

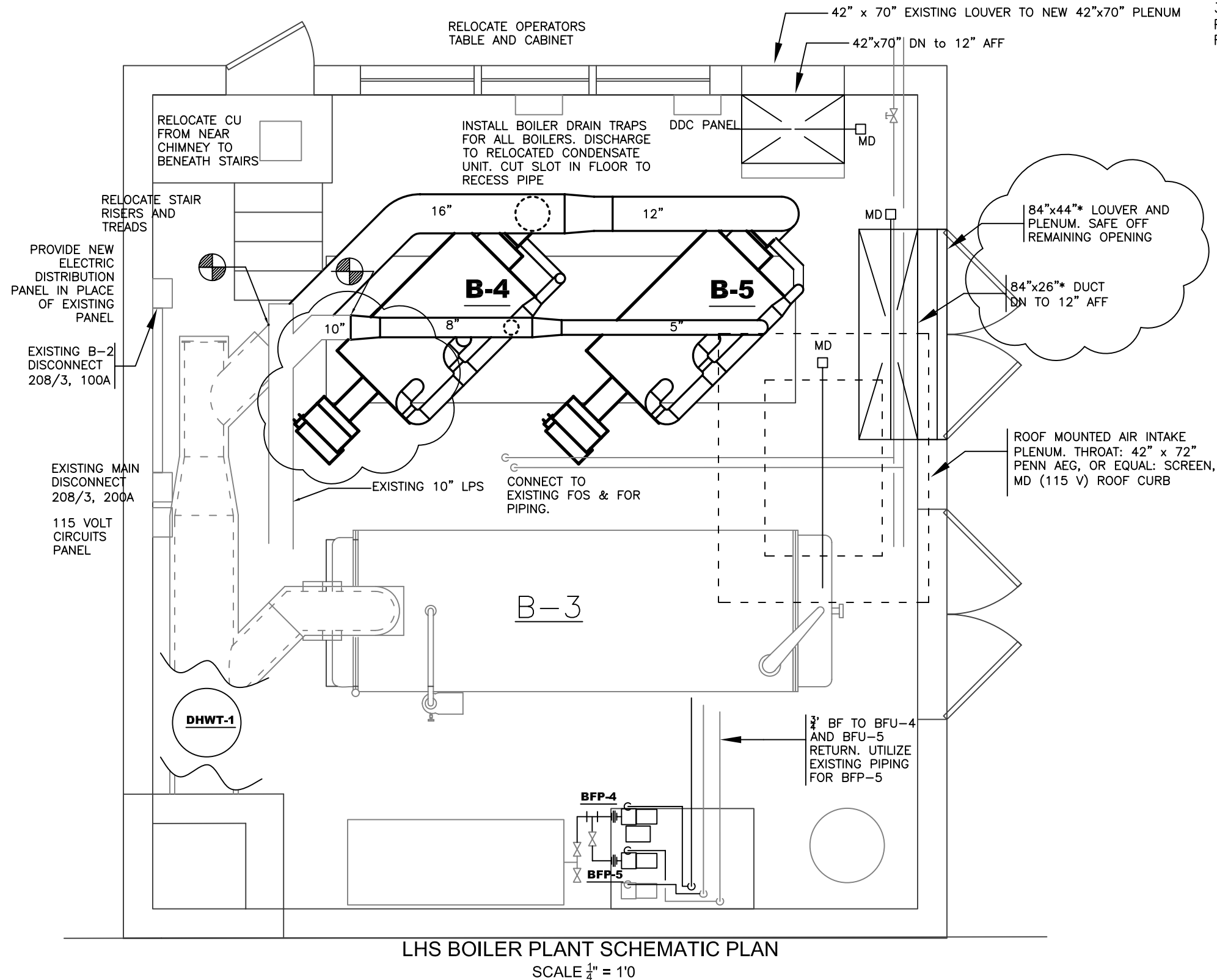
STEAM BOILER SCHEDULE

UNIT SYMBOL	UNIT LOCATION	BoHP	IBR OUTPUT (MBH)			COMB. EFF. (%)	THER. EFF. (%)	BOILER MANUF. OR EQUAL	BURNER MANUF. OR EQUAL	BURNER ELECTRIC			#2FO (GPH)		VENT SIZE	OP. WT. (LBS)	GENERAL REMARKS	
			GROSS	NET	SQ. FT.					HP	VOLTS	PH	AMP	MAX.				MIN.
B-4	MECH. RM	67*	2,249*	1,746*	7,275*	86.1	85.3	SMITH L028HE-S-9*	CARLIN 1050FFD*	1.0*	208*	3*	3.7	18.8*	9	14"*	8331*	SINGLE PACKAGE
B-5	MECH. RM	67	2,249	1,746	7,275	86.1	85.3	SMITH L028HE-S-9	CARLIN 1050FFD	1.0	208	3	3.7	18.8	9	14"	8331	SINGLE PACKAGE

