

AIR HANDLING UNIT SCHEDULE

DESIGNATION	AHU-1	AHU-2	AHU-3	AHU-4
MANUFACTURER	McQUAY	McQUAY	McQUAY	McQUAY
MODEL NO.	CAH 01T	RDS 100B	RAH 04TC	RAH 04TC
SYSTEM	2ND FLOOR	FOOD COURT	2ND FLOOR	KITCHEN
CFM	7845	6245	15455	15065
OUTSIDE AIR - CFM	1645	1020	5125	11355
TOTAL STATIC PRESSURE (IN. W.C.)	3.5	3.5	3.5	3.5
FAN RPM				
BRAKE HORSEPOWER	12.5	5.8	14.2	13.8
MOTOR HORSEPOWER	15	7-1/2	20	20
VOLTAGE / PHASE	460/3	460/3	460/3	460/3
FAN SIZE / TYPE	14-1/2" / AF			

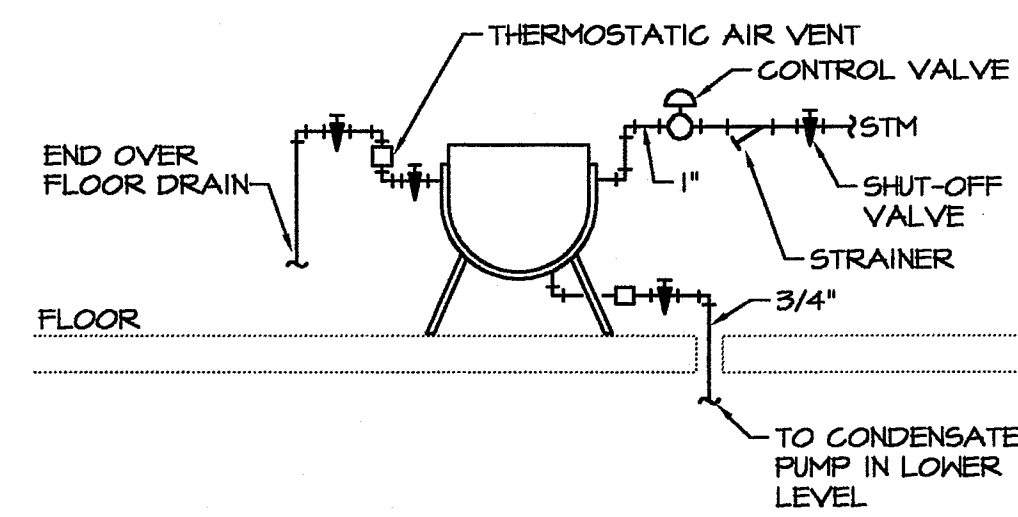
FACE AREA (SQ. FT.)	15.7	12.5	30.9	30.1
ENT. AIR (DB/WB)	82.4/61.6	81.1/66.8	86.3/70.1	95.8/75.6
LVG. AIR (DB/WB)	55/54	55/54	55/54	55/54
FINS/MIN. ROWS	12/2	12/2	12/2	12/2
TOTAL COOLING CAPACITY (MBH)	334.0	248.4	802.6	1121.4
SENSIBLE COOLING CAPACITY (MBH)	232.2	175.9	521.8	664.5
GPM @ 45 EWT, 10 WTD	67	50	161	226
AIR PRESSURE DROP (IN. W.C.)	1.0	1.0	1.0	1.0
WATER PRESSURE DROP (FT.)	15.0	15.0	15.0	15.0

FACE AREA (SQ. FT.)	16.75	12.5	30.9	30.1
ENT. AIR (DB/WB)	82.4/61.6	81.1/66.8	86.3/70.1	95.8/75.6
LVG. AIR (DB/WB)	55/54	55/54	55/54	55/54
MAX. FPI/MIN. ROWS	12/6	8/6	10/6	12/6
TOTAL COOLING CAPACITY (MBH)	328.6	248.4	802.6	1111.1
SENSIBLE COOLING CAPACITY (MBH)	232.2	175.9	521.8	664.5
AIR PRESSURE DROP (IN. W.C.)	.75	.54	.68	.75

ENT. AIR (DB)	NA	NA	43.5	10
LVG. AIR (DB)	NA	NA	60.0	90
TOTAL HEATING CAPACITY (KW) (MBH)	NA	NA	82 KH	—
STAGES OF HEATING	NA	NA	4	NA
STEAM #/HR	NA	NA	NA	1308
MINIMUM ROWS	NA	NA	NA	2
AIR PRESSURE DROP (IN. W.C.)	NA	NA	.05	.25

