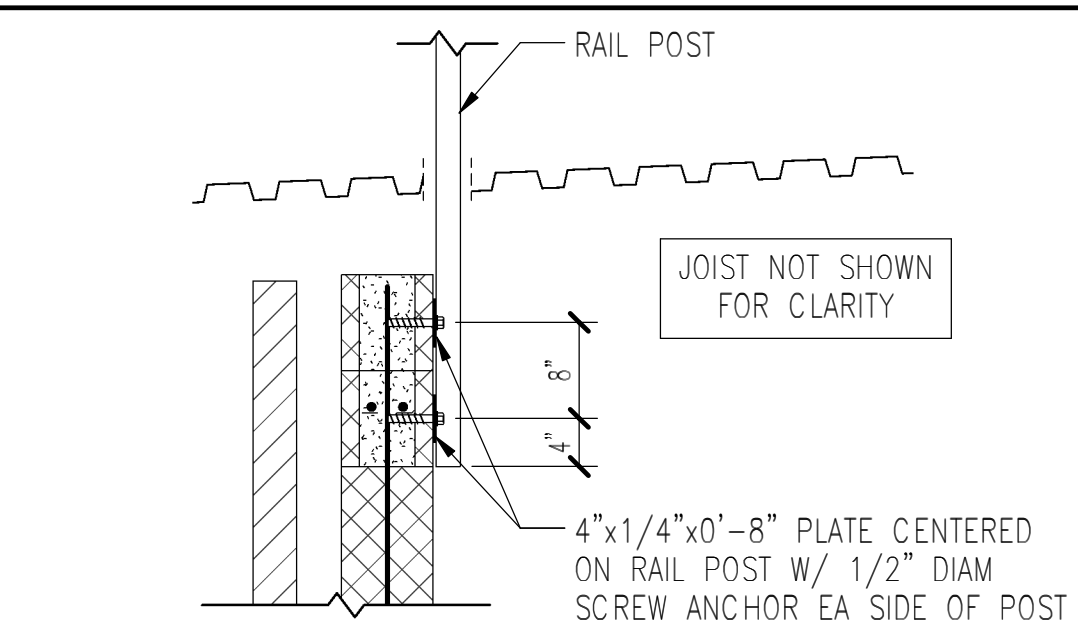
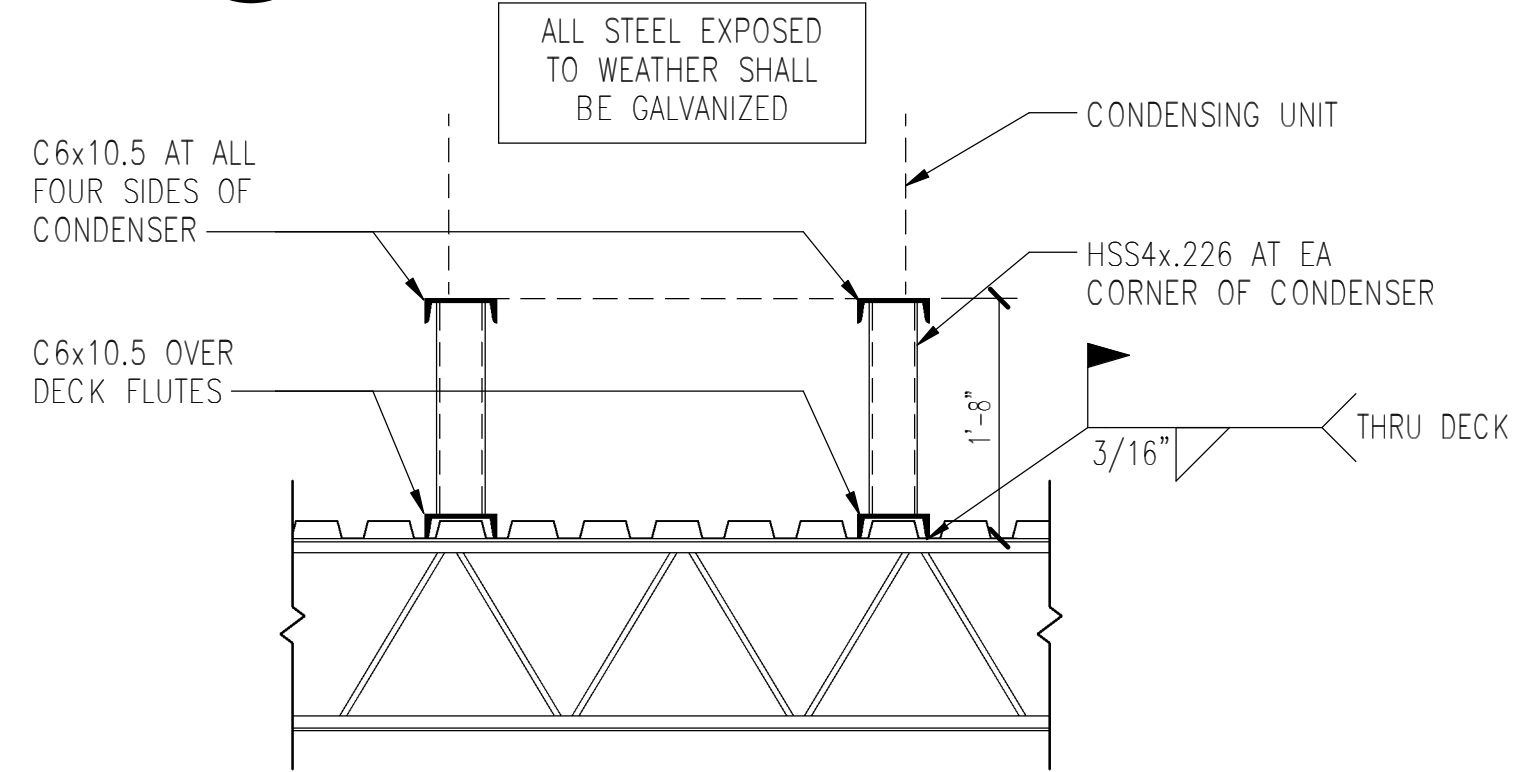


PCO-15 - ROOF FRAMING PLAN

1/8" = 1'-0"



1 PCO-15 - GAURDRAIL
3/4" = 1'-0"



2 PCO-15 - CONDENSING UNIT SUPPORT
3/4" = 1'-0"

3/10/2014 10:00:08 AM

MOSELEYARCHITECTS
 11430 NORTH COMMUNITY HOUSE ROAD GIBSON BUILDING SUITE 225 CHARLOTTE, NC 28277
 PHONE (704) 540-3755 FAX (704) 540-3754
 MOSELEYARCHITECTS.COM

DRAWING TITLE:
ROOF FRAMING AT REVISED MECH UNITS

CONTRACT
 DWG NO.:

PROJECT:
P1267 - FRENCH CREEK MESS HALL
 Project Address

DRAWN BY:
SMC

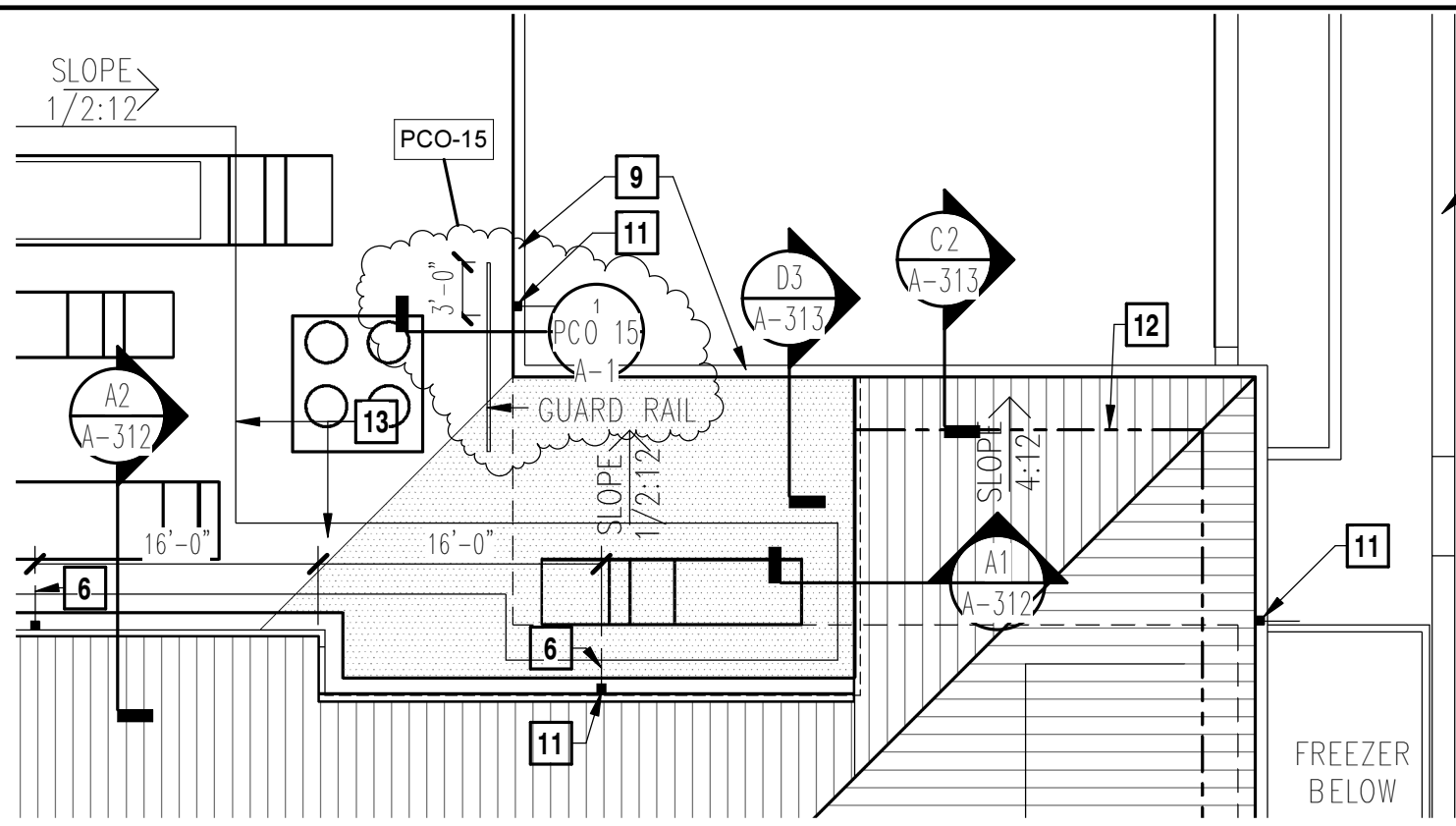
DATE:
03/14/14

ATTACHMENT TO:
PCO-15

PROJECT NO.:

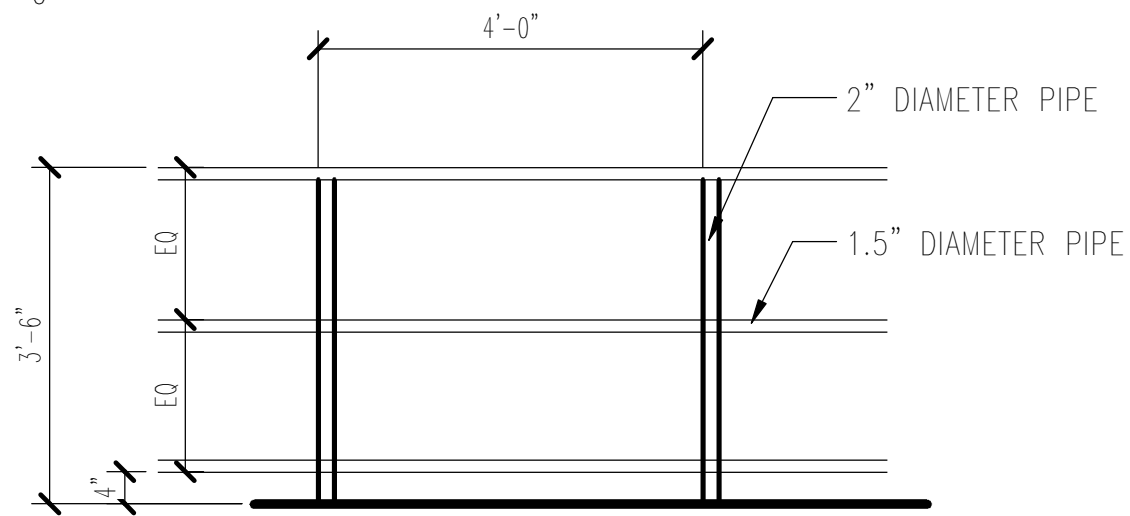
SUPPLEMENTAL DWG. NO.:

