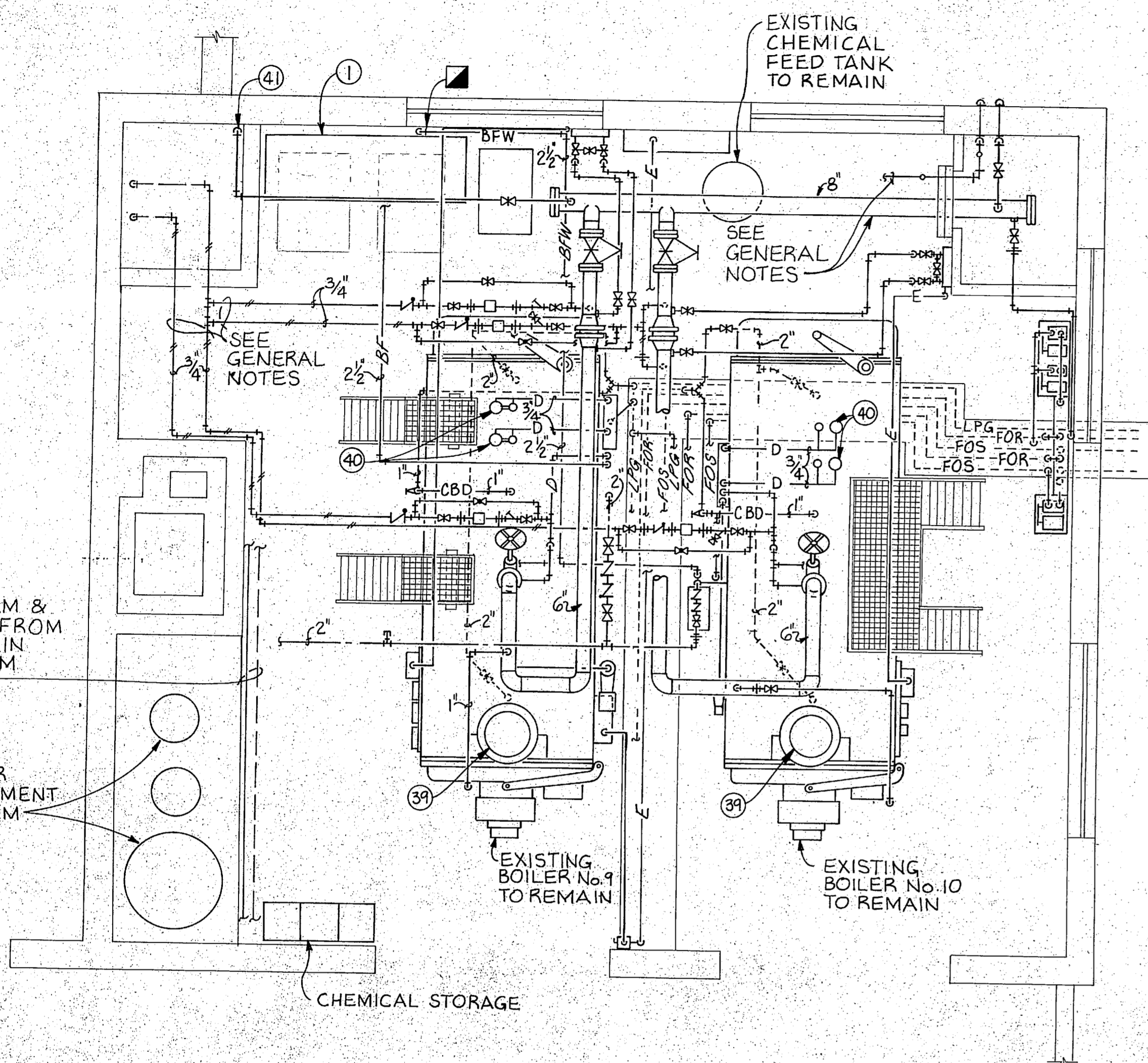
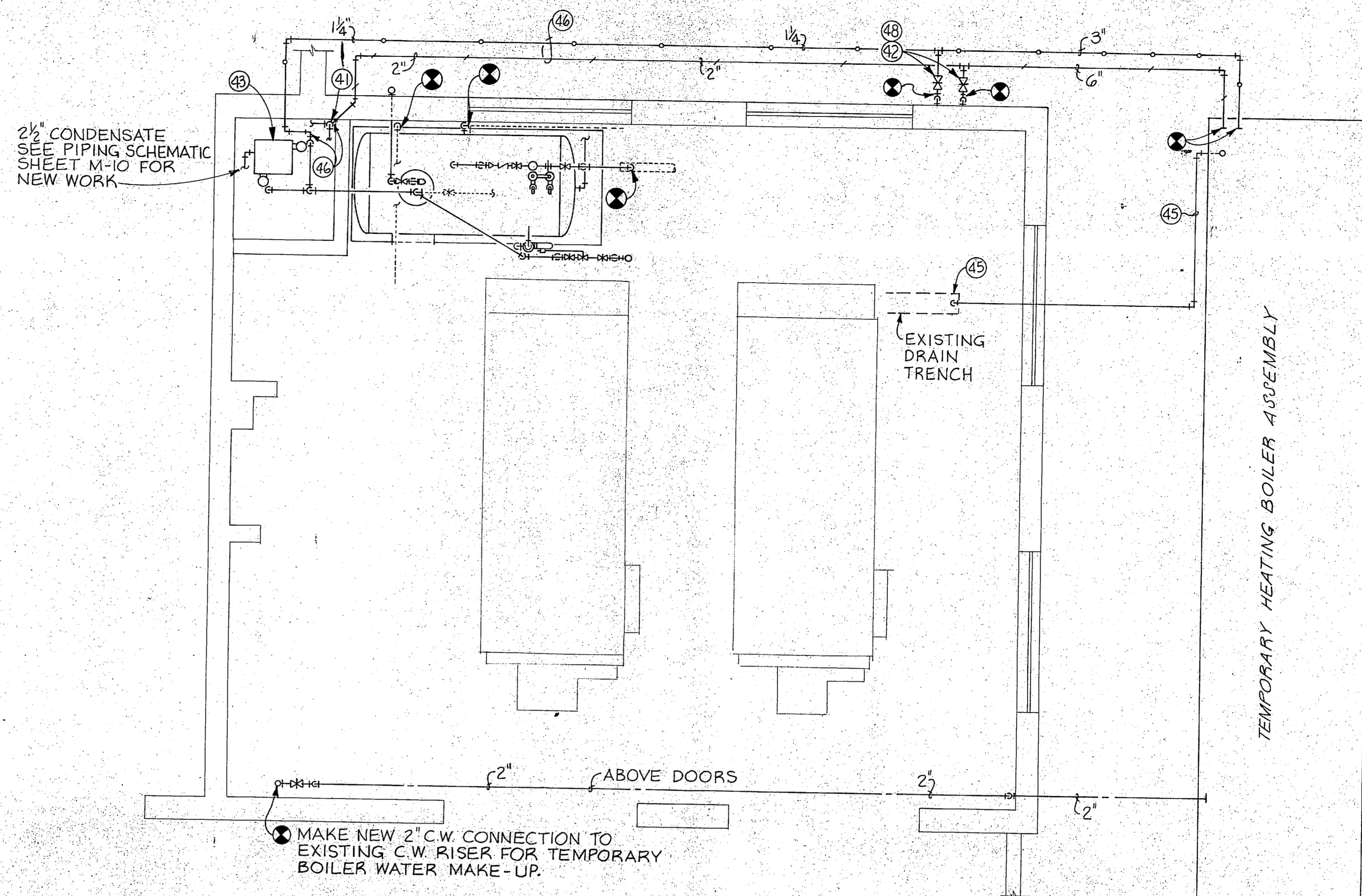


REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED
1	AS BUILT DRAWINGS	5/30/81	



A BOILER ROOM PLAN - DEMOLITION
SCALE: 1/4" = 1'-0"



B BOILER ROOM PLAN - NEW WORK
SCALE: 1/4" = 1'-0"

KEYED NOTES: (THIS SHEET ONLY)

- 1 REMOVE EXISTING BOILER FEED WATER STORAGE TANK WITH RELATED PIPING AND STAND. SEE EXISTING FEEDWATER RECEIVER, DETAIL 'A', THIS SHEET.
- 2 REMOVE EXISTING BOILER FEED WATER PUMP.
- 3 REMOVE EXISTING CONCRETE PUMP BASE.
- 4 REMOVE EXISTING PIPING.
- 5 REMOVE EXISTING SIMPLEX CONDENSATE PUMP, RELATED PIPING AND CONCRETE PAD.
- 6 EXISTING PIPING TO REMAIN.
- 7 REMOVE EXISTING ELECTRICAL CONTROL PANEL WITH RELATED STARTERS AND WIRING TO DISCONNECT SWITCH.
- 8 REMOVE EXISTING PRESSURE REDUCING VALVE.
- 9 REMOVE EXISTING CONTROL VALVE.
- 10 EXISTING PUMPED BOILER FEED WATER TO BOILER NO. 10 TO REMAIN.
- 11 EXISTING PUMPED BOILER FEED WATER TO BOILER NO. 9 TO REMAIN.
- 12 NEW 600 GALLON DEAERATOR TANK (TO OVERFLOW). SEE NEW DEAERATOR TANK, DETAIL 'B', THIS SHEET.
- 13 2" COLD WATER MAKE-UP INLET.
- 14 MANUAL AIR VENT.
- 15 AUTOMATIC AIR VENT.
- 16 NEW STEEL STEAM PRESSURE REDUCING VALVE, 3,000 LBS/HR, 100 PSIG INLET, 45 PSIG OUTLET.
- 17 WATER LEVEL CONTROLLER.
- 18 1" WATER INLET CONTROL VALVE, 45 GPM, SET AT 45 PSIG.
- 19 RELIEF VALVE, 1875 LBS/HR, SET AT 50 PSIG.
- 20 HIGH WATER ALARM.
- 21 LOW WATER ALARM.
- 22 NEW 3" STEAM SUPPLY.
- 23 BOILER FEED WATER PUMP, 50 GPM, 280' TOTAL DISCHARGE HEAD, 3450 RPM, 15 HP, 208 VOLT, 3 PHASE.
- 24 GATE VALVE.
- 25 STRAINER.
- 26 SUCTION FLEXIBLE COUPLING.
- 27 CHECK VALVE.
- 28 PRESSURE GAUGE, 0-200 PSI.
- 29 BY-PASS ORIFICE.
- 30 OVERFLOW DRAINER.
- 31 CONTROL PANEL.
- 32 CONTROL PANEL PRESSURE GAUGE.
- 33 CONTROL PANEL TEMPERATURE GAUGE.
- 34 2" TANK DRAIN.
- 35 3/4" PORT FOR OXYGEN SCAVENGER.
- 36 2" REDUCED PRESSURE BACKFLOW PREVENTER.
- 37 OVERFLOW VALVE.
- 38 WALL MOUNTED SUPPORT BRACKET FOR OVERFLOW VALVE.
- 39 EXISTING BOILER BREACHING AND STACK TO REMAIN. REMOVE DURING DEMOLITION OF EXISTING ROOF AND PROVIDE FOR REINSTALLATION OF EXISTING BREACHING AND STACK DURING NEW CONSTRUCTION.
- 40 EXISTING BOILER SAFETY RELIEF VALVE VENT PIPING UP THRU ROOF TO REMAIN. PROTECT DURING REMOVAL OF EXISTING ROOF AND INSTALLATION OF NEW ROOF.
- 41 EXISTING HIGH PRESSURE STEAM RISER, SEE REDUCING STATION PIPING SCHEMATIC, DETAIL 'A', SHEET M-10 FOR DEMOLITION AND NEW WORK.
- 42 PROVIDE NEW 6" STEAM VALVE AND 3" CONDENSATE VALVE FOR CONNECTION TO TEMPORARY BOILER WITH FEED WATER SYSTEM. PROVIDE BLIND FLANGE AT COMPLETION OF PROJECT.

EXISTING STEAM & CONDENSATE FROM UNIT HEATER IN CHILLER ROOM TO REMAIN

WATER TREATMENT SYSTEM

CHEMICAL STORAGE

EXISTING BOILER No. 9 TO REMAIN

EXISTING BOILER No. 10 TO REMAIN

EXISTING CHEMICAL FEED TANK TO REMAIN

SEE GENERAL NOTES

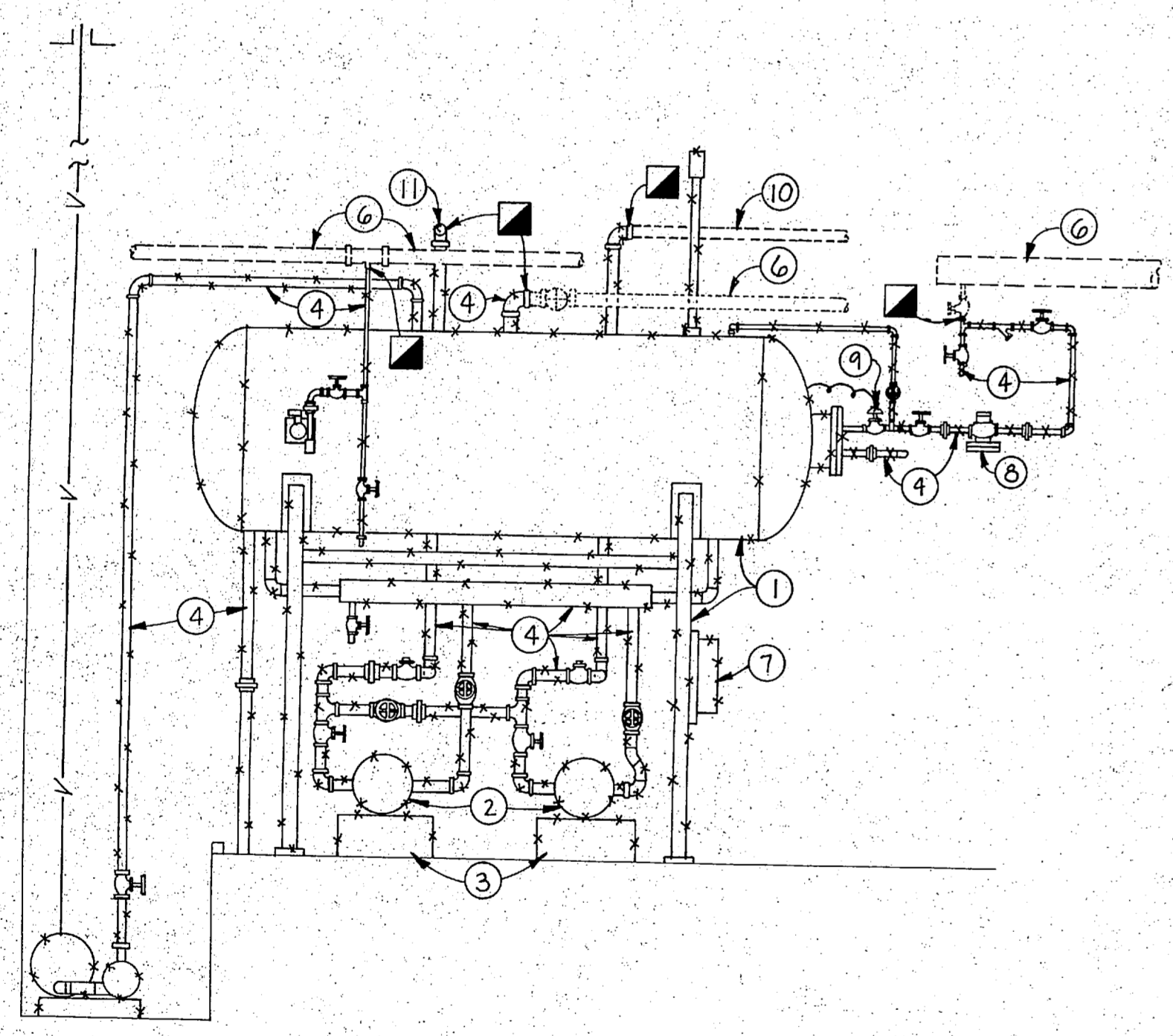
SEE GENERAL NOTES

2 1/2" CONDENSATE SEE PIPING SCHEMATIC SHEET M-10 FOR NEW WORK

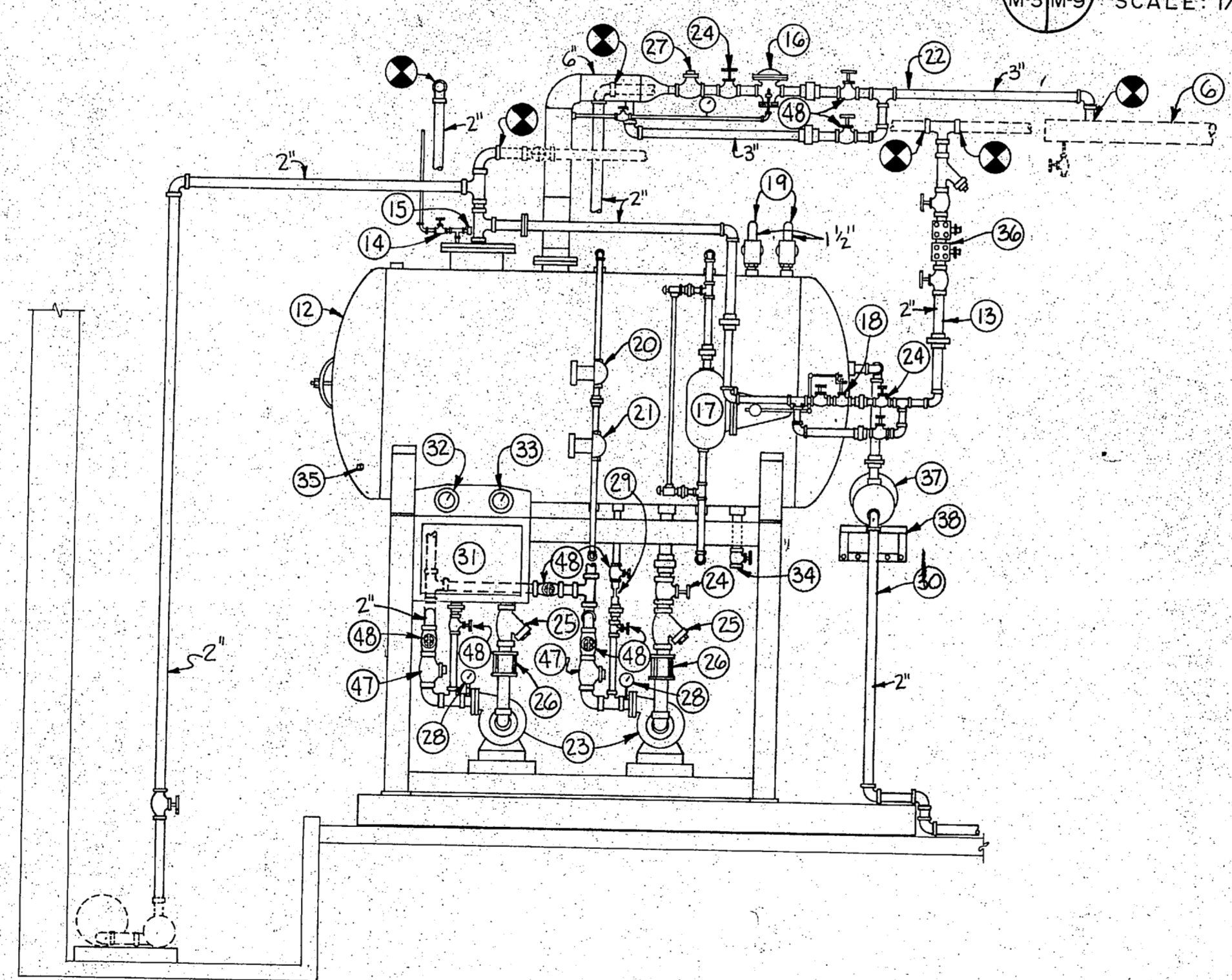
EXISTING DRAIN TRENCH

TEMPORARY HEATING BOILER ASSEMBLY

MAKE NEW 2" CW CONNECTION TO EXISTING C.W. RISER FOR TEMPORARY BOILER WATER MAKE-UP.



