

WETHERSFIELD BOILER REPLACEMENT PROJECT

FIREHOUSE No. 2
188 GRISWOLD ROAD

BID NO. 2016-04
AUGUST 19, 2015

Prepared for
TOWN OF WETHERSFIELD
505 Silas Deane Highway
Wethersfield, Connecticut

**MAYOR
PAUL MONTINIERI**

**TOWN MANAGER
Jeffrey K. Bridges Jr.**

MECHANICAL & ELECTRICAL ENGINEER

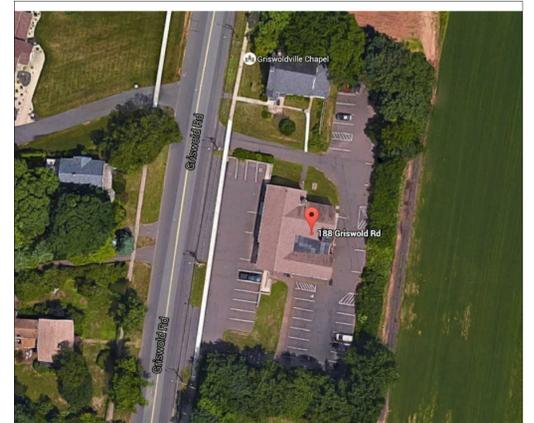
FRIAR ASSOCIATES II, LLC
281 FARMINGTON AVENUE
FARMINGTON, CT.

INDEX OF DRAWINGS

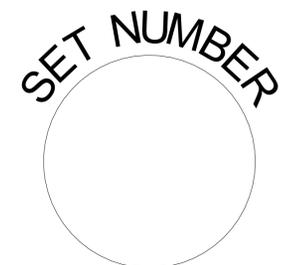
COVER SHEET

MECHANICAL

M1.1 FIRE HOUSE #3 MECHANICAL PLANS & DETAILS



SITE LOCATION MAP



NO.	DATE	DESCRIPTION
1	8-15-15	Issued for Bid

Mechanical Plans

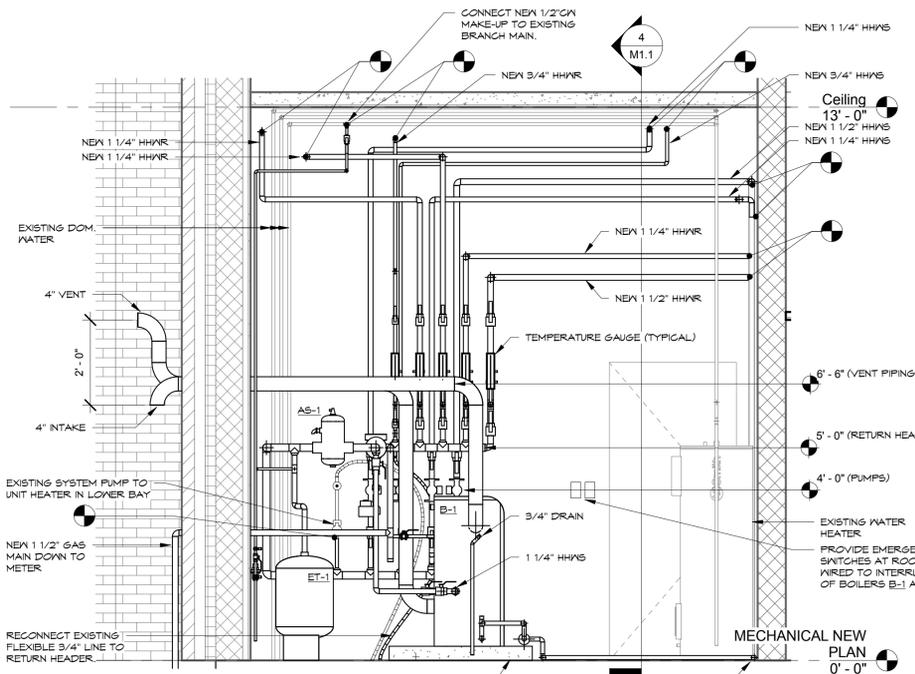
Boiler Replacement
Wethersfield Fire House #2
 188 Griswold Road
 Wethersfield, CT