PCO-15-S1



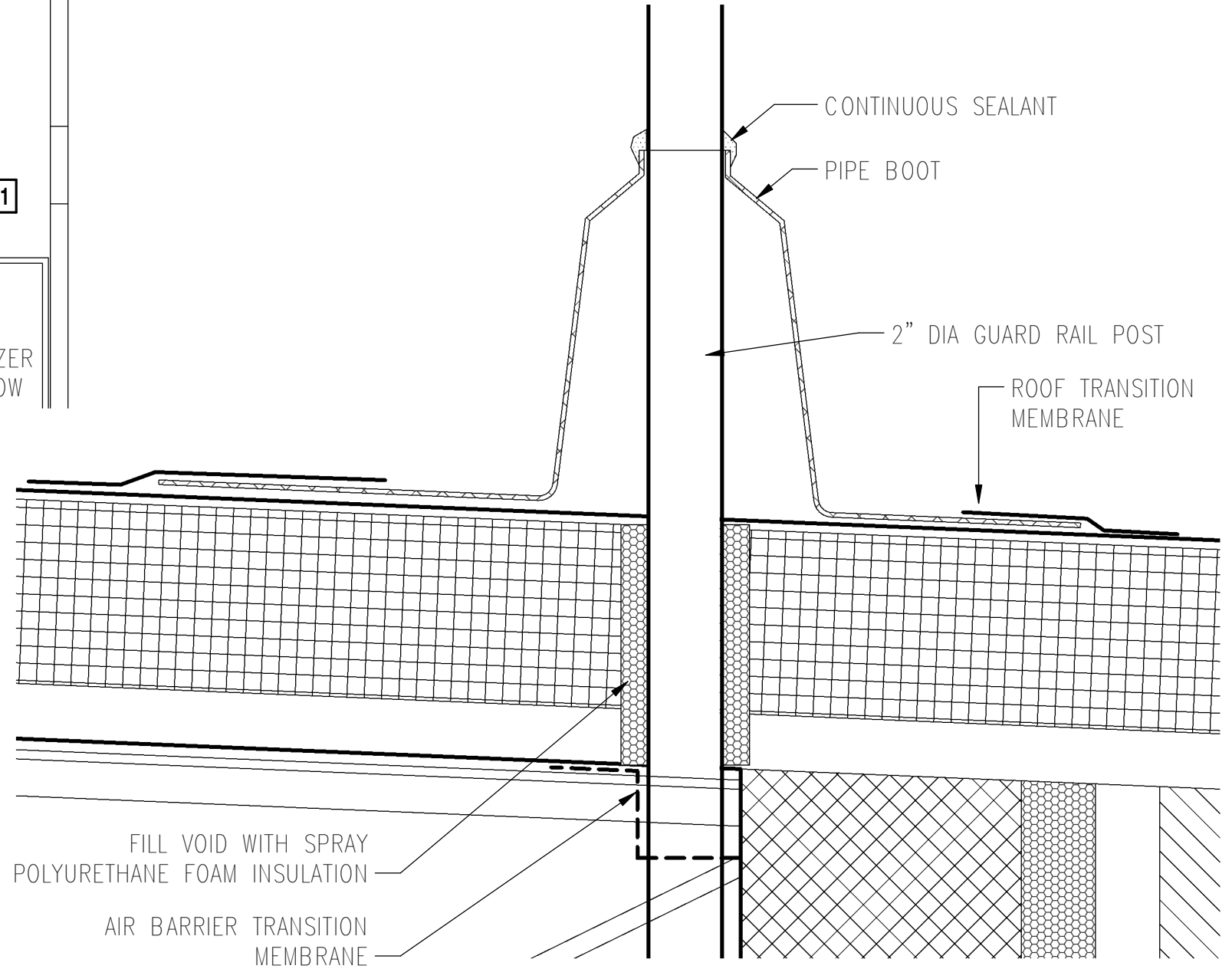
ROOF PLAN

3/32" = 1'-0"



2 GUARD RAIL ELEVATION

PCO 15 A1 | PCO 15 A-1 | 1/2" = 1'-0"



1 RCO-15 PIPE BOOT DETAIL

A-130 | PCO 15 A-1 | 3" = 1'-0"

3/5/2014 1:56:37 PM

MOSELEYARCHITECTS

11430 NORTH COMMUNITY HOUSE ROAD GIBSON BUILDING SUITE 225 CHARLOTTE, NC 28227
 PHONE (704) 540-3755 FAX (704) 540-3754
 MOSELEYARCHITECTS.COM

DRAWING TITLE:

ROOF PLAN AND DETAILS

CONTRACT DWG NO.:

PROJECT:

P1267 - FRENCH CREEK MESS HALL
 Project Address

DRAWN BY:

KM

DATE:

03/05/14

ATTACHMENT TO:

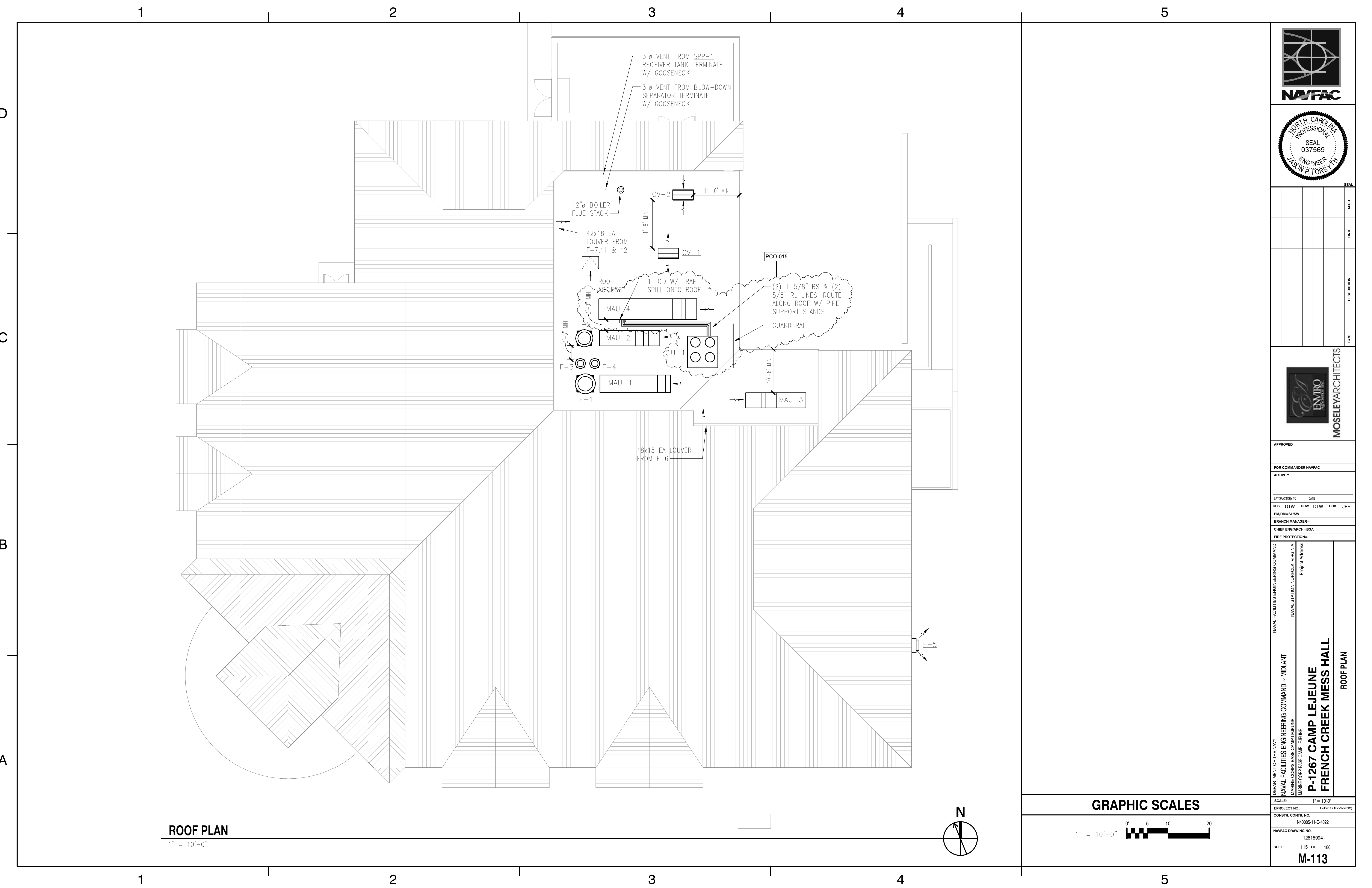
A130

PROJECT NO.:

500141

SUPPLEMENTAL DWG. NO.:

RCO-15
A1



DATE	DESCRIPTION	APP'D



APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES	DTW	DRW	DTW	CHK	JPF
-----	-----	-----	-----	-----	-----

PM/DM-SL/SW

BRANCH MANAGER=

CHIEF ENGINEER=BGA

FIRE PROTECTION=

DEPARTMENT OF THE NAVY	NAVAL FACILITIES ENGINEERING COMMAND	NAVAL FACILITIES ENGINEERING COMMAND - MIDLANT	NAVAL STATION NORFOLK, VIRGINIA	Project Address
MARINE CORPS BASE CAMP LEJEUNE	MARINE CORPS BASE CAMP LEJEUNE	P-1267 CAMP LEJEUNE	FRENCH CREEK MESS HALL	
ROOF PLAN			M-113	
SCALE: 1" = 10'-0"		PROJECT NO.: P-1267 (10-22-2012)		
CONSTR. CONTR. NO. N40085-11-C-4022		NAVFAC DRAWING NO. 12615994		
SHEET 115 OF 186				

GRAPHIC SCALES



AIR SEPARATOR SCHEDULE										
TAG	MANUFACTURER	MODEL NUMBER	SERVING	LOCATION	FLOW RATE (GPM)	INLET (IN)	OUTLET (IN)	PRESSURE DROP (FT WC)	DRAIN SIZE (IN)	WEIGHT (LBS)
AS-1	BELL & GOSSETT	RL-6F	HEAT PUMP LOOP	134	389	6	6	0.48	2	570

GENERAL NOTES:
 1. PROVIDE ASME AIR SEPARATOR W/O STRAINER.
 2. PROVIDE FACTORY WELDED SUPPORT BRACKETS.

PUMP SCHEDULE																	
TAG	MANUFACTURER	MODEL NUMBER	SERVING	LOCATION	TYPE	HEAD (FT WC)	FLOW RATE (GPM)	MECHANICAL EFFICIENCY (%)	SUCTION SIZE (IN)	DISCHARGE SIZE (IN)	IMPELLER SIZE (IN)	MOTOR SPEED (RPM)	MOTOR SIZE (HP)	ELECTRIC DATA			WEIGHT (LBS)
														V	PH	HZ	
P-1	BELL & GOSSETT	80-SC/3x3x7B/254TC	HEAT PUMP LOOP	134	INLINE	127	389	76.6	3	3	6.375	3525	20	460	3	60	535
P-2	BELL & GOSSETT	80-SC/3x3x7B/254TC	HEAT PUMP LOOP	134	INLINE	127	389	76.6	3	3	6.375	3525	20	460	3	60	535

GENERAL NOTES:
 1. PROVIDE A 5 GALLON FILTER FEEDER FF-1 WITH 50 MICRON FILTER BAG & PIPE USING 1" LINES UPSTREAM OF AS-1 AND DOWNSTREAM OF P-1 & 2.
 2. PROVIDE VARIABLE SPEED DRIVES FOR EACH PUMP MOTOR.
 3. PROVIDE FULLY REDUNDANT (N+1) DOWNSTREAM STATIC PRESSURE SENSORS/WIRING FOR EACH PUMP AS INDICATED ON DWG M-112B. SENSING TUBE TAPS SHOULD BE LOCATED ON TOP QUADRANT OF PIPE.
 4. REFER TO MECHANICAL / ELECTRICAL COORDINATION SCHEDULE FOR ADDITIONAL REQUIREMENTS.

