVES SHALL RUN THE SHORTEST AND MOST DIRECT ROUTE TO OUTDOOR THRU THE ROOF. WHERE VENTS RUN IN FINISHED SPACE THEY SHALL BE FURRED IN TO MATCH ADJACENT BUILDING CONSTRUCTION; IN UNFINISHED SPACE, PIPE TO BE COVERED ONLY. SAFETY VALVES SHALL BE LOCATED AS SHOWN ON THE FLOOR PLANS.
- 8 SEE FLOOR PLAN FOR CONNECTION LOCATION.
- 9 DRIP PAN ELBOW AT RELIEF VALVE OUTLET. SEE DETAIL SHEET M502.
- 10 STEAM CONDENSATE DRIP STATION. PROVIDE 1/2" PIPE TO NEAREST MAIN. SEE FLOOR PLAN.
- 11 VENT 7'-0" ABOVE GRADE OR ROOF. SEE FLOOR PLAN.
- 12 LINE SIZE GLOBE VALVE. CV AS SCHEDULED.
- 13 MOISTURE SEPARATOR.
- 14 4" S-15 TO HVAC EQUIPMENT. SEE EQUIPMENT PLAN ON M407.



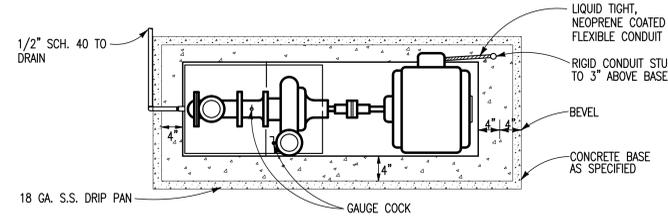
**STEAM PRESSURE REDUCING STATION SINGLE VALVE**  
SCALE: NONE

NOTE: RELIEF VALVE SIZE AND VENT PIPE SIZE SHALL BE ADJUSTED BASED ON ACTUAL PRV USED. SEE NOTE 7. SCHEDULED RELIEF PIPE SIZE IS FOR INITIAL REFERENCE ONLY.

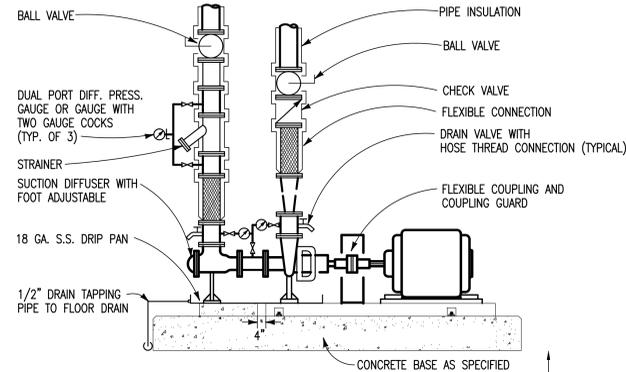
PRV#	P INLET (PSIG)	P OUTLET (PSIG)	MAX LOAD LB/HR	INLET PIPE DIA(A)	OUTLET PIPE DIA(B)	BY-PASS PIPE DIA(C)	BY-PASS VALVE CV	VENT PIPE MIN DIA (D) SEE NOTE 7
1	90	70	6,600	4"	4"	2"	51	4"
2	70	15	3,470	2 1/2"	4"	1 1/2"	26	4"



