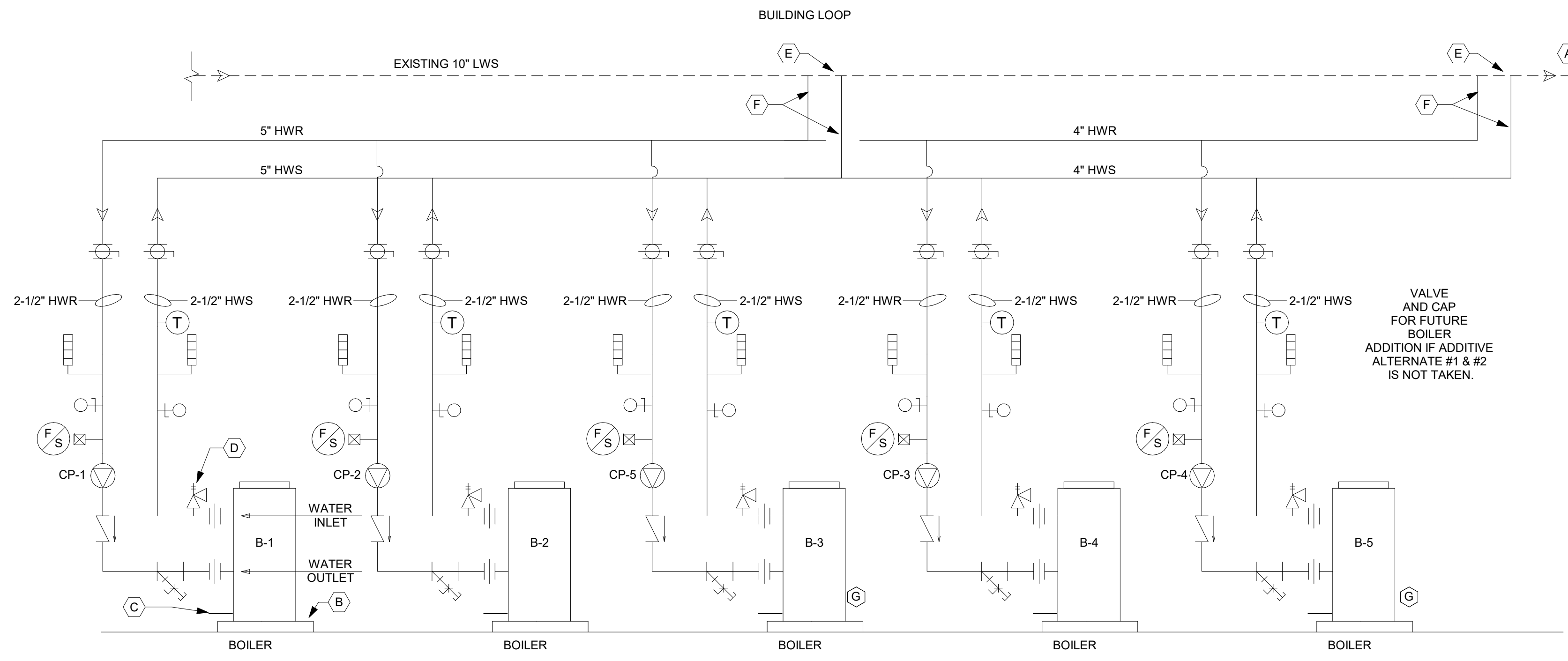


**1 WATER SOURCE HYDRONIC SCHEMATICS**  
M502 NOT TO SCALE