EXPANSION TANK SCHEDULE										
TAG	MANUFACTURER	MODEL NUMBER	SERVING	LOCATION	TYPE	TANK VOLUME (GAL)	ACCEPTANCE (GAL)	FILL PRESSURE (PSIG)	WEIGHT (LBS)	
ET-1	BELL & GOSSETT	B-35LA	HEAT PUMP LOOP	134	VERTICAL BLADDER	10	10	15	145	

GENERAL NOTES:
 1. PROVIDE ASME RATED PRECHARGED BLADDER-TYPE PRESSURE VESSEL.
 2. PROVIDE EXPANSION TANK CAPABLE OF OPERATING AT 125 PSI AND 240°F.

STEAM BOILER SCHEDULE															
TAG	MANUFACTURER	MODEL	LOCATION	INPUT (MBH)	STEAM OUTPUT (LB/HR)	FUEL	MIN FUEL INLET PRESSURE (IN WC)	MAX FUEL INLET PRESSURE (IN WC)	STEAM PRESSURE (PSIG)	FUEL INLET (IN)	ELECTRIC DATA				WEIGHT (LBS)
											FLA (A)	V	PH	HZ	
B-1	FULTON	ICS-50	135	2,100	1,725	NAT GAS	7.0	11.0	15.0	1.5	2.1	480	3	60	9,000

GENERAL NOTES:
 1. PROVIDE NAT GAS TRAIN ASSEMBLY.
 2. PROVIDE FULTON MODEL NUMBER F-50 BLOW-DOWN SEPARATOR W/ AQUASTAT & THERMOMETER. PROVIDE AUTOMATIC SELF ACTUATING VALVE COOLING KIT & SET TO 120°F.
 3. REFER TO MECHANICAL / ELECTRICAL COORDINATION SCHEDULE FOR ADDITIONAL REQUIREMENTS.
 4. PROVIDE STEAM SEPARATOR IN 4" HORIZONTAL LPS PIPING W/ 3/4" DRIP STATION.
 5. PROVIDE 150 PSIG ASME RATED BOILER VESSEL & A 50 PSIG PRESSURE RELIEF VALVE.

STEAM POWERED CONDENSATE RETURN PUMP PACKAGE										
TAG	MANUFACTURER	MODEL NUMBER	PUMP TYPE	SERVING KITCHEN ITEMS	LOCATION	CAPACITY (LBS/HR)	MOTIVE STEAM PRESSURE (PSIG)	BACK PRESSURE (PSIG)	RECEIVER TANK VOLUME (GAL)	WEIGHT (LBS)
SPP-1	SPIRAX SARCO	VDPT4	DUPLEX APT14	13, 79, 80 & 101	BOILER 135 PIT	1,725	15.0	5.0	8	600

GENERAL NOTES:
 1. PROVIDE PACKAGED STEAM POWERED CONDENSATE RETURN UNIT WITH RECEIVER TANK, DUPLEX STEAM POWERED PUMPS, SINGLE 1/2" MOTIVE STEAM CONNECTION W/ SHUT-OFF VALVE, STRAINER & DRIP TRAP ALL MOUNTED ON SKID FOR FLOOR MOUNTING. MAXIMUM SKID FOOTPRINT OF 3'-0" x 4'-0" & UNIT HEIGHT OF 2'-3".
 2. PROVIDE RECEIVER TANK WITH 2" NPT CONDENSATE INLET, 1/2" NPT DRAIN & 3" FLANGED VENT.
 3. PROVIDE DUPLEX PUMPS WITH 1" FLANGED CONDENSATE OUTLET WITH CHECK VALVES AT EACH PUMP DISCHARGE.

SPLIT SYSTEM INDOOR UNIT SCHEDULE														
TAG	LOCATION	MANUFACTURER	MODEL NUMBER	SUPPLY AIR (CFM)	TOTAL CAPACITY (BTU/HR)	INDOOR EAT (°F)		ELECTRIC DATA			WEIGHT (LBS)			
						DB	WB	MCA (A)	SERVICE					
											V	PH	HZ	
AC-1A	132-TELECOM	MITSUBISHI	PUY-A18NHA-BS	370	18,000	80.0	67.0	1.0	208	2	60	29		

SPLIT SYSTEM OUTDOOR UNIT SCHEDULE												
TAG	MANUFACTURER	MODEL NUMBER	LOCATION	AMBIENT AIR TEMPERATURE (°F)	EER	MCA (A)	MOCAP (A)	ELECTRIC DATA			WEIGHT (LBS)	
								V	PH	HZ	REFRIGERANT	
AC-1B	MITSUBISHI	PUY-A18NHA-BS	MECH YARD	95.0	15.3	13	20	208	2	60	R410A	97

GENERAL NOTES:
 1. REFER TO MECHANICAL / ELECTRICAL COORDINATION SCHEDULE FOR ADDITIONAL REQUIREMENTS.
 2. PROVIDE HARD-WIRED WALL MOUNTED THERMOSTAT.
 3. PROVIDE CONDENSATE PUMP W/ FLOAT SWITCH AND WIRE TO SHUT DOWN UNIT IN PAN HIGH LEVEL CONDITION.

CONDENSING UNIT SCHEDULE												
TAG	MANUFACTURER	MODEL	SERVING	LOCATION	NOMINAL CAPACITY (TONS)	NUMBER OF CIRCUITS	ELECTRIC DATA			WEIGHT (LBS)		
							MCA (A)	MOCAP (A)	V	PH	HZ	
CU-1	CAPTIVEAIRE	38APD040	MAU-4	ROOF	40	2	85.0	100	460	3	60	2094

GENERAL NOTES:
 1. PROVIDE FACTORY INSTALLED CARRIER DISCONNECT SWITCH.
 2. PROVIDE FACTORY INSTALLED SOLENOID COIL, ACCUMULATOR & LIQUID LINE SOLENOID VALVE.

MAKE-UP UNIT SCHEDULE																			
TAG	MFR	MODEL	SERVING	AIR FLOW (CFM)	FAN SPEED (RPM)	MOTOR SIZE (HP)	ESP (IN WC)	DRIVE TYPE	SONES	NATURAL GAS HEATER			ELECTRIC DATA			WEIGHT (LBS)	NOTES		
										EAT (°F)	LAT (°F)	INPUT (MBH)	OUTPUT (MBH)	SERVICE					
											V	PH	HZ	CONTROLLED BY					
MAU-1	GREENHECK	DGX-118-H32	KITCHEN ITEM 74 VAV HOOD	7,480	800	5	0.65	BELT	21.4	23	60	324.9	298.9	460	3	60	VAV HOOD PANEL	1,800	1,2,3,4,5,6,8
MAU-2	GREENHECK	DGX-115-H22	KITCHEN ITEM 76 VAV HOOD	4,725	901	3	0.60	BELT	18.9	23	60	205.2	188.8	460	3	60	VAV HOOD PANEL	1,300	1,2,3,4,5,6,8
MAU-3	GREENHECK	DGX-112-H22	KITCHEN ITEM 68 VAV HOOD	3,400	1053	3	0.75	BELT	16.1	23	60	147.6	135.7	460	3	60	VAV HOOD PANEL	1,250	1,2,3,5,6,8
MAU-4	CAPTIVEAIRE	A4-D.1000-920	KITCHEN ITEMS 06,27,100 & 101	8,180	682	5	0.30	BELT	23.8	23	60	355.3	326.9	460	3	60	VAV BAS INTERLOCK	2,782	1,2,3,5,6,7,8,9

NOTES:
 1. REFER TO MECHANICAL / ELECTRICAL COORDINATION SCHEDULE FOR ADDITIONAL REQUIREMENTS.
 2. PROVIDE V-BANK 2" DEEP MERV 13 FILTERS & WEATHERHOOD W/ BIRDSCREEN.
 3. PROVIDE BURNER CAPACITY DISCHARGE AIR TEMPERATURE FACTORY CONTROLS.
 4. PROVIDE COMBINATION CURB - ARRANGEMENT DBC.
 5. PROVIDE 120V SERVICE RECEPTACLE.
 6. PROVIDE MOTORIZED BACKDRAFT INTAKE DAMPER.
 7. PROVIDE FACTORY INSTALLED SINGLE POINT POWER CONTROL PANEL W/ VFD, DISCONNECT & BUILDING PRESSURE AIRFLOW CONTROL. UNIT SHALL BE VAV & CAPABLE OF TURNING DOWN TO 3,500 CFM.
 8. PROVIDE NAT GAS REGULATOR FOR 2 PSIG SERVICE PRESSURE.
 9. PROVIDE COOLING COIL SIZED FOR 90°F DB/79°F WB TO 65.6°F DB/64.3°F WB AND 482.9 MBH OF TOTAL COOLING CAPACITY AND 215.3 SENSIBLE CAPACITY.

BOILER FEEDWATER TANK											
TAG	MFR	MODEL	SERVING	BOILER SIZE	CAPACITY (GAL)	TYPE	TANK SIZE (D"xL"xH")	ELECTRIC DATA			WEIGHT (LBS)
							PUMP MOTOR SIZE (HP)	V	PH	HZ	
FT-1	FULTON	VT-50	31-50	71	VERTICAL	24x36x59	0.75x2	480	3	60	325

GENERAL NOTES:
 1. PROVIDE SINGLE POINT POWER CONNECTION & DISCONNECT FOR FIELD MOUNTING.
 2. PROVIDE 3/4 HP DUPLEX PUMPS WITH ALL PIPING FROM TANK TO 1" NPT COMMON DISCHARGE W/ BALANCING, CHECK & ISOLATION VALVES INCLUDING PRESSURE GAUGES FOR EACH PUMP.
 3. PROVIDE FACTORY CONTROLS FOR PUMP LEAD-LAG OPERATION & PRESSURE SWITCH LOCATED IN COMMON PIPE DISCHARGE.
 4. PROVIDE 3/4" COLD WATER INLET AND 3/4" CHEMICAL FEED INLET CONNECTIONS WITH AUTOMATIC MAKE-UP FLOAT VALVE.
 5. PROVIDE FULTON MODEL NUMBER 2-30-1500, 50 GAL CHEMICAL FEED SYSTEM, 120V/1 PH/ 60HZ INJECTOR PUMP W/ WATER METER, LEVEL SWITCH & TANK AGITATOR.
 6. SIZE PUMPS FOR A 50 PSIG PRESSURE RELIEF VALVE TO ENSURE MAKE-UP WATER CAN BE PROVIDED.
 7. REFER TO MECHANICAL / ELECTRICAL COORDINATION SCHEDULE FOR ADDITIONAL REQUIREMENTS.

MECHANICAL / ELECTRICAL COORDINATION SCHEDULE																		
EQUIPMENT OR DEVICE	ELECTRIC AL SERVICE		FURNISHED BY		INSTALLED BY		POWER WIRING PROVIDED BY		CONTROL WIRING PROVIDED BY		DISCONNECT PROVIDED BY		STARTER PROVIDED BY		COMBO STARTER PROVIDED BY		VFD	NOTES
	V	PH	DIV 23	DIV 26	DIV 23	DIV 26	DIV 23	DIV 26	DIV 23	DIV 26	DIV 23	DIV 26	DIV 23	DIV 26	DIV 23	DIV 26		
BAS CONTROL PANELS	120	1	X		X		X	X										PROVIDE HARD WIRED ETHERNET DATA CONNECTIONS.
BOILER CHEMICAL FEED SYSTEM	120	1	X		X		X	X										TOGL-P
BOILER FEEDWATER TANK (FT-1)	480	3	X		X		X	X			X							SINGLE-POINT POWER DIV 26 MOUNT PANEL & FEEDERS TO PUMPS.
DEDICATED OUTDOOR AIR HANDLING UNIT (DOAU-1)	480	3	X		X		X	X			X							SINGLE-POINT CONNECTION. FLA=74.0A, MCA=80.0A, MOCAP=100A.
DUCT SMOKE DETECTORS (EACH)	24	1		X	X		X	X	X									
ELECTRIC UNIT HEATER (EUH-1, 2 & 3)	277	1	X		X		X	X										TOGL-P
FANS (F-1, 2 & 5)	480	3	X		X		X	X									X	DIV 26 WIRE TO KITCHEN HOOD VAV CONTROLLER.
FANS (F-3 & 4)	480	3	X		X		X	X										DIV 26 WIRE TO KITCHEN HOOD HOOD SWITCH CONTROLLER.
FANS (F-6, 7, 11 & 12)	120	1	X		X		X	X										TOGL-P
FANS (F-8, 9 & 10)	120	1	X		X		X	X										TOGL-P
HEAT PUMPS (HP-1,2,4 THRU 8 & 10, 11, 12)	480	3	X		X		X	X										DIV 23 CONTROL INTERLOCK WITH ASSOCIATED KITCHEN EQUIPMENT.
HEAT PUMPS (HP-3 & 9)	277	1	X		X		X	X										DIV 26 INTERLOCK POWER IN SERIES WITH WALL MOUNTED THERMOSTAT & MOTORIZED MAKE-UP AIR DAMPER.
MAKE-UP AIR HANDLING UNITS (MAU-1,2,3)	480	3	X		X		X	X										SINGLE-POINT POWER CONNECTION.
MAKE-UP AIR HANDLING UNITS (MAU-4)	480	3	X		X		X	X										SINGLE-POINT POWER CONNECTION.
PUMPS (P-1 & 2)	480	3	X		X		X	X										
SPLIT SYSTEM (AC-1A & B)	208	1	X		X		X	X										30A-2P,SN,NF(3R FOR 1B)
STEAM BOILER (B-1)	480	3	X		X		X	X										30A-3P,NF