ENGINEERS SEAL

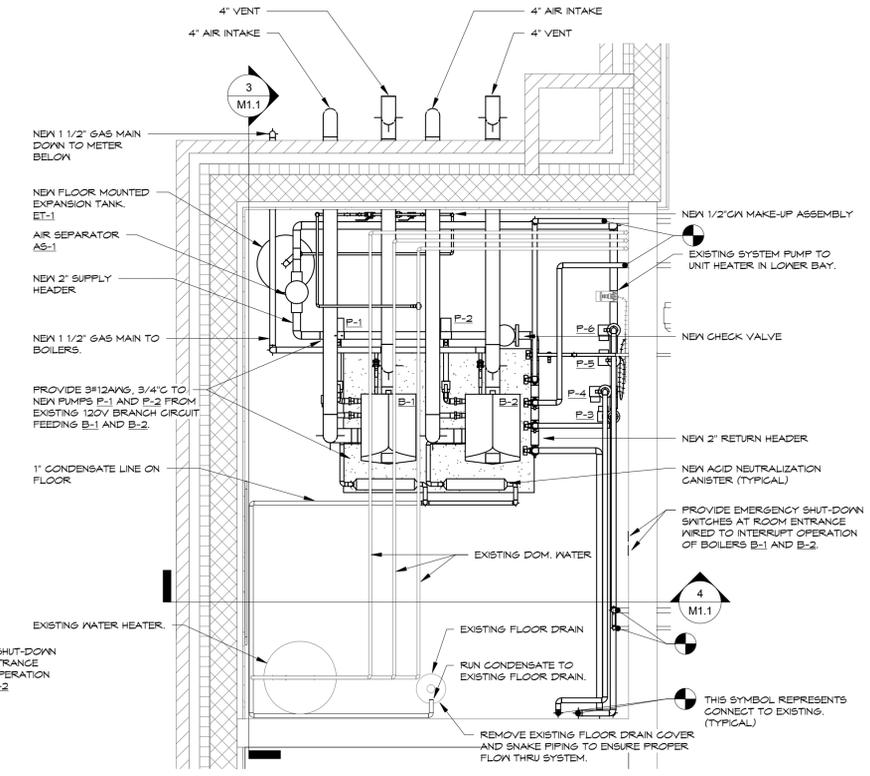
FRIAR ASSOCIATES II, LLC

281 Farmington Avenue
 Farmington, CT 06032

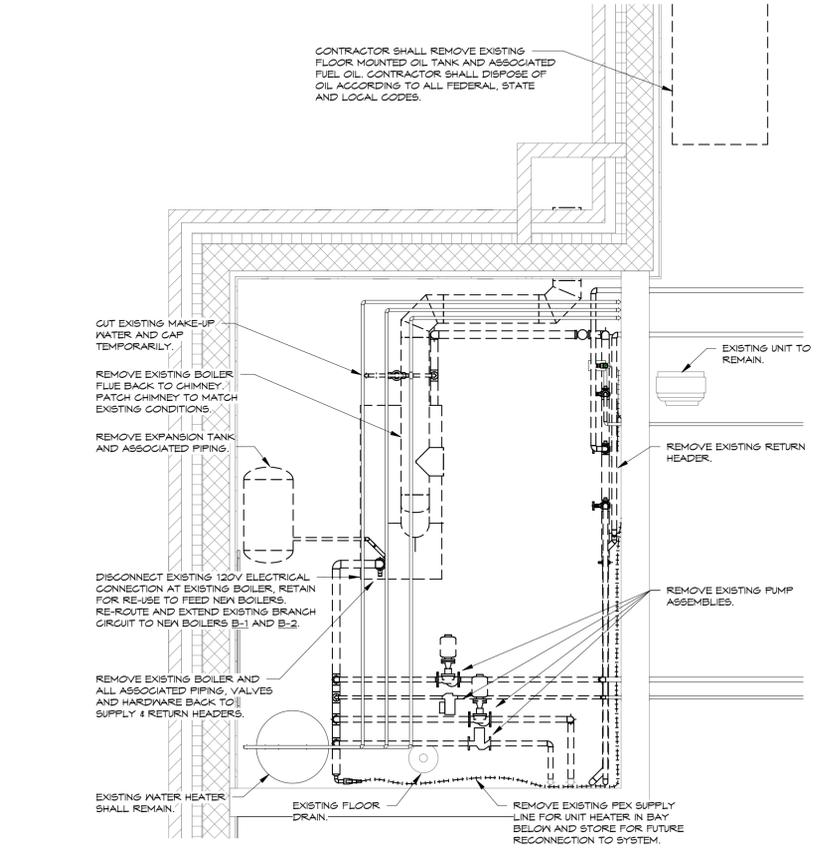
SHEET NO. **M1.1**



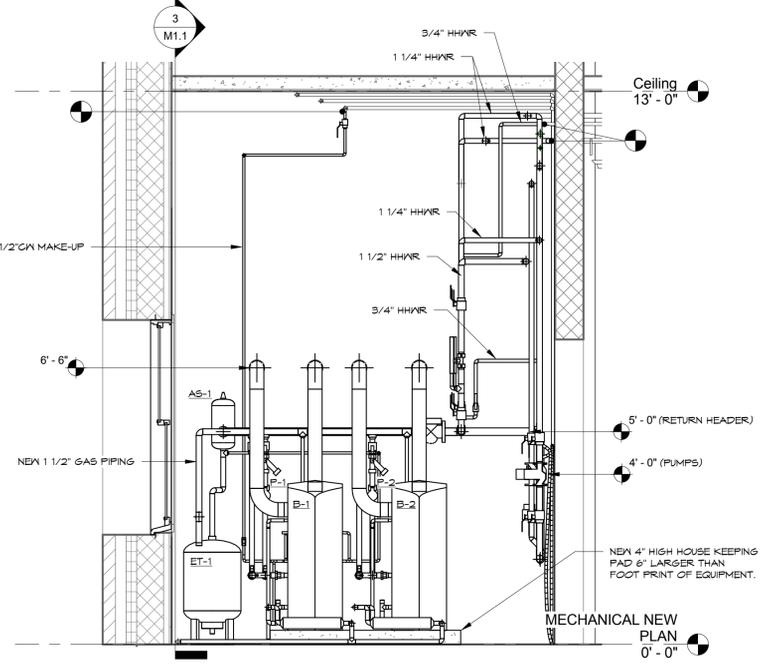
3 Section A
 SCALE: 1/2" = 1'-0"



2 MECHANICAL NEW PLAN
 SCALE: 1/2" = 1'-0"



1 MECHANICAL DEMO PLAN
 SCALE: 1/2" = 1'-0"



4 Section B
 SCALE: 1/2" = 1'-0"

EXPANSION TANK				
UNIT No.	MANUFACTURER & MODEL	CAPACITY (GAL)	PRESSURE RATING (PSI)	REMARKS
ET-1	AMTROL AX-40	42.0	125	

NOTES :

AIR SEPARATOR				
UNIT No.	MANUFACTURER & MODEL	SIZE	DESIGN FLOW	REMARKS
AS-1	SPIROVENT VDT200	2"	60	

NOTES :

PUMP SCHEDULE															
UNIT No.	SERVING	LOCATION	MANUFACTURER MODEL & SIZE	GPM L.M.H	HEAD FT. L.M.H	FLUID	PUMP EFF.	IMP. SIZE IN.	BHP	HP	ELECTRICAL DATA				NOTES
