

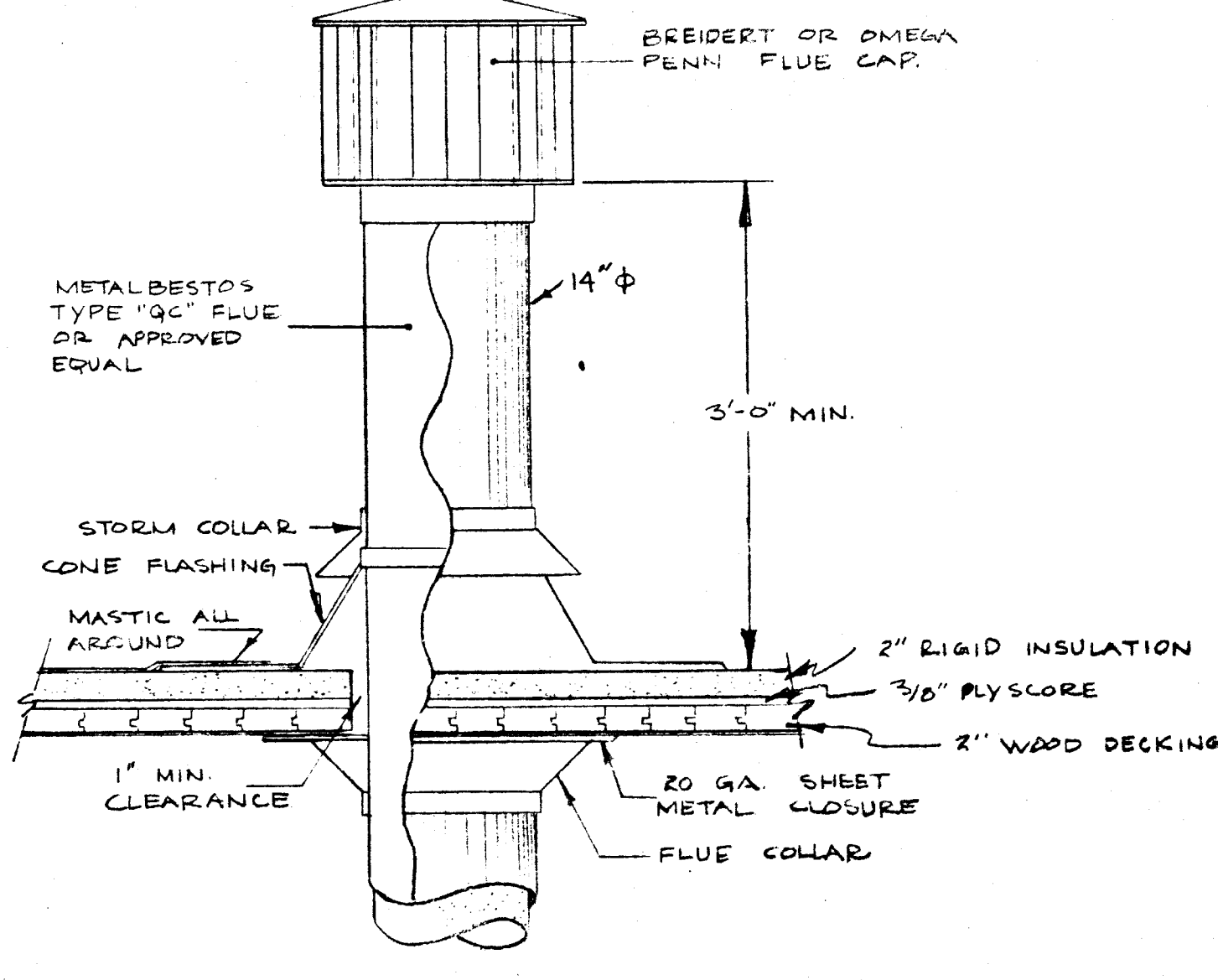
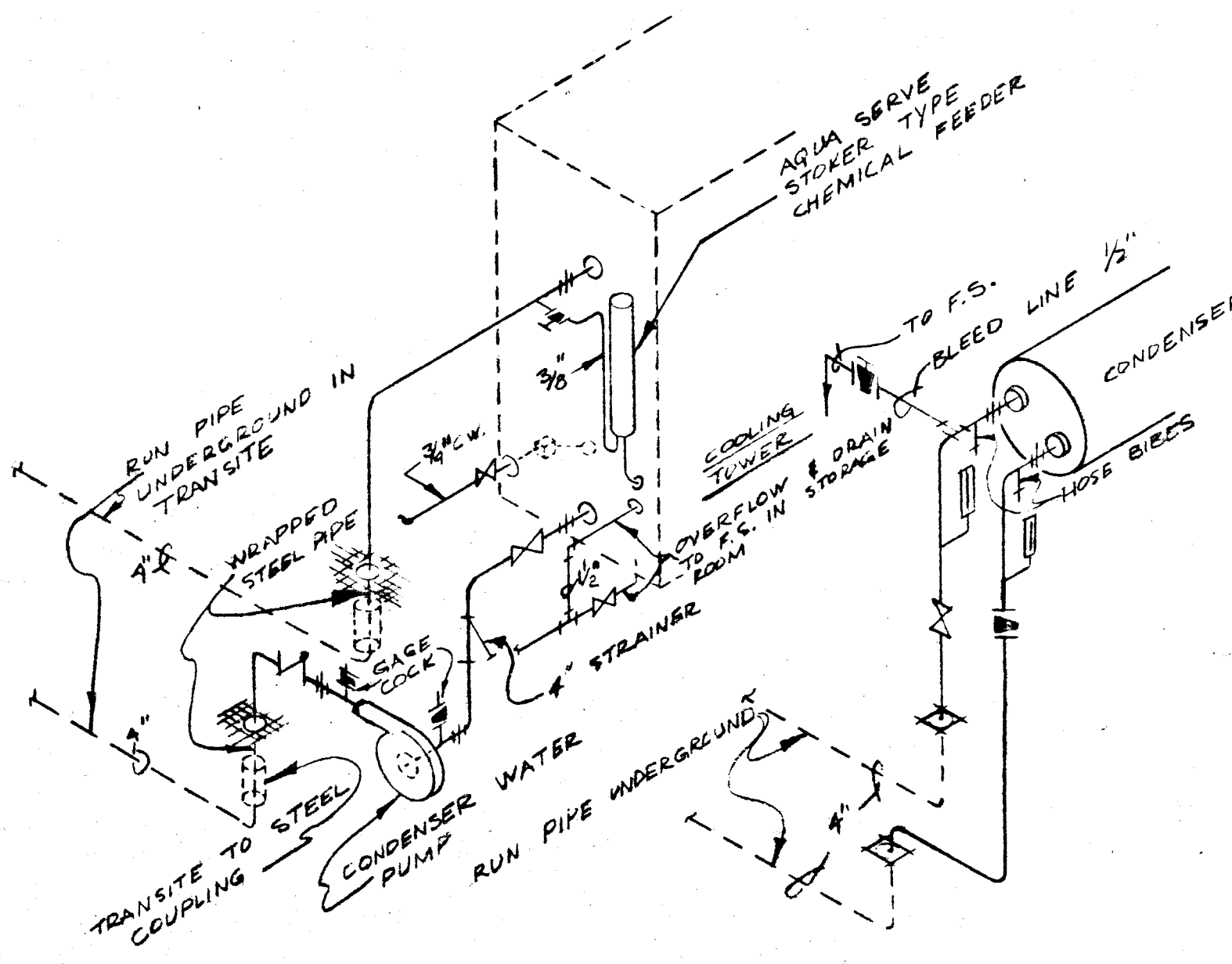
CHILLED WATER PIPING DIAGRAM
NOT TO SCALE