NO.	DATE	DESCRIPTION	BY



APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
DES DTW DRW DTW CHK JPF
PMID-SLWSW
BRANCH MANAGER=
CHIEF ENGINEER=BGA
FIRE PROTECTION=

DEPARTMENT OF THE NAVY
 NAVAL FACILITIES ENGINEERING COMMAND - MIDLANT
 NAVAL STATION NORFOLK VIRGINIA
 MARINE CORPS BASE CAMP LEJEUNE
 PROJECT ADDRESS
P-1267 CAMP LEJEUNE FRENCH CREEK MESS HALL
 SCHEDULES
 SCALE:
 EPROJECT NO.: P-1267 (10-22-201)
 CONSTR. CONTR. NO. N40085-11-C-4022
 NAVFAC DRAWING NO. 12616001
 SHEET 122 OF 186
M-602



ELECTRICAL ROOF PLAN
1/8" = 1'-0"

KEYNOTES

APPLIES TO DRAWINGS E-112
REPRESENTED BY [X]

1. PROVIDE WIRING TO KITCHEN HOOD VAV CONTROLLER.



DATE	DESCRIPTION	APPN	BYN



APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO	DATE	
DES BCW	DRW BCW	CHK DKL

PM/DM=SL/SW

BRANCH MANAGER=

CHIEF ENGINEER=BGA

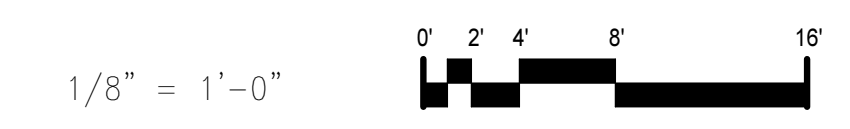
FIRE PROTECTION=

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND - MIDLANT
MARINE CORPS BASE CAMP LEJEUNE
MARINE CORPS BASE CAMP LEJEUNE
Project Address

**P-1267 CAMP LEJEUNE
FRENCH CREEK MESS HALL**

ELECTRICAL ROOF PLAN

GRAPHIC SCALES



SCALE:	1/8" = 1'-0"
PROJECT NO.:	P-1267 (10-22-2012)
CONSTR. CONTR. NO.:	N40085-11-C-4022
NAVFAC DRAWING NO.:	12616018
SHEET	139 OF 186
E-112	

PANELBOARD SCHEDULE MDP														
1200 AMP MCB			480/277			3 PH 4 W			MOUNT: SURFACE			PANEL ASSEMBLY RATED(KAIC): 14		
CKT	BRKR	POLE	LOAD	A	B	C	LOAD	POLE	BRKR	CKT				
1	1200	3	ATS-E	385.1	7.33		P/BD HPV	3	30 A	2				
3	--	--	--		380.39	7.33	--	--	--	4				
5	--	--	--			371.1	7.33	--	--	6				
7	60 A	3	SPD	0.00	1.98		ATS-X	3	70 A	8				
9	--	--	--		0.00	1.10	--	--	--	10				
11	--	--	--			0.00	1.48	--	--	12				
13	--	--	SPACE ONLY	0.00	0.00		SPACE ONLY	--	--	14				
15	--	--	SPACE ONLY		0.00	0.00	SPACE ONLY	--	--	16				
17	--	--	SPACE ONLY			0.00	SPACE ONLY	--	--	18				
				394 kVA	389 kVA	380 kVA								
				1429 A	1409 A	1372 A								

Load Classification	Connected Load	Demand Factor	Estimated	Panel Totals
INTERIOR LIGHTING	12.13 kVA	75.00%	9.10 kVA	Total Conn. Load: 1148.6 kVA Total Est. Demand: 816.0 kVA Total Conn. Current: 1382 A Total Est. Demand 981 A
EXTERIOR LIGHTING	2.77 kVA	75.00%	2.08 kVA	
RECEPTACLES	26.04 kVA	69.20%	18.02 kVA	
AC / HEAT PUMP	354.53 kVA	70.00%	248.17 kVA	
ELECTRIC HEAT	98.70 kVA	100.00%	98.70 kVA	
KITCHEN	363.94 kVA	65.00%	236.56 kVA	
MISCELLANEOUS	290.50 kVA	70.00%	203.35 kVA	

PANELBOARD SCHEDULE XHA														
70 AMP MCB			480/277			3 PH 4 W			MOUNT: SURFACE			PANEL ASSEMBLY RATED(KAIC): 14		
CKT	BRKR	POLE	LOAD	A	B	C	LOAD	POLE	BRKR	CKT				
1	20 A	1	EGRESS LTG	0.90	0.00		SPD	3	30 A	2				
3	20 A	1	EGRESS LTG		0.90	0.00	--	--	--	4				
5	20 A	1	EGRESS LTG			1.48	0.00	--	--	6				
7	20 A	1	EXTERIOR LIGHTING	0.49	0.59		EXTERIOR LIGHTING	1	20 A	8				
9	20 A	1	EXTERIOR LIGHTING		0.20	0.00	SPARE	1	20 A	10				
11	20 A	1	SPARE			0.00	0.00	SPARE	1	20 A	12			
13	--	--	SPACE ONLY	0.00	0.00		SPACE ONLY	--	--	14				
15	--	--	SPACE ONLY		0.00	0.00	SPACE ONLY	--	--	16				
17	--	--	SPACE ONLY			0.00	0.00	SPACE ONLY	--	18				
				2 kVA	1 kVA	1 kVA								
				7 A	4 A	6 A								

Load Classification	Connected Load	Demand Factor	Estimated	Panel Totals
INTERIOR LIGHTING	1.69 kVA	75.00%	1.26 kVA	Total Conn. Load: 3.0 kVA Total Est. Demand: 2.2 kVA Total Conn. Current: 4 A Total Est. Demand 3 A
EXTERIOR LIGHTING	1.28 kVA	75.00%	0.96 kVA	
RECEPTACLES	0.00 kVA	0.00%	0.00 kVA	
AC / HEAT PUMP	0.00 kVA	0.00%	0.00 kVA	
ELECTRIC HEAT	0.00 kVA	0.00%	0.00 kVA	
KITCHEN	0.00 kVA	0.00%	0.00 kVA	
MISCELLANEOUS	0.00 kVA	0.00%	0.00 kVA	

PANELBOARD SCHEDULE EMDP														
1200 AMP MCB			480/277			3 PH 4 W			MOUNT: SURFACE			PANEL ASSEMBLY RATED(KAIC): 22		
CKT	BRKR	POLE	LOAD	A	B	C	LOAD	POLE	BRKR	CKT				
1	400 A	3	EHM1	55.05	7.21		EHL1	3	100 A	2				
3	--	--	--		53.44	6.66	--	--	--	4				
5	--	--	--			49.03	1.45	--	--	6				
7	500 A	3	EHK1	112.2	21.16		XFMR ETR	3	125 A	8				
9	--	--	--		112.22	16.77	--	--	--	10				
11	--	--	--			112.2	22.88	--	--	12				
13	450 A	3	XFMR ETK(ON FLOOR)	99.63	0.00		SPD	3	60 A	14				
15	--	--	--		101.40	0.00	--	--	--	16				
17	--	--	--			95.64	0.00	--	--	18				
19	100 A	3	DOAU-01	10.25	36.10		DHP-1(2)	3	175 A	20				
21	--	--	--		10.25	36.10	--	--	--	22				
23	--	--	--			10.25	36.10	--	--	24				
25	175 A	3	DHP-1(1)	36.10	7.45		CU-1	3	100 A	26				
27	--	--	--		36.10	7.45	--	--	--	28				
29	--	--	--			36.10	7.45	--	--	30				
				385 kVA	380 kVA	371 kVA								
				1396 A	1378 A	1340 A								

Load Classification	Connected Load	Demand Factor	Estimated	Panel Totals
INTERIOR LIGHTING	10.44 kVA	75.00%	7.83 kVA	Total Conn. Load: 1123.6 kVA Total Est. Demand: 798.3 kVA Total Conn. Current: 1352 A Total Est. Demand 960 A
EXTERIOR LIGHTING	1.49 kVA	75.00%	1.12 kVA	
RECEPTACLES	26.04 kVA	69.20%	18.02 kVA	
AC / HEAT PUMP	354.53 kVA	70.00%	248.17 kVA	
ELECTRIC HEAT	98.70 kVA	100.00%	98.70 kVA	
KITCHEN	363.94 kVA	65.00%	236.56 kVA	
MISCELLANEOUS	268.50 kVA	70.00%	187.95 kVA	

PANELBOARD SCHEDULE HPV														
30 AMP MCB			480/277			3 PH 4 W			MOUNT: SURFACE			PANEL ASSEMBLY RATED(KAIC): 14		
CKT	BRKR	POLE	LOAD	A	B	C	LOAD	POLE	BRKR	CKT				
1	20 A	3	SOLAR PV INVERTER #1	3.67	0.00		SPD	3	30 A	2				
3	--	--	--		3.67	0.00	--	--	--	4				
5	--	--	--			3.67	0.00	--	--	6				
7	20 A	3	SOLAR PV INVERTER #2	3.67	0.00		SPACE ONLY	--	--	8				
9	--	--	--		3.67	0.00	SPACE ONLY	--	--	10				
11	--	--	--			3.67	0.00	SPACE ONLY	--	12				
				7 kVA	7 kVA	7 kVA								
				26 A	26 A	26 A								

Load Classification	Connected Load	Demand Factor	Estimated	Panel Totals
INTERIOR LIGHTING	0.00 kVA	0.00%	0.00 kVA	Total Conn. Load: 22.0 kVA Total Est. Demand: 15.4 kVA Total Conn. Current: 26 A Total Est. Demand 19 A
EXTERIOR LIGHTING	0.00 kVA	0.00%	0.00 kVA	
RECEPTACLES	0.00 kVA	0.00%	0.00 kVA	
AC / HEAT PUMP	0.00 kVA	0.00%	0.00 kVA	
ELECTRIC HEAT	0.00 kVA	0.00%	0.00 kVA	
KITCHEN	0.00 kVA	0.00%	0.00 kVA	
MISCELLANEOUS	22.00 kVA	70.00%	15.40 kVA	



NO.	DATE	DESCRIPTION	BY



APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
DES BCW DRW BCW CHK DKL
PMID-SLSW
BRANCH MANAGER
CHIEF ENGINEER-BGA
FIRE PROTECTION

DEPARTMENT OF THE NAVY
 NAVAL FACILITIES ENGINEERING COMMAND - MIDLANT
 MARINE CORPS BASE CAMP LEJEUNE
 MARINE CORPS BASE CAMP LEJEUNE
 Project Address
P-1267 CAMP LEJEUNE
FRENCH CREEK MESS HALL
 ELECTRICAL SCHEDULES

SCALE:
 PROJECT NO.: P-1267 (10-22-2012)
 CONSTR. CONTR. NO. N40085-11-C-4022
 NAVFAC DRAWING NO. 12616022
 SHEET 143 OF 186
E-601



3100 SMOKETREE CT, SUITE 1010
RALEIGH, NC 27604
Phone 919.875.0420 x 548
Email Address: Reg36@captiveaire.com

SUBMITTAL

Project Name: P-1267 Camp Lejeune French Creek Mess Hall

Fan Schedule: F-1,2,3,4,5,6,7,11,12 and MAU-1,2,3,4

Re-Submittal: 9/12/12
IN Response to Moseley Review dated: 9/10/12

Response to Engineer Comments:

- 5) MAU-3 to be rotated 180 degrees. Contractor to confirm ductwork re-route. Service clearance on open side of roof. See attached updated orientation of MAU-3.
- 6) MAU-4 to be provided to achieve turndown. See attached performance data.
- 7) MAU1 AND MAU2 drawings and performance data attached.