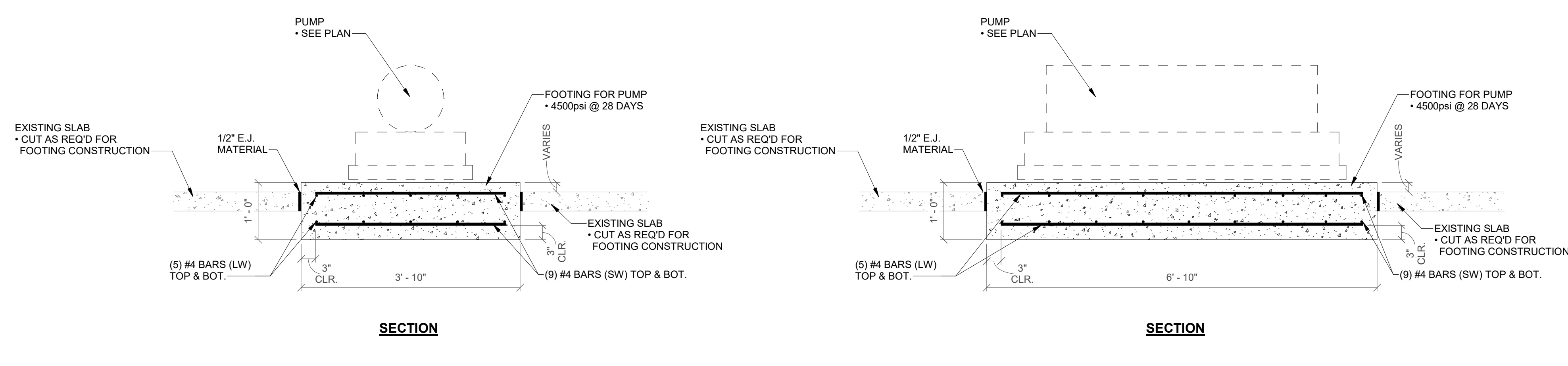
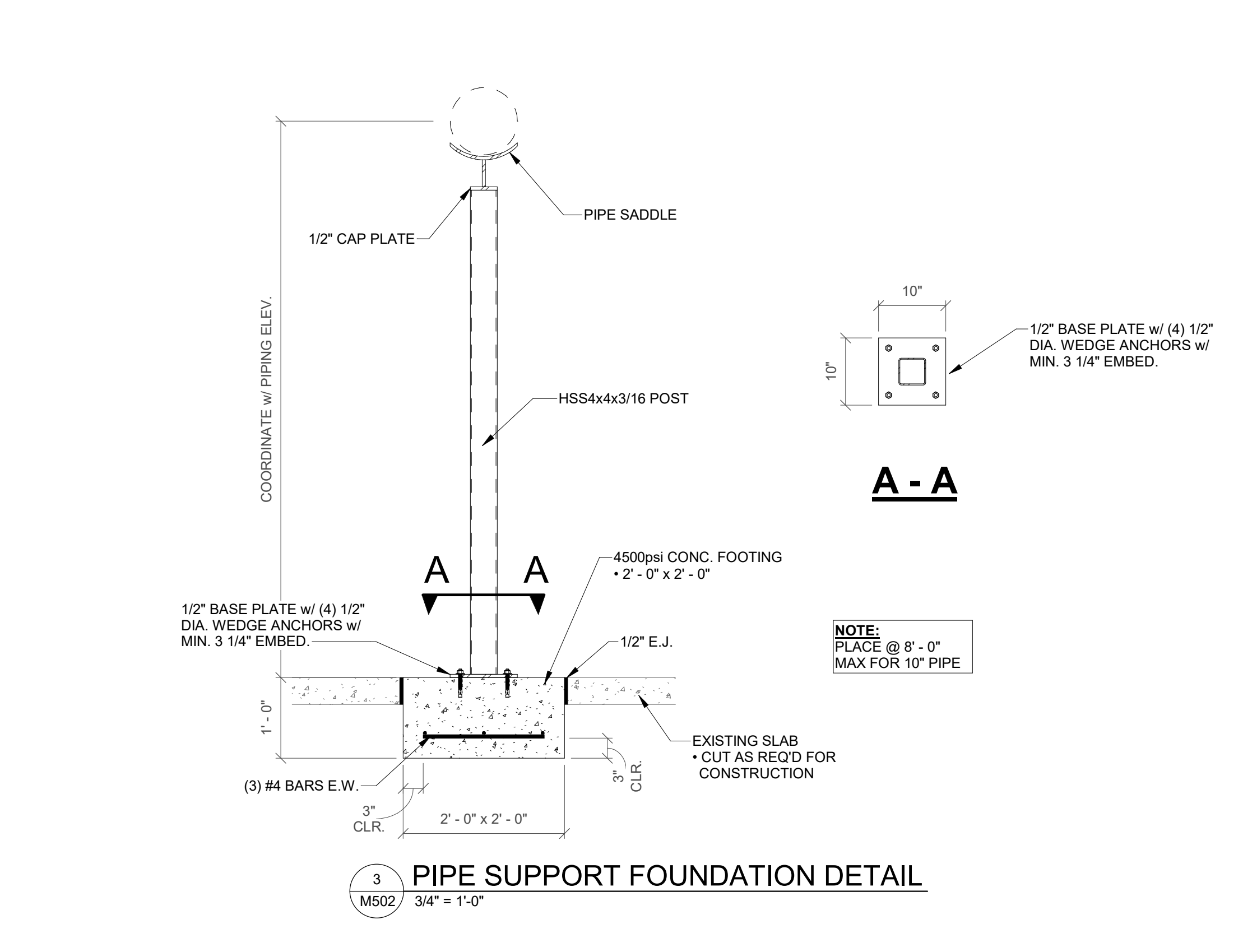


**2 MULTIPLE BOILER, COMMON HEADER - PIPING SCHEMATIC**  
M502 NOT TO SCALE

**NOTES:** HOT WATER SYSTEM

- REFER TO SPECIFICATIONS FOR SIZE, INSULATION, SUPPORTS AND WEATHER PROTECTION REQUIREMENTS.
- REFER TO MANUFACTURER'S PUBLISHED LITERATURE FOR CLEARANCE, GAS, WATER, COMBUSTION AIR AND FLUE VENT PIPING SIZING AND REQUIREMENTS.

LEGEND	SCHEMATIC FLOW DIAGRAM NOTES
UNION	(A) NEW SUCTION DIFFUSER - BELL AND GOSSET W/ STAINLESS STEEL FINAL STRAINER & BLOW DOWN CONNECTION. PROVIDE W/ SHUT-OFF VALVE. INSTALL 1 1/4" ADJUSTABLE SUPPORT FOOT.
WATER METER	(B) REPLACE TRUMPET VALVE (FLOW CONDITIONING CORP. TV-3) AND PRESSURE GAGE WITH NEW.
GATE VALVE	(C) MODIFY/EXTEND EXISTING PIPING TO ALLOW FOR INSTALLATION OF 8" BRAIDED FLEXIBLE CONNECTORS. (TYP. OF 4)
REDUCED PRESSURE BACKFLOW PREVENTER	(D) AIR SEPARATOR WITH NEW AIR-DIRT SEPARATOR. RE. SCHEDULE.
BUTTERFLY VALVE	(E) REPLACE EXPANSION TANK WITH NEW. RE. SCHEDULE.
BALANCING VALVE	(F) REPLACE HEAT TAPE, INSULATION, AND JACKETING. INSTALL RAPID-TRACE HEAT TAPE, 10 WATTS/FOOT 120VAC ON ALL INSULATED OUTDOOR ABOVE GRADE CWS AND CWR. INSTALL RAPID-TRACE HEAT TAPE, 3 WATTS/FOOT 120VAC ON ALL INSULATED OUTDOOR ABOVE GRADE MAKE-UP PIPING. INSTALL AT A RATE OF ONE FOOT OF TRACING FOR ONE FOOT OF PIPE. WRAP VALVES. PROVIDE THERMOSTAT AND SENSING ELEMENT.
CHECK VALVE	(G) REPLACE EXISTING BMS TEMPERATURE SENSOR WITH NEW.
MOTOR OPERATED 2-WAY CONTROL VALVE	(H) EXISTING 3/4" CHEMICAL TREATMENT CONNECTIONS. NEW CHEMICAL TREATMENT SYSTEM SHALL BE INSTALLED. CONTRACTOR SHALL FLUSH, REFILL, TREAT, AND TEST HYDRONIC SYSTEM.
PRESSURE GAUGE W/ COCK	(I) INSTALL HYDRONIC EQUIPMENT ON 4" THICK CONCRETE EQUIPMENT PAD - TYPICAL FOR PUMPS, BOILERS, HEAT EXCHANGER AND EXPANSION TANK. EXCEPT AS INDICATED ON PLANS, EXTEND AS NECESSARY TO COVER BASE OF NEW UNIT.
THERMOSTAT	(J) REPLACE EXISTING WITH NEW BALANCING VALVE, CHECK VALVE, ISOLATION VALVE (TRIPPLE DUTY VALVES NOT PERMITTED.)
SENSOR FOR BUILDING MANAGEMENT SYSTEM	(K) 1" DRAIN LINE WITH BALL VALVE TO NEAREST FLOOR DRAIN.
