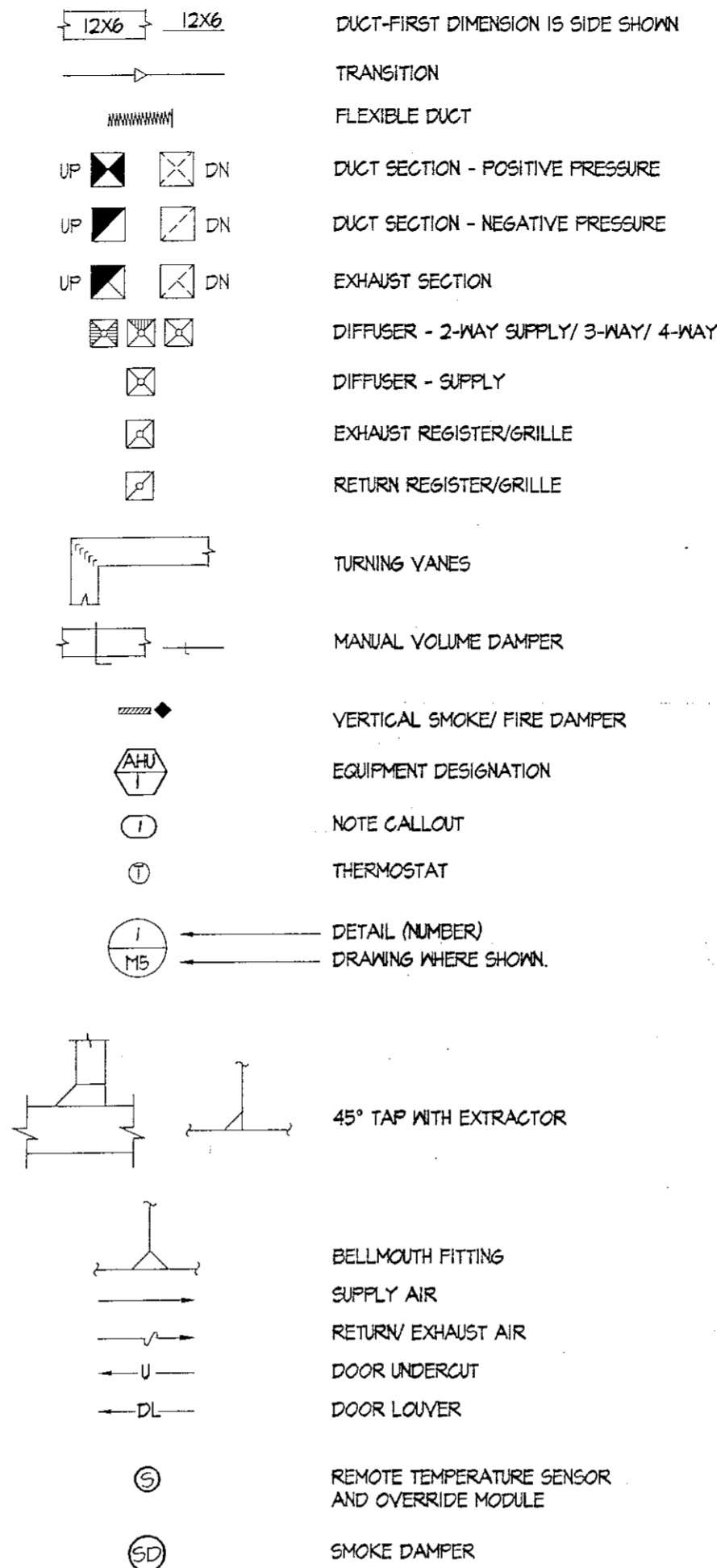


ABBREVIATIONS

ABBREVIATION	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
BHP	BRAKE HORSEPOWER
BTUH	BRITISH THERMAL UNIT PER HOUR
BDD	BACK DRAFT DAMPER
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
DDC	DIRECT DIGITAL CONTROLS
DB	DRY BULB TEMPERATURE
DL	DOOR LOUVER
DN	DOWN
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
EFF	EFFICIENCY
EG	EXHAUST GRILLE
ESP	EXTERNAL STATIC PRESSURE
EWI	ENTERING WATER TEMPERATURE
FFM	FEET PER MINUTE
FD	FIRE DAMPER
FLR	FLOOR
FLA	FULL LOAD AMPS
FV	FACE VELOCITY
GA	GAUGE
GPM	GALLONS PER MINUTE
HZ	HERTZ
HP	HORSEPOWER
IN	IN OR INCHES
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MCA	MINIMUM CIRCUITING AMPS
MFR	MANUFACTURER
MIN	MINIMUM
MOC	MAXIMUM OVER CURRENT PROTECTION
OPER	OPERATING
OSA	OUTSIDE AIR
PH	PHASE (ELECTRICAL)
PSI	POUNDS PER SQUARE INCH
RA	RETURN AIR
RS	RETURN GRILLE
RFM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SEH	SENSIBLE BTUH/1000
TMEH	TOTAL BTUH/1000
TT	TEMPERATURE TRANSMITTER
UON	UNLESS OTHERWISE NOTED
V	VOLT
VVT	VARIABLE VOLUME/VARIABLE TEMPERATURE SYSTEM
WB	WET BULB TEMPERATURE
WC	WATER COLUMN

LEGEND



GENERAL NOTES

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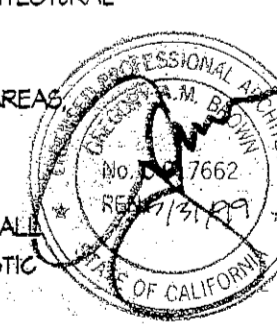
	FIXED EQUIPMENT ON GRADE	20% OF OPERATING WEIGHT
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DRAWING LIST

M1	GENERAL NOTES, LEGEND, ABBREVIATIONS
M1-1	SCHEDULES
M2	FLOOR PLAN
M2-1	UTILITY ROOM FLOOR PLAN
M3	MECH. ROOM, CONTROL DIAGRAM & SEQUENCE OF OPERATION
M4	DETAILS
M5	T-24 REQUIREMENTS

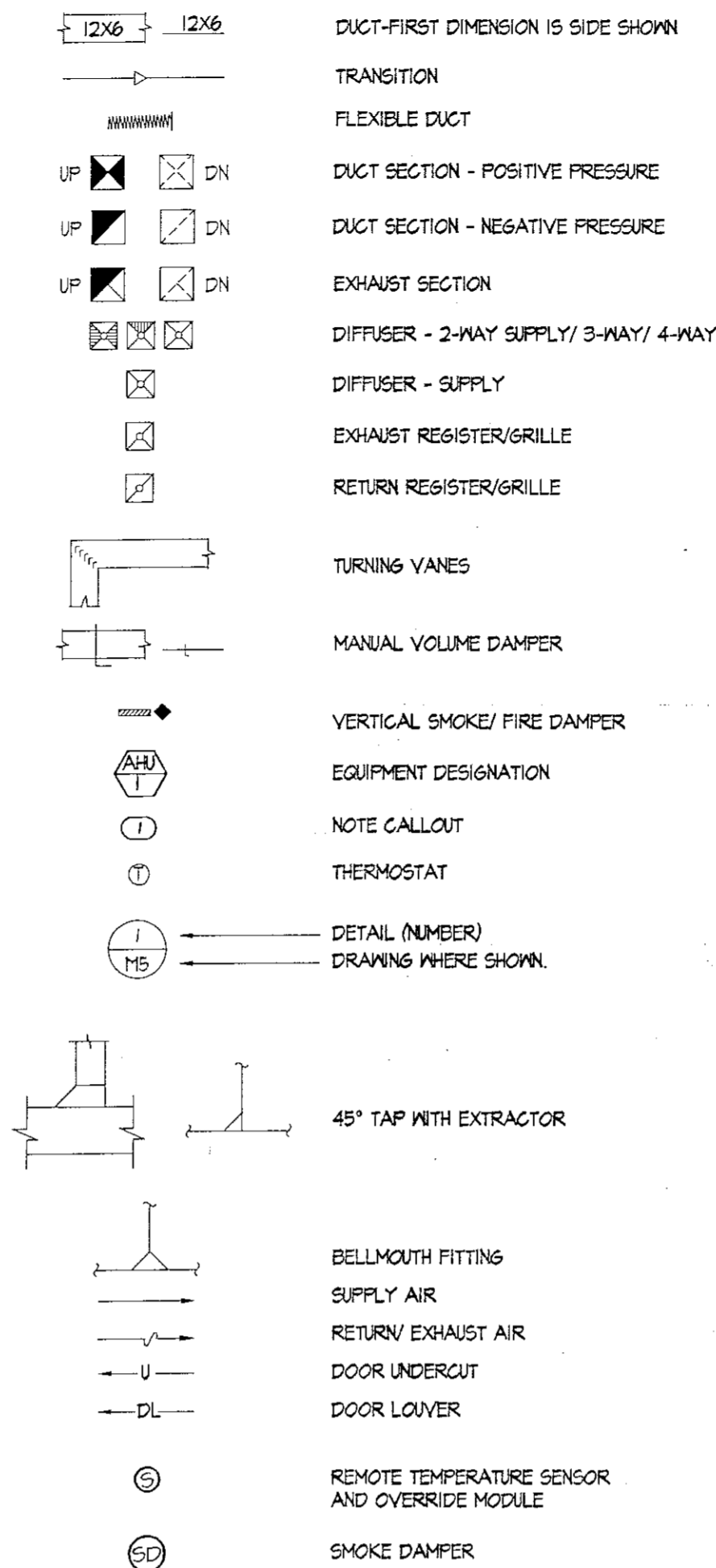
REV	DATE	DESCRIPTION
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1		
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3		
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5		

SCHEDULES

AIR HANDLING UNITS

MARK	MFR & MODEL	SERVICE	SA FAN									DX COIL				HEATING CAPACITY (GAS)							EA FAN			REMARKS			
			AIRFLOW CFM	TSP	ESP "WG	RPM	BHP	HP	RPM	EFF%	V/PH	TOT MEH	SENS MEH	ROWS FINS	REFRIG.	INPUT MEH	OUTPUT MEH	AUE %	EAT °F	LAT °F	NAT GAS CU FT/HR	CONNECTION (GTY) SIZE	TSP IN °F	RPM	(GTY) HP		FILTERS QTY. - SIZE (IN)	OSA CFM	OPER MT LBS
AHU-1	ENERGY LABS PF-6	WEST AREA	6,000	4	1.5	2162	6.94	7.5	1800	91.7	460/3	207	170	6-8	R22	150	120	80%	60.6	79.1	150	1/2	0.6	1479	3	(2) 24"x24"x2" (2) 12"x24"x2"	1380	5,900	
AHU-2	ENERGY LABS 1-80	EAST AREA	6,000	4	1.5	2162	6.94	7.5	1800	91.7	460/3	-	-	-	-	210 (2)	216 (2)	80%	24	95.7	340	(2) 1/2	-	-	-	(4) 24"x24"x2" (2) 12"x24"x2"	6,000	9,000	24V THERMOSTAT PROVIDED BY MANUFACTURER PROVIDE TWO FURNACES

CONDENSING UNIT

MARK	MFR & MODEL	SERVICE	NAMEPLATE		COOLING CAPACITY					PIPING CONN INCHES		REFR CHARGE	OP MT LBS	REMARKS
			ELA MCA MOCP	V/PH	AMB °F	TOT MEH	DISCH TEMP °F	SUCT TEMP °F	INPUT KW	SUCT	LIQUID			
CU-1	TYPHOON 46150-00	AHU-1	31.6 - -	480 3	93	207	110	42	-	(2)1-3/8	(2)1-1/8	R-22	1060	

INDIRECT EVAPORATIVE COOLER

MARK	MFR & MODEL	LOCATION	SERVICE	AIRFLOW CFM	EAT °F	LAT °F	EFF %	WET SIDE FAN					PUMP		OPER MT. LBS	REMARKS
								QTY	SIZE	HP	CFM	TSP	HP	V/PH		
IVC-1	ENERGY LABS -	AHU-2	EAST AREA	6,000	93	74.7	70.5%	1	#30	1.0	8,000	0.5	1/2	460/3	-	THIS IS PART OF AHU-2

EXHAUST FANS

MARK	MFR & MODEL	SERVICE	LOCATION	FAN			MOTOR				OPER MT LBS	REMARKS
				AIRFLOW CFM	ESP "WG	RPM	(W) HP	V/PH	BHP	SONES		
EF-1	LOREN COOK 245 CFV	BUILDING EXHAUST	MECH. ROOM EAST	6500	1.5	1006	3	460/3	2.53	14.5	445	
EF-2	LOREN COOK GEMINI 5-10	TOILET EXHAUST	CEILING SPACE	210	0.25	1050	(8)	115/1	-	1.6	32	PROVIDED WITH BACK DRAFT DAMPER
EF-3	LOREN COOK GEMINI 5-10	TOILET EXHAUST	CEILING SPACE	150	0.25	1200	1/6	115/1	-	8.4	70	PROVIDED WITH BACK DRAFT DAMPER
EF-4	LOREN COOK GEMINI 5-10	TOILET EXHAUST	CEILING SPACE	150	0.25	1200	1/6	115/1	-	8.4	70	PROVIDED WITH BACK DRAFT DAMPER
EF-5	LOREN COOK GEMINI 5-10	TOILET EXHAUST	CEILING SPACE	150	0.25	1200	1/6	115/1	-	8.4	70	PROVIDED WITH BACK DRAFT DAMPER
EF-6	LOREN COOK 210 SQN-B	EXHAUST	EXPOSED CEILING SPACE	4900	7/8	1077	2	460/3	157	-	300	
EF-7	LOREN COOK GEMINI 5-10	TOILET EXHAUST	CEILING SPACE	150	0.25	1200	1/6	115/1	-	8.4	70	PROVIDED WITH BACK DRAFT DAMPER
EF-8,1	LOREN COOK TO SQN-B	EXHAUST	EXPOSED CEILING SPACE	280	1/2	1484	1/6	115/1	0.13	13.3	80	

GRILLES, REGISTERS, DIFFUSERS

MARK	DESCRIPTION	MATERIAL	TYPE	FRONT BLADES	DAMPER	FINISH	REMARKS
CD-1	TITUS PCS CEILING DIFFUSERS	STEEL	2x2 LAY-IN TEE BAR	PERFORATED	NO	WHITE	
CD-2	TITUS TDC CEILING DIFFUSER	STEEL	SURFACE MOUNT	CONCENTRIC	NO	WHITE	
RG-1 & EG-1	TITUS PAR RETURN GRILLE	STEEL	2x2 LAY-IN TEE BAR	PERFORATED	NO	WHITE	
RG-2 & EG-2	TITUS 350 FL RETURN GRILLE	ALUMINUM	SURFACE MOUNT	HORIZONTAL	NO	WHITE	
SR-1	TITUS 300 RL SUPPLY REGISTER	STEEL	SURFACE MOUNT	VERTICAL	NO	WHITE	

ZONE DAMPERS

MARK	LOCATION	AHU	SERVICE	SIZE	MFR & MODEL	MAX CFM	MIN CFM	THERMOSTAT	TRANSFORMER	REMARKS
ZD-1	WEST SIDE CEILING	AHU-1	LIFEGUARD	12"	CARRIER ZD-12	500	250	CARRIER 33C5ZC--PI	115/24V	PROVIDE W/ PRESSURE INDEPENDENT CONTROL
ZD-2	WEST SIDE CEILING	AHU-1	OFFICE	10"	CARRIER ZD-10	300	150	CARRIER 33C5ZC--PI	115/24V	PROVIDE W/ PRESSURE INDEPENDENT CONTROL
ZD-3	WEST SIDE CEILING	AHU-1	OFFICE	12"	CARRIER ZD-12	480	150	CARRIER 33C5ZC--PI	115/24V	PROVIDE W/ PRESSURE INDEPENDENT CONTROL
ZD-4	WEST SIDE CEILING	AHU-1	OFFICE & CORRIDOR	14"	CARRIER ZD-14	750	150	CARRIER 33C5ZC--PI	115/24V	PROVIDE W/ PRESSURE INDEPENDENT CONTROL
ZD-5	WEST SIDE CEILING	AHU-1	CLASSROOM	12"	CARRIER ZD-12	600	120	CARRIER 33C5ZC--PI	115/24V	PROVIDE W/ PRESSURE INDEPENDENT CONTROL
ZD-6	WEST SIDE CEILING	AHU-1	CLASSROOM	12"	CARRIER ZD-12	500	100	CARRIER 33C5ZC--PI	115/24V	PROVIDE W/ PRESSURE INDEPENDENT CONTROL
ZD-7	EAST SIDE CEILING	AHU-1	COACHES	10"	CARRIER ZD-10	350	70	CARRIER 33C5ZC--PI	115/24V	PROVIDE W/ PRESSURE INDEPENDENT CONTROL
ZD-8	EAST SIDE CEILING	AHU-1	RECEP. & REGIS.	12"	CARRIER ZD-12	450	90	CARRIER 33C5ZC--PI	115/24V	PROVIDE W/ PRESSURE INDEPENDENT CONTROL
ZD-9	WEST SIDE CEILING	AHU-1	LOBBY	16"	CARRIER ZD-16	1000	200	CARRIER 33C5ZC--PI	115/24V	PROVIDE W/ PRESSURE INDEPENDENT CONTROL
ZD-10	WEST SIDE ELECT. ROOM	AHU-1	LOBBY & ELECT. RM.	16"	CARRIER RDC824	1150	230	CARRIER 33C5ZC--PI	115/24V	PROVIDE W/ PRESSURE INDEPENDENT CONTROL

BYPASS DAMPER

MARK	LOCATION	AHU	SERVICE	MFR & MODEL	MAX CFM	BYPASS CFM	PRESSURE SENSOR	REMARKS
BD-1	WEST SIDE CEILING	AHU-1	AHU-1	CARRIER 35PSA-18-050	5,000	8,000	PS02	PROVIDE W/ PRESSURE INDEPENDENT CONTROL



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artech
DESIGN
GROUP

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Mainst Creek, CA 94546
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08-04-18

Permit Submittal

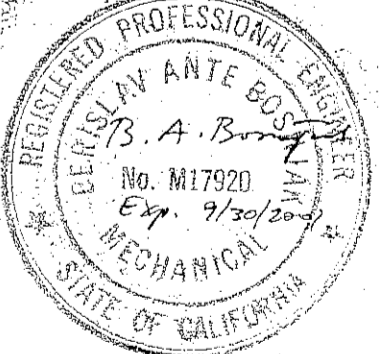
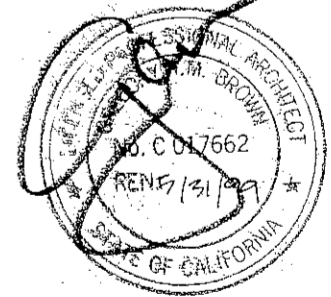
316 Issue

Construction Issue

Revision

REV	DATE	DESCRIPTION
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SAN RAMON OLYMPIC POOL
AQUATIC CENTER
9900 Broadmoor Drive, San Ramon, CA



Project No.

2143

Scale

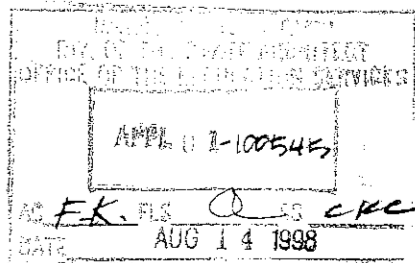
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Drawing

SCHEDULES

Sheet

M1-1



M1-1

SCHEDULES

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MARK	MFR & MODEL	SERVICE	SA FAN									DX COIL				HEATING CAPACITY (GAS)							EA FAN			REMARKS			
			AIRFLOW CFM	TSP	ESP "WG	RPM	BHP	HP	RPM	EFF%	V/PH	TOT MEH	SENS MEH	ROWS FINS	REFRIG.	INPUT MEH	OUTPUT MEH	AUE %	EAT °F	LAT °F	NAT GAS CU FT/HR	CONNECTION (GTY) SIZE	TSP IN °F	RPM	(GTY) HP		FILTERS QTY. - SIZE (IN)	OSA CFM	OPER MT LBS
AHU-1	ENERGY LABS PF-6	WEST AREA	6,000	4	1.5	2162	6.94	7.5	1800	91.7	460/3	207	170	6-8	R22	150	120	80%	60.6	79.1	150	1/2	0.6	1479	3	(2) 24"x24"x2" (2) 12"x24"x2"	1380	5,900	
AHU-2	ENERGY LABS 1-80	EAST AREA	6,000	4	1.5	2162	6.94	7.5	1800	91.7	460/3	-	-	-	-	210 (2)	216 (2)	80%	24	95.7	340	(2) 1/2	-	-	-	(4) 24"x24"x2" (2) 12"x24"x2"	6,000	9,000	24V THERMOSTAT PROVIDED BY MANUFACTURER PROVIDE TWO FURNACES

CONDENSING UNIT

MARK	MFR & MODEL	SERVICE	NAMEPLATE		COOLING CAPACITY					PIPING CONN INCHES		REFR CHARGE	OP MT LBS	REMARKS
			ELA MCA MOCP	V/PH	AMB °F	TOT MEH	DISCH TEMP °F	SUCT TEMP °F	INPUT KW	SUCT	LIQUID			
CU-1	TYPHOON 46150-00	AHU-1	31.6 - -	480 3	93	207	110	42	-	(2)1-3/8	(2)1-1/8	R-22	1060	

INDIRECT EVAPORATIVE COOLER

MARK	MFR & MODEL	LOCATION	SERVICE	AIRFLOW CFM	EAT °F	LAT °F	EFF %	WET SIDE FAN					PUMP		OPER MT. LBS	REMARKS
								QTY	SIZE	HP	CFM	TSP	HP	V/PH		
IVC-1	ENERGY LABS -	AHU-2	EAST AREA	6,000	93	74.7	70.5%	1	#30	1.0	8,000	0.5	1/2	460/3	-	THIS IS PART OF AHU-2

EXHAUST FANS

MARK	MFR & MODEL	SERVICE	LOCATION	FAN			MOTOR				OPER MT LBS	REMARKS
				AIRFLOW CFM	ESP "WG	RPM	(W) HP	V/PH	BHP	SONES		
EF-1	LOREN COOK 245 CFV	BUILDING EXHAUST	MECH. ROOM EAST	6500	1.5	1006	3	460/3	2.53	14.5	445	
EF-2	LOREN COOK GEMINI 5-10	TOILET EXHAUST	CEILING SPACE	210	0.25	1050	(8)	115/1	-	1.6	32	PROVIDED WITH BACK DRAFT DAMPER
EF-3	LOREN COOK GEMINI 5-10	TOILET EXHAUST	CEILING SPACE	150	0.25	1200	1/6	115/1	-	8.4	70	PROVIDED WITH BACK DRAFT DAMPER
EF-4	LOREN COOK GEMINI 5-10	TOILET EXHAUST	CEILING SPACE	150	0.25	1200	1/6	115/1	-	8.4	70	PROVIDED WITH BACK DRAFT DAMPER
EF-5	LOREN COOK GEMINI 5-10	TOILET EXHAUST	CEILING SPACE	150	0.25	1200	1/6	115/1	-	8.4	70	PROVIDED WITH BACK DRAFT DAMPER
EF-6	LOREN COOK 210 SQN-B	EXHAUST	EXPOSED CEILING SPACE	4900	7/8	1077	2	460/3	157	-	300	
EF-7	LOREN COOK GEMINI 5-10	TOILET EXHAUST	CEILING SPACE	150	0.25	1200	1/6	115/1	-	8.4	70	PROVIDED WITH BACK DRAFT DAMPER
EF-8,1	LOREN COOK TO SQN-B	EXHAUST	EXPOSED CEILING SPACE	280	1/2	1484	1/6	115/1	0.13	13.3	80	

GRILLES, REGISTERS, DIFFUSERS

MARK	DESCRIPTION	MATERIAL	TYPE	FRONT BLADES	DAMPER	FINISH	REMARKS
CD-1	TITUS PCS CEILING DIFFUSERS	STEEL	2x2 LAY-IN TEE BAR	PERFORATED	NO	WHITE	
CD-2	TITUS TDC CEILING DIFFUSER	STEEL	SURFACE MOUNT	CONCENTRIC	NO	WHITE	
RG-1 & EG-1	TITUS PAR RETURN GRILLE	STEEL	2x2 LAY-IN TEE BAR	PERFORATED	NO	WHITE	
RG-2 & EG-2	TITUS 350 FL RETURN GRILLE	ALUMINUM	SURFACE MOUNT	HORIZONTAL	NO	WHITE	
SR-1	TITUS 300 RL SUPPLY REGISTER	STEEL	SURFACE MOUNT	VERTICAL	NO	WHITE	

ZONE DAMPERS

MARK	LOCATION	AHU	SERVICE	SIZE	MFR & MODEL	MAX CFM	MIN CFM	THERMOSTAT	TRANSFORMER	REMARKS
ZD-1	WEST SIDE CEILING	AHU-1	LIFEGUARD	12"	CARRIER ZD-12	500	250	CARRIER 33C5ZC--PI	115/24V	PROVIDE W/ PRESSURE INDEPENDENT CONTROL
ZD-2	WEST SIDE CEILING	AHU-1	OFFICE	10"	CARRIER ZD-10	300	150	CARRIER 33C5ZC--PI	115/24V	PROVIDE W/ PRESSURE INDEPENDENT CONTROL
ZD-3	WEST SIDE CEILING	AHU-1	OFFICE	12"	CARRIER ZD-12	480	150	CARRIER 33C5ZC--PI	115/24V	PROVIDE W/ PRESSURE INDEPENDENT CONTROL
ZD-4	WEST SIDE CEILING	AHU-1	OFFICE & CORRIDOR	14"	CARRIER ZD-14	750	150	CARRIER 33C5ZC--PI	115/24V	PROVIDE W/ PRESSURE INDEPENDENT CONTROL
ZD-5	WEST SIDE CEILING	AHU-1	CLASSROOM	12"	CARRIER ZD-12	600	120	CARRIER 33C5ZC--PI	115/24V	PROVIDE W/ PRESSURE INDEPENDENT CONTROL
ZD-6	WEST SIDE CEILING	AHU-1	CLASSROOM	12"	CARRIER ZD-12	500	100	CARRIER 33C5ZC--PI	115/24V	PROVIDE W/ PRESSURE INDEPENDENT CONTROL
ZD-7	EAST SIDE CEILING	AHU-1	COACHES	10"	CARRIER ZD-10	350	70	CARRIER 33C5ZC--PI	115/24V	PROVIDE W/ PRESSURE INDEPENDENT CONTROL
ZD-8	EAST SIDE CEILING	AHU-1	RECEP. & REGIS.	12"	CARRIER ZD-12	450	90	CARRIER 33C5ZC--PI	115/24V	PROVIDE W/ PRESSURE INDEPENDENT CONTROL
ZD-9	WEST SIDE CEILING	AHU-1	LOBBY	16"	CARRIER ZD-16	1000	200	CARRIER 33C5ZC--PI	115/24V	PROVIDE W/ PRESSURE INDEPENDENT CONTROL
ZD-10	WEST SIDE ELECT. ROOM	AHU-1	LOBBY & ELECT. RM.	16"	CARRIER RDC824	1150	230	CARRIER 33C5ZC--PI	115/24V	PROVIDE W/ PRESSURE INDEPENDENT CONTROL

BYPASS DAMPER

MARK	LOCATION	AHU	SERVICE	MFR & MODEL	MAX CFM	BYPASS CFM	PRESSURE SENSOR	REMARKS
BD-1	WEST SIDE CEILING	AHU-1	AHU-1	CARRIER 35PSA-18-050	5,000	8,000	PS02	PROVIDE W/ PRESSURE INDEPENDENT CONTROL



P2S Engineering, Inc. Tel: 562 497 2999
Long Beach, CA 90815 www.p2seng.com

artech
DESIGN
GROUP

1350 Treat Blvd., Suite 190
Mainst Creek, CA 94546
(510) 915-0980
FAX (510) 915-0984

Date: 08-04-98

Permit Submittal

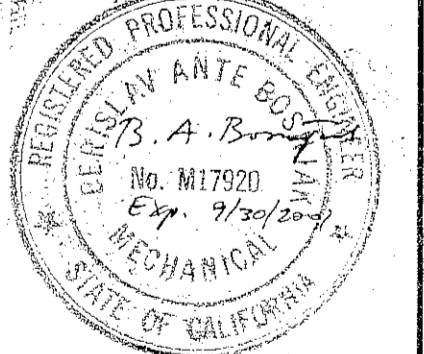
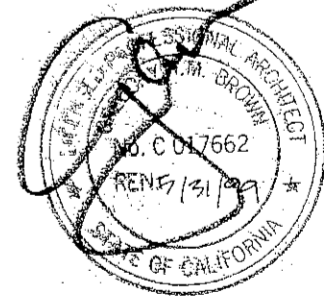
310 Issue

Construction Issue

Revision

REV	DATE	DESCRIPTION
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SAN RAMON OLYMPIC POOL
AQUATIC CENTER
9900 Broadmoor Drive, San Ramon, CA



Project No.