*Please note: 8,180 cfm of uncooled air from MAU-4 will be a large load on the kitchen and persons stationed below these vents during the Summer will not be comfortable.

EXHAUST FAN INFORMATION

FAN UNIT NO.	FAN UNIT MODEL #	MODEL	TAG	CFM	ESP.	RPM	H.P.	#	VOLT	FLA	WEIGHT (LBS.)/SDNES
1	NCA24HFA	NCA24HFA	F-1	8310	1.750	668	5.000	3	460	6.4	512.18
2	NCA24HFA	NCA24HFA	F-2	5250	1.500	1096	3.000	3	460	4.7	246.13
3	NCA16HFA	NCA16HFA	F-3	1740	1.650	1238	1.000	3	460	1.7	151.89
4	NCA16HFA	NCA16HFA	F-4	1740	1.650	1238	1.000	3	460	1.7	151.89
5	NCA24HFA	NCA24HFA	F-5	3988	1.850	1048	3.000	3	460	4.7	246.13
6	SIDD100A-CA	SIDD100A-CA	F-6	750	0.400	1156	0.360	1	115	4.2	121.00
7	SIDD100A-CA	SIDD100A-CA	F-7	750	0.400	1156	0.360	1	115	4.2	121.00
8	SIDD100A-CA	SIDD100A-CA	F-11	750	0.400	1156	0.360	1	115	4.2	121.00
9	SIDD100A-CA	SIDD100A-CA	F-12	750	0.400	1156	0.360	1	115	4.2	121.00

Teflon coated wheel for Grease fans
 Teflon coated wheel for Grease fans
 Teflon coated wheel for Grease fans
 Teflon coated wheel for Grease fans
 Teflon coated wheel for Grease fans
 Teflon coated wheel for Grease fans
 Teflon coated wheel for Grease fans
 Teflon coated wheel for Grease fans

MUA FAN INFORMATION

FAN UNIT NO.	FAN UNIT MODEL #	BLOWER	HOUSING	TAG	CFM	ESP.	RPM	H.P.	#	VOLT	FLA	WEIGHT (LBS.)/SDNES
10	A4-D1000-9E0	9E0	A4-D1000	MAU-1	7480	0.650	612	5.000	3	460	6.4	1769.64
11	A3-D1500-G18	G18-PB	A3-D1500	MAU-2	4725	0.600	706	3.000	3	460	4.7	1112.17
12	A2-D250-G15	G15-PB	A2-D250	MAU-3	2325	0.750	831	3.000	3	460	4.7	928.84
13	CAH 18	R918	N/A	MAU-4	8180	0.250	730	5.000	3	460	6.4	1800.83

Building Static Pressure Control with VFD Included

GAS FIREB MAKE-UP AIR UNIT(S)

FAN UNIT NO.	ACTUAL AIR DENSITY?	INPUT BTUS	OUTPUT BTUS	TEMP. RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE
10	YES	334278	307536	37 deg F	1 lb. - 5 lb.	Natural
11	YES	21159	194266	37 deg F	1 lb. - 5 lb.	Natural
12	YES	103903	95591	37 deg F	1 lb. - 5 lb.	Natural
13	YES	365561	336316	37 deg F	1 lb. - 5 lb.	Natural

ALL MAKE UP AIR UNITS TO HAVE MERV 13 VBANK FILTER SECTION WITH WEATHERHODD AND BIRDSCREEN.

CURB ASSEMBLIES

NO.	DN FAN	WEIGHT	ITEM	SIZE
1	# 1	103 LBS	Curb	42.500"V x 42.500"L x 20.000"H Vented Hinged 16 Gauge
2	# 2	76 LBS	Curb	32.500"V x 32.500"L x 20.000"H Vented Hinged 16 Gauge
3	# 3	65 LBS	Curb	26.500"V x 26.500"L x 20.000"H Vented Hinged 16 Gauge
4	# 4	65 LBS	Curb	26.500"V x 26.500"L x 20.000"H Vented Hinged 16 Gauge
5	# 5	66 LBS	Curb	31.500"V x 31.500"L x 18.000"H 16 Gauge
10	# 10	64 LBS	Curb	42.000"V x 42.000"L x 14.000"H Insulated 16 Gauge
10	# 10		Roll	6.000"V x 42.000"L x 14.000"Halong Width.
10	# 10		Roll	4.000"V x 4.000"L x 36.000"Halong Width.
11	# 11	136 LBS	Curb	35.000"V x 84.000"L x 12.000"H Insulated 16 Gauge
11	# 11		Roll	4.000"V x 4.000"L x 36.000"Halong Width.
12	# 12	126 LBS	Curb	31.000"V x 79.000"L x 12.000"H Insulated 16 Gauge
12	# 12		Roll	4.000"V x 4.000"L x 36.000"Halong Width.
13	# 13	241 LBS	Curb	55.000"V x 77.000"L x 14.000"H 16 Gauge



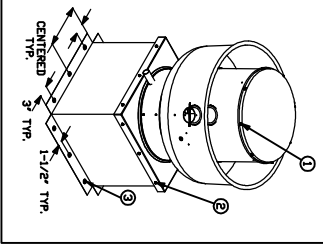
JOB	FRENCH CREEK MESS HALL P1267
LOCATION	CAMP LEJUNE, NC
DATE	8/3/2012
DWG #	1
REV.	2
JOB #	1602059
DRAWN BY	JAW-36
SCALE	3/8" = 1'-0"

HIGH WIND RATING FOR EXHAUST AND MUA FANS

Miami-Dade – Upblast Aluminum – NOA1

Installation Instructions:

1. Secure the lid to the fan using (8) 1/4" - 14 x 1' zinc plated steel self drilling screws with rubber washers, spaced evenly around the lid.
2. Secure the fan base to the curb using a minimum of (12) 1/4" - 14 x 2" zinc plated steel self drilling screws, through pre-punched holes in the fan base with a max spacing of 16 inches.
3. Secure the curb to the roof framing members by drilling 1/4" pilot holes in the curb flanges at locations shown in the diagram and using a minimum of (12) 3/8" x 2" (minimum embedment), zinc plated steel lag bolts and zinc plated washers, screw through curb flanges and into roof framing members with a maximum spacing 21 1/4".



Miami-Dade NOA1

General Notes:

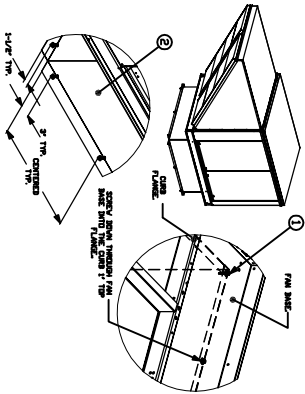
1. Tested in accordance to Florida Building Code test protocols TASB01, TASB02, TASB03.
2. Tested for areas including high velocity hurricane zones.
3. Tested under Miami-Dade County Notification number AT1-08033.

**DESIGN PRESSURE: +30.0 / -66.0 PSF
LARGE MISSILE IMPACT RESISTANT**

Miami-Dade – Steel Supply Fan – NOA2

Installation Instructions:

1. Secure the fan base to the top of the curb using a minimum of (12) 1/4"-14 x 1' self drilling screws (steel zinc plated) with a minimum spacing of 30" inches, secure through the fan base and into the curb.
2. Secure the curb to the roof framing members by drilling 1/4" pilot holes in the curb flanges at locations shown in the diagram using a minimum of (12) 3/8" x 2" (minimum embedment), zinc plated steel lag bolts and zinc plated washers, screw through curb flanges and into roof framing members with a maximum spacing 30".



Miami-Dade NOA2

General Notes:

1. Tested in accordance to Florida Building Code test protocols TASB01, TASB02, TASB03.
2. Tested for areas including high velocity hurricane zones.
3. Tested under Miami-Dade County Notification number AT1-08034.

**DESIGN PRESSURE: +30.0 / -130.0 PSF
LARGE MISSILE IMPACT RESISTANT**

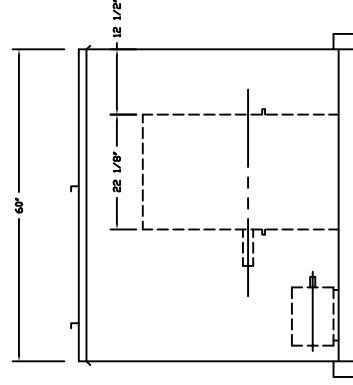
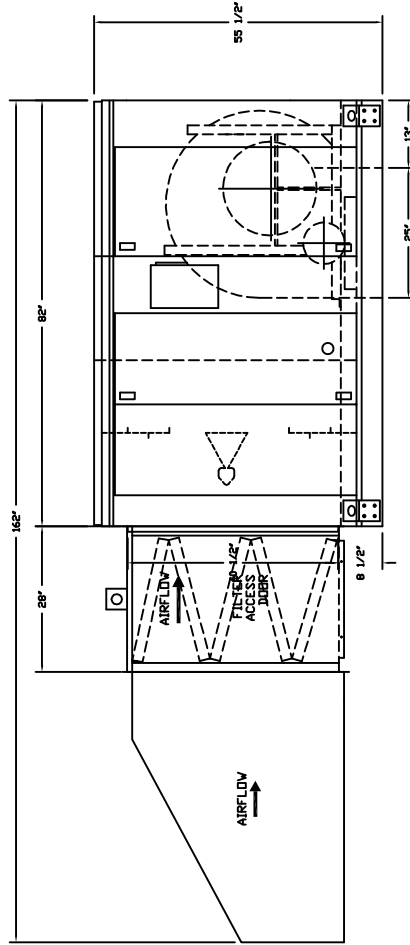
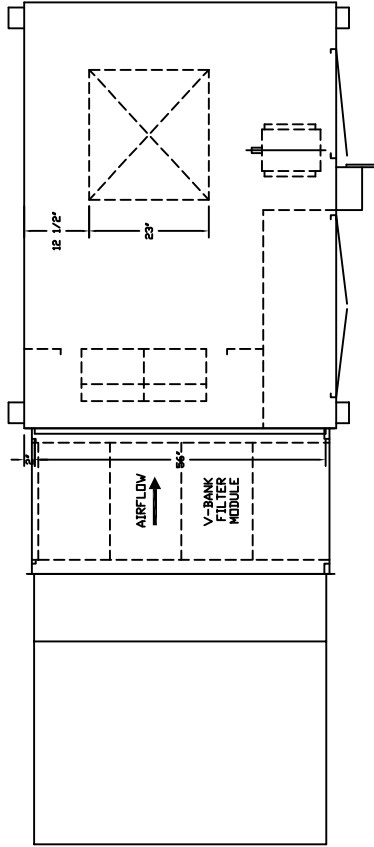


JOB	FRENCH CREEK MESS HALL P1267
LOCATION	CAMP LEJUNE, NC
DATE	8/3/2012
DWG #	2
REV.	2
JOB #	1602059
DRAWN BY	JAW-36
SCALE	3/8" = 1'-0"

- FAN #13 CAH 18 - HEATER (MAU-4)
- HORIZONTAL INDUSTRIAL HEATER WITH A 18" BURNER AND A 18" BLOWER.
 - V-BANK TA-43 FILTERS V-INTAKE HOOD WITH NO FILTERS - OUTDOOR
 - DOWN DISCHARGE - AIR FLOW LEFT TO RIGHT
 - LOW FIRE START - ALLOWS THE BURNER CIRCUIT TO ENERGIZE WHEN THE MODULATION CONTROL IS IN A LOW FIRE POSITION.
 - GAS PRESSURE GAUGE, 5 TO 15 INCHES W.C., 2.5" DIAMETER, 1/4" THREAD SIZE
 - GAS PRESSURE GAUGE, 0-50, 2.5" DIAMETER, 1/4" THREAD SIZE
 - CLOGGED FILTER SWITCH WITH LIGHT ON REMOTE PANEL
 - GFCI 15 AMP CONVENIENCE OUTLET FOR HEATER ENCLOSURE. POWER SUPPLY BY OTHERS - INCLUDES RECEPTACLE AND J BOX.
 - INTERNAL DOWN DISCHARGE DAMPER FOR SIZE 2 INDUSTRIAL HORIZONTAL UNITS WITH 18" & 20" INCH BLOWERS. INCLUDES ACTUATOR.
 - SIZE 2 HORIZONTAL HEATER VAV PROFILE AND WIRING PACKAGE
 - BUILDING STATIC PRESSURE CONTROL
 - VFD FACTORY MOUNTED AND WIRED ON UNIT CONTROL PANEL.
 - UNIT MOUNT STATIC PRESSURE VFD CONTROL
 - CURB CLIPS FOR HIGH WIND RATING