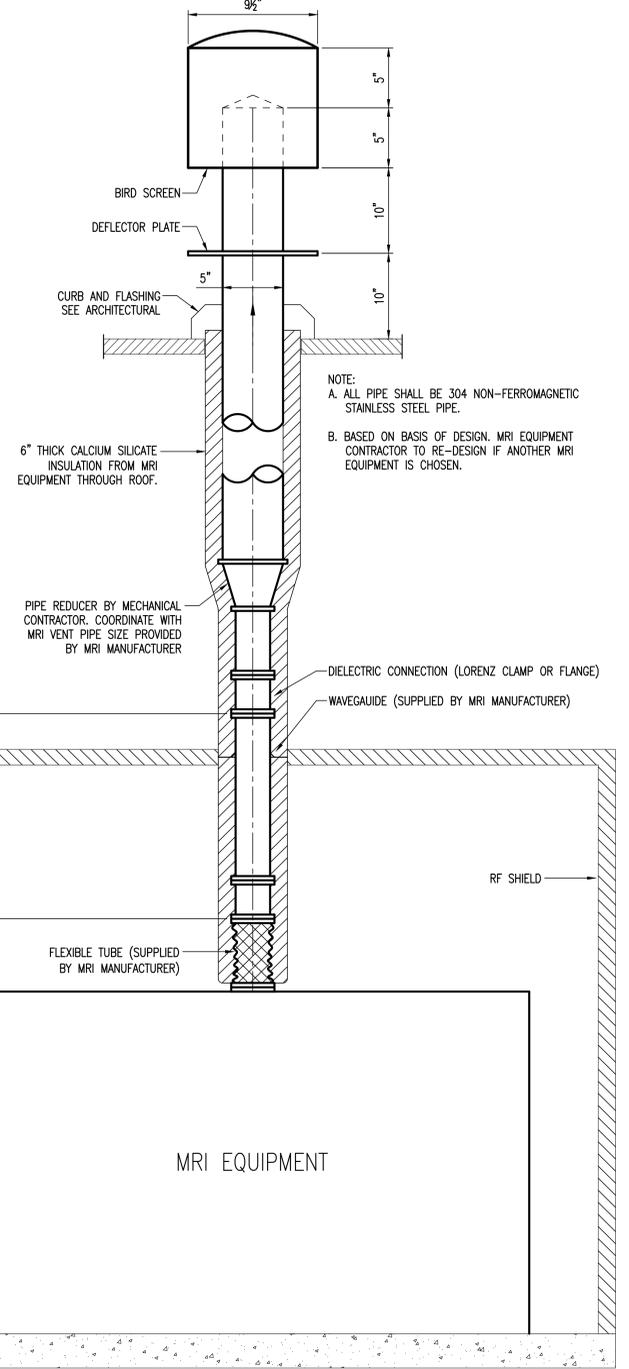
**VERTICAL PUMP DETAIL**  
SCALE: NONE



**END SUCTION PUMP - PLAN**  
SCALE: NONE



**END SUCTION PUMP - ELEVATION**  
SCALE: NONE

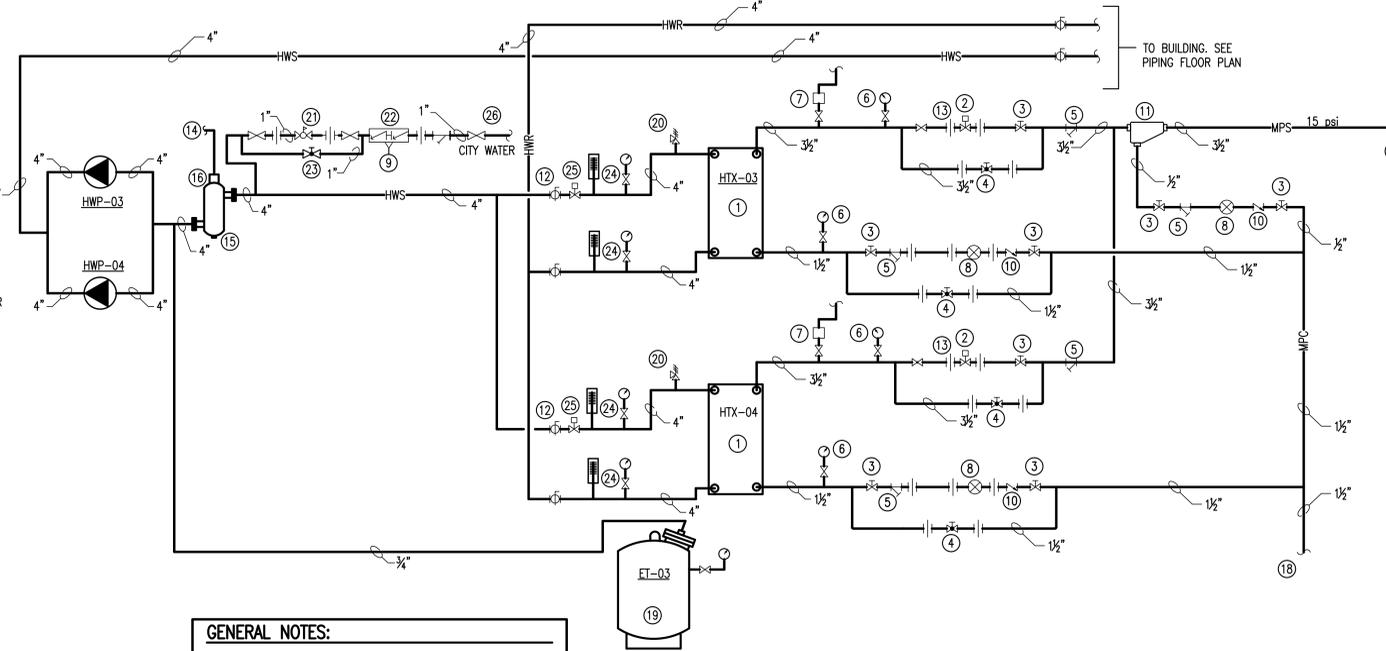


**TYPICAL CRYOGEN VENT OUTLETS**  
SCALE: NONE

**NOTES:**

(HOT WATER PIPING SCHEMATIC ONLY)

- 1 SHELL AND TUBE HEAT EXCHANGERS. SEE SCHEDULE.
- 2 CONTROL VALVE WITH ELECTRIC ACTUATOR. MOUNT IN ACCESSIBLE LOCATION. SEE CONTROLS.
- 3 LINE SIZE GATE VALVE (TYPICAL).
- 4 LINE SIZE GLOBE VALVE (BYPASS).
- 5 LINE SIZE STRAINER (TYPICAL).
- 6 PRESSURE GAUGE, 0-100 PSIG. (TYPICAL)
- 7 VACUUM BREAKER. VENT TO ATMOSPHERE. 7'-0" ABOVE ROOF.
- 8 FLOAT AND THERMOSTATIC STEAM TRAP.
- 9 PROVIDE DRAIN PIPE FOR RPZ. ROUTE TO FLOOR DRAIN WITH 3/4" COPPER PIPING.
- 10 CHECK VALVE FOR STEAM APPLICATION.
- 11 LINE SIZE STEAM SEPARATOR.
- 12 LINE SIZE BALL VALVE (TYPICAL).
- 13 LINE SIZE UNION (TYPICAL). SEE SPECIFICATIONS FOR ADDITIONAL LOCATIONS FOR UNIONS.
- 14 PIPE TO NEAREST FLOOR DRAIN.
- 15 4" LINE SIZE AIR SEPARATOR WITH AUTOMATIC AIR RELIEF VALVE AND STRAINER.
- 16 AUTOMATIC AIR RELIEF VALVE.
- 17 CONNECT TO NEW 15 PSI STEAM PIPE. SEE FLOOR PLAN