A EXISTING FEEDWATER RECEIVER
NO SCALE

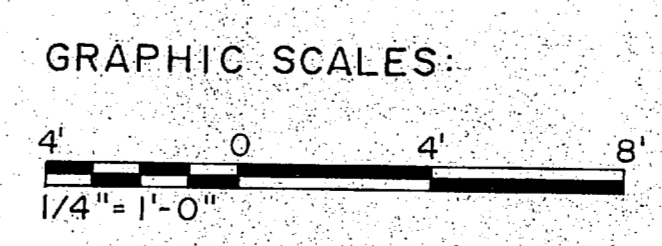


B NEW DEAERATOR TANK
NO SCALE

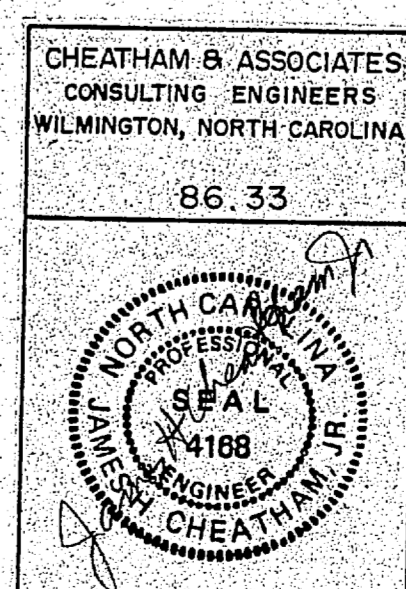
- 43 PROVIDE NEW DUPLEX CONDENSATE PUMP, 14 GALLON RECEIVER, 12 GPM AT 50 PSIG DISCHARGE PRESSURE, 1-1/2 HP, 208 VOLT, 3 PHASE MOTORS.
- 44 2" BY-PASS GATE VALVE, NORMALLY CLOSED.
- 45 BLOW DOWN FROM TEMPORARY BOILER SHALL BE PIPED, FULL SIZE, THRU BOILER ROOM WALL AND DISCHARGED INTO EXISTING DRAIN TRENCH.
- 46 PROVIDE TEMPORARY 2" HIGH PRESSURE STEAM CONNECTION TO EXISTING MAIN AT PRESSURE REDUCING STATION AND TEMPORARY 1-1/4" PUMPED CONDENSATE FROM CONDENSATE PUMP FOR BUILDING OPERATION.
- 47 NEW STEEL CHECK VALVE.
- 48 NEW STEEL GATE VALVE.

GENERAL NOTES:

- A. REMOVE ASBESTOS INSULATION FROM BOILER NO. 9 PIPING, STEAM HEADER, AND EXISTING PUMPED CONDENSATE MAIN. PROVIDE NEW INSULATION.
- B. ALL BOILER ROOM PIPING AND EQUIPMENT TO REMAIN SHALL BE PROTECTED DURING DEMOLITION AND CONSTRUCTION OF NEW ROOF STRUCTURE. PIPING SHALL BE DISCONNECTED FROM BOILERS DURING DEMOLITION AND NEW CONSTRUCTION. PROVIDE TEMPORARY SUPPORTS FOR ALL PIPING. PROVIDE RECONNECTION OF ALL PIPING DISASSEMBLED FOR DEMOLITION. PROVIDE NEW HANGER ROD ASSEMBLIES FOR ALL PIPE HANGERS. SEE TYPICAL HANGER, DETAIL 'H', SHEET M-11.
- C. ALL PIPING SHALL BE TESTED UNDER NORMAL OPERATING CONDITIONS AFTER CONSTRUCTION TO PROVIDE FOR A TIGHT OPERATING PIPING SYSTEM.



RECORD DRAWING		M-9
CHEATHAM & ASSOCIATES CONSULTING ENGINEERS WILMINGTON, NORTH CAROLINA		THE SMITH-SINNETT ASSOCIATES, P.A. 110 WIND CHIME CT. RALEIGH, NC 27615
86.33		DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA
DES. J.G.W.		RENOVATE BUILDING 2615
DR. LAB/JEM		BOILER ROOM PLANS DEMOLITION & NEW WORK
CHK. J.H.C.		NAVFAC DRAWING NO. 4160641
SUBMITTED BY: RJL		CONSTR. CONTR. NO. N62470-86-B-9517
DESIGN DIR. JEC		SHEET 61 OF 74
APPROVED: PWO OR DICG DATE 7-20-81		SCALE: NOTED SPEC. 05-86-9517
SATISFACTORY TO: DATE		



REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED
1	AS BUILT DRAWINGS	5/30/89	

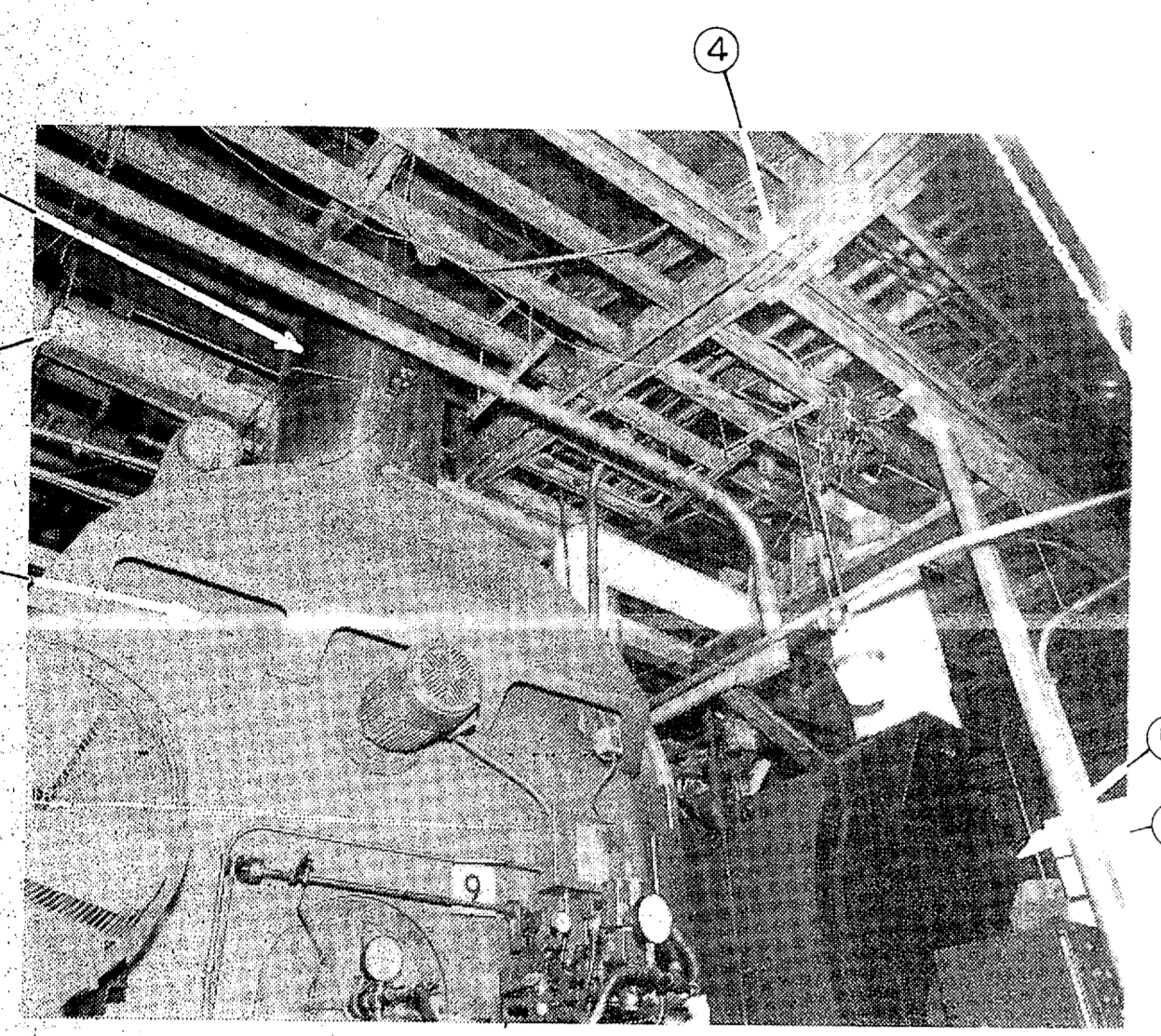


PHOTO-BOILER No. 9
(LOOKING NORTHWEST)
NO SCALE

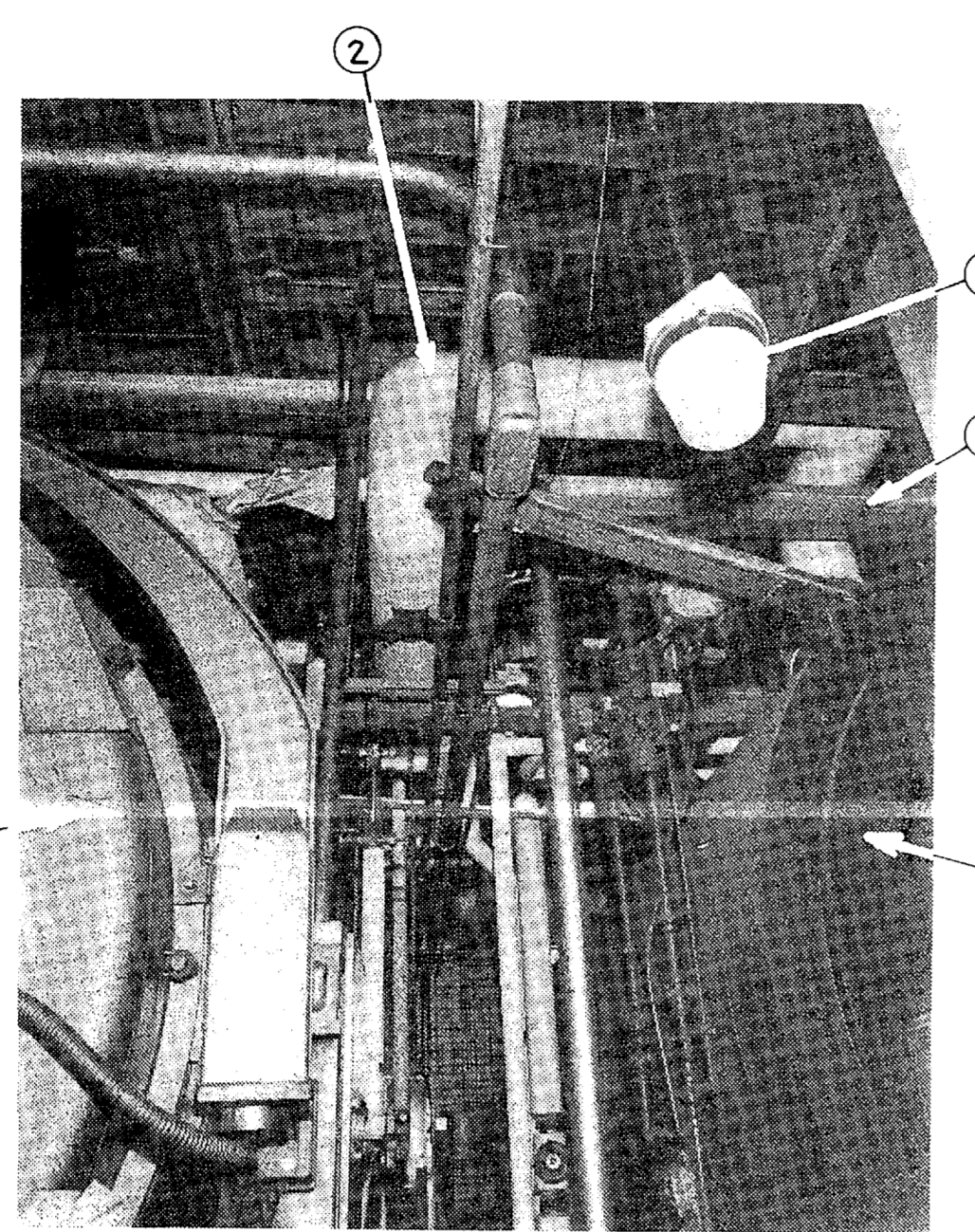


PHOTO-BETWEEN FRONT OF BOILERS
(LOOKING NORTHWEST)
NO SCALE

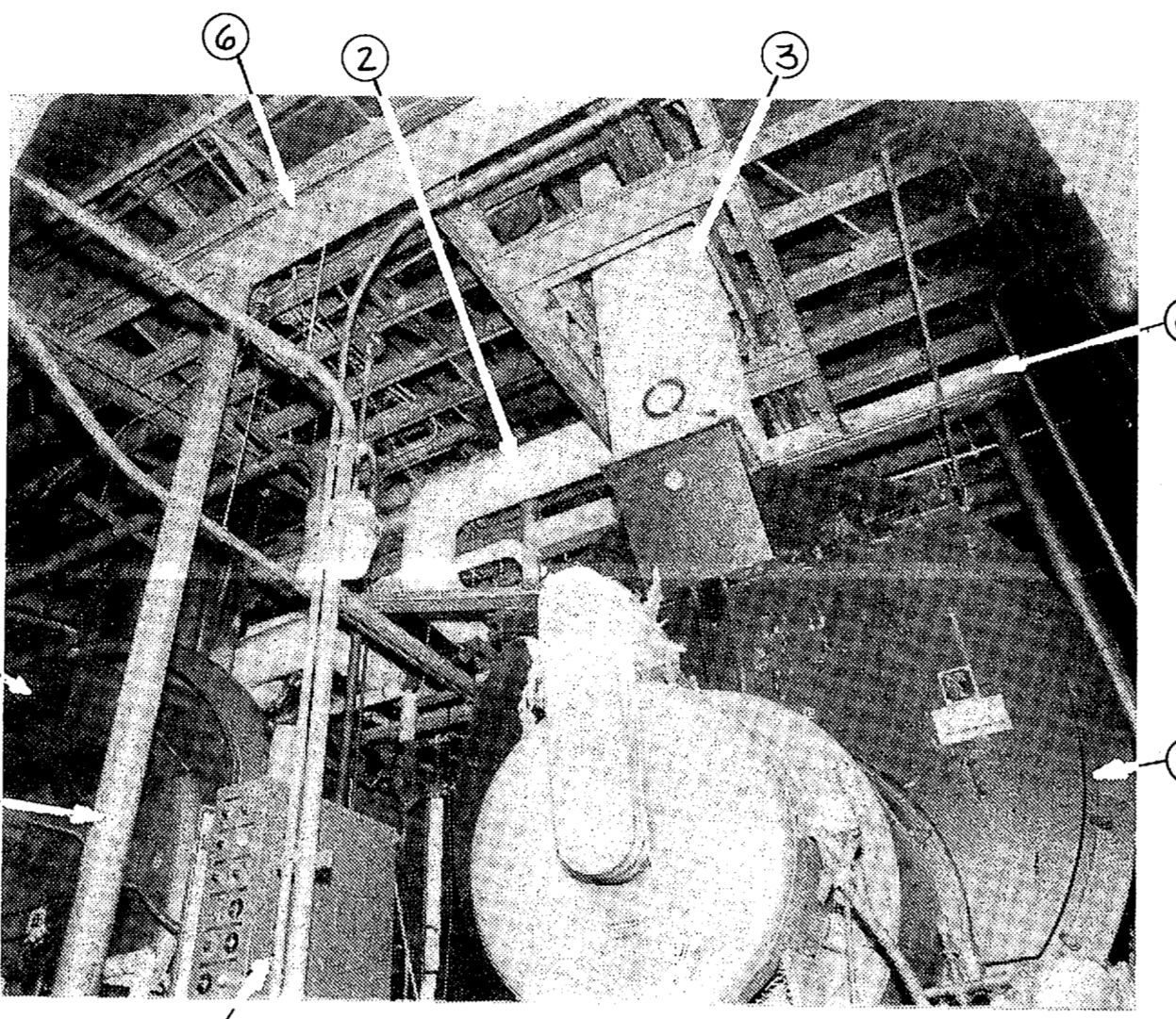


PHOTO-BOILER No. 10
(LOOKING NORTHWEST)
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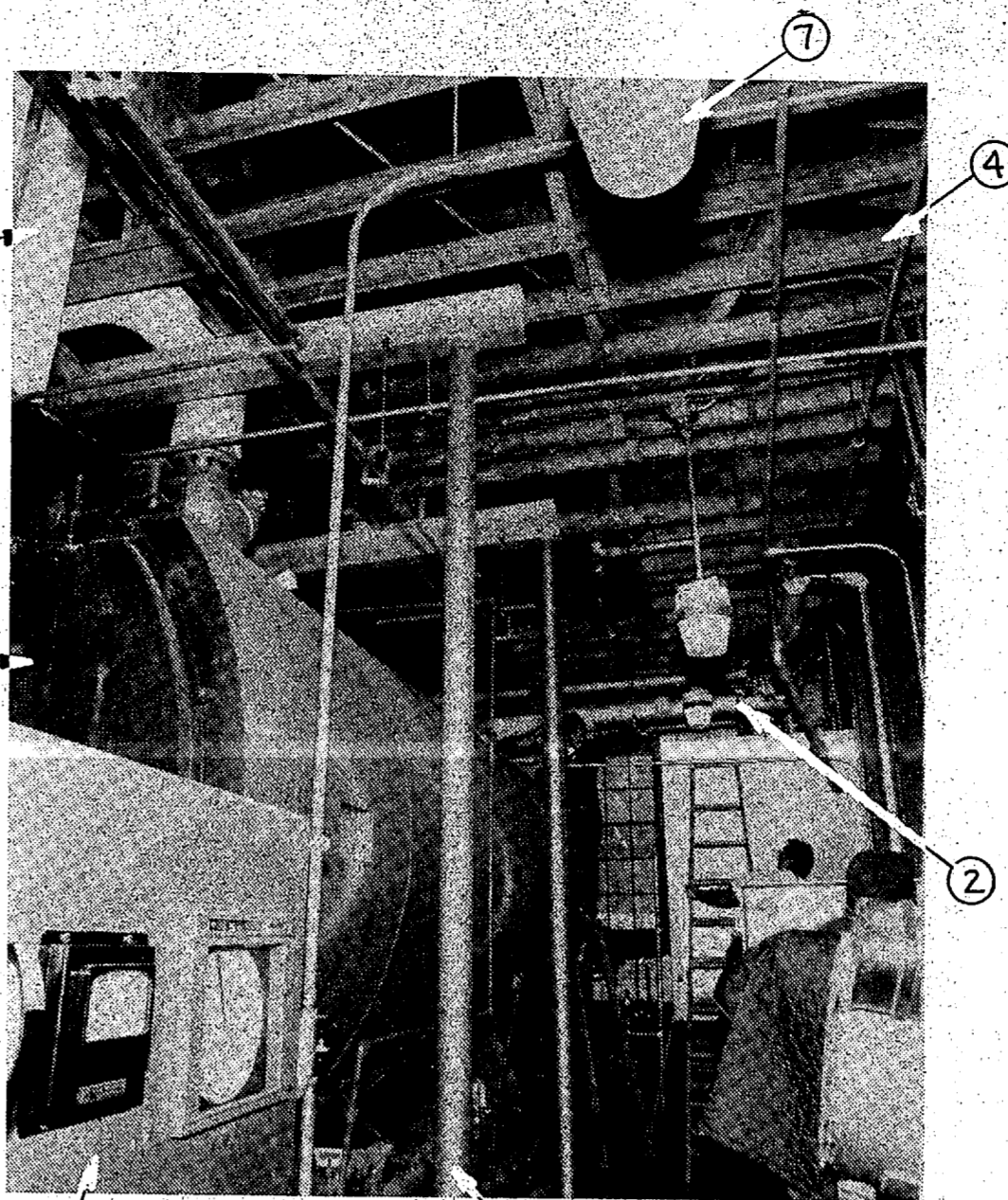


PHOTO-BOILER No. 10
(LOOKING NORTHWEST)
NO SCALE

KEYED NOTES: (THIS SHEET ONLY)

