

HVAC - DEMOLITION PLANS & SCHEDULES

BOILER ROOM A-110
BOILER REPLACEMENT AND SYSTEM UPGRADES

FOR
CLINTON COUNTY CORRECTIONAL FACILITY
58 PINE MOUNTAIN ROAD, McELHATTAN, PA 17748

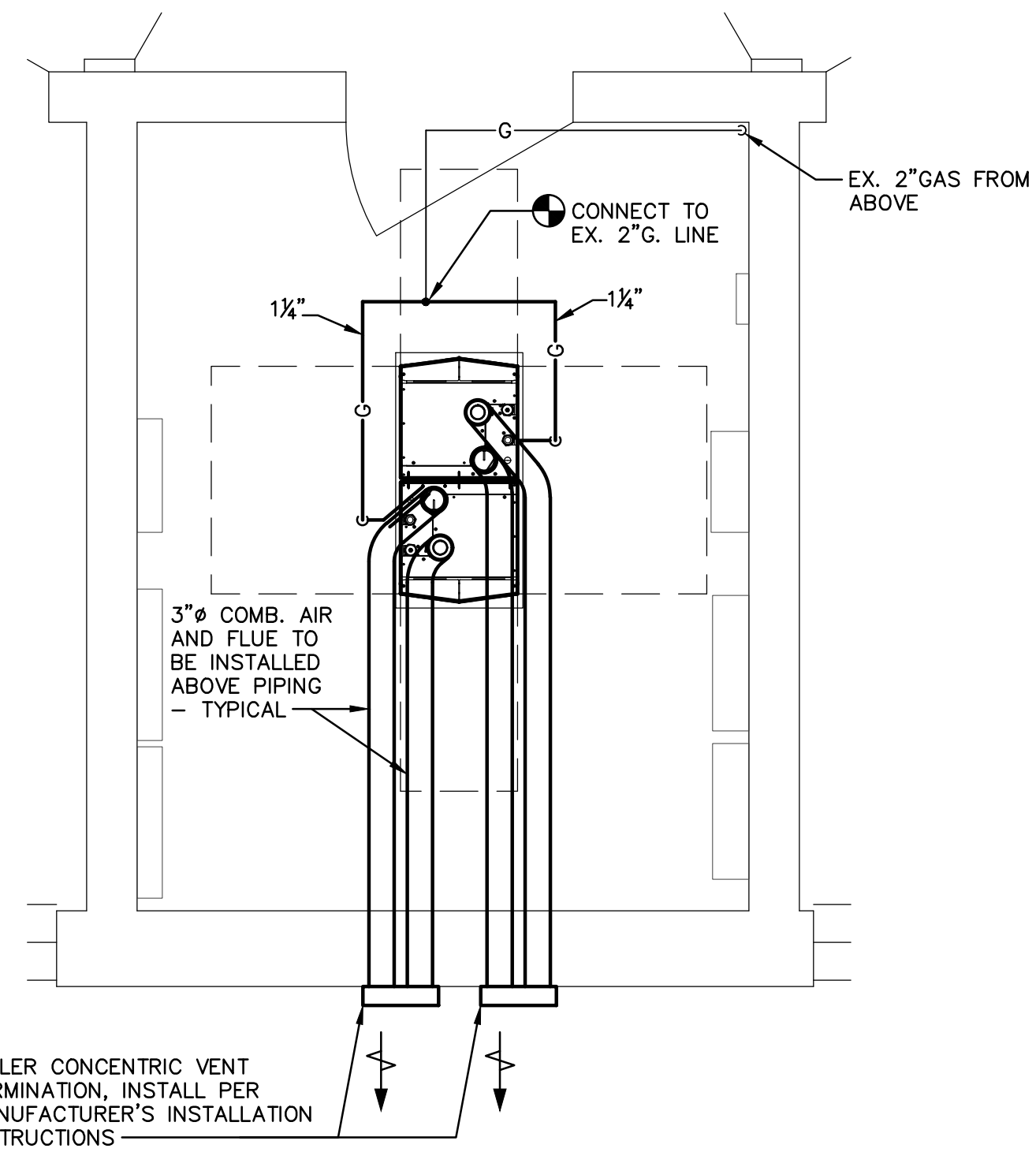


BRETT N. YONISH, P.E.
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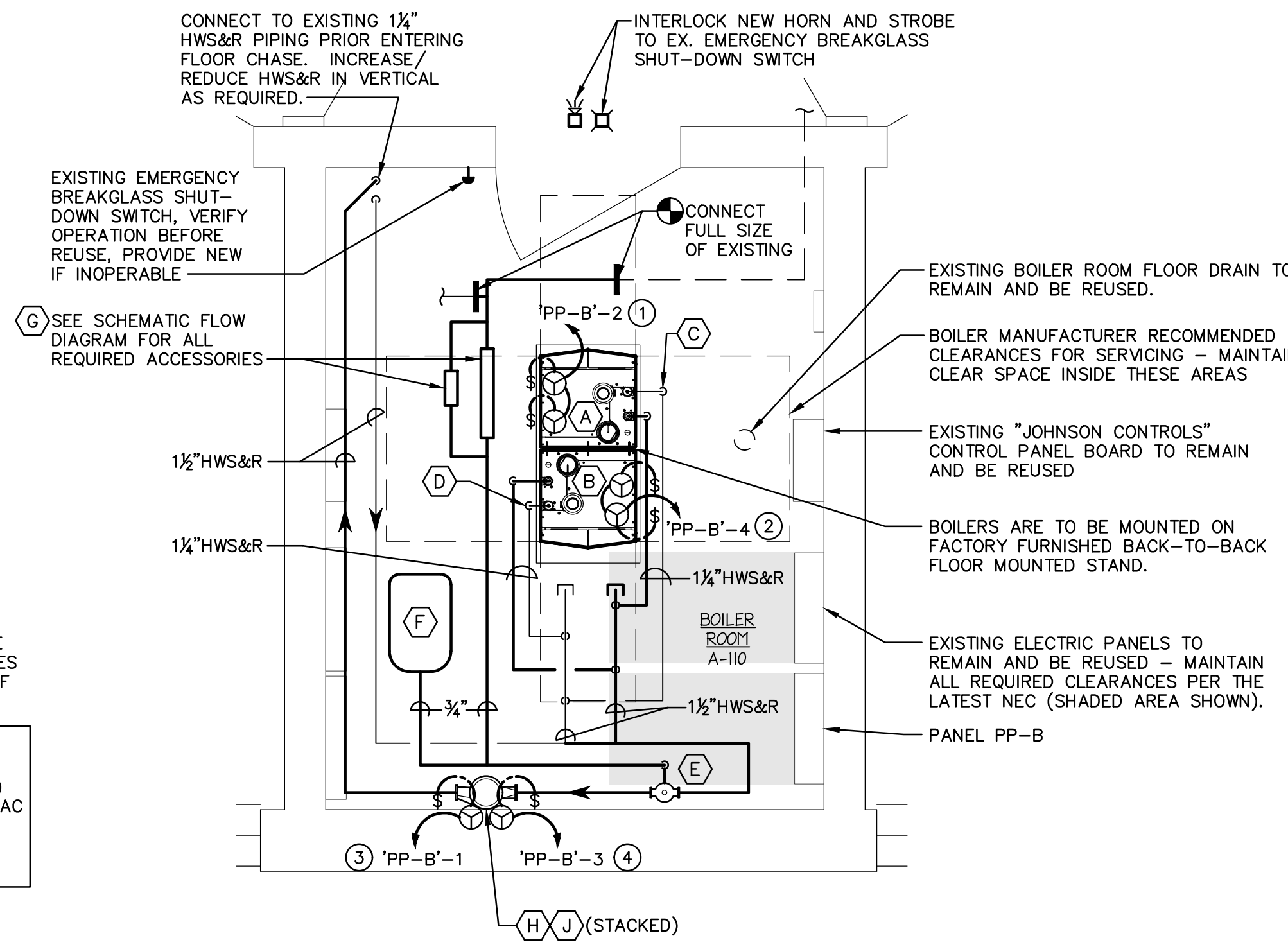
541 MAIN STREET
WINDBER, PA 15963
(814) 467-6877