TYPE	2" THROW AWAY	2" THROW AWAY	2" THROW AWAY	2" THROW AWAY
MIN. SQ. FT. AREA	26.2	20.8	51.5	50.2
PANEL & CIRCUIT	MDPI	MDPI	MDPI	MDPI
WIRE & CONDUIT	3#10, #10G 3/4"C.	3#10, #10G 3/4"C.	4#10, #10G 1-1/2"C.	3#10, #10G 1"C.
OVERCURRENT DEVICE	25A-3P	20A-3P	150A-3P	60A-3P
DISCONNECT	—	—	—	—
STARTER	—	—	—	—
COMBINATION STARTER	YES (3)	YES (3)	YES (3)	YES
CONTROL SEQUENCE	(4)	(4)	(4)	(4)
VIBRATION ISOLATION	—	—	—	—
REFERENCE DRAWING/DETAIL	M4	ME3	ME3	ME3
REMARKS			(1)	(2)

- AHU-3 HEATING COIL IS AN ELECTRIC COIL IN THE PRE-HEAT LOCATION.
- AHU-4 HEATING COIL IS A STEAM COIL.
- STARTER/DISC. SW. IS PART OF VARIABLE FREQUENCY DRIVE THAT IS TO BE PROVIDED FOR THE UNIT. SEE SPECIFICATIONS, SECTION 15010.
- SEE SPECIFICATIONS, SECTION 15450.