- 1 EXISTING BOILER NO. 9 WITH RELATED PIPING TO REMAIN. PROVIDE TEMPORARY DISCONNECTION OF ALL PIPING TO BOILER. REMOVE ASBESTOS PIPE INSULATION ON ALL PIPING AND PROVIDE NEW INSULATION. PROVIDE RECONNECTION OF ALL PIPING.
- 2 EXISTING PIPING TO REMAIN. PROVIDE TEMPORARY DISCONNECTION OF ALL PIPING TO BOILERS. PROVIDE TEMPORARY SUPPORT FOR ALL PIPING DURING DEMOLITION OF EXISTING ROOF STRUCTURE AND INSTALLATION NEW ROOF STRUCTURE AND ROOFING. PROVIDE NEW HANGERS TO NEW ROOF STRUCTURE. PROVIDE RECONNECTION OF ALL PIPING.
- 3 EXISTING BOILER STACK TO REMAIN. PROVIDE TEMPORARY DISCONNECTION OF EXISTING STACK FROM BOILERS. PROTECT STACK DURING DEMOLITION OF EXISTING ROOF STRUCTURE AND INSTALLATION NEW ROOF STRUCTURE AND ROOFING. PROVIDE RECONNECTION OF EXISTING STACKS.
- 4 EXISTING EXPOSED ROOF STRUCTURE TO BE REMOVED, SEE DEMOLITION PLANS, SHEET D-8.
- 5 EXISTING BOILER NO. 10 WITH RELATED PIPING TO REMAIN. PROVIDE TEMPORARY DISCONNECTION OF ALL PIPING TO BOILER. PROVIDE RECONNECTION OF ALL PIPING.
- 6 EXISTING PIPE SUPPORT STRUCTURE TO REMAIN.
- 7 EXISTING LIGHTING FIXTURE, SEE ELECTRICAL DRAWINGS FOR WORK.
- 8 EXISTING BOILER CONTROL PANEL TO REMAIN (NO WORK)
- 9 EXISTING WATER STORAGE TANK TO BE REMOVED, SEE PLUMBING DRAWINGS FOR DEMOLITION AND NEW WORK.
- 10 REMOVE EXISTING STEAM AND CONDENSATE PIPING. SEE SHEET M-9 FOR DETAILED WORK.
- 11 EXISTING CONDENSATE PUMP PIT. SEE SHEET M-9 FOR DETAILED WORK.
- 12 REMOVE EXISTING BOILER FEED WATER TANK, PUMPS, STAND, RELATED PIPING AND WIRING.
- 13 TERMINATION POINT OF STEAM PIPE DEMOLITION. EXISTING STEAM METER TO REMAIN.
- 14 REMOVE EXISTING WATER PIPING WITH INSULATION. SEE PLUMBING DRAWINGS FOR DETAILED WORK.
- 15 EXISTING BOILER STACK TERMINAL. PROTECT STACK DURING DEMOLITION OF EXISTING ROOF STRUCTURE AND NEW ROOF STRUCTURE AND ROOFING.
- 16 EXISTING BOILER STACK BASE FLASHING. PROTECT STACK DURING DEMOLITION OF EXISTING ROOF STRUCTURE AND NEW ROOF STRUCTURE AND ROOFING.
- 17 EXISTING RELIEF PIPING THRU ROOF TO REMAIN. PROTECT STACK DURING DEMOLITION OF EXISTING ROOF STRUCTURE AND NEW ROOF STRUCTURE AND ROOFING.
- 18 REMOVE EXISTING POWER VENTILATOR. SEE FLOOR PLAN, SHEET M-2, FOR DEMOLITION WORK AND FLOOR PLAN, SHEET M-6 FOR NEW WORK.
- 19 PROVIDE NEW STEEL STEAM PRESSURE REDUCING VALVE, 2350 LBS/HR, 100 PSIG INLET, 50 PSIG OUTLET PRESSURE.
- 20 PROVIDE NEW STEAM PRESSURE RELIEF, 3500 LBS/HR, SET AT 55 PSIG. SEE RELIEF VALVE DISCHARGE PIPING DETAIL 'G', SHEET M-11.
- 21 PROVIDE NEW STEEL STEAM PRESSURE REDUCING VALVE, 135 LBS/HR, 100 PSIG INLET, 15 PSIG OUTLET PRESSURE.
- 22 PROVIDE NEW STEAM PRESSURE RELIEF, 250 LBS/HR, SET AT 20 PSIG. SEE RELIEF VALVE DISCHARGE PIPING DETAIL 'G', SHEET M-11.
- 23 PROVIDE NEW STEEL STEAM PRESSURE REDUCING VALVE, 2125 LBS/HR, 100 PSIG INLET, 60 PSIG OUTLET PRESSURE.
- 24 PROVIDE NEW STEAM PRESSURE RELIEF, 3200 LBS/HR, SET AT 65 PSIG. SEE RELIEF VALVE DISCHARGE PIPING DETAIL 'G', SHEET M-11.
- 25 PROVIDE NEW STEEL 1/2" BUCKET TRAP, 100 LBS/HR, 95 PSIG DROP.
- 26 PROVIDE NEW PRESSURE GAUGE WITH SIPHON TUBE AND GAUGE COCK, 0-200 PSIG.
- 27 PROVIDE NEW PRESSURE GAUGE WITH SIPHON TUBE AND GAUGE COCK, 0-100 PSIG.
- 28 PROVIDE NEW PRESSURE GAUGE WITH SIPHON TUBE AND GAUGE COCK, 0-30 PSIG.
- 29 PROVIDE NEW STEEL 3/4" STEAM SUMMER SHUT-OFF VALVE.
- 30 PROVIDE NEW 1/2" END OF MAIN BUCKET TRAP, 150 LBS/HR, 95 PSIG PRESSURE DROP.
- 31 PROVIDE NEW 2" BUCKET TRAP, 5300 LBS/HR, 55 PSIG PRESSURE DROP.
- 32 WATER HEATER STEAM TEMPERATURE CONTROL VALVE BY WATER HEATER MANUFACTURE.
- 33 PROVIDE NEW STEEL STRAINER.
- 34 PROVIDE NEW STEEL GATE VALVE.

GENERAL NOTES:

A. REMOVE ASBESTOS INSULATION FROM BOILER NO. 9 PIPING, STEAM HEADER, AND EXISTING PUMPED CONDENSATE MAIN. PROVIDE NEW INSULATION.

B. ALL BOILER ROOM PIPING AND EQUIPMENT TO REMAIN SHALL BE PROTECTED DURING DEMOLITION AND CONSTRUCTION OF NEW ROOF STRUCTURE. PIPING SHALL BE DISCONNECTED FROM BOILERS DURING DEMOLITION AND NEW CONSTRUCTION. PROVIDE TEMPORARY SUPPORTS FOR ALL PIPING. PROVIDE RECONNECTION OF ALL PIPING DISASSEMBLED FOR DEMOLITION. PROVIDE NEW HANGER ROD ASSEMBLIES FOR ALL PIPE HANGERS. SEE TYPICAL HANGER, DETAIL 'H', SHEET M-11.

C. ALL PIPING SHALL BE TESTED UNDER NORMAL OPERATING CONDITIONS AFTER CONSTRUCTION TO PROVIDE FOR A TIGHT OPERATING PIPING SYSTEM.