SUPPLY SIDE HEATER INFORMATION:

WINTER TEMPERATURE = 20°F. TEMP. RISE = 37°F.
 BTUS CALCULATED OFF ACTUAL AIR DENSITY
 OUTPUT BTUS AT ALTITUDE OF 0.0 ft. = 336316
 INPUT BTUS AT ALTITUDE OF 0.0 ft. = 365561

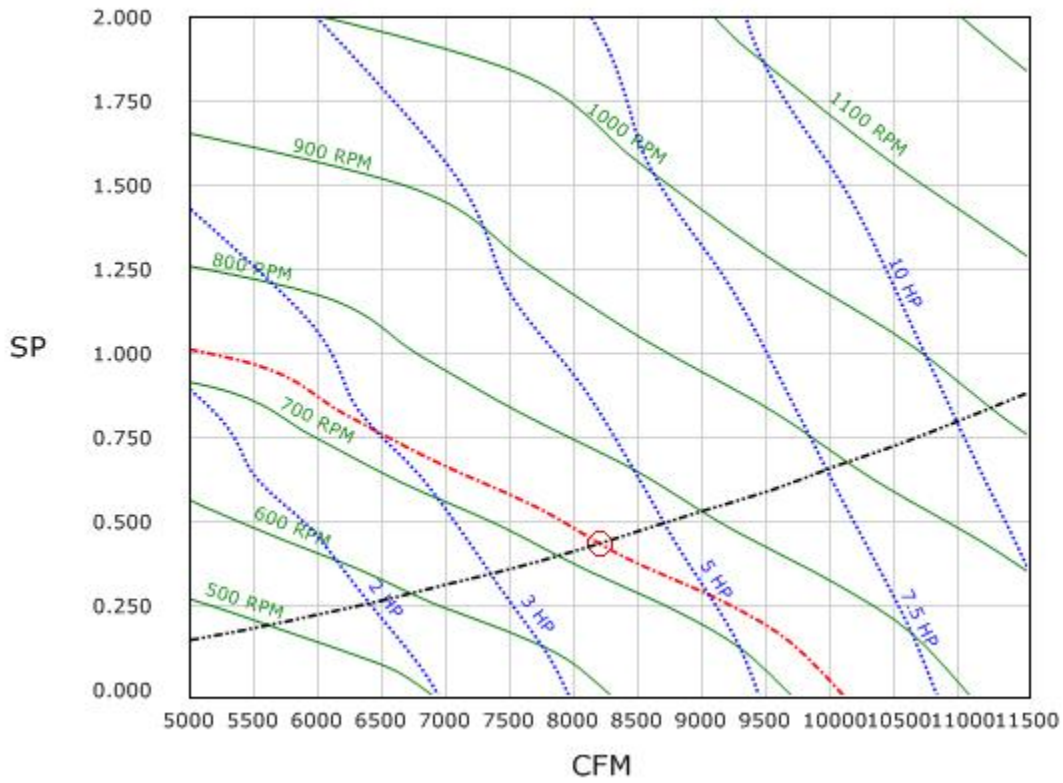


CAPTIVE AIR		JOB	FRENCH CREEK MESS HALL P1267
		LOCATION	CAMP LEJEUNE, NC
DATE	8/3/2012	JOB #	1602059
DWG #	11	DRAWN BY	JAW-36
REV.	2	SCALE	3/8" = 1'-0"

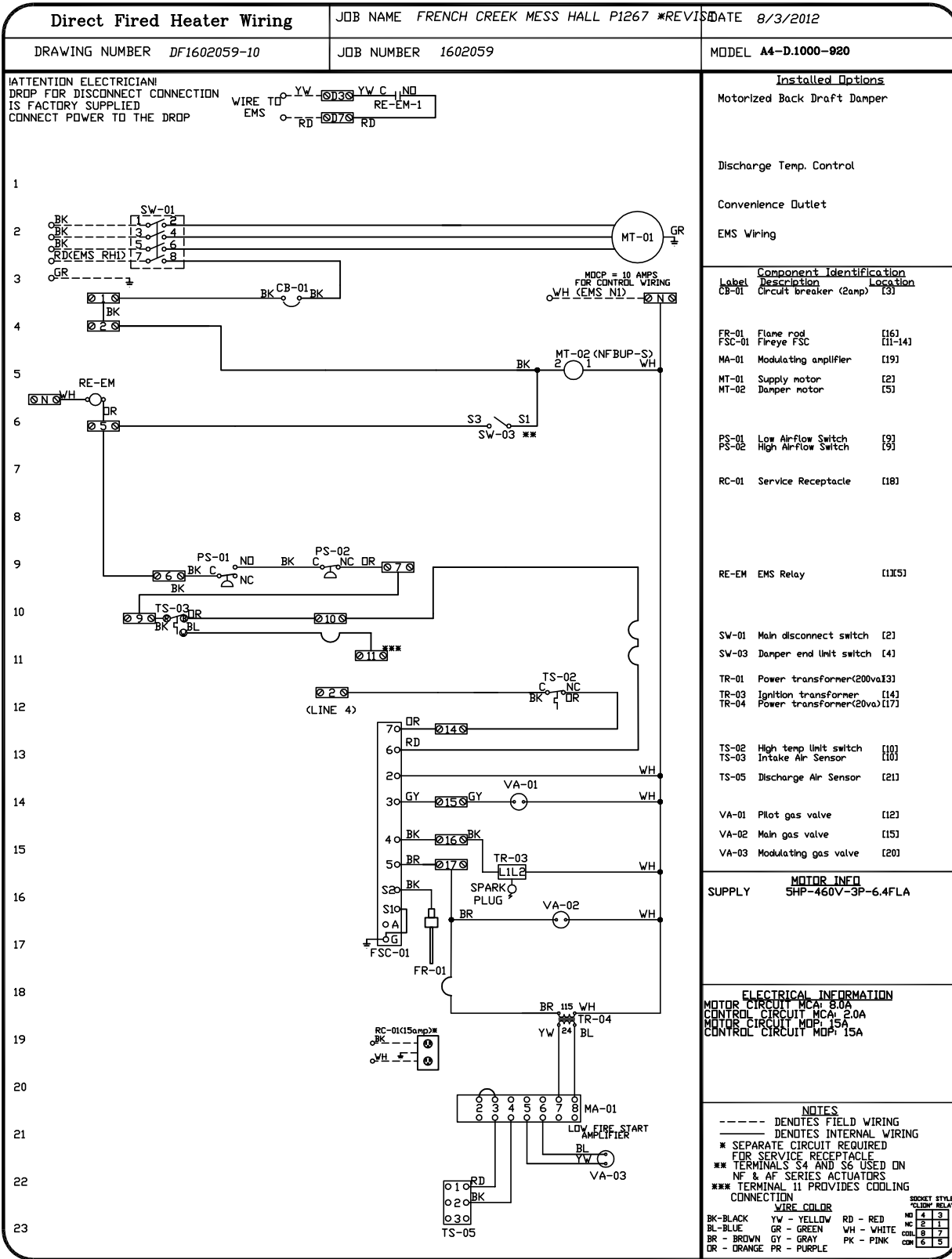
CAH 18 Supply Performance Curves

8180 CFM, 0.455 SP @ 730 RPM and 4.275 BHP at 29 feet and 57 deg F

* Please note that these curves were adjusted for job specific temperature and altitude.



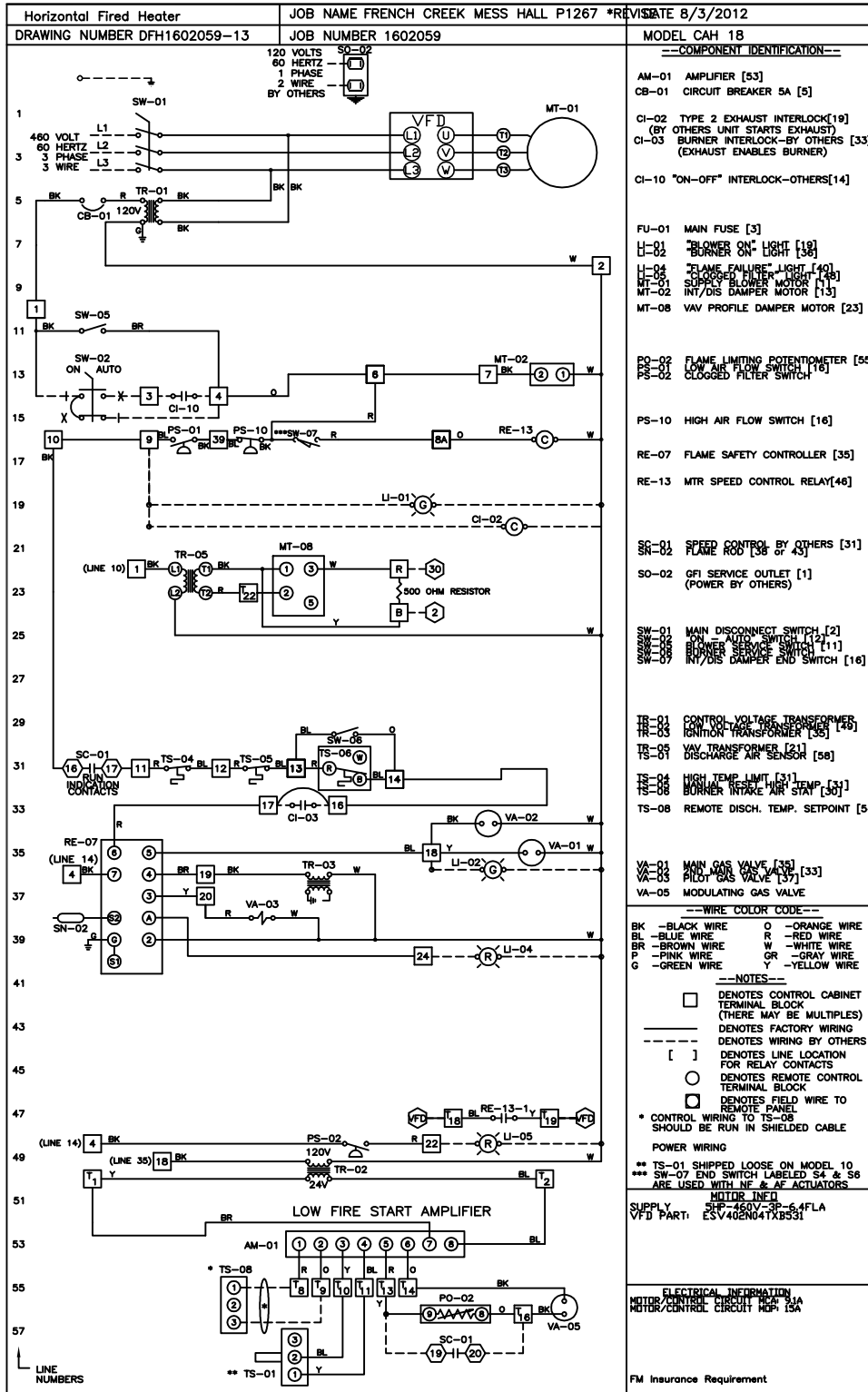
HEATER MAKE UP UNIT WIRING DIAGRAM MUA-1,2,3



JOB FRENCH CREEK MESS HALL P1267	
LOCATION CAMP LEJEUNE, NC	
DATE 8/3/2012	JOB # 1602059
DWG # 12	DRAWN BY JAW-36
REV. 2	SCALE 3/8" = 1'-0"