2143

Scale

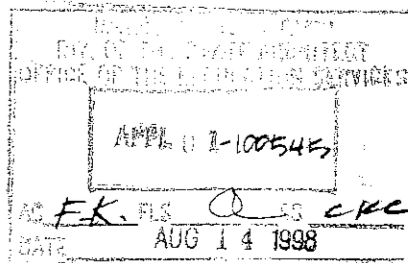
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SCHEDULES

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M1-1

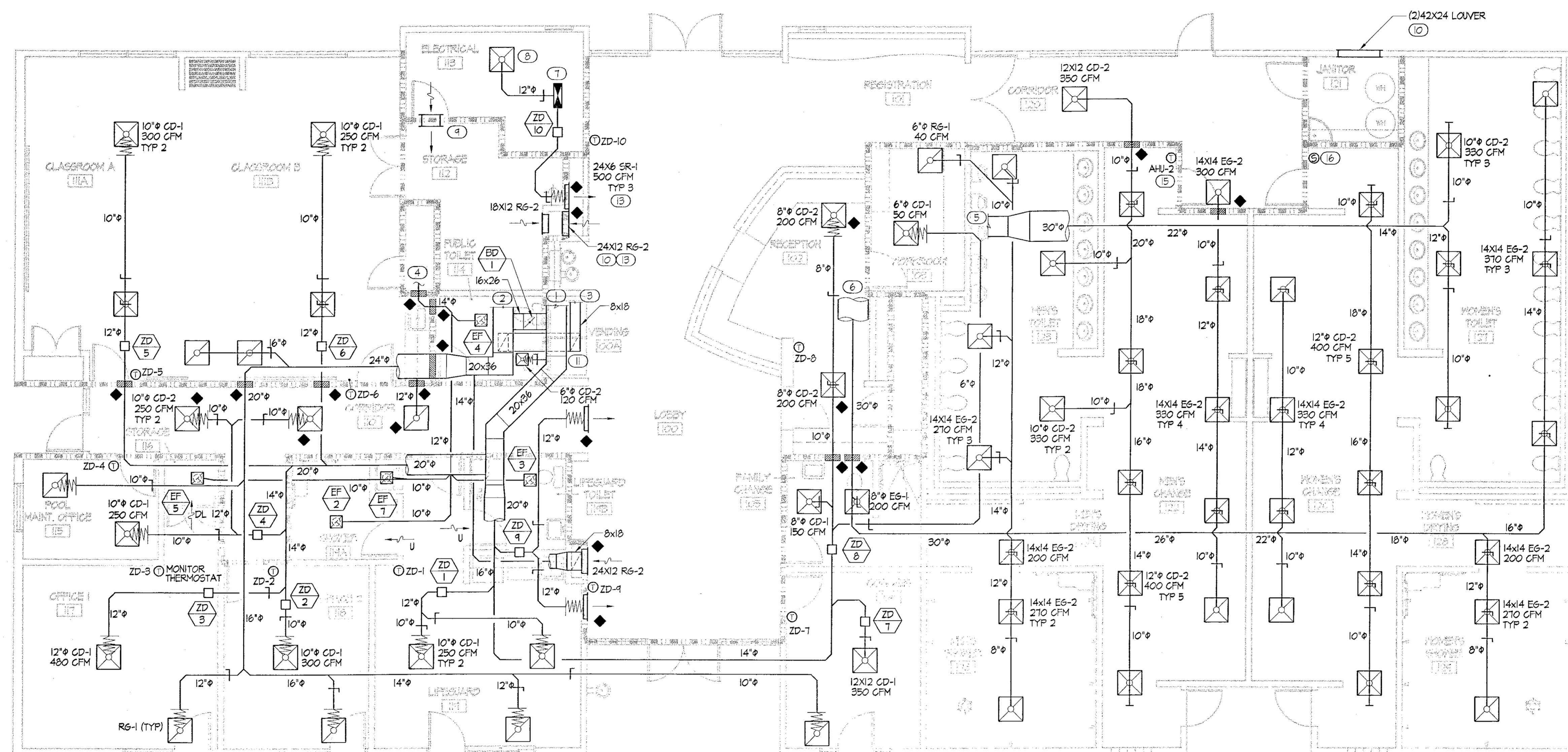


M1-1

REV	DATE	DESCRIPTION
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REV	DATE	DESCRIPTION
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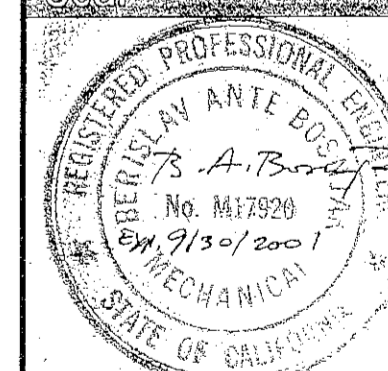
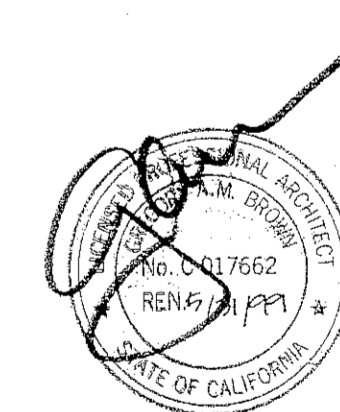
SAN RAMON OLYMPIC POOL
AQUATIC CENTER
9900 Broadmoor Drive, San Ramon, CA



NOTES:

- (1) 20X36 SA DUCT FROM AHU-1 AT MECHANICAL ROOM WEST. SEE M-3 FOR CONTINUATION.
- (2) 20X36 RA DUCT TO AHU-1 AT MECHANICAL ROOM WEST. SEE M-3 FOR CONTINUATION.
- (3) 8X18 RA DUCT FROM MECHANICAL ROOM WEST. SEE M-3 FOR CONTINUATION.
- (4) 12" EA DUCT TO MECHANICAL ROOM WEST. SEE M-3 FOR CONTINUATION.
- (5) 20X36 SA DUCT FROM AHU-2 AT MECHANICAL ROOM EAST. SEE M-3 FOR CONTINUATION.
- (6) 30" EA DUCT TO EF-1 AT MECHANICAL ROOM EAST. SEE M-3 FOR CONTINUATION.
- (7) 8X24 SA DUCT FROM AHU-1 ABOVE.
- (8) 12" NECK SIZE THERMA-FUSER BY ACUTHERM (650 CFM).
- (9) 18X12 TRANSFER DUCT WITH 18X12 GRILLES ON BOTH ENDS.
- (10) 24X12 RA GRILLE MOUNTED +6" AFF.

- (11) 8X18 RA DUCT CONNECT TO RA PLENUM SEALED AIR TIGHT.
- (12) (2) 42"X24" WALL LOUVER. ONE AT +6" AFF.(BOTTOM). ONE AT 6" BELOW ROOF (TOP).
- (13) SEE ARCHITECT DRAWING FOR EXACT LOCATION.
- (14) PROVIDE THERMOSTATS AT +60" AFF WITH LOCKING PLASTIC COVER.
- (15) PROVIDE PROGRAMMABLE THERMOSTAT HONEYWELL T1300 SERIES 2000 WITH 1 STAGE COOL, 2 STAGE HEAT, AUTO CHANGEOVER, ON/AUTO FAN SWITCHING AND 3 HOUR OVERRIDE TIMER. THERMOSTAT SHALL BE HONEYWELL MODEL T1300D2001/QT300A2040.
- (16) PROVIDE REMOTE TEMPERATURE SENSOR AND 3 HOUR OVERRIDE MODULE HONEYWELL MODEL T114TA2000. CONNECT REMOTE MODULE TO THERMOSTAT SUBBASE @ MEN'S LOCKER ROOM.



Project No.

2193

Scale

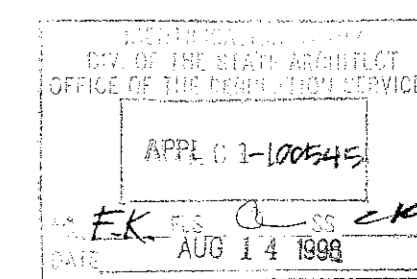
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Drawing

FLOOR PLAN

Sheet

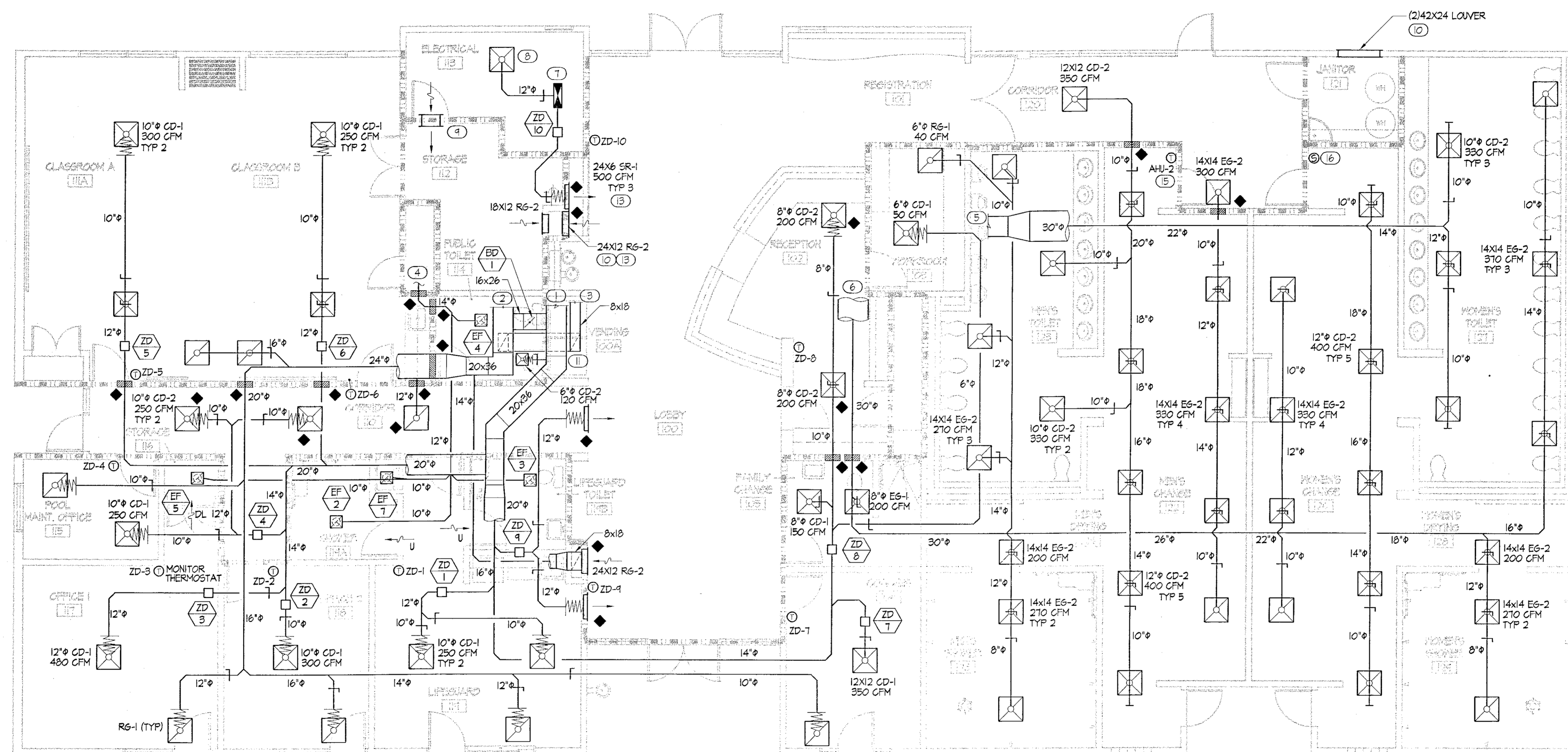
M2



REV	DATE	DESCRIPTION
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REV	DATE	DESCRIPTION
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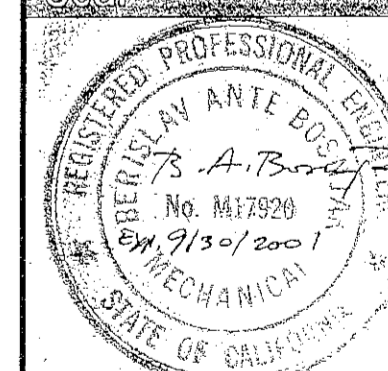
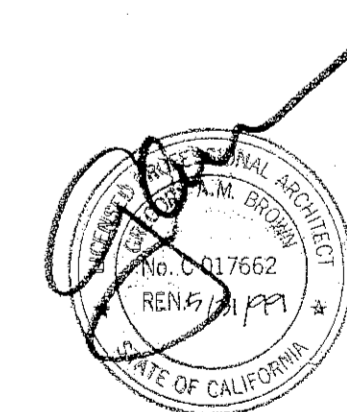
SAN RAMON OLYMPIC POOL
AQUATIC CENTER
9900 Broadmoor Drive, San Ramon, CA



NOTES:

- (1) 20X36 SA DUCT FROM AHU-1 AT MECHANICAL ROOM WEST. SEE M-3 FOR CONTINUATION.
- (2) 20X36 RA DUCT TO AHU-1 AT MECHANICAL ROOM WEST. SEE M-3 FOR CONTINUATION.
- (3) 8X18 RA DUCT FROM MECHANICAL ROOM WEST. SEE M-3 FOR CONTINUATION.
- (4) 12" EA DUCT TO MECHANICAL ROOM WEST. SEE M-3 FOR CONTINUATION.
- (5) 20X36 SA DUCT FROM AHU-2 AT MECHANICAL ROOM EAST. SEE M-3 FOR CONTINUATION.
- (6) 30" EA DUCT TO EF-1 AT MECHANICAL ROOM EAST. SEE M-3 FOR CONTINUATION.
- (7) 8X24 SA DUCT FROM AHU-1 ABOVE.
- (8) 12" NECK SIZE THERMA-FUSER BY ACUTHERM (650 CFM).
- (9) 18X12 TRANSFER DUCT WITH 18X12 GRILLES ON BOTH ENDS.
- (10) 24X12 RA GRILLE MOUNTED +6" AFF.

- (11) 8X18 RA DUCT CONNECT TO RA PLENUM SEALED AIR TIGHT.
- (12) (2) 42"X24" WALL LOUVER. ONE AT +6" AFF.(BOTTOM). ONE AT 6" BELOW ROOF (TOP).
- (13) SEE ARCHITECT DRAWING FOR EXACT LOCATION.
- (14) PROVIDE THERMOSTATS AT +60" AFF WITH LOCKING PLASTIC COVER.
- (15) PROVIDE PROGRAMMABLE THERMOSTAT HONEYWELL T1300 SERIES 2000 WITH 1 STAGE COOL, 2 STAGE HEAT, AUTO CHANGEOVER, ON/AUTO FAN SWITCHING AND 3 HOUR OVERRIDE TIMER. THERMOSTAT SHALL BE HONEYWELL MODEL T1300D2001/QT300A2040.
- (16) PROVIDE REMOTE TEMPERATURE SENSOR AND 3 HOUR OVERRIDE MODULE HONEYWELL MODEL T114TA2000. CONNECT REMOTE MODULE TO THERMOSTAT SUBBASE @ MEN'S LOCKER ROOM.



Project No.

2193

Scale

3/16"=1'-0"

Drawing

FLOOR PLAN

Sheet

Scale

Scale

Scale

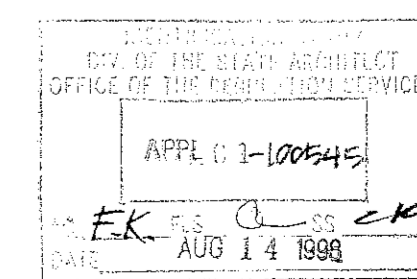
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Scale

Scale

Scale

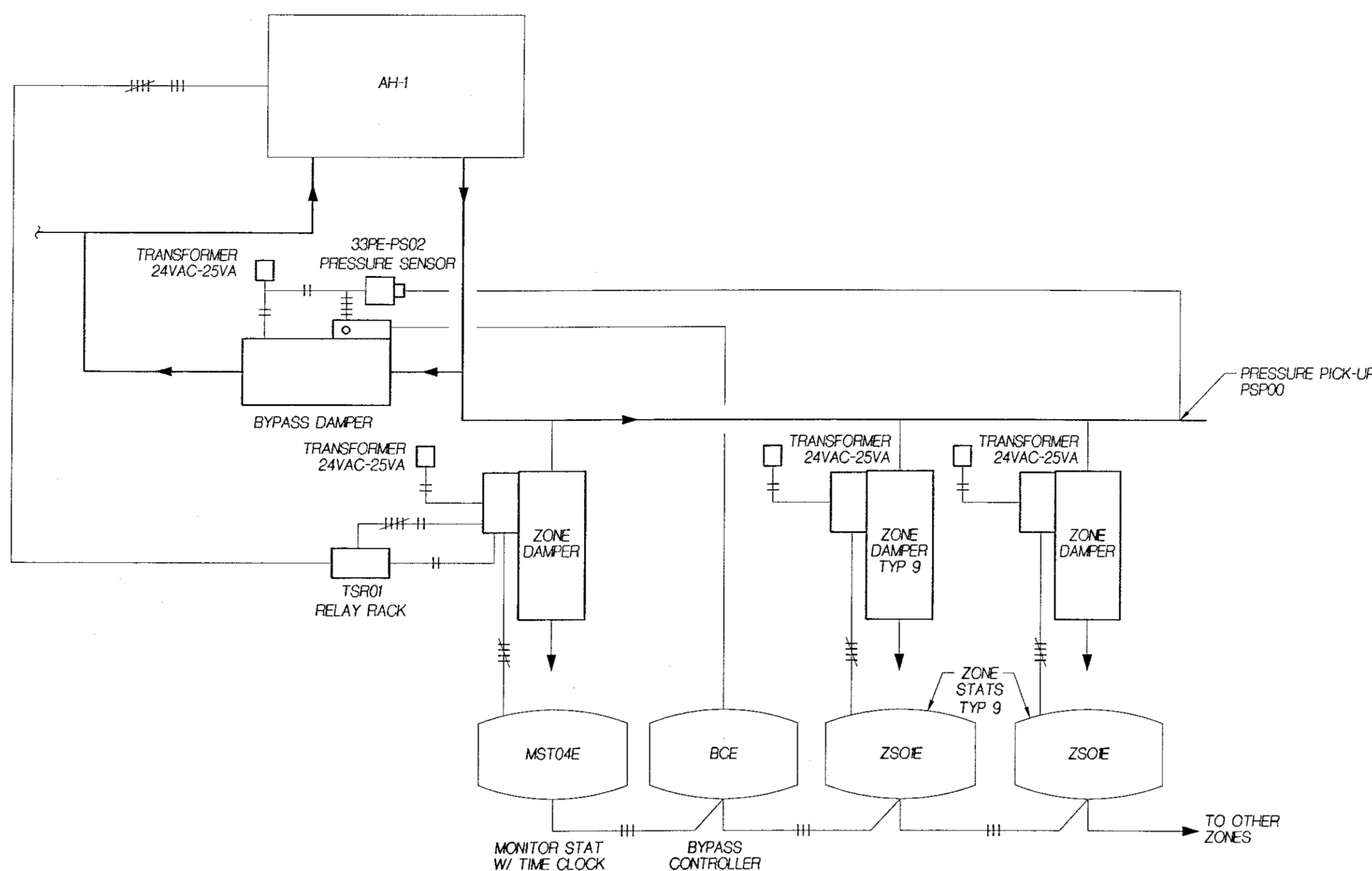
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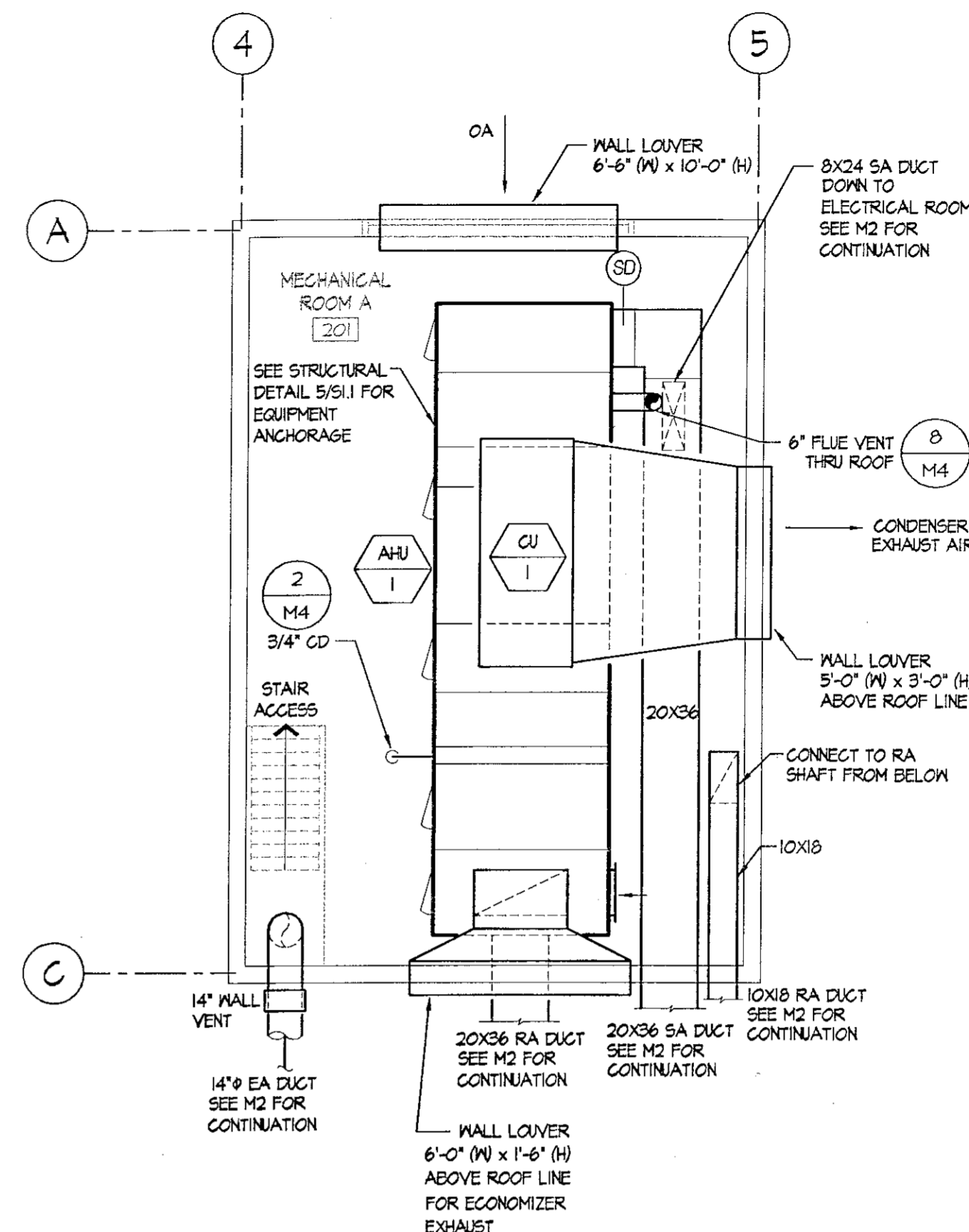
M2

SEQUENCE OF OPERATION:

1. AH-1 SHALL OPERATE ACCORDING TO THE REQUIREMENT BY USER UNDER TIME CLOCK. UNIT IS CONSTANT AIR VOLUME COOLING AND HEATING VIA DX COIL & GAS FURNACE. UNIT IS PROVIDED WITH ECONOMIZER.
2. THE ROOM TEMPERATURE IS MAINTAINED BY VVT CONTROL. THE MONITOR THERMOSTAT W/TIME CLOCK WILL CONTROL SA FAN ON/OFF (OPERATING SCHEDULE) AND CONTROL CHANGE OVER BETWEEN COOLING/HEATING MODE (ROOM TEMPERATURE CONTROL). THE ZONE DAMPER WILL MODULATE BETWEEN MAXIMUM AND MINIMUM CFM TO MAINTAIN ROOM TEMPERATURE AT SETPOINT. WHEN THE ROOM TEMPERATURE CAN NOT BE SATISFIED BY ZONE DAMPER MODULATING, THE ZONE DAMPER WILL CALL FOR CHANGING OF COOLING/HEATING MODE. THE MONITOR THERMOSTAT WILL DETERMINE AIR HANDLING UNIT AH-1 COOLING/HEATING MODE ACCORDING TO MAJORITY REQUIREMENT OF THE ZONE DAMPERS.
3. ROOM TEMPERATURE SETPOINT IS AT 75°F FOR COOLING AND 70°F FOR HEATING (ADJUSTABLE).
4. ECONOMIZER IS PROVIDED WITH OA DRY BULB TEMPERATURE SENSOR. WHEN THE OUTSIDE AIR TEMPERATURE DROP BELOW 65°F (UNDER COOLING MODE), OA & EA DAMPER WILL BE FULLY OPEN AND RA DAMPER WILL BE FULLY CLOSED WHILE EXHAUST FAN WILL BE OPERATING.
5. SMOKE DETECTOR @ SA DUCT SHALL SHUT DOWN THE SUPPLY FAN WHEN SMOKE IS DETECTED.

