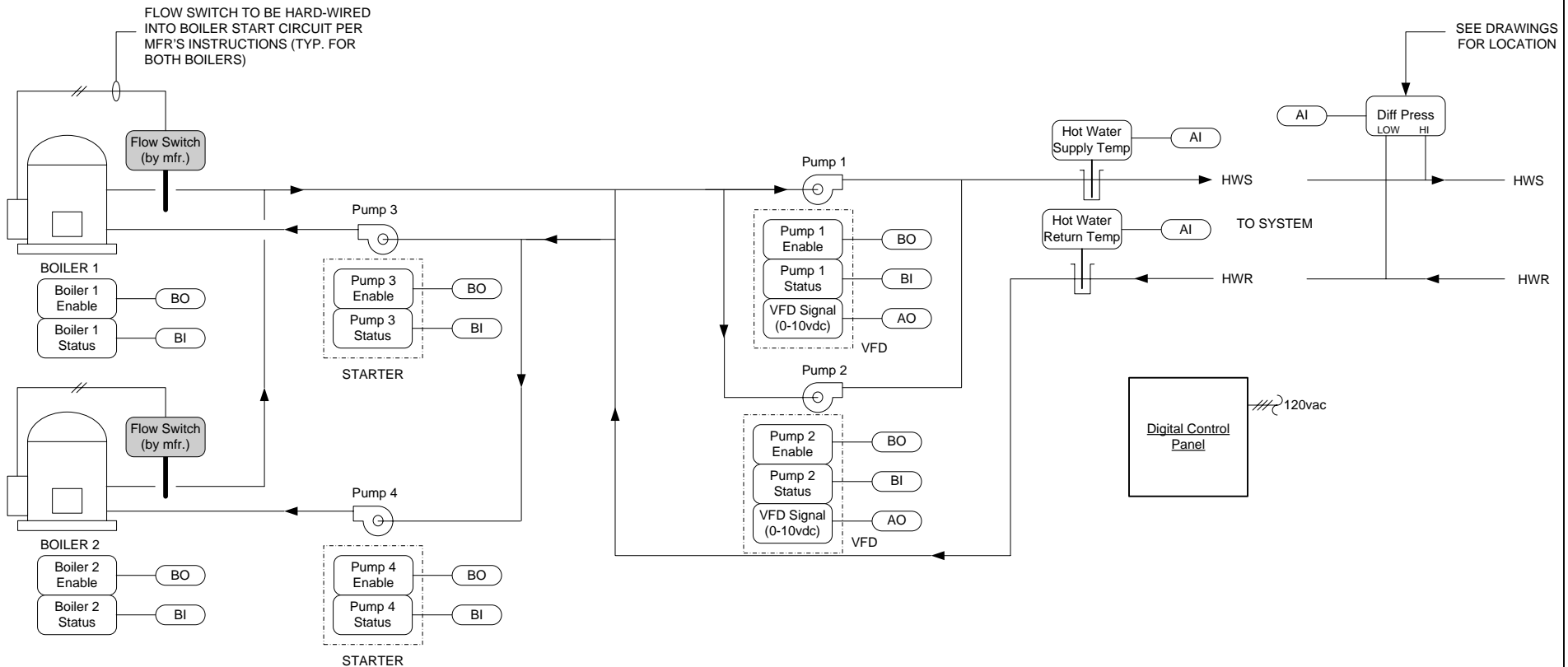


HEATING HOT WATER SYSTEM SCHEMATIC



SEQUENCE OF OPERATION:

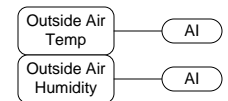
HEATING WATER PLANT: The Heating Water System shall be enabled to run anytime the outside air temperature is below 85°F (adj.). The lead Boiler Pump (P-3 or P-4), and the lead System Hot Water Pump (P-1 or P-2) shall be enabled. Once the lead pumps are proven to be on, then the lead Boiler (B-1 or B-2) shall be enabled.

SYSTEM HOT WATER PUMPS (P-1 & P-2): Lead and lag system pump assignment shall be initialized automatically by the FMS based upon day-of-month strategy. Between the first day of any given month and through the (15th) day, P-1 shall be the lead pump (with P-2 in stand-by mode), from the 16th day to the last day of the month, P-2 shall be the lead pump (with P-1 in stand-by mode). Failure of the lead pump shall cause the stand-by pump to operate and an alarm generated through the FMS. The FMS operator shall be able to override or bypass the switchover assignment from the user interface graphic screen. The System Pump VFDs shall be modulated to maintain the differential pressure setpoint of 10 PSI (adj.) measured between the supply and return lines at the location indicated on the drawings.

BOILER PUMPS (P-3 & P-4): Before a boiler is fired, its associated circulating pump shall be commanded on. Once the circulating pump is proven to be on through a current sensing switch then the boiler shall be allowed to fire.

BOILERS (B-1 & B-2): Lead and lag boiler assignment shall be initialized by the FMS based upon day-of-month strategy. Between the first day of any given month and through the (15th) day, B-1 shall be the lead boiler (with B-2 in stand-by mode), from the 16th day to the last day of the month, B-2 shall be the lead pump (with B-1 in stand-by mode). Failure of the lead boiler to maintain the hot water supply temperature setpoint shall cause the stand-by boiler to operate. The FMS operator shall be able to override or bypass the switchover assignment from the user interface graphic screen.

HOT WATER SUPPLY TEMPERATURE RESET: Measurements of hot water supply temperature shall be taken over a 10 minute (adj.) floating window to determine the average temperature. The FMS shall inversely reset the supply water temperature with the outside air temperature. Initially, the HWS-T setpoint shall be 180°F at OAT=20°F and below and 160°F at OAT=75°F and above. The lead boiler (and lag boiler if necessary) shall be fired to maintain the HWS-T setpoint.



MOUNT OA TEMP./HUMIDITY SENSOR ON NORTH FACING WALL IN SHADED AREA.