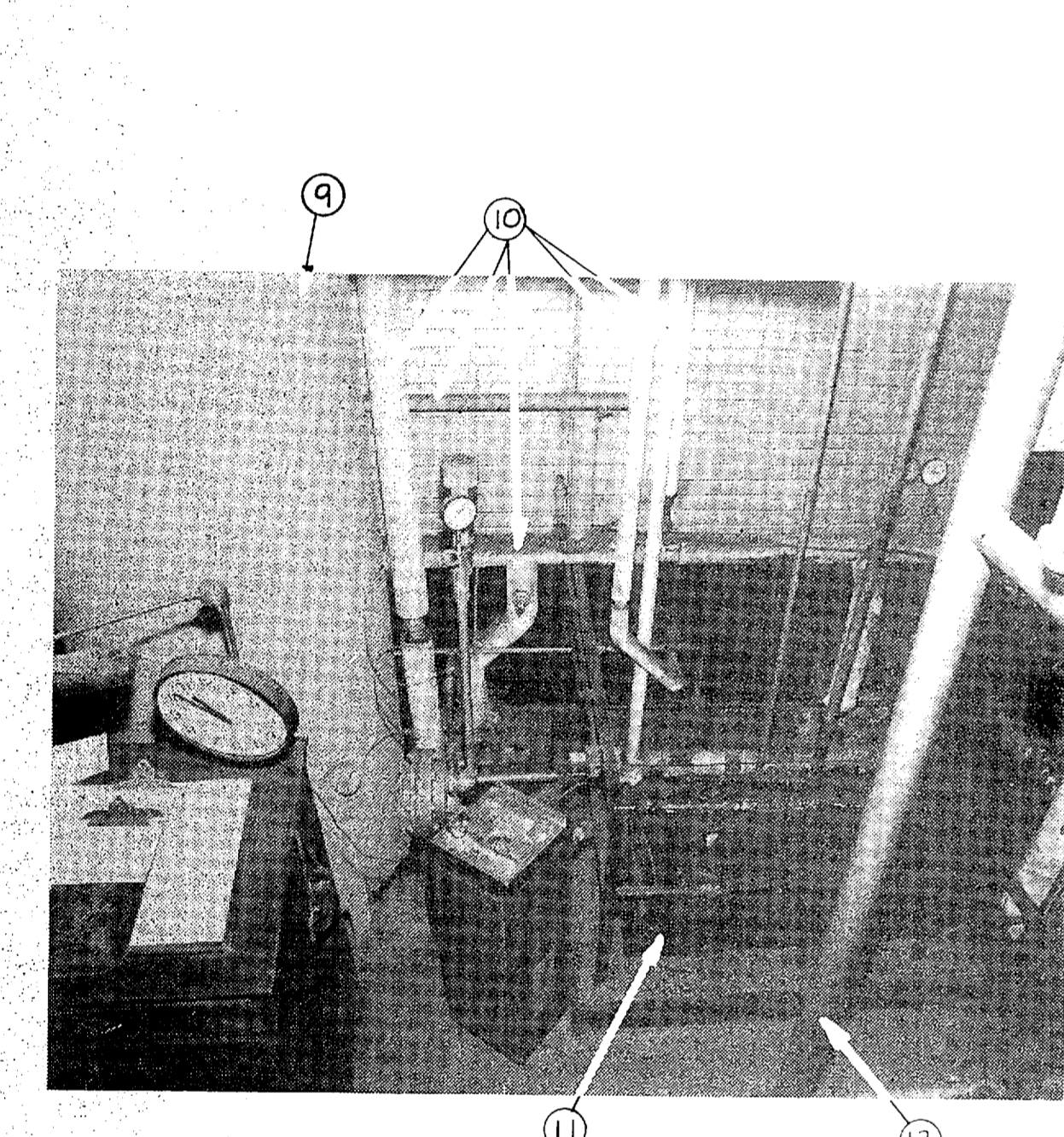


PHOTO-CONDENSATE PIT AREA
(LOOKING WEST-SOUTHWEST)
NO SCALE

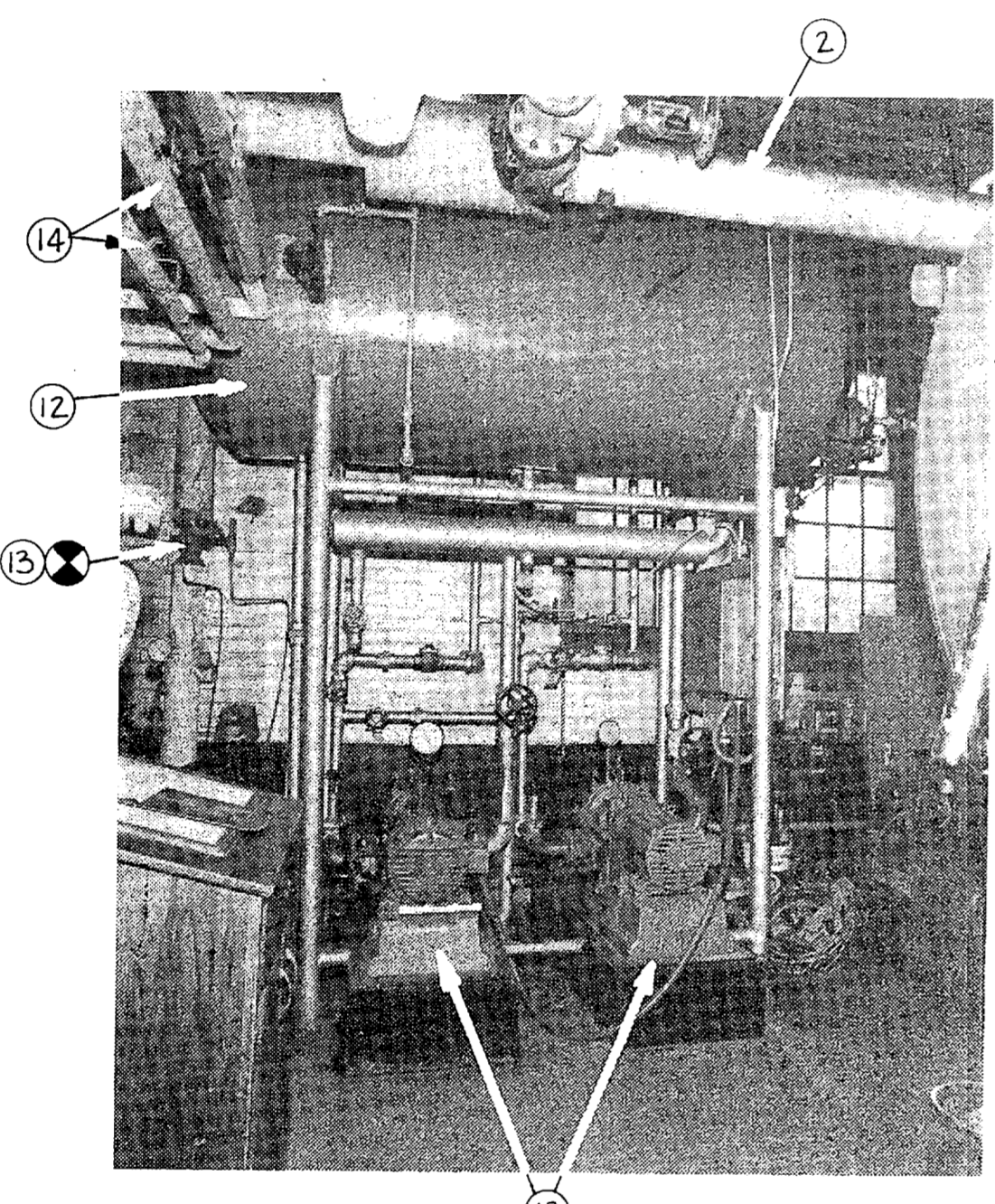


PHOTO-LEFT SIDE OF BOILER No. 9
(LOOKING NORTHWEST)
NO SCALE

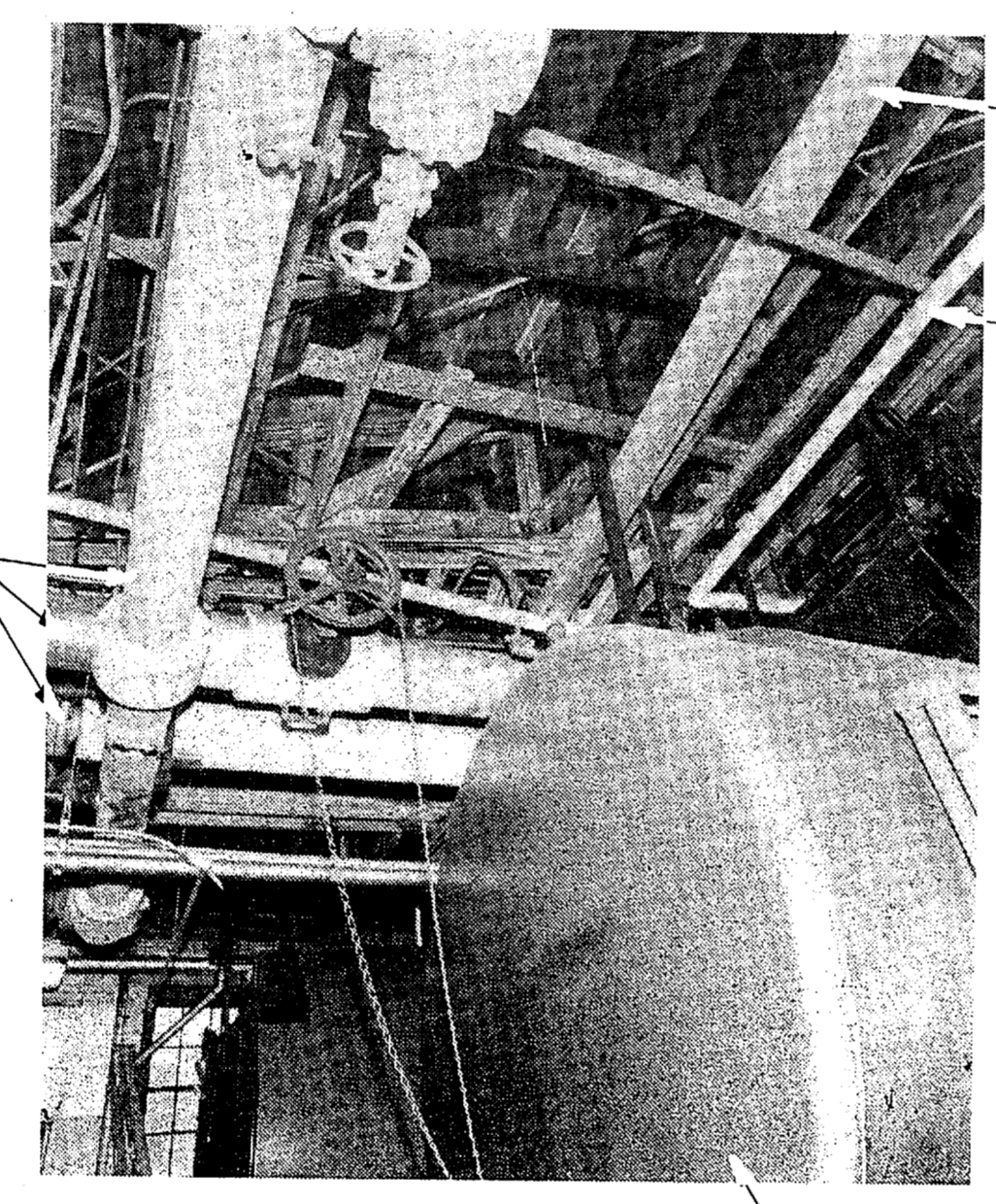


PHOTO-BACK OF BOILER No. 9
(LOOKING NORTHEAST)
NO SCALE

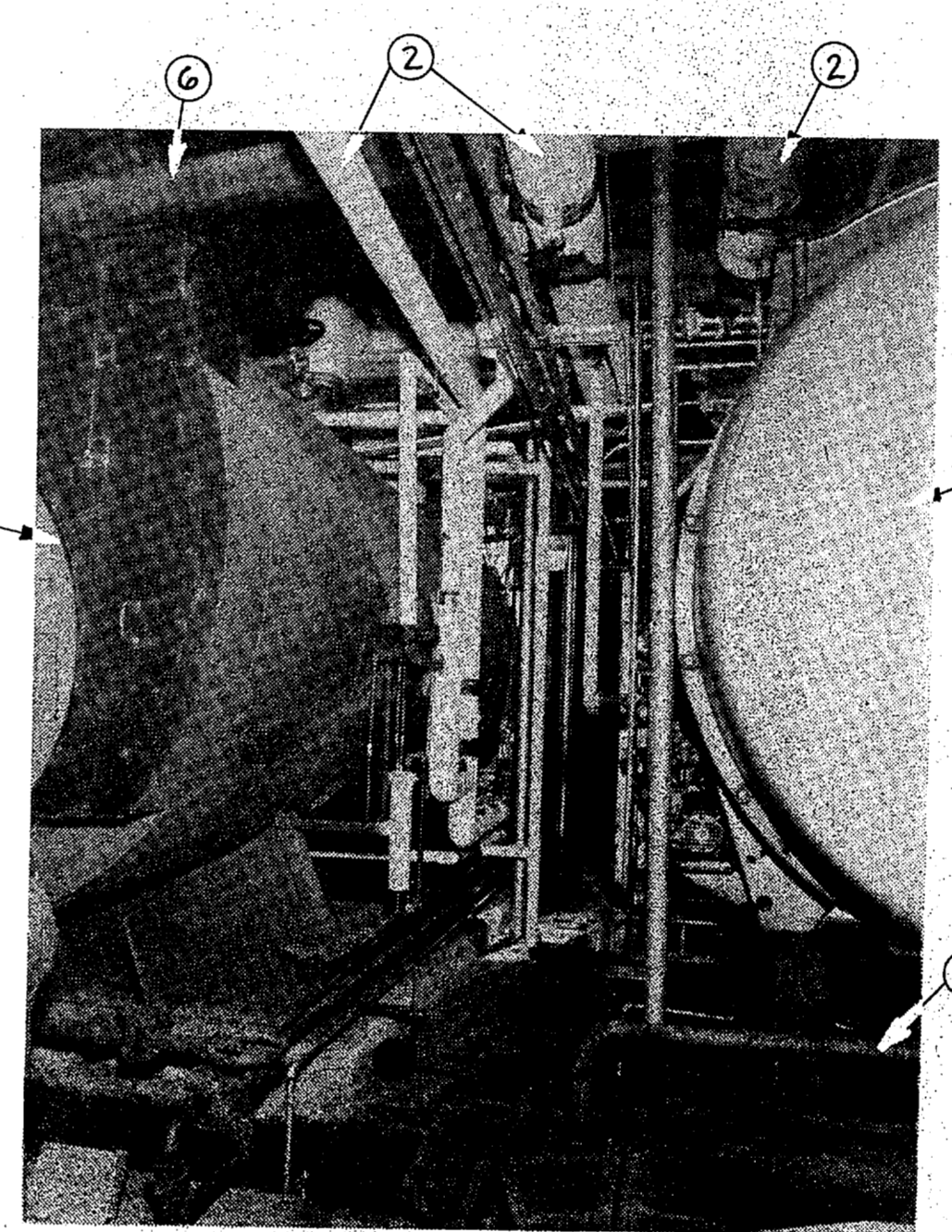
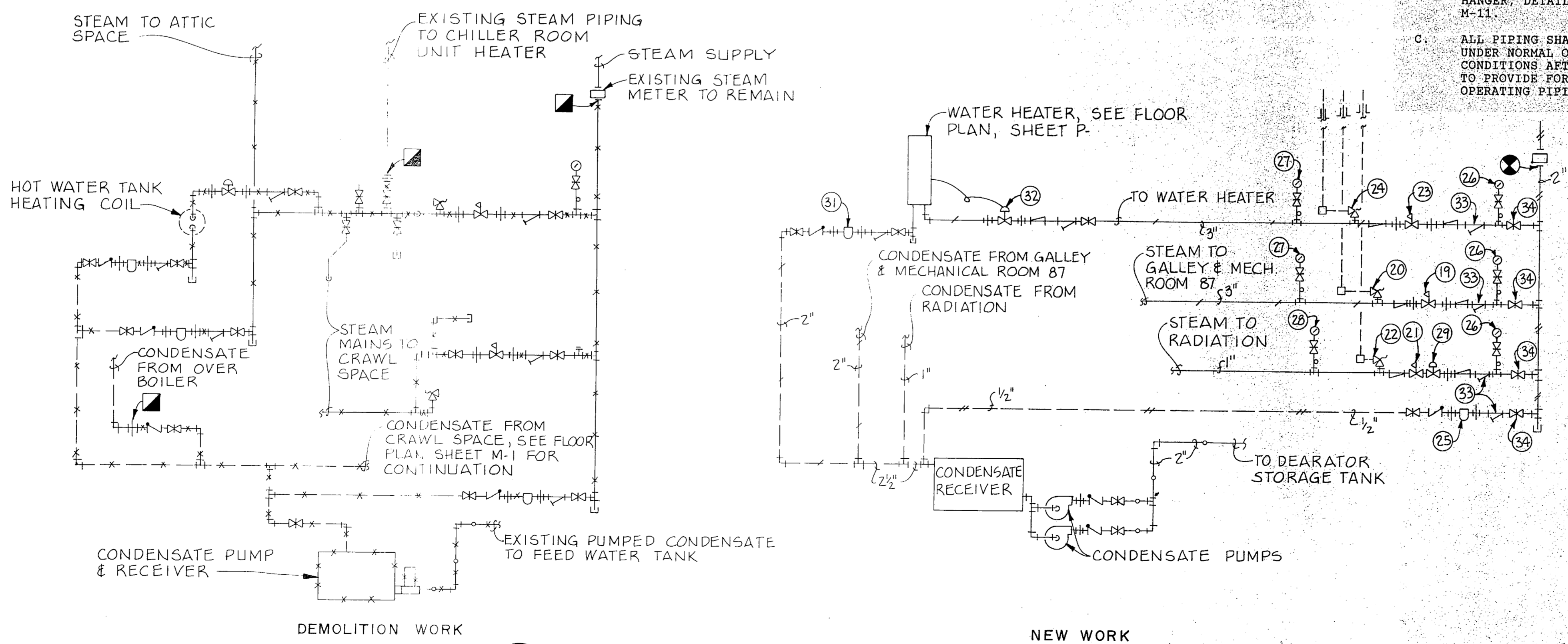


PHOTO-BACK OF BOILERS
(LOOKING SOUTHEAST)
NO SCALE



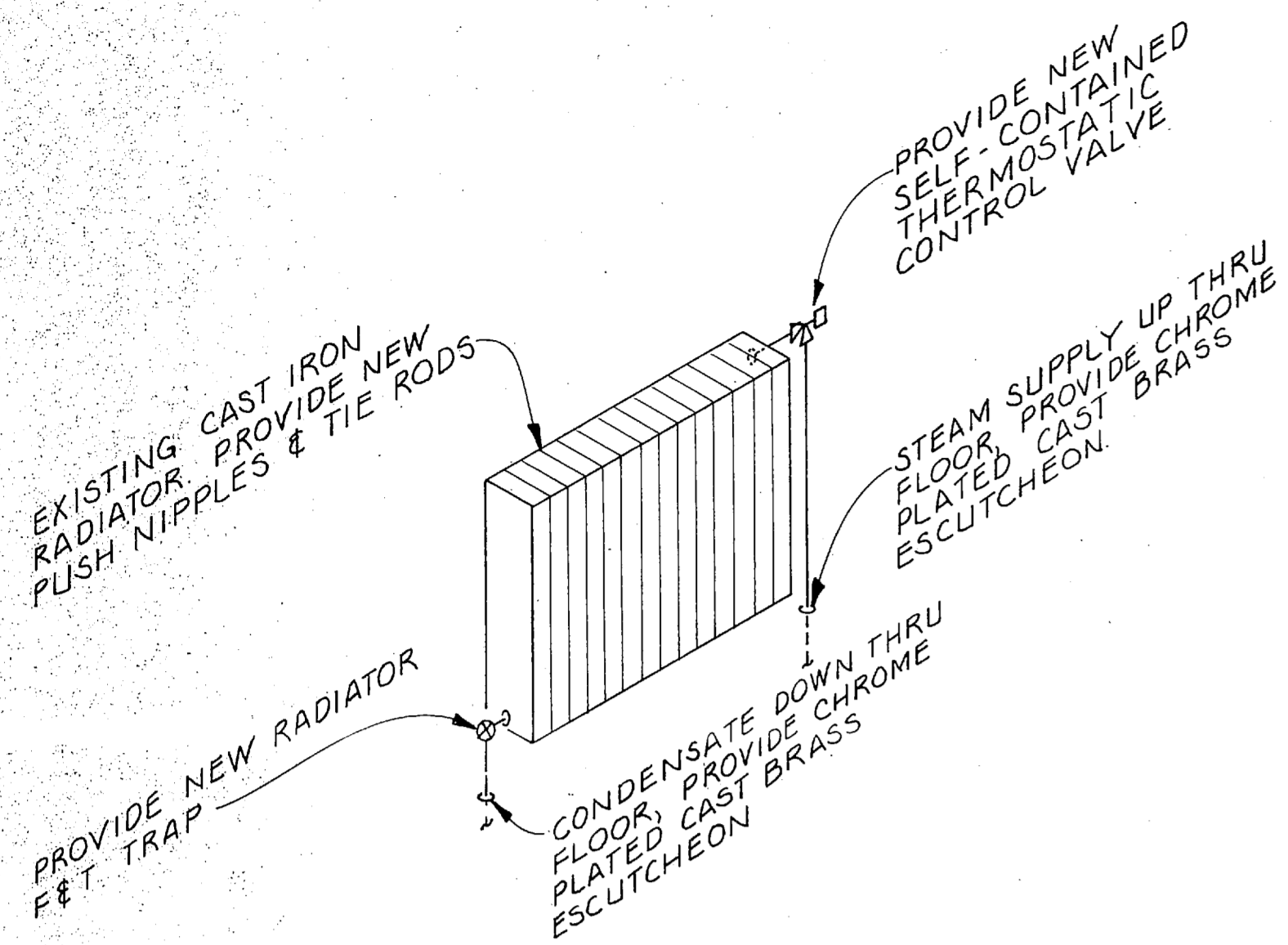
PHOTO-OUTSIDE BOILER ROOM
(LOOKING NORTHWEST)
NO SCALE



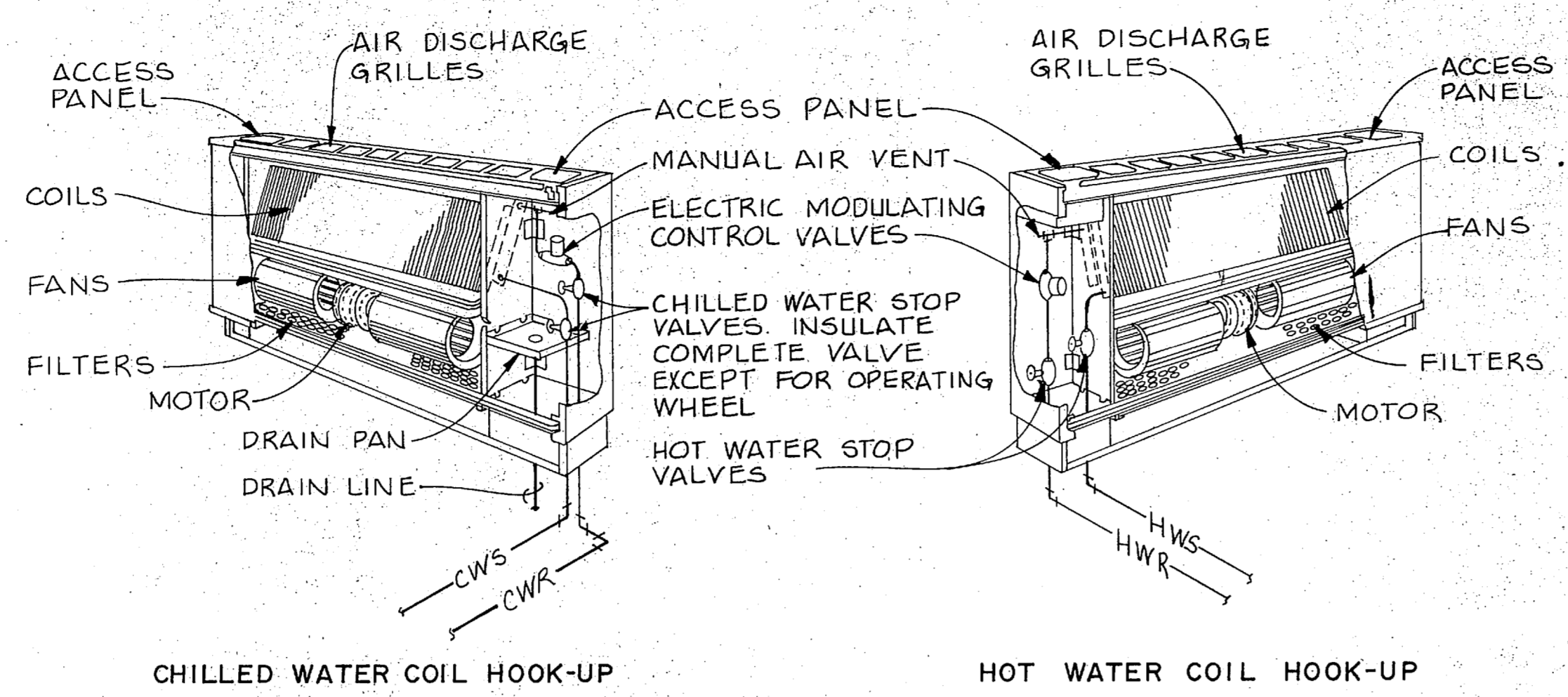
REDUCING STATION PIPING SCHEMATIC
NO SCALE

RECORD DRAWING		M-10	
THE SMITH-SINNETT ASSOCIATES, P.A. 110 WIND CHIME CT. RALEIGH, NC 27615		DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA	
DES. JGW DR. LAB/JEM CHK. JHC SUBMITTED BY: RJL DESIGN DIR. [Signature] APPROVED: PWO OR DICC [Signature] DATE 7-20-87 SATISFACTORY TO: [Signature]		RENOVATE BUILDING 2615 PHOTOS	
86-33		SIZE F	CODE IDENT. NO. 80091
CHEATHAM & ASSOCIATES CONSULTING ENGINEERS WILMINGTON, NORTH CAROLINA		NAVFAC DRAWING NO. 4160642	CONSTR CONTR. NO. N62470-86-B-9517
[Professional Engineer Seal: CHEATHAM & ASSOCIATES, INC. NORTH CAROLINA, LICENSE NO. 4108]		SCALE GRAPHIC	SPEC 86-9517
			SHEET 62 OF 74

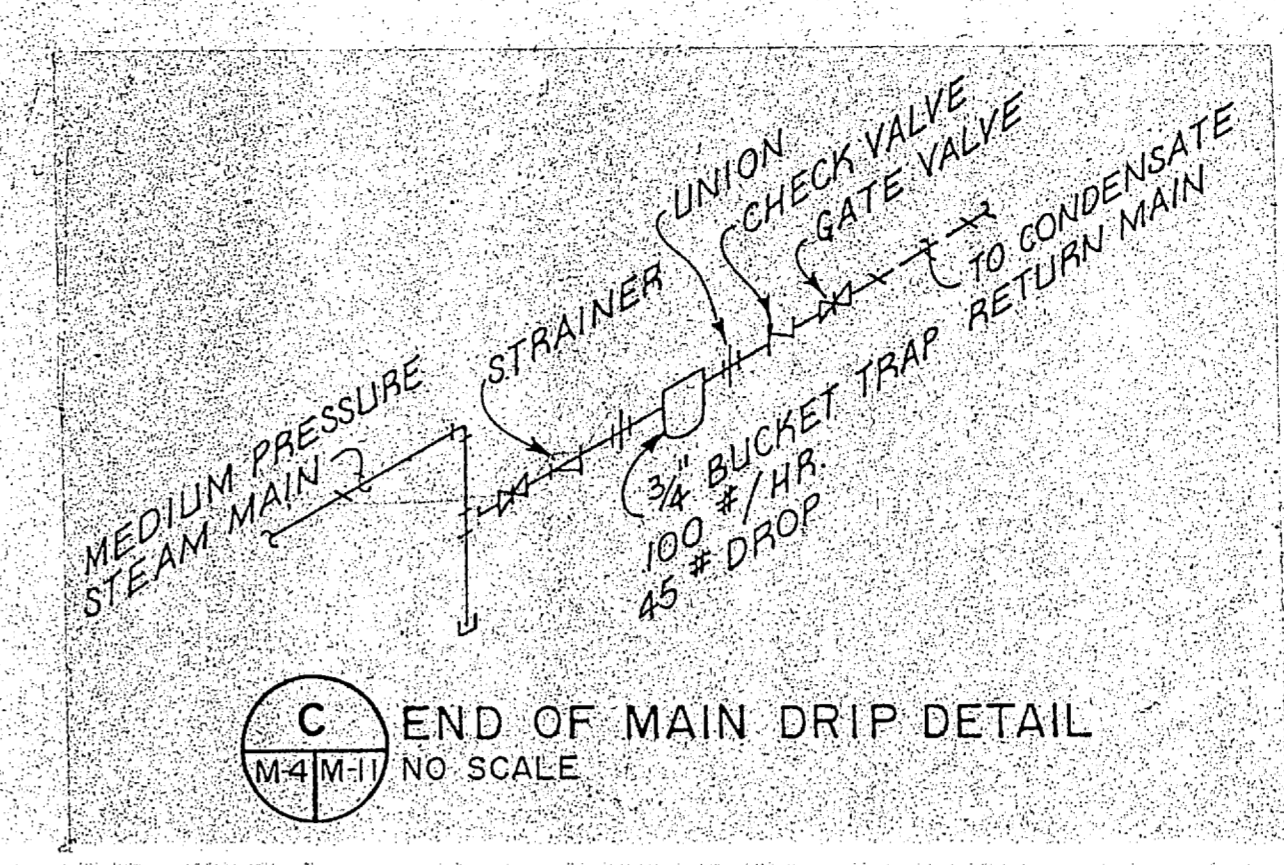
REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED
1	AS BUILT DRAWINGS	9/30/87	