CHILLED & HOT WATER COIL ---
TYPICAL PIPING DIAGRAM
NOT TO SCALE

UNIT NO.	AREA SERVED	TYPE OF UNIT	BLOWER										COOLING COIL										HEATING COIL									
			STAT. PRESSURE			MOTOR			ENTERING AIR				LEAVING AIR			MAX. WATER			ENT. AIR			LVG. AIR			MIN. WATER			MAX. WATER				
			INCHES WG	EXT.	TOTAL	HP	VOLTS	PHASE	DRY BULB	WET BULB	LEWING	FACE AREA	GPM	FACE AREA	SO. FT.	IN. WG	SO. FT.	GPM	IN. WG	SO. FT.	GPM	IN. WG	SO. FT.	GPM	IN. WG	SO. FT.	GPM	IN. WG	SO. FT.			
1	AUDITORIUM	SINGLE ZONE	0.150	0.95	1.03	1.98	7/2	220	3φ	58	67	54	51.4	13.75	52	10																
2	GAME ROOM & OFFICE	SINGLE ZONE	0.100	0.40	1.10	1.85	2	220	3φ	51	67.5	54	51.4	5.62	16.5	10																

- A.C. UNITS 1 & 2 BASED ON TRANS CLIMATE CHANGERS
- PROVIDE RUBBER IN SHEAR ISOLATORS UNDER A.C. 1 & 2
- PROVIDE ADJUSTABLE SHEAVES SELECTED AT MIDPOINT OF ADJUSTMENT
- A.C. #1 & 2 TO HAVE C' CLEANABLE FILTERS.