HEATER MAKE UP UNIT WIRING DIAGRAM MUA-4

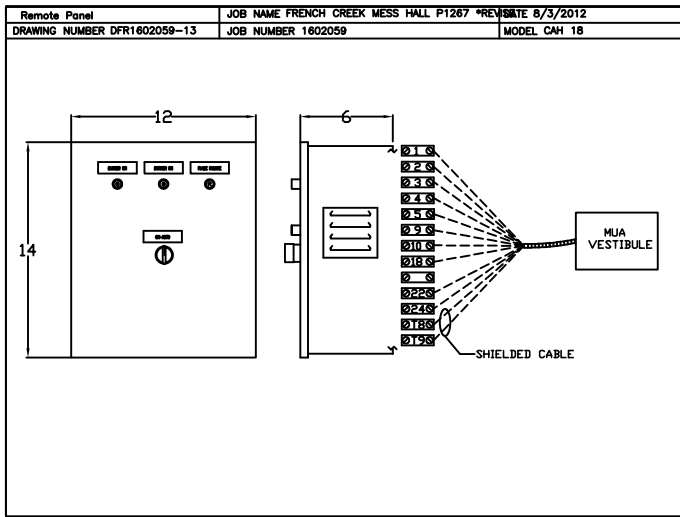
Building Static Pressure
Control with VFD included



JOB FRENCH CREEK MESS HALL P1267	
LOCATION CAMP LEJEUNE, NC	
DATE 8/3/2012	JOB # 1602059
DWG # 13	DRAWN BY JAW-36
REV. 2	SCALE 3/8" = 1'-0"

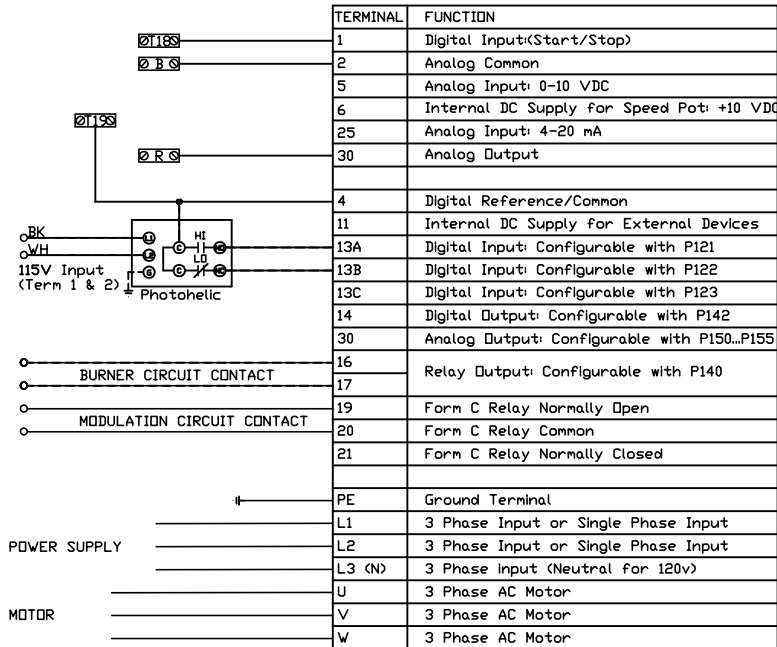
HEATER MAKE UP UNIT WIRING DIAGRAM MUA-4

Building Static Pressure
Control with VFD included



Static Pressure VFD Control

SMV SERIES VARIABLE FREQUENCY DRIVE



All external control wires to motor speed control should be 16-20 AWG shielded multiconductor cables and must not be run in the same conduit or raceway with any high power wiring. Ground Shielded Cable at the drive chassis ONLY.

PG. 11 OF THE DRIVE MANUAL DESCRIBES THE PROPER INSTALLATION PROCEDURE

PG. 19 OF THE DRIVE MANUAL DESCRIBES THE PROGRAMMING PROCEDURE OF THE DRIVE

PG. 23 OF THE DRIVE MANUAL DESCRIBES THE PARAMETER SETTINGS OF THE DRIVE

NOTE: THE DEFAULT PASSWORD FROM THE FACTORY REQUIRED TO PROGRAM THE DRIVE IS '225'.

DRIVE PARAMETER SETTINGS*

EPM PROGRAM IND_VAV_PRES
P100 (Start Source) = 01 (Terminal Strip)
P102 = ##Minimum Frequency (Hz)(Preset@30Hz)
P103 = ##Maximum Frequency (Hz)(Preset@60Hz)
P110 (Start Method) = 03 (Auto Re-start)
P121 (T13A) = 05 (NMP Down)
P122 (T13B) = 04 (NMP Up)
P136 (Preset Speed 6) = 45
P140 (Form A (NO) Relay) = 01 (Run)
P144 (Relay Inversion) = 00 (None)
P150 (T330 DUT) = 01 (0-10vdc)
P152 FREQ SCL = 55 (Hz that TB-30 = 10vdc)
P156 (T330 OFFSET) = 50 (% of P152, TB-30 is 0vdc)
P166 (Carrier Frequency) = 00 (4 kHz)
P171 (Current Limit) = 150 (% of Max I)
P400 (PROTODCL SELECT) = 1/0 MODULE (0)
P441 (RELAY 2 OUTPUT) = ABOVE #6 (7)

Adjust manually on all drives
P107 = 00 (If 120 or 208 VAC)
or 01 (If 230, 480 or 575 VAC)
P108 = Motor FLA x 100 / Drive Output Rating

CAPTIVE AIR

JOB FRENCH CREEK MESS HALL P1267	
LOCATION CAMP LEJEUNE, NC	
DATE 8/3/2012	JOB # 1602059
DWG # 14	DRAWN BY JAW-36
REV. 2	SCALE 3/8" = 1'-0"



Order # 1951369 - FRENCH CREEK MUA

Fan #1 A4-D.1000-920 (2779 lbs./158 curb)

Direct Gas Fired Heated Make Up Air Unit with 20" Blower and 24" Burner.

Supply Motor:

Model DTP0054, 5.000 HP, 3 Phase 460 V, 60Hz, 6.8 FLA, ODP, Premium (E-Plus3) Eff.

Supply Motor Pulleys:

<u>Part Type</u>	<u>Qty</u>	<u>Browning #</u>	<u>Turns Out</u>
Belt	2	BX70	
Blower Pulley	1	2BK90H	
Motor Pulley	1	2VP42 x 1 1/8	3.5

Burner:

Min Output BTU: 36,667 BTU/Hr
Max Output BTU: 1,100,001 BTU/Hr
Size: 24" long
Gas Type: Natural

Supply Performance:

Volume: 8180 cfm RPM: 686 TS: 3592 ft/min

SP: 1.256" w.g.
(0.250" Ext. + 0.230" Int. + 0.776" Opt.)

BHP: 4.039

Altitude: 0' Winter Entering Air
Dry Bulb Temp: 27°F

Output BTU: 472935 Temp Rise: 55°F

Input BTU: 514060

BTUs BASED OFF ACTUAL AIR DENSITY

DX Coil Entering Dry Bulb Temperature: 90°F

DX Coil Entering Wet Bulb Temperature: 79°F

DX Coil Leaving Dry Bulb Temperature: 59°F

DX Coil Leaving Wet Bulb Temperature: 59°F

DX Coil Total Capacity: 444.3 MBH

DX Coil Sensible Capacity: 271.3 MBH

DX Coil Latent Capacity: 173.0 MBH

Temperature drop calculations are based on tested data.

Supply Installation Information:

Gas Inlet Pressure: 7 in. w.c. - 14 in. w.c.

Insurance: No Insurance Requirement (ANSI)

Motor/Control Circuit: 9.1 Amps MCA, 15 Amps MOP, 460 V, 14 AWG Wire Min.

Supply Unit Voltage: 3 phs 460 V 60Hz

Construction Features

Housing constructed of heavy duty G90 galvanized steel • Forward curved centrifugal blower wheel • Vibration isolation • Adjustable drive assemblies • Adjustable motor mount • Ball bearing motors • Heavy duty, pre-lubricated bearings rated for 200,000 hours of operation • Static resistant belts • Service doors on both sides • Horizontal & down discharge • Large intake area ensures low pressure drop across unit • Spring loaded profile plates automatically adjust for any airflow - no manual setting required! • Weatherproof safety disconnect switch • Modular design provides design flexibility • Fully insulated casing

Blower:

20" forward curved, centrifugal blower. Permanently lubricated pillow-block ball bearings. Enamel finish. 5000-18000 CFM. 1-7/16" x 37.25" Shaft. 1100 max. RPM. Heavy duty angle iron frame. Used in heated and non-heated supply fans.

Temp Control:

RTC Solutions • 40-90°F Discharge Temp Control • Remote Panel

Intake:

V-Bank for Size # 4 Modular Heater. EZ Metal Mesh Filters. Includes screened intake. For outdoor installation.

Filters:

15x MV EZ Kleen Metal Mesh Filter. 16"x 20"x 2" Used for heater and supply fan intakes. (3412)

Curb & Supports:

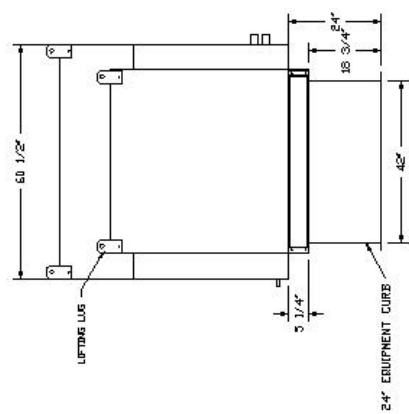
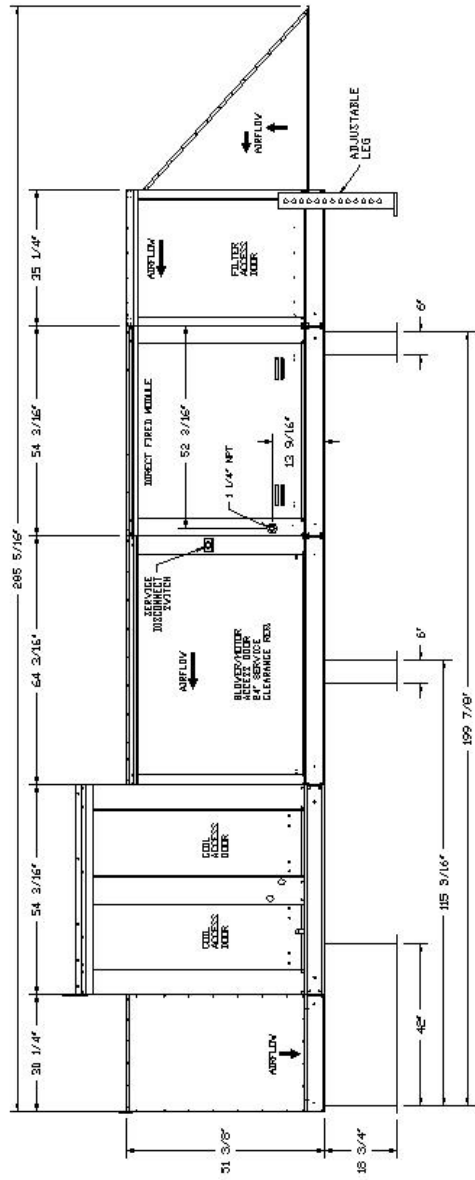
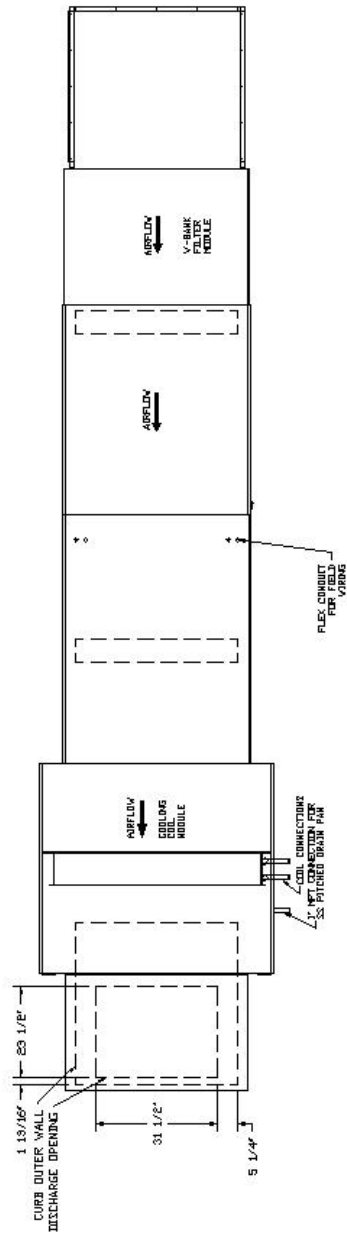
RAIL - 6" Width X 42" Length X 24" Height
Adjustable Equipment Legs, 36 in. high, set of 2
CURB - 42" Square X 24" Supply Height, Insulated
RAIL - 6" Width X 42" Length X 24" Height

