

PACKAGED AIR HANDLING UNIT

AIR HANDLING UNIT

SYMBOL	MAXIMUM AIR HANDLING UNIT SIZE (IN)			MINIMUM OUTSIDE AIR CFM	MAXIMUM WEIGHT (LBS)	MANUFACTURER	UNIT CONSTRUCTION	REMARKS
	LENGTH	WIDTH	HEIGHT					
AHU-1	157	76	72	4,000	7,000	UNITECH	STEEL PANELED WITH CHANNEL BASE FRAME	PROVIDE WITH FULLY REMOVABLE LIFTING LUGS

SUPPLY AIR FAN

SYMBOL	TOTAL AIR FLOW (CFM)	TOTAL STATIC PRESSURE (IN. W.C.)	QNTY OF FANS	FAN RPM	BHP EACH	MOTOR ELECTRICAL CHARACTERISTICS					TOTAL BHP	TOTAL HP	FAN TYPE	FAN WHEEL SIZE	DUTY	CLASS	REMARKS
						MOTOR RPM	VOLTS	HERTZ	PHASE	HP EA							
SF-1	12,000	5.5	4	3,100	3.9	3600	208	60	3	5.0	15	20	PLENUM FAN	150	AHU-1	2	-

COOLING COIL

SYMBOL	NOMINAL AIR FLOW CFM	ENTERING AIR DB/WB °F	LEAVING AIR DB/WB °F	ENTERING WATER TEMP	LEAVING WATER TEMP	SENSIBLE COOLING MBH	TOTAL COOLING MBH	TOTAL GPM	COIL PER SECT.	NO. OF SECT.	TOTAL SQ. FT.	MAX FACE VEL.	MAX AIR PRESS. DROP (IN)	MAX WATER PRESS. DROP (FT)	MIN ROWS	MAX FINS PER INCH	NOMINAL COIL SIZE	FLUID	REMARKS
CC-1	12,000	83/62	54/52	45	53	386	386	83	1	2	25.3	475	0.75	15	8	10	2 @ 28.5" x 64"	PG 35%	-

HEATING COIL

SYMBOL	NOMINAL AIR FLOW CFM	ENTERING AIR DB °F	LEAVING AIR DB °F	ENTERING WATER TEMP	LEAVING WATER TEMP	TOTAL HEATING MBH	TOTAL GPM	COIL PER SECT.	NO. OF SECT.	TOTAL SQ. FT.	MAX FACE VEL.	MAX AIR PRESS. DROP IN	MAX WATER PRESS. DROP FT	MIN ROWS	MAX FINS PER INCH	NOMINAL COIL SIZE	FLUID	REMARKS
HC-1	12,000	47	71	180	145	284	17.2	1	2	25	480	0.1	9	1	6	2 @ 30" x 60"	PG 35%	-

FILTER SECTION

SYMBOL	NOMINAL AIR FLOW CFM	PRE-FILTER TYPE	FINAL FILTER	MIN. FILTER FACE AREA (SQ. FT.)	HOLDING FRAME ARRANGEMENT	REMARKS
FS-1	12,000	2" MERV 8	4" MERV 14	25	FACE LOAD	-

FILTER SECTION FURNISHED WITH FAN

DAMPERS

SYMBOL	NOMINAL SIZE	TYPE	RUSKIN MODEL	SERVICE	REMARKS
RAD-1	71.5" X 24.25"	PARALLEL	CD-50	RETURN AIR	-

RETURN AIR DAMPER FURNISHED WITH FAN

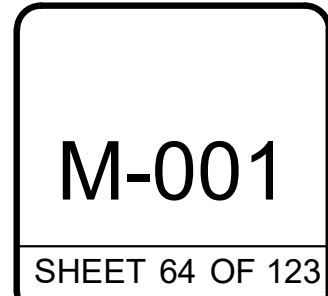
VARIABLE FREQUENCY DRIVES

SYMBOL	DUTY	QUANTITY OF FAN MOTORS DRIVEN	HP EA	TOTAL HP	TOTAL BHP	FAN MOTOR			REMARKS
						VOLTS	HERTZ	PHASE	
VFD-1	AHU-1	4	5	20	16.7	208	60	3	DRIVES FURNISHED BY DIVISION 23. THE DRIVES SHALL MATCH THE MOTORS PROVIDED WITH THE FANS. DIVISION 23 AND DIVISION 26 SHALL COORDINATE THE EFFORTS AND THE ELECTRICAL CONTRACTOR FOR POWER, WIRING AND CONTROLS WORK, ETC.

ROOFTOP EXHAUST FANS

SYMBOL	AIRFLOW CFM	TOTAL STATIC PRESSURE IN. WC	INPUT WATTS	FAN RPM	ELECTRICAL				DRIVE	DUTY	COOK MODEL	MAXIMUM SOUND LEVELS dB										REMARKS
					MOTOR HP	VOLTS	HERTZ	PHASE				OCTAVE BAND										
												1	2	3	4	5	6	7	8	LWA	dBA	
REF-1	600	0.8	150	1271	1/2	115	60	3	DIRECT	GENERAL EXHAUST	150ACRUH-EC	78	68	65	60	62	56	50	67	55	1, 2, 3	
NOTES: 1. WITH DAMPER, RUSKIN CD-30 OR BETTER, LOW LEAKAGE, WIRED TO OPEN WHEN FAN RUNS. WITH FACTORY FURNISHED CURB 2. OR EQUAL FROM GREENHECK OR TWIN CITY 3. WITH EC MOTOR																						

SYMBOL	DUTY	LOCATION	PLENUM APPROX. SIZE INSIDE CLEAR W X H	EBTRON MODEL	ELECTRICAL			REMARKS
					VOLTS	HZ	PH	
AFM-1	AHU-1	OA DAMPER	26" x 72" ID	GTA-116	24	60	1	-



CIRCUIT BALANCE VALVE SCHEDULE

CHILLER																			
SYMBOL	COOLING CAPACITY NOM. TON	ELECTRICAL CHARACTERISTICS			MCA AMPS	MOCP AMPS	PERFORMANCE MAX. OPERATING									REFRIGERANT	CARRIER MODEL	FLUID	REMARKS
		VOLT	HERTZ	PHASE			KW / TON				EVAPORATOR				EER				
							100%	75%	50%	25%	EWI °F	LWT °F	FLOW GPM	MAX. PR. DROP FT. W.C.					
C-1	45	208	60	3	230	250	1.18	0.83	0.62	0.6	54	44	85	5.5	10.2	R410A	30RAP045	35% PG	

CHILLED WATER PUMP														
SYMBOL	FEET HEAD	SHUT-OFF HEAD (FT)	GPM	% EFF	ELECTRICAL CHARACTERISTICS				RPM	DUTY	TYPE	TACO MODEL	FLUID	REMARKS
					VOLTS	HERTZ	PHASE	HP						
CHWP-1	70	74	85	61%	208	60	3	5	1,760	CHILLED WATER	BASE MOUNTED END SUCTION	F12009D	35% PG	
CHWP-2	70	74	85	61%	208	60	3	5	1,760	CHILLED WATER	BASE MOUNTED END SUCTION	F12009D	35% PG	

CIRCUIT BALANCE VALVE SCHEDULE			
GPM FLOW		REQUIRED BALANCING VALVE SIZE BELL & GOSSETT CB	REMARKS
MIN.	MAX.		
0.1	1	RF - 1/2"	PROVIDE AND INSTALL CIRCUIT BALANCING VALVES OF SIZE INDICATED FOR THE REQUIRED GPM FLOW RATE. PROVIDE REDUCERS AS REQUIRED AT VALVE
0.25	1.1	RF - 3/4"	
0.5	2.5	1/2"	
2	5	3/4"	
4	9.5	1"	
9	21	1-1/4"	
15	32	1-1/2"	
30	65	2"	
45	100	2-1/2"	
80	175	3"	
170	400	4"	SELECTION BASED ON BELL & GOSSETT CB AT MINIMUM 2.3 FT. HD. PRESSURE DROP
220	500	4" F&G	
300	650	5"	
450	950	6"	
650	1300	8"	

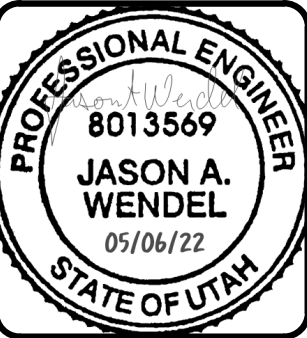
EXPANSION TANK					
SYMBOL	VOLUME GAL	ACCPPT VOLUME GAL	BELL & GOSSETT MODEL	DUTY	REMARKS
ET-1	8	2.4	AX-15V	CHILLED WATER	
ET-2	21.7	11.3	AX-40V	HEATING WATER	

AIR SEPARATOR					
SYMBOL	GPM	SIZE (IN)	TYPE	SPIROTHERM MODEL	DUTY
AS-1	85	3	AIR & DIRT	VDN300	CHILLED WATER
AS-2	35	2.5	AIR & DIRT	VDN250	HEATING WATER

ELECTRIC UNIT HEATER									
SYMBOL	HEATER KW	MIN. CFM	ELECTRICAL				MARKEL MODEL	SERVICE	REMARKS
			VOLTS	HERTZ	PHASE	AMPS			
EUH-1	3.3	400	208	60	1	15.9	F1F5103N	FIRE RISER	1, 2
NOTES: 1. PROVIDE WITH WALL BRACKET, 24 VOLT CONTROL, RELAY AND TRANSFORMER. 2. INSTALL 8 FT. A.F.F. WITH HORIZONTAL DISCHARGE									

GLYCOL MAKE-UP UNIT											
SYMBOL	TANK VOLUME (GAL)	PUMP							DUTY	% PROP. GLYCOL	REMARKS
		GPM	HD PSI	HP	MAX RPM	VOLT	HERTZ	PHASE			
GMU-1	50	1.3	100	1/3	1750	115	60	1	HEATING AND CHILLED WATER	35%	-

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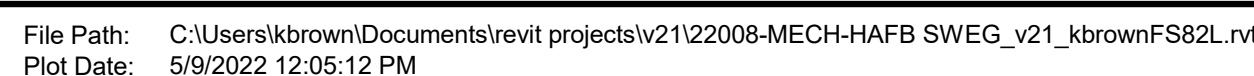
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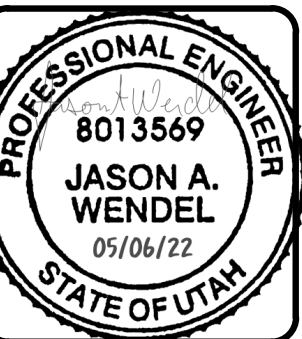
HAFB 309th SOFTWARE ENGINEERING FACILITY	MECHANICAL SCHEDULES
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HAFB 309th SOFTWARE ENGINEERING FACILITY
MECHANICAL PLAN

SHEET 67 OF 123



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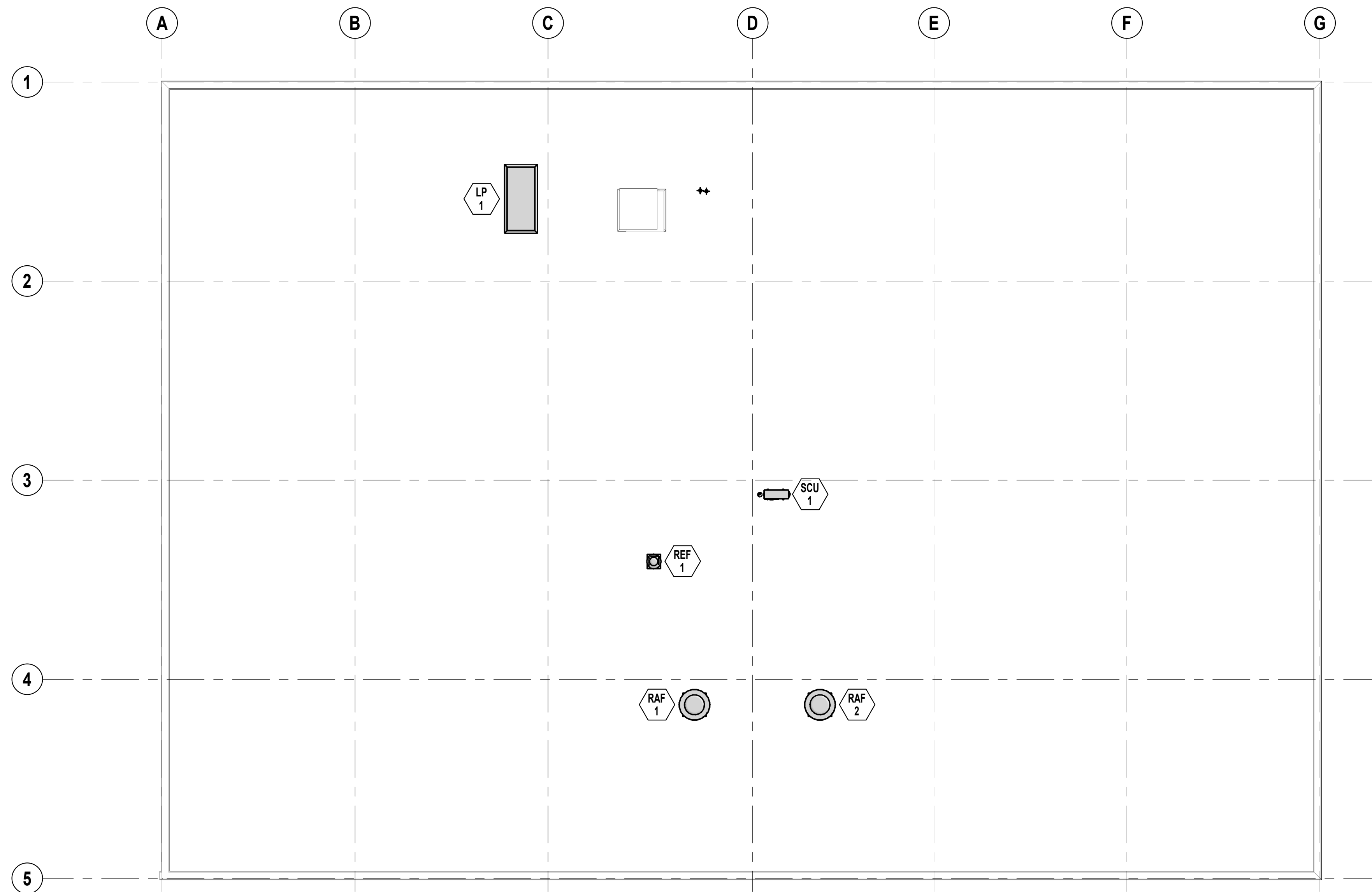
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		SCOTT ARNOLD		

HAFB 309th SOFTWARE
ENGINEERING FACILITY

ROOF MECHANICAL PLAN

MH102

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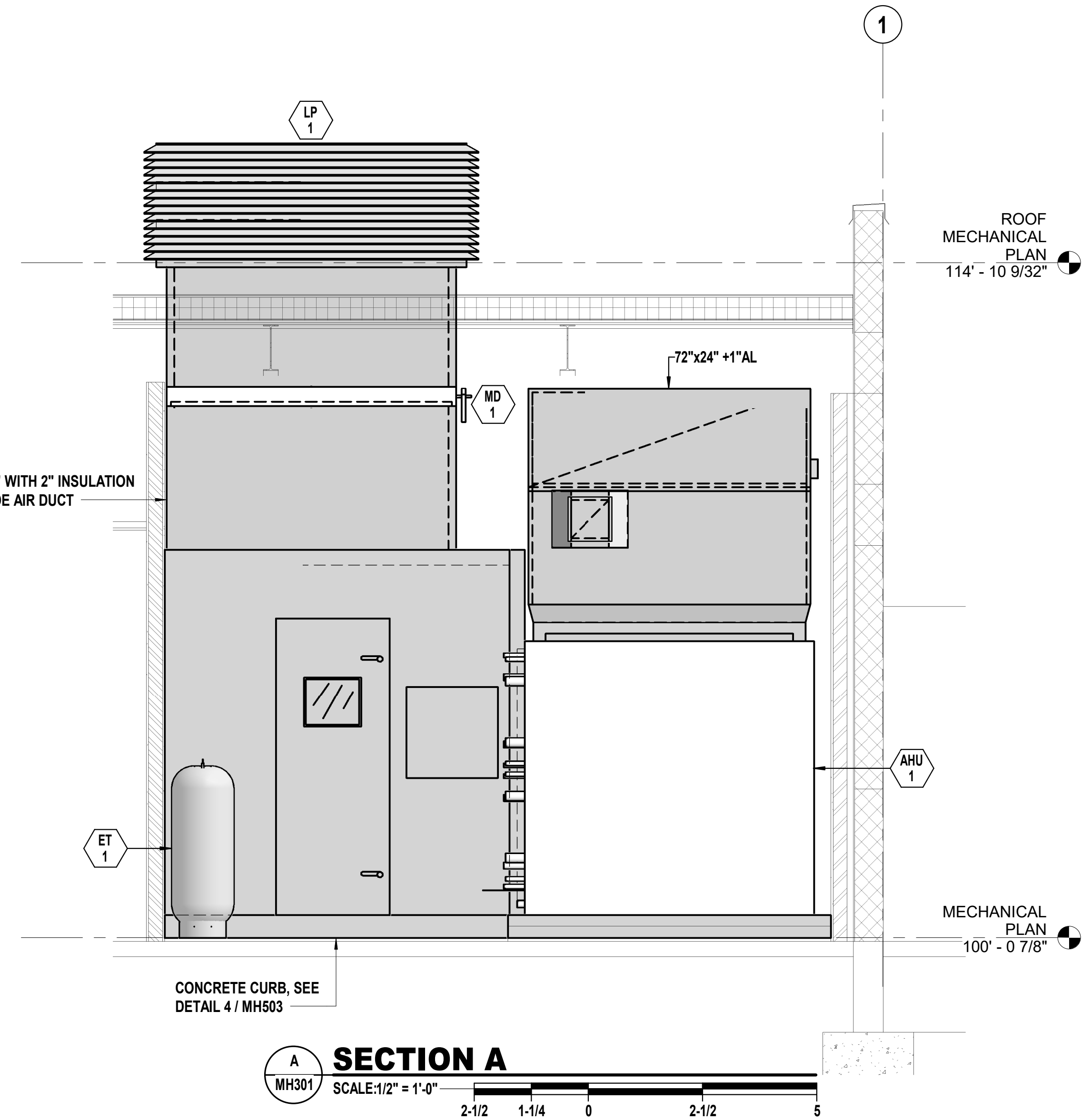
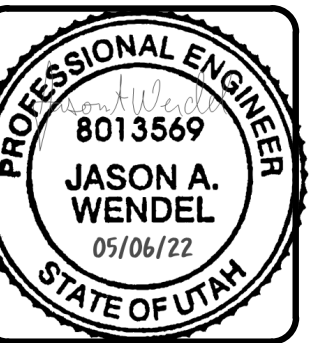
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MH102

ROOF MECHANICAL PLAN

SCALE: 1/8" = 1'-0"

10 5 0 10 20



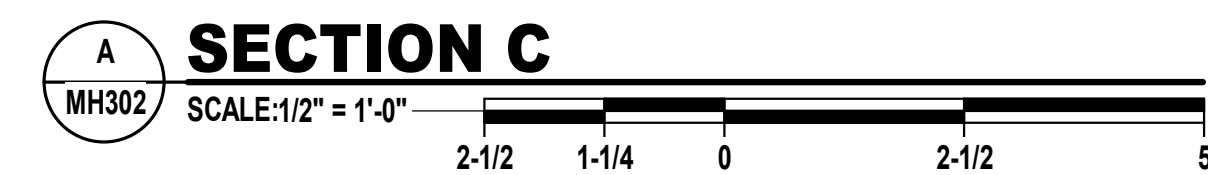
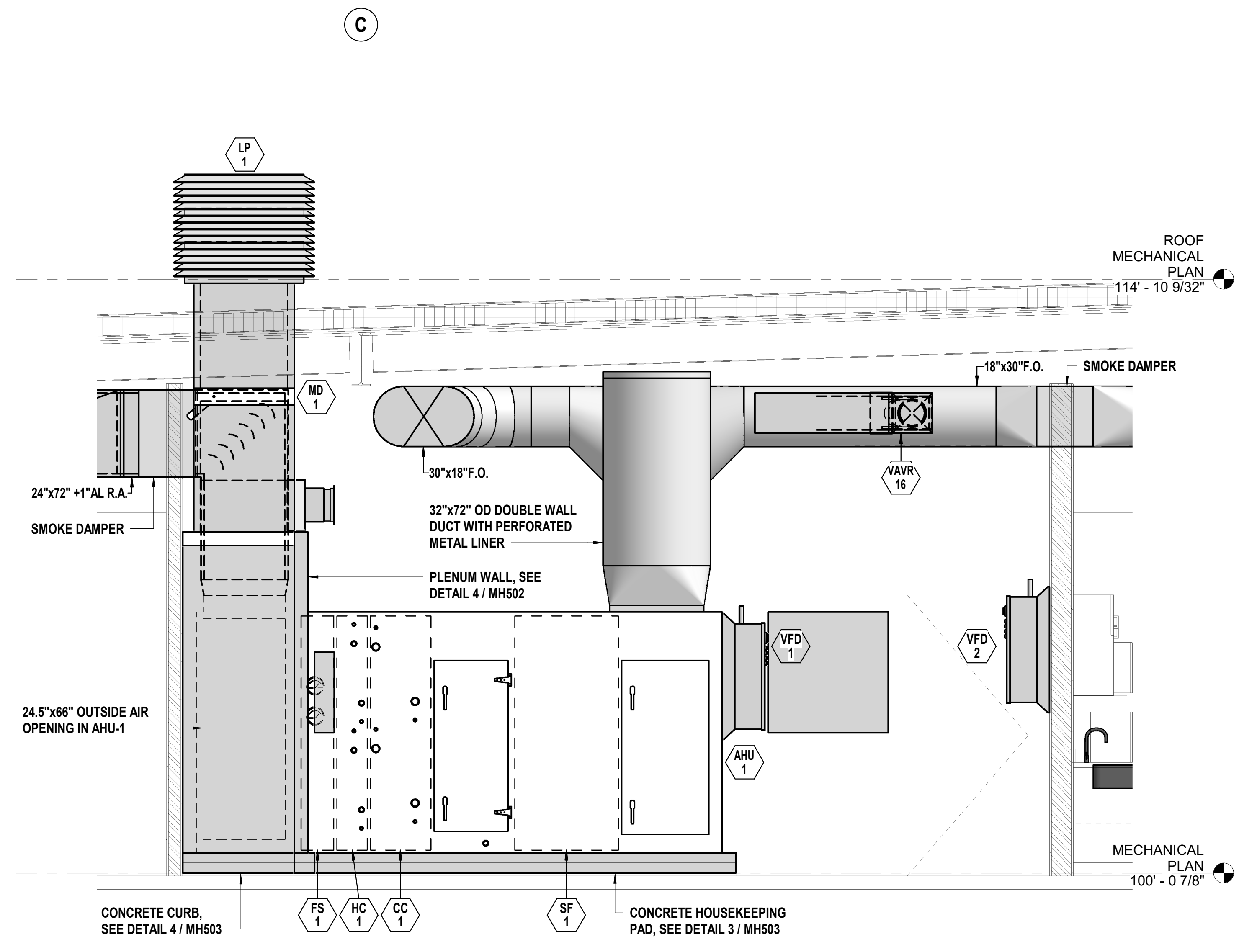
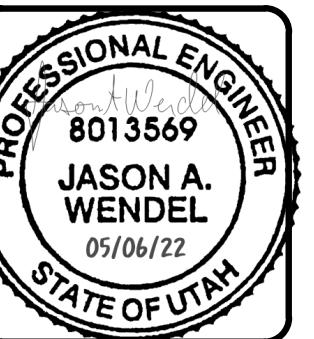
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	OTHER PROJECT NO. 7596233	ISSUE DATE 05/10/2022
	BASE PROJECT MANAGER SCOTT ARNOLD	

HAFB 309th SOFTWARE ENGINEERING FACILITY
MECHANICAL SECTIONS

MH301

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	Designer	Checker
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OTHER PROJECT NO. 7596233	BASE PROJECT NUMBER KESM200806	
SCOTT ARNOLD		

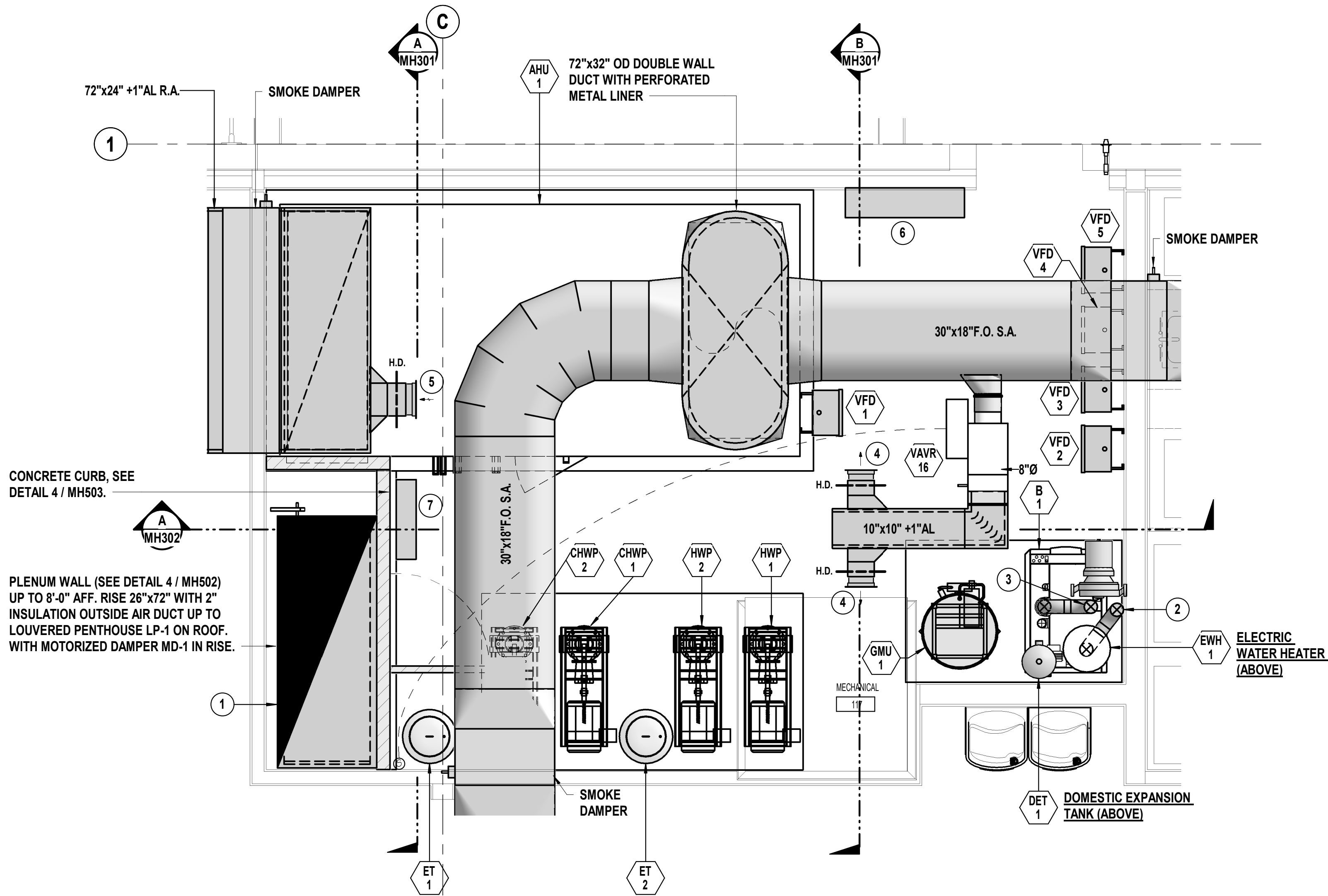
HAFB 309th SOFTWARE ENGINEERING FACILITY
MECHANICAL SECTIONS

MH302

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DRAWING NOTES

NOTE #	DIFFUSER CALLOUT	DESCRIPTION
1		72"x26" OUTSIDE AIR DUCT WITH 2" INSULATION FROM LP-1 ABOVE.
2		RISE 4" BOILER FLUE UP TO GOOSENECK ON ROOF.
3		RISE 4" COMBUSTION AIR DUCT UP TO GOOSENECK ON ROOF.
4	S-3	190 CFM, 8"x8" NECK SUPPLY AIR DIFFUSER
5	R-2	10"x10" NECK RETURN AIR GRILLE
6		AIR HANDLING UNIT ATC PANEL
7		HW AND CHW SYSTEMS ATC PANEL



1
MH401

ENLARGED MECHANICAL ROOM PLAN

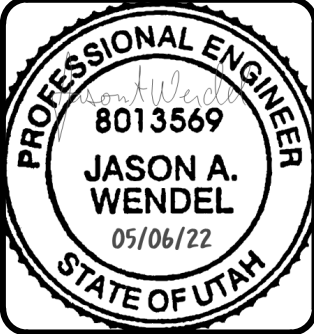
SCALE: 1/2" = 1'-0"

2-1/2 1-1/4 0 2-1/2 5

N



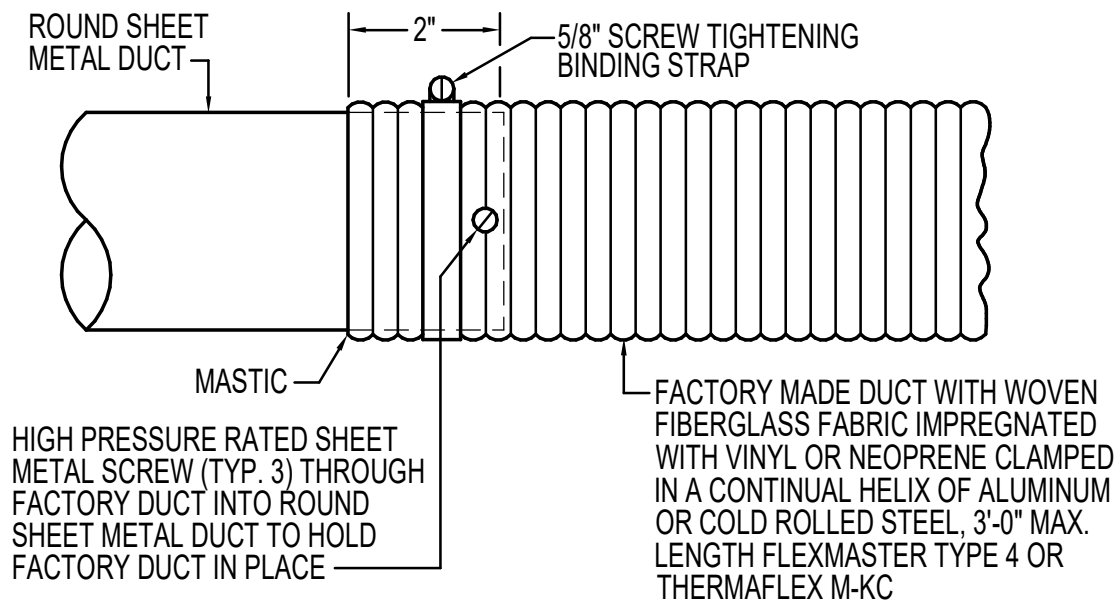
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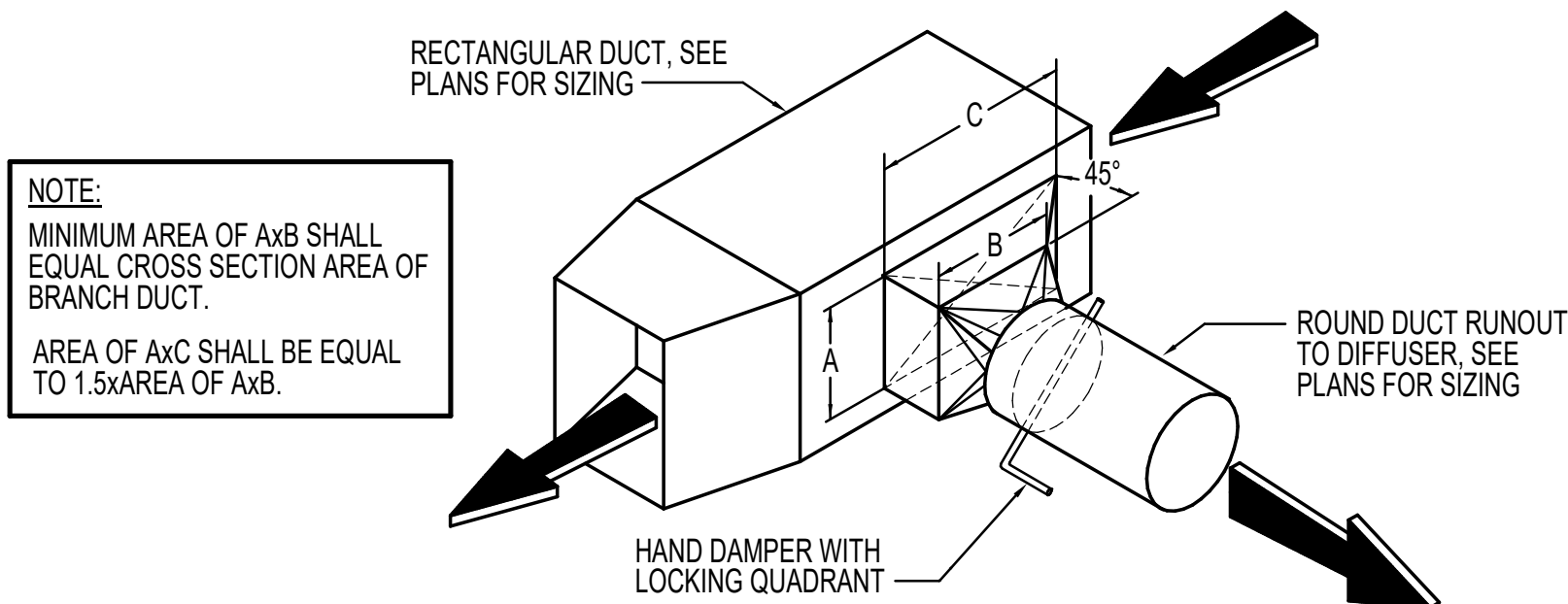
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PROJECT NAME: HAFB 309th SOFTWARE ENGINEERING FACILITY		PROJECT MANAGER: SCOTT ARNOLD

HAFB 309th SOFTWARE ENGINEERING FACILITY	MECHANICAL ROOM PLAN
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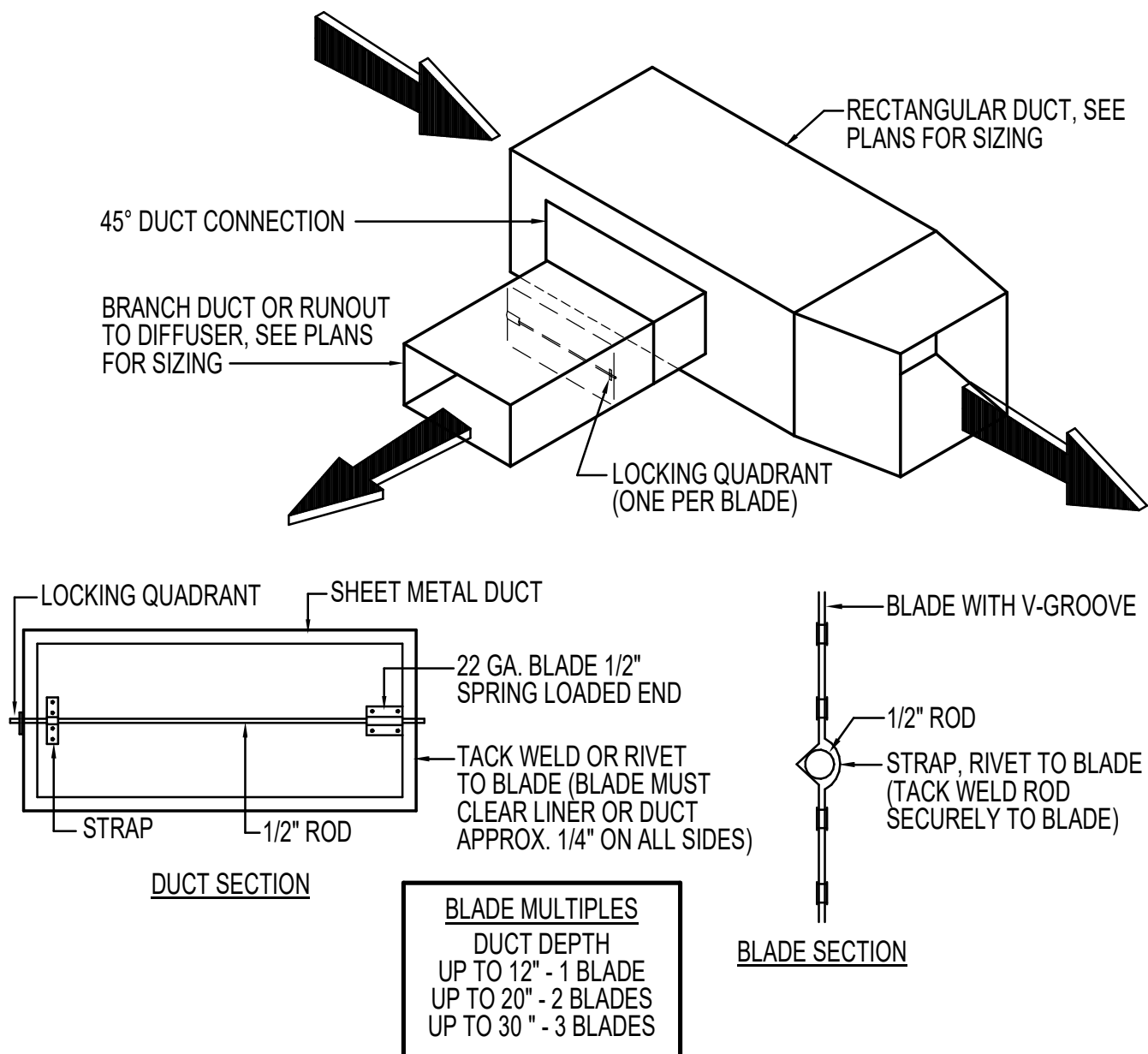
MH401
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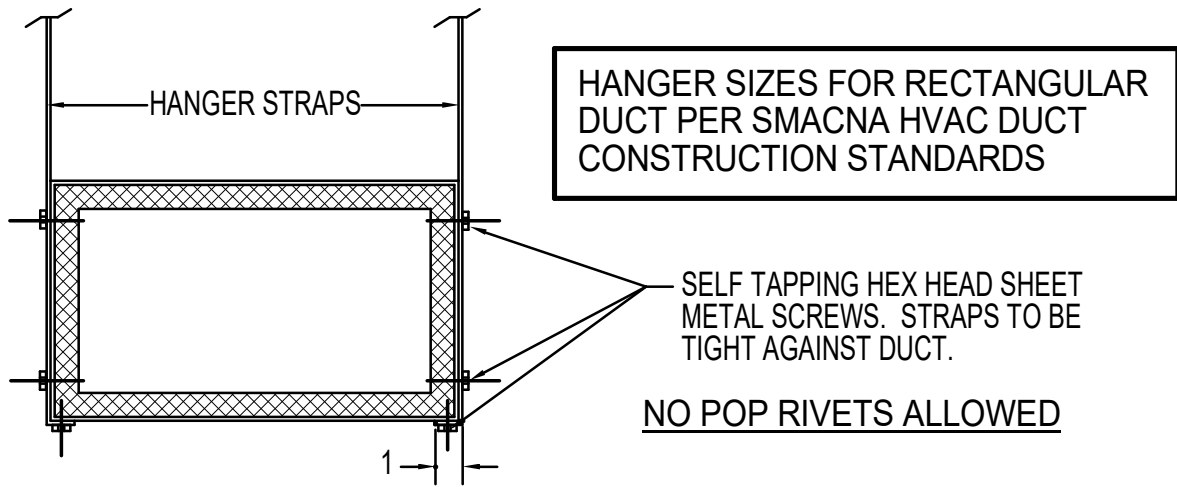
7 **FACTORY MADE DUCT DETAIL**
MH501 SCALE: NONE



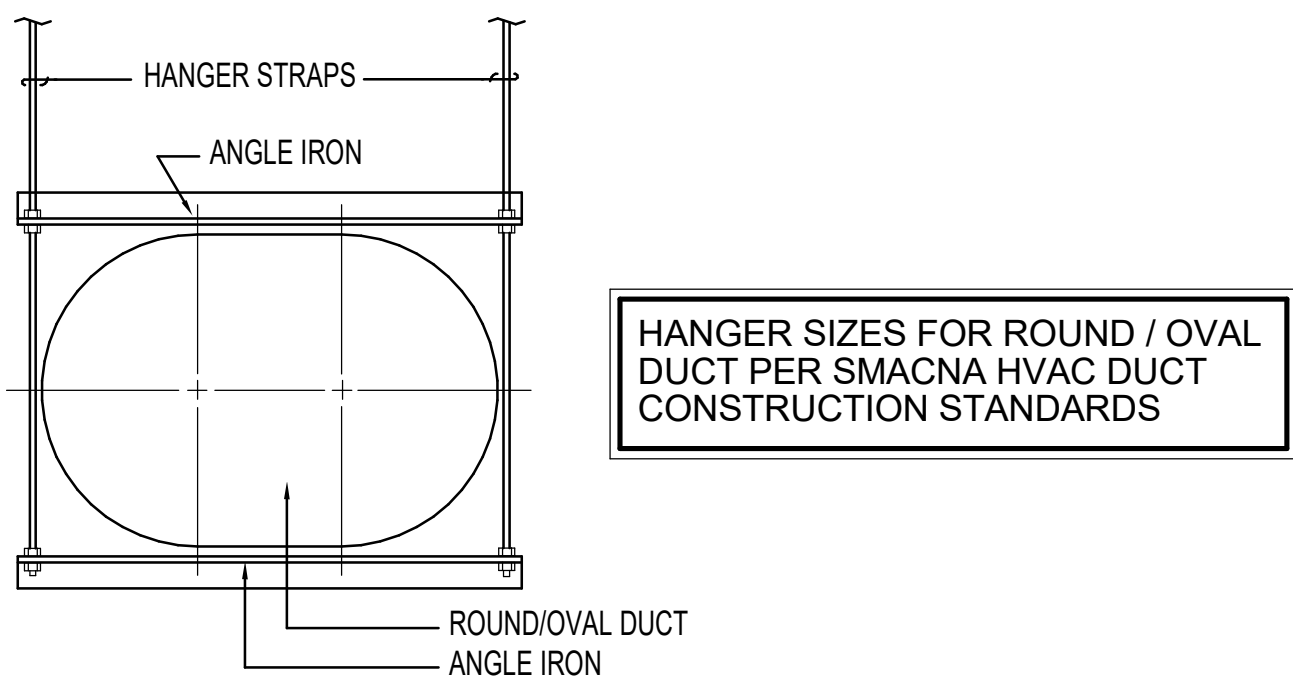
8 **DUCT CONNECTION DETAIL**
MH501 SCALE: NONE



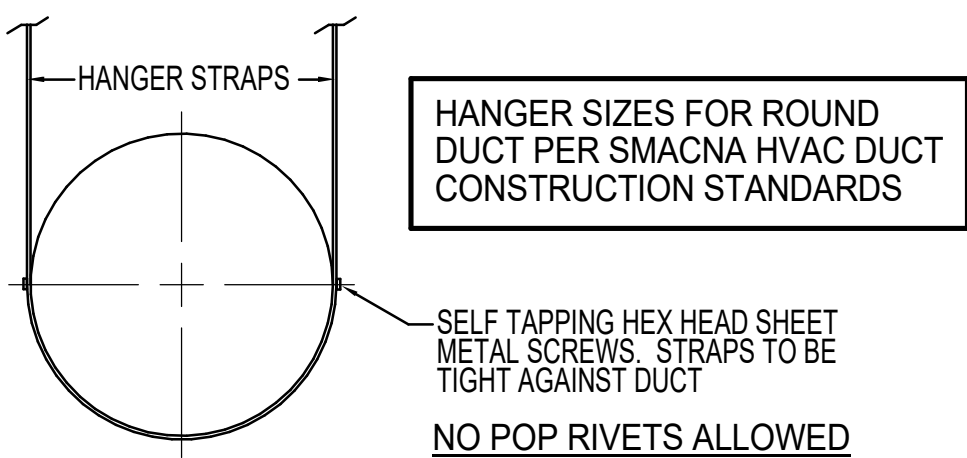
9 **BRANCH DUCT AND DAMPER DETAIL**
MH501 SCALE: NONE



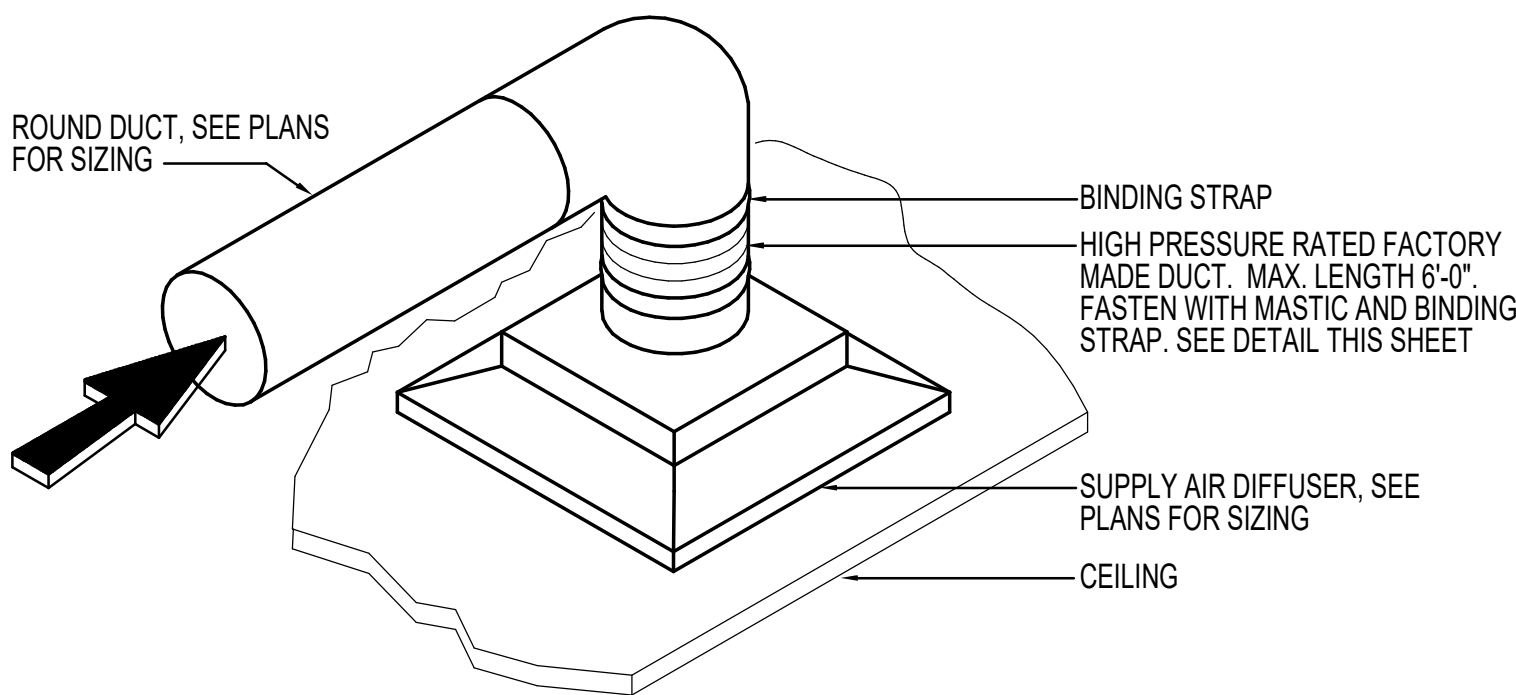
3 **DUCT HANGER DETAIL**
MH501 SCALE: NONE



4 **OVAL DUCT HANGER DETAIL**
MH501 SCALE: NONE

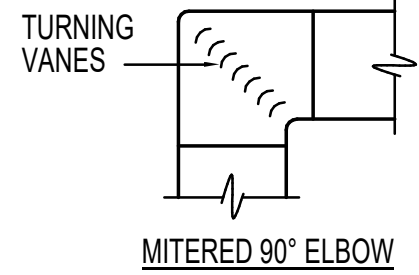


5 **ROUND DUCT HANGER DETAIL**
MH501 SCALE: NONE

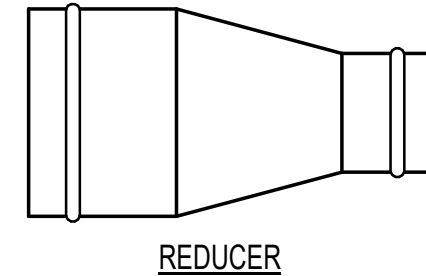


6 **DUCT CONNECTION TO DIFFUSER DETAIL**
MH501 SCALE: NONE

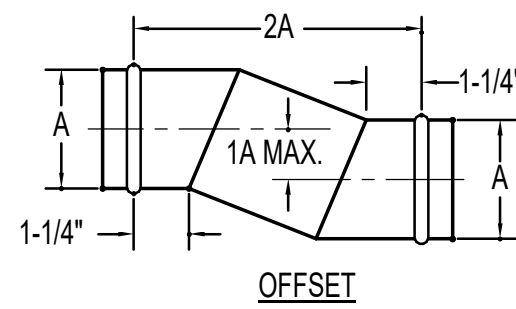
NOTE:
ALL DUCTS (SUPPLY, RETURN AND EXHAUST) TO HAVE TURNING VANES WITH SQUARE TYPE ELBOWS AT ANY ANGLE OF DIRECTION CHANGE. VANES TO START AND STOP PARALLEL WITH DUCT SIDE. PROVIDE 1" TRAILING EDGE.



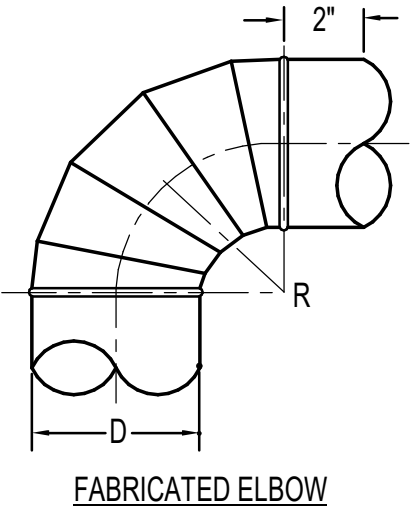
MITERED 90° ELBOW



REDUCER

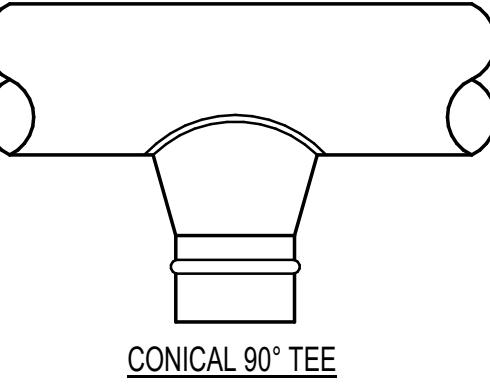


OFFSET

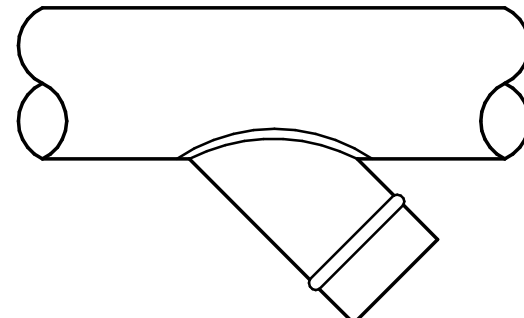


FABRICATED ELBOW

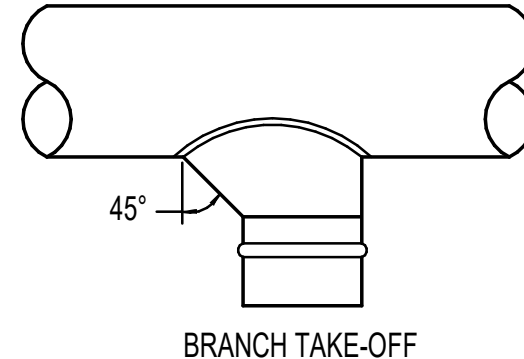
DIMENSIONS
D = DUCT SIZE
Q R = 1.5D
0-35° --- 2 PIECE
36-71° --- 3 PIECE
72-90° --- 5 PIECE
ADD ONE PIECE FOR EACH ADDITIONAL 18°



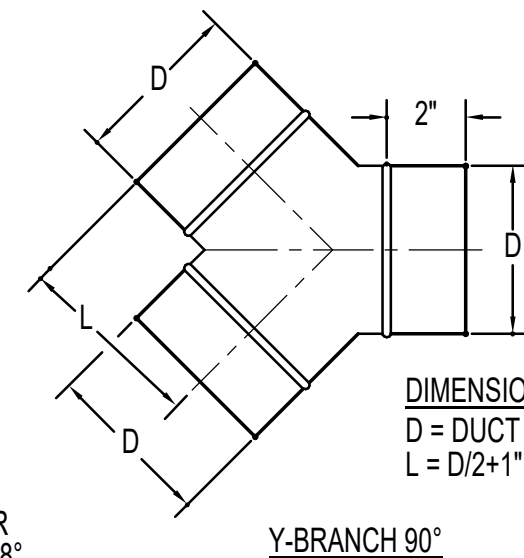
CONICAL 90° TEE



45° LATERAL TEE



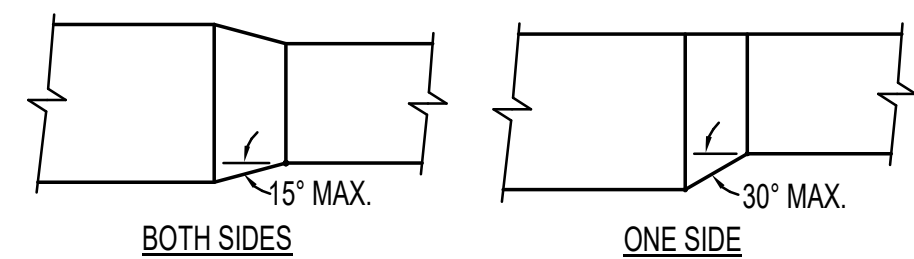
BRANCH TAKE-OFF



DIMENSIONS
D = DUCT SIZE
L = D/2+1"

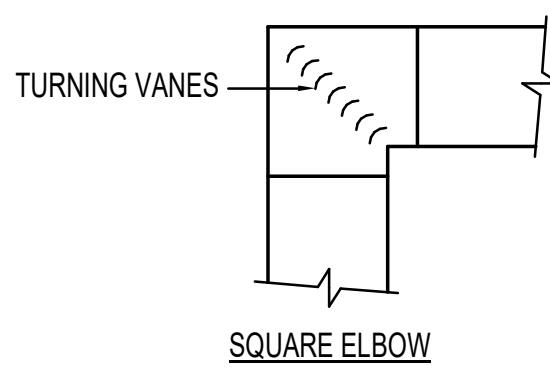
Y-BRANCH 90°

1 **MEDIUM VELOCITY DUCT FITTINGS DETAIL**
MH501 SCALE: NONE

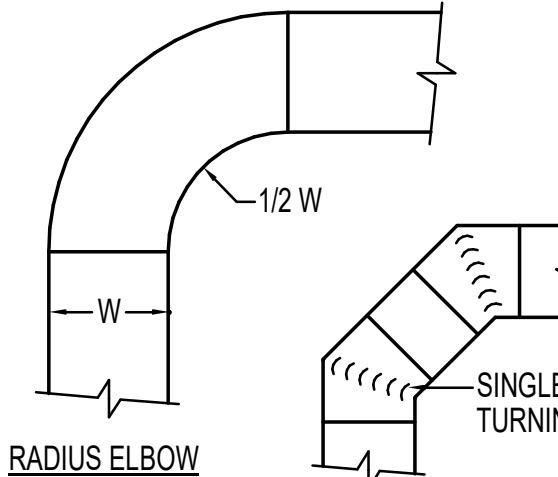


BOTH SIDES

ONE SIDE



SQUARE ELBOW



RADIUS ELBOW

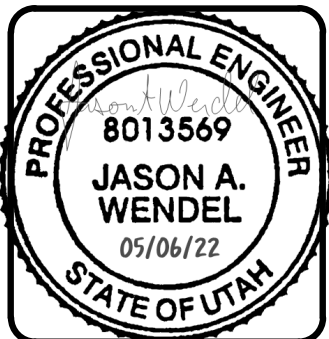
45 DEG. ELBOW

NOTES:
1. ALL DUCTS (SUPPLY, RETURN AND EXHAUST) TO HAVE TURNING VANES IN SQUARE ELBOW.
2. INSIDE SQUARE, OUTSIDE RADIUS ELBOWS NOT ALLOWED.