AIR CONDITIONING SYMBOLS	
PIPING	VALVES
CH - CHILLED WATER SUPPLY	GL - GLOBE
CR - CHILLED WATER RETURN	CK - CHECK
HW - HEATING WATER SUPPLY	AE - ANGLE, ELEVATION
HR - HEATING WATER RETURN	AP - ANGLE, PLAN
C - CONDENSER WATER SUPPLY	RL - RELIEF
CR - CONDENSER WATER RETURN	PR - PRESSURE REDUCING
HPS - HIGH PRESSURE STEAM SUPPLY	DO - DIAPHRAGM OPERATED
HPR - HIGH PRESSURE STEAM RETURN	TRW - THREE WAY
LPS - LOW PRESSURE STEAM SUPPLY	SO - SOLENOID
LPR - LOW PRESSURE STEAM RETURN	PC - PET COCK
CD - CONDENSATE PUMP DISCHARGE	FL - FLOAT
FD - FEEDWATER PUMP DISCHARGE	MO - MOTOR OPERATED
CW - CIRCULATING WATER SUPPLY	MISCELLANEOUS
CRW - CIRCULATING WATER RETURN	MTW - THERMOMETER TEST WELL
RG - REFRIGERANT, HOT GAS	EJ - EXPANSION JOINT
RL - REFRIGERANT, LIQUID	FC - FLEXIBLE CONNECTION
RS - REFRIGERANT, SUCTION	ST - STRAINER
D - DRAIN	AAV - AUTOMATIC AIR VENT
BD - BOILER BLOW DOWN	AI - PIPE ANCHOR
FITTINGS	EL - EXPANSION LOOP
EO - ELBOW, TURNED DOWN	PG - PIPE GUIDE
ET - ELBOW, TURNED UP	TC - THERMOMETER
EC - REDUCER, CONCENTRIC	PS - PRESSURE SAUCE
ER - REDUCER, ECCENTRIC	SG - SIGHT GLASS
ED - TEE, OUTLET DOWN	TL - THERMOSTAT
EU - TEE, OUTLET UP	TR - THERMOSTAT REMOTE BULB
EB - BRASS	TRB - THERMOMETER REMOTE BULB
EP - ORIFICE PLATE	



CONDENSING WATER PIPING DIAGRAM
NO SCALE

BOILER FLUE DETAIL
NO SCALE

FAN SCHEDULE									
UNIT NO.	AREA SERVED	CFM	STATIC PRESSURE IN WG	MOTOR HP	VOLTAGE & PHASE	TYPE	MAX. OUTLET VELOCITY FPM	MAX. TIP SPEED FPM	REMARKS
1 & 2	TOILET AREA	510	1/10	1/10	115 1φ	ROOF VENTILATOR, BELT DRIVEN, LOW CONTOUR.		2420	PENN. NO. LC-15
3	HOOD EXHAUST KITCHEN					BY KITCHEN EQUIPMENT SUPPLIER.			
4	GAME ROOM	500	1/10	1/10	115 1φ	ROOF VENTILATOR, BELT DRIVEN, LOW CONTOUR.		2420	" " " "
5	OFFICE TOILET	60	1/10	1/10	115 1φ	LOW CONTOUR W/ BACKDRAFT DAMPER, ROOF MOUNTED		2199	GREENHECK AJ-8-24-E

- A.C. CONTRACTOR TO FURNISH & INSTALL DUCT & VENT HOOD FROM EF-#3

PUMP SCHEDULE									
PUMP	DESIGN POINT #1	DESIGN POINT #2	MOTOR	MIN. CONN. SIZE	TYPE	REMARKS			
CHILLED & HOT WATER	68 45 68	150 25 54	2 220 3φ	2 1/2	SINGLE SUCTION, BASE MTD, 1750 RPM, MESH SEAL	BELL & GOSSET 150-B 2 AB			
CONDENSER WATER	125 40 69	160 35 55	3 220 3φ	2 1/2	SINGLE SUCTION, BASE MTD, 1750 RPM, MESH SEAL	BELL & GOSSET 150-B 2 AB			