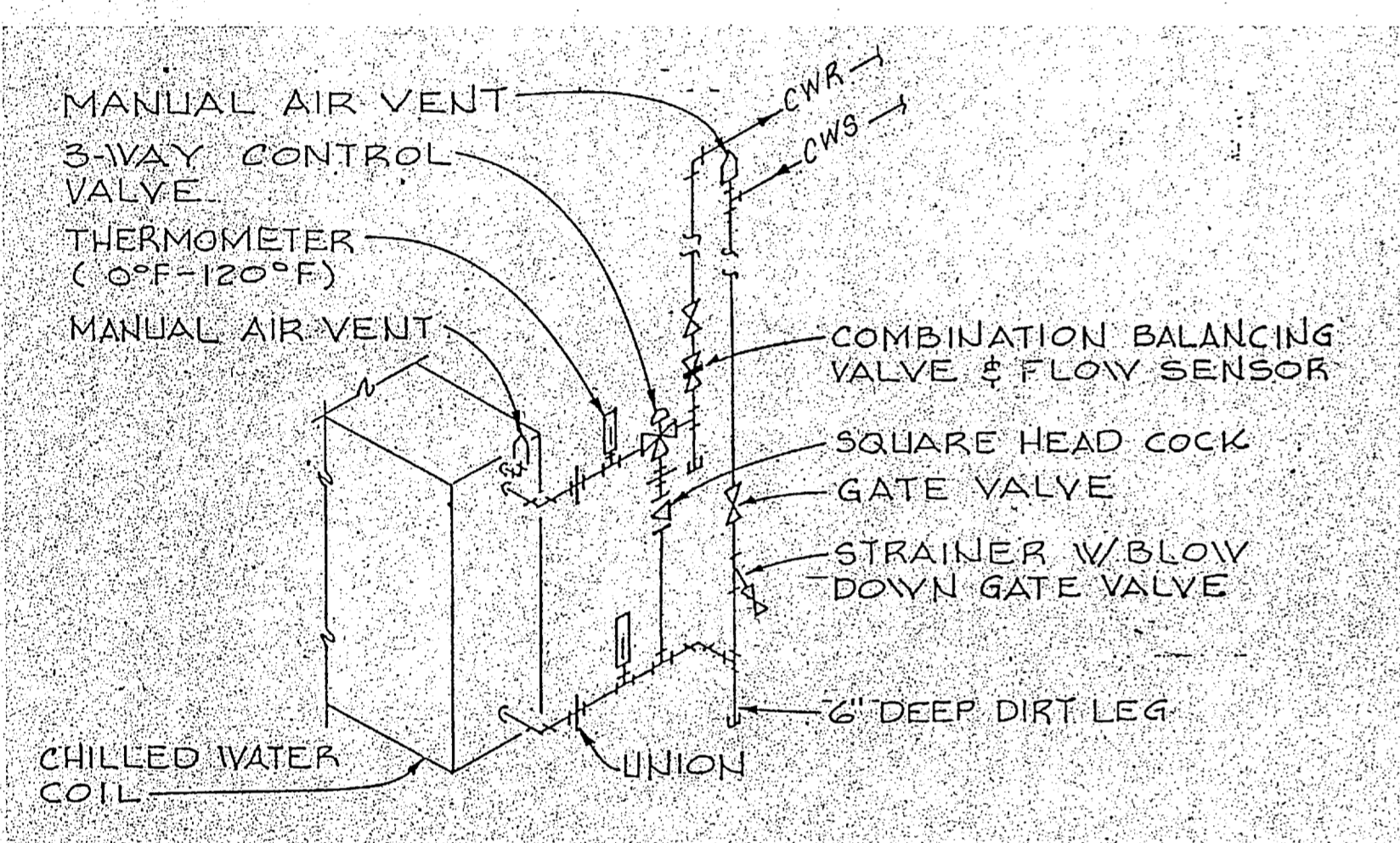
A TYPICAL RADIATOR DETAIL
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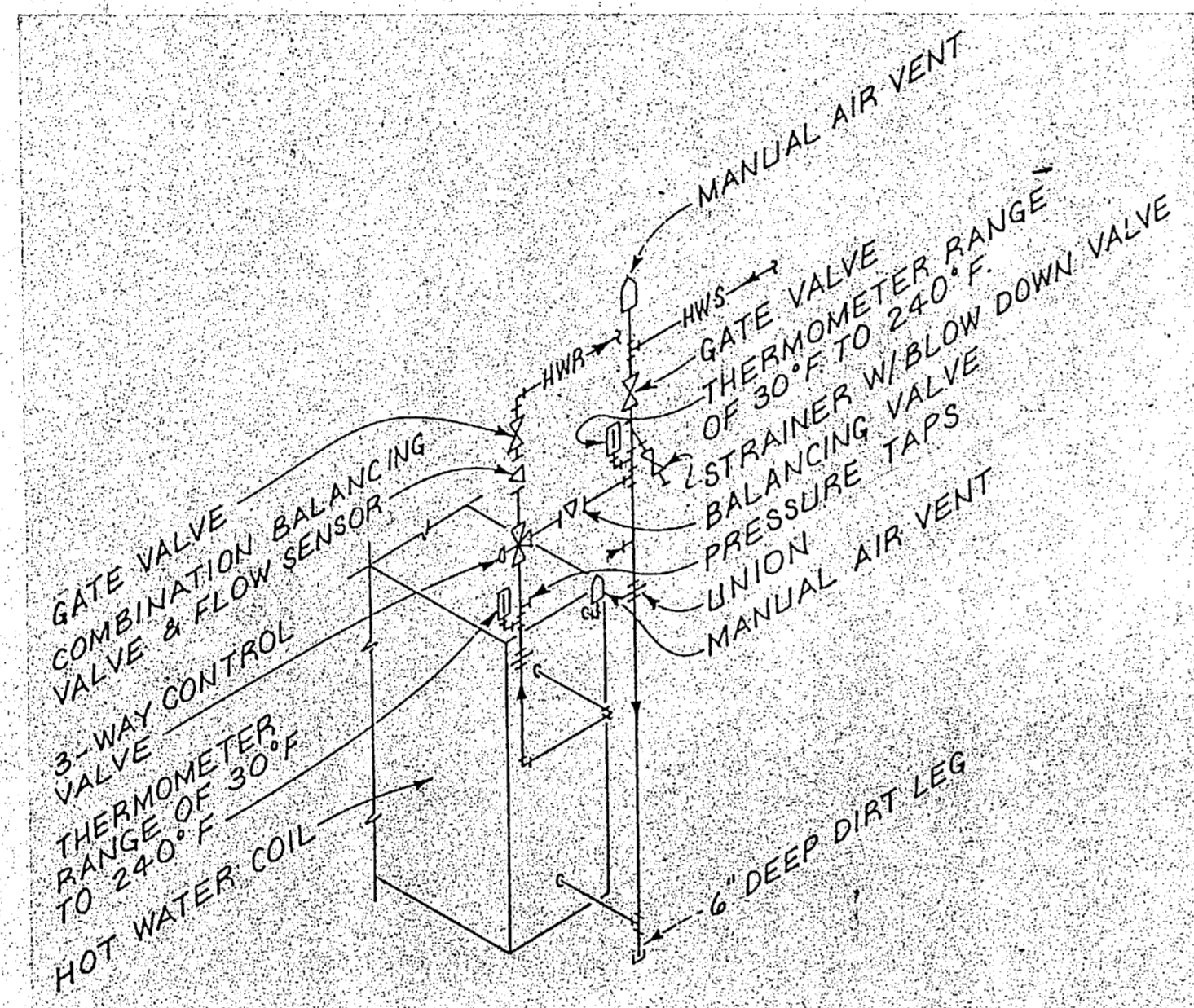
B FAN COIL UNIT DETAILS
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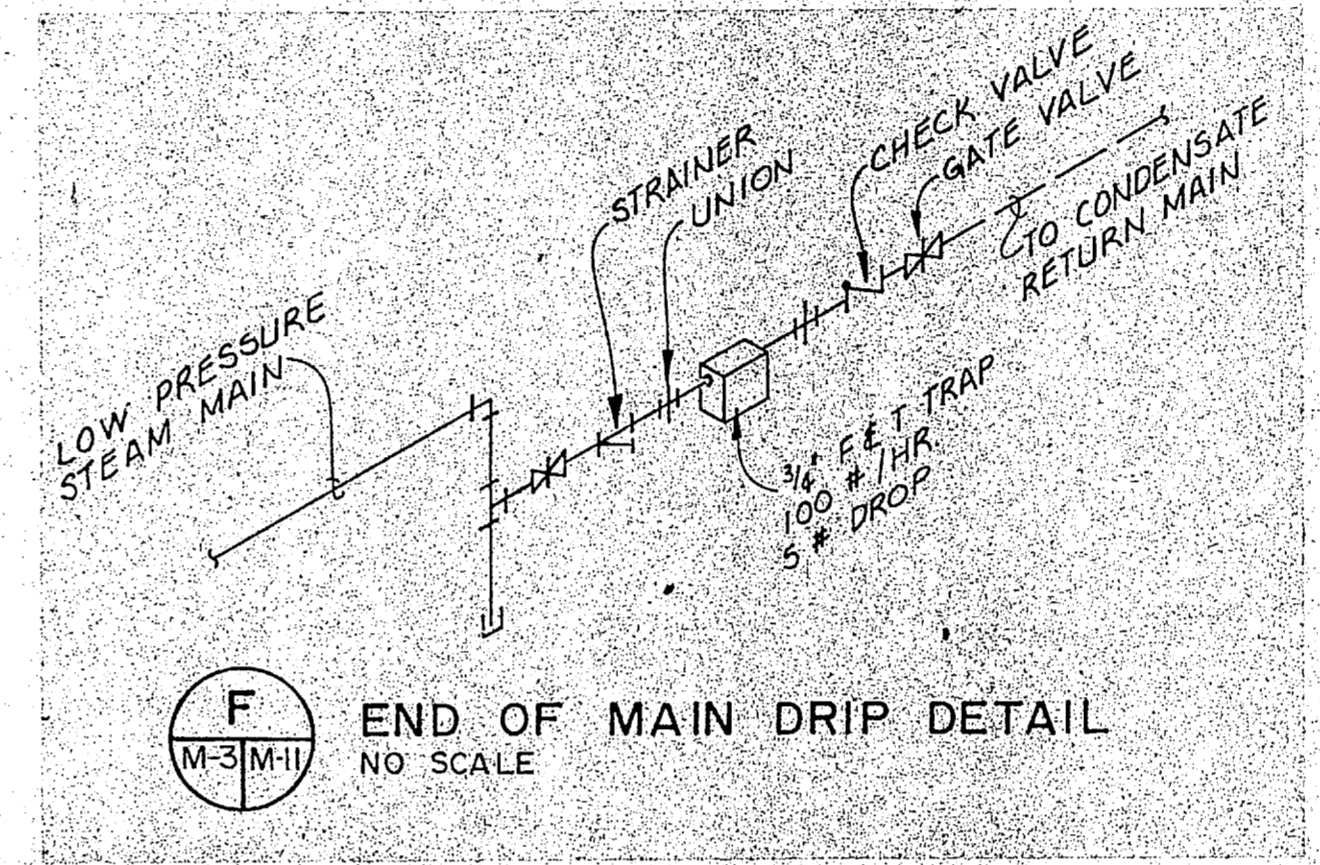
C END OF MAIN DRIP DETAIL
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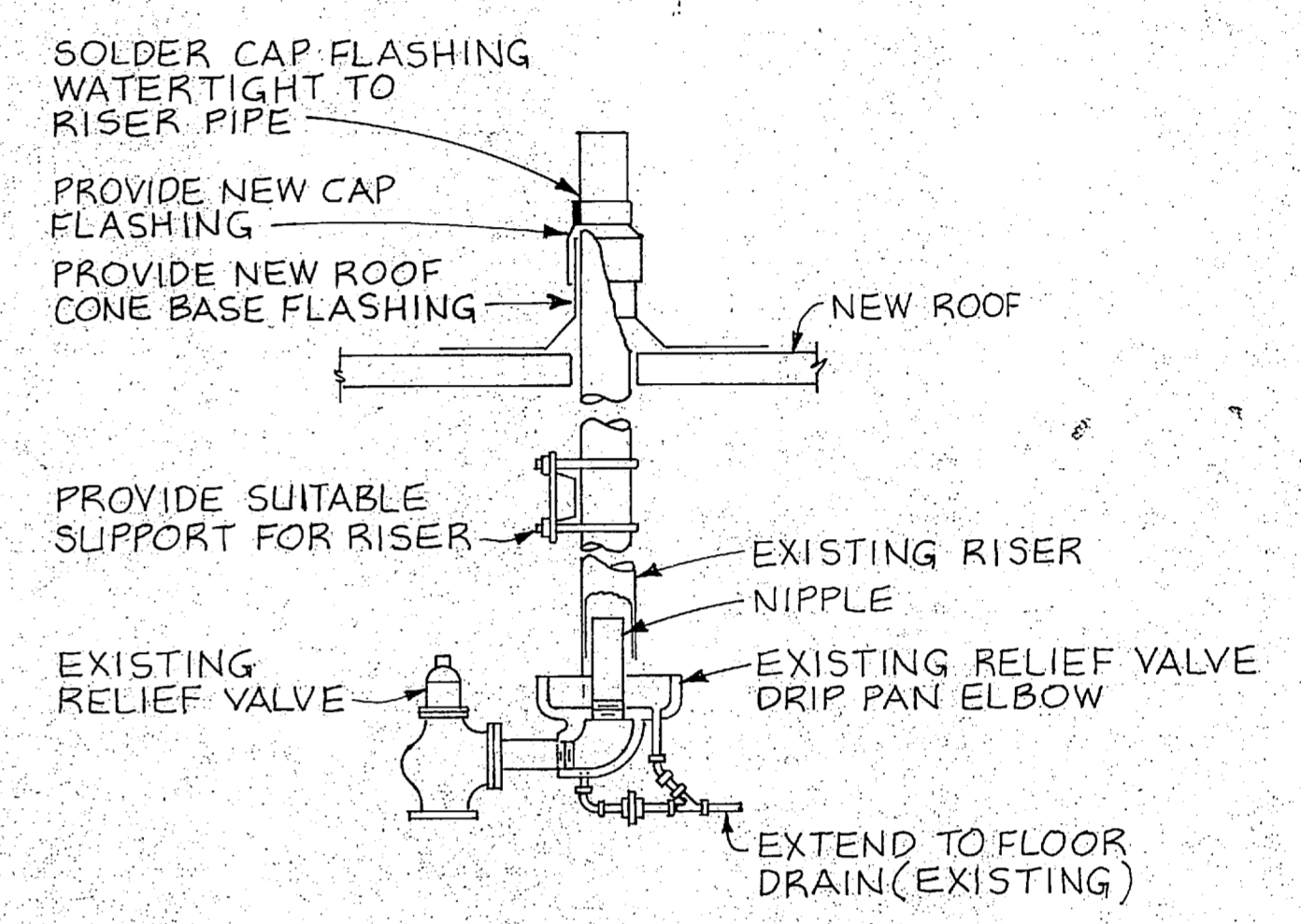
D CHILLED WATER COIL PIPING DETAIL
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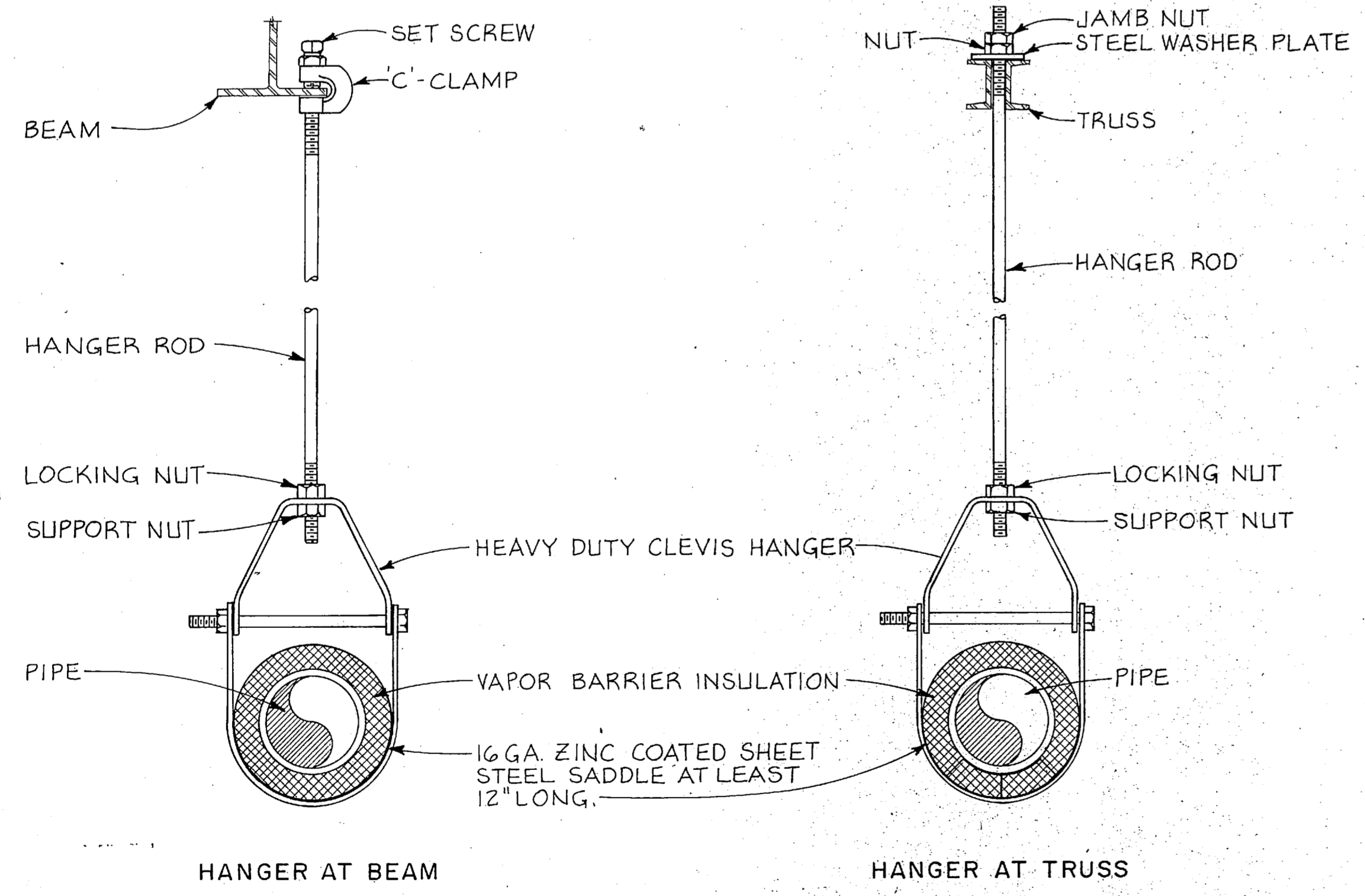
E HOT WATER COIL PIPING DETAIL
 NO SCALE



F END OF MAIN DRIP DETAIL
 NO SCALE



G RELIEF VALVE DISCHARGE PIPING DETAIL
 NO SCALE



H HANGER DETAILS
 NO SCALE

RECORD DRAWING		M-11	
CHEATHAM & ASSOCIATES CONSULTING ENGINEERS WILMINGTON, NORTH CAROLINA 86.33	THE SMITH-SINNETT ASSOCIATES, P.A. 110 WIND CHIME CT. RALEIGH, NC 27615	DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND CAMP LEJEUNE, NORTH CAROLINA	MARINE CORPS BASE RENOVATE BUILDING 2615
DES. JGW	CHK. JHC	MECHANICAL DETAILS	
DR. JEM, LAB	SUBMITTED BY: RJL	APPROVED: PWO OR DICG	DATE: 7-20-87
DESIGN DIR.	DATE	SIZE: F	CODE IDENT. NO.: 80091
SATISFACTORY TO:	DATE	NAVFAC DRAWING NO.: 4160643	CONSTR. CONTR. NO. N62470-86-B-9517
SCALE: NOTED		SPEC: 05-86-9517	SHEET 63 OF 74

FAN COIL UNIT SCHEDULE

SYMBOL	CFM		COOLING COIL *		HEATING COIL **		RUNOUT SIZE		ELECTRICAL		REMARKS	
	TOTAL	O.A.	GPM	SENSIBLE CAPACITY	TOTAL CAPACITY	GPM	TOTAL CAPACITY	COOLING	HEATING	HP		VOLTAGE
F.C.#1	300	40	1.8	6,500	8,800	1.2	12,000	1/2"	1/2"	1/30	120	1
F.C.#2	200	40	1.3	5,000	6,400	.8	8,000	1/2"	1/2"	1/60	120	1
F.C.#3	800	80	4.8	17,600	23,600	3.2	32,000	1"	3/4"	1/12	120	1
F.C.#4	200	—	1.3	5,000	6,400	.8	8,000	1/2"	1/2"	1/60	120	1
F.C.#5	600	80	3.3	11,800	16,000	2.4	24,000	3/4"	3/4"	1/20	120	1

MAKE-UP AIR UNIT SCHEDULE

SYMBOL	CFM	ESP "H ₂ O	ELECTRICAL		REMARKS	
			HP	VOLTAGE		PHASE
M.A.#1	1440	.25	1/3	120	1	INTERLOCK WITH EXISTING RANGE HOOD FAN

REVISIONS

SYM.	DESCRIPTION	DATE	APPROVED
1	AS BUILT DRAWINGS	9/20/83	

* FAN COIL BASED ON 78°F E.A.T. D.B., 65°F W.B., 10°F WATER TEMP. RISE & 45°F E.W.T.
 ** HEATING COIL BASED ON 65°F E.A.T. & 180°F E.W.T., MAXIMUM OF 10' FOR COIL & CONTROL VALVE.

AIR HANDLING UNIT SCHEDULE

SYMBOL	AIR QUANTITY		EXT. S.P. "H ₂ O	HP	ELECTRICAL		COOLING COIL ****				HEATING COIL **				REMARKS		
	TOTAL CFM	OUTSIDE AIR CFM			VOLTAGE	PHASE	EDB °F	EWB °F	LDB °F	LWB °F	GTH-MBH	GPM	RUNOUT SIZE	EAT °F		GTH-MBH	GPM
A.H.U.#1	800	100	.35	1/3	120	1	78.2	66.8	58.1	57.1	24.5	5	1"	62	30	3	3/4"
A.H.U.#2	1600	740	.35	1	208	3	83.6	71.5	53.0	52.9	95.7	19.1	1 1/2"	47.2	109	11	1 1/4"

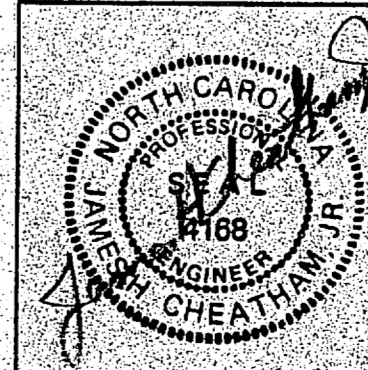
* EXT. S.P. INCLUDES SUPPLY & RETURN AIR DUCTWORK & GRILLES. FILTERS IN UNIT ARE NOT INCLUDED IN THIS FIGURE.
 ** BASED ON 180°F E.W.T. & 20°F DROP. MAXIMUM WATER PRESSURE DROP OF 10' FOR COIL & CONTROL VALVE.
 *** BASED ON 45°F E.W.T. & 10°F TEMPERATURE RISE. MAXIMUM WATER PRESSURE DROP OF 15' FOR COIL & CONTROL VALVE.
 **** BASED ON MAXIMUM COIL VELOCITY OF 600 F.P.M. & A MAXIMUM AIR SIDE PRESSURE DROP OF 2.0" WATER COLUMN. COIL SHALL HAVE A MINIMUM OF 6 ROWS & MAXIMUM OF 132 FINS PER INCH.

