

### BOILER SCHEDULE

NOTES:  
 1. REFER TO SPECIFICATION SECTION 235216 FOR FEATURES.  
 2. REFER TO SPECIFICATION SECTION 230900 AND M700 SERIES SHEETS FOR CONTROLS.  
 3. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL CHARACTERISTICS.  
 4. BOILER SHALL HAVE A 100°F HEATING SETPOINT AND OPERATING RANGE OF ±5°F.  
 5. FURNISH AND INSTALL BOILER B-4 AND B-5 ONLY IF ADD ALTERNATE #1 AND #2 ARE TAKEN.

NUMBER	HEATING		CAP. (GAL)	FUEL TYPE	TURN-DOWN RATIO	EWT (°F)	LWT (°F)	FLOW RATE (GPM)	HEAD LOSS (FT. HD)	VENTING NOTES	THERMAL EFF. (%)	MANUFACTURER	REMARKS
	INPUT CAP. (BTU/HR)	OUTPUT CAP. (BTU/HR)											
B-1	850,000	824,500	16	NAT. GAS	7:1	60	100	41	3.3	4" CPVC COMBUSTION AIR, 6" CPVC FLUE VENT KIT	97	LOCHINVAR FTX850N	SEE 1/M501 & 2/M501 FOR DETAIL AND SCHEMATIC.
B-2	850,000	824,500	16	NAT. GAS	7:1	60	100	41	3.3	4" CPVC COMBUSTION AIR, 6" CPVC FLUE VENT KIT	97	LOCHINVAR FTX850N	SEE 1/M501 & 2/M501 FOR DETAIL AND SCHEMATIC.
B-3	850,000	824,500	16	NAT. GAS	7:1	60	100	41	3.3	4" CPVC COMBUSTION AIR, 6" CPVC FLUE VENT KIT	97	LOCHINVAR FTX850N	SEE 1/M501 & 2/M501 FOR DETAIL AND SCHEMATIC.
B-4	850,000	824,500	16	NAT. GAS	7:1	60	100	41	3.3	4" CPVC COMBUSTION AIR, 6" CPVC FLUE VENT KIT	97	LOCHINVAR FTX850N	ADD ALT #1. SEE 1/M501 & 2/M501 FOR DETAIL AND SCHEMATIC.
B-5	850,000	824,500	16	NAT. GAS	7:1	60	100	41	3.3	4" CPVC COMBUSTION AIR, 6" CPVC FLUE VENT KIT	97	LOCHINVAR FTX850N	ADD ALT #1. SEE 1/M501 & 2/M501 FOR DETAIL AND SCHEMATIC.

### GAS PRESSURE REGULATOR SCHEDULE

NOTE:  
 1. CONTRACTOR SHALL FIELD VERIFY GAS METER DELIVERY PRESSURE PRIOR TO ORDERING OF GAS PRESSURE REGULATORS. REGULATORS SHALL BE SIZED AND SUBMITTED BASED ON FIELD MEASURED DELIVERY PRESSURE AND A OUTLET PRESSURE OF 7" WC.

NUMBER	MANUFACTURER	MODEL NO.	FUEL TYPE	CFH	ORIFICE SIZE (IN.)	VALVE ANGLE	INLET/OUTLET DIAMETER (IN.)	VENT PIPE DIAMETER (IN.)	SPRING COLOR	MIN. INLET PRESSURE (PSIG)	MAX. INLET PRESSURE (PSIG)	OUTLET PRESSURE (IN. WC.)
GPR-1	SENSUS	243-12-2	N. GAS	428	3/8"	10°	2"	1"	BLUE	2	5	7
GPR-2	SENSUS	496	N. GAS	250	1/4"	0°	3/4"	1"	GREEN	2	5	7

### HOT WATER CIRCULATING PUMP SCHEDULE

NOTES:  
 1. REFER TO SPECIFICATION SECTION 232123 FOR FEATURES.  
 2. REFER TO SPECIFICATION SECTION 230900 AND M700 SERIES SHEETS FOR CONTROLS.  
 3. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL CHARACTERISTICS.  
 4. FURNISH AND INSTALL CP-4 AND CP-5 ONLY IF ADD ALT #1 AND #2 ARE RESPECTIVELY TAKEN.