											HZ	PH	VOLTS	RPM	
P-1	B-1 PRIMARY	BOILER ROOM	LOCHNVAR PUM3021	22, 28, 33	24, 27, 30	WATER	-	-	1/6	-	60	1	115	-	1
P-2	B-2 PRIMARY	BOILER ROOM	LOCHNVAR PUM3021	22, 28, 33	24, 27, 30	WATER	-	-	1/6	-	60	1	115	-	1
P-3	ZONE	BOILER ROOM	B46 e-90-1.25AAB	21	25	WATER	-	2.3	25	50	60	1	115	1725	
P-4	ZONE	BOILER ROOM	B46 e-90-1.25AAB	21	25	WATER	-	2.3	25	50	60	1	115	1725	
P-5	ZONE	BOILER ROOM	B46 e-90-1.25AAB	21	25	WATER	-	2.3	25	50	60	1	115	1725	
P-6	ZONE	BOILER ROOM	B46 e-90-1.25AAB	21	25	WATER	-	2.3	25	50	60	1	115	1725	

NOTES :

- PUMP IS SHIPPED AS PART OF BOILER PACKAGE FOR FIELD INSTALLATION AND WIRING.
- CONTRACTOR SHALL RE-USE EXISTING ELECTRICAL CIRCUITS TO POWER NEW PUMPS. EXTEND EXISTING BRANCH CIRCUITS TO NEW LOCATION WITH 3/4" EMT AND #12AWG. CONDUCTOR (MIN.)