1. MOUNT PUMPS ON 4" CONCRETE PADS.
2. PUMP TO HAVE T.E.P.C. MOTOR

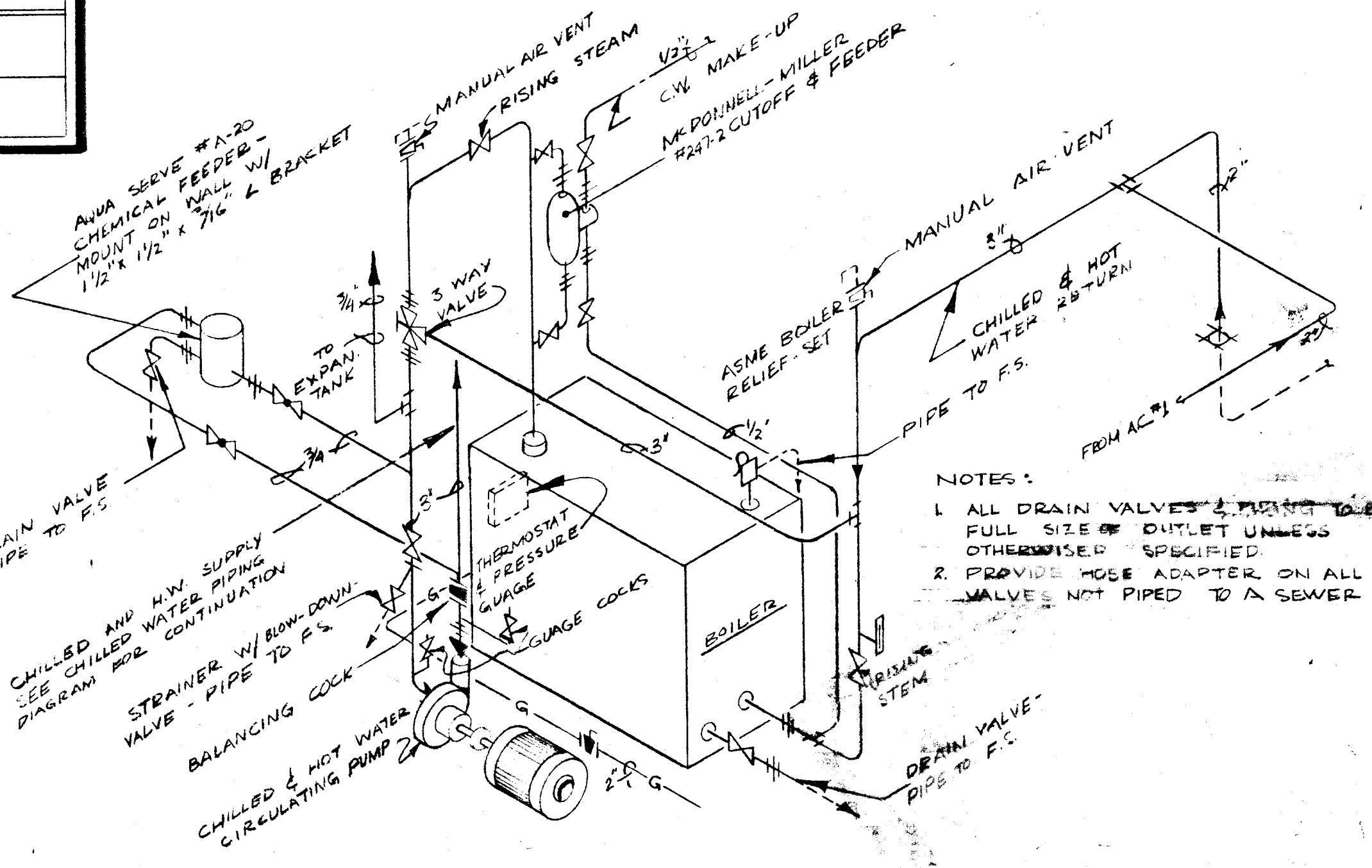
BOILER SCHEDULE				
UNIT	MBH INPUT	MBH OUTPUT	VOLTS	MAX. MODEL NUMBER
1	650	680	115	WG-350

COOLING TOWER SCHEDULE						
UNIT	GPM	TEMP DEG. F FROM	TEMP DEG. F TO	WET BULD	FAN MOTOR	MARLEY MODEL NUMBER
1	125	95°	85°	75°	1.5 220 3φ	PERMATOWER 5030