REVISIONS		
MARK	BY	DATE

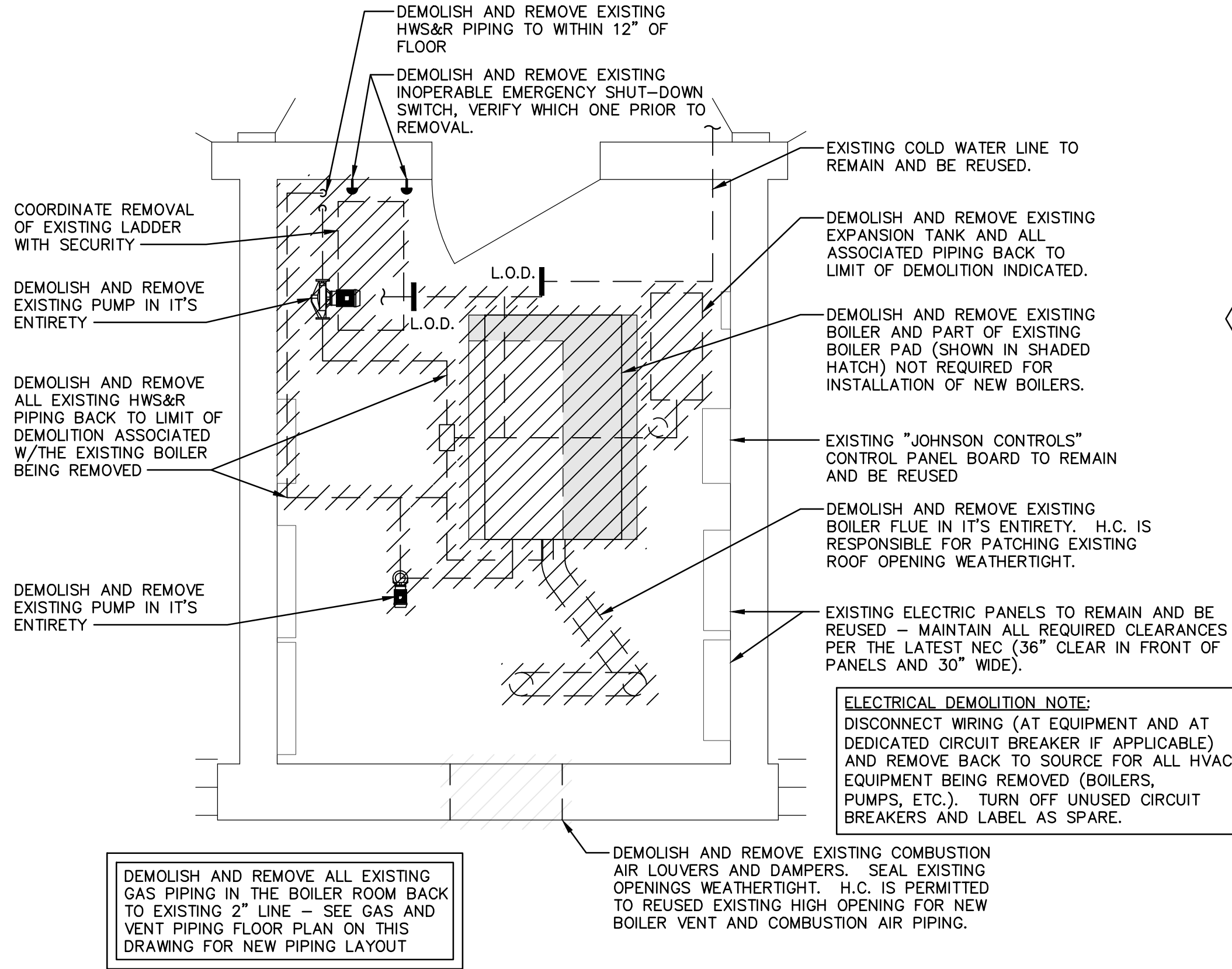
DATE: 09-27-2019	DRAWING NO. H-2
DRAWN BY: K.E.K.	
CHECKED BY: C.G.A.	
PROJECT NO. EHEA 19139	



HOUSING UNIT E & F BOILER ROOM
NEW GAS PIPING & VENT WORK
SCALE: 1/2"=1'-0"



HOUSING UNIT E & F BOILER ROOM
NEW BOILER, PIPING & ELECTRICAL WORK
SCALE: 1/2"=1'-0"



HOUSING UNIT E & F BOILER ROOM - HVAC DEMOLITION
SCALE: 1/2"=1'-0"

IMPORTANT NOTE: THIS PROJECT IS A SINGLE, PRIME HVAC CONTRACT WITH ALL INCIDENTAL ELECTRICAL WORK TO BE INCLUDED AND PERFORMED BY THE HVAC CONTRACTOR, EITHER BY A REGISTERED ELECTRICIAN EMPLOYED BY THE HVAC CONTRACTOR OR BY AN ELECTRICAL SUB-CONTRACTOR (ALSO EMPLOYED BY THE HVAC CONTRACTOR).