HOT WATER BOILER SCHEDULE													
UNIT No.	MANUFACTURER & MODEL	INPUT (MBH)	I-B-R NET OUTPUT (MBH)	MIN/MAX GAS (IN W.G.)	GPM	HHWS	HHWR	WPD	ELECTRICAL				REMARKS
									HP	PH	VOLTS	AMPS	
B-1	LOCHNVAR KB-286	285	270	4.0"/14"	26.5	180	160	29"	-	1	120/24	1.5	1, 2, 3, 4,
B-2	LOCHNVAR KB-286	285	270	4.0"/14"	26.5	180	160	29"	-	1	120/24	1.5	1, 2, 3, 4,

NOTES :

- BOILER HAS 24V CONTROL REQUIREMENT.
- PROVIDE WITH CONDENSATE NEUTRALIZATION KIT.
- PROVIDE WITH REQUIRED PRIMARY PUMP KIT. REFER TO PUMP SCHEDULE FOR MAKE & MODEL.
- PROVIDE WITH 5:1 MODULATING GAS BURNER.

GENERAL MECHANICAL NOTES:

- WHERE PIPING, LIGHTS AND DUCTWORK CONFLICT, PIPING SHALL BE COORDINATED TO SUIT CONDITIONS.
- CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS.
- MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLED INSPECTION AS PART OF THIS CONTRACT.

MECHANICAL NOTES:

- CONTRACTOR SHALL EXTEND EXISTING GAS SERVICE TO NEW BOILERS. CONTRACTOR SHALL COORDINATE FINAL CONNECTION AND PROVIDE ALL PIPING, VALVES AND REGULATORS NECESSARY TO DELIVER GAS TO BOILERS.
- EXISTING HHWS AND HHWR DISTRIBUTION PIPING IS TO BE THOROUGHLY CHEMICALLY CLEANED PRIOR TO INSTALLATION OF BOILERS TO PREVENT FOULING OF EQUIPMENT.
- CONTRACTOR SHALL PROVIDE 1/2" CN MAKE-UP WATER TO NEW BOILERS FROM EXISTING SERVICE.
- VERIFY CONDENSATE DRAIN NEUTRALIZATION REQUIREMENT WITH LOCAL BUILDING OFFICIAL.
- MASONRY REPAIR SHALL CONSIST OF 4" BRICK TO MATCH EXISTING.
- MASONRY BOND AND MORTAR COLOR SHALL MATCH EXISTING.
- ALL JOINTS SHALL BE TOOLED AND BRICKED WASHED WHEN COMPLETED.
- ALL MASONRY WORK SHALL BE PERFORMED BY QUALIFIED MASON.
- CONTRACTOR SHALL TIE BOILER CONTROLS INTO EXISTING SYSTEM.
- CONTRACTOR SHALL FOLLOW PIPING CONFIGURATION IN BOILER INSTRUCTION MANUAL.
- NEW BOILERS SHALL BE MOUNTED ON NEW HOUSE KEEPING PAD AS INDICATED.
- CONTRACTOR SHALL PROVIDE SEPARATE PRICING FOR NEW 'TEKMAR' TEKMAR-NET 2 HOUSE CONTROLS AS ALTERNATE #1. THE PRICING SHALL INCLUDE THE REMOVAL OF EXISTING CONTROL SYSTEM AND INSTALLATION OF A FULLY FUNCTIONAL CONTROL SYSTEM.
- CONTRACTOR SHALL COORDINATE INSTALLATION OF NEW GAS AND REGULATOR WITH UTILITY COMPANY.
- CONTRACTOR SHALL PROVIDE ALL REQUIRED HARDWARE INCLUDING REGULATORS, VALVES AND FITTINGS FOR A COMPLETE OPERATIONAL INSTALLATION.
- ANY UNUSED WALL PENETRATIONS SHALL BE SEALED.