

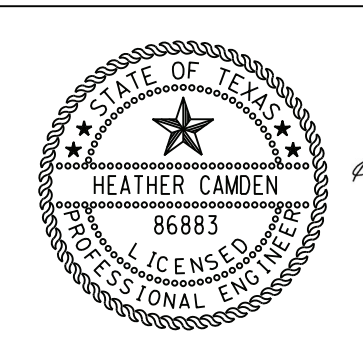
- DRAWING NOTES:
- 1 REMOVE AHU AND OAHU. ALL PIPING, DUCT, ELECTRICAL AND CONTROLS SERVING THE DEMOLISHED AHU SHALL BE REMOVED BACK TO OUTSIDE OF THE ROOM. PATCH THE WALL TO MEET THE EXISTING FIRE RATING.
 - 2 TEMPORARY BYPASS AHU.
 - 3 TEMPORARY BYPASS UNIT SHALL BE CONNECTED TO THE RISERS AS NOTED ON THE ROOF PLAN. FLEX MAY BE USED. REFER TO M500 FOR ISOMETRIC OF DUCT CONNECTIONS. REMOVE ANY DUCTWORK IN THE CHASE NECESSARY TO MAKE CONNECTIONS.
 - 4 ONCE THE DUCTWORK AT THE ROOF HAS BEEN CONNECTED TO THE RISERS AND THE FLEXIBLE DUCT HAS CONNECTED THE TEMPORARY BYPASS AHU TO THE RISERS, THE TEMPORARY AHUS SHALL BE ENERGIZED AND THE AHU SHALL BE DE-ENERGIZED. THE BYPASS AHUS ARE SIZED FOR BOTH AHUS TO SERVICE ONE EXISTING AHU. AHU-L-8 SHALL BE REPLACED FIRST AND AHU-L-7 SHALL BE DONE AFTER. ALL ISOLATION VALVES SHALL BE SHUT TO THE AHU AND THE AHU SHALL BE REPLACED AS DETAILED ON M300. THE WALL THE TWO UNITS SHARE MUST REMAIN IN PLACE DURING THE FIRST AHU REPLACEMENT.
 - 5 REMOVE EXISTING VSD. REPLACE WITH NEW VSD. REFER TO RENO FOR DETAIL.
 - 6 PROVIDE A TAP INTO THE EXHAUST DUCT AS NOTED FOR VENTILATION DURING CUTTING OF THE EXISTING UNITS. PROVIDE A MANUAL BALANCING DAMPER (LOW LEAK) WITH FLEXIBLE DUCT TO ALLOW FOR MOVEMENT TO WHERE THE CUTTING IS TAKING PLACE. COORDINATE ANY NEEDED SHUT-DOWNS WITH THE OWNER. 12" ✓
 - 7 REMOVE THE EXISTING CONCRETE PAD AND REPOUR. REFER TO STRUCTURAL DRAWINGS FOR FURTHER INFO.

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		03	02-16	FOR BID



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 E&C Engineers & Consultants Inc.
 Texas Firm Registration No: F000066

Date: 3/2/16
 Drawn By: DV
 Checked By: HEC

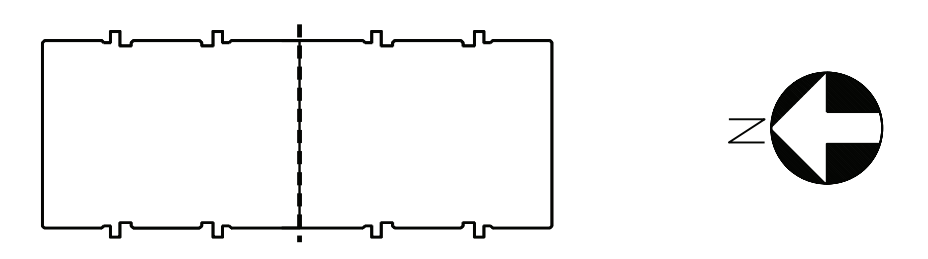
UTHC Project No.: 730022
 E & C Project No.: 3302.00
 File Name:



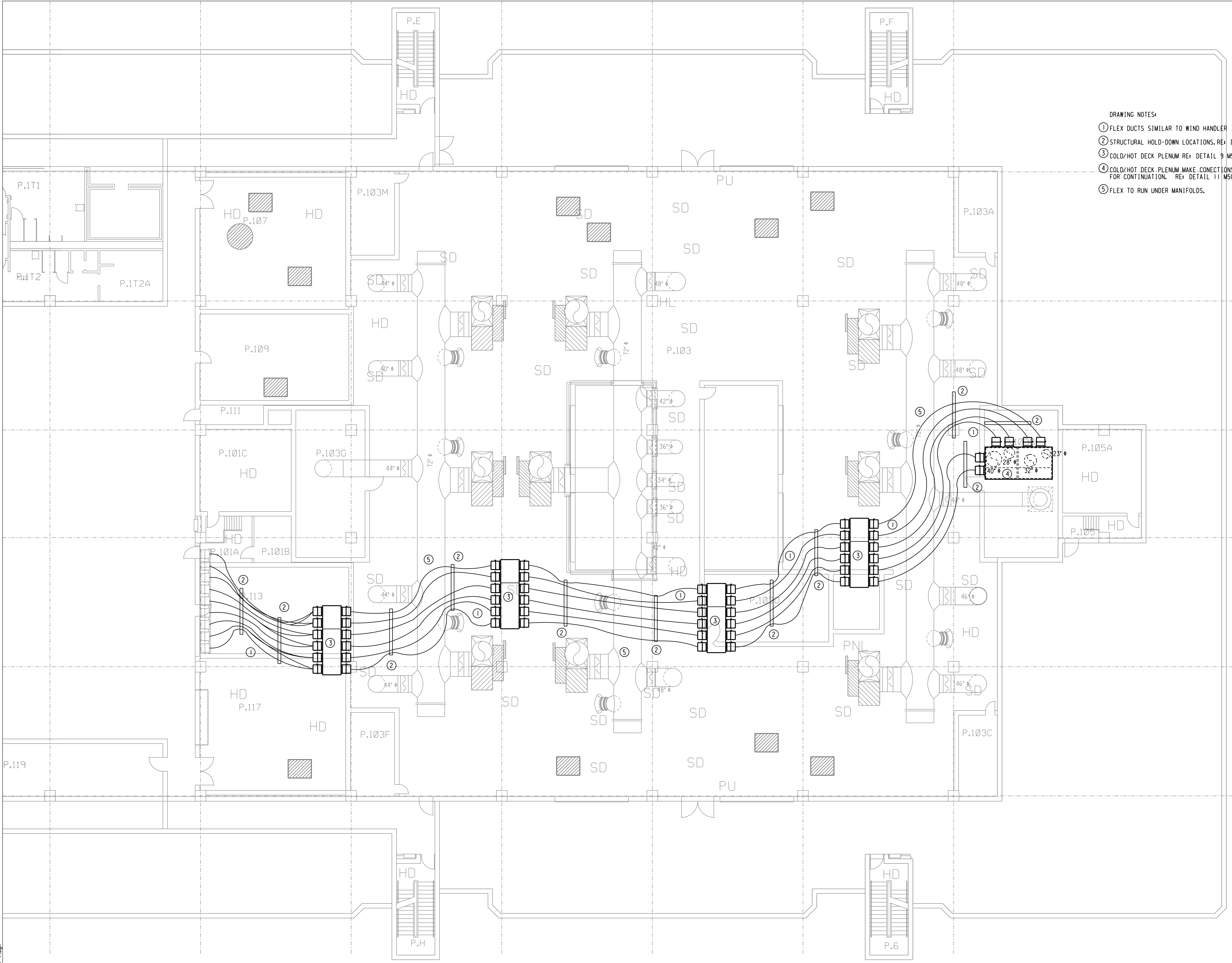
**MEDICAL SCHOOL BUILDING
 AHU L-7 & 8 REPLACEMENT**

DRAWING TITLE
**MECHANICAL PH
 DEMOLITION/
 BYPASS DRAWING**

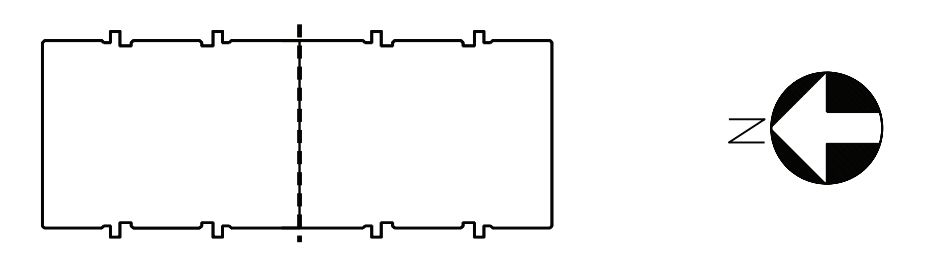
DRAWING NO.
M108



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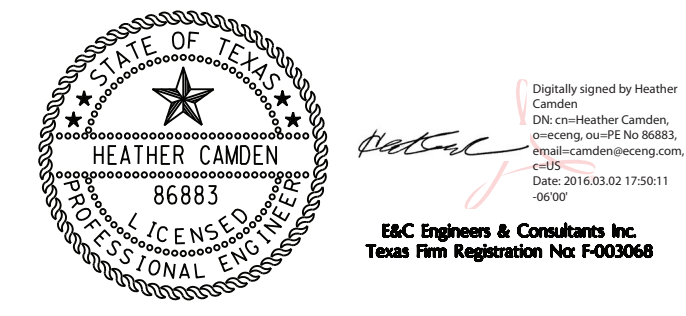
- DRAWING NOTES:
- ① FLEX DUCTS SIMILAR TO WIND HANDLER INSULATED TU FLEX. FLEX TO BE 20" φ.
 - ② STRUCTURAL HOLD-DOWN LOCATIONS. RE: DETAIL 12 M501
 - ③ COLD/HOT DECK PLENUM RE: DETAIL 9 M501
 - ④ COLD/HOT DECK PLENUM MAKE CONNECTIONS TO COLD & HOT DECK AS NOTED. TAP DOWN TO BELOW RE:M108 FOR CONTINUATION. RE: DETAIL 11 M501
 - ⑤ FLEX TO RUN UNDER MANIFOLDS.



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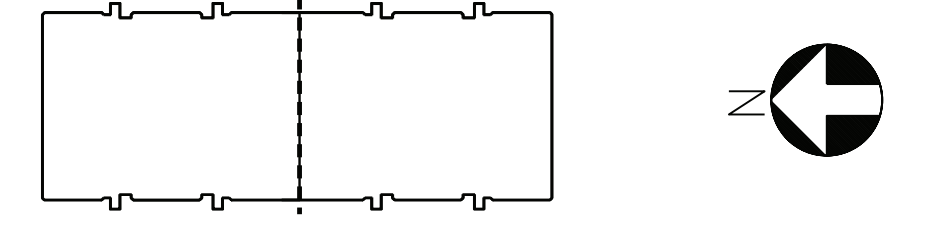
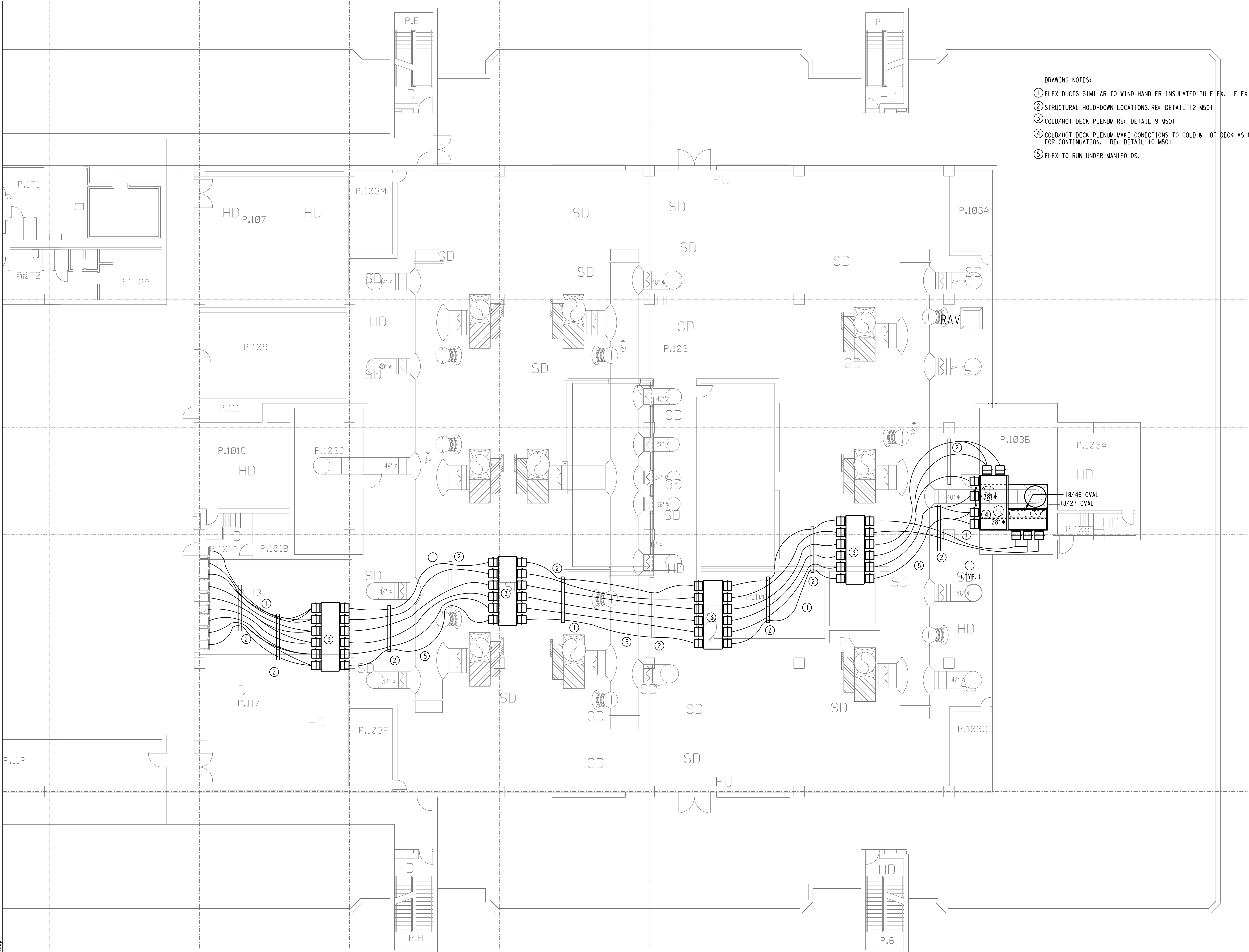
**MEDICAL SCHOOL BUILDING
 AHU L-7 & 8 REPLACEMENT**

DRAWING TITLE
**MECHANICAL ROOF
 DEMOLITION/
 BYPASS DRAWING**

DRAWING NO.
M109.7

DRAWING NOTES:

- ① FLEX DUCTS SIMILAR TO WIND HANDLER INSULATED TU FLEX. FLEX TO BE 20" φ.
- ② STRUCTURAL HOLD-DOWN LOCATIONS. RE: DETAIL 12 M501
- ③ COLD/HOT DECK PLENUM RE: DETAIL 9 M501
- ④ COLD/HOT DECK PLENUM MAKE CONNECTIONS TO COLD & HOT DECK AS NOTED. TAP DOWN TO BELOW RE:M108 FOR CONTINUATION. RE: DETAIL 10 M501
- ⑤ FLEX TO RUN UNDER MANIFOLDS.

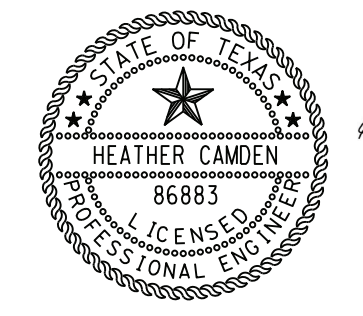


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 Texas Firm Registration No. F000066

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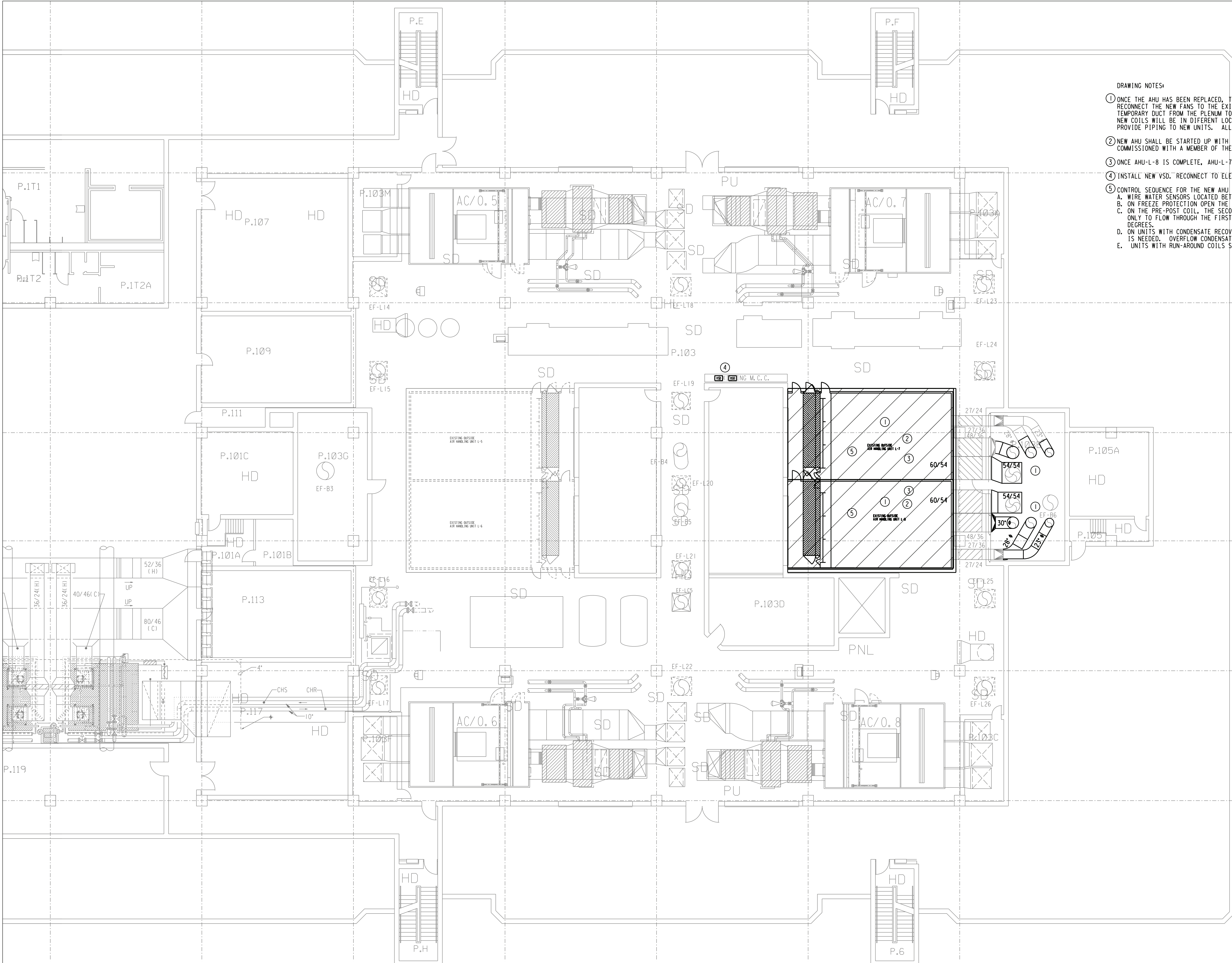
UTHC Project No. 730022
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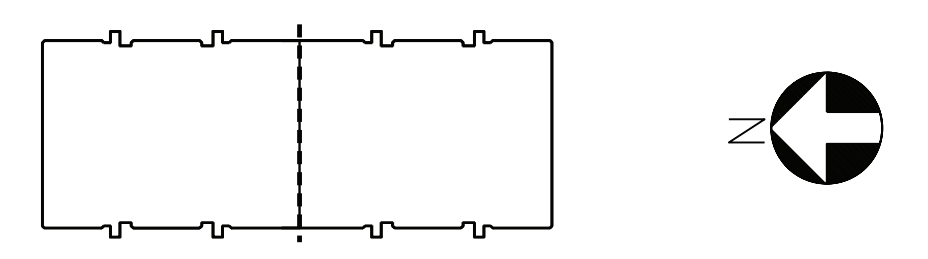
**MEDICAL SCHOOL BUILDING
 AHU L-7 & 8 REPLACEMENT**

DRAWING TITLE
**MECHANICAL ROOF
 DEMOLITION/
 BYPASS DRAWING**

DRAWING NO.
M109.8



- DRAWING NOTES:
- ONCE THE AHU HAS BEEN REPLACED, TIE BACK INTO THE CHILLED WATER, STEAM AND DUCTWORK. RECONNECT THE NEW FANS TO THE EXISTING VFD. DE-ENERGIZE THE TEMPORARY UNIT AND REMOVE THE TEMPORARY DUCT FROM THE PLENUM TO THE RISERS AND CAP TO MATCH EXISTING. NEW COILS WILL BE IN DIFFERENT LOCATIONS. ROUTE PIPE THROUGH STRUCTURAL OPENINGS AS NECESSARY TO PROVIDE PIPING TO NEW UNITS. ALL CONTROL VALVING SHALL BE PIPED IN THE UNITS AS NOTED.
 - NEW AHU SHALL BE STARTED UP WITH A REPRESENTATIVE FROM THE FACTORY AND COMMISSIONED WITH A MEMBER OF THE UTHSC-H STAFF IN ATTENDANCE.
 - ONCE AHU-L-8 IS COMPLETE, AHU-L-7 MAY BEGIN.
 - INSTALL NEW VSD. RECONNECT TO ELEC AS NEEDED.
 - CONTROL SEQUENCE FOR THE NEW AHU SHALL MATCH THE EXISTING AHU CONTROLS WITH THE FOLLOWING EXCEPTIONS:
 - WIRE WATER SENSORS LOCATED BETWEEN THE UNIT AND THE PAD BACK TO THE BAS. PROVIDE ALARM.
 - ON FREEZE PROTECTION OPEN THE CHILLED WATER COIL VALVE 100%.
 - ON THE PRE-POST COIL, THE SECOND COIL ISOLATION VALVE SHALL CLOSE AND ALLOW THE CHILLED WATER ONLY TO FLOW THROUGH THE FIRST COIL WHEN THE TEMPERATURE OF THE OUTSIDE AIR IS UNDER 60 DEGREES.
 - ON UNITS WITH CONDENSATE RECOVERY, THE PUMP SHALL OPERATE WHEN THE TANK IS FULL AND COOLING IS NEEDED. OVERFLOW CONDENSATE SHALL BE ROUTED TO DRAIN.
 - UNITS WITH RUN-AROUND COILS SHALL HAVE DAMPER SEQUENCE AS NOTED ON THE SCHEDULE SHEET M400.

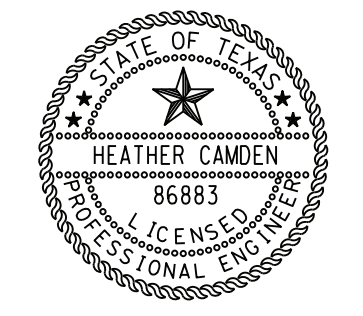


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HEATHER CAMDEN
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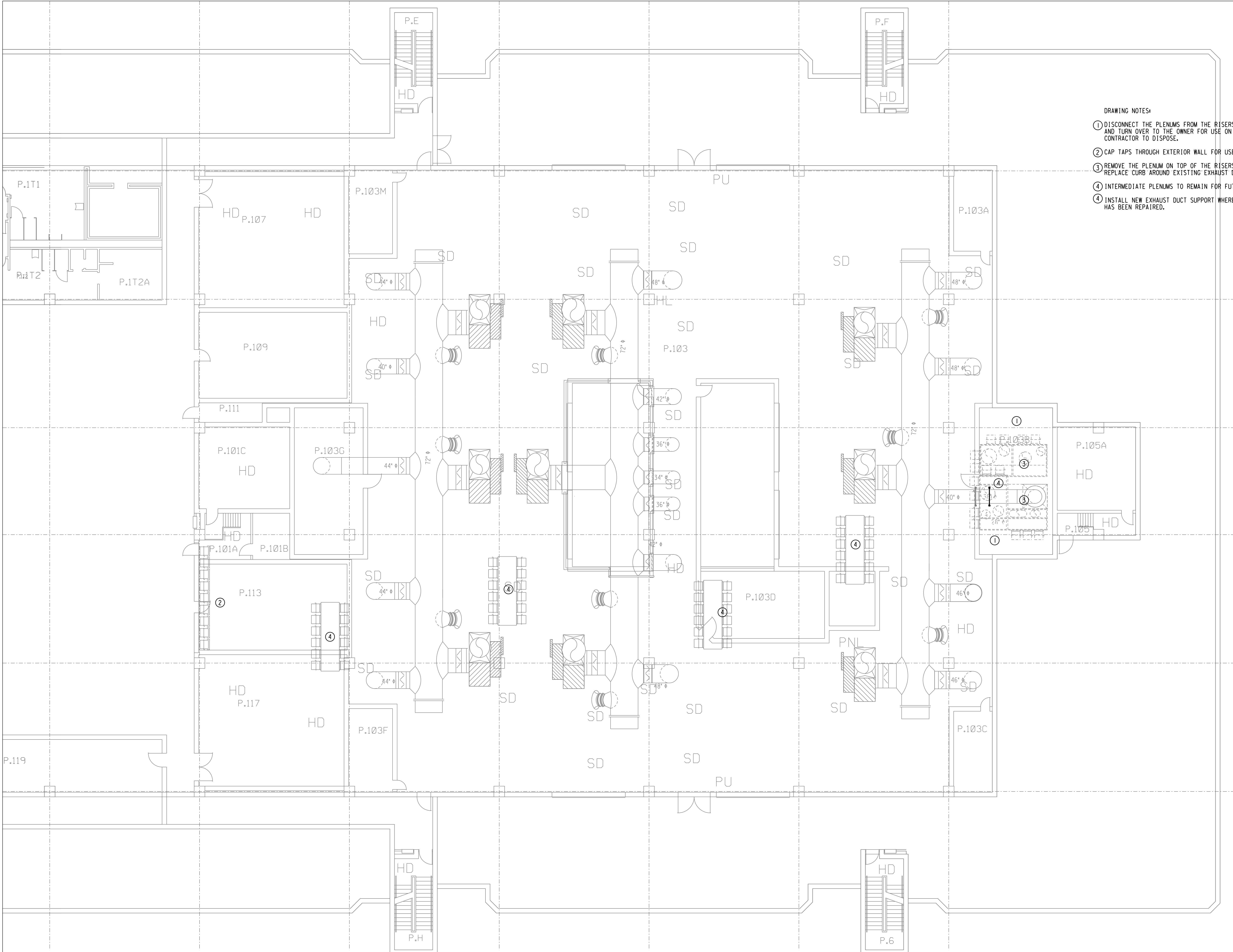
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 File Name:



**MEDICAL SCHOOL BUILDING
 AHU L-7 & 8 REPLACEMENT**

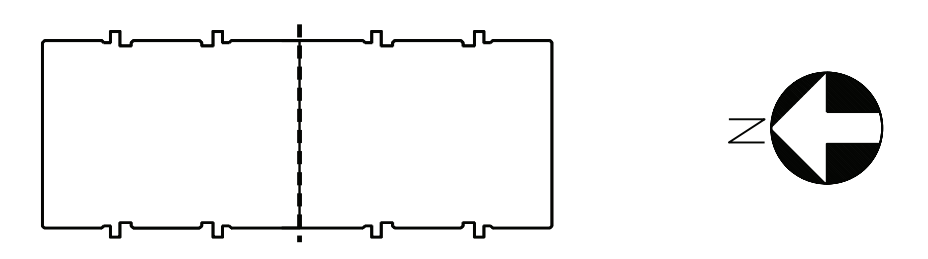
**MECHANICAL PH
 RENOVATION
 DRAWING**

DRAWING NO.
M208



DRAWING NOTES:

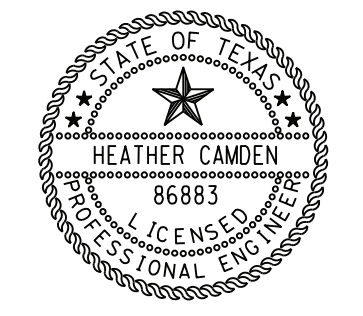
- ① DISCONNECT THE PLENUMS FROM THE RISERS. CAP THE RISERS AIRTIGHT. REMOVE FLEX DUCT FROM THE ROOF AND TURN OVER TO THE OWNER FOR USE ON FUTURE PHASES. IF THE OWNER FINDS THE DUCT UNUSABLE, CONTRACTOR TO DISPOSE.
- ② CAP TAPS THROUGH EXTERIOR WALL FOR USE ON FUTURE PHASES.
- ③ REMOVE THE PLENUM ON TOP OF THE RISERS ON THE ROOF. PATCH THE ROOF TO MATCH EXISTING. REPLACE CURB AROUND EXISTING EXHAUST DUCT PENETRATION.
- ④ INTERMEDIATE PLENUMS TO REMAIN FOR FUTURE USE. CAP ALL INLETS AND OUTLETS.
- ④ INSTALL NEW EXHAUST DUCT SUPPORT WHERE PREVIOUSLY REMOVED ONCE THE ROOF HAS BEEN REPAIRED.



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 E&C Engineers & Consultants Inc.
 Texas Firm Registration No. F000066

Date: 3/2/16
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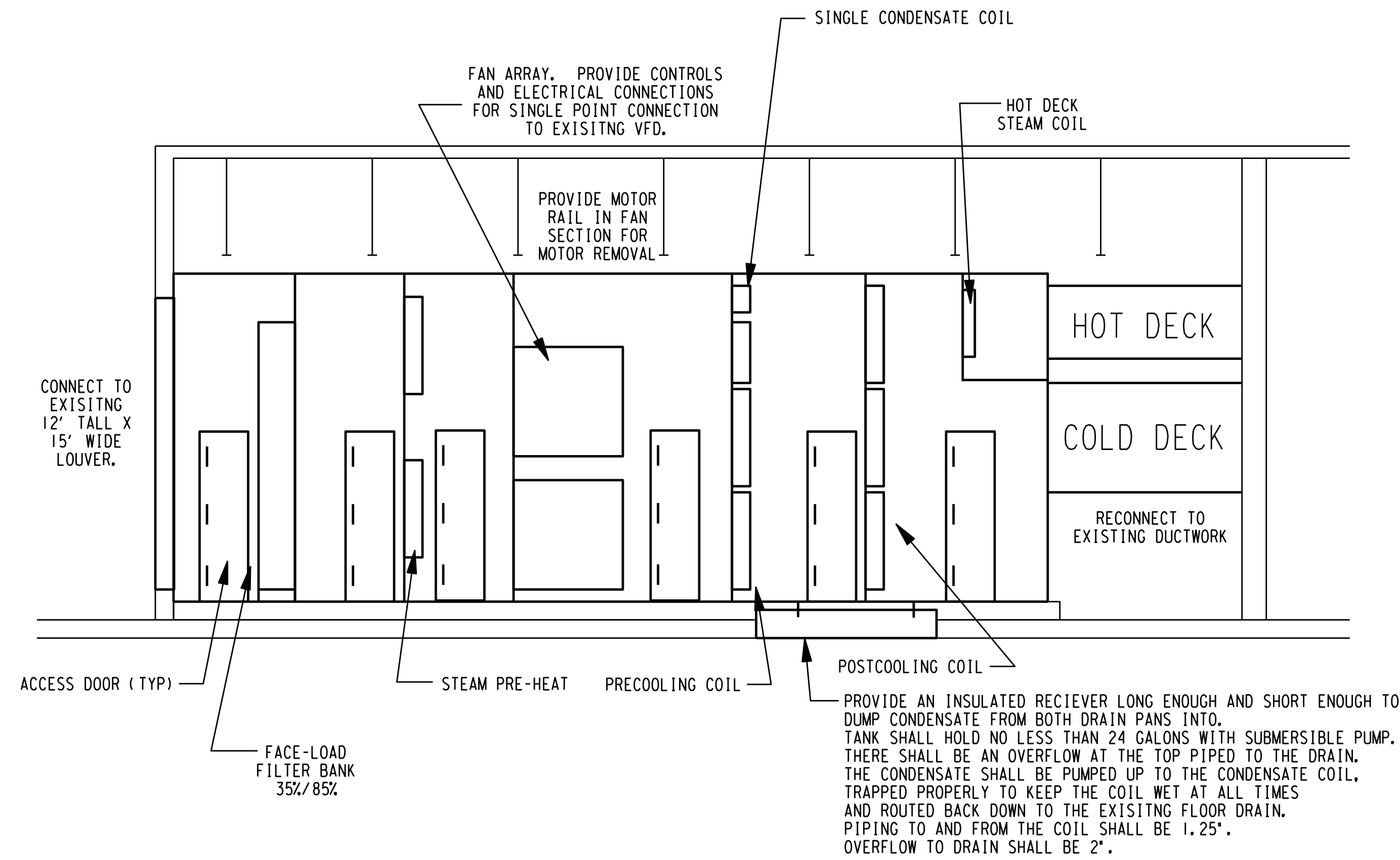
UTHC Project No.: 730022
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 File Name:



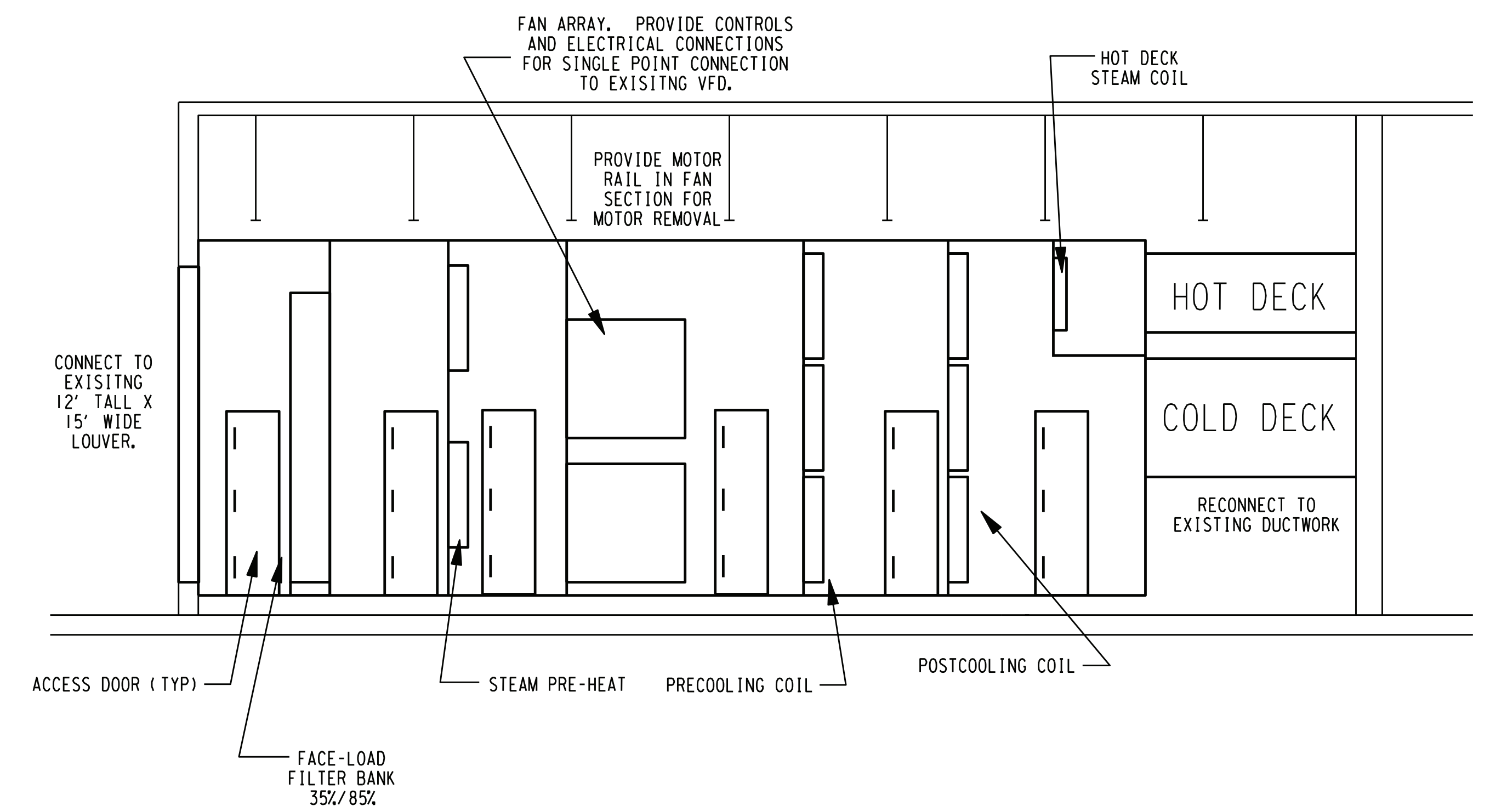
**MEDICAL SCHOOL BUILDING
 AHU L-7 & 8 REPLACEMENT**

DRAWING TITLE
**MECHANICAL ROOF
 RENOVATION
 DRAWING**

DRAWING NO.
M209



03 REPLACEMENT UNIT DETAIL W/
CONDENSATE RECOVERY
NOT TO SCALE

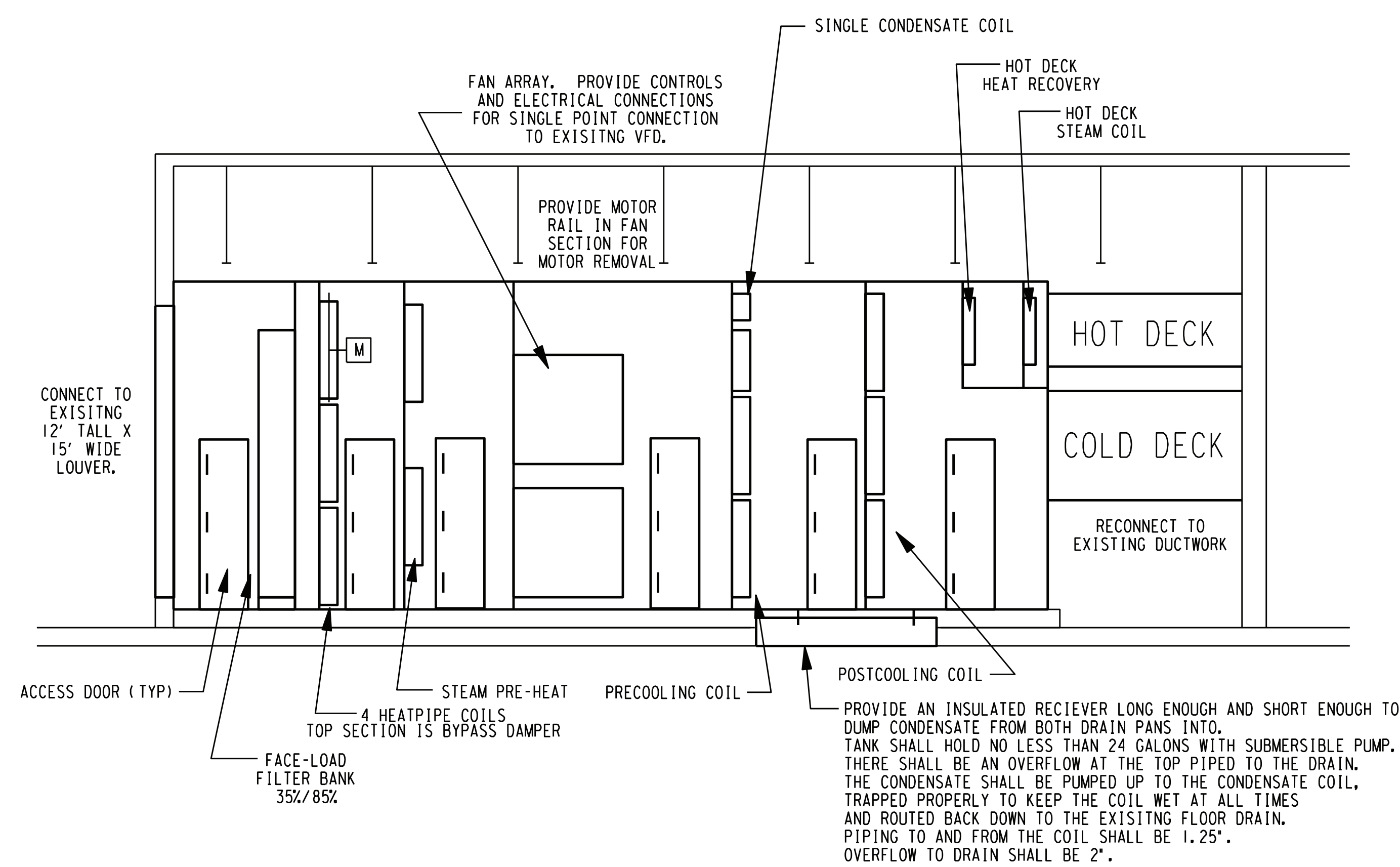


01 REPLACEMENT UNIT DETAIL
NOT TO SCALE

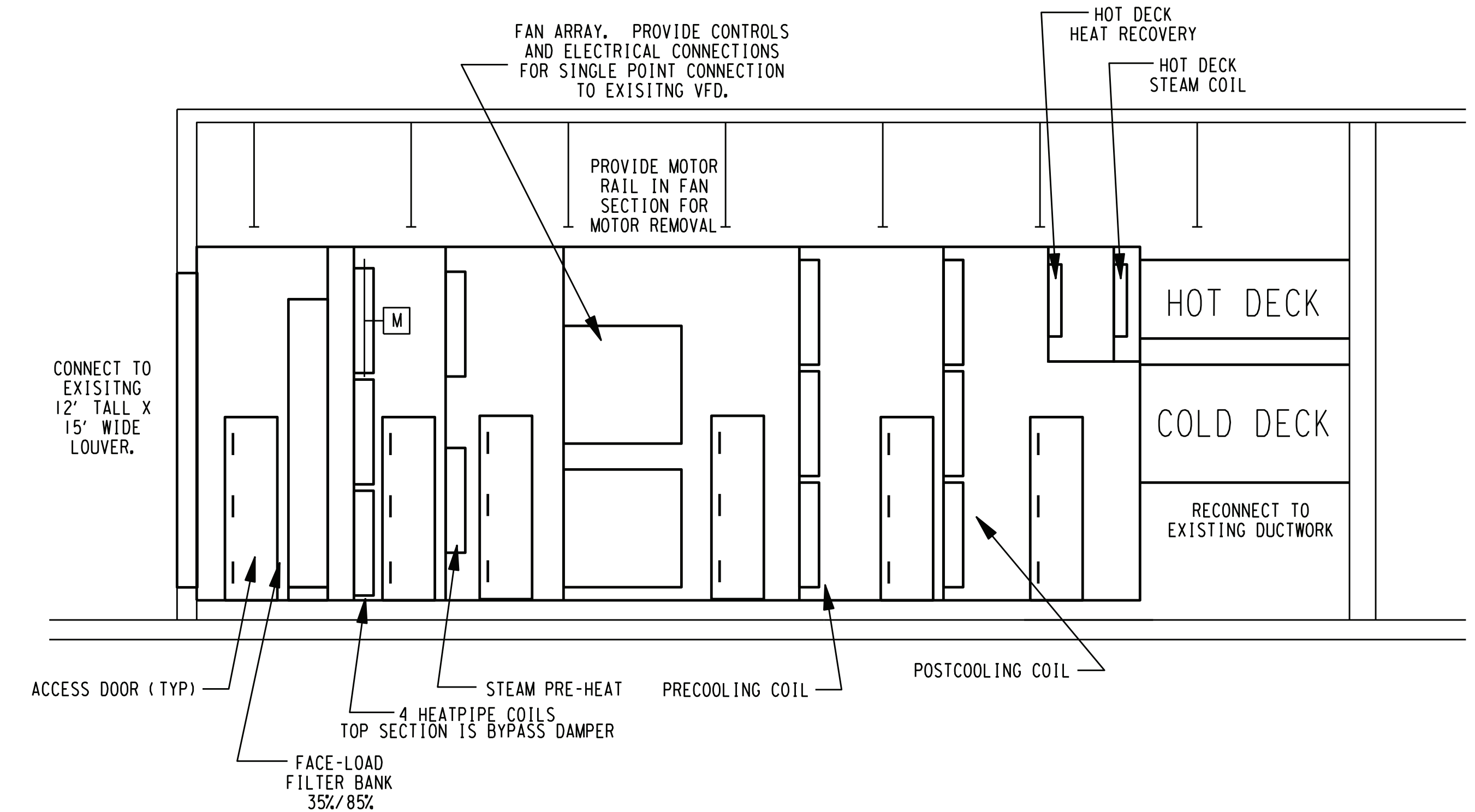
ALL UNITS MAXIMUM DIMENSIONS ARE:
14' 0" TALL
36' 0" LONG
18' 6" WIDE

DUCT TAPS:
BOTTOM OF COLD DECK AT 5' 3" AFF.
TOP OF COLD DECK AT 9' 9" AFF.
BOTTOM OF HOT DECK AT 10' 9" AFF.
TOP OF HOT DECK AT 13' 9" AFF.

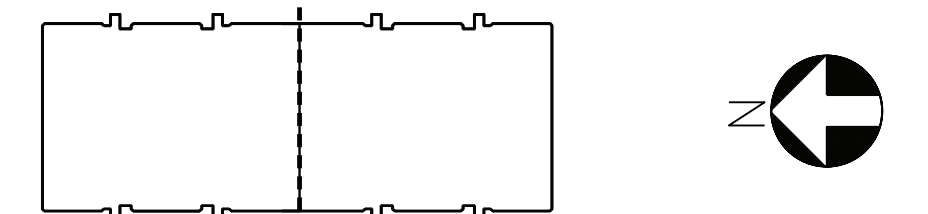
UNIT WILL SIT ON A 6" HOUSEKEEPING PAD.
COIL PIPING IS HOUSED INSIDE THE UNIT.
THERE SHALL BE ONE PIPING INLET TO THE AHU
ON EACH SIDE SERVED FROM THE TOP OF THE UNIT.
THE MANIFOLD SHALL DROP AND COIL
ISOLATION AND BALANCING VALVES SHALL BE
ACCESSED INSIDE THE UNIT.
COILS SHALL BE INTERNALLY DEMOUNTABLE TO BE
REMOVED FROM INSIDE THE UNIT FORWARD AND
OUT THE CLOSEST ACCESS DOOR.



04 REPLACEMENT UNIT DETAIL W/
HEATPIPE AND CONDENSATE RECOVERY
NOT TO SCALE



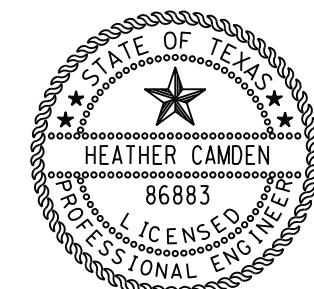
02 REPLACEMENT UNIT DETAIL W/ HEATPIPE
NOT TO SCALE



Issue For	Description
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Date 3/2/16
Drawn By DV
Checked By HEC

UTHC Project No. 730022
E & C Project No. 3302.00
File Name



**MEDICAL SCHOOL BUILDING
AHU L-7 & 8 REPLACEMENT**

DRAWING TITLE
**MECHANICAL
AHU DETAILS**

DRAWING NO.
M300

AIR HANDLING UNIT SCHEDULE - REPLACEMENT

UNIT INFORMATION		
UNIT NO.	AHU-L7	AHU-L8
OPERATION TYPE	NORMAL	NORMAL
LOCATION	SOUTH PENTHOUSE (BLUE CHASE)	SOUTH PENTHOUSE (BLUE CHASE)
MANUFACTURER (BASIS OF DESIGN)	TEMPROL	TEMPROL
TYPE	WELDED FRAME OR BUILT ON SITE	WELDED FRAME OR BUILT ON SITE
CONFIGURATION	FANWALL DUAL DUCT	FANWALL DUAL DUCT
SERVICE	BLUE CHASE EAST	BLUE CHASE WEST
SUPPLY FAN DESIGN INFORMATION		
DESIGN SET FAN AIR QUANTITY	79,800	79,800
MAX OA	79,800	79,800
TOTAL STATIC PRESSURE (IN.W.G.)	5.50	5.50
BASIS OF DESIGN	TEMPROL FAN ARRAY 6@ PF11-27	TEMPROL FAN ARRAY 6@ PF11-27
FAN DESCRIPTION	6 @ 27" MAXIMUM DIAMETER	6 @ 27" MAXIMUM DIAMETER
FAN TYPE	PLUG FAN ARRAY (PF)	PLUG FAN ARRAY (PF)
FAN RPM	1696	1696
BRKE HP	16.9 MAX/FAN	16.9 MAX/FAN
NOMINAL MOTOR HP	20 MAXIMUM / FAN	20 MAXIMUM / FAN
NOMINAL MOTOR RPM	1750 MAX	1750 MAX
VOLTAGE/PHASE	480/3	480/3
EMERGENCY POWER REQUIRED (YES/NO)	NO	NO
VFD REQUIRED	YES - NEW 125HP	YES - NEW 125HP
DRIVE ARRANGEMENT TYPE	DIRECT	DIRECT
COOLING COIL DESIGN INFORMATION		
COIL POSITION	PRE COOLING	PRE COOLING
COIL DESCRIPTION	6@5WC-4-48X84X4-8CU	6@5WC-4-48X84X4-8CU
CASE MATERIAL	16 GA. 304 S.S.	16 GA. 304 S.S.
QUANTITY OF COILS	3LH/3RH	3LH/3RH
COIL AIRFLOW	79800	79800
MAX FACE VELOCITY	475.0	475.0
MINIMUM NUMBER ROWS	4	4
MINIMUM NUMBER OF FINS PER INCH	8	8
MAXIMUM AIR PRESSURE DROP	0.42	0.42
ENTERING AIR TEMP (DB) (°F)	98.0	98.0
ENTERING AIR TEMP (WB) (°F)	80.0	80.0
LEAVING AIR TEMP (DB) (°F)	67.5	67.5
LEAVING AIR TEMP (WB) (°F)	65.3	65.3
ENTERING WATER TEMP (°F)	50.1	50.1
LEAVING WATER TEMP (°F)	62.0	62.0
MINIMUM COIL LATENT HEAT (MHB)	1,858,928.0	1,858,928.0
MINIMUM COIL SENSIBLE HEAT (MBH)	2,504,646.0	2,504,646.0
MINIMUM COIL TOTAL HEAT (MBH)	4,363,574.0	4,363,574.0
MAX WATER FLOW (GPM)	731.2	731.2
CHILLED WATER TEMP DIFFERENCE (°F)	11.9	11.9
MAX WATER PRESSURE DROP (FT OF WATER)	10.11	10.11
TUBE MATERIAL / FIN MATERIAL	CU / CU	CU / CU
UV LIGHTS (YES/NO)	YES	YES
COOLING COIL DESIGN INFORMATION		
COIL POSITION	POST COOLING	POST COOLING
COIL DESCRIPTION	6@5WC-4-48X84X4-8CU	6@5WC-4-48X84X4-8CU
CASE MATERIAL	16 GA. 304 S.S.	16 GA. 304 S.S.
QUANTITY OF COILS	3LH/3RH	3LH/3RH
COIL AIRFLOW	79800	79800
MAX FACE VELOCITY	475.0	475.0
MINIMUM NUMBER ROWS	4	4
MINIMUM NUMBER OF FINS PER INCH	8	8
MAXIMUM AIR PRESSURE DROP	0.42	0.42
ENTERING AIR TEMP (DB) (°F)	67.5	67.5
ENTERING AIR TEMP (WB) (°F)	65.3	65.3
LEAVING AIR TEMP (DB) (°F)	52.7	52.7
LEAVING AIR TEMP (WB) (°F)	52.7	52.7
ENTERING WATER TEMP (°F)	42.0	42.0
LEAVING WATER TEMP (°F)	50.1	50.1
MINIMUM COIL LATENT HEAT (MHB)	1,687,739.0	1,687,739.0
MINIMUM COIL SENSIBLE HEAT (MBH)	1,285,264.0	1,285,264.0
MINIMUM COIL TOTAL HEAT (MBH)	2,973,003.0	2,973,003.0
MAX WATER FLOW (GPM)	731.2	731.2
CHILLED WATER TEMP DIFFERENCE (°F)	8.1	8.1
MAX WATER PRESSURE DROP (FT OF WATER)	10.36	10.36
TUBE MATERIAL / FIN MATERIAL	CU / CU	CU / CU
UV LIGHTS (YES/NO)	YES	YES
HEATING COIL DESIGN INFORMATION		
COIL POSITION	PREHEAT	PREHEAT
COIL DESCRIPTION	4@9NS-48X78X1-4CU	4@9NS-48X78X1-4CU
CASE MATERIAL	16 GA. 304 S.S.	16 GA. 304 S.S.
QUANTITY OF COILS	4	4
COIL AIRFLOW IN FULL HEATING	79,800	79,800
MAX FACE VELOCITY AT FULL HEATING	767	767
MINIMUM NUMBER OF ROWS	1	1
MINIMUM NUMBER OF FINS PER INCH	4	4
MAXIMUM AIR PRESSURE DROP AT FULL HEAT	0.18	0.18
ENTERING AIR TEMP (DB) (°F)	19	19
LEAVING AIR TEMP (DB) (°F)	52.5	52.5
STEAM PRESSURE	10#	10#
CONDENSATE RATE	347#/#HR	347#/#HR
MINIMUM COIL SENSIBLE HEAT (MBH)	3,314,717.0	3,314,717.0
TUBE MATERIAL / FIN MATERIAL	CU/AL	CU/AL
UV LIGHTS (YES/NO)	NO	NO
HEATING COIL DESIGN INFORMATION		
COIL POSITION	REHEAT	REHEAT
COIL DESCRIPTION	2@9NS-48X84X1-6CU	2@9NS-48X84X1-6CU
CASE MATERIAL	16 GA. 304 S.S.	16 GA. 304 S.S.
QUANTITY OF COILS	2	2
COIL AIRFLOW IN FULL HEATING	40,000	40,000
MAX FACE VELOCITY AT FULL COOLING	714	714
MINIMUM NUMBER OF ROWS	1	1
MINIMUM NUMBER OF FINS PER INCH	6	6
MAXIMUM AIR PRESSURE DROP AT FULL HEAT	0.2	0.2
ENTERING AIR TEMP (DB) (°F)	52.5	52.5
LEAVING AIR TEMP (DB) (°F)	96.1	96.1
STEAM PRESSURE	10#	10#
CONDENSATE RATE	2052#/#HR	2052#/#HR
MINIMUM COIL SENSIBLE HEAT (MBH)	1,955,674.0	1,955,674.0
TUBE MATERIAL / FIN MATERIAL	CU/CU	CU/CU
UV LIGHTS (YES/NO)	NO	NO
FILTER SECTION		
2" - 30# PLEATED PRE-FILTER	YES	YES
2" - 85# FINAL FILTER	YES	YES
NOTES		
UNIT SHALL BE PROVIDED WITH FACTORY INSTALLED JUNCTION BOXES AUXILIARIES, RECEPTACLES, SERVICING LIGHTS, ETC. RE: ELECTRICAL DRAWINGS FOR FURTHER INFORMATION.		
FACTORY INSTALLED JUNCTION BOXES ARE FOR CONNECTION BY DIVISION 26. DIVISION 26 IS NOT TO PENETRATE AIR HANDLING UNIT HOUSING. WIRING FROM JUNCTION BOX TO LOAD INSIDE AIR HANDLING UNIT SHALL BE BY THE MANUFACTURER.		
ALL POWER WIRING BETWEEN VARIABLE FREQUENCY DRIVES, MOTOR CONTROLLERS AND MOTORS SHALL BE COMPLETED BY THE AIR HANDLING UNIT MANUFACTURER.		
INFORMATION SHOWN IS PER UNIT.		

ENERGY RECOVERY COILS SCHEDULE - ALTERNATE # 1																																
LOCATION	DESIGN CFM	AIR HANDLING UNIT COIL										HOT DECK COIL										REMARKS										
		ENT. AIR		LVG. AIR		TOTAL MBH	GPM (1)	"H" x "L" IN.	NO. OF COILS	MIN. F.A. SO. FT.	MAX. FACE VEL. FPM	NO. OF ROWS	FIN SERIES	MAX. P.D.		ENT. AIR		LVG. AIR		TOTAL MBH	GPM (1)		"H" x "L" IN.	NO. OF COILS	MIN. F.A. SO. FT.	MAX. FACE VEL. FPM	NO. OF ROWS	FIN SERIES	MAX. P.D.			
		DB °F	WB °F	DB °F	WB °F									AIR IN.	---	DB °F	WB °F	DB °F	WB °F										AIR IN.	---		
AHU-L-7	53,200	98.0	80	88.5	77.5	671	---	84X48	4	112	475	6	8	0.57	---	REHEAT	40,000	52.7	52.7	68.2	--	671	---	84X60	2	60.0	571	6	8	0.78	---	THE HEATPIPE WRAP-AROUND SYSTEM SHALL BE VERIFIED BY THE MANUFACTURER TO NOT REQUIRE A PUMP. THE COIL PRESSURE DROP MUST NOT EXCEED THE NOTED TOTAL.
AHU-L-8	53,200	98.0	80	88.5	77.5	671	---	84X48	4	112	475	6	8	0.57	---	REHEAT	40,000	52.7	52.7	68.2	--	671	---	84X60	2	60.0	571	6	8	0.78	---	

ALTERNATE #1 - WRAP-AROUND HEAT PIPE COIL UNIT, SHALL REQUIRE A DIFFERENT FAN DUE TO THE INCREASED STATIC PRESSURE THROUGH THE COILS. THE COOLING COILS SHALL NOT CHANGE, SO THAT IF THERE IS A FAILURE IN THE HEAT-PIPE, THE COILS SHALL BE ABLE TO ACHIEVE THE FULL CAPACITY OF THE SYSTEM REQUIREMENTS.

THE FANS FOR THE UNITS WITH WRAP-AROUND COILS SHALL BE:
 60 PF10-27
 1782 RPM
 15.9 MAX BHP/FAN
 20 MAX HP/FAN
 1750 HP MOTOR
 480/3 PHASE
 NO EMERGENCY POWER
 NEW 125HP VFD
 DIRECT-DRIVE

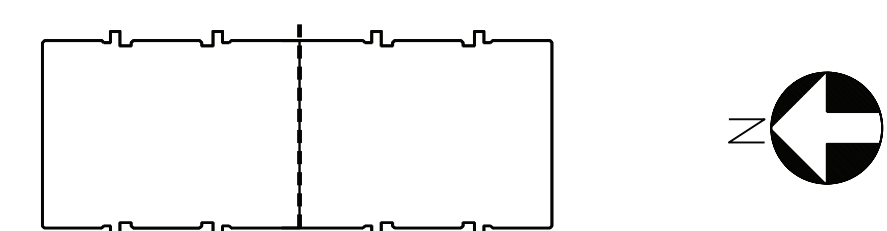
THE BYPASS DAMPER SHALL BE FULL OPEN IN FULL COOLING MODE. THE BYPASS DAMPER SHALL CLOSE AS THE UNIT REQUIRES REHEAT. THE DAMPER SHALL BE SEQUENCED TO FULLY MODULATE TO MAINTAIN STATIC PRESSURE ACROSS THE DAMPER OF 0.57". THIS SHALL ENSURE THE MAXIMUM AMOUNT OF AIR WILL TRAVEL THROUGH THE HEAT PIPES WITHOUT INCREASING THE STATIC PRESSURE OF THE UNIT ABOVE THE ABILITIES OF THE FAN.

COIL SCHEDULE - ALTERNATE #2 - CONDENSATE

THE TOP EXTERIOR PRE-COOLING COIL IN THE CONDENSATE RECOVERY UNITS SHALL BE REPLACED BY THE FOLLOWING TWO COILS		
UNIT NO.	AHU-L-7	AHU-L-8
COOLING COIL DESIGN INFORMATION		
COIL POSITION	COOLING - CONDENSATE	
COIL DESCRIPTION	1@5WC-8-6X84X6-8CU	
CASE MATERIAL	16 GA. 304 S.S.	
QUANTITY OF COILS	4	
COIL AIRFLOW	3LH/3RH	
MAX FACE VELOCITY	1370	
MINIMUM NUMBER ROWS	8	
MINIMUM NUMBER OF FINS PER INCH	8	
MAXIMUM AIR PRESSURE DROP	0.42	
ENTERING AIR TEMP (DB) (°F)	98.0	
ENTERING AIR TEMP (WB) (°F)	80.0	
LEAVING AIR TEMP (DB) (°F)	67.4	
LEAVING AIR TEMP (WB) (°F)	66.7	
ENTERING WATER TEMP (°F)	55.0	
LEAVING WATER TEMP (°F)	72.1	
MINIMUM COIL LATENT HEAT (MHB)	25,521.0	
MINIMUM COIL SENSIBLE HEAT (MBH)	43,076.0	
MINIMUM COIL TOTAL HEAT (MBH)	68,597.0	
MAX WATER FLOW (GPM)	8.0	
CHILLED WATER TEMP DIFFERENCE (°F)	17.1	
MAX WATER PRESSURE DROP (FT OF WATER)	6.2	
TUBE MATERIAL / FIN MATERIAL	CU / CU	
UV LIGHTS (YES/NO)	YES	
COOLING COIL DESIGN INFORMATION		
COIL POSITION	COOLING	
COIL DESCRIPTION	1@5WC-4-42X84X4-8CU	
CASE MATERIAL	16 GA. 304 S.S.	
QUANTITY OF COILS	3LH/3RH	
COIL AIRFLOW	11,930	
MAX FACE VELOCITY	487.0	
MINIMUM NUMBER ROWS	4	
MINIMUM NUMBER OF FINS PER INCH	8	
MAXIMUM AIR PRESSURE DROP	0.42	
ENTERING AIR TEMP (DB) (°F)	98.0	
ENTERING AIR TEMP (WB) (°F)	80.0	
LEAVING AIR TEMP (DB) (°F)	67.8	
LEAVING AIR TEMP (WB) (°F)	65.5	
ENTERING WATER TEMP (°F)	50.1	
LEAVING WATER TEMP (°F)	60.7	
MINIMUM COIL LATENT HEAT (MHB)	273,027.0	
MINIMUM COIL SENSIBLE HEAT (MBH)	370,848.0	
MINIMUM COIL TOTAL HEAT (MBH)	643,875.0	
MAX WATER FLOW (GPM)	131.8	954.9
CHILLED WATER TEMP DIFFERENCE (°F)	10.6	15.0
MAX WATER PRESSURE DROP (FT OF WATER)	10.1	20.90
TUBE MATERIAL / FIN MATERIAL	CU / CU	CU / CU
UV LIGHTS (YES/NO)	YES	YES

PUMP SCHEDULE - ALTERNATE #2 - CONDENSATE

UNIT NO.	LOCATION	SERVICE	TYPE	GPM	FT. HEAD H ₂ O	SHUT OFF HEAD FT. H ₂ O	DESIGN PRESSURE PSI	MOTOR					REMARKS
								BHP	HP	RPM	VOLTS @ 60 HZ	PH	
CP-L7	CONDENSATE RECEIVER	CONDENSATE	SUBMERSIBLE	8.5	20.0	22.0	150	4.0	1/6	3450	120	I	SIMILAR TO FLINT & WALLING ECP0625
CP-L8	CONDENSATE RECEIVER	CONDENSATE	SUBMERSIBLE	8.5	20.0	22.0	150	4.0	1/6	3450	120	I	SIMILAR TO FLINT & WALLING ECP0625



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ISSUE FOR	Date	Description
As Issued	03-02-16	FOR BID

E & C
ENGINEERS & CONSULTANTS, INC.
 1010 LAMAR, SUITE 650
 HOUSTON, TEXAS 77002
 TEL 713/580-8800
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 Heather Chamberlain
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 Date: 2016.03.02 09:58:33 -0500
 E&C Engineers & Consultants Inc.
 Texas Firm Registration No: F00066

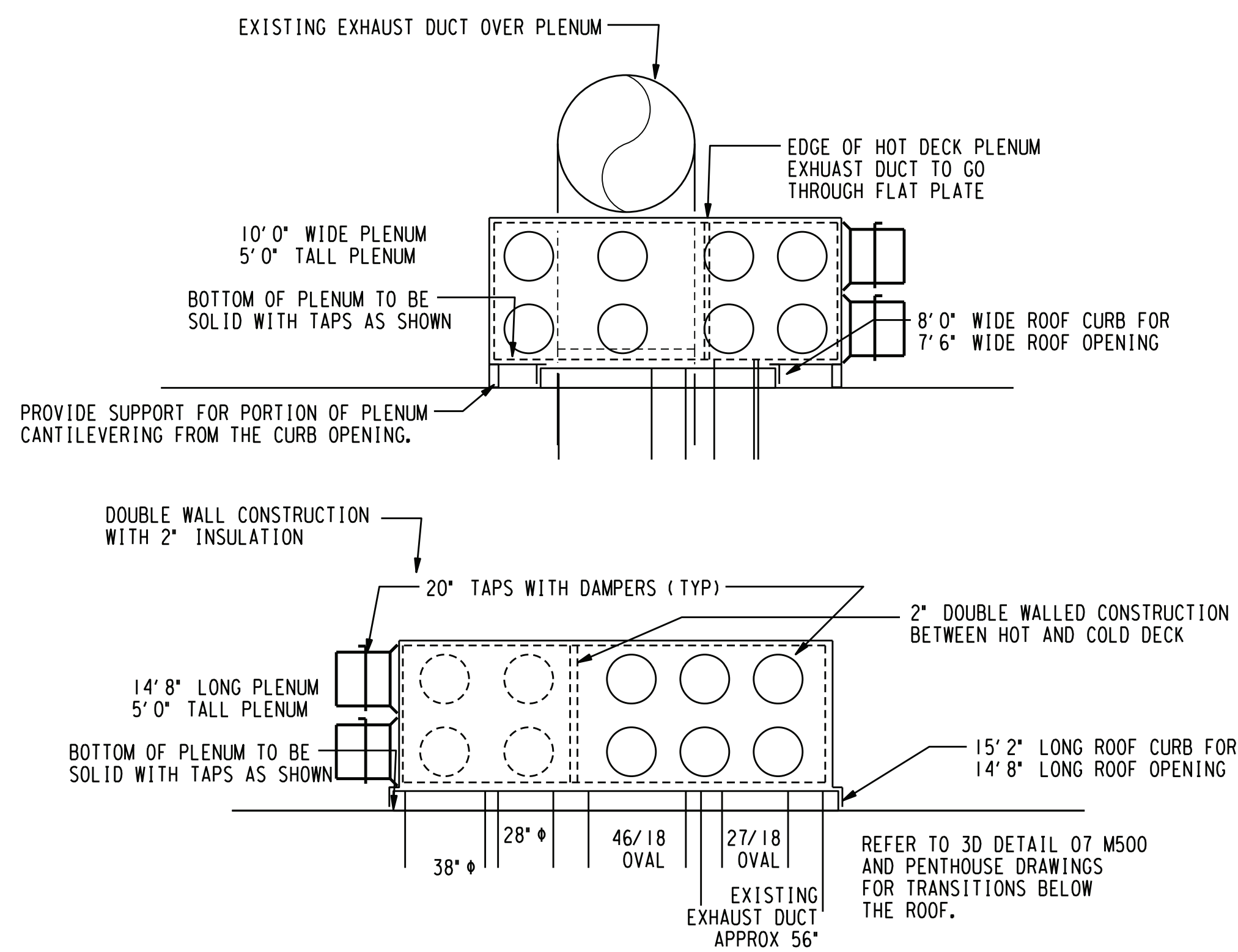
Date: 3/2/16
 Drawn By: DV
 Checked By: HEC

UTSC Project No.: 730022
 E & C Project No.: 3302.00
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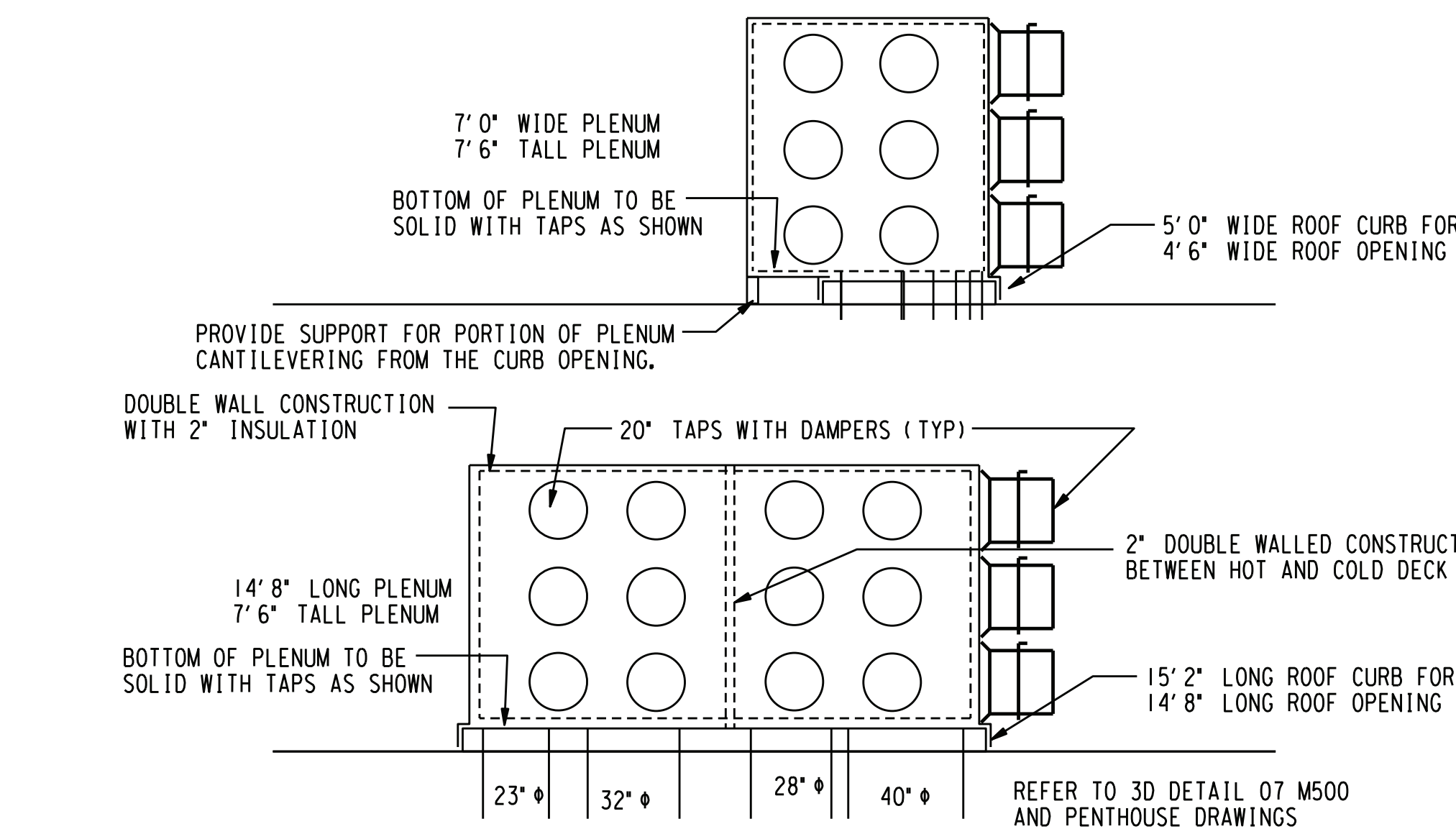
**MEDICAL SCHOOL BUILDING
 AHU L-7 & 8 REPLACEMENT**

DRAWING TITLE
MECHANICAL SCHEDULES

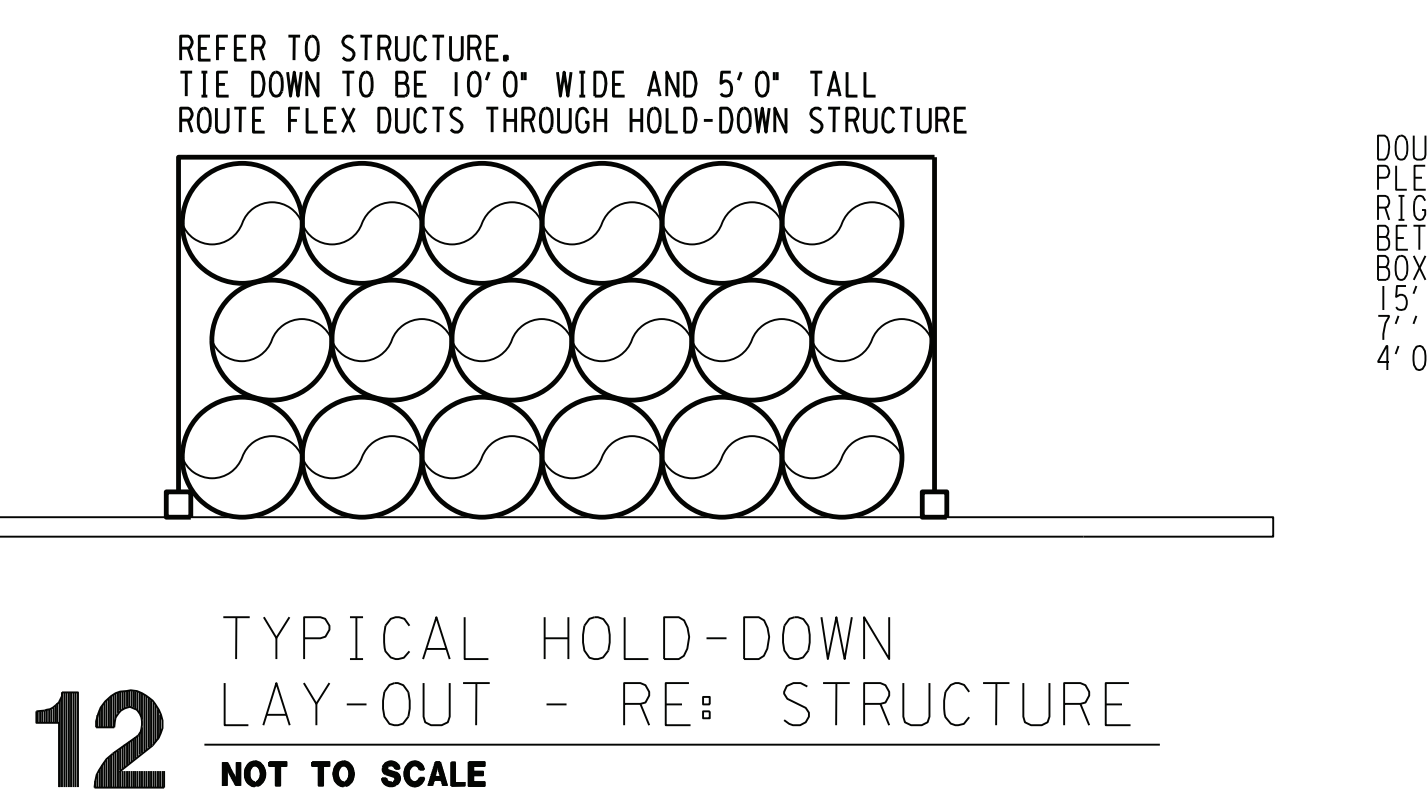
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M400



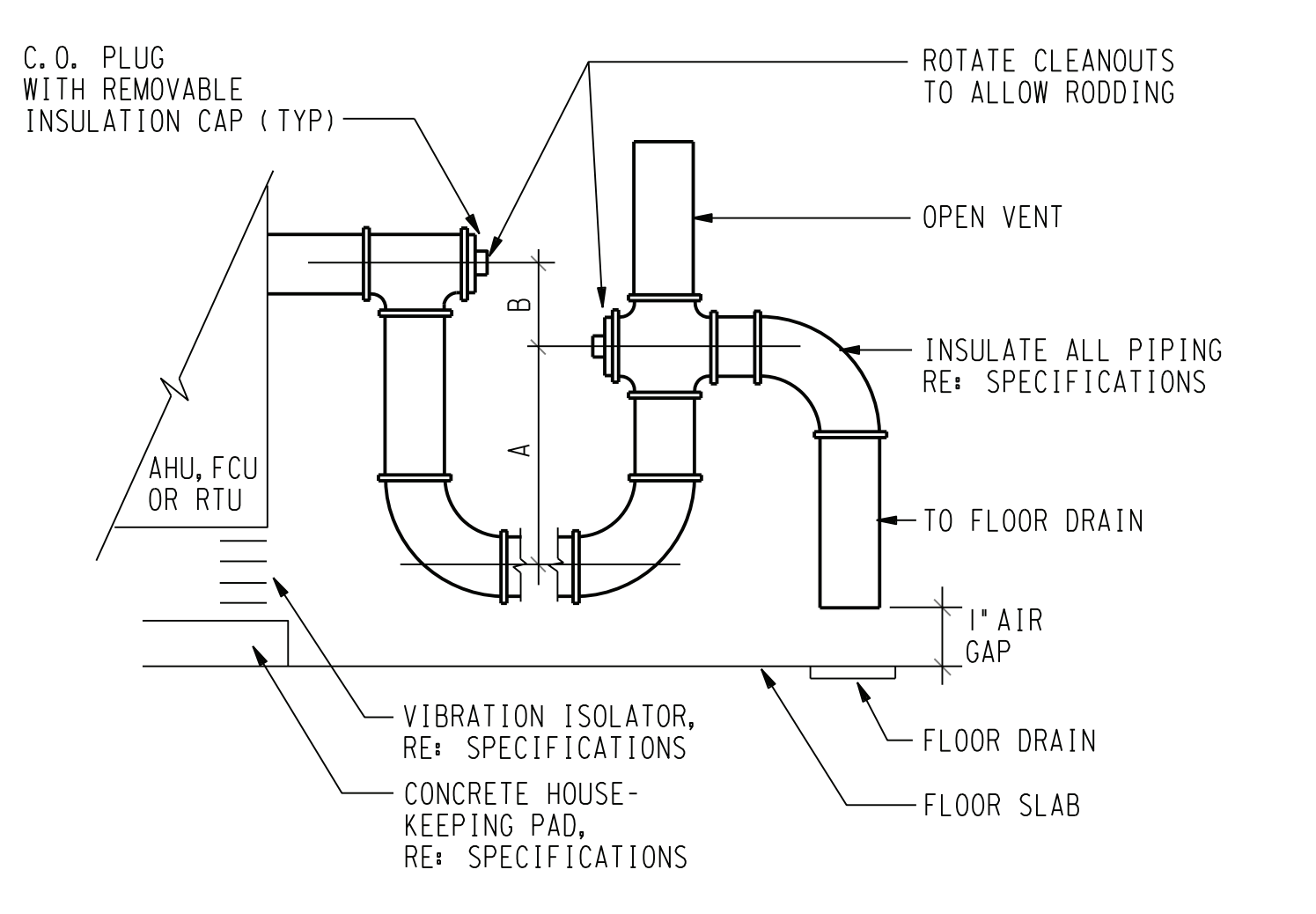
12 AHU-L8 RISER PLENUM
NOT TO SCALE



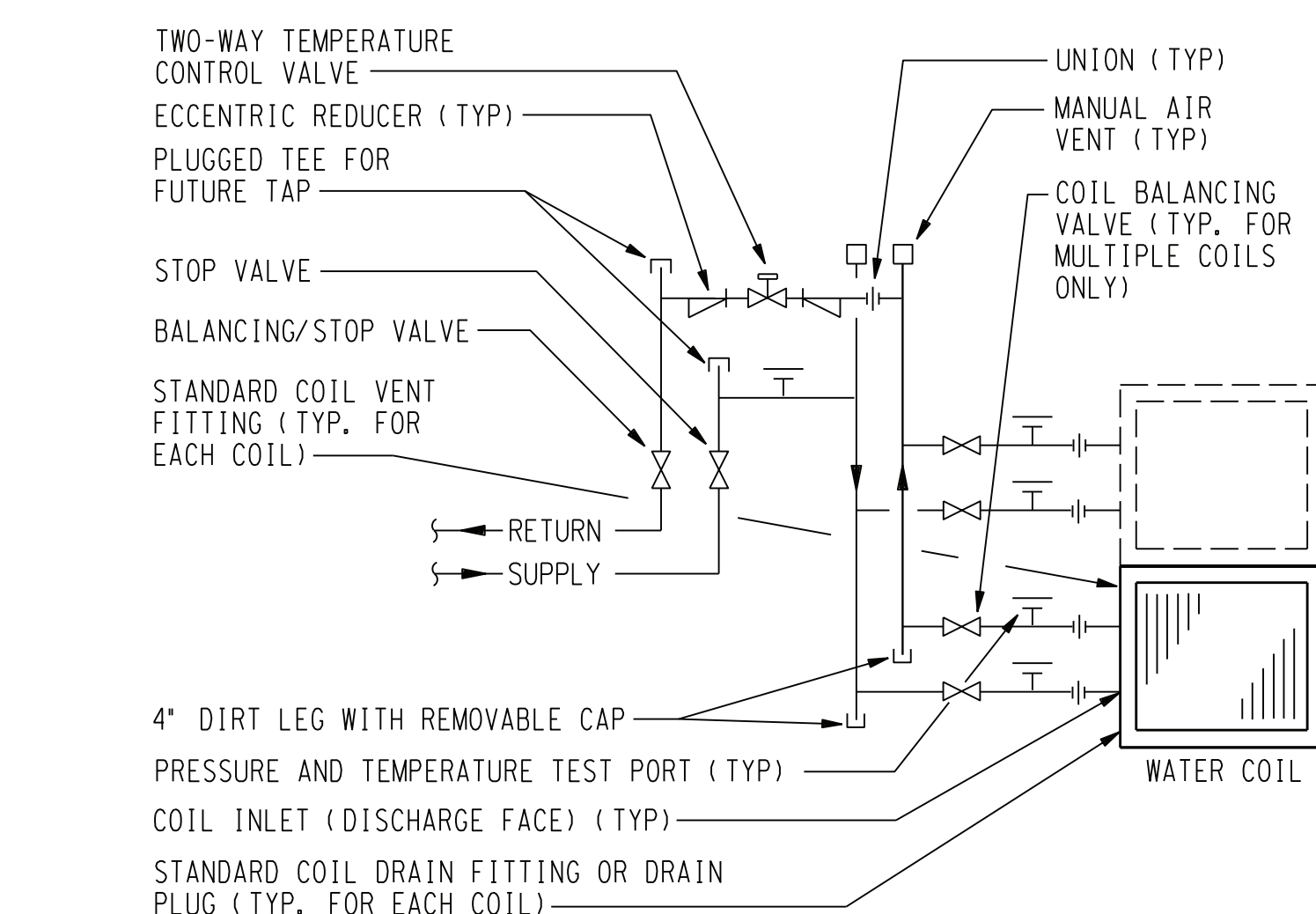
11 AHU-L7 RISER PLENUM
NOT TO SCALE



12 TYPICAL HOLD-DOWN LAY-OUT - RE: STRUCTURE
NOT TO SCALE

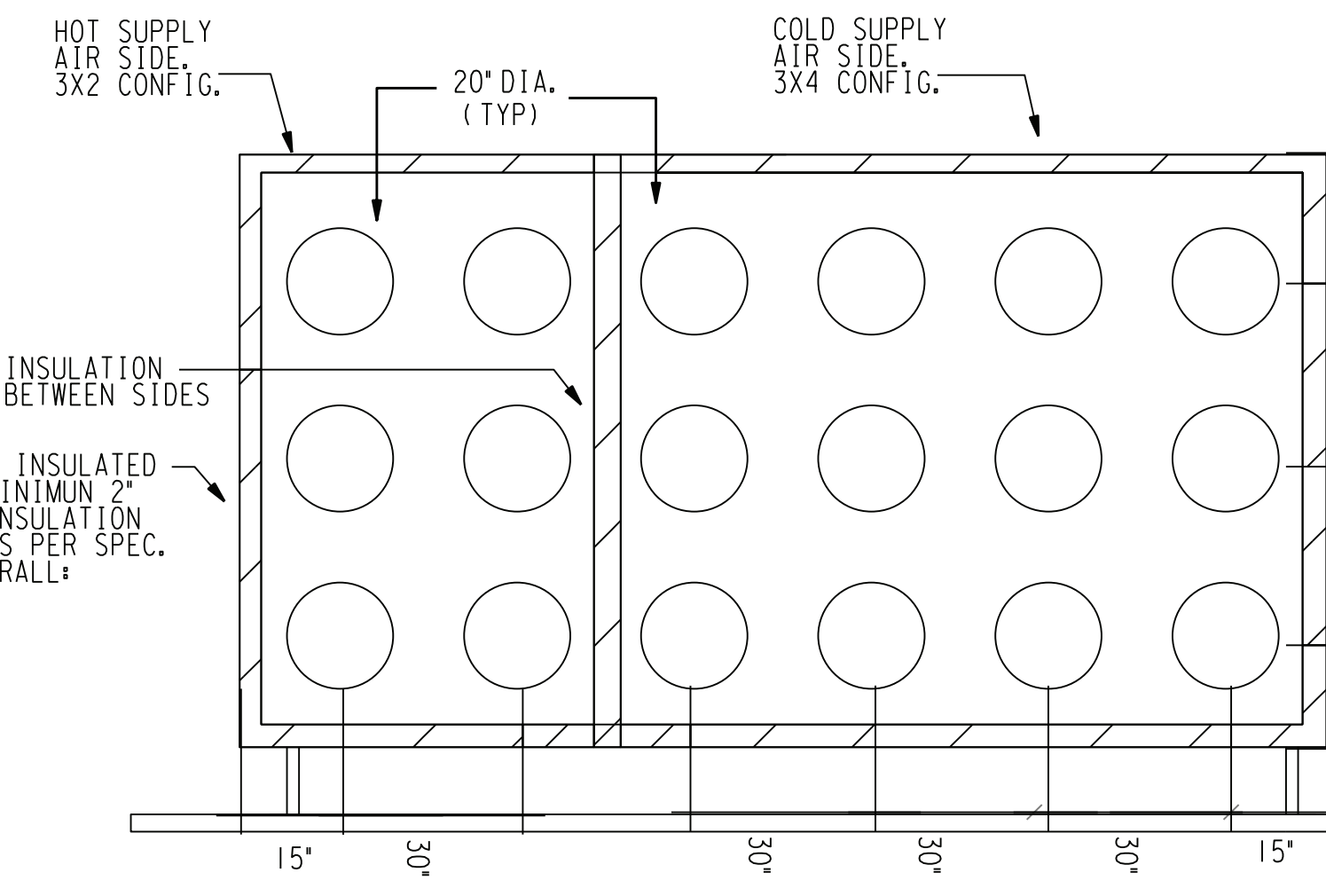


A - MINIMUM = B/2 + 1/2"
B - MINIMUM = UNIT FAN DISCHARGE PRESSURE + 2"
7 TYPICAL CONDENSATE DRAIN PIPING
NOT TO SCALE

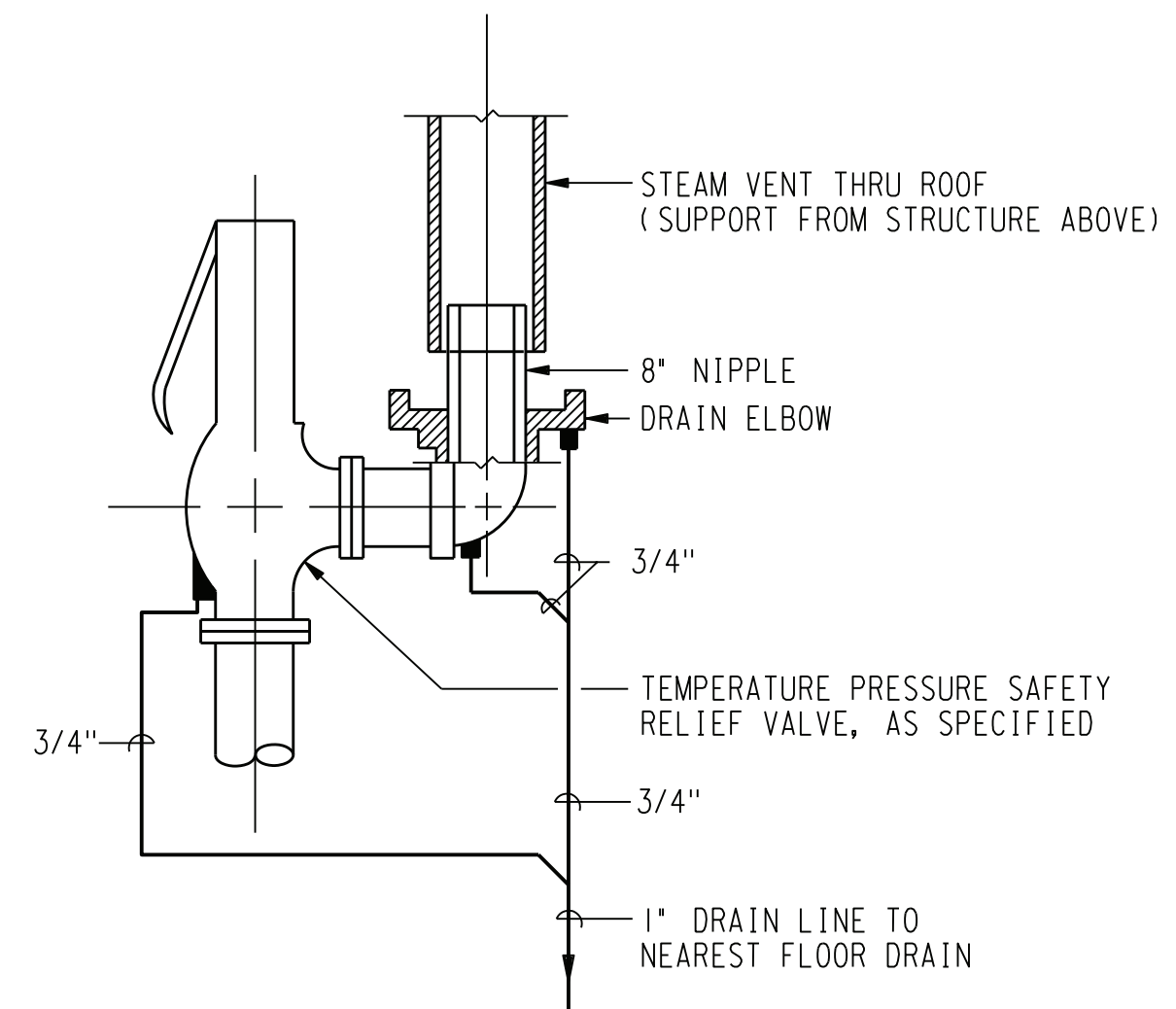


NOTES:
1. INSULATE ALL PIPING, VALVES, FITTINGS AND ACCESSORIES. RE: SPECIFICATIONS.
2. INSTALL TEST PORTS IN EASILY ACCESSIBLE LOCATIONS WITH MINIMUM OF 12\"/>

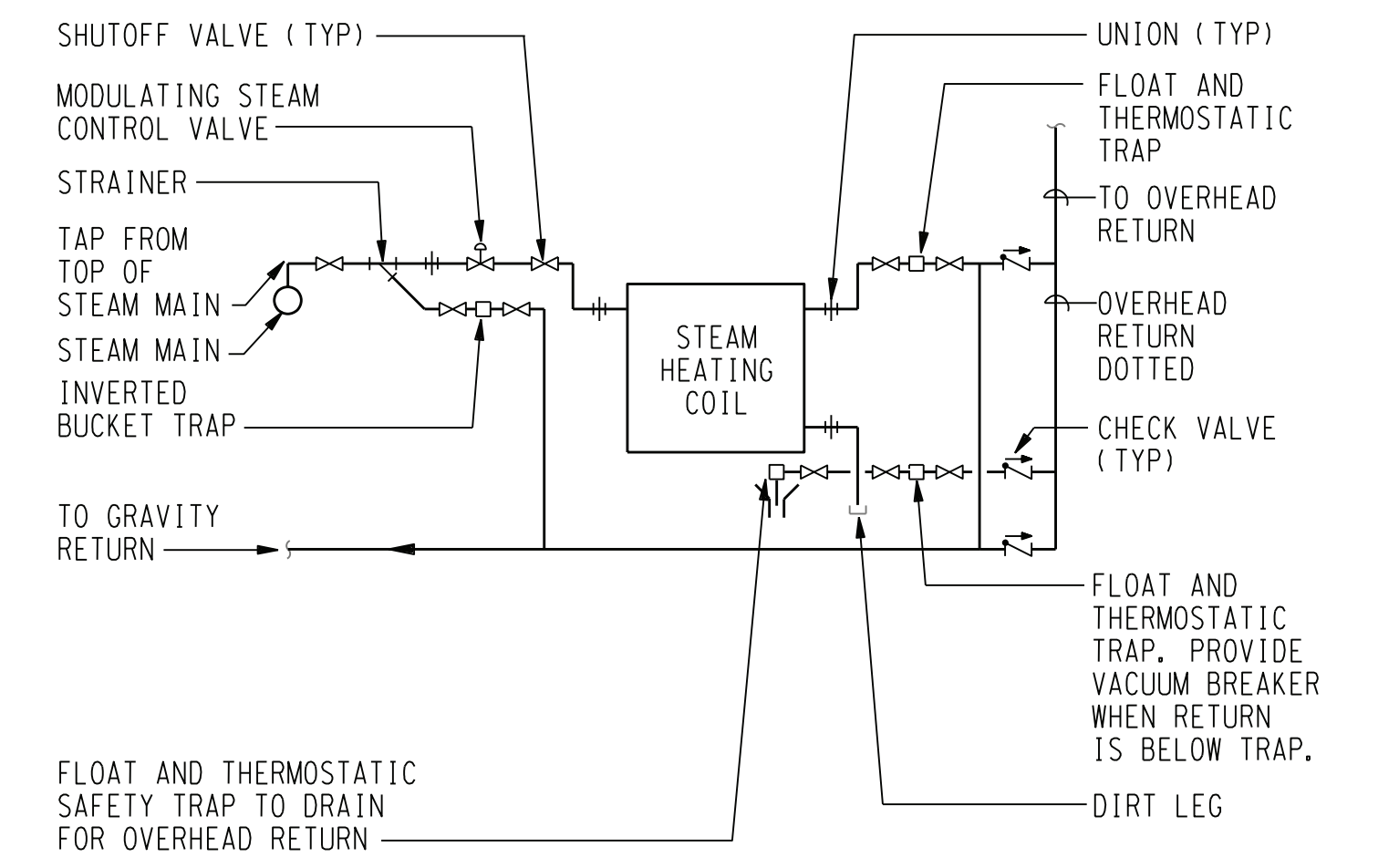
8 TYPICAL AIR HANDLING UNIT COIL PIPING
NOT TO SCALE