MARK	SYMBOL	LOCATION	TYPE	FUEL TYPE	RELIEF VALVE SETTING (PSI)	DEDICATED BOILER PUMP (SEE BOILER SYSTEM PUMP SCHEDULE)	FLUID					BOILER			ELECTRICAL CHARACTERISTICS			BASIS OF DESIGN*		WEIGHT (LBS) WET/DRY
							MINIMUM FLOW (GPM) THRU BOILER HIGH/LOW FIRING RATE	MAXIMUM FLOW (GPM) THRU BOILER	ENTERING WATER TEMPERATURE	WATER TEMPERATURE RISE	WATER PRESSURE DROP @ DESIGN FLOW	INPUT	OUTPUT	EFFICIENCY	FLA	MCA	VOLTAGE	MANUFACTURER	MODEL	
B-1	(A)	BOILER ROOM A-110	HIGH EFFICIENT WALL HUNG	NATURAL GAS	30	(C)	7.6/1.5	27	100	25	0.70'	199.0	185.0	95%	3.3	4.2	115V-60HZ-1φ	LOCHINVAR	WHB199	219 / 175
B-2	(B)	BOILER ROOM A-110	HIGH EFFICIENT WALL HUNG	NATURAL GAS	30	(D)	7.6/1.5	27	100	25	0.70'	199.0	185.0	95%	3.3	4.2	115V-60HZ-1φ	LOCHINVAR	WHB199	219 / 175

- NOTES:
- BOILER IS TO BE FACTORY FURNISHED WITH INTEGRAL MANUAL RESET HIGH LIMIT AND LWCO TEST BUTTON.
 - BOILER FLUE AND COMBUSTION AIR PIPING IS TO BE CPVC. MANUFACTURER OF BOILER TO PROVIDE CONCENTRIC VENT TERMINATION KIT.
 - PROVIDE CONDENSATE NEUTRALIZING KIT FOR EACH BOILER.
 - BOILER IS TO BE FACTORY FURNISHED WITH BACNET MODULE FOR CONNECTING INTO EXISTING ON-SITE CONTROLS SYSTEM.
 - CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING A NON-FUSED DISCONNECT SWITCH FOR EACH BOILER.
- * OR APPROVED EQUIVALENT.
A MOUNT BOILERS BACK TO BACK ON FLOOR STAND FURNISHED BY THE BOILER MANUFACTURER.

MARK	SYMBOL	LOCATION	TYPE	FLOW (GPM)	MAXIMUM TEMP / PRESSURE	BASIS OF DESIGN*				
						MANUFACTURER*	MODEL	CONNECTION SIZE	PRESSURE DROP (FT)	BUILT-IN BLOWDOWN
AP-1	(E)	BOILER ROOM A-110	AIR	16.0	270°F / 150 PSI	SPIROTHERM SPIROVENT	VJR150	1 1/2"Ø	0.5 FT.	NO

- NOTES:
* OR APPROVED EQUIVALENT.

MARK	SYMBOL	SERVES/ DUTY	LOCATION	PUMP TYPE	CONTROL	CIRCULATING FLUID					ELECTRICAL MOTOR			BASIS OF DESIGN*					
						FLUID TYPE	TEMP. (°F)	FLOW (GPM)	HEAD (FT)	NET POSITIVE SUCTION (REQUIRED)	NET POSITIVE SUCTION (AVAILABLE)	HORSE POWER	ELECTRICAL CHARACTERISTICS	SPEED (RPM)	MANUFACTURER	MODEL	IMPELLER SIZE	WEIGHT	
																			MANUFACTURER*
BP-1	(C)	B-1	BOILER ROOM A-110	INLINE	WITH BOILER	WATER	125.0	15	4.0	N/A	N/A	FRACTIONAL	115V-60HZ-1φ	HIGH	FURNISHED WITH BOILER - GRUNDFOS MODEL UPMXL				
BP-2	(D)	B-2	BOILER ROOM A-110	INLINE	WITH BOILER	WATER	125.0	15	4.0	N/A	N/A	FRACTIONAL	115V-60HZ-1φ	HIGH	FURNISHED WITH BOILER - GRUNDFOS MODEL UPMXL				
P-1	(H)	SYSTEM LOOP (DUTY)	BOILER ROOM A-110	INLINE	NOTE 1	WATER	125.0	16	15	N/A	N/A	FRACTIONAL	115V-60HZ-1φ	VARIABLE	GRUNDFOS	MAGNA 32-60	N/A	13.5 LBS	
P-2	(J)	SYSTEM LOOP (DUTY)	BOILER ROOM A-110	INLINE	NOTE 1	WATER	125.0	16	15	N/A	N/A	FRACTIONAL	115V-60HZ-1φ	VARIABLE	GRUNDFOS	MAGNA 32-60	N/A	13.5 LBS	