1. EACH BOILER: PA404A OPERATING CONTROL; UV FLAME CONTROL RM7879A; 15 PSIG RELIEF VALVE; L4079B HIGH LIMIT; LWCO; MM157 PUMP CONTROL
2. EACH BOILER: ELECTRIC IGNITION*
3. EACH BOILER: BOILER FEED PUMP CONTROLLER
4. EACH BOILER: BOILER FEED PUMP (BFP); DOMESTIC CENTRIFLO, C35; 37 GPM @ 35 THD; 3500 RPM, 0.5 HP; DOMESTIC C35, OR EQUAL.
5. EACH BOILER: TANKLESS DOMESTIC HOT WATER COILS, SM-12
6. DHWT-1: SUPERSTOR GL-119 GALLON, OR EQUAL. BRONZE CIRCULATOR PUMPS: TACO 010B, OR EQUAL.

GENERAL NOTES:

1. COMPLY WITH THE BOILER MANUFACTURER'S INSTALLATION REQUIREMENTS AS DESCRIBED IN 28HE-IOM-1
2. SLOPE STEAM PIPING $\frac{1}{8}$ " PER LINEAR FOOT IN DIRECTION OF FLOW
3. THESE DRAWINGS' INTENT IS TO DEFINE THE GENERAL SCOPE OF THE PROJECT - ALL NECESSARY EQUIPMENT MUST BE FURNISHED AND INSTALLED TO REALIZE THIS DESIGN INTENT REGARDLESS OF INCLUSION ON THESE DRAWINGS.



LHS BOILER PLANT SCHEMATIC PLAN
SCALE $\frac{1}{4}$ " = 1'0"

FOR FINAL REVIEW ONLY 12-15-08
REVISION 01/09/08 *

Honeywell		
501 County Road, Westbrook ME 04092		
MSAD 49 LAWRENCE JUNIOR AND SENIOR HIGH SCHOOL BOILER PLANT		
REVISION	DATE	APPD
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		ECM 6 - 1

SCOPE OF WORK

REMOVE BOILER #1

- ISOLATE BOILER NUMBER ONE AND DRAIN IT
- ISOLATE DOMESTIC HOT WATER PIPING AND DISCONNECT IT
- DISCONNECT AND REMOVE LATERAL VENT PIPING
- DISCONNECT AND REMOVE STEAM LINE
- DISCONNECT BOILER FEED PIPING AT BOILER.
- DISCONNECT AND REMOVE BOILER DRAIN PIPING
- DISCONNECT AND REMOVE BOILER RELIEF VALVE PIPING
- DISCONNECT AND REMOVE FUEL OIL SUPPLY AND RETURN PIPING
- DISCONNECT AND REMOVE BLOWDOWN PIPING AND COMPONENTS
- DISCONNECT AND REMOVE LPG PILOT TUBING
- DISCONNECT AND REMOVE THE ELECTRICAL POWER
- DISCONNECT AND REMOVE CONTROL WIRING
- DISCONNECT AND REMOVE AUTOMATION WIRING AND SENSORS

INSTALL TWO BOILERS.#4 AND #5

GENERAL:

- EXTEND EXISTING HOUSEKEEPING PAD. NOTE EXISTING PAD THICKNESS: 6".
- RIG IN NEW BOILERS

FUEL OIL PIPING & IGNITION

- CONNECT TO EXISTING FUEL OIL SUPPLY AND RETURN 1" PIPING AT THE PROPOSED BURNER ELEVATION
- FURNISH AND INSTALL 1/2" FUEL OIL SUPPLY (FOS) AND RETURN (FOR) TUBING, INCLUDING, FOS STRAINER, FOS FIREMATIC, FOR CHECK VALVE, AND PRESSURE GAGES AND ISOLATION VALVES FOR BOTH BURNERS
- FURNISH AND INSTALL LPG PILOT PIPING AND TUBING; CONNECT TO EXISTING LPG PIPING.

COMBUSTION MAKEUP AIR

UTILIZE EXISTING OPENING AND LOUVER

- REMOVE EXISTING DOWNWARD FACING COMBUSTION AIR DUCT. EXISTING LOUVER TO REMAIN.
- FURNISH AND INSTALL A 42"x 70" DUCT SPLITTING INTO A 42" x 30" DUCT DOWN TO 12" AFF ("above finished floor")
- FURNISH AND INSTALL A MOTORIZED DAMPER (MD)

INSTALL NEW "LOWER" OPENING

- REMOVE DOUBLE DOORS
- FURNISH AND INSTALL AN 84" x 42" LOUVER W/SCREEN
- FURNISH AND INSTALL A 24" PLENUM TO AN 84" x 24" DUCT DOWN TO 12" AFF
- SAFE OFF REMAINING OPENING

INSTALL NEW "HIGH" OPENING

- CUT ROOF AND INSTALL ROOF INTAKE VENTILATOR, PENN AEG, OR EQUAL, INCLUDING CURB, SCREEN, MOTORIZED DAMPER.

BREECHING:

- FURNISH AND INSTALL LATERAL VENT PIPING AS SHOWN ON DRAWING: SCHEDULE STEEL
- CONNECT TO EXISTING BREECHING

STEAM PIPING

- FURNISH AND INSTALL STEAM PIPING. SLOPE TOWARDS EXISING MAIN
- FURNISH AND INSTALL BOILER DRAIN STEAM TRAPS. TRAP DISCHAGE SHALL BE TO THE RELOCATED CPU. CUT SLOT IN FLOOR SLAB TO RECESS PIPE

BOILER FEED PUMPS AND PIPING

- FURNISH AND INSTALL BFU-5. CONNECT TO EXISTING PUMP DISCHARGE PIPING FOR B-1
- FURNISH AND INSTALL BFU-4 FURNISH AND INSTALL NEW DISCHARGE PIPING UTILIZE EXISTING MOUNTING RAIL OR INSTALL NEW
- RELOCATE EXISTING CONVERTER RELIEF VALVE DISCHARGE TO CLEAR NEW WORK
- FURNISH AND INSTALL ALL VALVES REQUIRED

PLANT AUTOMATION DDC

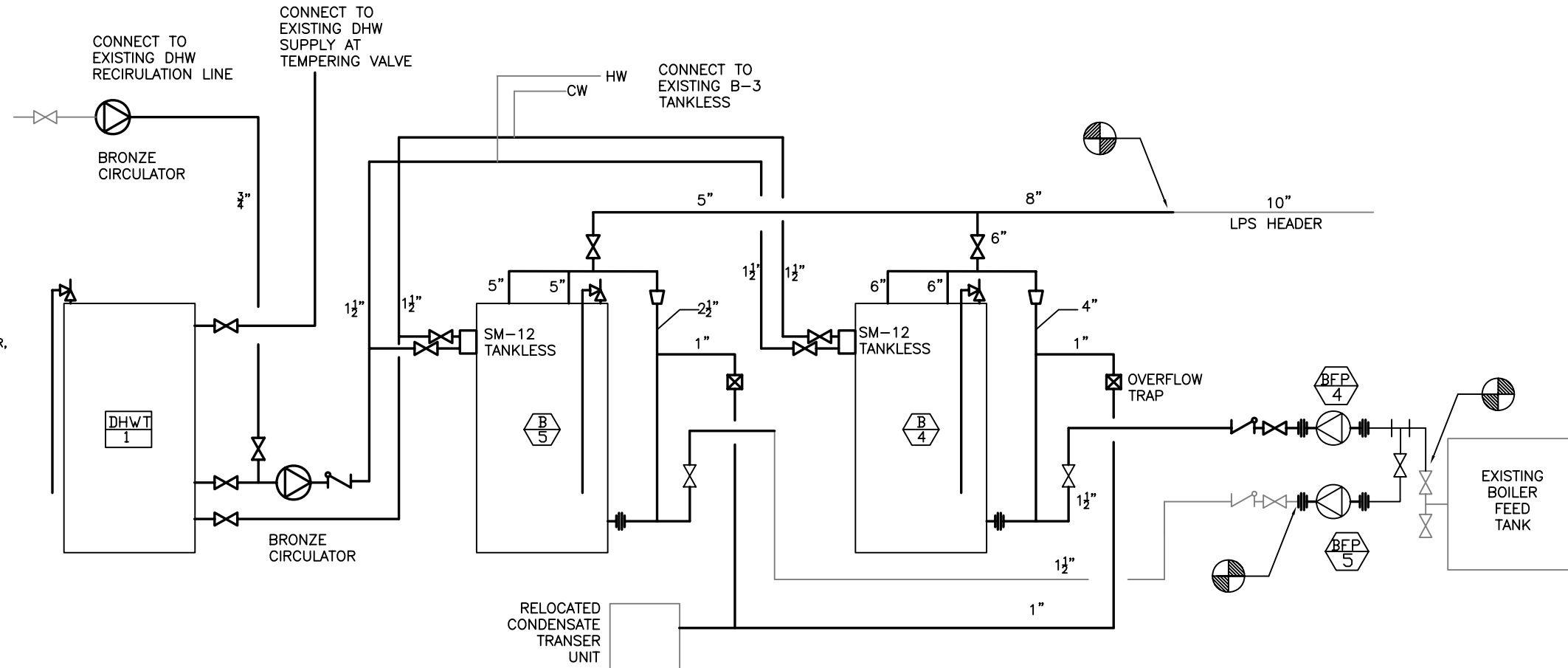
- PROVIDE S/S/STATUS FOR EACH BOILER. PROVIDE L/L PROGRAM
- PROVIDE DHW TEMPERATURE SENSOR
- RECONNECT LPS HEADER SENSOR
- AUTOMATION WIRING AND SENSORS BY OTHERS