Selected Options:

- Motorized Back Draft Damper 34" X 36" for Size 4 Standard & Modular Direct Fired Heaters w/Extended Shaft, Standard Galvanized Construction, 3/4" Rear Flange, NFBUP-S Actuator Included
- Cooling Interlock Relay. 24VAC Coil. 120V Contacts. Locks out burner circuit when AC is energized.
- Low Fire Start. Allows the burner circuit to energize when the modulation control is in a low fire position.
- Gas Pressure Gauge, 0-35", 2.5" Diameter, 1/4" Thread Size
- Gas Pressure Gauge, -5 to +15 Inches Wc., 2.5" Diameter, 1/4" Thread Size
- DX Coil Module for Size 4 Modular Fans - 7,000 thru 9,650 CFM (40 Ton - 2 Circuit DX Coil, 4EY1103H-52.5x48.0) DXM4-4. NOT BUILT WITH OPP SIDE CONTROLS. Condenser and condenser disconnect (unless provided on quote) will be installed, started and warranted by others. R410A refrigerant

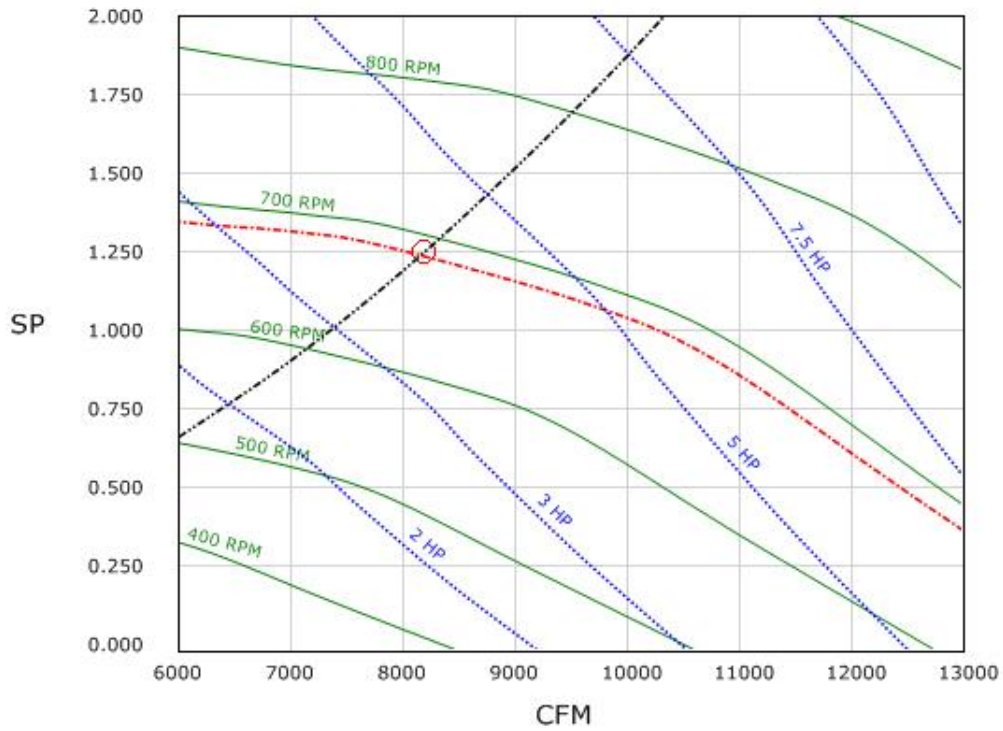
and piping by others. Ensure DX-Kit is ordered for filter drier, sight glass, thermal expansion valve. (Old Heatcraft Coil # 5EJ0904B-52.5x48.0)

- Downturn Plenum for Size 4 Cooling Coil Module - Required for Down Discharge Cooling Coil Applications
- 40 Ton, Dual Circuit Condensing Unit. 3 phase 460V. Air Cooled. Includes: Factory Installed Carrier Disconnect Switch, Solenoid Coil, Accumulator and Liquid Line Solenoid Valve. 10 week lead time. Shipping included in price. Ships from Charlotte, NC. Ships separate, freight included. R410A refrigerant and piping by others. 38APD04064-10020
- Clogged Filter Switch with Light on Remote Panel
- GFCI 15 amp Convenience Outlet For Heater Enclosure. Power supply by others - Includes receptacle and J box.
- DX 4-4 Kit R410A. Includes Filter Drier, Sight Glass, and Thermal Expansion Valve for DX units. Installation by others. Includes R410A TXV. Installation by others. Includes R410A TXV.
- VAV (Variable-Air-Volume) Wiring Package for Commercial Fans. Building Static Pressure Variable Frequency Drive Control Included
- Supply Variable Frequency Drive - 5 HP Max., 400/480 V, Three Phase, 9.4/8.2 A Max., NEMA 1 Enclosure, (Default Shipped Loose for Field Installation) PART NEEDS PROGRAMMING
- VFD factory mounted and wired on unit control panel.



8180 CFM, 1.256 SP @ 686 RPM and 4.039 BHP at 0 feet and 82 deg F

* Please note that these curves were adjusted for job specific temperature and altitude.



A4-D.1000-920 supply sound data @ 686 RPM:

LWA: 82.8 Sones: 22 DBA: 71.3

Octave 1	Octave 2	Octave 3	Octave 4	Octave 5	Octave 6	Octave 7	Octave 8
95.6	87.4	79.5	82.3	74.8	72.8	67.4	65.6

Customer:	Date:	3/31/2014
Contact:	From:	
Telephone:	Company:	
Cell:	Return Tel:	
Fax:	Return Fax:	
Job:		
Quote #:		

Construction

Item: FrenchCreekMUA
 Coils Per Bank: 1
 Tube OD IN: 5/8
 Style: EJ
 Fins Per Inch: 9
 Rows: 4
 Fin Surface: Optimize ABC
 Fin Height (IN): 52.50
 Finned Length (IN): 48.00
 Tubing Mat. (IN): 0.020 Copper
 Fin Mat. (IN): 0.0075 Aluminum
 Circuiting: Optimize
 Face Area (SQ FT): 17.50

Air Side

Air Flow (Sft^3/min) 8180.0
 Altitude FT: 0.00
 Ent. Air DB/WB °F: 90.00 / 79.00
 Lvg. Air DB/WB °F: 0.00 / 0.00
 Total / Sensible MBH: 444.0 / 0.00
 Max Air PD "H2O: 0.00

Refrigerant Side

Refrigerant: 410A
 Super Heat °F: 8.00
 Saturated Suction Temp °F: 45.00
 Liquid Temp °F: 110.0

OUTPUT DATA		Most Economical			Specified Coil		
		Coil 1	Coil 2	Coil 3	Coil 4	Coil 5 ✓	Coil 6
Model Number:						5EJ0904B	
Air Velocity:	(Sft/min)					467.4	
Total Capacity:	MBH					482.9	
Sens. Capacity:	MBH					215.3	
Lvg. Air DB:	°F					65.63	
Lvg. Air WB:	°F					64.32	
Standard APD	"H2O					0.38	
Code 18/19:						8009/20	
Code 18/19_2:						8008/20	
Suction Conn.:	IN					(2) 1.625	
Distributor Conn 1:	IN					(1) 1.125	
Distributor Conn 2:	IN					(1) 1.125	
Refg. PD:	lbf/in^2					2.65	
Refg. Velocity:	ft/min					1457.6	
Internal Volume:	in^3					2556.0	
Weight:	lbm					238.7	
Notes:						CJKM	
Price Each:	\$					0	
Total Cost (1):	\$					0	

Notes:

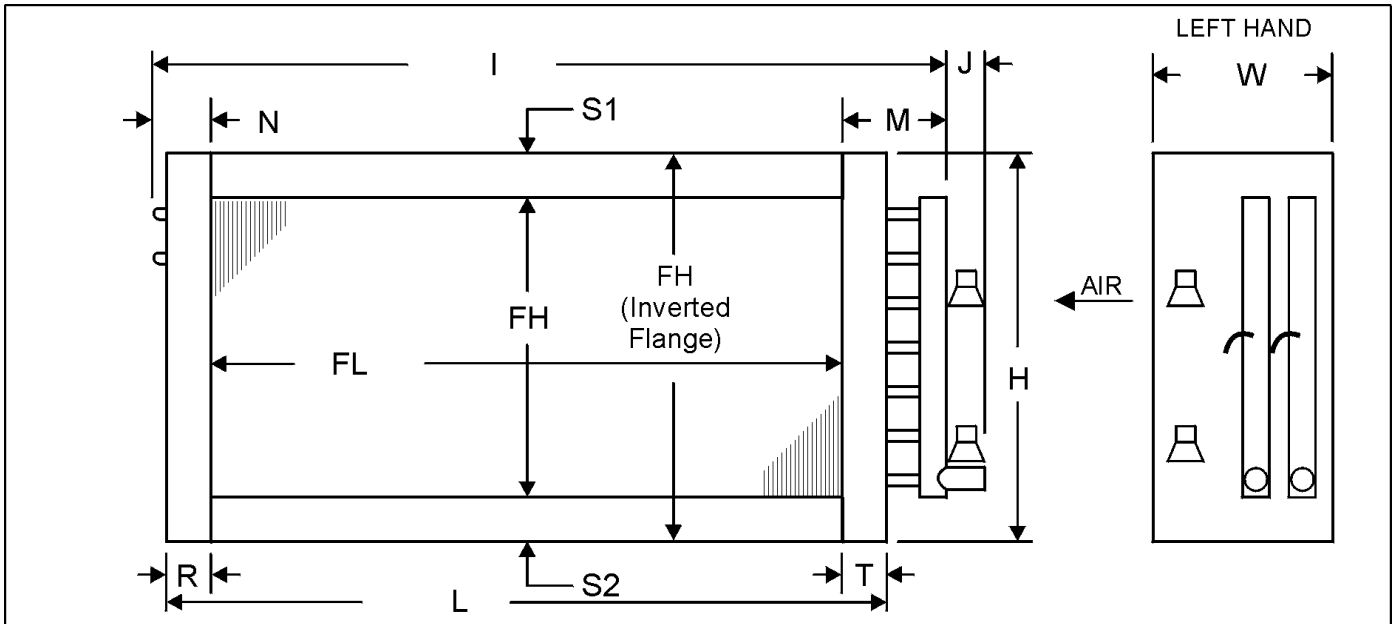
- C) Coil is NOT certified by AHRI.
- J) Coil Will Be Supplied With Multiple Distributors.
- K) Special Circuiting, Dead Tubes May Be Required, Consult Factory.
- M) Coil rating valid for Heatcraft coils only.

Customer:
Contact:
Telephone:
Cell:
Fax:
Job:
Quote #:

Date: 3/31/2014
From:
Company:
Return Tel:
Return Fax:

ITEM	QTY	MODEL NUMBER						HAND
		TYPE	FPI	ROWS	FIN	FH (IN)	FL (IN)	
FrenchCreekMUA	1	5EJ	09	04	B	52.50	48.00	Left

MATERIALS OF CONSTRUCTION		OPTIONS				
Finns	0.0075 Aluminum	Coating	None		Nitrogen Charge	Yes
Tubes	0.020 Copper	Casing Type	Flanged		Moisture Eliminator	No
Casing	Galvanized Steel	Bypass Kit Size	None		Mounting Holes	No
Conn. Material	Copper	Distributor Location	Connection End		Label Kit	No
Conn. Type	Sweat	Connection:	Sweat-Copper		Tube Ferrules	No
Weight (LBS)	239.0	Distributor #1	(1) 1.125 Code: 8017/17			
		Distributor #2	(1) 1.125 Code: 8017/17			
		Suction Connection	(2) 2.125			



DIMENSIONAL DATA(IN)																
A	B	C	D	E	F	H	I	J	L	M	N	R	S1	S2	T	W
0.00	0.00	0.00	0.00	0.00	0.00	55.50	56.25	6.00	51.00	5.75	2.50	1.50	1.50	1.50	1.50	7.50

NOTES:

GENERAL NOTES:

1. All dimensions are in (in)
2. Manually verifying dimensions is highly recommended.
3. The suction line should be connected to the lower connection on the entering air side for counterflow operation.
4. The supply line should be connected to the middle connection on the leaving air side for counterflow operation.
5. Headers are equipped with external equalizer connections.
6. Liquid distributor may extend beyond suction header.