- NOTES:
- PUMP IS TO BE FACTORY FURNISHED WITH BACNET MODULE FOR CONNECTING TO EXISTING ON-SITE CONTROLS SYSTEM.
 - PUMPS ARE TO BE PROVIDED WITH TAPS FOR PRESSURE GAGES ON THE INLET AND OUTLET FLANGE WHERE AVAILABLE - IF NOT AVAILABLE ON PUMP FLANGE, FIELD INSTALL PRESSURE GAGES IN PIPING.
 - INSTALL PUMPS PER THE MANUFACTURER'S RECOMMENDATIONS AND SUPPORT INDEPENDENT OF THE CONNECTING PIPING FROM THE BUILDING STRUCTURE.
 - PROVIDE VIBRATION ISOLATION FOR ALL PUMPS.
 - CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING A NON-FUSED DISCONNECT SWITCH FOR EACH PUMP.
- * OR APPROVED EQUIVALENT.

MARK	SYMBOL	LOCATION	TYPE	APPROX. SYSTEM VOLUME	TEMPERATURE RANGE - MIN / MAX	FILL PRESSURE (PSI)	MAX/RELIEF PRESSURE (PSI)	TANK ORIENTATION	BASIS OF DESIGN*					
									MANUFACTURER*	MODEL	TANK DIMENSIONS	CONNECTION SIZE	TANK VOLUME	ACCEPTANCE VOLUME
ET-1	(F)	BOILER ROOM A-110	DIAPHRAGM	80.0	55°F / 200°F.	12.0	30.0	HORIZONTAL CEILING MOUNT	WESSELS	NTA-15	19" L x 12"Ø	1/2"Ø	7.8 GALLONS	6.3 GALLONS

- NOTES:
1. CONTRACTOR TO CHECK "PRE-CHARGE" OF EXPANSION TANK AND ADD/REMOVE PRESSURE AS REQUIRED.
* OR APPROVED EQUIVALENT.

MARK	SYMBOL	LOCATION	TYPE	FLOW (GPM)	MAXIMUM TEMP / PRESSURE	MANUFACTURER*	MODEL	CONNECTION SIZE	PRESSURE DROP (FT)	BUILT-IN BLOWDOWN
AP-1	(E)	BOILER ROOM A-110	AIR	16.0	270°F / 150 PSI	SPIROTHERM SPIROVENT	VJR150	1 1/2"Ø	0.5 FT.	NO

NOTES:
* OR APPROVED EQUIVALENT.

DRAWING NOTES (APPLY TO THIS DRAWING ONLY)

- CIRCUIT FOR NEW BOILER (B-1) AND NEW BOILER PUMP (BP-1) WITH DISCONNECT SWITCH FOR EACH, WIRE SIZE: 2 #12 & 1 #12 GROUND IN 3/4" CONDUIT.
- CIRCUIT FOR NEW BOILER (B-2) AND NEW BOILER PUMP (BP-2) WITH DISCONNECT SWITCH FOR EACH, WIRE SIZE: 2 #12 & 1 #12 GROUND IN 3/4" CONDUIT.
- CIRCUIT FOR NEW SYSTEM PUMP (P-1) WITH DISCONNECT SWITCH, WIRE SIZE: 2 #12 & 1 #12 GROUND IN 3/4" CONDUIT.
- CIRCUIT FOR NEW SYSTEM PUMP (P-2) WITH DISCONNECT SWITCH, WIRE SIZE: 2 #12 & 1 #12 GROUND IN 3/4" CONDUIT.

September 27, 2019 - 1:42pm \\E:\hills\Server\Company Projects\2019\19139 - Clinton County Correctional Facility Boiler\Drawings\19139 - H2.dwg