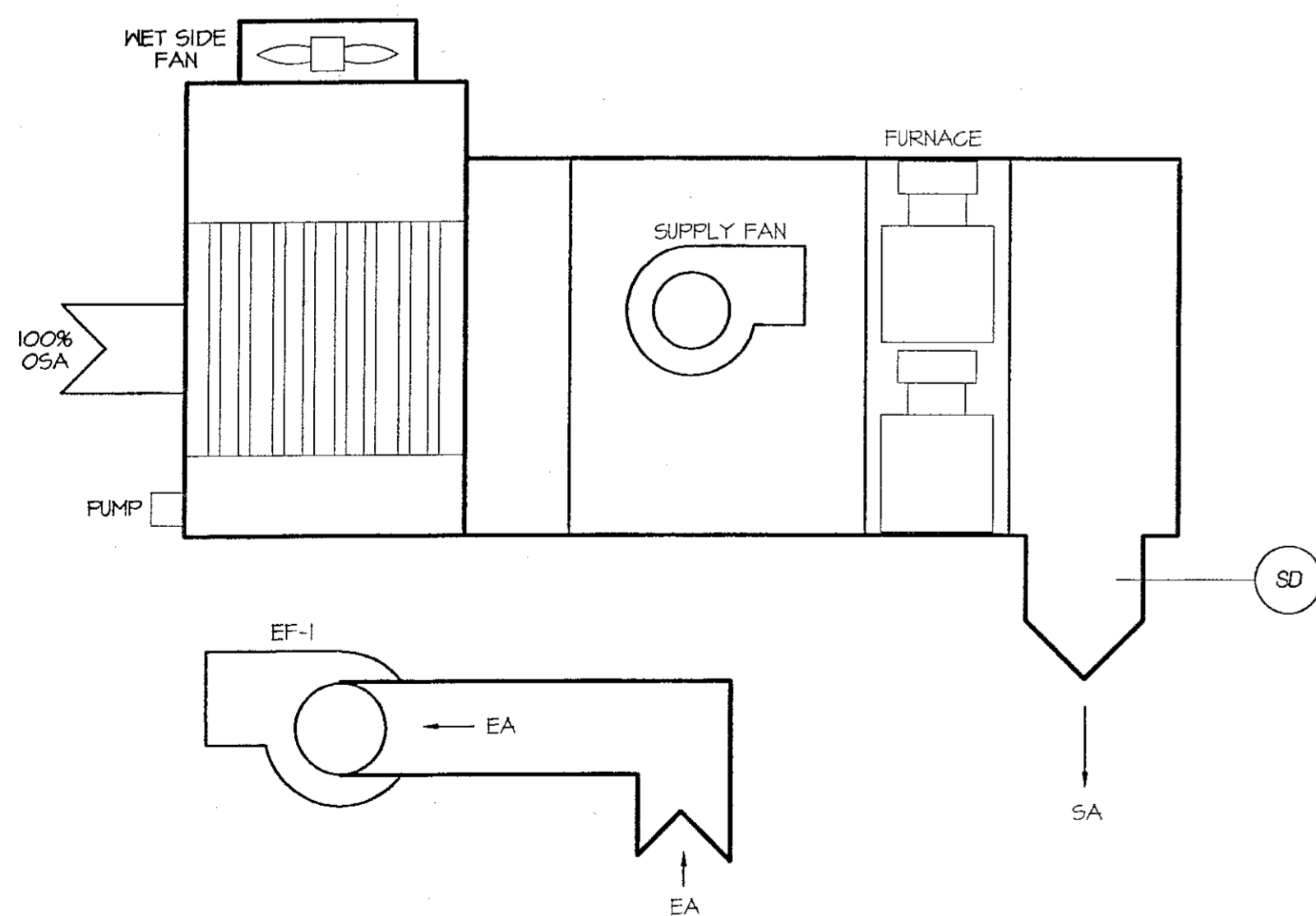


AH-1 CONTROL DIAGRAM AND SEQUENCE OF OPERATION



MECHANICAL ROOM WEST

SCALE: 1/4"=1'-0"

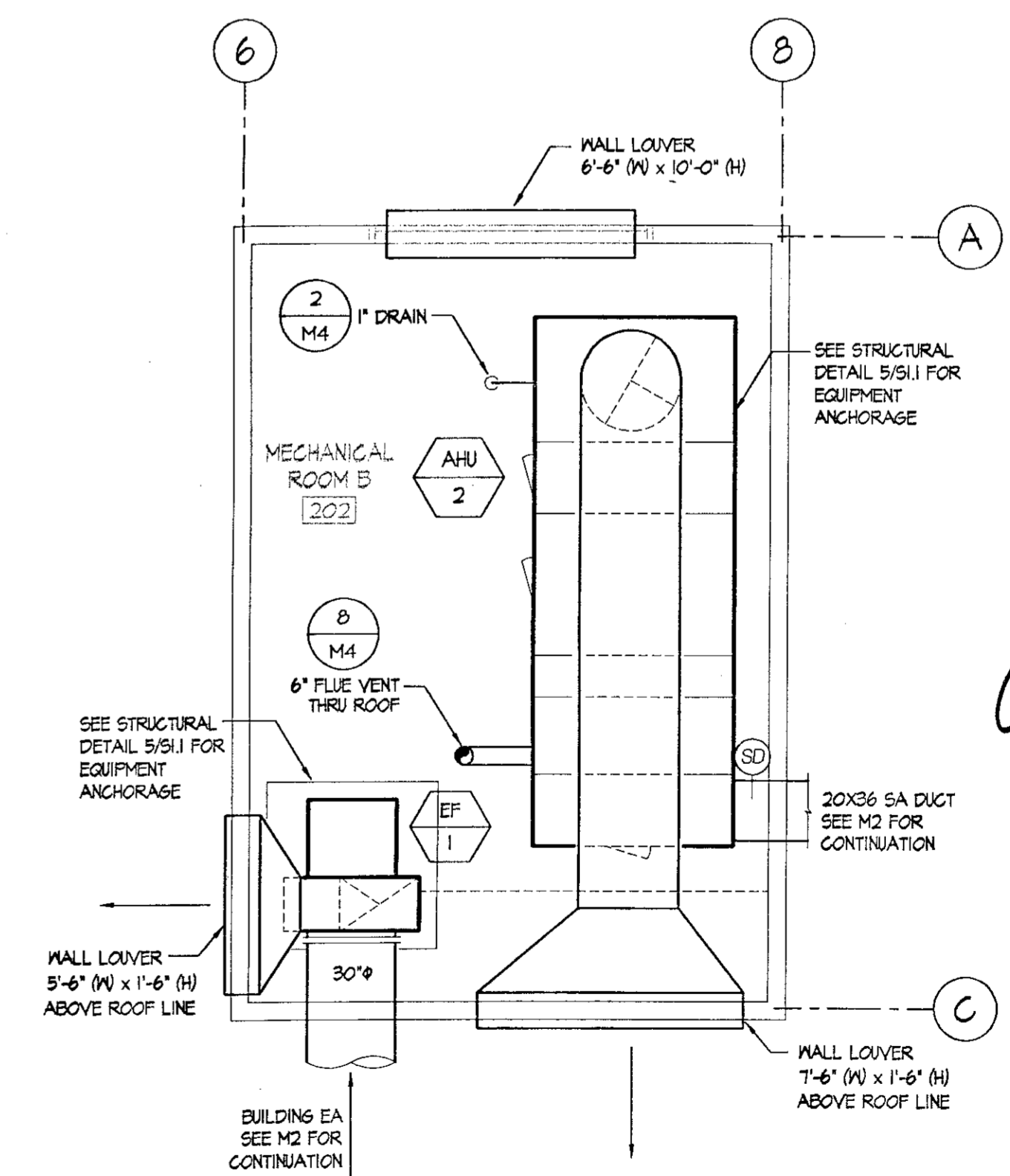


AHU-2:

1. AHU-2 SHALL OPERATE ACCORDING TO BUILDING'S SET SCHEDULE. UNIT IS CONSTANT AIR VOLUME COOLING AND HEATING VIA INDIRECT EVAPORATOR AND GAS FURNACE. AHU-2 HAS AN ASSOCIATED EXHAUST FAN EF-1.
2. EXHAUST FAN EF-1 IS A FIXED SPEED FAN INTERLOCKED WITH AHU-2 SUPPLY FAN.
3. THE TEMPERATURE OF EAST SIDE SHALL BE MAINTAINED AT 77°F±2°F FOR COOLING AND 70°F±2°F FOR HEATING.
4. ROOM THERMOSTAT WILL CONTROL WET SIDE FAN AND PUMP ON/OFF FOR COOLING AND TWO STAGE GAS HEATING IN SEQUENCE TO MAINTAIN ROOM TEMPERATURE AT SETPOINT:

	CUT IN	CUT OUT	CONTROL DIFFERENTIAL
WET SIDE CONTROL	74°F	75°F	4°F
FURNACE CONTROL	68°F	72°F	4°F

COOLING AND HEATING SHALL NOT BE SIMULTANEOUS.
5. SMOKE DETECTOR @ SA DUCT SHALL SHUT DOWN THE SUPPLY FAN WHEN SMOKE IS DETECTED.



MECHANICAL ROOM EAST

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL 01-100845
AC 10-100845
AUG 14 1998
SCALE: 1/4"=1'-0"

Date: 08-04-98

Permit: Submittal

By: Issue

Construction: Issue

Revisions:

REV	DATE	DESCRIPTION
1		
2		
3		
4		
5		

**SAN RAMON OLYMPIC POOL
AQUATIC CENTER**
9900 Broadmoor Drive, San Ramon, CA

Scale:
REGISTERED PROFESSIONAL ENGINEER
B. A. B. No. M17920
Exp. 9/30/2001
MECHANICAL
STATE OF CALIFORNIA

Project No:
2193

Scale:
AS SHOWN

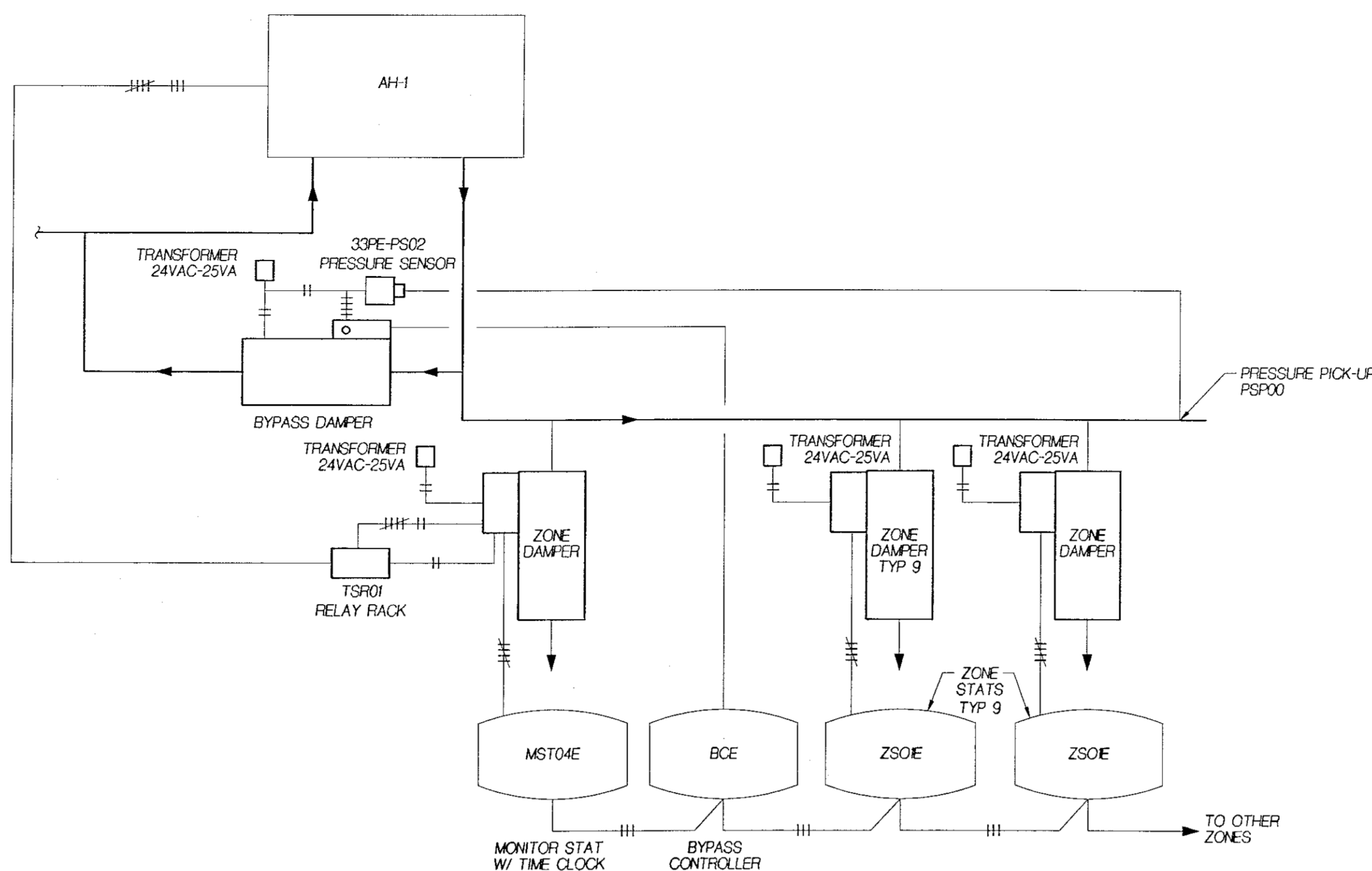
Drawing:
**MECH. ROOM, CONTROL
DIAGRAM & SEQUENCE
OF OPERATION**

M3

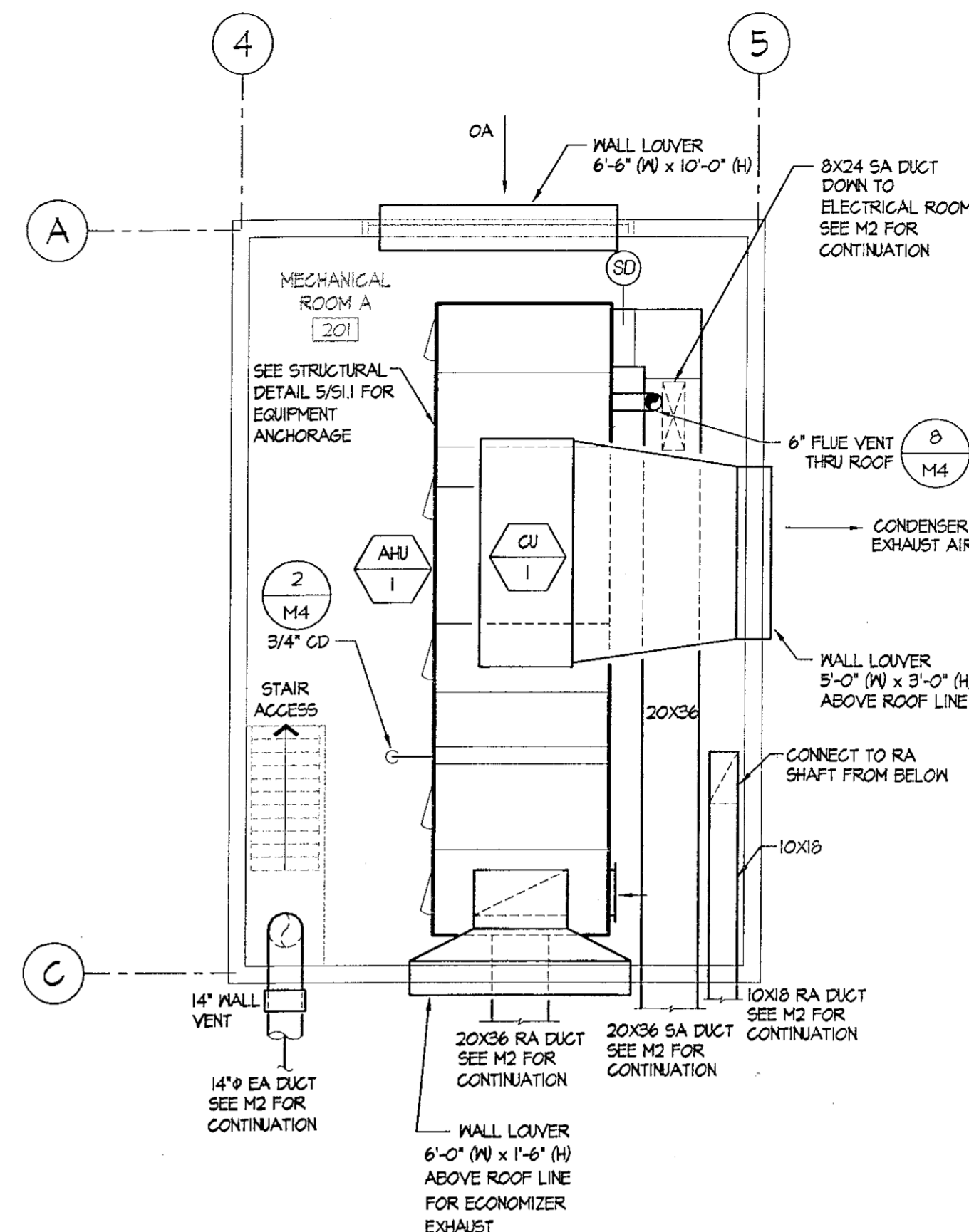
AH-2 & EF-1 CONTROL DIAGRAM AND SEQUENCE OF OPERATION

SEQUENCE OF OPERATION:

1. AH-1 SHALL OPERATE ACCORDING TO THE REQUIREMENT BY USER UNDER TIME CLOCK. UNIT IS CONSTANT AIR VOLUME COOLING AND HEATING VIA DX COIL & GAS FURNACE. UNIT IS PROVIDED WITH ECONOMIZER.
2. THE ROOM TEMPERATURE IS MAINTAINED BY VVT CONTROL. THE MONITOR THERMOSTAT W/TIME CLOCK WILL CONTROL SA FAN ON/OFF (OPERATING SCHEDULE) AND CONTROL CHANGE OVER BETWEEN COOLING/HEATING MODE (ROOM TEMPERATURE CONTROL). THE ZONE DAMPER WILL MODULATE BETWEEN MAXIMUM AND MINIMUM CFM TO MAINTAIN ROOM TEMPERATURE AT SETPOINT. WHEN THE ROOM TEMPERATURE CAN NOT BE SATISFIED BY ZONE DAMPER MODULATING, THE ZONE DAMPER WILL CALL FOR CHANGING OF COOLING/HEATING MODE. THE MONITOR THERMOSTAT WILL DETERMINE AIR HANDLING UNIT AH-1 COOLING/HEATING MODE ACCORDING TO MAJORITY REQUIREMENT OF THE ZONE DAMPERS.
3. ROOM TEMPERATURE SETPOINT IS AT 75°F FOR COOLING AND 70°F FOR HEATING (ADJUSTABLE).
4. ECONOMIZER IS PROVIDED WITH OA DRY BULB TEMPERATURE SENSOR. WHEN THE OUTSIDE AIR TEMPERATURE DROP BELOW 65°F (UNDER COOLING MODE), OA & EA DAMPER WILL BE FULLY OPEN AND RA DAMPER WILL BE FULLY CLOSED WHILE EXHAUST FAN WILL BE OPERATING.
5. SMOKE DETECTOR @ SA DUCT SHALL SHUT DOWN THE SUPPLY FAN WHEN SMOKE IS DETECTED.

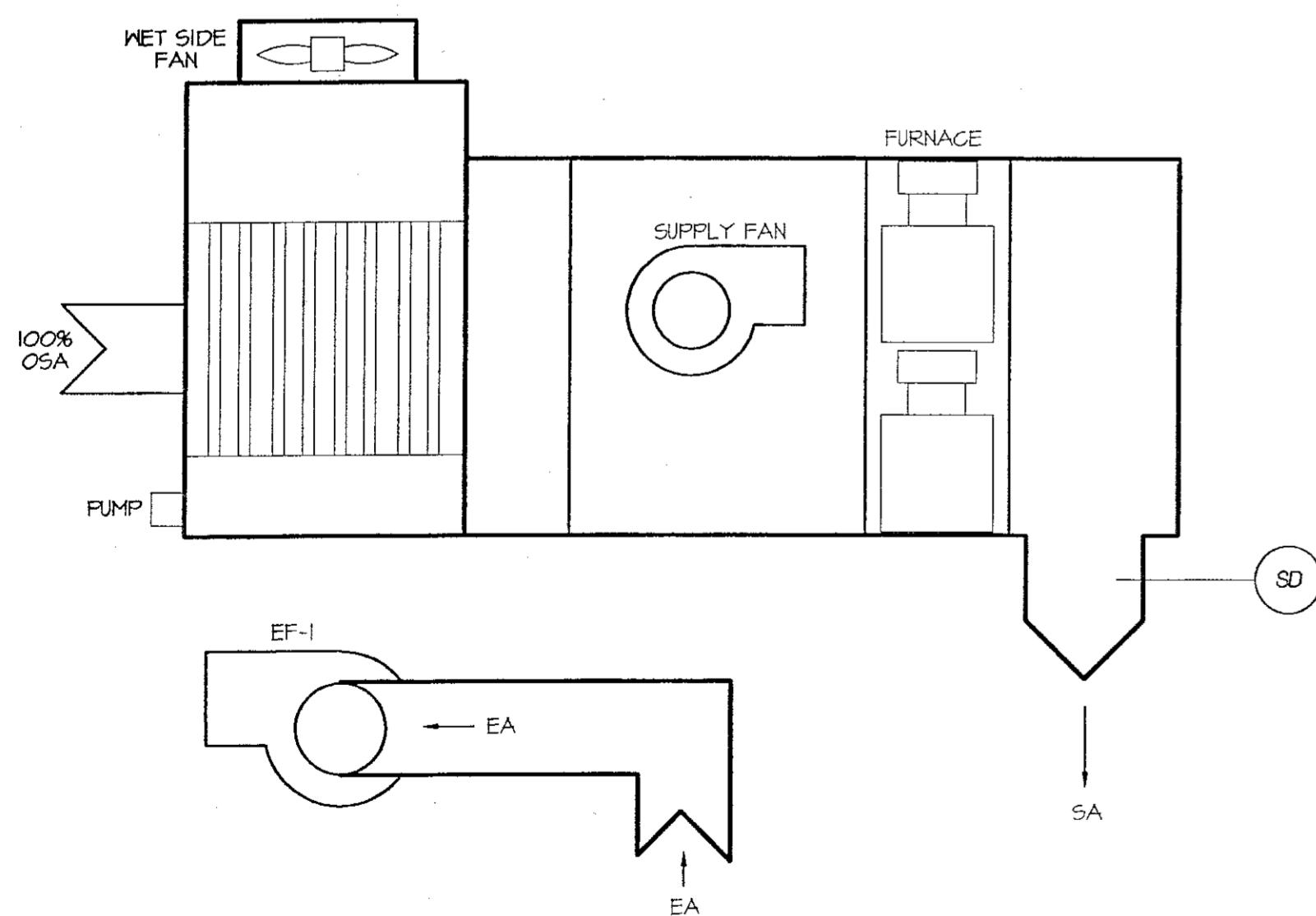


AH-1 CONTROL DIAGRAM AND SEQUENCE OF OPERATION



MECHANICAL ROOM WEST

SCALE: 1/4"=1'-0"