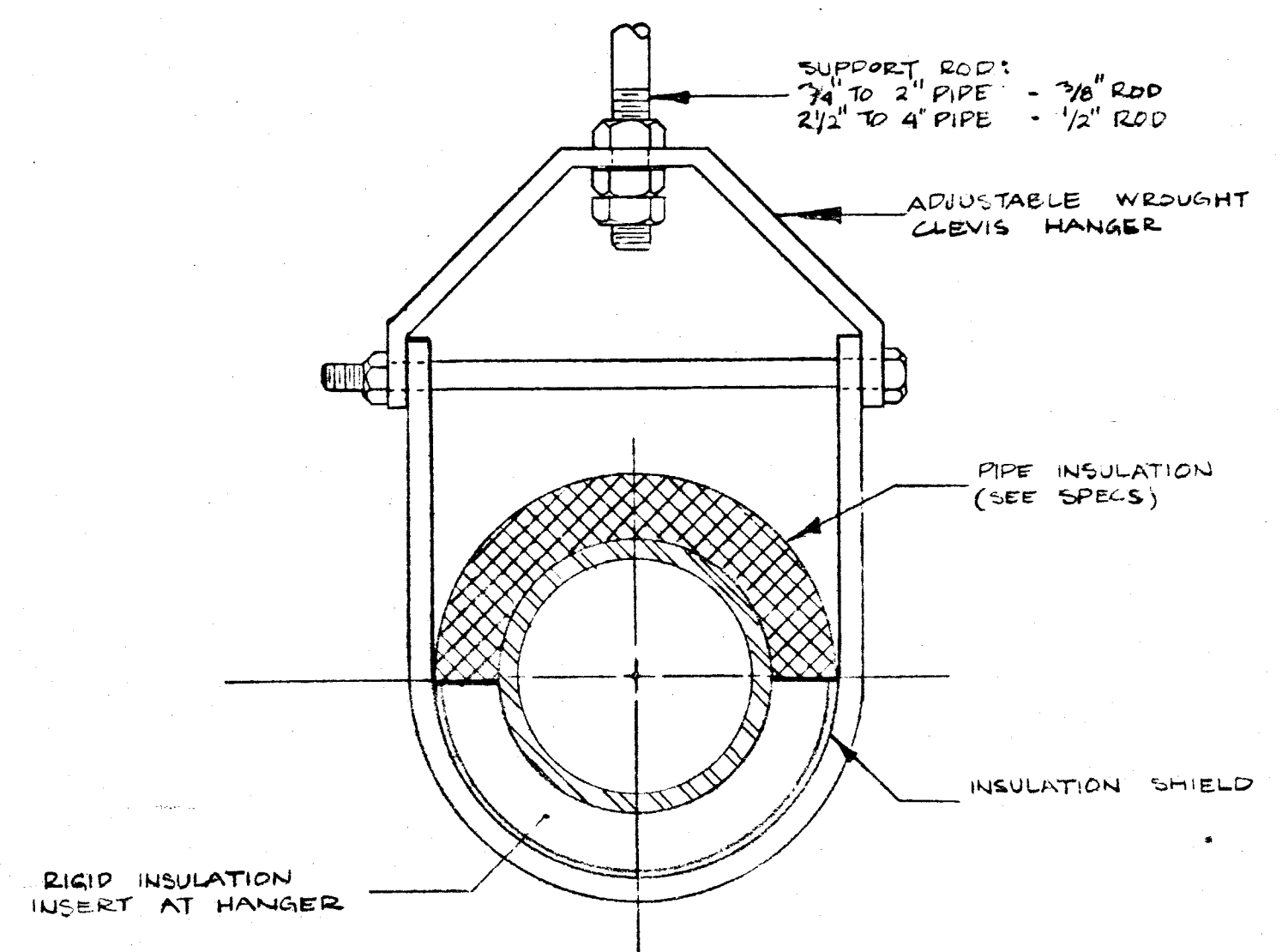
1. FAN MOTOR TO HAVE T.E.P.C. MOTOR

CHILLER SCHEDULE									
LOCATION	CHILLER CAPACITY	COND. CAPACITY	ELECT. CHARACTERISTICS	TRANE MODEL					
EQUIPMENT ROOM	90 55 45	12 125 85 95	11 20 3 126 044	CG 40B					