NUMBER	MANUFACTURER	MODEL NO.	MOTOR		PUMP DESIGN FLOW (GPM)	GENERAL DESCRIPTION	ASSOCIATED WATER HEATER	COMMENTS
			HP	HEAD (FT.)				
CP-1	BELL & GOSSETT	ECOCIRC XL 55-45	0.5	7.5	41	High Efficiency Large Wet Rotor Circulator with Single Phase Electronically Commutated Motor	B-1	
CP-2	BELL & GOSSETT	ECOCIRC XL 55-45	0.5	7.5	41	High Efficiency Large Wet Rotor Circulator with Single Phase Electronically Commutated Motor	B-2	
CP-3	BELL & GOSSETT	ECOCIRC XL 55-45	0.5	7.5	41	High Efficiency Large Wet Rotor Circulator with Single Phase Electronically Commutated Motor	B-3	
CP-4	BELL & GOSSETT	ECOCIRC XL 55-45	0.5	7.5	41	High Efficiency Large Wet Rotor Circulator with Single Phase Electronically Commutated Motor	B-4	ADD ALT #1
CP-5	BELL & GOSSETT	ECOCIRC XL 55-45	0.5	7.5	41	High Efficiency Large Wet Rotor Circulator with Single Phase Electronically Commutated Motor	B-5	ADD ALT #2

### COOLING TOWER SCHEDULE

NOTES:  
 1. REFER TO SPECIFICATION SECTION SECTION 236500 FOR FEATURES.  
 2. REFER TO SPECIFICATION SECTION SECTION 230900 FOR CONTROLS.  
 3. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL CHARACTERISTICS.  
 4. FURNISH COOLING TOWER WITH A VARIABLE FREQUENCY DRIVE W/ ELECTROMECHANICAL BYPASS (ABB ACS355 OR EQUIVALENT) FOR EACH FAN MOTOR. AND A NEMA 3R ENCLASURE. REFER TO SPECIFICATION SECTION 230514 FOR VFD REQUIREMENTS.  
 5. FURNISH ONE ALUMINUM SERVICE LADDER WITH GUARD RAILS, 4FT LADDER EXTENSION, MOTOR DAVIT SYSTEM FOR EACH COOLING TOWER CELL.  
 6. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO ORDERING OF CT-1. VERIFY THAT THE COOLING TOWER SELECTED WILL FIT IN AVAILABLE SPACE (LxW) WHILE MAINTAINING MINIMUM SERVICE CLEARANCES AND ACCESS TO GALVANIZED STEEL BAR GRATING PLATFORM.  
 7. CONDENSER FLUID - WATER.

NUMBER	TYPE	EAT D.B. (°F)	EAT W.B. (°F)	EWT (°F)	LWT (°F)	WATER FLOW (GPM)	MAX. STATIC LIFT + PRESSURE DROP (PSI)	FAN MOTOR H.P. (EACH)	NUMBER OF FANS & MOTOR	TOTAL HEAT REJECTED (MBH)	EFF. (GPM/HP)	BASIN HEATER	MANUFACTURER
CT-1	COUNTERFLOW	95	78	96.3	86.3	2145	8.4	25	2	10,725	42.9	2 @ 7KW	EVAPCO 29-4L21

### PUMP SCHEDULE

NOTES:  
 1. REFER TO SPECIFICATION SECTION 232123 FOR FEATURES.  
 2. REFER TO SPECIFICATION SECTION 230900 AND M700 SERIES SHEETS FOR CONTROLS.  
 3. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL CHARACTERISTICS.  
 4. PUMP SUBMITTALS SHALL INCLUDE PUMP PERFORMANCE CURVES.  
 5. PROVIDE EACH PUMP WITH A VARIABLE FREQUENCY DRIVE MODEL ABB ACS355 OR EQUAL. SIZED TO MATCH MOTOR HP. REFER TO SPEC SECTION 230514 FOR VRF REQUIREMENTS.