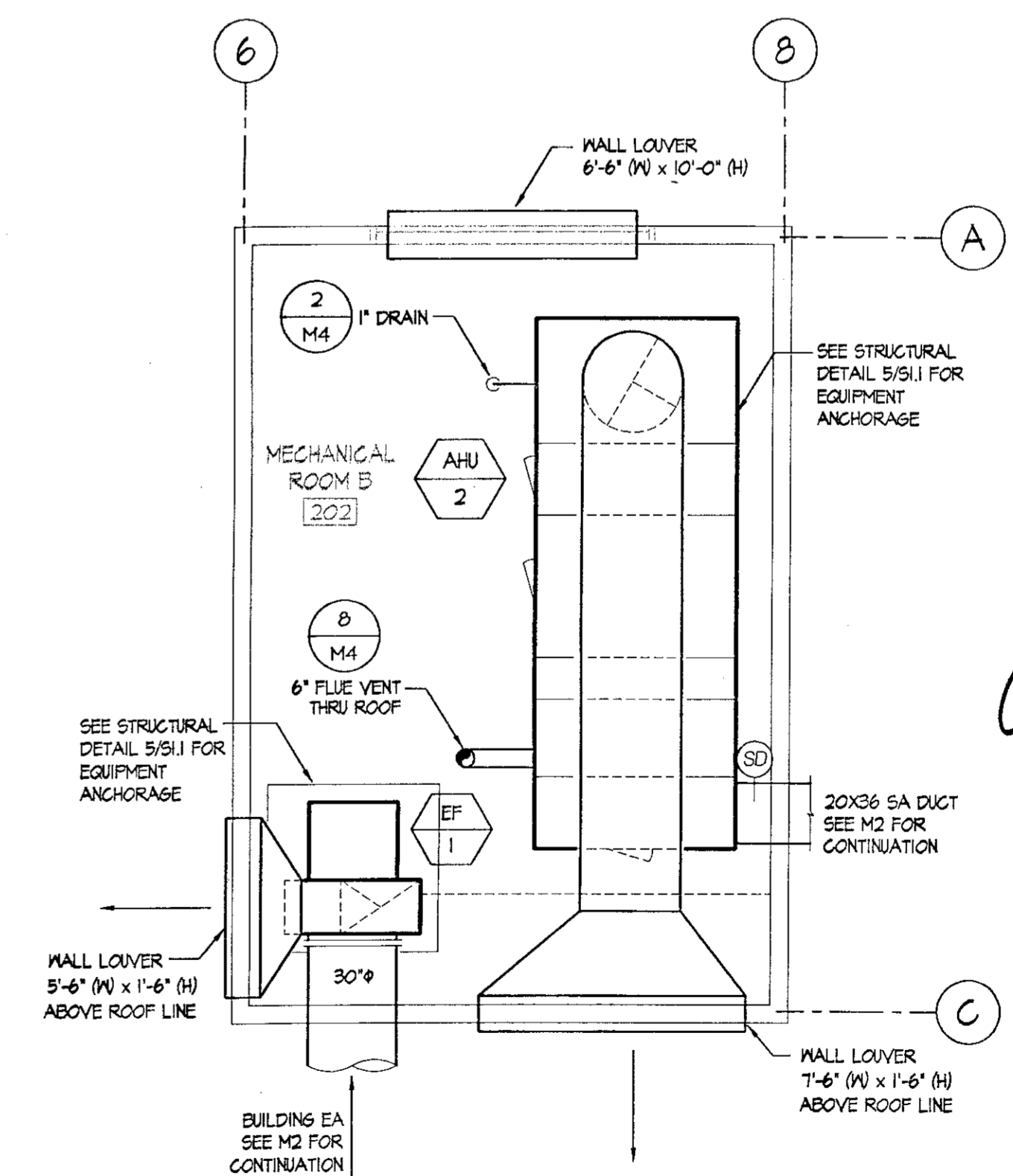


AHU-2:

1. AHU-2 SHALL OPERATE ACCORDING TO BUILDING'S SET SCHEDULE. UNIT IS CONSTANT AIR VOLUME COOLING AND HEATING VIA INDIRECT EVAPORATOR AND GAS FURNACE. AHU-2 HAS AN ASSOCIATED EXHAUST FAN EF-1.
2. EXHAUST FAN EF-1 IS A FIXED SPEED FAN INTERLOCKED WITH AHU-2 SUPPLY FAN.
3. THE TEMPERATURE OF EAST SIDE SHALL BE MAINTAINED AT 77°F±2°F FOR COOLING AND 70°F±2°F FOR HEATING.
4. ROOM THERMOSTAT WILL CONTROL WET SIDE FAN AND PUMP ON/OFF FOR COOLING AND TWO STAGE GAS HEATING IN SEQUENCE TO MAINTAIN ROOM TEMPERATURE AT SETPOINT:

	CUT IN	CUT OUT	CONTROL DIFFERENTIAL
WET SIDE CONTROL	74°F	75°F	4°F
FURNACE CONTROL	68°F	72°F	4°F

COOLING AND HEATING SHALL NOT BE SIMULTANEOUS.
5. SMOKE DETECTOR @ SA DUCT SHALL SHUT DOWN THE SUPPLY FAN WHEN SMOKE IS DETECTED.

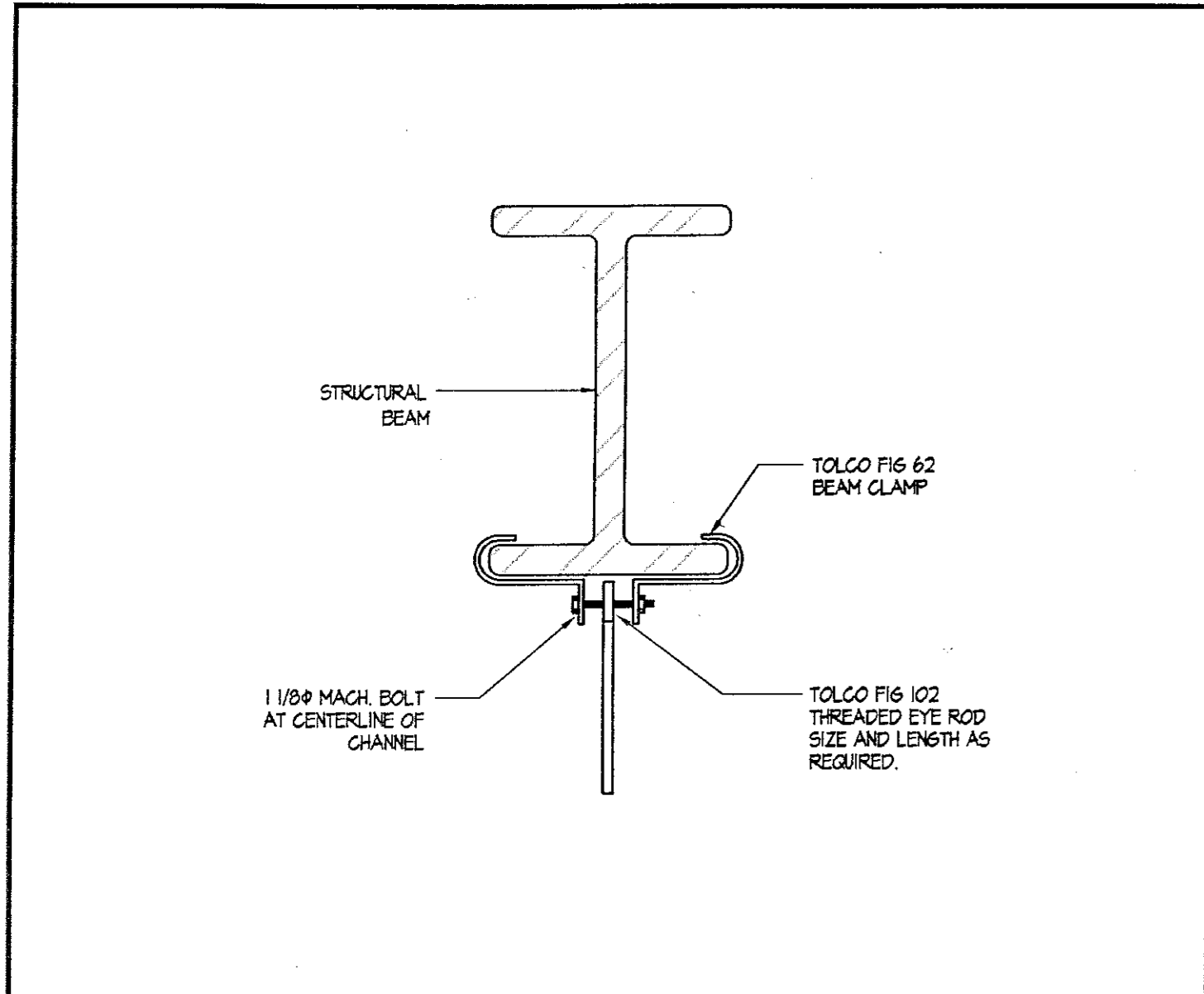


MECHANICAL ROOM EAST

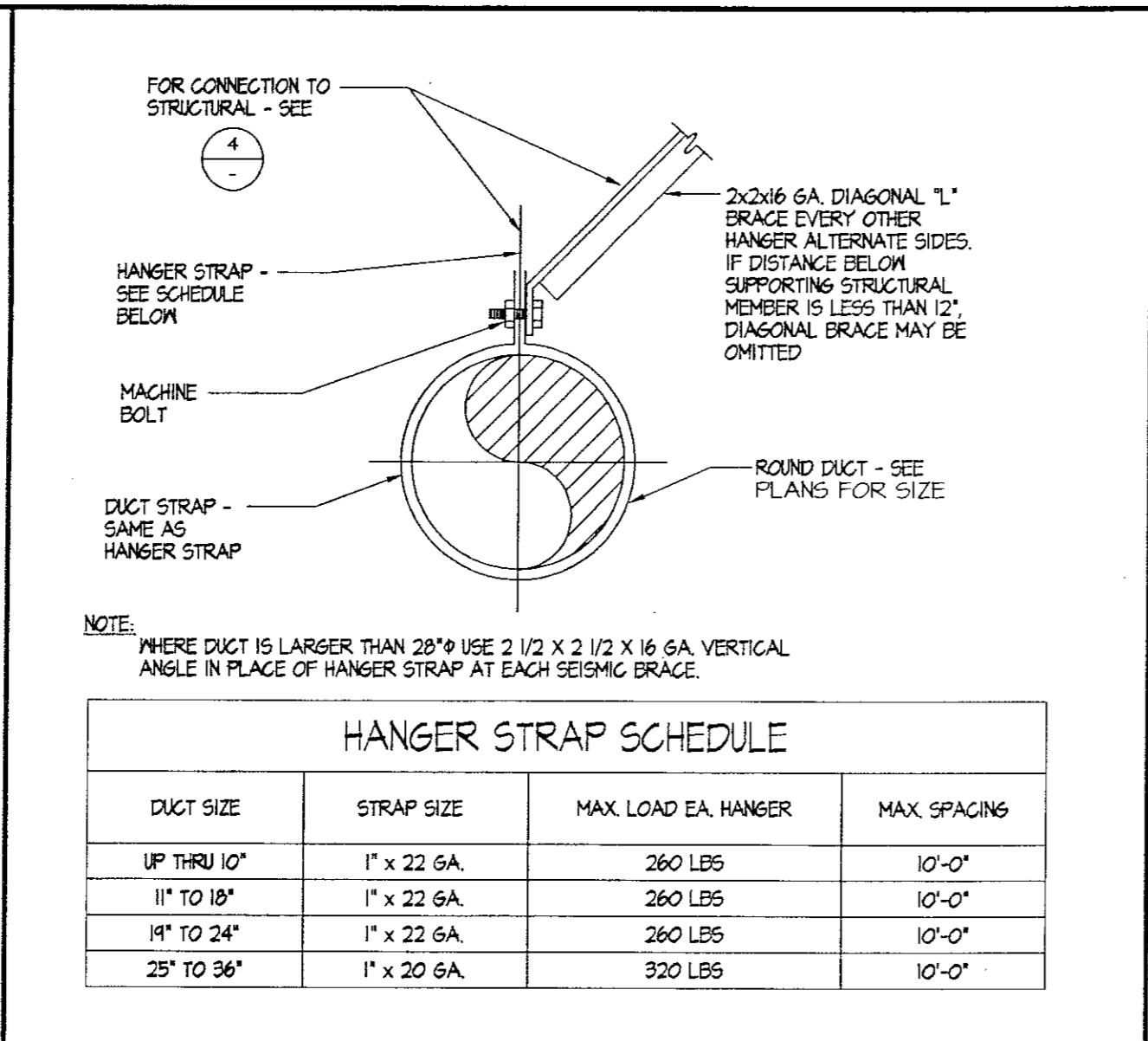
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL 01-1005415
AC 10-1005415
AUG 14 1998
SCALE: 1/4"=1'-0"

REV	DATE	DESCRIPTION
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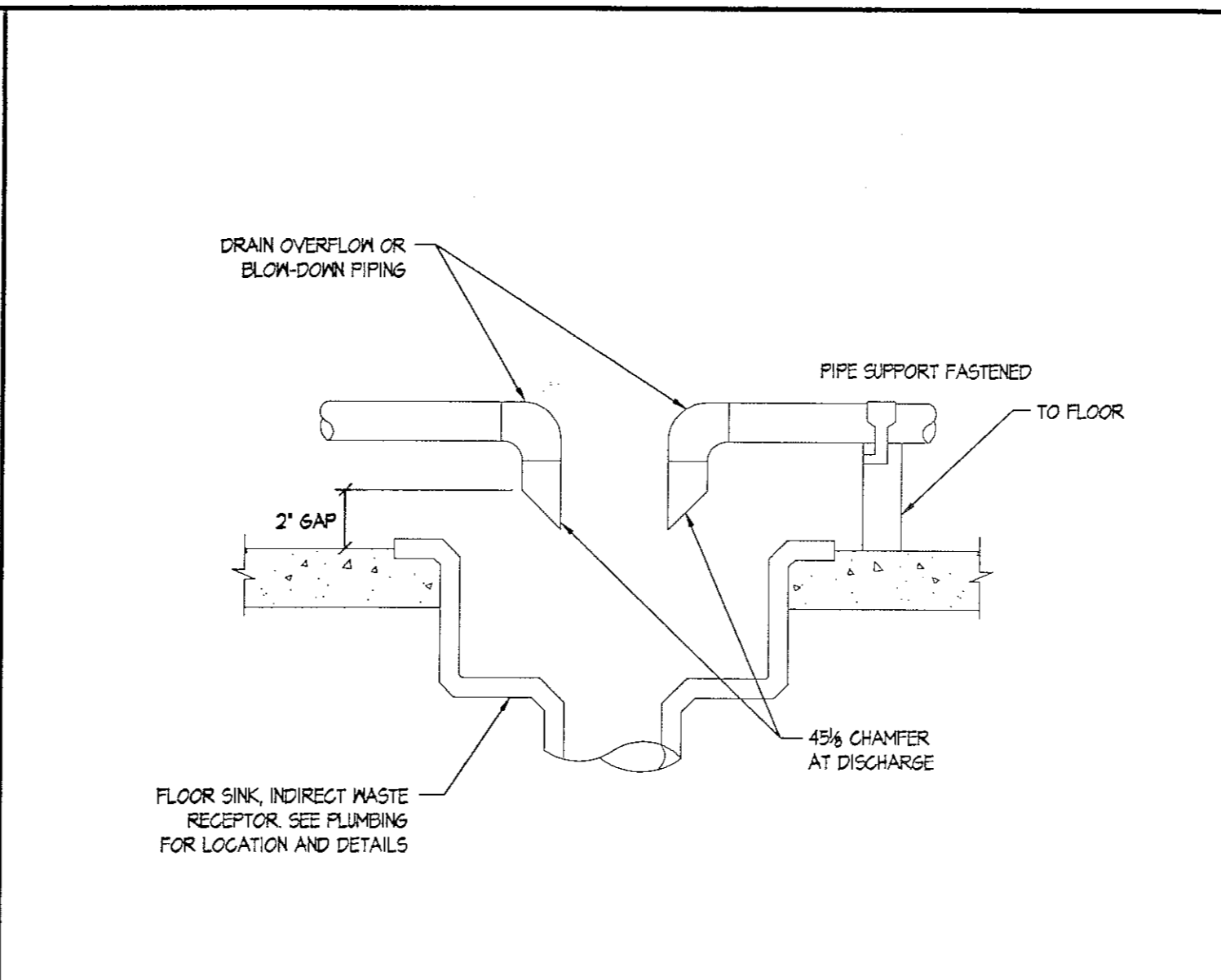
SAN RAMON OLYMPIC POOL
AQUATIC CENTER
9900 Broadmoor Drive, San Ramon, CA



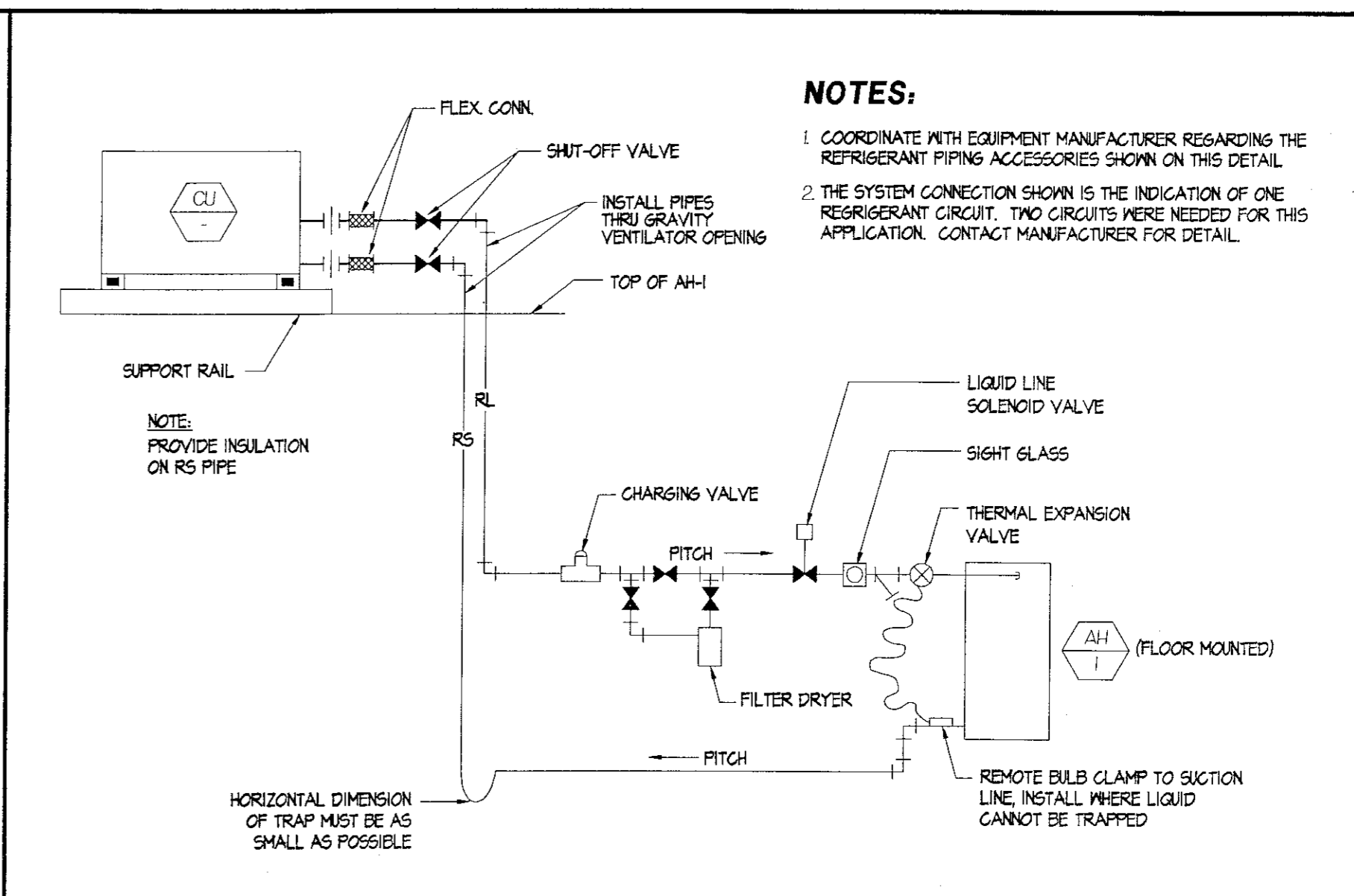
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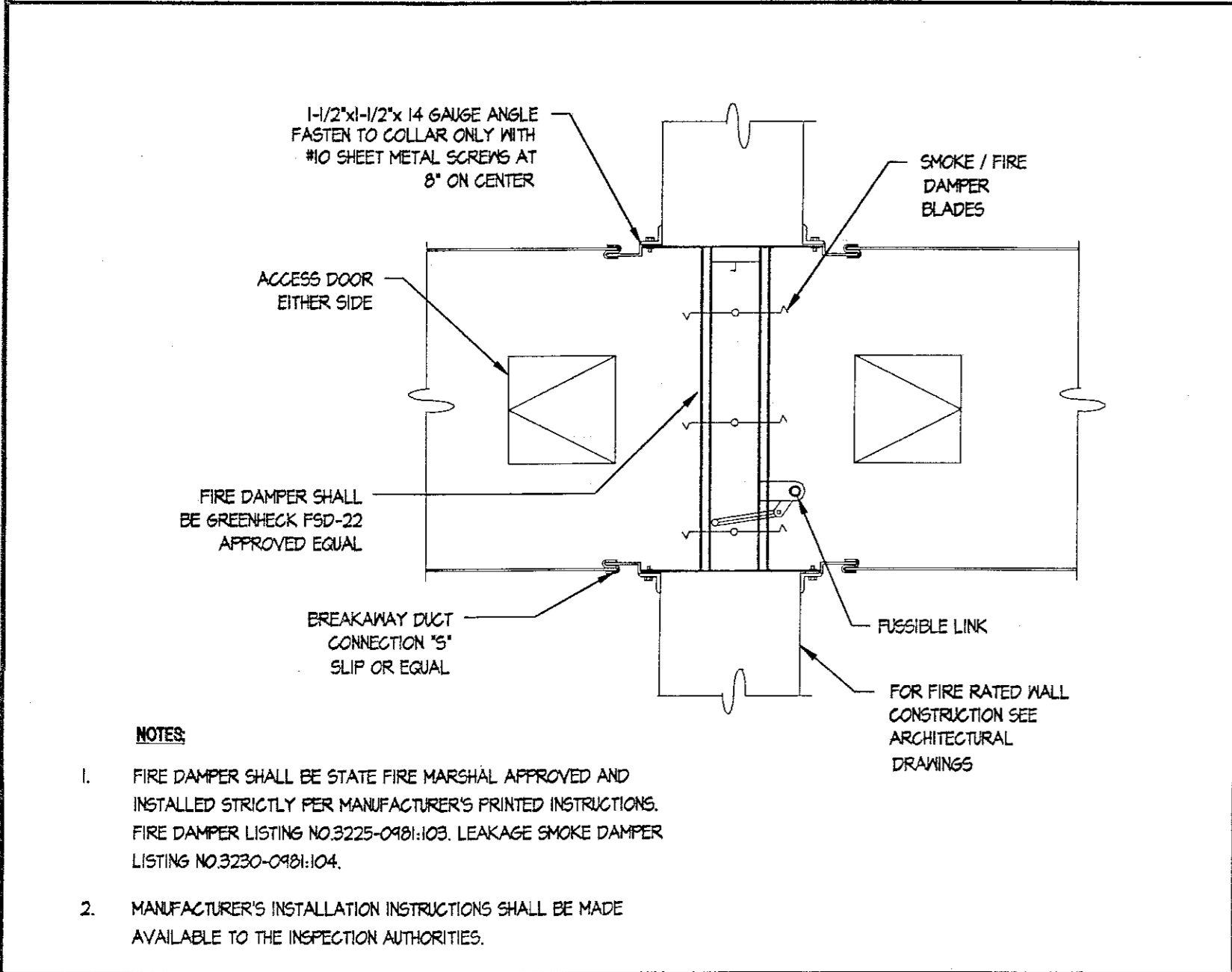
DUCT SUPPORT 3 NO SCALE