1. CAPACITY BASED ON .0005' BULBING FACTOR IN CONDENSER & EVAPORATOR
2. REDUCED VOLTAGE OR INCREMENT STARTING REQUIRED.



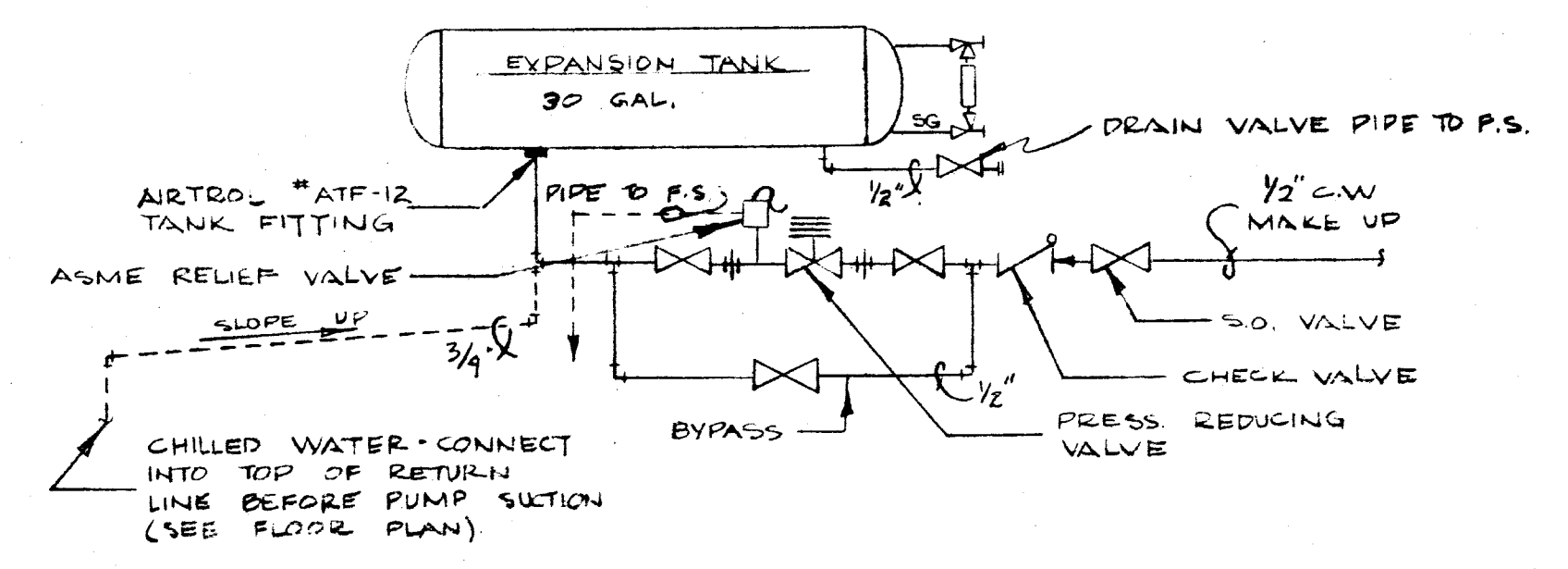
BOILER PIPING DIAGRAM
NO SCALE



PIPE SIZE	SHIELD LENGTH	U.S. GAUGE FOR SHIELD
UP TO 2 1/2"	8"	10
3" TO 5"	12"	18

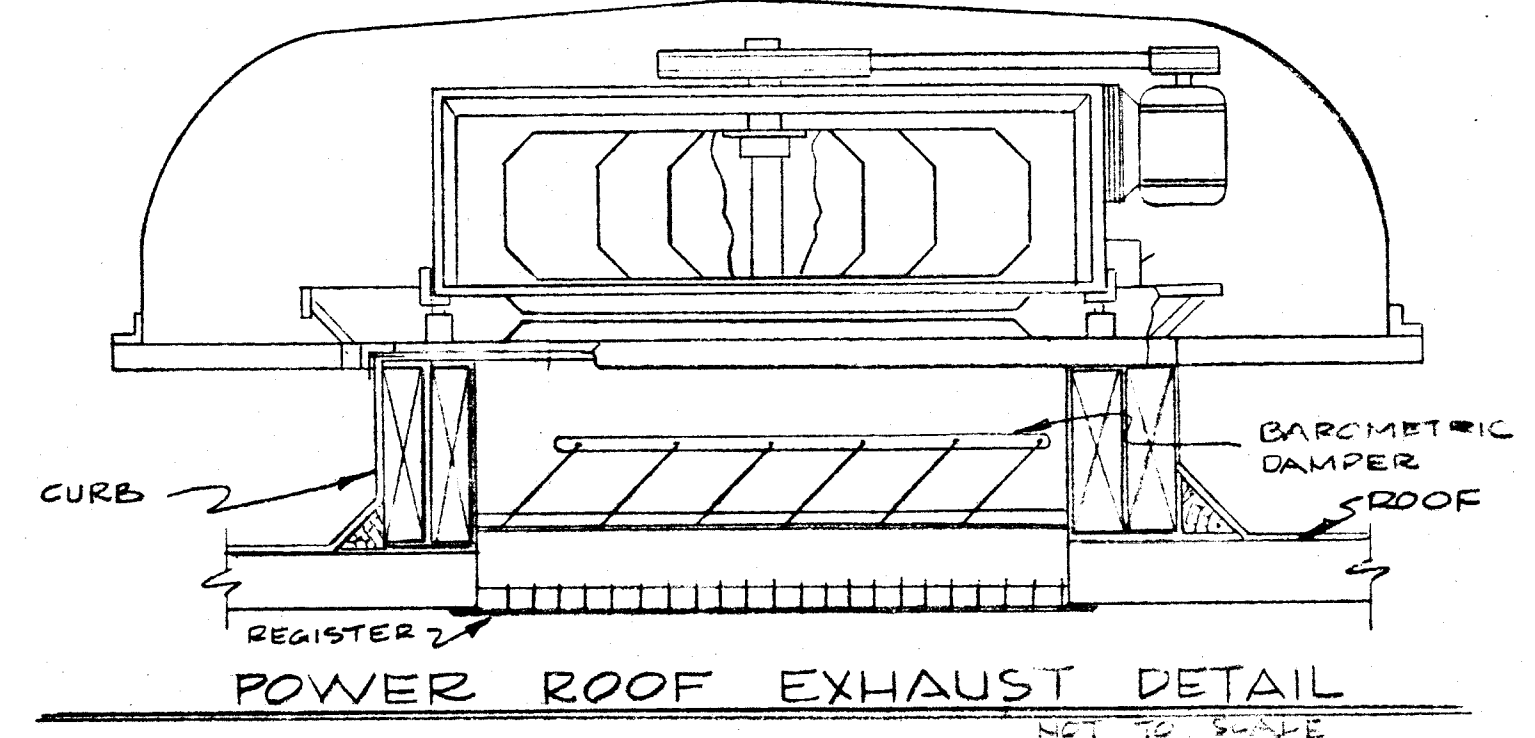
1. RIGID INSULATION INSERT SHALL BE 4" LONGER THAN SHIELD LENGTH