POWER VENTILATOR SCHEDULE

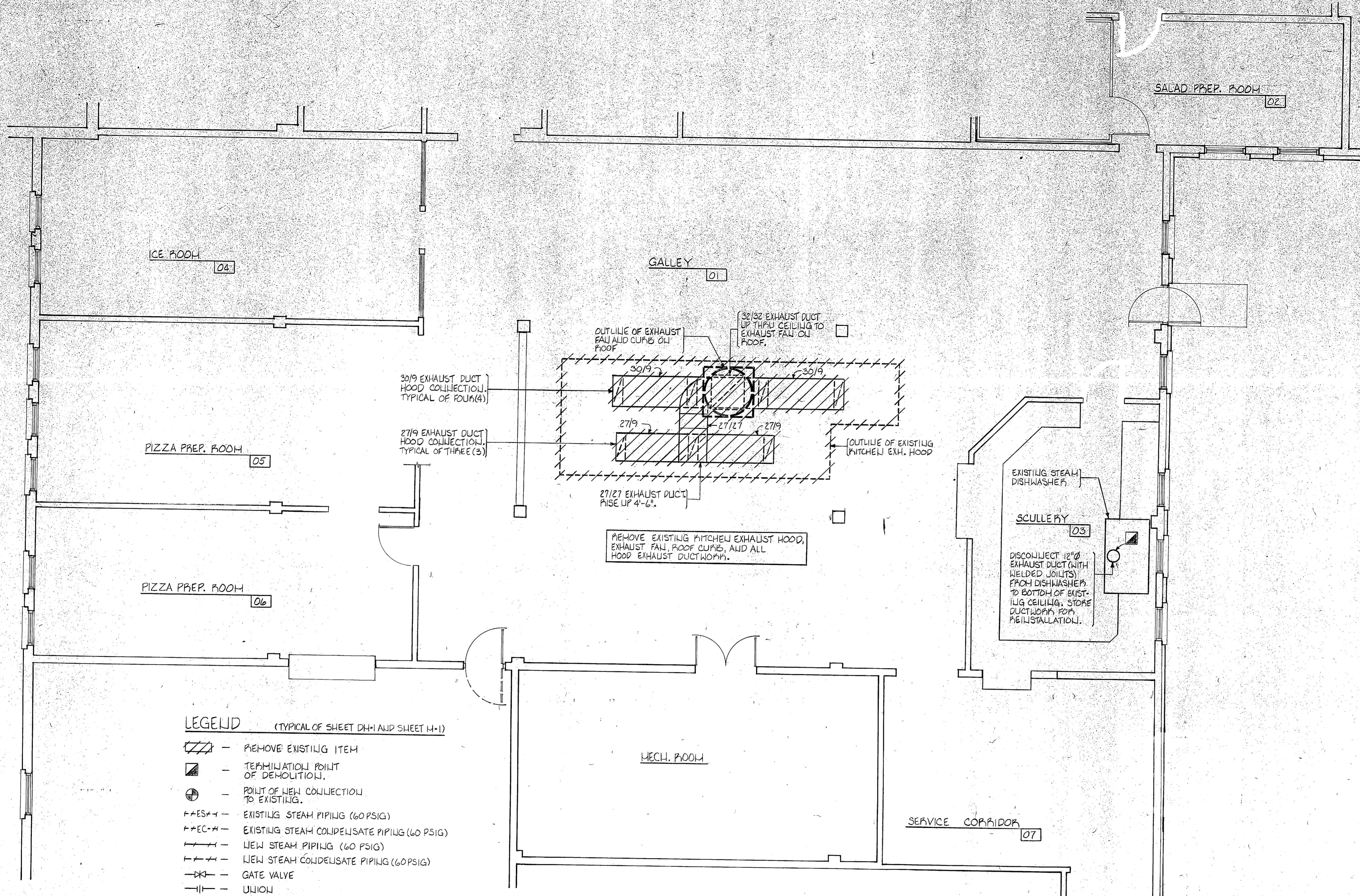
SYMBOL	CFM	E.S.P. "H ₂ O	RPM	TIP SPEED	ELECTRICAL		TYPE	DRIVE	REMARKS
					H.P.	VOLTAGE			
F-1	380	.125	1300	3701	1/30	120	1	ROOF MOUNTED CENTRIFUGAL	DIRECT
F-2	1150	.20	1490	4340	1/4	120	1		BELT W/COOLING THERMOSTAT
F-3	470	.125	1300	3701	1/25	120	1		DIRECT
F-4	2500	.125	700	3390	1/4	120	1		BELT W/COOLING THERMOSTAT
F-5	2500	.125	700	3390	1/4	120	1		BELT W/COOLING THERMOSTAT
F-6	690	.125	840	2446	1/4	120	1		BELT

RECORD DRAWING

M-12

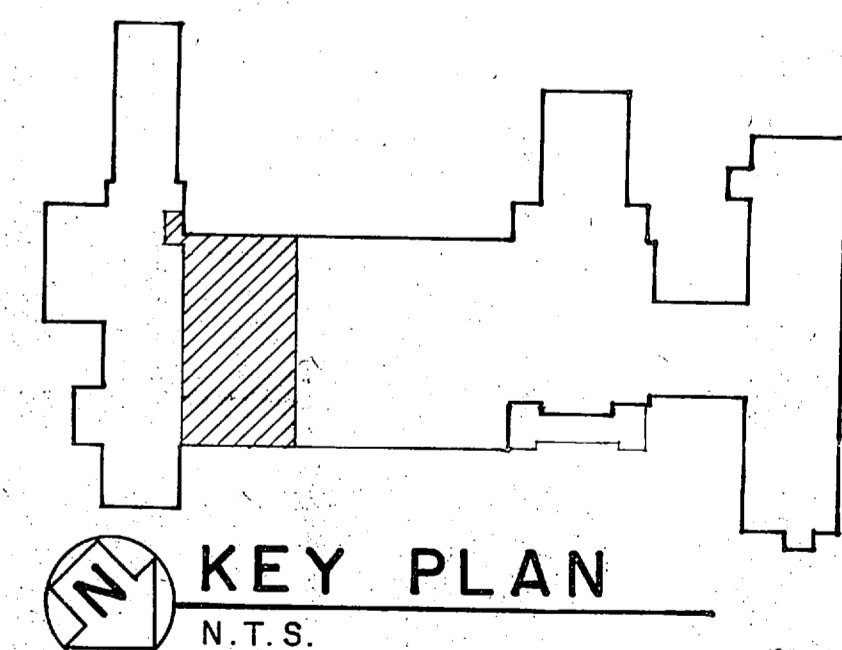
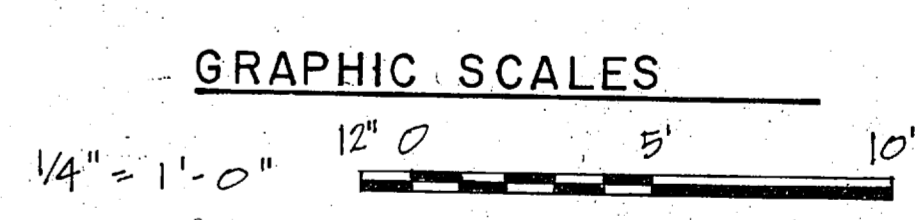
CHEATHAM & ASSOCIATES CONSULTING ENGINEERS WILMINGTON, NORTH CAROLINA 86-33	THE SMITH, SINNETT & ASSOCIATES, P.A. 110 WIND CHIME CT., RALEIGH, NC 27618	DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA
	DES. JGW DR. JEM, LAB CHK. JHC SUBMITTED BY: RJL	RENOVATE BUILDING 2615
	DESIGN DIR. <i>JGW</i> APPROVED: PWO OR OIC <i>Ylona</i> 7-20-83 SATISFACTORY TO:	SCHEDULES SIZE: F CODE IDENT. NO.: 80091 NAVFAC DRAWING NO.: 4160644 CONSTR. CONTR. NO. N62470-86-B-9517
SCALE: NOTED SPEC. 05-86-9517		SHEET 64 OF 74

REVISIONS		
SYM.	DESCRIPTION	DATE



- LEGEND** (TYPICAL OF SHEET D-11 AND SHEET H-1)
- REMOVE EXISTING ITEM
 - TERMINATION POINT OF DEMOLITION
 - POINT OF NEW COLLECTION TO EXISTING
 - EXISTING STEAM PIPING (60 PSIG)
 - EXISTING STEAM CONDENSATE PIPING (60 PSIG)
 - NEW STEAM PIPING (60 PSIG)
 - NEW STEAM CONDENSATE PIPING (60 PSIG)
 - GATE VALVE
 - UNION
 - STRAINER
 - CHECK VALVE
 - VACUUM BREAKER CHECK VALVE
 - TRAP
 - MODULATING STEAM CONTROL VALVE
 - GLOBE VALVE

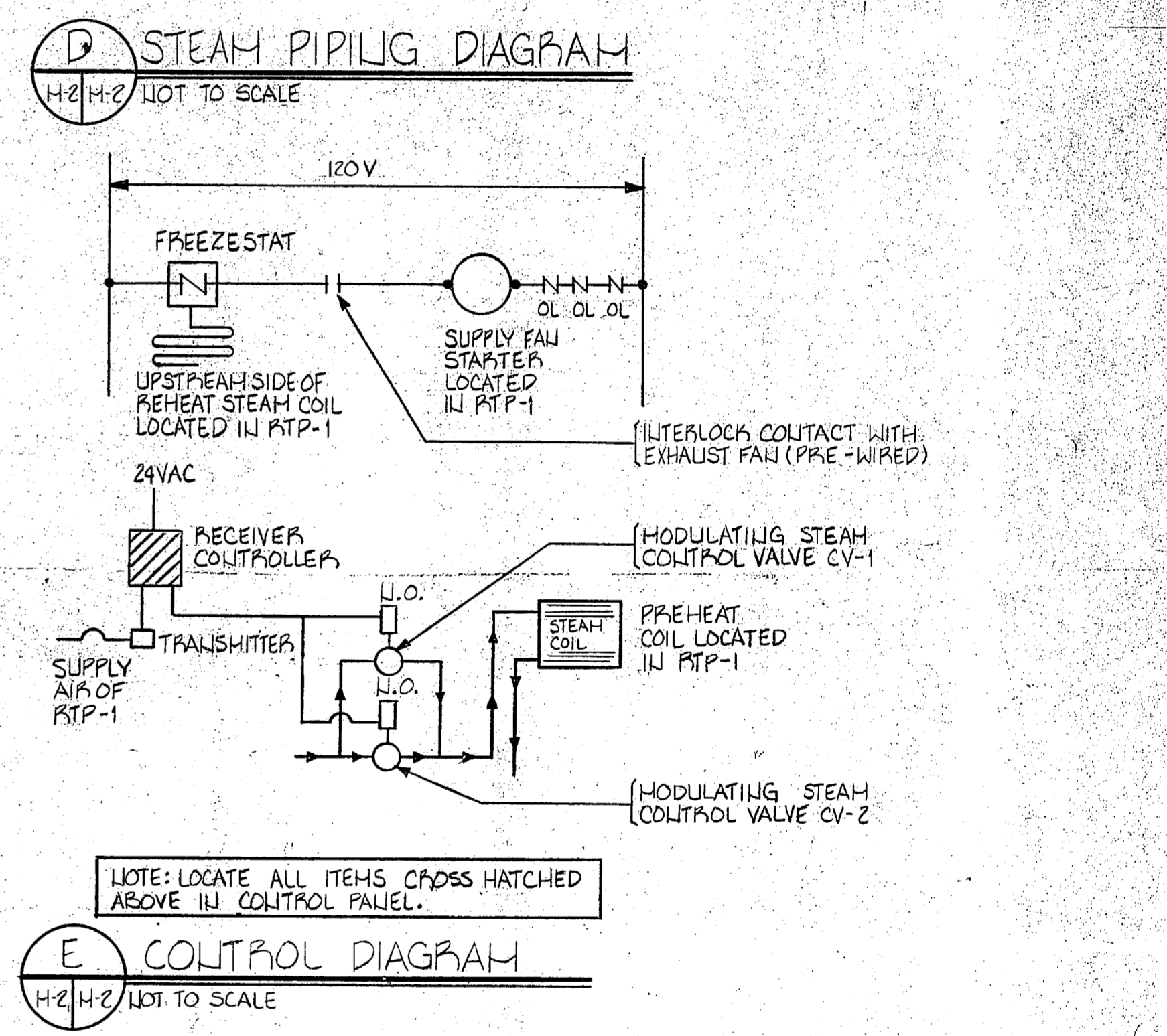
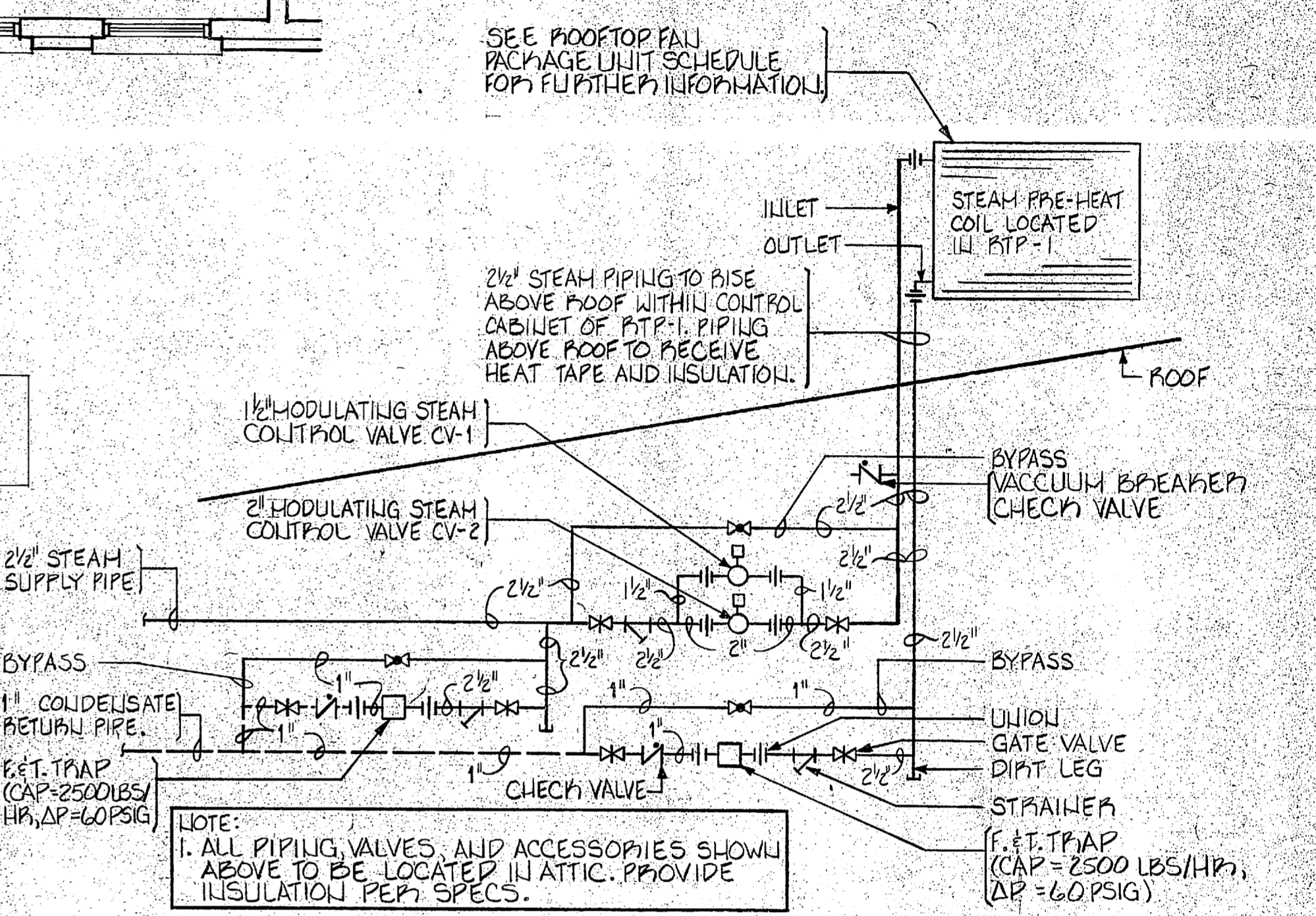
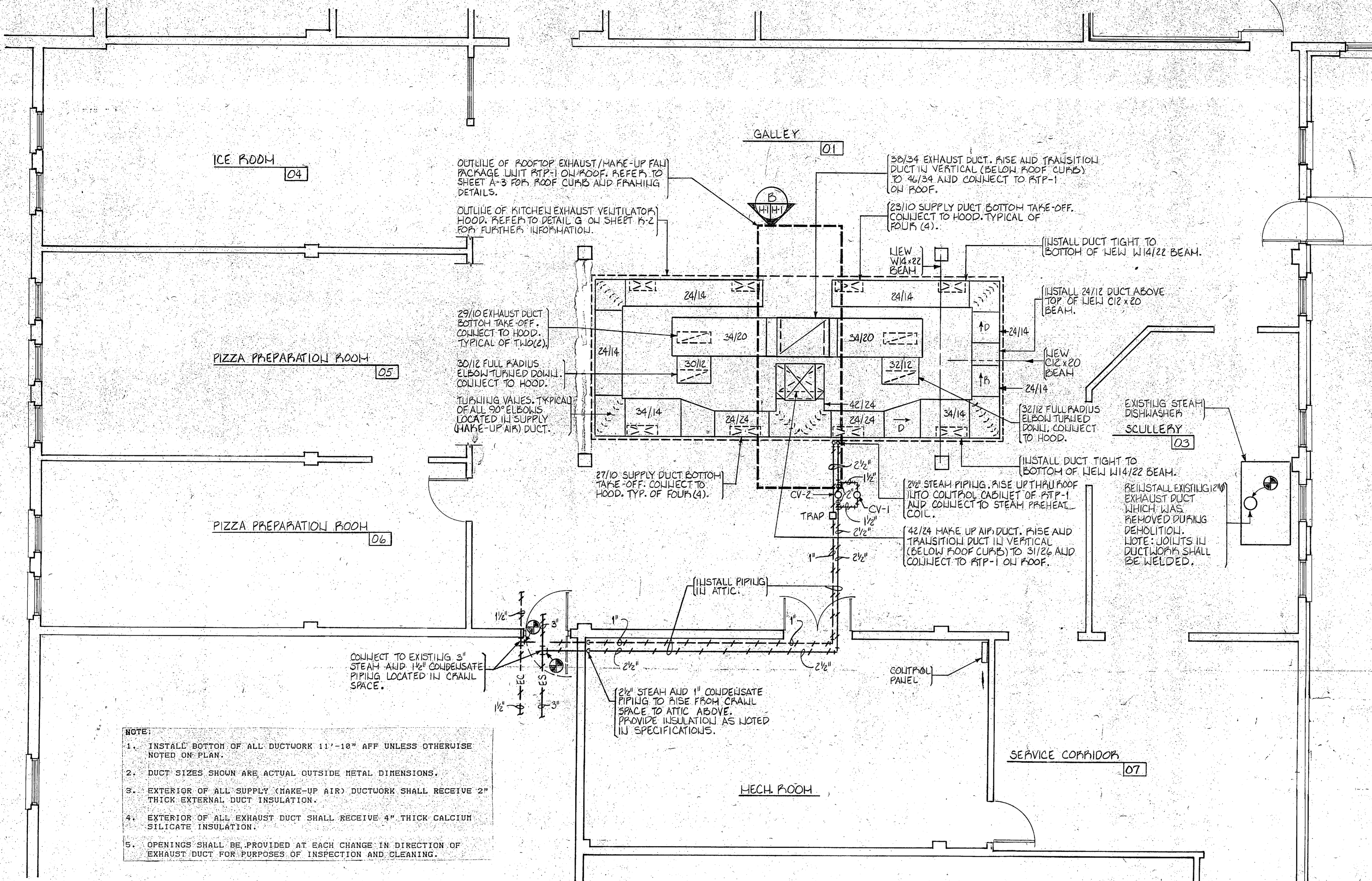
A KITCHEN PLAN - MECHANICAL DEMOLITION
 SCALE: 1/4" = 1'-0"



SHELTON Y. ADCOCK Consulting Engineer 2017 Myron Dr. Raleigh, NC 27607 (919) 782-1528	THE SMITH-SINNETT ASSOCIATES, P.A. 4601 LAKE BOONE TRAIL, SUITE 3C RALEIGH, N.C. 27607	DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA	M-1
	DES. RCC DR. BLR CHK. RCC / SYA SUBMITTED BY: RJL DESIGN DIR. <i>[Signature]</i> APPROVED: PWO OR OIC DATE 8-19-98 SATISFACTORY TO: DATE	RENOVATE GALLEY, BLDG. 2615 KITCHEN PLAN - MECHANICAL DEMOLITION	NAVFAC DRAWING NO. 4186095 CONSTR. CONTR. NO. 62470-87-B-9852 SCALE: GRAPHIC SPEC. 05-87-9852 SHEET 13 OF 17

ROOFTOP FAN PACKAGE UNIT SCHEDULE																				
MARK	DESCRIPTION	EXHAUST FAN				SUPPLY FAN				STEAM PRE-HEAT COIL				MANUFACTURER AND MODEL NO.	ACCESSORIES					
		CFM	EXT. S.P. IN WG	MOTOR HP	RPM	POWER	CFM	EXT. S.P. IN U.G.	MOTOR HP	RPM	POWER	STEAM PRESS. PSIG	LBS. STEAM PER HR.			COND. TRAP CAP. LBS/HR	HEATING CAPACITY BTU/HR	TEMP. RISE (°F)	COIL FACE VELOCITY FT/MIN.	MIN. FACE AREA SQ. FT.
RTP-1	ROOFTOP EXHAUST/SUPPLY MAKE-UP FAN PACKAGE UNIT WITH STEAM PRE-HEAT COIL	16,400	2.0	10	768	208-3-60	12,900	0.60	7.5	550	208-3-60	60	940	2,500	767	55	570	22.5	GAYLORD CRT-6F-29200-60-5TH	MOTOR STARTERS, ADJ. DRIVES, START/STOP SWITCH, SPRING ISOLATION, COMPLETE FACTORY WIRING, DISTRIBUTING TUBE TYPE STEAM COIL, INLET RAIN LOUVER AND BIRD SCREEN, INLET DAMPER, DRAIN.