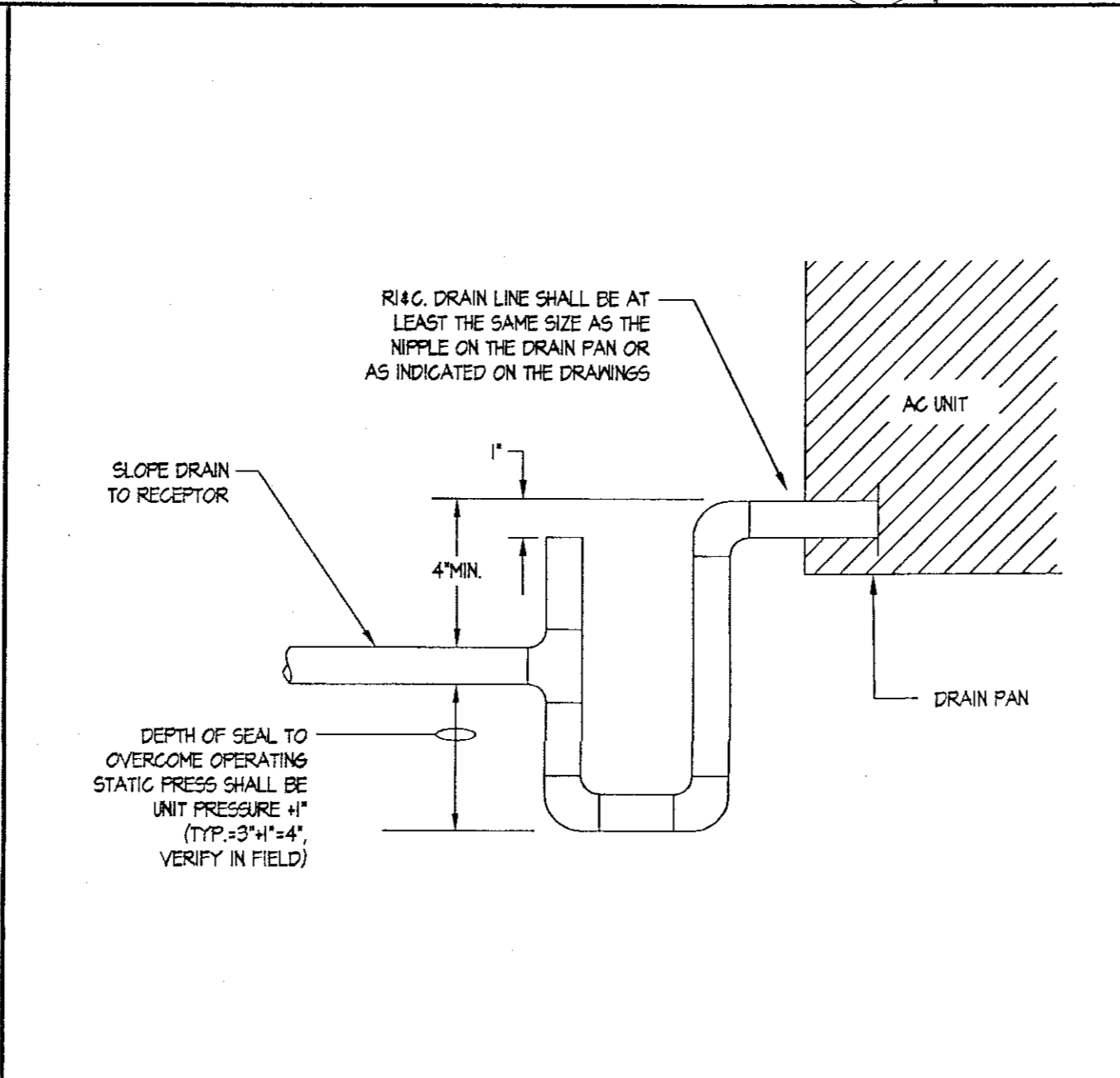
EQUIPMENT DRAIN 2 NO SCALE



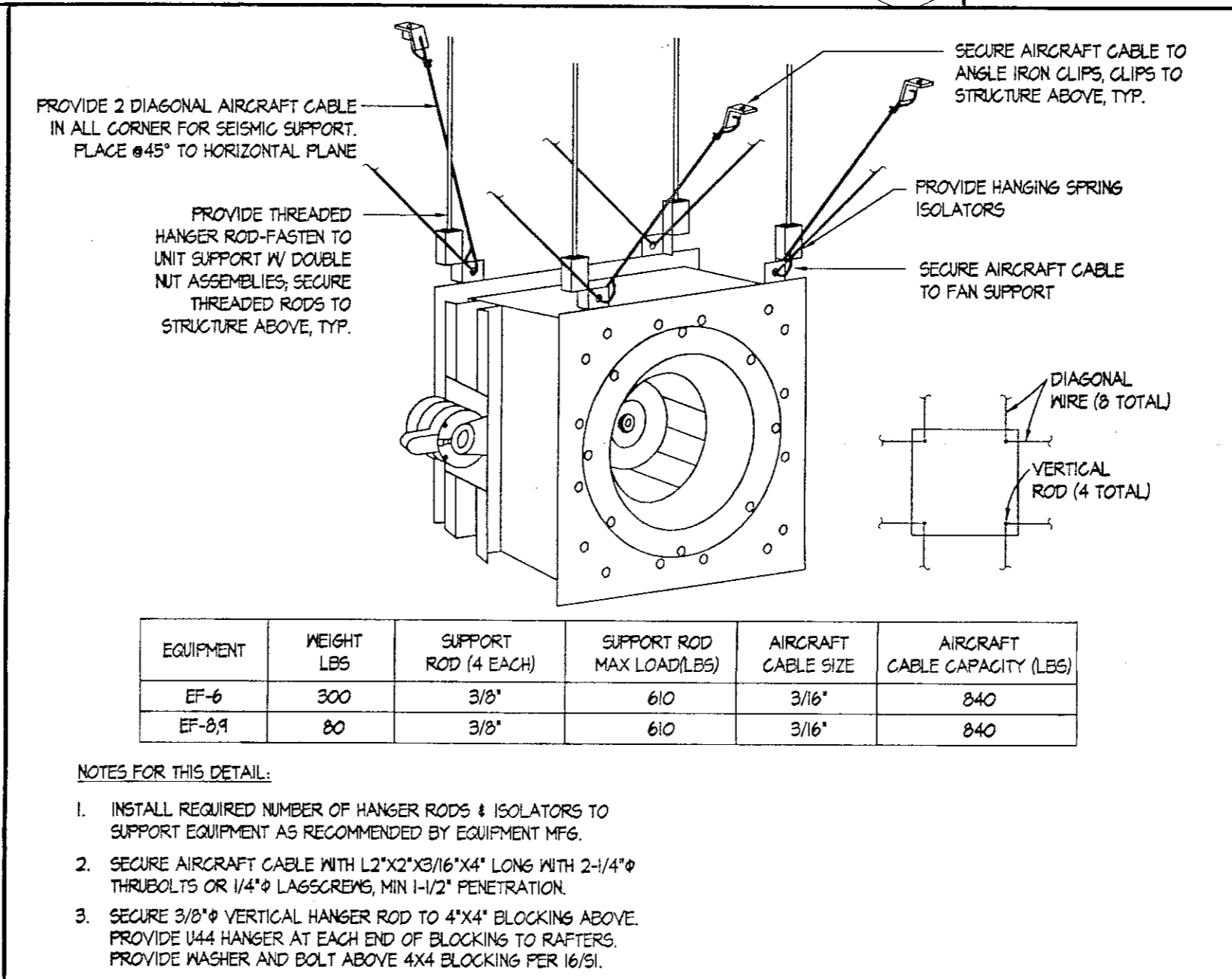
DX SPLIT SYSTEM CONNECTIONS 1 NO SCALE



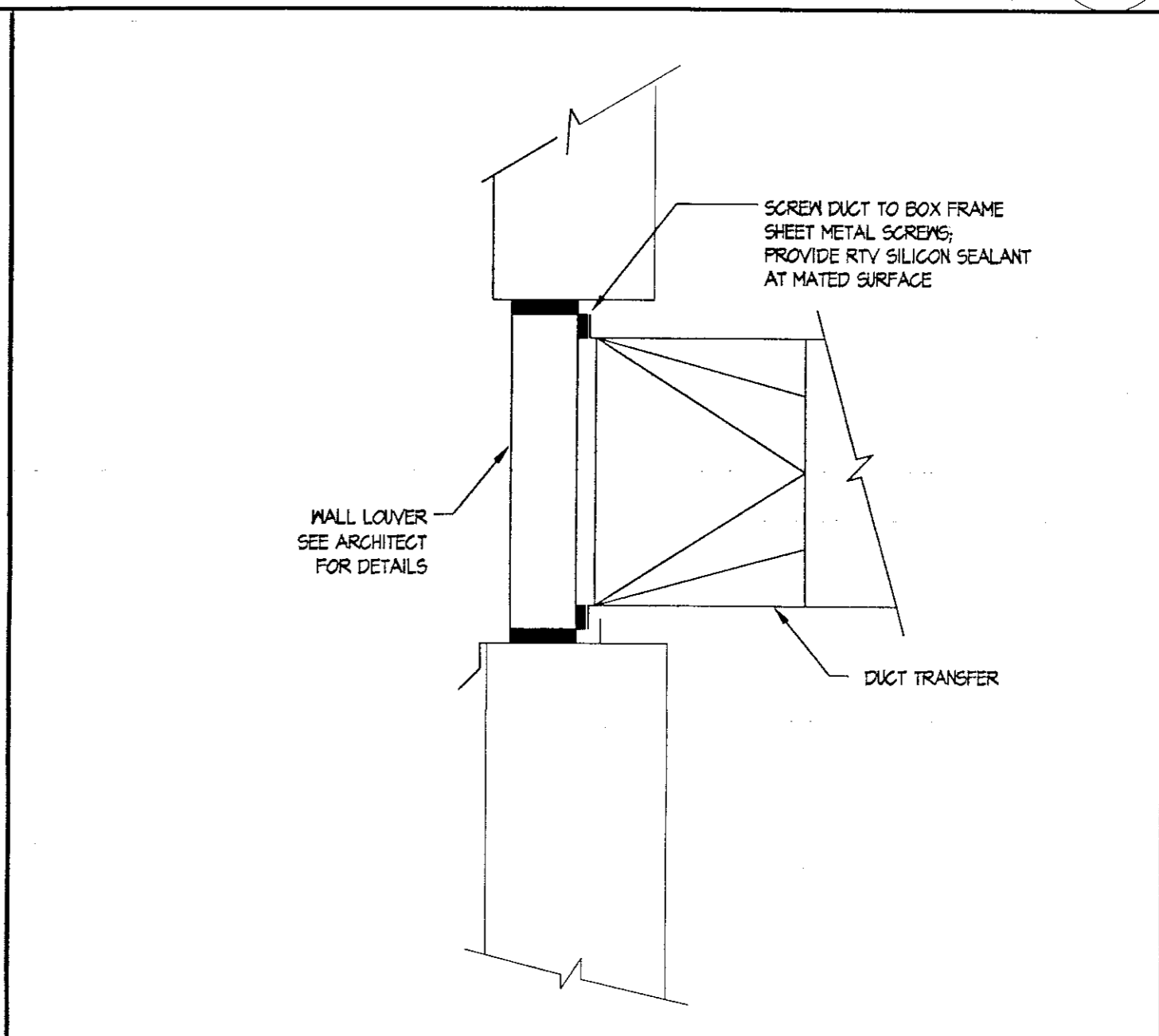
COMBINATION FIRE/SMOKE DAMPER DETAIL 7 NO SCALE



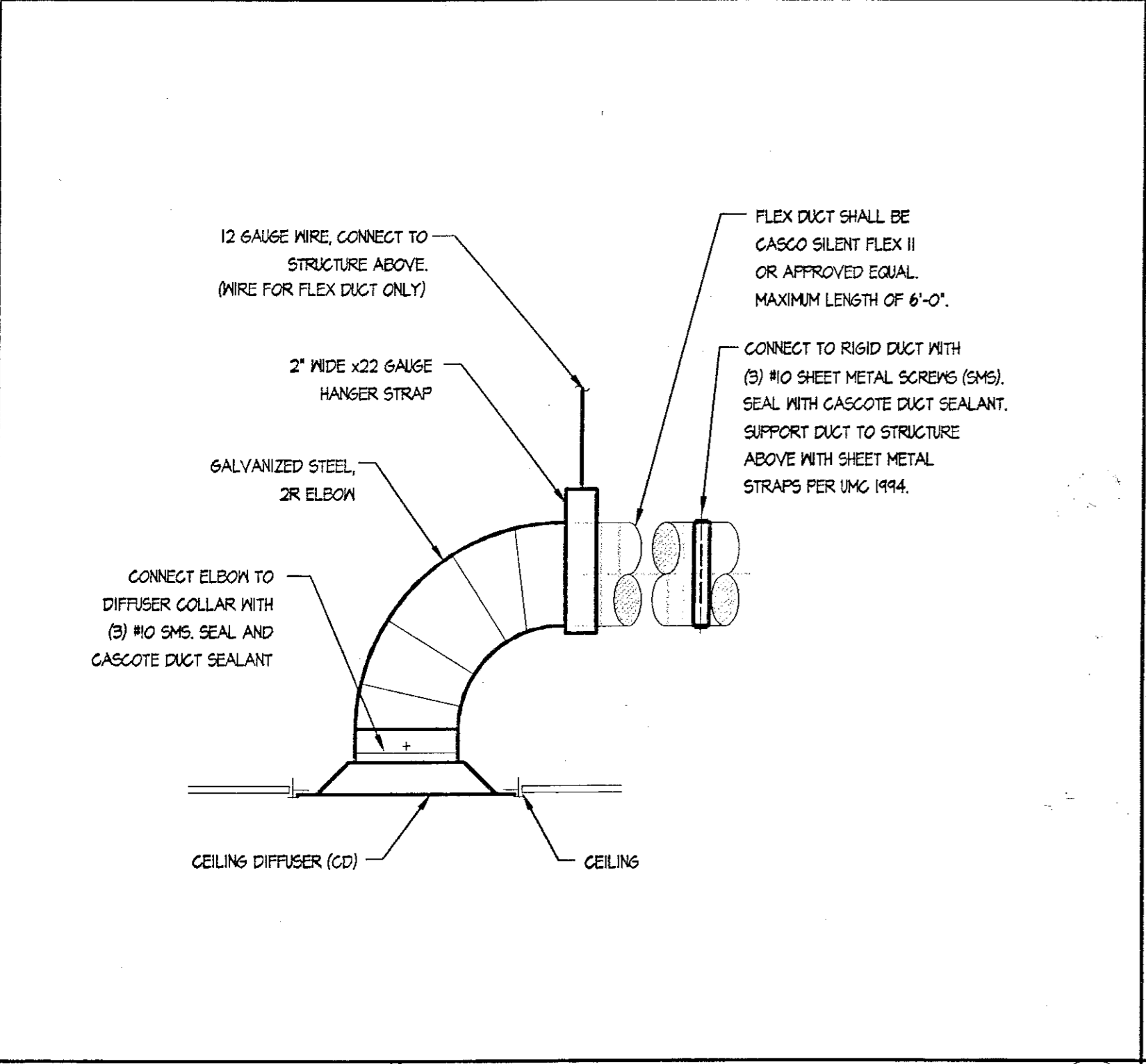
CONDENSATE TRAP DETAIL 6 NO SCALE



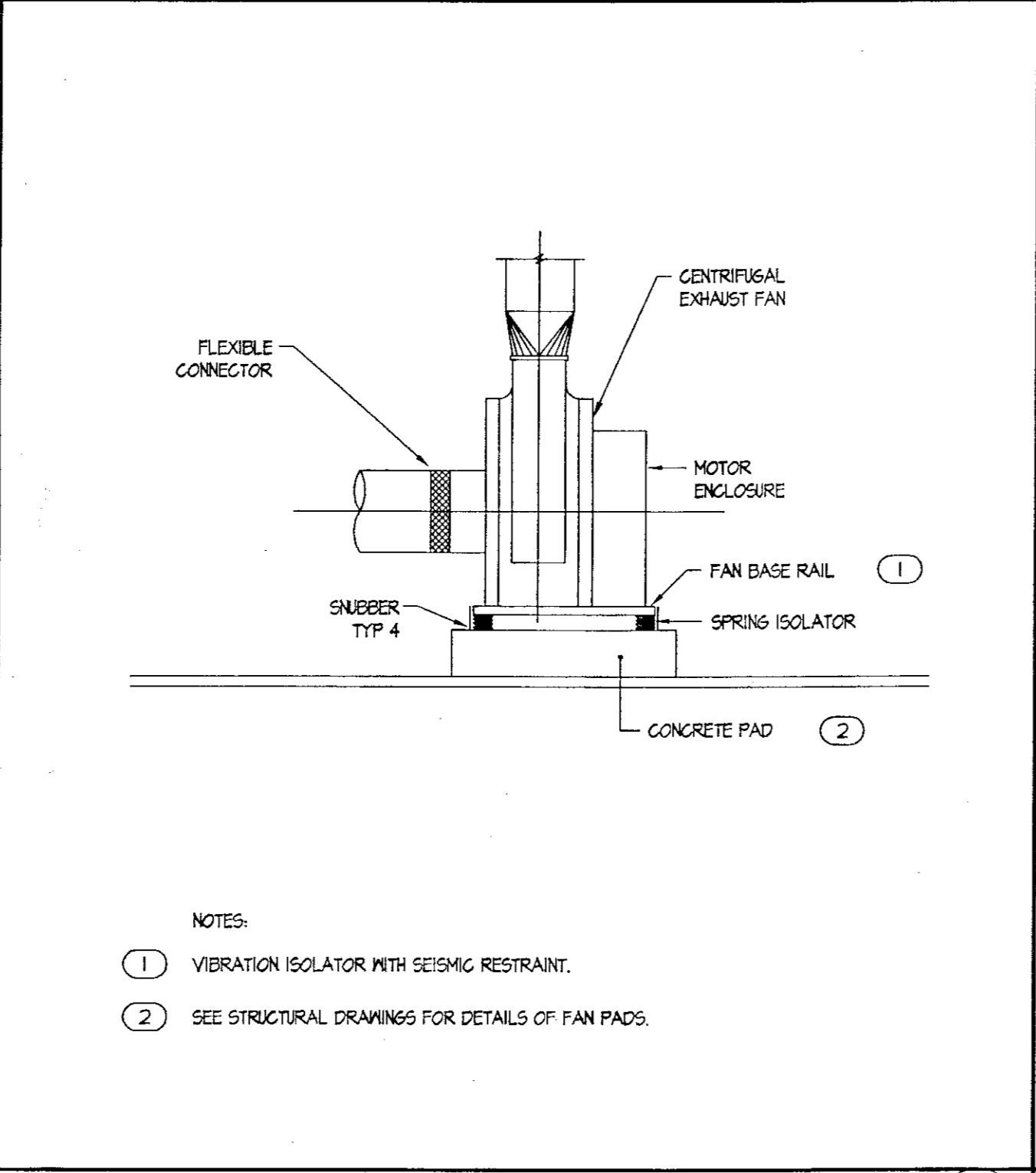
SUSPENDED EQUIPMENT SUPPORT 5 NO SCALE



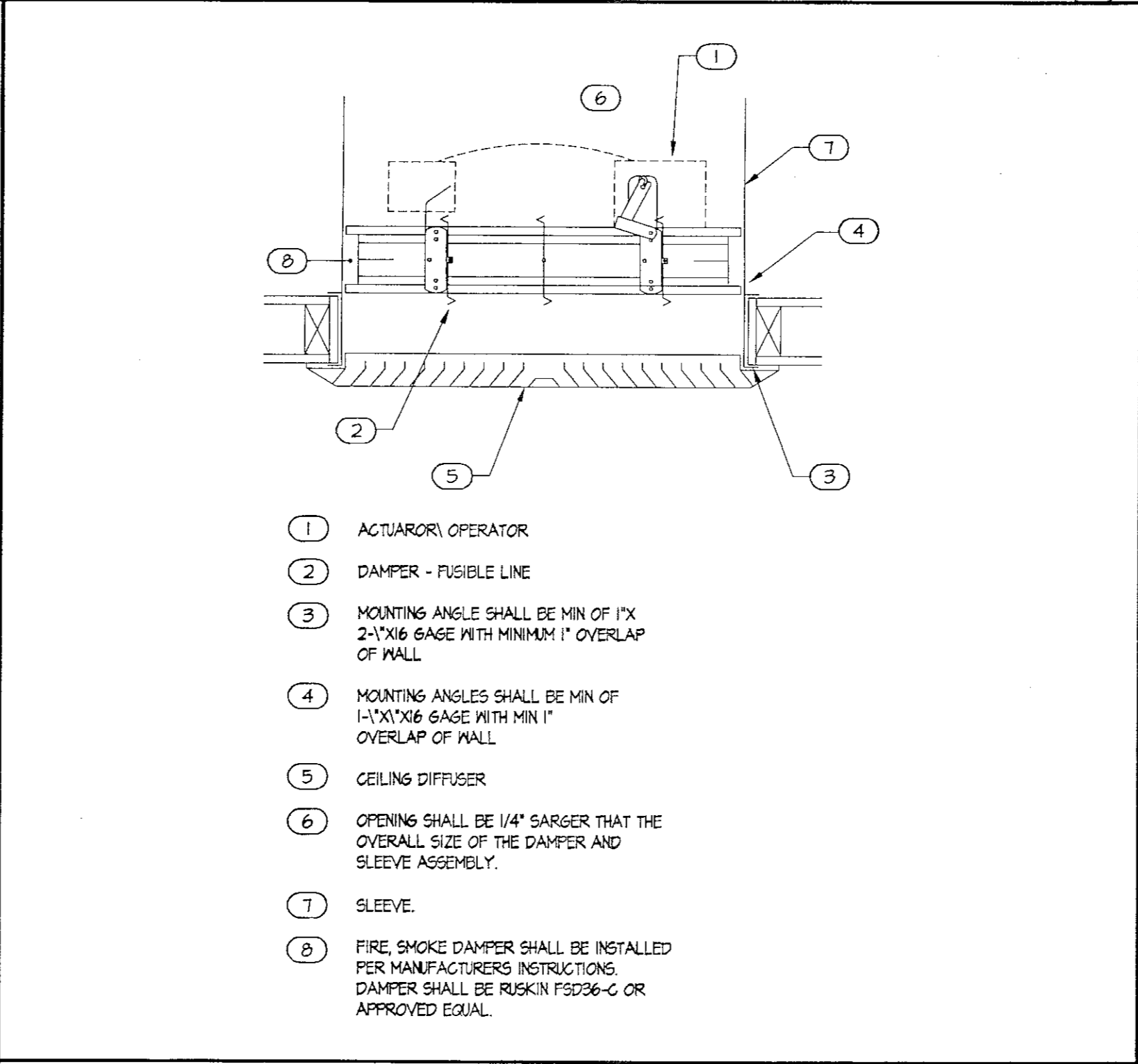
EXHAUST WALL LOUVER CONN. 4 NO SCALE



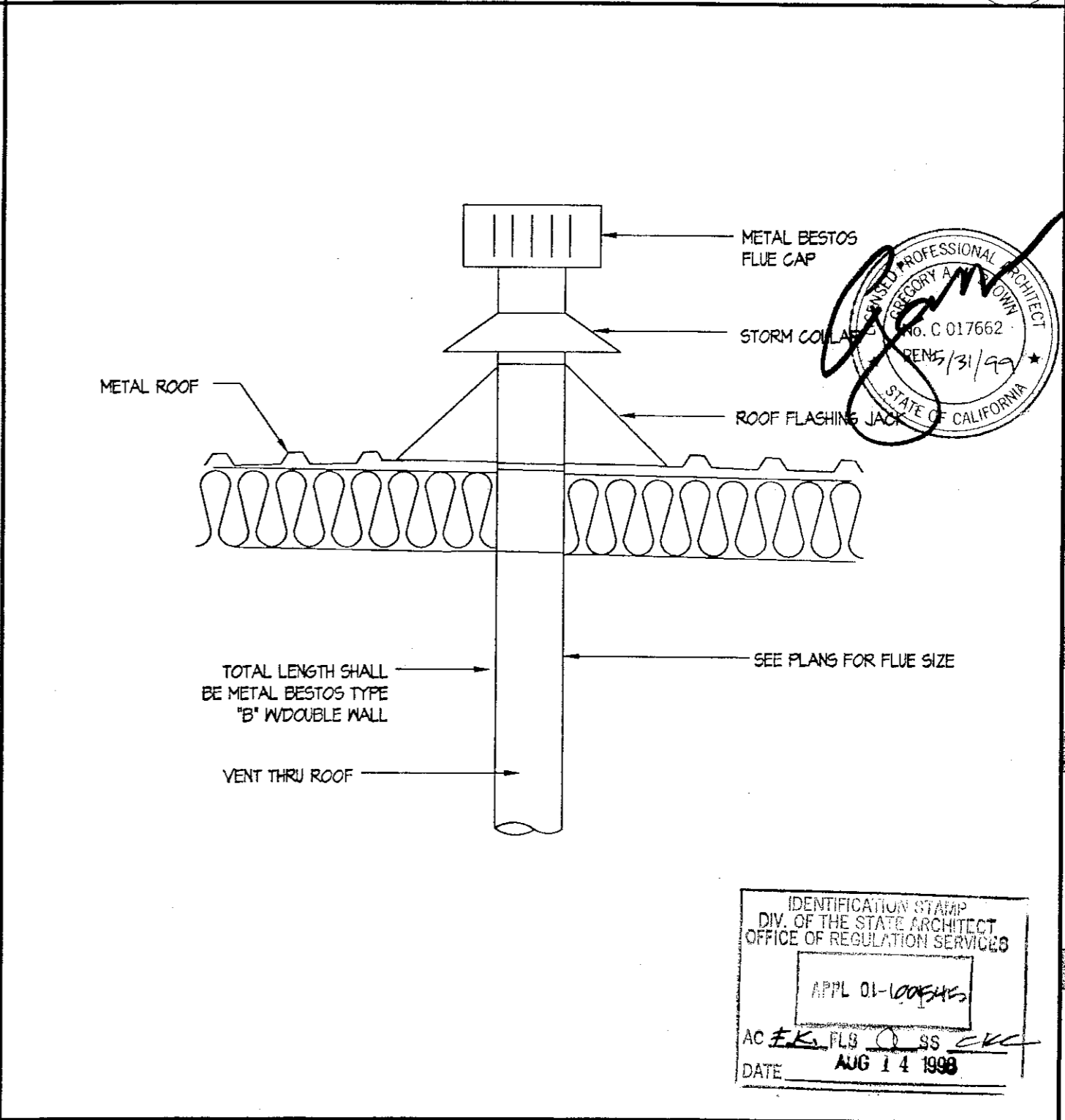
CEILING DIFFUSER ONLY DETAIL 11 NO SCALE