PIPE SUPPORT DETAIL
NO SCALE



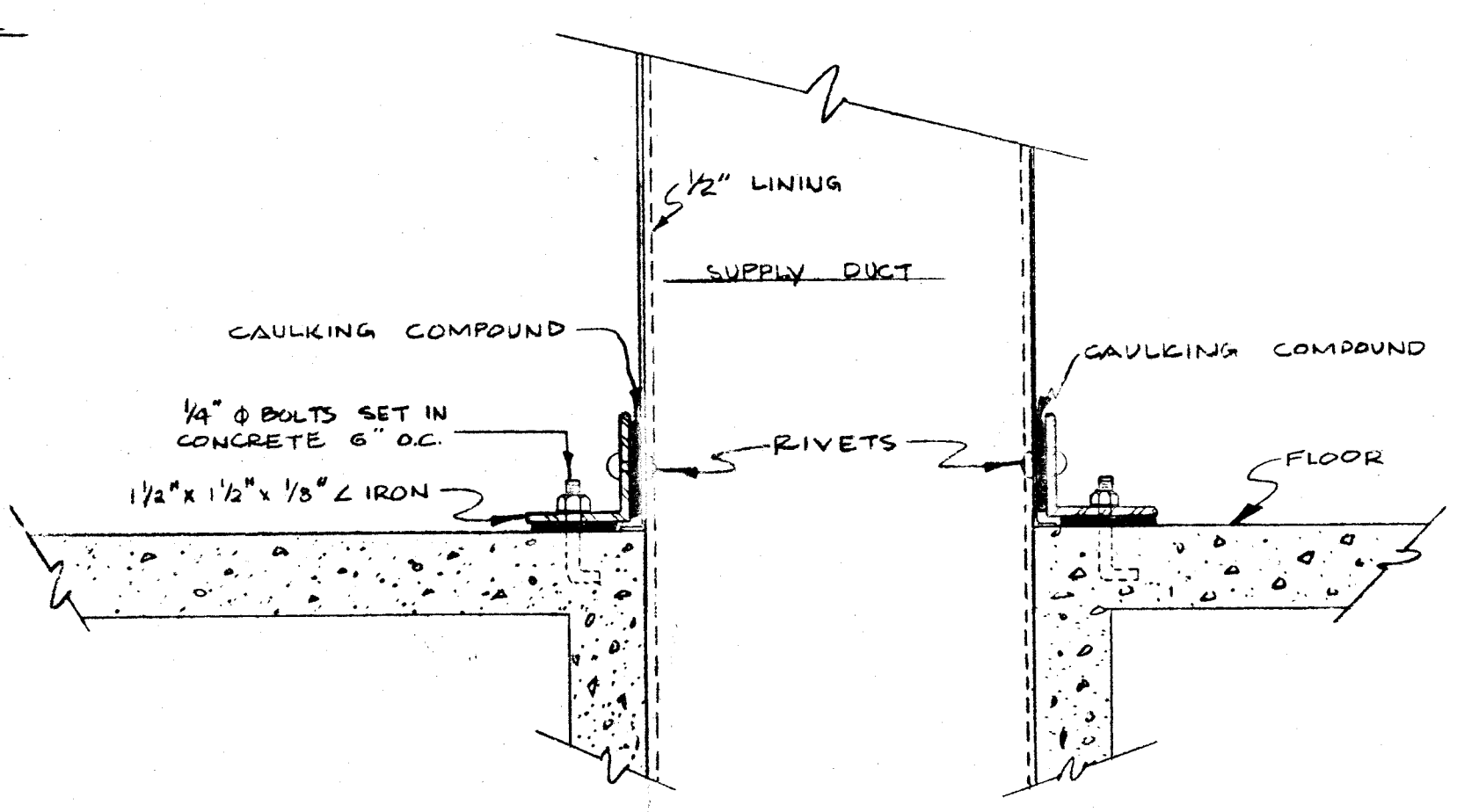
1. EXPANSION TANK TO BE SUSPENDED ON (2) 2" x 1/4" BRACKETS W/ 1/4" SADDLE WELDED TO BRACKET, TIE DOWN W/ 1/4" STEEL STRAP USING 3/8" NUTS, BOLTS & LOCK WASHERS. SUPPORT TANG ON 4 POINTS FOR EVEN WEIGHT DISTRIBUTION USING 3/8" & RODS DOUBLE NUTTED AND SECURED FROM UNISTRUT CODE DEVICE OR APPROVED EQUAL