9 TYPICAL ROOFTOP PLENUM
NOT TO SCALE

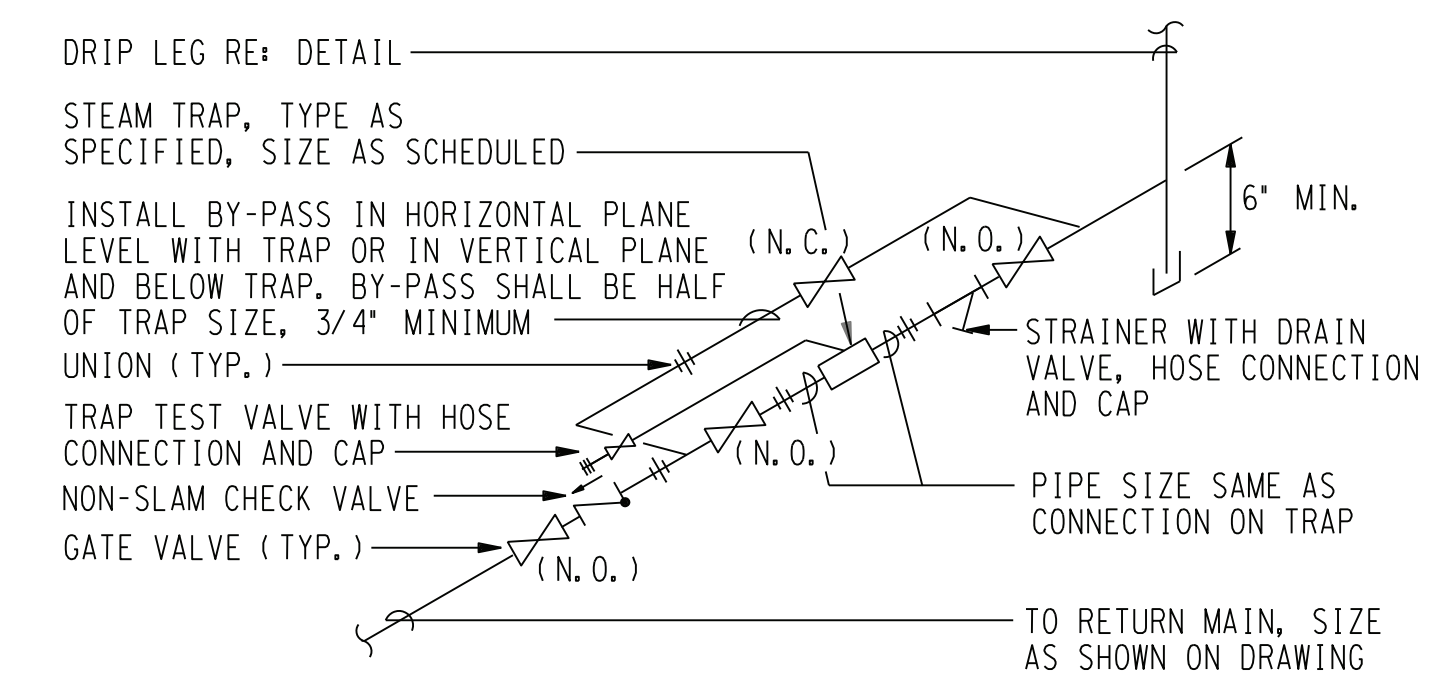


6 TYPICAL STEAM SAFETY RELIEF VALVE
NOT TO SCALE



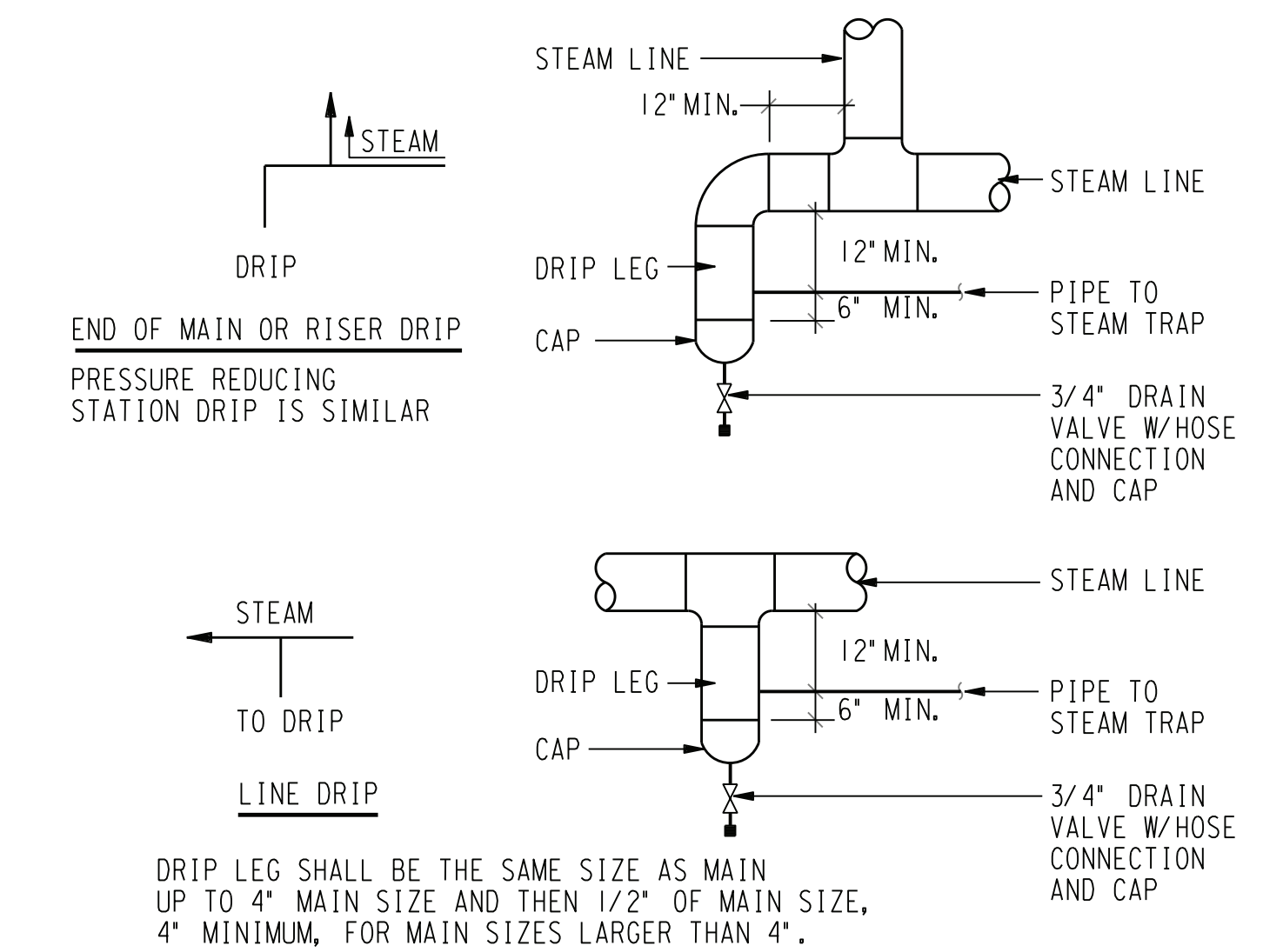
NOTES:
1. SIZE PRV-1A SIZED FOR 100% OF REDUCED PRESSURE STEAM LOAD.
2. HIGH PRESSURE TO MEDIUM PRESSURE OR MEDIUM PRESSURE TO LOW PRESSURE. DO NOT USE FOR HIGH PRESSURE TO LOW PRESSURE.

4 TYPICAL SINGLE STAGE STEAM PRESSURE REDUCING STATION
NOT TO SCALE

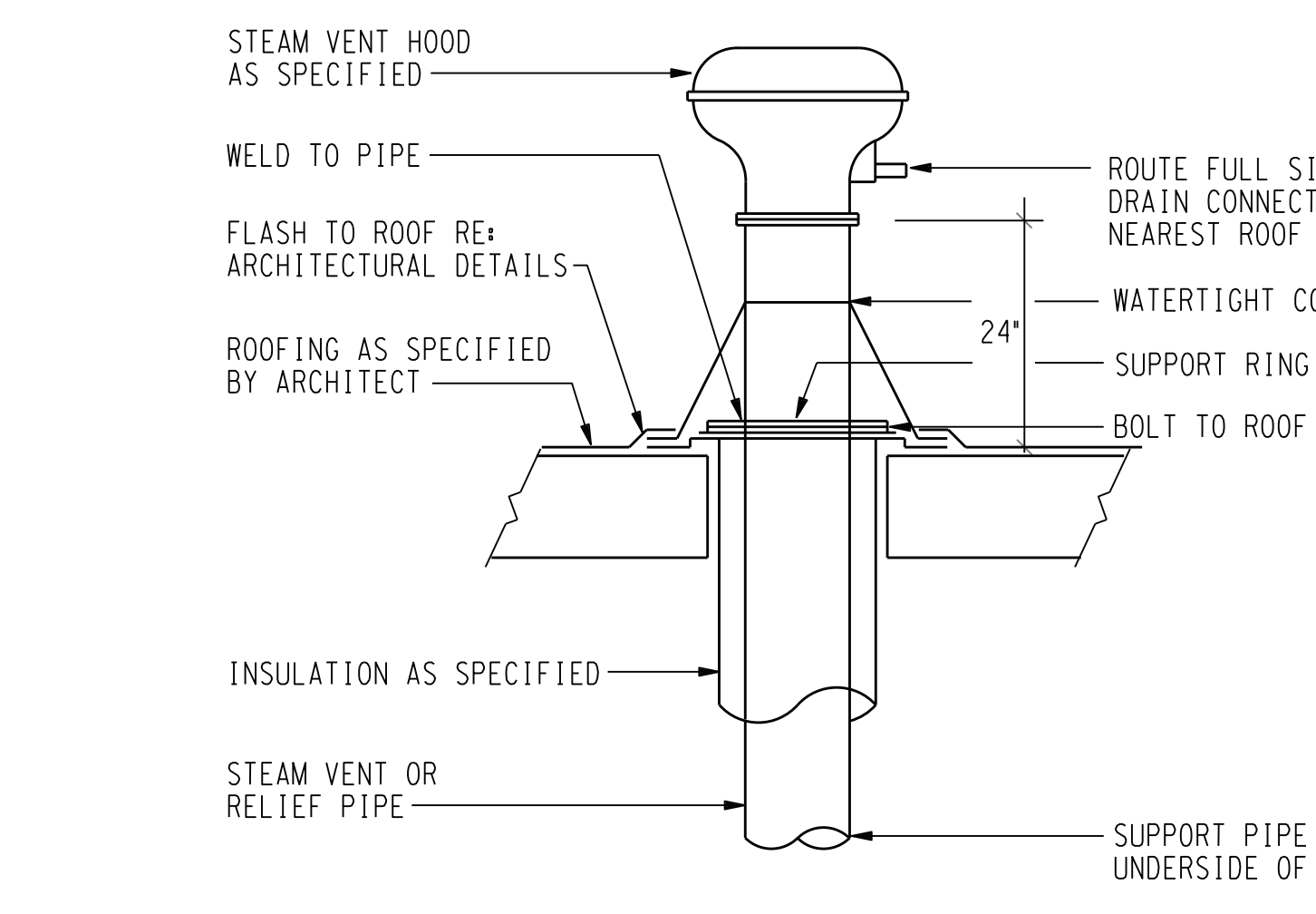


NOTES:
1. BY-PASS IS NOT REQUIRED ON THE TRAP PROVIDED FOR THE DRIPPING OF LOW PRESSURE SUPPLY MAINS (15 PSIG OR LESS).
2. CHECK VALVE IS NOT REQUIRED FOR LOW PRESSURE STEAM SYSTEM WITH GRAVITY RETURN.

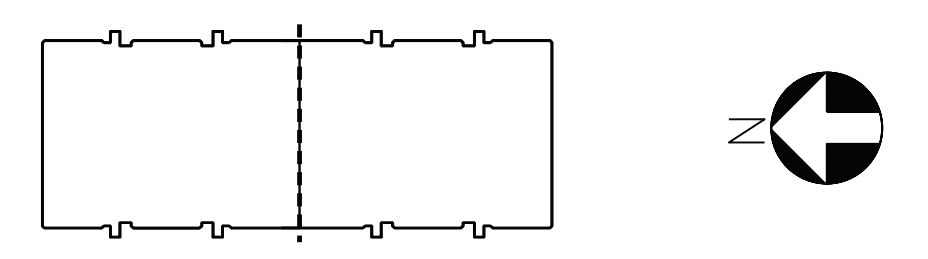
3 TYPICAL STEAM DRIP TRAP PIPING
NOT TO SCALE



2 TYPICAL STEAM DRIP TRAP POCKETS
NOT TO SCALE



1 TYPICAL STEAM VENT THRU ROOF ASSEMBLY
NOT TO SCALE



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HEATHER CAMBER
REGISTERED PROFESSIONAL ENGINEER
E&C Engineers & Consultants Inc.
Texas Firm Registration No. F00066

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**MEDICAL SCHOOL BUILDING
AHU L-7 & 8 REPLACEMENT**

DRAWING TITLE
**MECHANICAL
DETAILS**

DRAWING NO.
M501