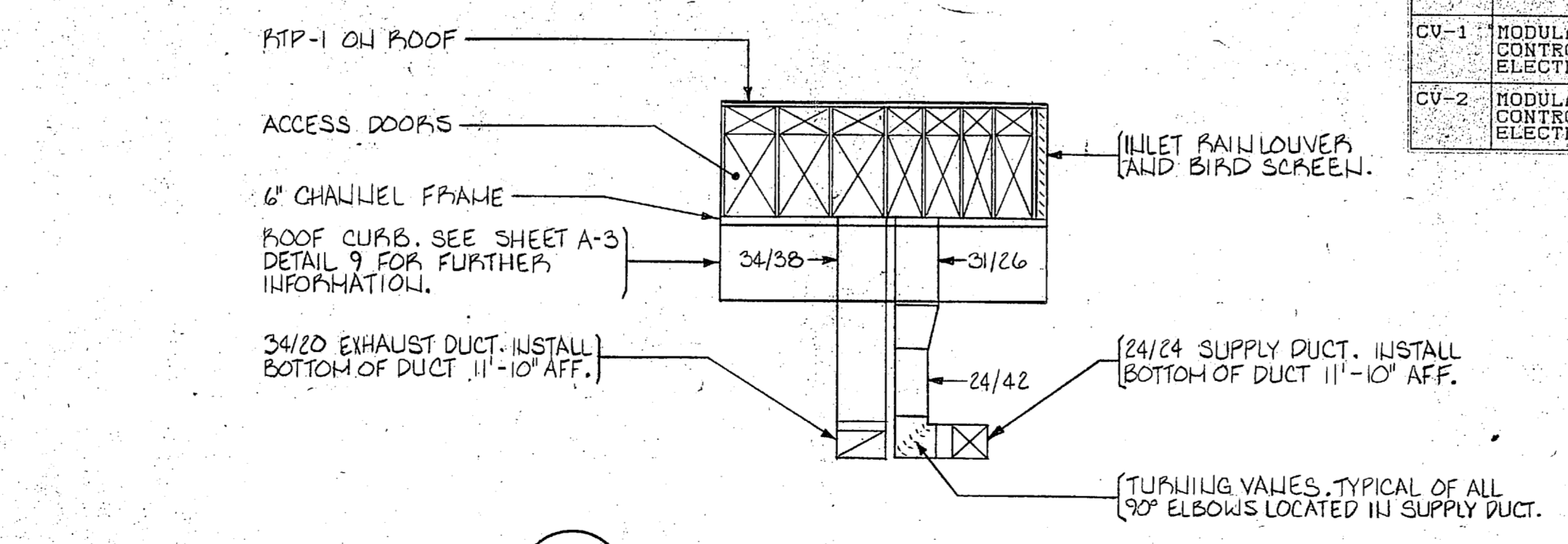
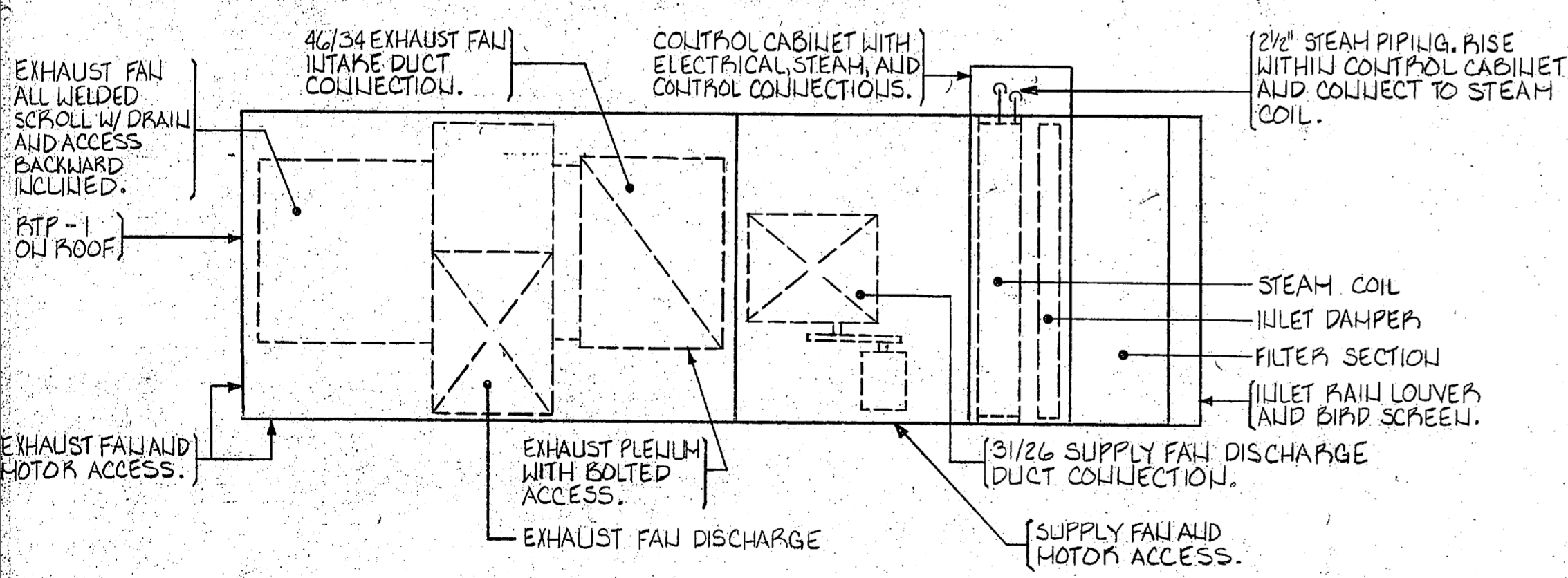
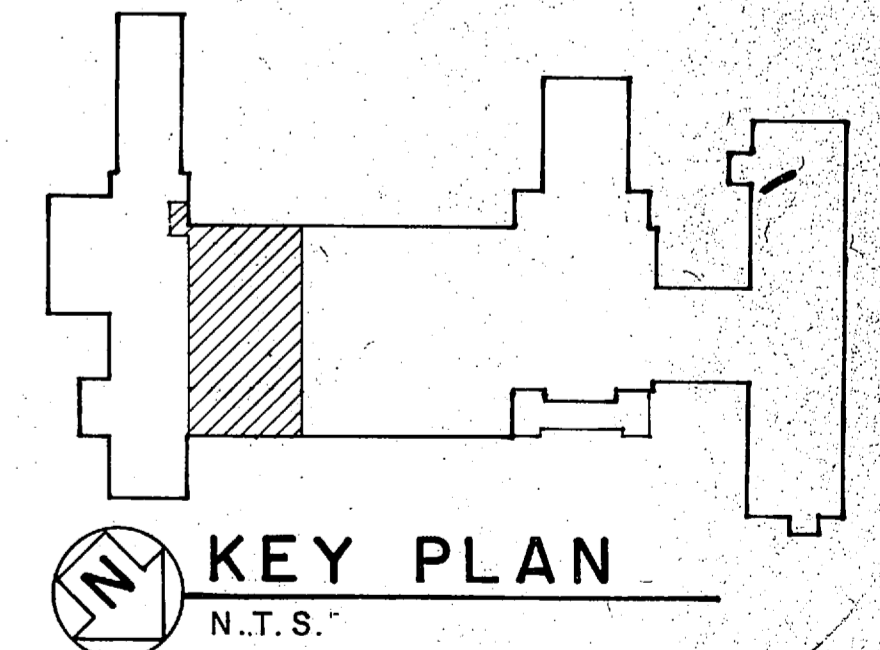
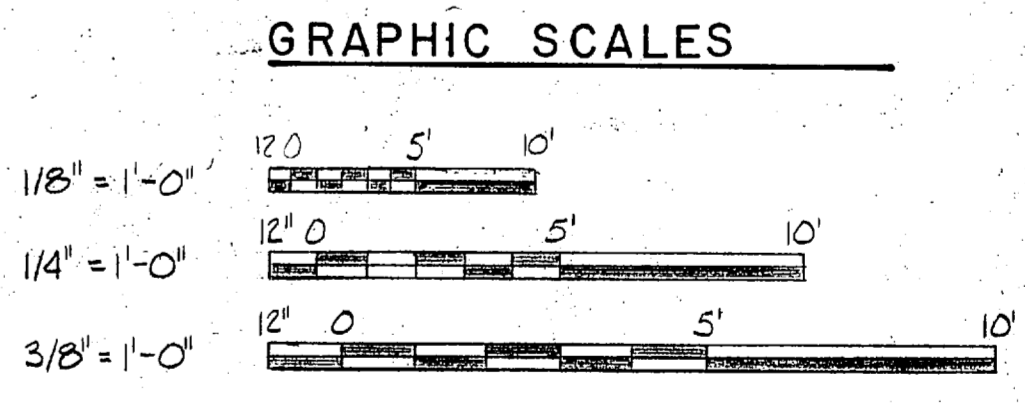
REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED



- NOTE:**
1. INSTALL BOTTOM OF ALL DUCTWORK 11'-10" AFF UNLESS OTHERWISE NOTED ON PLAN.
 2. DUCT SIZES SHOWN ARE ACTUAL OUTSIDE METAL DIMENSIONS.
 3. EXTERIOR OF ALL SUPPLY (MAKE-UP AIR) DUCTWORK SHALL RECEIVE 2" THICK EXTERNAL DUCT INSULATION.
 4. EXTERIOR OF ALL EXHAUST DUCT SHALL RECEIVE 4" THICK CALCIUM SILICATE INSULATION.
 5. OPENINGS SHALL BE PROVIDED AT EACH CHANGE IN DIRECTION OF EXHAUST DUCT FOR PURPOSES OF INSPECTION AND CLEANING.

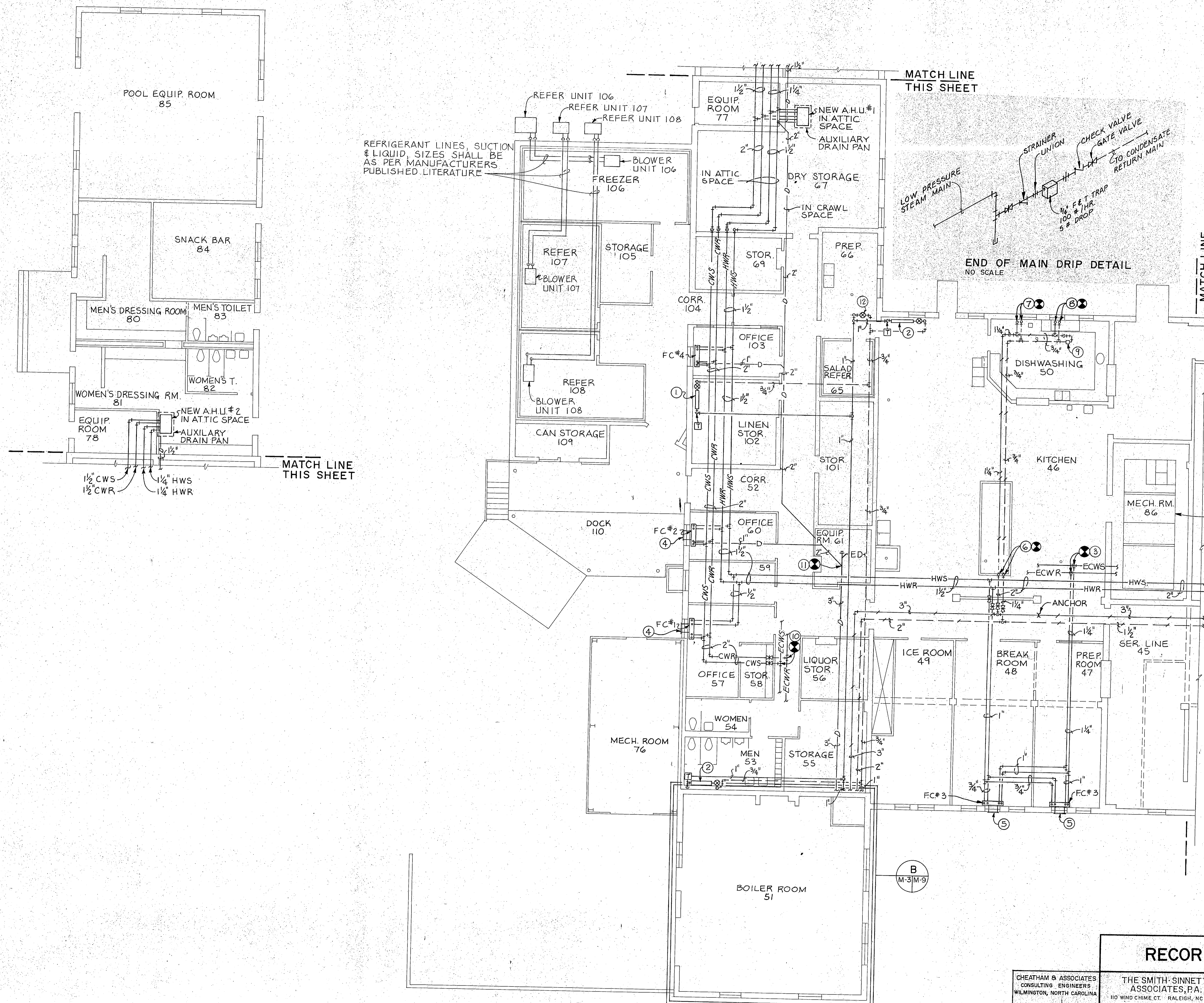
A KITCHEN PLAN - MECHANICAL (NEW WORK)
1/2" H/2 SCALE: 1/4" = 1'-0"

STEAM CONTROL VALVE SCHEDULE				
MARK	DESCRIPTION	SIZE	STEAM PRESS. (PSIG)	LBS. STEAM PER HR.
CV-1	MODULATING STEAM CONTROL VALVE WITH ELECTRIC OPERATOR	1 1/2"	60	280
CV-2	MODULATING STEAM CONTROL VALVE WITH ELECTRIC OPERATOR	2"	60	560



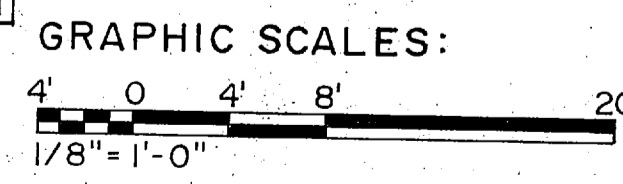
SHELTON Y. ADCOCK Consulting Engineer 2017 Myron Dr. Raleigh, NC 27607 (919) 782-1528	THE SMITH-SINNETT ASSOCIATES, P.A. 4601 LAKE BOONE TRAIL, SUITE 3C RALEIGH, N.C. 27607	DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA
	DR. BLR DRK SYA/RCC SUBMITTED BY: RUL DESIGN DIR: YLL	APPROVED: PWO OR DIC DATE: 8-19-83
APPROVED: PWO OR DIC DATE: 8-19-83	SATISFACTORY TO:	NAVFAC DRAWING NO. 4186096 CONSTR. CONTR. NO. N62470-87-B-9852 SCALE: GRAPHIC SPEC. 05-87-9852 SHEET 14 OF 17

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED
1	AS BUILT DRAWINGS	3/30/89	



- KEYED NOTES: (THIS SHEET ONLY)**
- NEW LOCATION OF EXISTING 4 TUBE, 16 SECTION, 30" HIGH CAST IRON RADIATOR. PROVIDE NEW PUSH UP RIGIDLY THERMOSTATICALLY CONTROLLED RADIATOR VALVE AND TRAP. SEE DETAIL 'A', SHEET M-11.
 - EXISTING 5 TUBE, 26 SECTION, 24" HIGH CAST IRON RADIATOR. PROVIDE NEW PUSH UP RIGIDLY THERMOSTATICALLY CONTROLLED RADIATOR VALVE AND TRAP. SEE DETAIL 'A', SHEET M-11.
 - PROVIDE NEW 1-1/4" VALVED CONNECTION TO EXISTING CWS AND CWR MAINS DURING SHUT DOWN PERIOD.
 - PROVIDE NEW 2" X 8" BRICK VENT OUTSIDE AIR INTAKE LOUVER, 40 CFM.
 - PROVIDE NEW 4" X 8" BRICK VENT OUTSIDE AIR INTAKE LOUVER, 80 CFM.
 - PROVIDE NEW 2" STEAM AND 1-1/4" CONDENSATE CONNECTION TO EXISTING RISERS IN CRAWL SPACE SERVING EXISTING COOKING ISLAND.
 - PROVIDE NEW 1" STEAM AND 3/4" CONDENSATE CONNECTION TO EXISTING RISERS IN CRAWL SPACE SERVING EXISTING DISHWASHER BOOSTER HEATER.
 - PROVIDE NEW 3/4" STEAM AND 3/4" CONDENSATE CONNECTIONS TO EXISTING RISERS IN CRAWL SPACE SERVING EXISTING DISHWASHER.
 - NEW MEDIUM PRESSURE END OF MAIN DRIP STATION, SEE DETAIL 'C', SHEET M-11.
 - PROVIDE NEW 2" VALVED CONNECTION TO EXISTING CWS AND CWR MAINS DURING SHUT DOWN PERIOD.
 - PROVIDE NEW 2" AIR CONDITIONING CONDENSATE DRAIN CONNECTION TO AIR CONDITIONING CONDENSATE DRAIN CONNECTION EXISTING IN CRAWL SPACE.
 - PROVIDE NEW END OF MAIN LOW PRESSURE DRIP. SEE DETAIL 'A', THIS SHEET.