EXPANSION TANK PIPING DIAGRAM
NOT TO SCALE

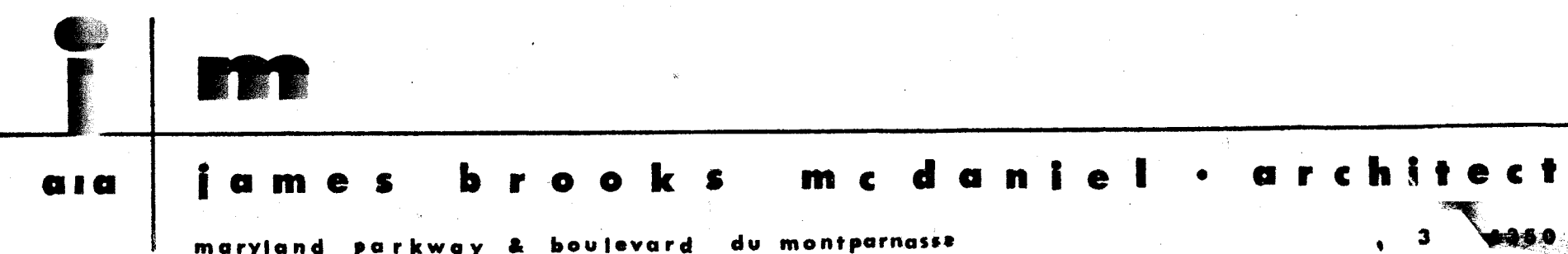
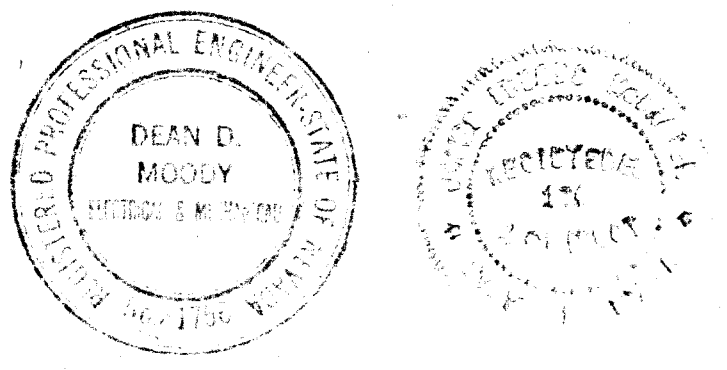


1. COMBUSTION AIR INTAKE, FRESH AIR INTAKE INSTALLATION SIMILAR TO ABOVE.

POWER ROOF EXHAUST DETAIL
NOT TO SCALE



DETAIL OF DUCT TO FLOOR CONNECTION
NOT TO SCALE



drawn by: K.V.J.
checked by: E.A.A.
job number: 62-14
scale: AS NOTED
date: MARCH 15, 1965

AIR CONDITIONING 513-27B
EQUIPMENT SCHEDULE & DETAILS
46. FIRST DRAINING MAY 8, 1965 513-27B sheet title

no.	date	revision	by	chk
1				
2				

job title: RECREATION CENTER
CITY OF LAS VEGAS
LAS VEGAS, NEVADA

sheet number: 12