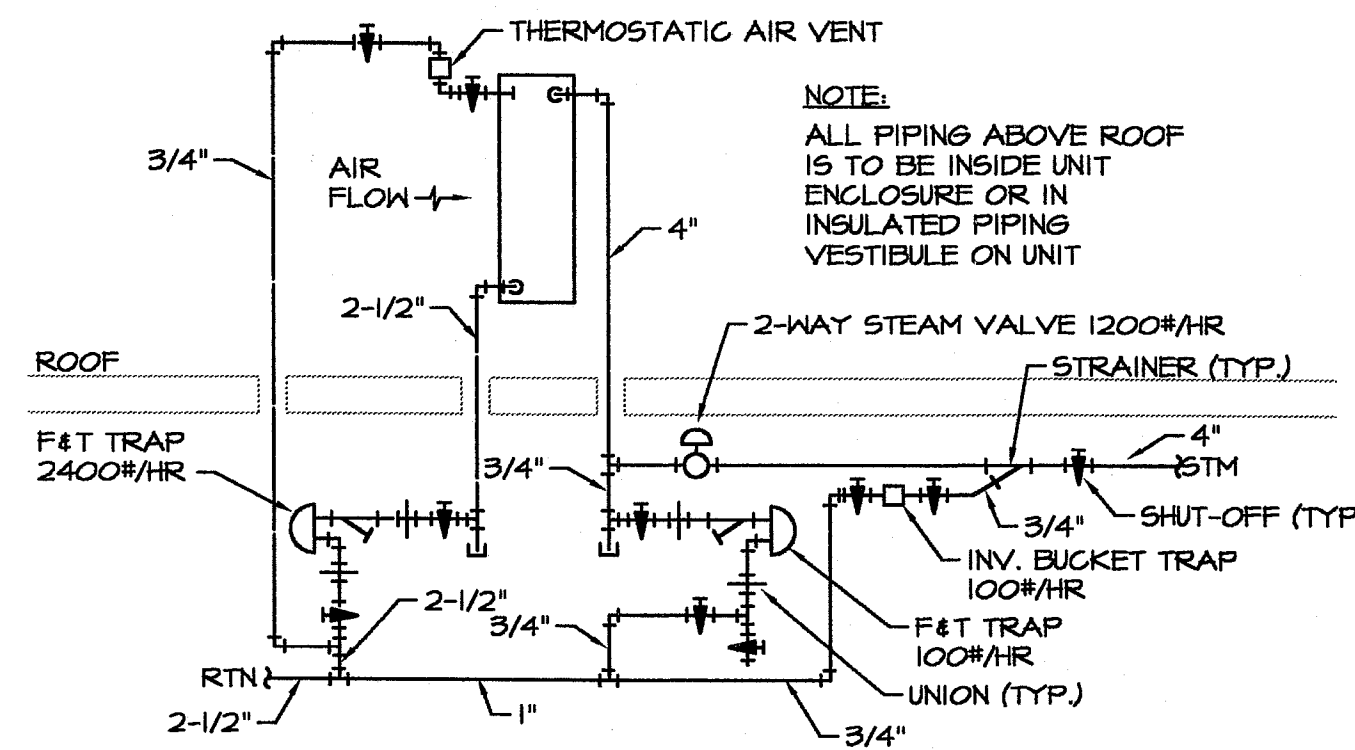


STEAM KETTLE PIPING DIAGRAM
NO SCALE

AIR COOLED CONDENSING UNIT SCHEDULE

DESIGNATION	ACCU-1	ACCU-2	ACCU-3	ACCU-4
MANUFACTURER	McQUAY	McQUAY	McQUAY	McQUAY
MODEL NO.	ALPO32C	ALPO2T	ACRO75AS	ACRO100AS
SYSTEM	AHU-1	AHU-2	AHU-3	AHU-4
MBH (1)	350	314	871	1178
AMBIENT AIR TEMP. (°F)	105	105	105	105
SUCTION TEMP. (°F)	44.5	40.2	44.9	45.3
NO. REFRIG. CKTS.	1	1	2	2
NO. COMPRESSORS	1	1	2	2
TOTAL COMPRESSOR HP	30	25	2835	2850
CONTROL STEPS	3	3	286	286
FANS (NO./HP)	3/1.0	3/1.0	4/2.0	6/2.0
MAXIMUM OVERCURRENT PROTECTION	80A	60A	200A	150A
MINIMUM WIRE SIZE	1/0	6	3/0	250
VOLTAGE/PHASE	480/3	480/3	480/3	480/3
PANEL & CIRCUIT	MDPI	MDPI	MDPI	MDPI
WIRE & CONDUIT	3#10, #10G 1-1/2"C.	3#6, #10G 1"C.	3#3/0, #6G 2"C.	3#250, #4G 2-1/2"C.
OVERCURRENT DEVICE	80A/3P	60A/3P	200A/3P	250A/3P
DISCONNECT	YES	YES	YES	YES
CONTROL SEQUENCE	SEE SPEC.	SEE SPEC.	SEE SPEC.	SEE SPEC.
VIBRATION ISOLATION	—	—	—	—
REFERENCE DRAWING/DETAIL	ME3	ME3	ME3	ME3
REMARKS				

(1) CAPACITY WHEN MATCHED WITH SCHEDULED AIR HANDLING UNIT.