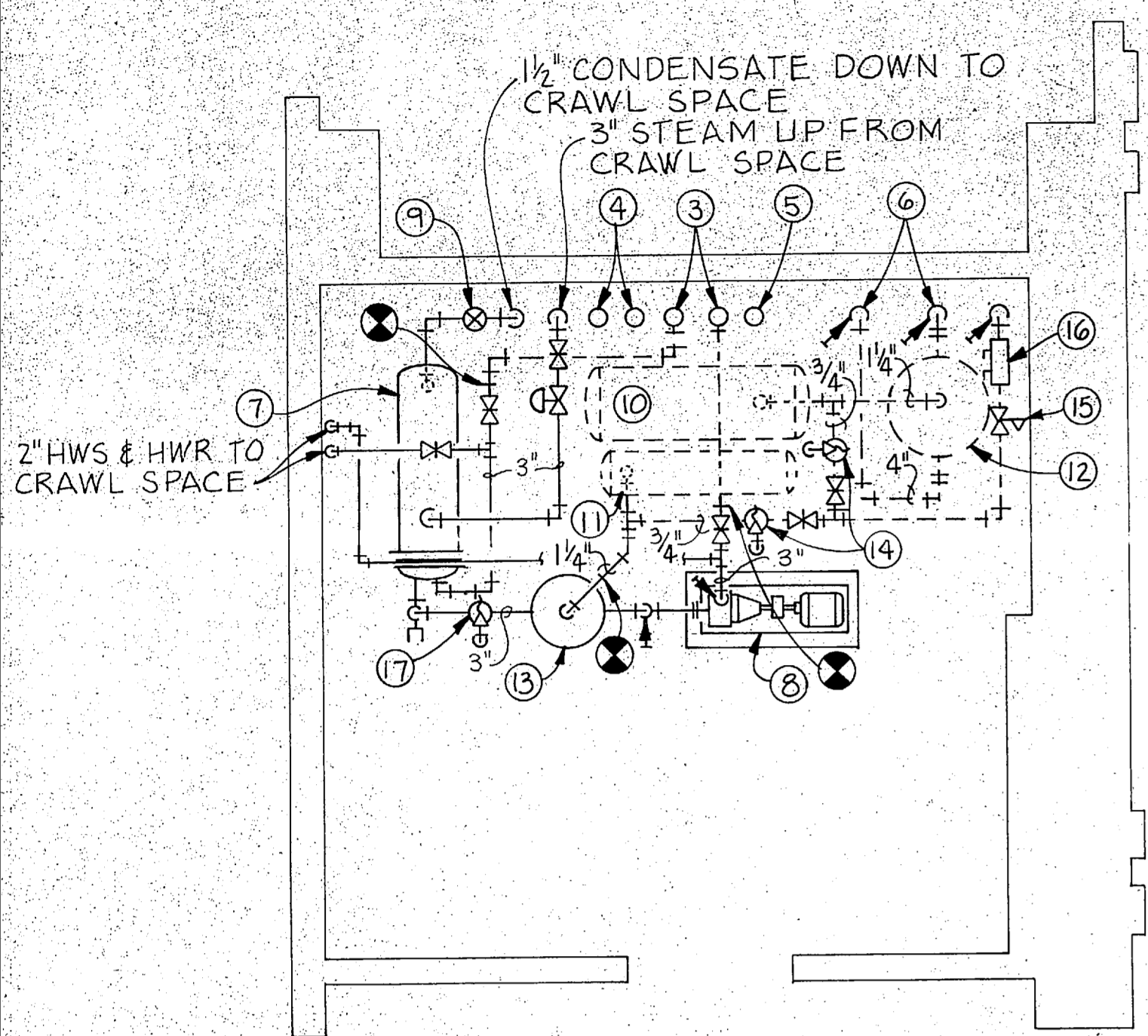
PIPING FLOOR PLAN - AREA A
SCALE: 1/8" = 1'-0"



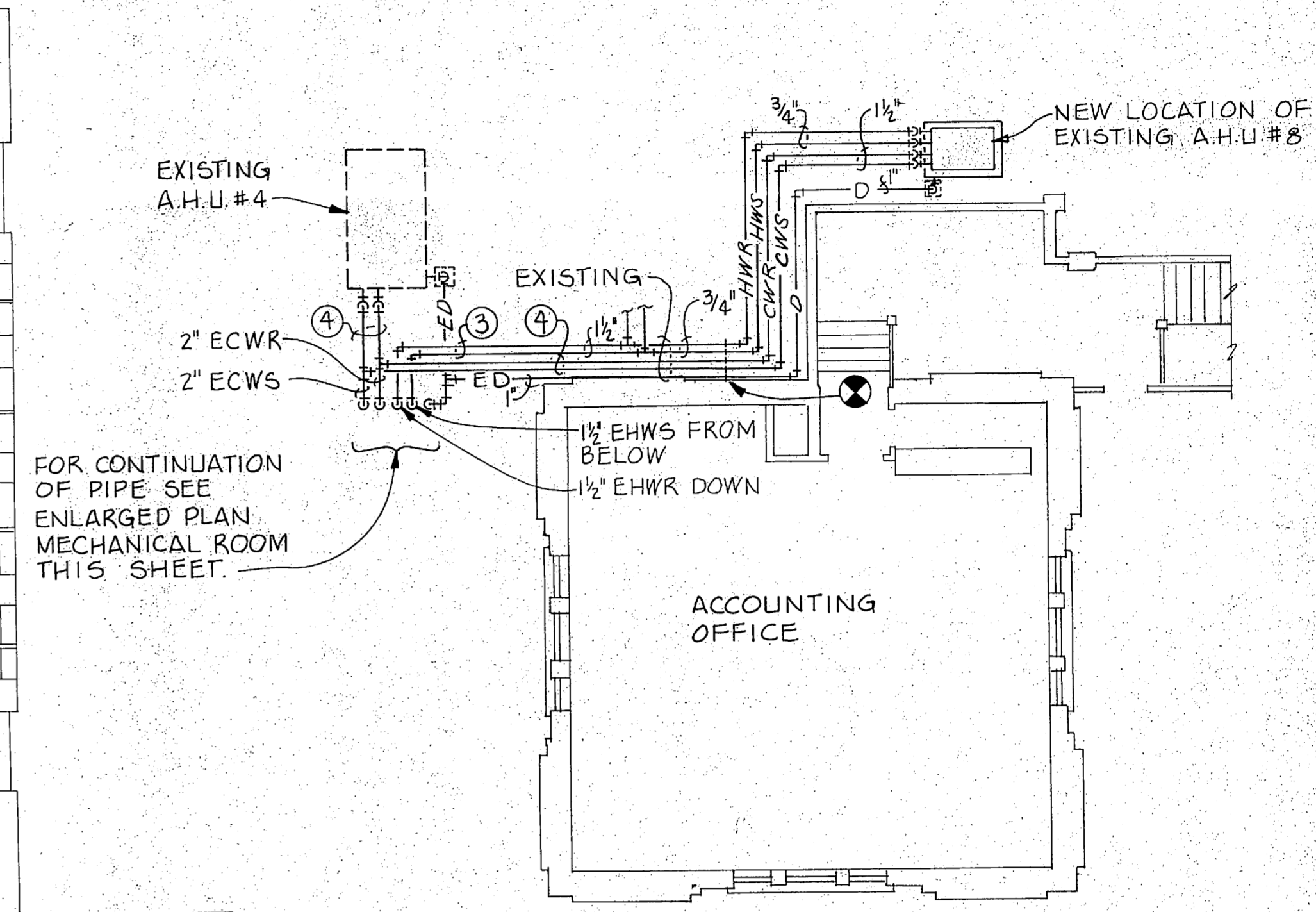
*CHW Piping
New Add*

RECORD DRAWING		M-3	
CHEATHAM & ASSOCIATES CONSULTING ENGINEERS WILMINGTON, NORTH CAROLINA		THE SMITH-SINNETT ASSOCIATES, P.A. 110 WIND CHIME CT. RALEIGH, NC 27615	
DES. JGW		DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND	
DR. LAB/JEM		MARINE CORPS BASE	
CHK. JHC		CAMP LEJEUNE, NORTH CAROLINA	
SUBMITTED BY: RJL		RENOVATE BUILDING 2615	
DESIGN DIR. JEM		PIPING FLOOR PLAN - AREA A NEW WORK	
APPROVED: PWD OR DIC		DATE: 7-20-87	SIZE: F
SATISFACTORY TO:		DATE:	CODE IDENT. NO. 80091
			NAVFAC DRAWING NO. 4160635
			CONSTR. CONTR. NO. NG2470-86-B-9517
			SCALE: NOTED SPEC. 05-86-9517 SHEET 55 OF 74

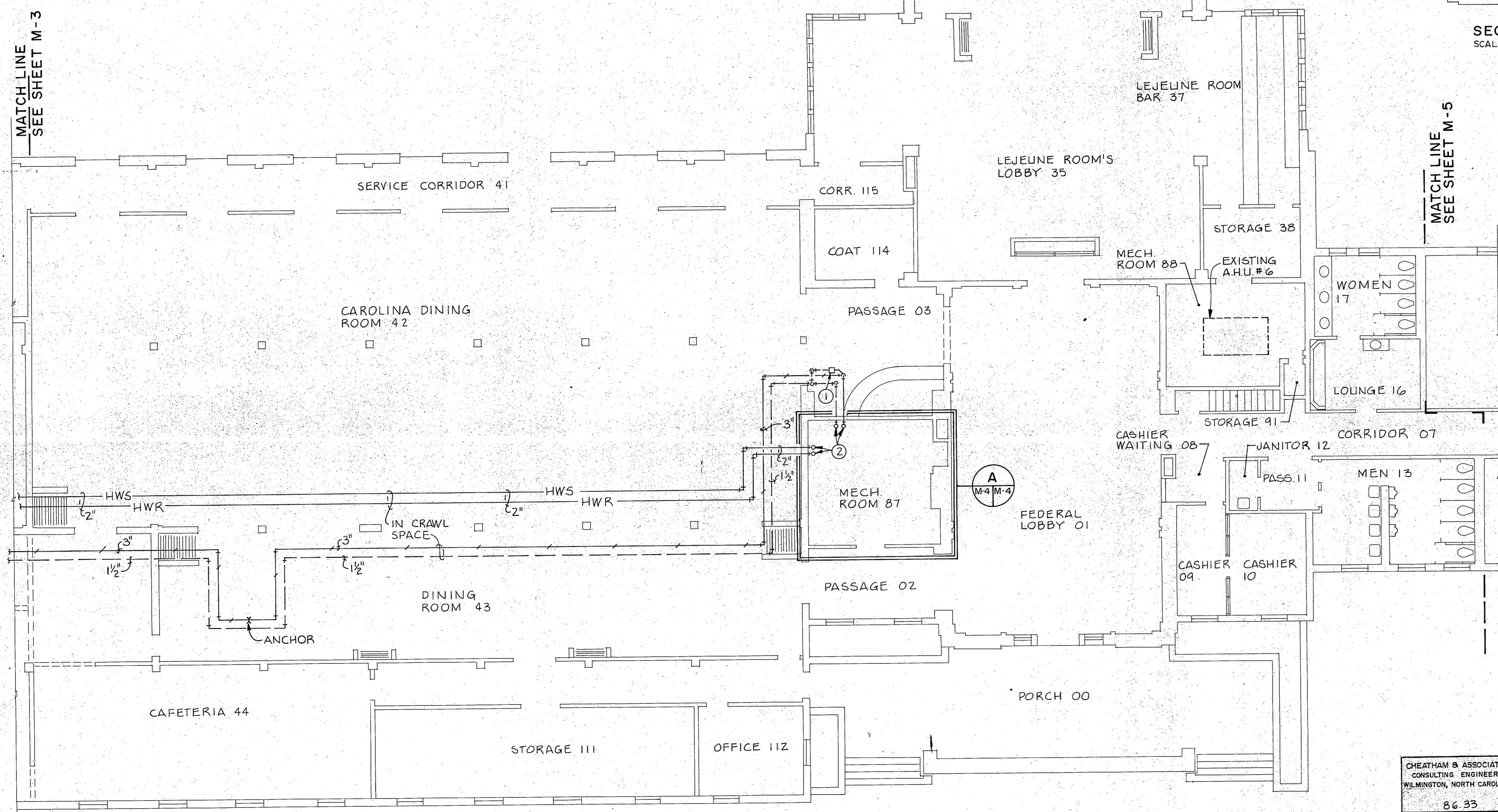
REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED
1	AS BUILT DRAWINGS	5/30/89	



A
ENLARGED PLAN MECHANICAL ROOM # 87
SCALE: 1/4"=1'-0"

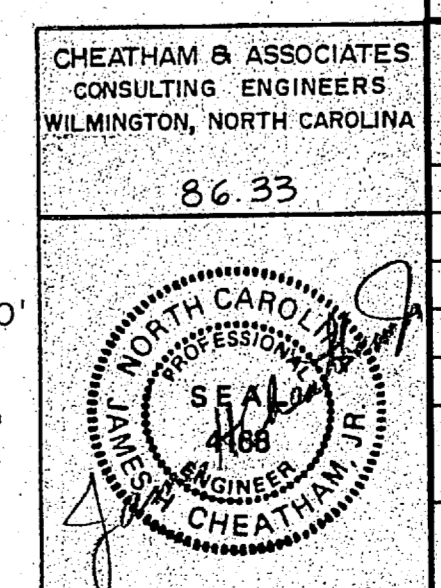
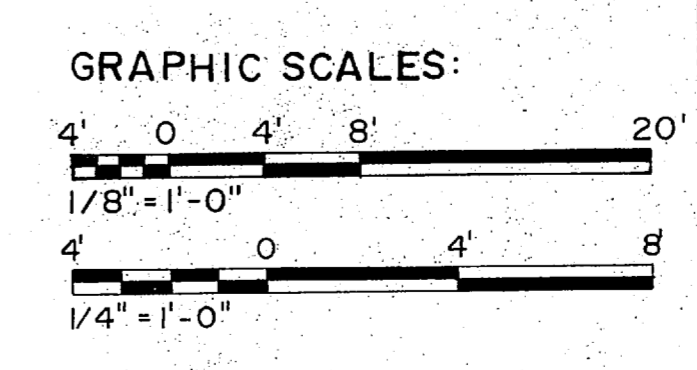


SECOND FLOOR PLAN
SCALE: 1/8"=1'-0"



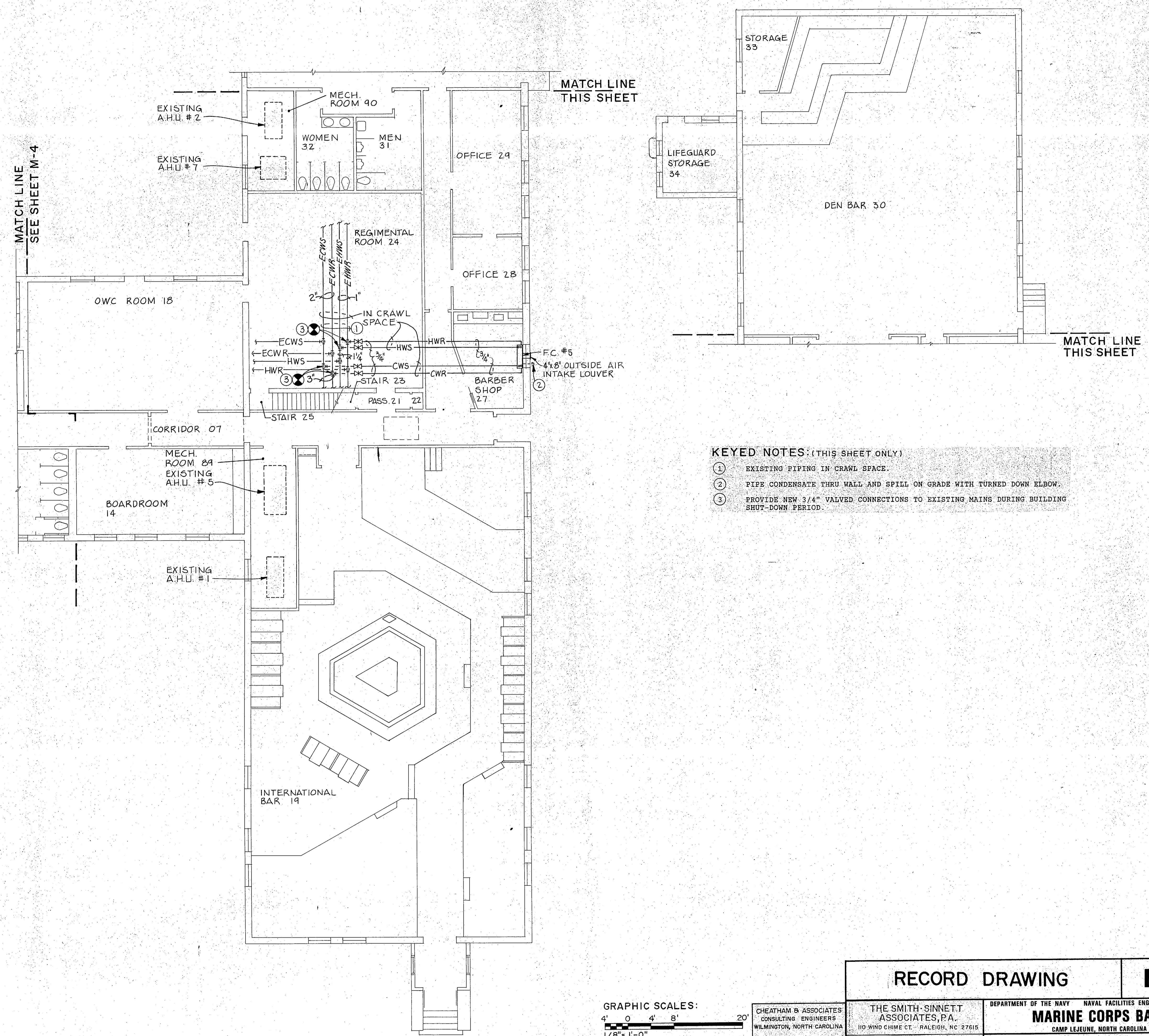
PIPING FLOOR PLAN-AREA B
SCALE: 1/8"=1'-0"

- KEYED NOTES: (THIS SHEET ONLY)**
- NEW END OF MAIN DRIP, 100 LBS/HR, 45 PSIG DROP. SEE DETAIL 'C', SHEET M-11.
 - SEE ENLARGED MECHANICAL ROOM PLAN, DETAIL 'A', THIS SHEET FOR CONTINUATION.
 - EXISTING HWS AND HWR TO REMAIN.
 - EXISTING CWS AND CWR TO REMAIN.
 - EXISTING AIR CONDITIONING CONDENSATE DRAIN DOWN FROM ATTIC SPACE TO REMAIN.
 - EXISTING 4" CWR TO AND FROM CRAWL SPACE TO REMAIN.
 - PROVIDE NEW STEAM TO WATER CONVERTOR, 98.5 GPM, 152.8° F. EMT, 180° F. LWT, 1341 LBS/HR, 45 PSIG STEAM TO SHELL. SEE CONVERTOR PIPING SCHEMATIC, DETAIL 'A', SHEET M-5.
 - PROVIDE NEW END SUCTION PUMP, 98.5 GPM AT 50' TDH, 63% EFF., 1750 RPM, 3 HP, 480 VOLT, THREE PHASE MOTOR.
 - NEW F & T TRAP, 3350 LBS/HR WITH 40 PSIG PRESSURE DROP. SEE CONVERTOR PIPING SCHEMATIC, DETAIL 'B', THIS SHEET.
 - EXISTING CHILLED WATER EXPANSION TANK TO REMAIN.
 - EXISTING HOT WATER EXPANSION TANK TO REMAIN.
 - EXISTING CHILLED WATER AIR SEPARATOR TO REMAIN.
 - PROVIDE NEW 3" AIR SEPARATOR WITH STRAINER, 1" GATE VALVE BLOWDOWN VALVE AND PIPE STAND. ANCHOR PIPE STAND TO FLOOR WITH LEAD ANCHOR SHIELDS.
 - EXISTING PRESSURE RELIEF VALVE TO REMAIN.
 - EXISTING PRESSURE REDUCING VALVE TO REMAIN.
 - EXISTING BACKFLOW PREVENTER TO REMAIN.
 - PROVIDE NEW TEMPERATURE RELIEF VALVE, 1700 MBH, SET AT 30 PSIG DISCHARGE PRESSURE.



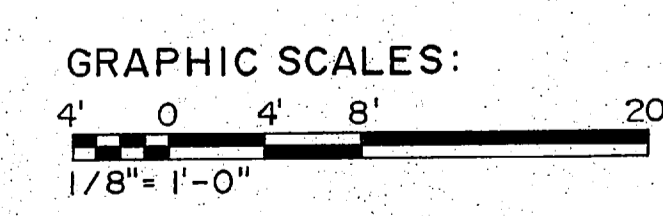
RECORD DRAWING		M-4	
CHEATHAM & ASSOCIATES CONSULTING ENGINEERS WILMINGTON, NORTH CAROLINA		THE SMITH-SINNETT ASSOCIATES, P.A. 110 WIND CHIME CT. RALEIGH, NC 27615	
DES. JGW DR. LAB/JEM CHK. JHC SUBMITTED BY: R.J.L. DESIGN DIR. [Signature] APPROVED: P.W.D. OR DICC [Signature] SATISFACTORY TO: [Signature]		DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA	
86.33		RENOVATE BUILDING 2615	
DATE: [Blank]		PIPING FLOOR PLAN AREA B NEW WORK	
DATE: [Blank]		NAVFAC DRAWING NO. 4160636	
DATE: [Blank]		CONSTR. CONTR. NO. N62470-86-B-9517	
DATE: [Blank]		SHEET 56 OF 74	

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED
1	AS BUILT DRAWINGS	5/30/89	



- KEYED NOTES: (THIS SHEET ONLY)**
- ① EXISTING PIPING IN CRAWL SPACE.
 - ② PIPE CONDENSATE THRU WALL AND SPILL ON GRADE WITH TURNED DOWN ELBOW.
 - ③ PROVIDE NEW 3/4" VALVED CONNECTIONS TO EXISTING MAINS DURING BUILDING SHUT-DOWN PERIOD.

PIPING FLOOR PLAN-AREA C
SCALE: 1/8" = 1'-0"



RECORD DRAWING		M-5	
CHEATHAM & ASSOCIATES CONSULTING ENGINEERS WILMINGTON, NORTH CAROLINA 86-33		DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA	
THE SMITH-SINNETT ASSOCIATES, P.A. 110 WIND CHIME CT. - RALEIGH, NC 27615		DES. JGW DR. LAB/JEM CHK. JHC SUBMITTED BY: R.J.L. DESIGN DIR.	
APPROVED: PWO OR OICC DATE: 7-20-87		RENOVATE BUILDING 2615 PIPING FLOOR PLAN-AREA C NEW WORK	
SATISFACTORY TO:		SIZE: F CODE IDENT. NO.: 80091	NAVFAC DRAWING NO.: 4160637 CONSTR. CONTR. NO. N62470-86-B-9517
SCALE: NOTED		SPEC. 05-86-9517	
		SHEET 57 OF 74	