- 18 ROUTE TO EXISTING CONDENSATE PUMP. SEE FLOOR PLANS
- 19 ASME BLADDER EXPANSION TANK MIN. 80 GALLONS. SEE EXPANSION TANK SCHEDULE.
- 20 RELIEF VALVE SET AT 25 PSIG. VENT TO OUTSIDE 8'-0" ABOVE GRADE.
- 21 PRESSURE REGULATOR SET AT 10 PSIG.
- 22 REDUCED PRESSURE ZONE BACK FLOW PREVENTION (RPZ)
- 23 GLOBE VALVE. (BYPASS)
- 24 THERMOMETER AND PRESSURE GAGE AT HEAT EXCHANGER INLET AND OUTLET.
- 25 AUTOMATIC ON/OFF VALVE. SEE CONTROLS
- 26 CONNECT TO DCW. SEE PLUMBING PLAN.



**STEAM TO HOT WATER HEAT EXCHANGER**  
SCALE: NONE

**GENERAL NOTES:**  
A. SEE SPECIFICATIONS AND OTHER DETAILS OF PUMPS ETC. FOR ALL REQUIRED VALVES, STRAINERS, AND COMPONENTS, SOME COMPONENTS ARE NOT SHOWN ON THESE SCHEMATIC.

Revisions:	Date:

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Drawing Title:  
**DETAILS AND SCHEMATICS - MECHANICAL**

Approved: Project Director

Project Title:  
**EXPAND RADIOLOGY AND SPS OVERTON BROOKS VAMC**

Location:  
**SHREVEPORT, LA**

Date: 04-17-2015  
Checked: PJC  
Drawn: JSW

Project Number:  
**667-083**

Building Number:  
**1**

Drawing Number:  
**M503**

Dwg. 126 of 160

**FINAL SUBMITTAL**

**OFFICE OF CONSTRUCTION AND FACILITIES MANAGEMENT**