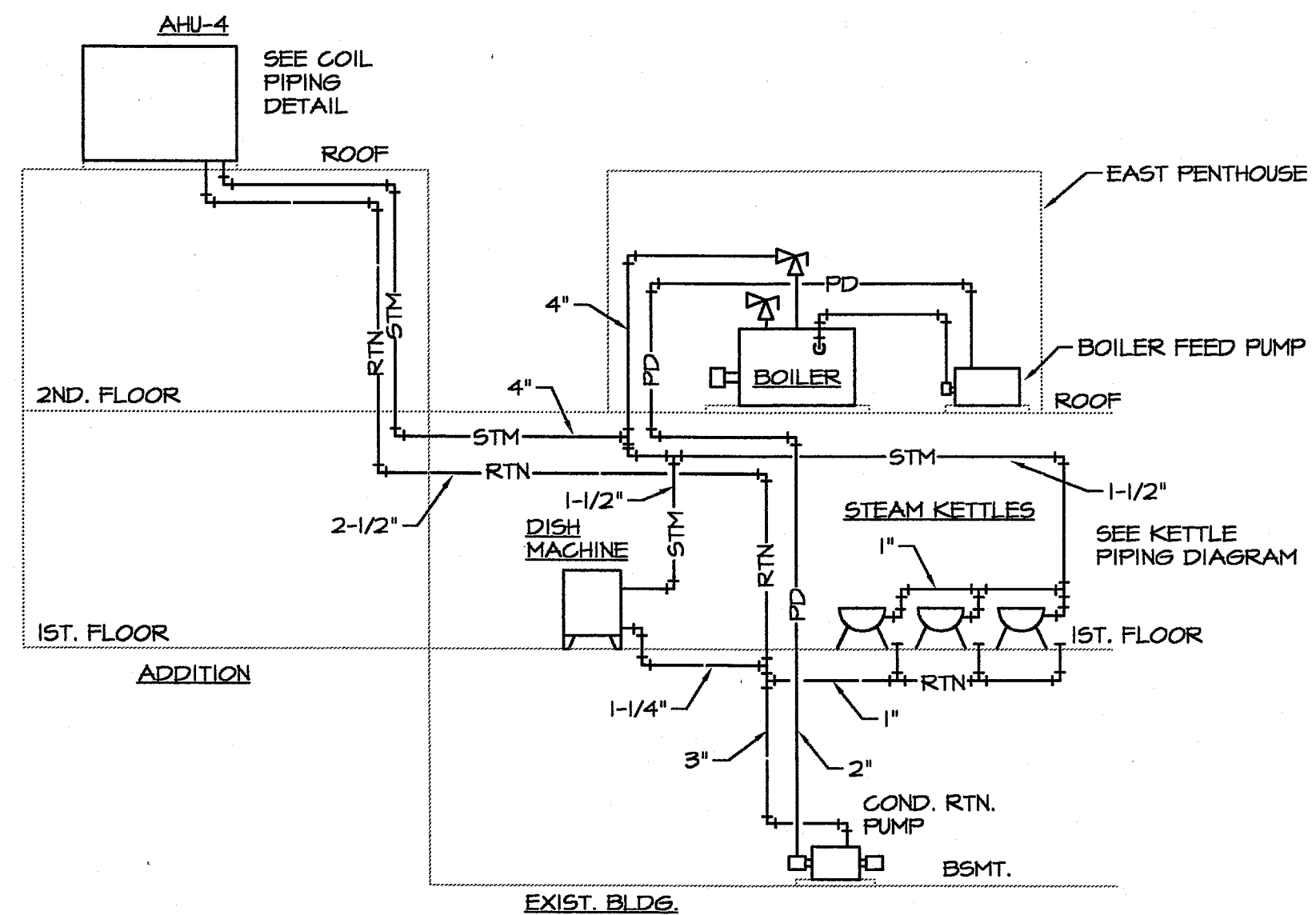


STEAM COIL PIPING - ROOFTOP AHU-4
NO SCALE

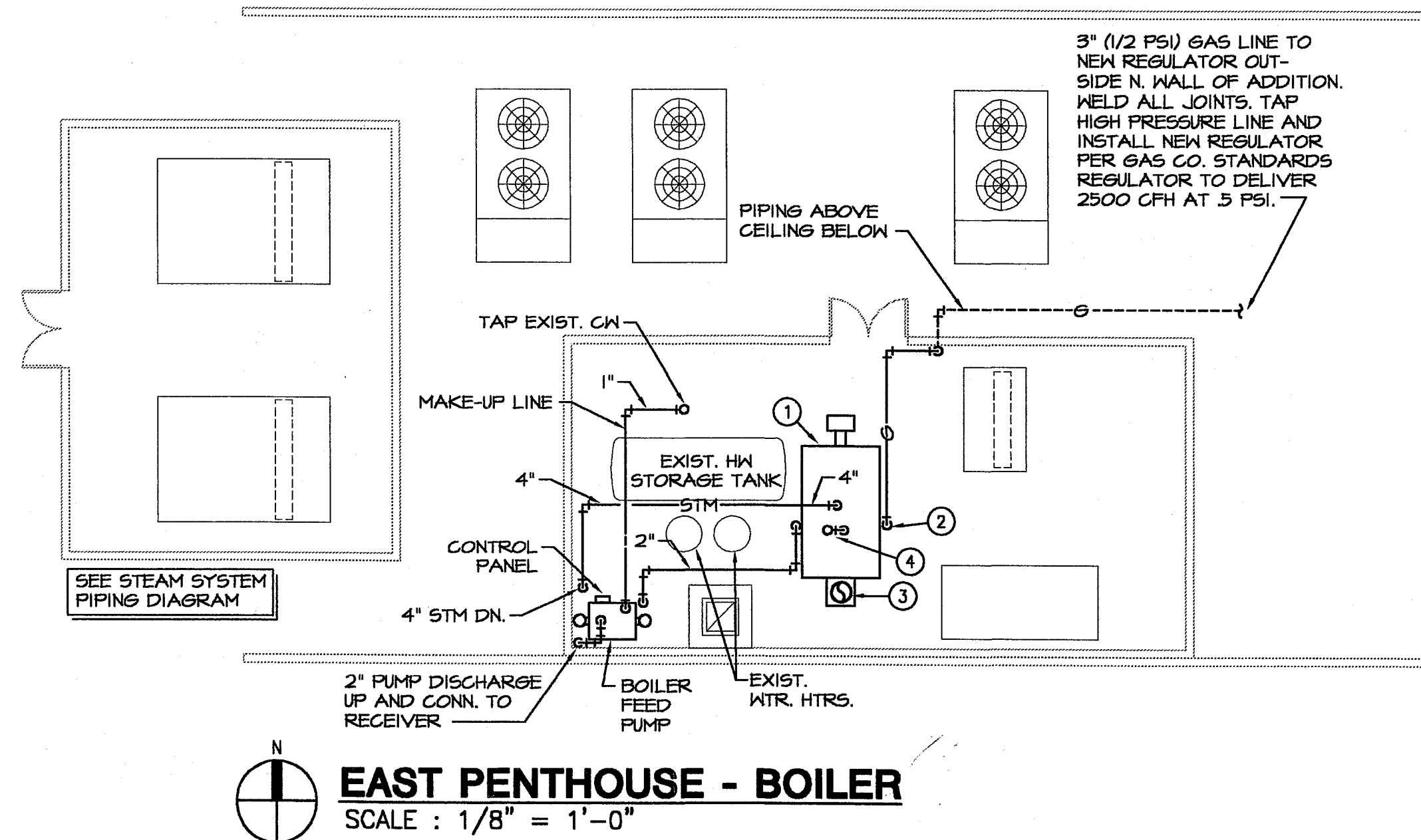
STEAM BOILER

DESIGNATION	B-1
MANUFACTURER	BRYAN
MODEL	RY-250
CAPACITY (MBH OUTPUT)	2006
BURNER MOTOR (HP)	2
VOLT/PHASE	480/3
LOCATION	EAST PENTHOUSE
PANEL & CIRCUIT	(1)
WIRE & CONDUIT	3-#12, 1-#126, 3/4" CONDUIT
OVERCURRENT DEVICE	15A/3P
DISCONNECT	YES
STARTER	—
COMBINATION STARTER	—
CONTROL	—
REFERENCE DRAWING/DETAIL	
REMARKS	

(1) PROVIDE A 15A/3P BREAKER IN A 480V. EXISTING EAST PENTHOUSE PANEL TO FEED "B-1", CONTRACTOR SHALL VERIFY THAT SPACE IS AVAILABLE.



STEAM SYSTEM PIPING DIAGRAM
NO SCALE

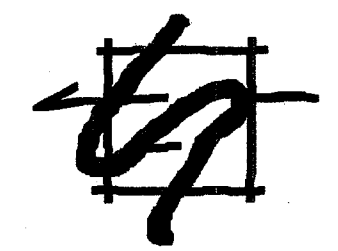
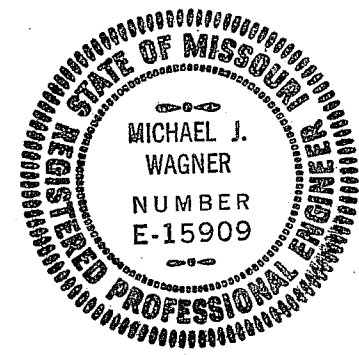


EAST PENTHOUSE - BOILER