CENTRIFUGAL EXHAUST FANS 10 NO SCALE



1-HOUR FIRE/SMOKE DAMPER-CEILING 9 NO SCALE



FLUE VENT THROUGH ROOF 8 NO SCALE

Electrical
Mechanical
Plumbing
Telecommunications

P2S Engineering, Inc. Tel: 562 497 2999
Long Beach, CA 90815 www.p2seng.com

artech
DESIGN
GROUP

1350 Treat Blvd., Suite 190
Walnut Creek, CA 94596
(510) 975-0980
FAX (510) 975-0984

Date: 08-04-98

Permit: Submittal

Draw Issue

Construction Issue

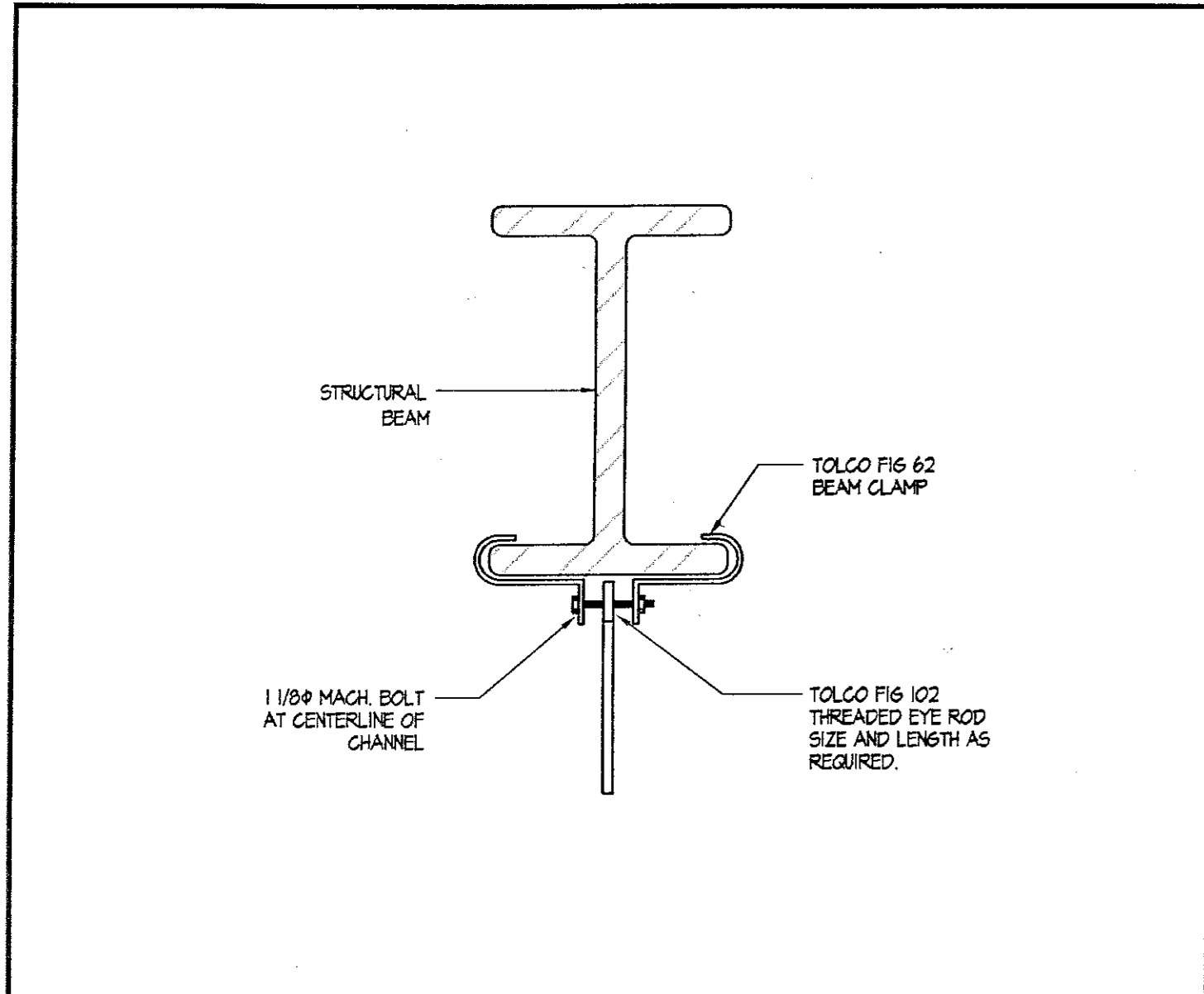
Revisions:

REV	DATE	DESCRIPTION

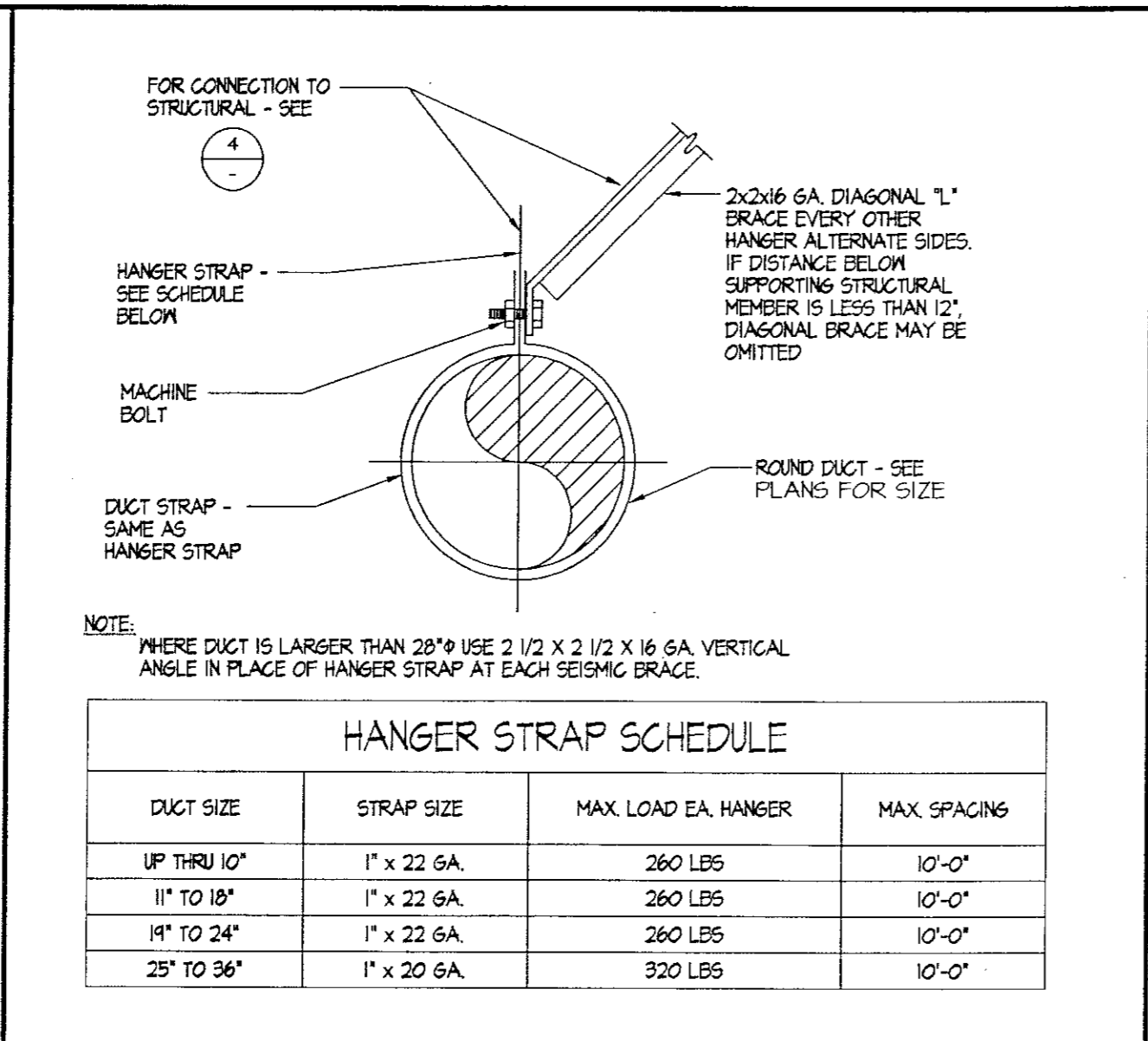
SAN RAMON OLYMPIC POOL
AQUATIC CENTER
9900 Broadmoor Drive, San Ramon, CA

Professional Engineer
State of California
No. 017662
Exp. 12/31/99

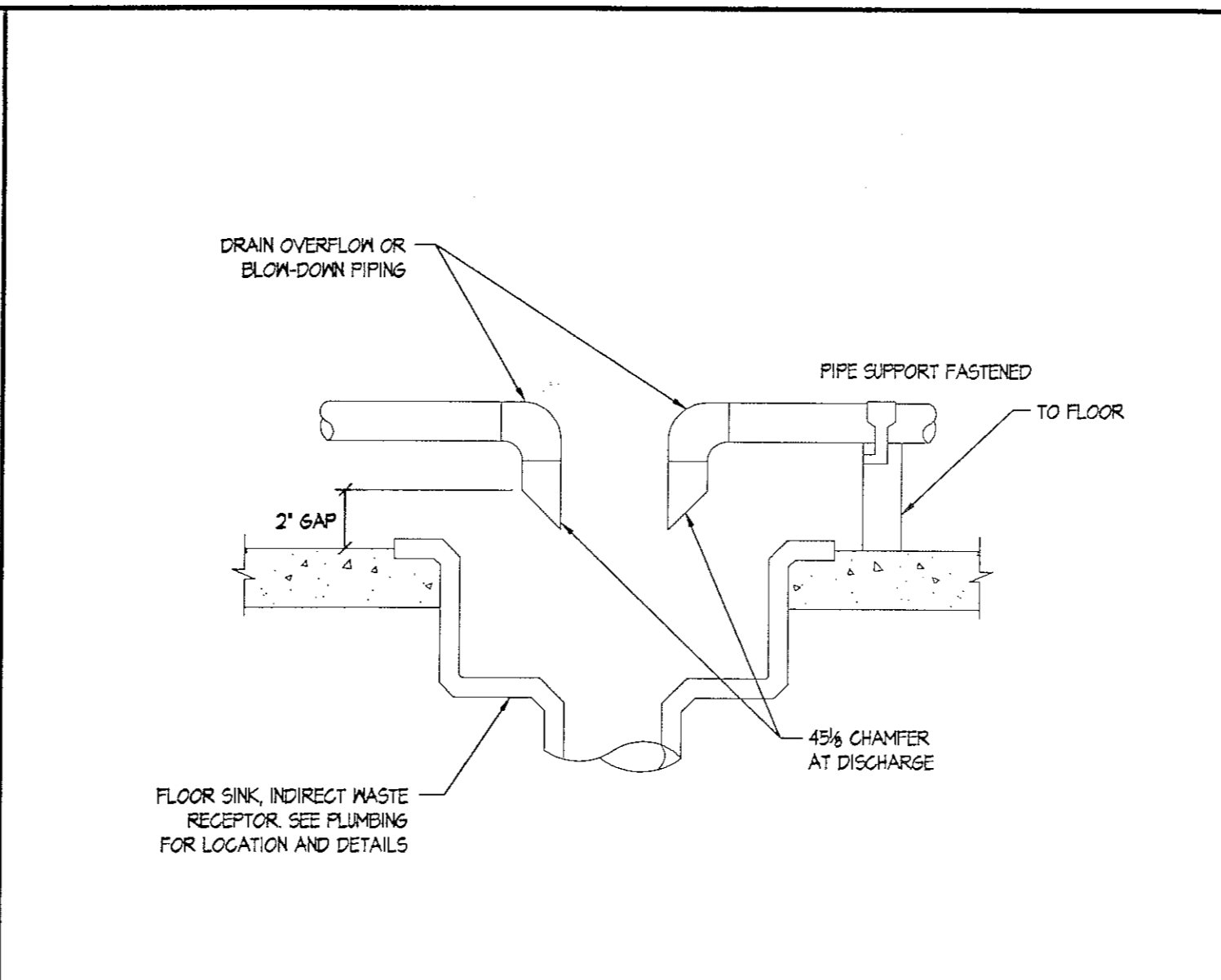
Project No: 2143
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Drawing: DETAILS
Sheet: M4



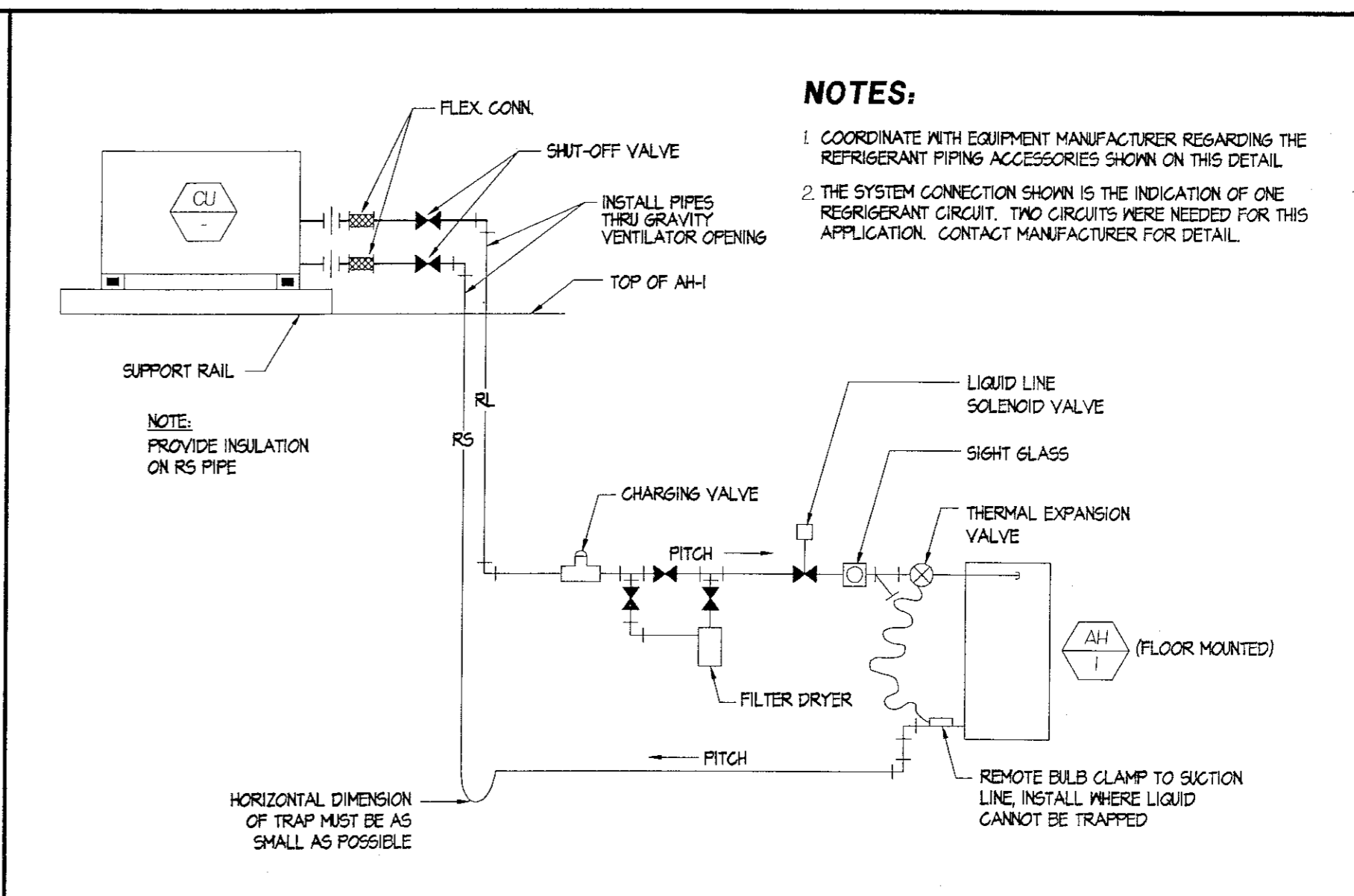
CONNECTION TO STRUCTURE 3 NO SCALE



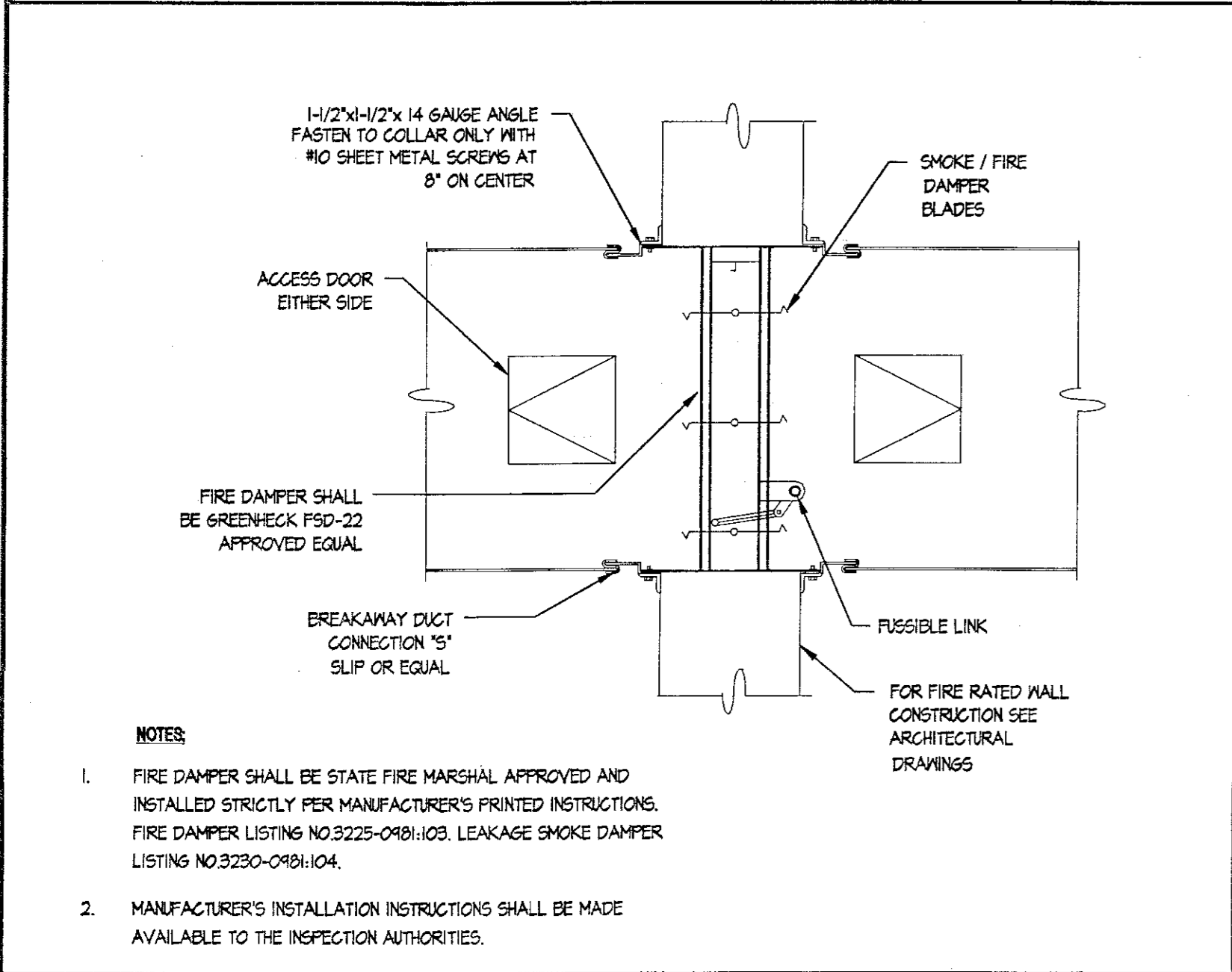
DUCT SUPPORT 3 NO SCALE



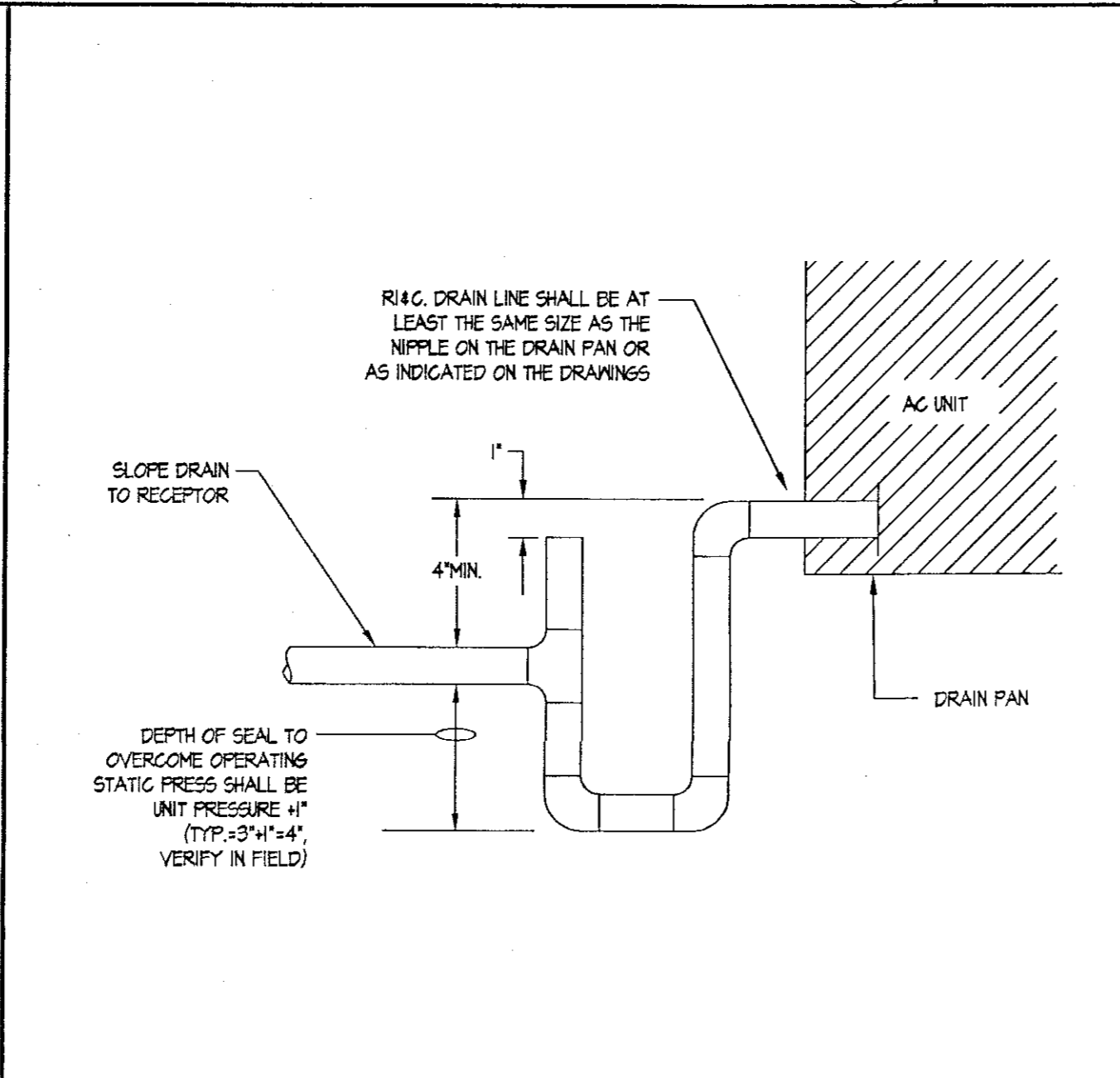
EQUIPMENT DRAIN 2 NO SCALE



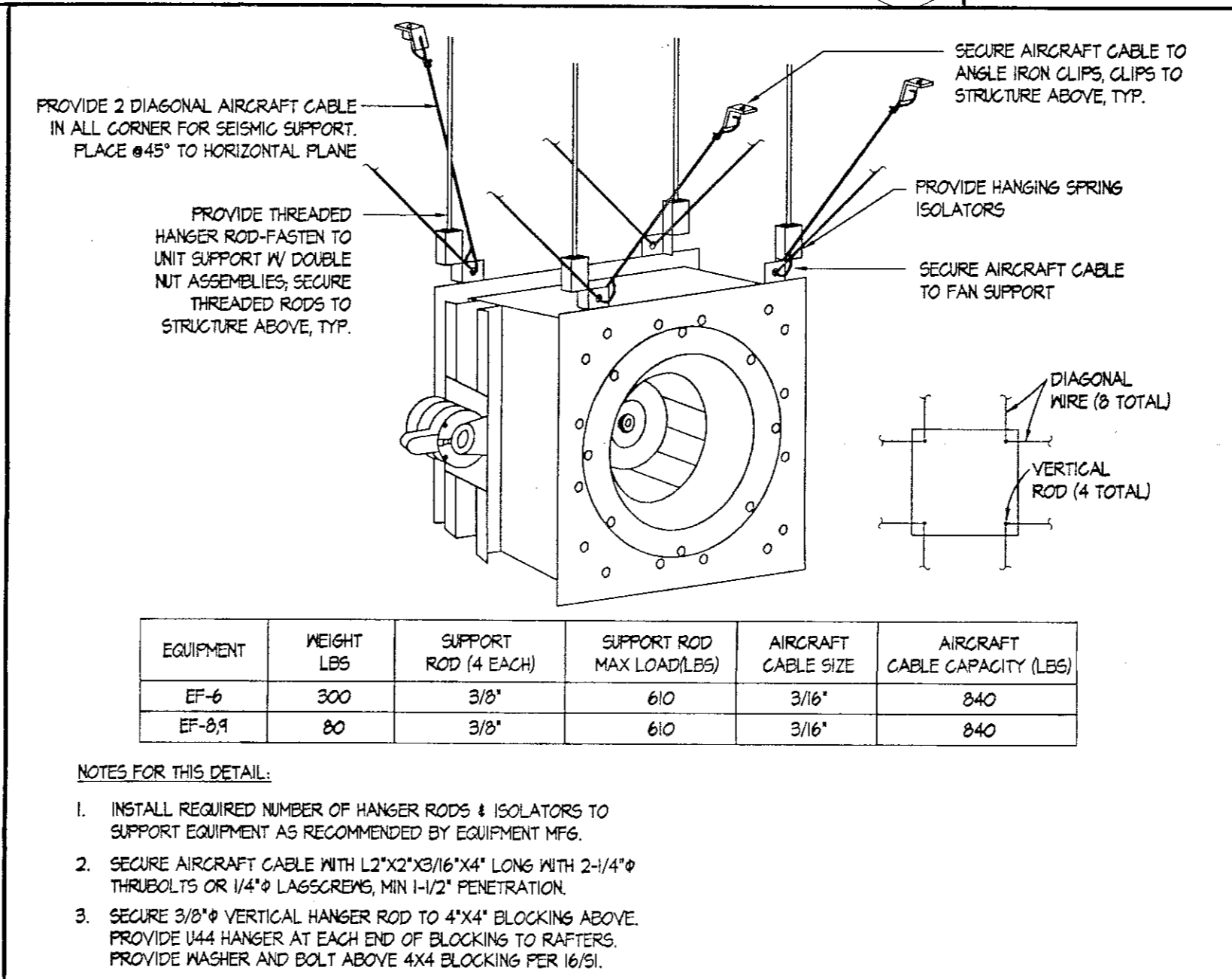
DX SPLIT SYSTEM CONNECTIONS 1 NO SCALE



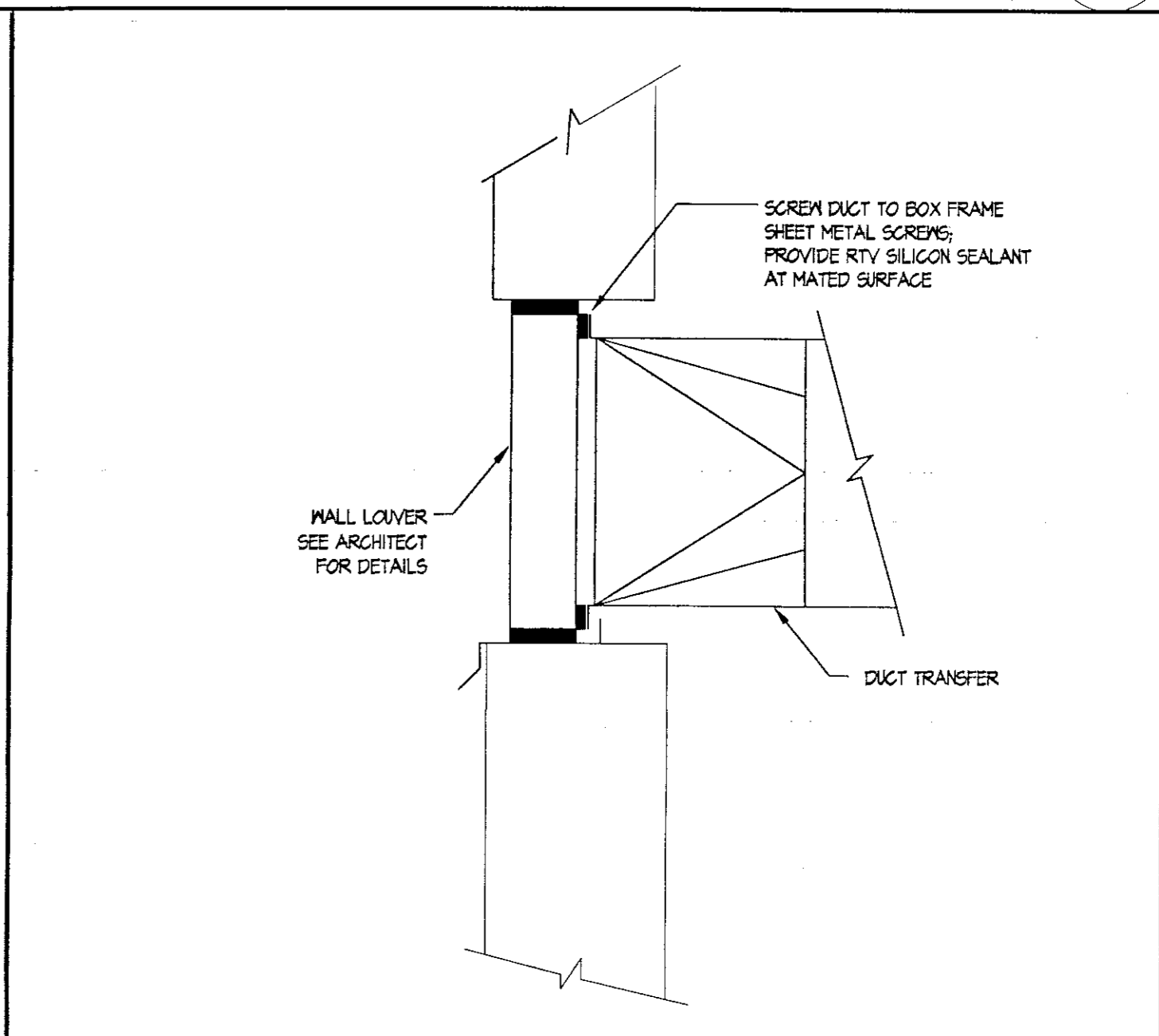
COMBINATION FIRE/SMOKE DAMPER DETAIL 7 NO SCALE