NUMBER	MIN. PUMP FLOW (GPM)	PUMP FLOW (GPM)	PUMP HEAD (FT.)	PLEV EFFICIENCY (%)	MOTOR POWER (HP)	MOTOR SPEED (RPM)	MOTOR W/ VFD	MANUFACTURER	EQUIPMENT SERVICES
P-1	387	2145	95	82.4	75	1800	Yes	BELL & GOSSETT BG-E1510-6G-SS-365T-L	BLDG. LOOP
P-2	387	2145	95	82.4	75	1800	Yes	BELL & GOSSETT BG-E1510-6G-SS-365T-L	BLDG. LOOP
P-3	478	2145	50	82.1	40	1200	Yes	BELL & GOSSETT BG-E1510-8GB-SS-364T-L	COOLING TOWER
P-4	478	2145	50	82.1	40	1200	Yes	BELL & GOSSETT BG-E1510-8GB-SS-364T-L	COOLING TOWER

### PLATE AND FRAME HEAT EXCHANGER SCHEDULE

NOTES:  
 1. REFER TO SPECIFICATION SECTION 235700 FOR FEATURES.  
 2. REFER TO SPECIFICATION SECTION 230900.  
 3. HEAT EXCHANGERS WITH FRAME SIZE SIZED TO ACCOMMODATE 25% ADDITIONAL PLATES.

NUMBER	COLD SIDE					HOT SIDE					MANUFACTURER
	FLUID TYPE	FLOW (GPM)	EWT (°F)	LWT (°F)	PRESS. DROP (FT. W.C.)	FLUID TYPE	FLOW (GPM)	EWT (°F)	LWT (°F)	PRESS. DROP (FT. W.C.)	
HX-1	WATER	2,145	86.3	96.3	22.8	WATER	2,145	100	90	22.7	BELL & GOSSETT AP100

### EXPANSION TANK SCHEDULE

NOTES:  
 1. REFER TO SPECIFICATION 232116 FOR FEATURES.

NUMBER	FLUID TYPE	FILL TEMP. (°F)	FILL PRESS. (PSIG)	MAX OPERATING PRESS. (PSIG)	ACCEPTANCE VOL. (GAL)	SYSTEM TOTAL VOLUME (GAL)	REQD. VOL (GAL)	DIM. (IN)	MANUFACTURER
ET-1	WATER	40	21	85	18	4,500	28	20	BELL & GOSSETT B130

### GAS UNIT HEATER SCHEDULE

NOTES:  
 1. REFER TO SPECIFICATION SECTION 238238 FOR FEATURES.  
 2. REFER TO SPECIFICATION SECTION 230900 AND M700 SERIES SHEETS FOR CONTROLS.  
 3. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL CHARACTERISTICS.

NUMBER	INPUT CAP. (BTU/HR)	OUTPUT CAP. (BTU/HR)	MOUNTING HEIGHT A.F.F.	FAN & MOTOR CFM	MOTOR H.P.	FUEL TYPE	EFF. (AFUE%)	MANUFACTURER
GUH-1	60,000	49,200.0	10' - 0"	990	.083	NAT. GAS	82	MODINE HDS-60

### AIR SEPARATOR SCHEDULE

NOTES:  
 1. REFER TO SPECIFICATION SECTION 23 2116 FOR FEATURES.  
 2. FURNISH WITH THE FOLLOWING ACCESSORY ITEMS: AUTOMATIC AIR VENT, REDUCING VALVE, MANUAL BLOWDOWN VALVE.

NUMBER	TANG. FLANGED CONN. (IN)	HEIGHT (IN)	DRAIN SIZE (IN)	TANK FITTING SIZE (IN)	MAX WATER FLOW (GPM)	PRESS. DROP (FT. W.C.)	WEIGHT (LBS.)	MANUFACTURER
AS-1	10	5' - 5"	2	2	3,600	1.9	800	BELL & GOSSETT RL-10F

SA&E PROJECT NUMBER	01-415-001
BID PACKAGE	BP-1
ISSUED FOR CONSTRUCTION	08-23-2023
<b>Southern A&amp;E</b>	
architects & engineers	
7951 Troon Circle Austell, Ga 30168 (770) 819-7777	R# 1 Doc # AD2 Date 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 SCHEDULES



STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS  
 SOUTHERN A & E, LLC  
 ENGINEER FIRM  
 LICENSE NO. PE039650  
 EXP. DATE - 06/30/2024

DRAWING NUMBER

**M601**