



## WHEEL PIPING DIAGRAM

### SYSTEM SEQUENCE OF OPERATIONS

#### 1. WHEEL SYSTEM CHILLED WATER PUMP (P-1 AND P-2) CONTROL:

ENERGIZE THE LEAD PUMP WHENEVER THE FACILITY EQUIPMENT REQUIRES COOLING. MONITOR PUMP STATUS THRU THE VARIABLE SPEED DRIVE. IF LEAD PUMP (P-1) FAILS, MONITORING SHALL BE TRANSFERRED TO THE BACKUP PUMP (P-2). THE PRESSURE SENSORS (DPS-1) AND (DPS-2) SHALL BE DIRECT WIRED AND CONNECTED TO THE LEAD PUMP SPEED CONTROLLER LOCATED IN THE MECHANICAL ROOM. MODULATE PUMP SPEED THROUGH THE PUMP VARIABLE SPEED CONTROLLER AS REQUIRED TO MAINTAIN SETPOINT (DPS-1) PERIODICALLY EVERY 7 DAYS. CHANGE THE ROLES OF LEAD AND LAG PUMPS.

#### 3. WHEEL SYSTEM COOLING TOWER WATER BYPASS WATER CONTROL:

MONITOR COOLING TOWER WATER FLOWRATE WITH FLOW METER (FM2). THE WATER FLOWRATE SETPOINT IS 2,000 GPM. WHEN COOLING TOWER FLOWRATE DROPS BELOW 1,500 GPM, MODULATE BYPASS VALVE (HS-2) OPEN TO MAINTAIN A MINIMUM FLOWRATE OF 2,000 GPM. WHEN THE FLOWRATE INCREASES ABOVE 2,100 GPM, MODULATE BYPASS VALVE (HS-2) CLOSED TO MAINTAIN A MINIMUM FLOWRATE OF 2,000 GPM. WHEN SYSTEM IS NOT IN OPERATION AND DURING SYSTEM START BYPASS VALVE (HS-2) SHALL FAIL TO THE OPEN POSITION.