SCALE: 1/8" = 1'-0"

- NOTES:**
- NEW GAS FIRED STEAM BOILER.
 - 4" GAS DOWN TO CONN. AT GAS TRAIL ON BOILER.
 - 12" POSITIVE PRESSURE FLUE UP THRU ROOF. TERMINATE WITH WEATHER CAP.
 - RELIEF VALVE PIPE UP THRU ROOF.

54B #921902

SMITH & BOUCHER, INC.
CONSULTING ENGINEERS
8620 WEST 110TH STREET
OVERLAND PARK, KANSAS 66210
(913) 345-2127
(913) 345-0617 (FAX)



ELLISON-AUXIER
ARCHITECTS INC.
924 FRANCIS ST. JOSEPH, MO 64501 (816) 233-8003 FAX 233-7793

PROJECT:
PROPOSED RENOVATIONS
STUDENT UNION
MISSOURI WESTERN STATE COLLEGE
4525 DOWNS DRIVE
SAINT JOSEPH, MISSOURI

SHEET:
MET

DATE: 12-8-98

PROJECT NAME:
MISC. STUDENT UNION
DRAWING FILE NAME:
BOUCHER.DWG
PLOT DATE:
12-3-98
LAST CORRECTION DATE:
12-3-98
PLOT DATE: