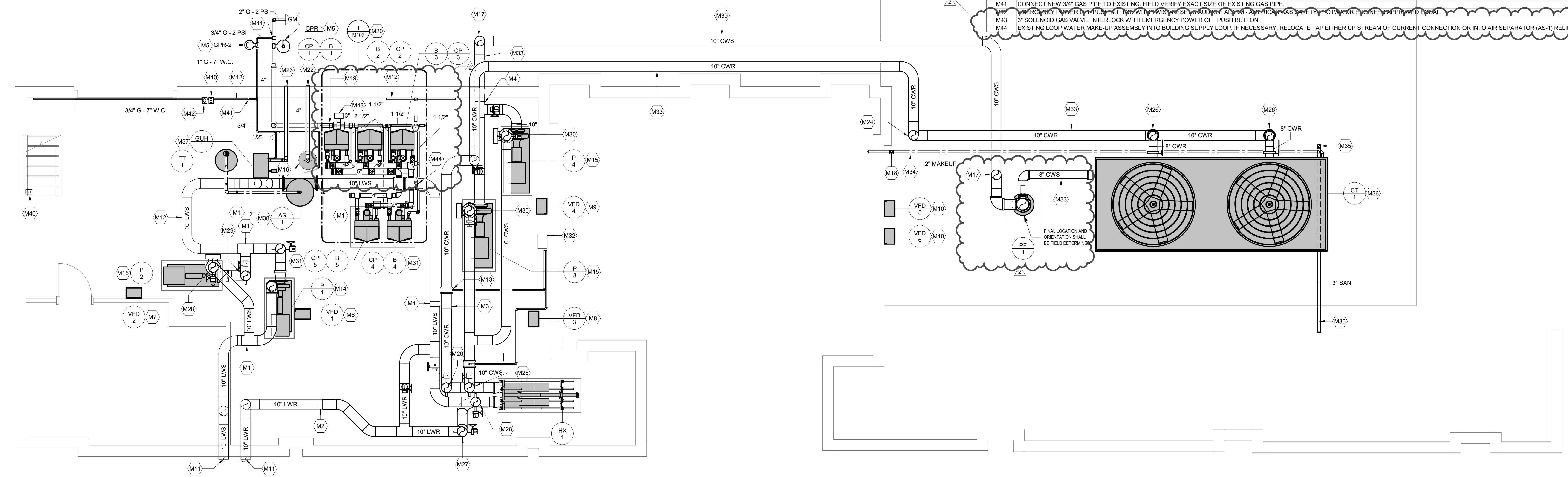


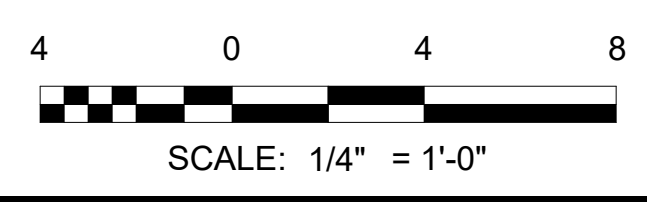
**1 BOILER VENTING PLAN - MECHANICAL**  
M102 1/4" = 1'-0"



**2 RENOVATION PLAN - MECHANICAL**  
M102 1/4" = 1'-0"

**KEYNOTE SCHEDULE**

#	KEYNOTE DESCRIPTION
M1	CONNECT NEW 10" LWS PIPE TO EXISTING AT THIS POINT.
M2	CONNECT NEW 10" LWR PIPE TO EXISTING AT THIS POINT.
M3	CONNECT NEW 10" CWS PIPE TO EXISTING AT THIS POINT.
M4	CONNECT NEW 10" CWR PIPE TO EXISTING AT THIS POINT.
M5	VERIFY GAS PRESSURE FROM UTILITY PROVIDER AND FIELD VERIFY GAS PRESSURE PRIOR TO ORDERING AND INSTALLATION. REPORT TO ENGINEER FOR RESIZING IF METER DELIVERY PRESSURE IS DIFFERENT FROM SCHEDULED VALUES. GAS PRESSURE REGULATOR SHALL BE SIZED TO MEET DELIVERY PRESSURE REQUIREMENTS.
M6	VARIABLE FREQUENCY DRIVE (VFD-1) FOR PUMP P-1. INSTALL ON VERTICAL UNISTRUT BRACKET.
M7	VARIABLE FREQUENCY DRIVE (VFD-2) FOR PUMP P-2.
M8	VARIABLE FREQUENCY DRIVE (VFD-3) FOR PUMP P-3.
M9	VARIABLE FREQUENCY DRIVE (VFD-4) FOR PUMP P-4.
M10	VARIABLE FREQUENCY DRIVE (VFD-5 & VFD-6) FOR COOLING TOWER MOTORS.
M11	EXISTING BUILDING 10" LWS AND 10" LWR PIPING SHALL REMAIN.
M12	EXISTING PIPE TO REMAIN.
M13	CONNECT NEW CHEMICAL TREATMENT PIPE TO EXISTING 10" CWS PIPE. REUSE EXISTING TAPS. PROVIDE NEW TAPS IF NECESSARY.
M14	INSTALL NEW PUMP ON EXISTING MECHANICAL EQUIPMENT PAD. ENLARGE AS NECESSARY TO ACCOMMODATE FOOTPRINT OF NEW PUMP.
M15	INSTALL NEW PUMP ON NEW MECHANICAL EQUIPMENT PAD. SIZE TO ACCOMMODATE FOOTPRINT OF NEW PUMP. MATCH HEIGHT OF EXISTING PAD.
M16	EXISTING GAS FIRED WATER HEATER SHALL REMAIN. CONNECT NEW 4" FLUE TO WATER HEATER. ROUTE FLUE TO SIDEWALL.
M17	TIE NEW 10" CWS PIPE TO EXISTING CWS BELOW GRADE AT THIS POINT.
M18	CONNECT NEW 2" CW TO EXISTING. COORDINATE WITH OWNER FOR WATER TIE-IN. TIE-IN LOCATION SHALL BE DOWNSTREAM OF METER AND BACKFLOW PREVENTER.
M19	CONNECT NEW 3" NATURAL GAS PIPE TO EXISTING. NEW GAS PIPE TO BE SAME SIZE AS EXISTING. FIELD VERIFY EXACT SIZE OF EXISTING GAS PIPE.
M20	SEE 1 & 2/M501 FOR BOILER DETAIL AND SCHEMATIC. HYDRONIC SPECIALTY ITEMS SHOWN ON SCHEMATIC DIAGRAM.
M21	SIDE WALL TERMINATION OF 4" CPVC COMBUSTION AIR AND 6" CPVC FLUE VENT AT APPROX 7'-6" A.F.F. SEE DETAIL 1/M501. REFER TO MANUFACTURERS INSTALLATION MANUAL. (TYP. FOR ALL)
M22	SIDE WALL TERMINATION OF 4" SINGLE WALL 26 GAUGE GALVANIZED STEEL VENT FOR CATEGORY 1 VENTING AT APPROX 7'-6" A.F.F. SEE DETAIL 1/M501. REFER TO MANUFACTURERS INSTALLATION MANUAL.
M23	SIDE WALL TERMINATION OF 3" SINGLE WALL 26 GAUGE GALVANIZED STEEL VENT FOR CATEGORY 1 VENTING AT APPROX 8'-0" A.F.F. SEE DETAIL 1/M501. REFER TO MANUFACTURERS INSTALLATION MANUAL.
M24	CWR PIPE DOWN.
M25	CWS PIPE DOWN.
M26	CWR PIPE UP.
M27	LWR PIPE DOWN.
M28	LWS PIPE UP.
M29	LWS PIPE DOWN.
M30	CWS PIPE UP.
M31	FURNISH AND INSTALL BOILER B-4, B-5 AND ASSOCIATED CIRCULATING PUMPS P-4, P-5 ONLY IF ADDITIVE ALTERNATE IS TAKEN. OTHERWISE VALVE AND CAP WATER AND GAS CONNECTIONS FOR FUTURE INSTALLATION.
M32	NEW CHEMICAL TREATMENT SYSTEM. REFER TO SPECIFICATIONS FOR REQUIREMENTS.
M33	INSTALL NEW HEAT TAPE (10 WATTS/FT) ON NEW 8" AND 10" CWS AND CWR. APPLY 2" INSULATION AND PVC JACKETING PER SPECIFICATIONS 230719.
M34	INSTALL NEW HEAT TAPE (3 WATTS/FT) ON NEW 2" MAKEUP WATER. APPLY 2" INSULATION AND PVC JACKETING PER SPECIFICATIONS 230719.
M35	CONNECT NEW VALVED 3" DRAIN AND 3" OVERFLOW PIPING TO COMMON 3" PIPING AND TIE INTO EXISTING SANITARY DRAIN LINE. FIELD COORDINATE EXACT TIE-IN LOCATION.
M36	INSTALL NEW COOLING TOWER ON EXISTING FRAMED I-BEAM SUPPORTS. THE I-BEAMS REST ON AN EXISTING CONCRETE STRUCTURAL SUPPORT. COORDINATE MODIFICATION OF EXISTING STRUCTURAL SUPPORTS WITH MANUFACTURER INSTALLATIONAL DETAILS. MAINTAIN EXISTING GALVANIZED STEEL BAR GRATING SERVICE PLATFORM. TIE NEW CWS, CWR, MAKEUP WATER AND OVERFLOW WATER PIPING TO NEW COOLING TOWER.
M37	RECONNECT EXISTING GAS PIPE TO NEW GUH-1
M38	PROVIDE ADEQUATE SUPPORT AT INLET AND OUTLET TO CARRY FLOODED WEIGHT OF 2052 LBS.
M39	EXISTING CWS PIPE BELOW GRADE.
M40	COMBINED NATURAL GAS AND CARBON MONOXIDE MONITOR - AMERICAN GAS SAFETY AGSCHACO-50 OR ENGINEER APPROVED EQUAL.
M41	CONNECT NEW 3/4" GAS PIPE TO EXISTING. FIELD VERIFY EXACT SIZE OF EXISTING GAS PIPE.
M42	EMERGENCY POWER OFF PUSH BUTTON WITH WIRING TO BE FIELD DETERMINED. AMERICAN GAS SAFETY AGSCHACO-50 OR ENGINEER APPROVED EQUAL.
M43	3" SOLENOID GAS VALVE. INTERLOCK WITH EMERGENCY POWER OFF PUSH BUTTON.
M44	EXISTING LOOP WATER MAKE-UP ASSEMBLY INTO BUILDING SUPPLY LOOP. IF NECESSARY, RELOCATE TAP EITHER UP STREAM OF CURRENT CONNECTION OR INTO AIR SEPARATOR (AS-1) RELIEF VENT.



SA&E PROJECT NUMBER	<b>01-415-001</b>	
BID PACKAGE	BP-1	
ISSUED FOR CONSTRUCTION	<b>08-23-2023</b>	
REVISIONS		
R#	Doc #	Date
1	AD2	09/08/23
2	AD3	10/06/23

**Southern A&E**  
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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 RENOVATION PLAN**

	STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS	DRAWING NUMBER <b>M102</b>
	SOUTHERN A & E, LLC ENGINEER FIRM LICENSE NO. PE030374 EXP. DATE - 06/30/2024	