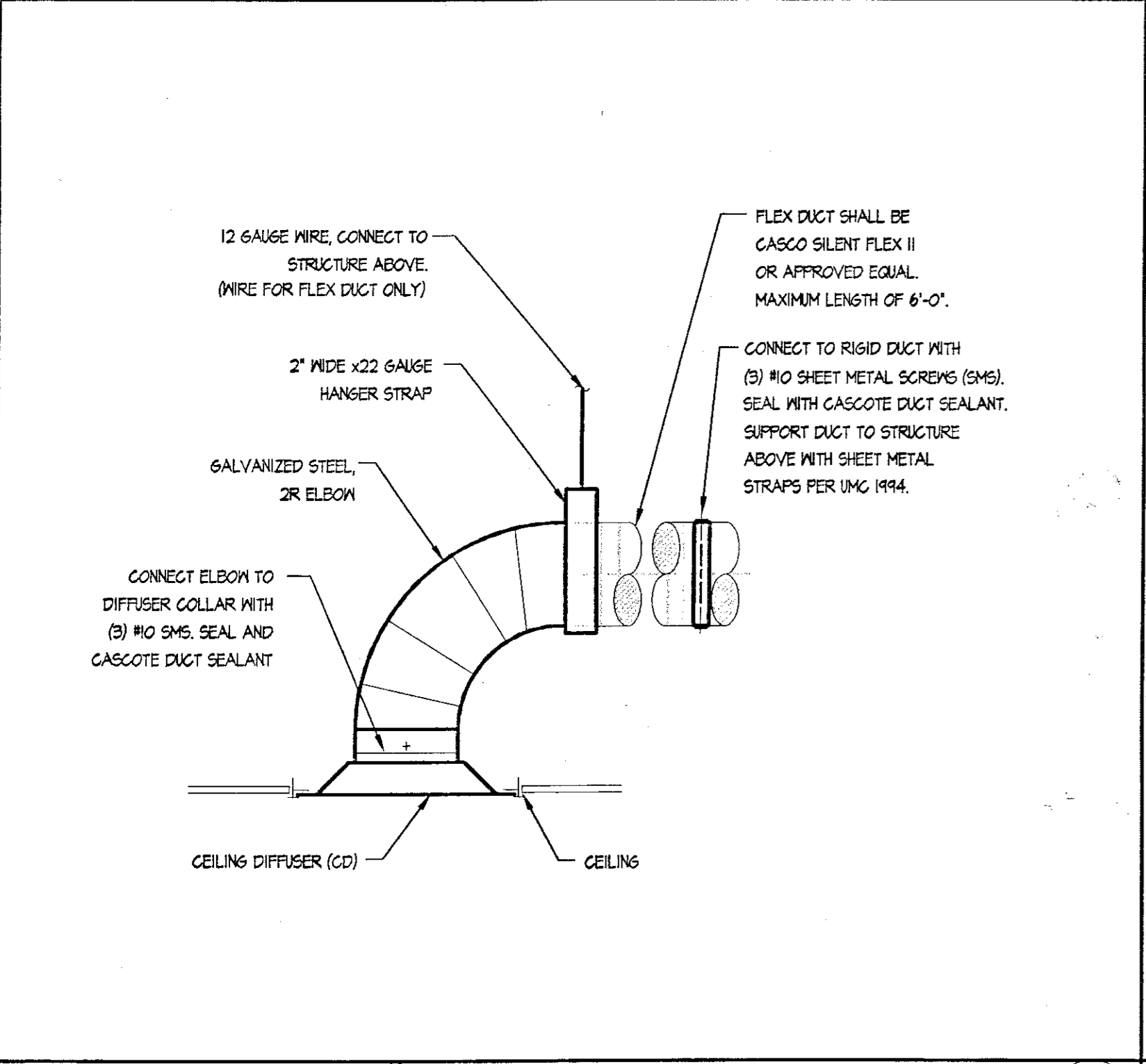
CONDENSATE TRAP DETAIL 6 NO SCALE



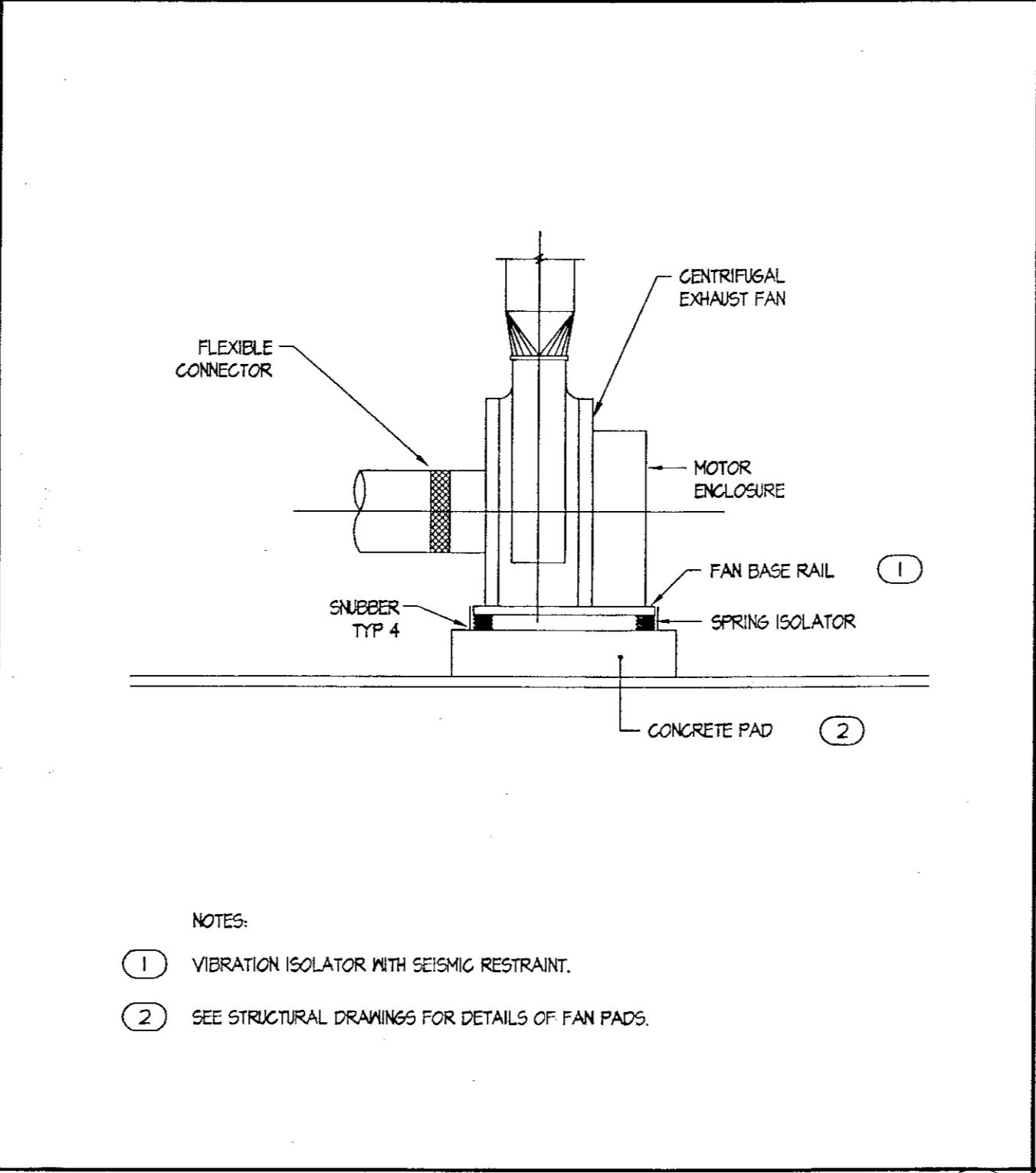
SUSPENDED EQUIPMENT SUPPORT 5 NO SCALE



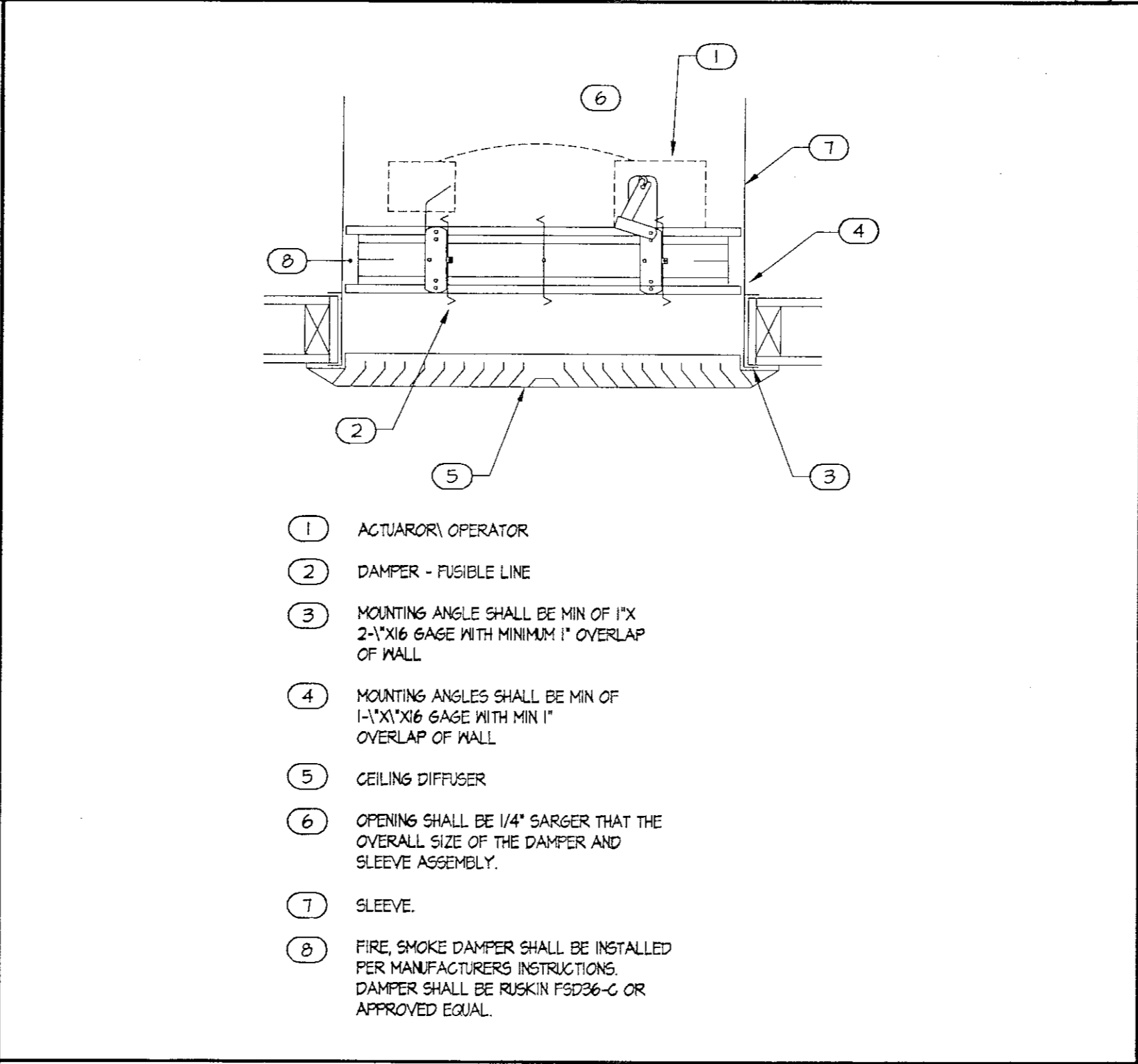
EXHAUST WALL LOUVER CONN. 4 NO SCALE



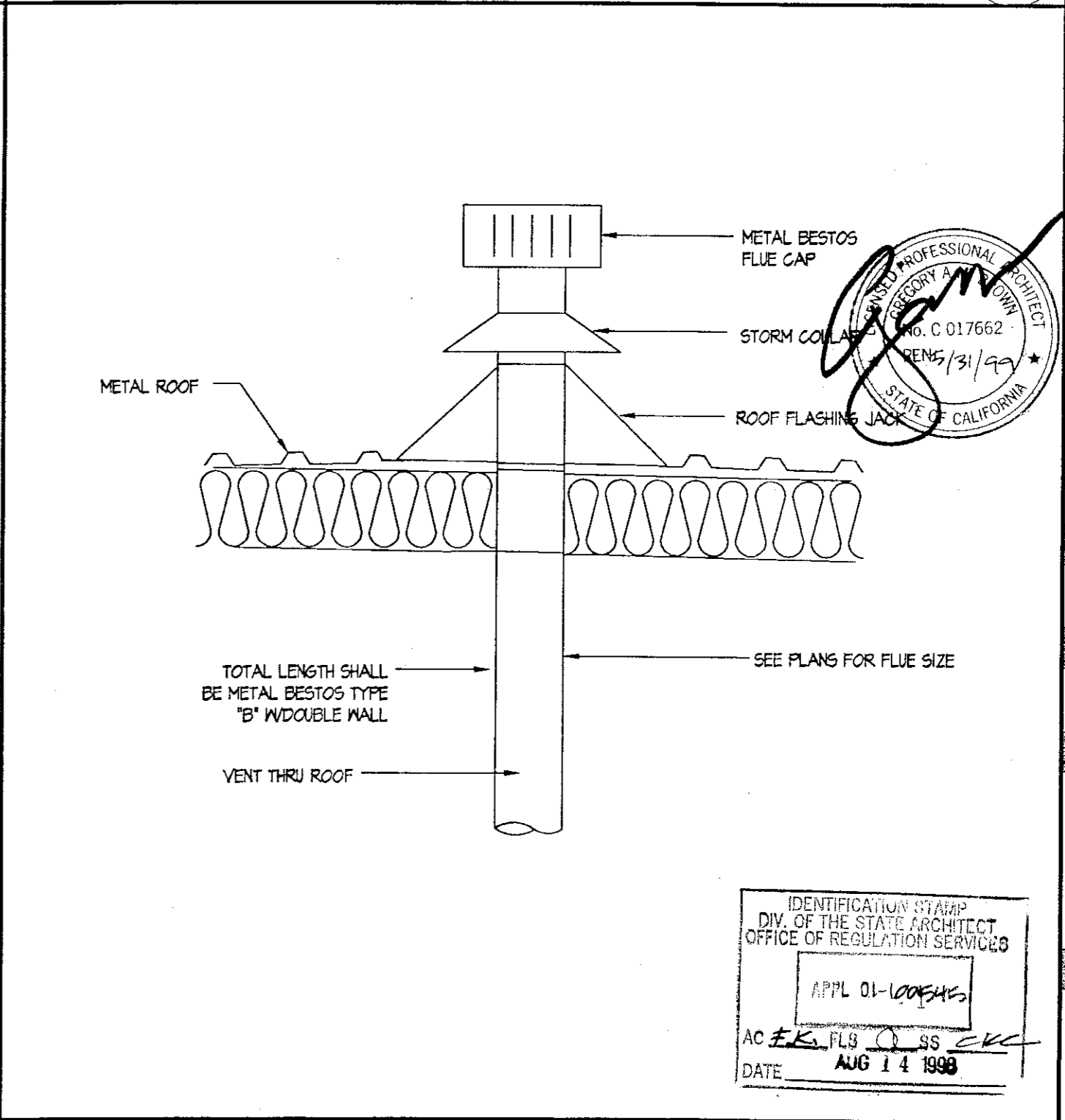
CEILING DIFFUSER ONLY DETAIL 11 NO SCALE



CENTRIFUGAL EXHAUST FANS 10 NO SCALE



1-HOUR FIRE/SMOKE DAMPER-CEILING 9 NO SCALE



FLUE VENT THROUGH ROOF 8 NO SCALE

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Date: 08-04-98
Permit: Submittal
Bid: Issue
Construction: Issue

Revisions:
REV DATE DESCRIPTION
△
△
△
△
△

SAN RAMON OLYMPIC POOL AQUATIC CENTER
9900 Broadmoor Drive, San Ramon, CA

Professional Engineer
BE 117920
Exp. 12/31/00
STATE OF CALIFORNIA

Project No: 2193
Scale: NONE
Drawing: DETAILS
Sheet: M4

EQUIPMENT AND SYSTEMS EFFICIENCY

<input type="checkbox"/> ANY APPLIANCE FOR WHICH THERE IS A CALIFORNIA STANDARD ESTABLISHED IN THE APPLIANCE EFFICIENCY STANDARDS MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFIED THAT THE APPLIANCE COMPLIES WITH THE APPLICABLE STANDARD FOR THAT APPLIANCE. INCLUDED ARE ROOM AIR CONDITIONERS, CENTRAL AIR CONDITIONING HEAT PUMPS (REGARDLESS OF CAPACITY), EXCEPT THAT REQUIREMENTS FOR CENTRAL AIR CONDITIONING HEAT PUMPS WITH COOLING CAPACITY OF 135,000 BTU/HR OR MORE APPLY TO HEATING PERFORMANCE BUT NOT COOLING PERFORMANCE), OTHER CENTRAL AIR CONDITIONERS WITH A COOLING CAPACITY LESS THAN 135,000 BTU/HR, FAN TYPE CENTRAL FURNACES WITH INPUT RATE LESS THAN 400,000 BTU/HR, BOILERS, WALL FURNACES, FLOOR FURNACES, ROOM HEATERS, UNIT HEATERS, AND DUCT FURNACES SHALL HAVE BEEN CERTIFIED TO THE CALIFORNIA ENERGY COMMISSION BY ITS MANUFACTURER TO COMPLY WITH THE APPLIANCE EFFICIENCY STANDARDS.	NA
<input type="checkbox"/> THE FOLLOWING SPACE CONDITIONING EQUIPMENT MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFIED THAT THE EQUIPMENT MEETS OR EXCEEDS ALL APPLICABLE EFFICIENCY REQUIREMENTS LISTED IN 112 OF THE ENERGY EFFICIENCY STANDARDS: ALL AIR CONDITIONERS, HEAT PUMPS AND CONDENSING UNITS > 135,000 BTU/HR, ALL WATER CHILLERS, ALL GAS-FIRED BOILERS > 300,000 BTU/HR, ALL OIL-FIRED BOILERS > 225,000 BTU/HR, AND ALL WARM AIR FURNACES AND COMBINATION WARM AIR FURNACES/AIR-CONDITIONING UNITS > 225,000 BTU/HR. FAN TYPE CENTRAL FURNACES SHALL NOT HAVE A PILOT LIGHT.	NA
<input type="checkbox"/> PIPING, EXCEPT THOSE CONVEYING FLUIDS AT TEMPERATURES BETWEEN 60 DEGREES F AND 105 DEGREES F, OR WITHIN HVAC EQUIPMENT, SHALL BE INSULATED IN ACCORDANCE WITH STANDARDS 123.	NA
<input checked="" type="checkbox"/> AIR HANDLING DUCT SYSTEMS SHALL BE CONSTRUCTED, INSTALLED, SEALED, AND INSULATED AS PROVIDED IN CHAPTER 6 OF THE UNIFORM MECHANICAL CODE.	M-2

CONTROLS

<input type="checkbox"/> EACH SPACE CONDITIONING SYSTEM SHALL BE INSTALLED WITH AN AUTOMATIC TIME SWITCH WITH AN ACCESSIBLE MANUAL OVERRIDE THAT ALLOWS OPERATION OF THE SYSTEM DURING OFF-HOURS FOR UP TO 4 HOURS. THE TIME SWITCH SHALL BE CAPABLE OF PROGRAMMING DIFFERENT SCHEDULES FOR WEEKDAYS AND WEEKENDS, INCORPORATE AN AUTOMATIC HOLIDAY SHUT-OFF FEATURE THAT TURNS OFF ALL LOADS FOR AT LEAST 24 HOURS, THEN RESUMES THE NORMALLY SCHEDULED OPERATION, AND HAS PROGRAM BACKUP CAPABILITIES THAT PREVENT THE LOSS OF THE DEVICE PROGRAM AND TIME SETTINGS FOR AT LEAST 10 HOURS IF POWER IS INTERRUPTED.	NA
<input type="checkbox"/> EACH SPACE CONDITIONING SYSTEM SHALL BE INSTALLED WITH AN OCCUPANCY SENSOR TO CONTROL THE OPERATING PERIOD OF THE SYSTEM.	NA
<input type="checkbox"/> EACH SPACE CONDITIONING SYSTEM SHALL BE INSTALLED WITH A 4-HOUR TIMER THAT CAN BE MANUALLY OPERATED TO CONTROL THE OPERATING PERIOD OF THE SYSTEM.	NA
<input type="checkbox"/> EACH SPACE CONDITIONING SYSTEM SHALL BE INSTALLED WITH CONTROLS THAT TEMPORARILY RESTART AND TEMPORARILY OPERATE THE SYSTEM AS REQUIRED TO MAINTAIN A SETBACK COOLING & HEATING THERMOSTAT SETPOINT.	NA
<input type="checkbox"/> EACH SPACE CONDITIONING SYSTEM SERVING MULTIPLE ZONES WITH A COMBINED CONDITIONED FLOOR AREA MORE THAN 25,000 SQUARE FEET SHALL BE PROVIDED WITH ISOLATION ZONES. EACH ZONE SHALL: NOT EXCEED 25,000 SQUARE FEET; SHALL BE PROVIDED WITH ISOLATION DEVICES, SUCH AS VALVES OR DAMPERS, THAT ALLOW THE SUPPLY OF HEATING OR COOLING TO BE SETBACK OR SHUT OFF INDEPENDENTLY OF OTHER ISOLATION AREAS; AND SHALL BE CONTROLLED BY A TIME CONTROL DEVICES AS DESCRIBED ABOVE.	NA

<input checked="" type="checkbox"/> EACH SPACE CONDITIONING ZONE SHALL BE CONTROLLED BY AN INDIVIDUAL THERMOSTATIC CONTROL THAT RESPONDS TO TEMPERATURE WITHIN THE ZONE. WHERE USED TO CONTROL HEATING, THE CONTROL SHALL BE ADJUSTABLE DOWN TO 55 DEGREE F OR LOWER. FOR COOLING, THE CONTROL SHALL BE READJUSTABLE UP TO 85 DEGREE F OR HIGHER. WHERE USED TO CONTROL BOTH HEATING AND COOLING, THE CONTROL SHALL BE CAPABLE OF PROVIDING A DEAD BAND OF AT LEAST 5 DEGREE F WITHIN WHICH THE SUPPLY OF HEATING AND COOLING IS SHUT OFF OR REDUCED TO A MINIMUM.	M-2
<input checked="" type="checkbox"/> THERMOSTATS SHALL HAVE NUMERIC SETPOINTS IN DEGREE F.	M-2
<input checked="" type="checkbox"/> THERMOSTATS SHALL HAVE ADJUSTABLE SETPOINT STOPS ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL.	M-2
<input type="checkbox"/> HEAT PUMPS SHALL BE INSTALLED WITH CONTROLS TO PREVENT ELECTRIC RESISTANCE SUPPLEMENTARY HEATER OPERATION WHEN THE HEATING LOAD CAN BE MET BY THE HEAT PUMP ALONE. ELECTRIC RESISTANCE SUPPLEMENTARY HEATER OPERATION IS PERMITTED DURING TRANSIENT PERIODS, SUCH AS START-UPS AND FOLLOWING ROOM THERMOSTAT SETPOINT ADVANCE, WHEN CONTROLS ARE PROVIDED WHICH USE PREFERENTIAL RATE CONTROL, INTELLIGENT RECOVERY, STAGING, RAMPING OR SIMILAR CONTROL MECHANISMS DESIGNED TO PRECLUDE THE UNNECESSARY OPERATION OF SUPPLEMENTARY HEATING DURING THE RECOVERY PERIOD. SUPPLEMENTARY HEATER OPERATION IS ALSO PERMITTED DURING DEFROST.	NA