AUXILIARIES

- FURNISH AND INSTALL BLOWDOWN PIPING. CONNECTING TO EACH BOILER. REINSTALL SENSOR AND CONTROL VALVE TO PIPING, SIMILAR TO EXISTING. DRAIN TO GUTTER COMMON SYSTEM FOR BOTH
- FURNISH AND INSTALL BOILER DRAIN PIPING
- FURNISH AND INSTALL BOILER RELIEF VALVE AND DISCHARGE PIPING TO GUTTER

DOMESTIC HOT WATER TANKLESS AND STORAGE SYSTEM

- RELOCATE CDU SERVING IA BUILDING TO BENEATH THE STAIRS. CONNECT TO EXISTING PUMP DISCHARGE, VENT AND CONDENSATE
- SET THE DHW STORAGE TANK, DHWT-1, IN PLACE OF CDU, FURNISHED BY HONEYWELL
- FURNISH AND INSTALL DOMESTIC HOT WATER PIPING TO TANKLESS HEATERS FOR EACH BOILER. CONNECT TO EXISTING TANKLESS PIPING SERVING B-3.
- FURNISH AND INSTALL AN INLINE, DOMESTIC WATER CIRCULATION PUMP FROM THE DHWT-1 TO THE TANKLESS HEATERS
- FURNISH AND INSTALL A DOMESTIC HOT WATER RECIRCULATION PUMP. CONNECT TO THE EXISTING RECIRCULATION PIPING IN BOILER ROOM.



**SYSTEM SCHEMATIC
NTS**

INSULATION

- INSULATE STEAM PIPING
- INSULATE BFU DISCHARGE PIPING- CONNECT TO EXISTING
- INSULATE VENT DISCHARGE
- INSULATE DOMESTIC HOT WATER PIPING

ELECTRICAL

- FURNISH AND INSTALL THE BURNER ELECTRICAL POWER CIRCUITS
- PROVIDE A NEW POWER DISTRIBUTION PANEL AND BRANCH CIRCUIT FOR EACH BURNER.
- FURNISH AND INSTALL OPERATING CONTROL WIRING FOR EACH BOILER
- FURNISH AND INSTALL COMBUSTION AIR LOUVER MOTORIZED DAMPER WIRING. INTERLOCK WITH BURNER OPERATION
- FURNISH AND INSTALL WIRING FOR OPERATING CONTROLS, B-4 AND B-5
- FURNISH AND INSTALL BOILER FEED PUMP AND RECIRCULATION PUMP WIRING
- RECONNECT BLOWDOWN SYSTEM
- ALL POWER WIRING IN EMT TO MATCH EXISTING

NOTES:

1 COMPLY WITH ALL THE BOILER MANUFACTURER'S INSTALLATION REQUIREMENTS AS DESCRIBED IN 28HE-10M-1

Honeywell

501 County Road, Westbrook ME 04092

MSAD 49
LAWRENCE JUNIOR AND
SENIOR HIGH SCHOOL
BOILER PLANT

REVISION	DATE	APPD

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ECM 6 - 2

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