CIRCULATING PUMP	(L) REPLACE EXISTING TEMPERATURE GAGE WITH NEW.
BALL VALVE	(M) PRESSURE GAGE - FIELD VERIFY INSTALLATION LOCATION.
FLOW SWITCH	(N) FLOW SWITCH - FIELD VERIFY INSTALLATION LOCATION.
AUTOMATIC AIR VENT	(O) Y-STRAINER.
FLEXIBLE CONNECTOR	(P) REPLACE HEAT EXCHANGER WITH NEW. REFER TO MANUFACTURER'S PUBLISHED LITERATURE FOR CONFIGURATION OF HOT SIDE AND COLD SIDE HOOK-UP.
BALL VALVE	(Q) REPLACE AUTOMATIC AIR VENT WITH NEW.
KEYED NOTE INDICATOR	(R) INSTALL NEW ISOLATION VALVES IN HYDRONIC LOOP PIPING PRIOR TO EXITING MECHANICAL ROOM.
PRESSURE RELIEF VALVE	(S) 3/4" SHOT FEEDER FOR BUILDING LOOP INSTALLED ACROSS ONE OF THE TWO PUMPS.
STRAINER	(T) INSTALL A NEW DIFFERENTIAL PRESSURE (DP) SENSOR IN THE BUILDING LOOP FOR VARIABLE PUMPING APPLICATION. LOCATE THE DP SENSOR NEAR THE FARTHEST ZONE, NEAR THE END OF THE PIPING RUN. FIELD COORDINATE FINAL LOCATION WITH JOHN SUMMERFIELD, HVAC BUILDING MAINTENANCE TECH, CITY OF AUSTELL. PROVIDE NEW TAPWELL FOR NEW PRESSURE TRANSDUCER. FIELD ESTABLISH THE DIFFERENTIAL PRESSURE SETPOINT, AND CONTROL BUILDING PUMP VFD TO MAINTAIN DIFFERENTIAL PRESSURE SETPOINT.
BUTTERFLY VALVE	
DRAIN VALVE	
LWR LOOP WATER RETURN	
LWS LOOP WATER SUPPLY	
CWR CONDENSER WATER RETURN	
CWS CONDENSER WATER SUPPLY	
HWR HOT WATER RETURN	
HWS HOT WATER SUPPLY	
PRESSURE REDUCING VALVE	



**SA&E PROJECT NUMBER** 01-415-001  
**BID PACKAGE** BP-1  
**ISSUED FOR CONSTRUCTION** 08-23-2023

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**REVISIONS**

R#	Doc #	Date
1	AD2	09/08/23

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**REPLACEMENT OF COOLING TOWER & BOILER:**  
**THREADMILL COMPLEX**  
 5000 AUSTELL POWDER SPRINGS ROAD  
**THE CITY OF AUSTELL**  
 5000 AUSTELL POWDER SPRINGS ROAD

**MECHANICAL EQUIPMENT DETAILS**

**DRAWING NUMBER** M502

**STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS**  
 SOUTHERN A & E, LLC  
 ENGINEER FIRM  
 LICENSE NO. PEF003374  
 EXP. DATE: 06/30/2024