VENTILATION

<input type="checkbox"/> CONTROLS SHALL BE PROVIDED TO ALLOW OUTSIDE AIR DAMPERS OR DEVICES TO BE OPERATED AT THE VENTILATION RATES AS SPECIFIED IN THESE PLANS.	NA
<input type="checkbox"/> GRAVITY OR AUTOMATIC DAMPERS INTERLOCKED AND CLOSED ON FAN SHUTDOWN SHALL BE PROVIDED ON THE OUTSIDE AIR INTAKES AND DISCHARGES OF ALL SPACE CONDITIONING AND EXHAUST SYSTEMS.	NA
<input type="checkbox"/> ALL GRAVITY VENTILATING SYSTEMS SHALL BE PROVIDED WITH AUTOMATIC OR READILY ACCESSIBLE MANUALLY OPERATED DAMPERS IN ALL OPENINGS TO THE OUTSIDE, EXCEPT FOR COMBUSTION AIR OPENINGS.	NA
<input checked="" type="checkbox"/> AIR BALANCING. ALL SPACE CONDITIONING AND VENTILATION SYSTEMS SHALL BE BALANCED TO THE QUANTITIES SPECIFIED IN THESE PLANS, IN ACCORDANCE WITH THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB) PROCEDURAL STANDARDS (1983), OR ASSOCIATED AIR BALANCE COUNCIL (AABC) NATIONAL STANDARDS (1986).	M-2
<input type="checkbox"/> OUTSIDE AIR CERTIFICATION. THE SYSTEM SHALL PROVIDE THE MINIMUM OUTSIDE AIR AS SHOWN ON THE MECHANICAL DRAWINGS, AND SHALL BE MEASURED AND CERTIFIED BY THE INSTALLING LICENSED C-20 MECHANICAL CONTRACTOR.	NA

SERVICE WATER HEATING SYSTEMS

<input type="checkbox"/> THE FOLLOWING SERVICE WATER HEATING SYSTEMS AND EQUIPMENT MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFIED THAT THE EQUIPMENT MEETS OR EXCEEDS ALL APPLICABLE EFFICIENCY REQUIREMENTS LISTED IN 115 OF THE ENERGY EFFICIENCY STANDARDS: OIL-FIRED STORAGE TYPES > 105,000 BTU/HR, OIL-FIRED NON-STORAGE TYPES > 210,000 BTU/HR, GAS-FIRED NON-STORAGE TYPES > 200,000 BTU/HR.	NA
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<input type="checkbox"/> UNFIRED SERVICE WATER HEATER STORAGE TANKS AND BACKUP TANKS FOR SOLAR WATER HEATING SYSTEMS SHALL HAVE EITHER: EXTERNAL INSULATION WITH AN INSTALLED R-VALUE OF AT LEAST R-2; INTERNAL AND EXTERNAL INSULATION WITH A COMBINED R-VALUE OF AT LEAST R-16; OR SUFFICIENT INSULATION SO THAT THE HEAT LOSS OF THE TANK SURFACE BASED ON AN 80 DEGREE F WATER-AIR TEMPERATURE DIFFERENCE SHALL BE LESS THAN 0.5 BTU/HR/SF.	NA
<input type="checkbox"/> IF A CIRCULATING HOT WATER SYSTEM IS INSTALLED, IT SHALL HAVE A CONTROL CAPABLE OF AUTOMATICALLY TURNING OFF THE CIRCULATING PUMPS WHEN HOT WATER IS NOT REQUIRED.	NA
<input type="checkbox"/> LAVATORIES IN RESTROOMS OF PUBLIC FACILITIES SHALL BE EQUIPPED WITH:	NA
<input type="checkbox"/> OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 0.5 GALLONS PER MINUTE.	NA
<input type="checkbox"/> FOOT ACTUATED CONTROL VALVES, AND OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 0.75 GALLONS PER MINUTE.	NA
<input type="checkbox"/> PROXIMITY SENSOR ACTUATED CONTROL VALVES, AND OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 0.75 GALLONS PER MINUTE.	NA
<input type="checkbox"/> SELF-CLOSING VALVES, AND OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 2.5 GALLONS PER MINUTE, AND 0.25 GALLONS/CYCLE (CIRCULATING SYSTEM).	NA
<input type="checkbox"/> SELF-CLOSING VALVES, AND OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 2.5 GALLONS PER MINUTE, AND 0.50 GALLONS/CYCLE (NON-CIRCULATING SYSTEM).	NA
<input type="checkbox"/> SELF-CLOSING VALVES, AND OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 2.5 GALLONS PER MINUTE, AND 0.75 GALLONS/CYCLE (FOOT SWITCHES AND PROXIMITY SENSOR CONTROLS).	NA
<input type="checkbox"/> LAVATORIES IN RESTROOM OF PUBLIC FACILITIES SHALL BE EQUIPPED WITH CONTROLS TO LIMIT THE OUTLET TEMPERATURE OF 110 DEGREES F.	NA

MECHANICAL MANDATORY MEASURES

CERTIFICATE OF COMPLIANCE

Part 1 of 3

MECH-1

PROJECT NAME

SAN RAMON AQUATIC CENTER

DATE

4-27-98

PROJECT ADDRESS

8900 BROADMOOR DRIVE, SAN RAMON, CA

PRINCIPAL DESIGNER - MECHANICAL

B.A. BOSNJAK - P2S ENGINEERING, INC.

TELEPHONE

(562) 437-2999

DOCUMENTATION AUTHOR

Q. ZHANG - P2S ENGINEERING, INC.

TELEPHONE

(562) 437-2999

Building Permit

Checked by Date

Enforcement Agency Use

GENERAL INFORMATION

DATE OF PLANS

4-27-98

BUILDING CONDITIONED FLOOR AREA

7,540 SF

BUILDING TYPE

☒ NONRESIDENTIAL ☐ HIGH RISE RESIDENTIAL ☐ HOTEL / MOTEL GUEST ROOM

PHASE OF CONSTRUCTION

☒ NEW CONSTRUCTION ☐ ADDITION ☐ ALTERATION- DUCTWORK ONLY

METHOD OF MECHANICAL COMPLIANCE

☐ PERSPECTIVE ☐ PERFORMANCE ☒ DUCTWORK ONLY

PROOF OF ENVELOPE COMPLIANCE

☐ PREVIOUS ENVELOPE PERMIT ☒ ENVELOPE COMPLIANCE ATTACHED

STATEMENT OF COMPLIANCE

This Certificate of Compliance lists the building features and performance specifications needed to comply with Title 24, Parts I and II of the California Code of Regulations. This certificate applies only to building mechanical requirements.

The Principal Mechanical Designer hereby certifies that the proposed building design represented in this set of construction documents is consistent with the other compliance forms and worksheets, with the specifications, and with any other calculations submitted with this permit application. The proposed building has been designed to meet the mechanical requirements contained in sections 110 through 115, 120 through 124, 140 through 142, 144 and 145.

Please check one:
☒ I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation, and that I am a civil engineer, mechanical engineer, or architect.
☐ I affirm that I am eligible under the exemption to Division 3 of the Business and Professions Code by Section 5537.2 of the Business and Professions Code to sign this document as the person responsible for its preparation, and that I am an licensed contractor preparing documents for work that I have contracted to perform.
☐ I affirm that I am eligible under the exemption to Division 3 of the Business and Professions Code by Section _____ of the _____ Code to sign this document as the person responsible for its preparation, and for the following reason: _____

PRINCIPAL MECHANICAL DESIGNER - NAME

SIGNATURE

B.A. Bosnjak

LIC. NO.

M - 17920

DATE

4-27-98

MECHANICAL MANDATORY MEASURES

Indicate location on plans of Note Block for Mandatory Measures

SHEET M5

INSTRUCTIONS TO APPLICANT

For detailed instructions on the use of this and all Energy Efficiency Standards compliance forms, please refer to the Nonresidential Manual published by the California Energy Commission.

MECH-1: Required on plans for all submittals. Parts 2 & 3 may be incorporated in schedules on plans.

MECH-2: Required for all submittals, choose appropriate version depending on method of mechanical compliance.

MECH-3 and MECH-4: Required for all submittals.

Nonresidential Compliance Form

December 98

TITLE 24 COMPLIANCE FORMS

Date: 08-04-98

Permit Submittal

Bid Issue

Construction Issue

Revision

REV DATE DESCRIPTION

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2

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EQUIPMENT AND SYSTEMS EFFICIENCY

<input type="checkbox"/> ANY APPLIANCE FOR WHICH THERE IS A CALIFORNIA STANDARD ESTABLISHED IN THE APPLIANCE EFFICIENCY STANDARDS MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFIED THAT THE APPLIANCE COMPLIES WITH THE APPLICABLE STANDARD FOR THAT APPLIANCE. INCLUDED ARE ROOM AIR CONDITIONERS, CENTRAL AIR CONDITIONING HEAT PUMPS (REGARDLESS OF CAPACITY), EXCEPT THAT REQUIREMENTS FOR CENTRAL AIR CONDITIONING HEAT PUMPS WITH COOLING CAPACITY OF 135,000 BTU/HR OR MORE APPLY TO HEATING PERFORMANCE BUT NOT COOLING PERFORMANCE), OTHER CENTRAL AIR CONDITIONERS WITH A COOLING CAPACITY LESS THAN 135,000 BTU/HR, FAN TYPE CENTRAL FURNACES WITH INPUT RATE LESS THAN 400,000 BTU/HR, BOILERS, WALL FURNACES, FLOOR FURNACES, ROOM HEATERS, UNIT HEATERS, AND DUCT FURNACES SHALL HAVE BEEN CERTIFIED TO THE CALIFORNIA ENERGY COMMISSION BY ITS MANUFACTURER TO COMPLY WITH THE APPLIANCE EFFICIENCY STANDARDS.	NA
<input type="checkbox"/> THE FOLLOWING SPACE CONDITIONING EQUIPMENT MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFIED THAT THE EQUIPMENT MEETS OR EXCEEDS ALL APPLICABLE EFFICIENCY REQUIREMENTS LISTED IN 112 OF THE ENERGY EFFICIENCY STANDARDS: ALL AIR CONDITIONERS, HEAT PUMPS AND CONDENSING UNITS > 135,000 BTU/HR, ALL WATER CHILLERS, ALL GAS-FIRED BOILERS > 300,000 BTU/HR, ALL OIL-FIRED BOILERS > 225,000 BTU/HR, AND ALL WARM AIR FURNACES AND COMBINATION WARM AIR FURNACES/AIR-CONDITIONING UNITS > 225,000 BTU/HR. FAN TYPE CENTRAL FURNACES SHALL NOT HAVE A PILOT LIGHT.	NA
<input type="checkbox"/> PIPING, EXCEPT THOSE CONVEYING FLUIDS AT TEMPERATURES BETWEEN 60 DEGREES F AND 105 DEGREES F, OR WITHIN HVAC EQUIPMENT, SHALL BE INSULATED IN ACCORDANCE WITH STANDARDS 123.	NA
<input checked="" type="checkbox"/> AIR HANDLING DUCT SYSTEMS SHALL BE CONSTRUCTED, INSTALLED, SEALED, AND INSULATED AS PROVIDED IN CHAPTER 6 OF THE UNIFORM MECHANICAL CODE.	M-2

CONTROLS

<input type="checkbox"/> EACH SPACE CONDITIONING SYSTEM SHALL BE INSTALLED WITH AN AUTOMATIC TIME SWITCH WITH AN ACCESSIBLE MANUAL OVERRIDE THAT ALLOWS OPERATION OF THE SYSTEM DURING OFF-HOURS FOR UP TO 4 HOURS. THE TIME SWITCH SHALL BE CAPABLE OF PROGRAMMING DIFFERENT SCHEDULES FOR WEEKDAYS AND WEEKENDS, INCORPORATE AN AUTOMATIC HOLIDAY SHUT-OFF FEATURE THAT TURNS OFF ALL LOADS FOR AT LEAST 24 HOURS, THEN RESUMES THE NORMALLY SCHEDULED OPERATION, AND HAS PROGRAM BACKUP CAPABILITIES THAT PREVENT THE LOSS OF THE DEVICE PROGRAM AND TIME SETTINGS FOR AT LEAST 10 HOURS IF POWER IS INTERRUPTED.	NA
<input type="checkbox"/> EACH SPACE CONDITIONING SYSTEM SHALL BE INSTALLED WITH AN OCCUPANCY SENSOR TO CONTROL THE OPERATING PERIOD OF THE SYSTEM.	NA
<input type="checkbox"/> EACH SPACE CONDITIONING SYSTEM SHALL BE INSTALLED WITH A 4-HOUR TIMER THAT CAN BE MANUALLY OPERATED TO CONTROL THE OPERATING PERIOD OF THE SYSTEM.	NA
<input type="checkbox"/> EACH SPACE CONDITIONING SYSTEM SHALL BE INSTALLED WITH CONTROLS THAT TEMPORARILY RESTART AND TEMPORARILY OPERATE THE SYSTEM AS REQUIRED TO MAINTAIN A SETBACK COOLING & HEATING THERMOSTAT SETPOINT.	NA
<input type="checkbox"/> EACH SPACE CONDITIONING SYSTEM SERVING MULTIPLE ZONES WITH A COMBINED CONDITIONED FLOOR AREA MORE THAN 25,000 SQUARE FEET SHALL BE PROVIDED WITH ISOLATION ZONES. EACH ZONE SHALL: NOT EXCEED 25,000 SQUARE FEET; SHALL BE PROVIDED WITH ISOLATION DEVICES, SUCH AS VALVES OR DAMPERS, THAT ALLOW THE SUPPLY OF HEATING OR COOLING TO BE SETBACK OR SHUT OFF INDEPENDENTLY OF OTHER ISOLATION AREAS; AND SHALL BE CONTROLLED BY A TIME CONTROL DEVICES AS DESCRIBED ABOVE.	NA

<input checked="" type="checkbox"/> EACH SPACE CONDITIONING ZONE SHALL BE CONTROLLED BY AN INDIVIDUAL THERMOSTATIC CONTROL THAT RESPONDS TO TEMPERATURE WITHIN THE ZONE. WHERE USED TO CONTROL HEATING, THE CONTROL SHALL BE ADJUSTABLE DOWN TO 55 DEGREE F OR LOWER. FOR COOLING, THE CONTROL SHALL BE READJUSTABLE UP TO 85 DEGREE F OR HIGHER. WHERE USED TO CONTROL BOTH HEATING AND COOLING, THE CONTROL SHALL BE CAPABLE OF PROVIDING A DEAD BAND OF AT LEAST 5 DEGREE F WITHIN WHICH THE SUPPLY OF HEATING AND COOLING IS SHUT OFF OR REDUCED TO A MINIMUM.	M-2
<input checked="" type="checkbox"/> THERMOSTATS SHALL HAVE NUMERIC SETPOINTS IN DEGREE F.	M-2
<input checked="" type="checkbox"/> THERMOSTATS SHALL HAVE ADJUSTABLE SETPOINT STOPS ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL.	M-2
<input type="checkbox"/> HEAT PUMPS SHALL BE INSTALLED WITH CONTROLS TO PREVENT ELECTRIC RESISTANCE SUPPLEMENTARY HEATER OPERATION WHEN THE HEATING LOAD CAN BE MET BY THE HEAT PUMP ALONE. ELECTRIC RESISTANCE SUPPLEMENTARY HEATER OPERATION IS PERMITTED DURING TRANSIENT PERIODS, SUCH AS START-UPS AND FOLLOWING ROOM THERMOSTAT SETPOINT ADVANCE, WHEN CONTROLS ARE PROVIDED WHICH USE PREFERENTIAL RATE CONTROL, INTELLIGENT RECOVERY, STAGING, RAMPING OR SIMILAR CONTROL MECHANISMS DESIGNED TO PRECLUDE THE UNNECESSARY OPERATION OF SUPPLEMENTARY HEATING DURING THE RECOVERY PERIOD. SUPPLEMENTARY HEATER OPERATION IS ALSO PERMITTED DURING DEFROST.	NA

VENTILATION

<input type="checkbox"/> CONTROLS SHALL BE PROVIDED TO ALLOW OUTSIDE AIR DAMPERS OR DEVICES TO BE OPERATED AT THE VENTILATION RATES AS SPECIFIED IN THESE PLANS.	NA
<input type="checkbox"/> GRAVITY OR AUTOMATIC DAMPERS INTERLOCKED AND CLOSED ON FAN SHUTDOWN SHALL BE PROVIDED ON THE OUTSIDE AIR INTAKES AND DISCHARGES OF ALL SPACE CONDITIONING AND EXHAUST SYSTEMS.	NA
<input type="checkbox"/> ALL GRAVITY VENTILATING SYSTEMS SHALL BE PROVIDED WITH AUTOMATIC OR READILY ACCESSIBLE MANUALLY OPERATED DAMPERS IN ALL OPENINGS TO THE OUTSIDE, EXCEPT FOR COMBUSTION AIR OPENINGS.	NA
<input checked="" type="checkbox"/> AIR BALANCING. ALL SPACE CONDITIONING AND VENTILATION SYSTEMS SHALL BE BALANCED TO THE QUANTITIES SPECIFIED IN THESE PLANS, IN ACCORDANCE WITH THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB) PROCEDURAL STANDARDS (1983), OR ASSOCIATED AIR BALANCE COUNCIL (AABC) NATIONAL STANDARDS (1986).	M-2
<input type="checkbox"/> OUTSIDE AIR CERTIFICATION. THE SYSTEM SHALL PROVIDE THE MINIMUM OUTSIDE AIR AS SHOWN ON THE MECHANICAL DRAWINGS, AND SHALL BE MEASURED AND CERTIFIED BY THE INSTALLING LICENSED C-20 MECHANICAL CONTRACTOR.	NA

SERVICE WATER HEATING SYSTEMS

<input type="checkbox"/> THE FOLLOWING SERVICE WATER HEATING SYSTEMS AND EQUIPMENT MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFIED THAT THE EQUIPMENT MEETS OR EXCEEDS ALL APPLICABLE EFFICIENCY REQUIREMENTS LISTED IN 115 OF THE ENERGY EFFICIENCY STANDARDS: OIL-FIRED STORAGE TYPES > 105,000 BTU/HR, OIL-FIRED NON-STORAGE TYPES > 210,000 BTU/HR, GAS-FIRED NON-STORAGE TYPES > 200,000 BTU/HR.	NA
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<input type="checkbox"/> UNFIRED SERVICE WATER HEATER STORAGE TANKS AND BACKUP TANKS FOR SOLAR WATER HEATING SYSTEMS SHALL HAVE EITHER: EXTERNAL INSULATION WITH AN INSTALLED R-VALUE OF AT LEAST R-2; INTERNAL AND EXTERNAL INSULATION WITH A COMBINED R-VALUE OF AT LEAST R-16; OR SUFFICIENT INSULATION SO THAT THE HEAT LOSS OF THE TANK SURFACE BASED ON AN 80 DEGREE F WATER-AIR TEMPERATURE DIFFERENCE SHALL BE LESS THAN 0.5 BTU/HR/SF.	NA
<input type="checkbox"/> IF A CIRCULATING HOT WATER SYSTEM IS INSTALLED, IT SHALL HAVE A CONTROL CAPABLE OF AUTOMATICALLY TURNING OFF THE CIRCULATING PUMPS WHEN HOT WATER IS NOT REQUIRED.	NA
<input type="checkbox"/> LAVATORIES IN RESTROOMS OF PUBLIC FACILITIES SHALL BE EQUIPPED WITH:	NA
<input type="checkbox"/> OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 0.5 GALLONS PER MINUTE.	NA
<input type="checkbox"/> FOOT ACTUATED CONTROL VALVES, AND OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 0.75 GALLONS PER MINUTE.	NA
<input type="checkbox"/> PROXIMITY SENSOR ACTUATED CONTROL VALVES, AND OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 0.75 GALLONS PER MINUTE.	NA
<input type="checkbox"/> SELF-CLOSING VALVES, AND OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 2.5 GALLONS PER MINUTE, AND 0.25 GALLONS/CYCLE (CIRCULATING SYSTEM).	NA
<input type="checkbox"/> SELF-CLOSING VALVES, AND OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 2.5 GALLONS PER MINUTE, AND 0.50 GALLONS/CYCLE (NON-CIRCULATING SYSTEM).	NA
<input type="checkbox"/> SELF-CLOSING VALVES, AND OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 2.5 GALLONS PER MINUTE, AND 0.75 GALLONS/CYCLE (FOOT SWITCHES AND PROXIMITY SENSOR CONTROLS).	NA
<input type="checkbox"/> LAVATORIES IN RESTROOM OF PUBLIC FACILITIES SHALL BE EQUIPPED WITH CONTROLS TO LIMIT THE OUTLET TEMPERATURE OF 110 DEGREES F.	NA

MECHANICAL MANDATORY MEASURES

CERTIFICATE OF COMPLIANCE

Part 1 of 3

MECH-1

PROJECT NAME

SAN RAMON AQUATIC CENTER

DATE

4-27-98

PROJECT ADDRESS

8900 BROADMOOR DRIVE, SAN RAMON, CA

PRINCIPAL DESIGNER - MECHANICAL

B.A. BOSNJAK - P2S ENGINEERING, INC.

TELEPHONE

(562) 437-2999

DOCUMENTATION AUTHOR

Q. ZHANG - P2S ENGINEERING, INC.

TELEPHONE

(562) 437-2999

GENERAL INFORMATION

DATE OF PLANS

4-27-98

BUILDING CONDITIONED FLOOR AREA

7,540 SF

BUILDING TYPE

☒ NONRESIDENTIAL

☐ HIGH RISE RESIDENTIAL

☐ HOTEL / MOTEL GUEST ROOM

PHASE OF CONSTRUCTION

☒ NEW CONSTRUCTION

☐ ADDITION

☐ ALTERATION- DUCTWORK ONLY

METHOD OF MECHANICAL COMPLIANCE

☐ PERSPECTIVE

☐ PERFORMANCE

☒ DUCTWORK ONLY

PROOF OF ENVELOPE COMPLIANCE

☐ PREVIOUS ENVELOPE PERMIT

☒ ENVELOPE COMPLIANCE ATTACHED

STATEMENT OF COMPLIANCE

This Certificate of Compliance lists the building features and performance specifications needed to comply with Title 24, Parts I and II of the California Code of Regulations. This certificate applies only to building mechanical requirements.

The Principal Mechanical Designer hereby certifies that the proposed building design represented in this set of construction documents is consistent with the other compliance forms and worksheets, with the specifications, and with any other calculations submitted with this permit application. The proposed building has been designed to meet the mechanical requirements contained in sections 110 through 115, 120 through 124, 140 through 142, 144 and 145.

Please check one:

☒ I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation, and that I am a civil engineer, mechanical engineer, or architect.

☐ I affirm that I am eligible under the exemption to Division 3 of the Business and Professions Code by Section 5537.2 of the Business and Professions Code to sign this document as the person responsible for its preparation, and that I am an licensed contractor preparing documents for work that I have contracted to perform.

☐ I affirm that I am eligible under the exemption to Division 3 of the Business and Professions Code by Section _____ of the _____ Code to sign this document as the person responsible for its preparation, and for the following reason: _____

PRINCIPAL MECHANICAL DESIGNER - NAME

B.A. BOSNJAK

SIGNATURE

LIC. NO.

M - 17920

DATE

4-27-98

MECHANICAL MANDATORY MEASURES

Indicate location on plans of Note Block for Mandatory Measures

SHEET M5

INSTRUCTIONS TO APPLICANT

For detailed instructions on the use of this and all Energy Efficiency Standards compliance forms, please refer to the Nonresidential Manual published by the California Energy Commission.

MECH-1: Required on plans for all submittals. Parts 2 & 3 may be incorporated in schedules on plans.

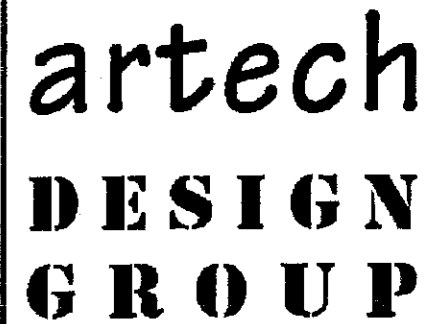
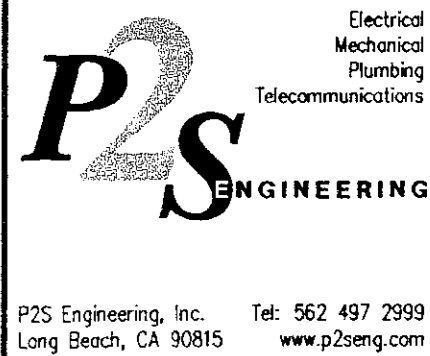
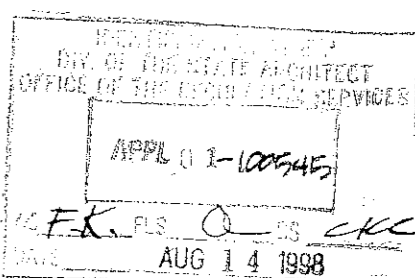
MECH-2: Required for all submittals, choose appropriate version depending on method of mechanical compliance.

MECH-3 and MECH-4: Required for all submittals.

Nonresidential Compliance Form

December 98

TITLE 24 COMPLIANCE FORMS



Date: 08-04-98

Permit Submittal

Bid Issue

Construction Issue

Revision

REV DATE DESCRIPTION

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