2 **RECTANGULAR DUCT FITTINGS DETAIL**
MH501 SCALE: NONE



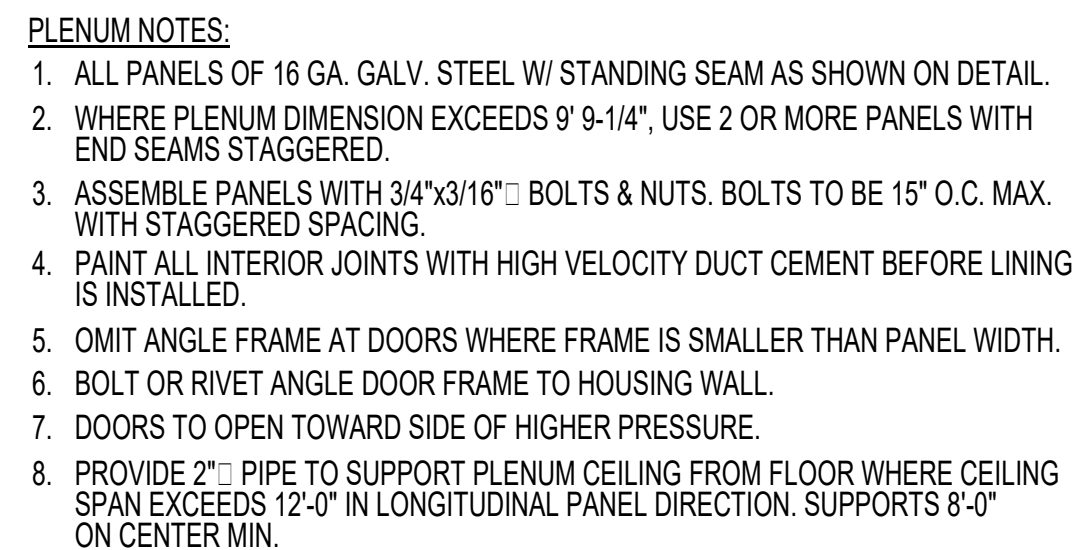
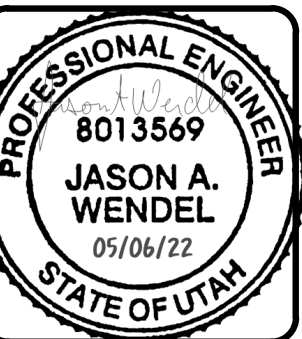
DATE	APPROVAL
DESCRIPTION	



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OTHER PROJECT NO. 7596233		BASE PROJECT MANAGER SCOTT ARNOLD	
DEPARTMENT OF THE AIR FORCE 75TH AIR BASE WING 75TH CIVIL ENGINEER GROUP			

HAFB 309th SOFTWARE ENGINEERING FACILITY MECHANICAL DETAILS

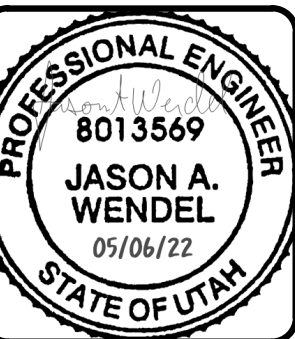
MH501
SHEET 72 OF 123

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			CUSTOM PROJECT NO. 7596233 KFSN20806 BASE PROJECT MANAGER	ISSUE DATE: 05/10/2022
		SCOTT ARNOLD		

HAFB 309th SOFTWARE ENGINEERING FACILITY
MECHANICAL DETAILS

MH502

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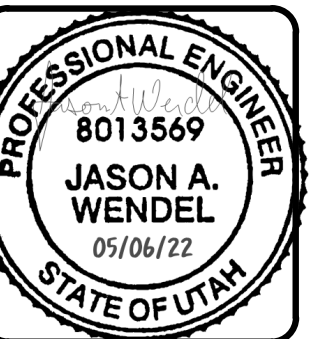
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	ORDER PROJECT NO. 75962335 KKSJ020006 ORDER PROJECT MANAGER SCOTT ARNOLD	ISSUE DATE: 05/10/2022

HAFB 309th SOFTWARE ENGINEERING FACILITY
MECHANICAL DETAILS

MH503



1. ALL ELECTRICAL INSTALLATION BE IT POWER DISTRIBUTION OR SPECIAL SYSTEMS, IS INCLUDED IN THE SCOPE OF THE GENERAL CONTRACT. OF SPECIFIC CONCERN ARE THE CONTROL SYSTEMS RELATED TO MECHANICAL EQUIPMENT. RESPONSIBILITY FOR THE CONTROL WORK IS DIVIDED BETWEEN THE PROJECT ELECTRICIAN (DIV. 26) AND A SPECIALTY CONTROLS CONTRACTOR (DIV 23).
2. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH DIVISION 26 AND TO THE FULLEST EXTENT POSSIBLE, PRODUCTS AND PRACTICES SHALL BE SIMILAR FOR ALL INSTALLATIONS.
3. THE ELECTRICIAN SHALL PROVIDE ALL POWER TO AND THROUGHOUT THE BUILDING, TO INCLUDE MOTOR CONTROL CENTERS, BREAKER PANELS AND ALL OTHER SYSTEMS DESIGNATED TO THE ELECTRICIANS.
4. THE ELECTRICIAN SHALL RUN AND CONNECT ALL WIRING AND DEVICES 120 VOLTS AND ABOVE WHICH POWER MOTORS AND OTHER MECHANICAL DEVICES. WHERE CONTROL DEVICES ARE LOCATED IN POWER CIRCUIT, THE CONTROLS CONTRACTOR SHALL INTERRUPT THE CIRCUIT IN THE MECHANICAL EQUIPMENT JUNCTION BOX, WIRE THROUGH THE CONTROL DEVICE AND BACK TO THE JUNCTION BOX.
5. THE CONTROLS CONTRACTOR SHALL ROUTE ALL CONDUIT FOR MECHANICAL CONTROLS, PULL WIRING REQUIRED FOR MECHANICAL CONTROLS THROUGH THE CONDUITS AND MAKE CONNECTIONS TO MECHANICAL EQUIPMENT, ATC PANELS, SENSORS, ETC, AS INDICATED ON THE PLANS ALL IN ACCORDANCE WITH DIVISION 26.
6. THE CONTROLS CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR CONTROL SYSTEMS CIRCUITS.
7. BREAKERS AND DISCONNECTS, AUXILIARY CONTACTS, STANDARD PILOT LIGHTS AND MAGNETIC STARTERS ARE THE RESPONSIBILITY OF DIVISION 26.
8. AUXILIARY RELAYS, LOW VOLTAGE TRANSFORMERS, CONTROL PANEL SWITCHES AND DEVICES, THERMOSTATS, PRESSURE SWITCHES, ELECTRIC OPERATED VALVES, ETC. ARE THE RESPONSIBILITY OF DIVISION 23.
9. ANY QUESTION OF RESPONSIBILITY SHALL BE CLARIFIED BY THE GENERAL CONTRACTOR
10. ALL WIRING SHALL TERMINATE AT LABELED TERMINAL STRIPS.
11. ALLOW FOR ACCOMMODATION OF CHW DIFFERENTIAL PRESSURE SENSOR WIRING FROM THE MANWARING CENTER AND HART BUILDING BACK TO THE NEW CENTRAL CHILLER PLANT WHERE ROUTING OF EACH PASSES THROUGH THE AUDITORIUM SPACE OR SITE.

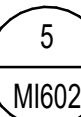
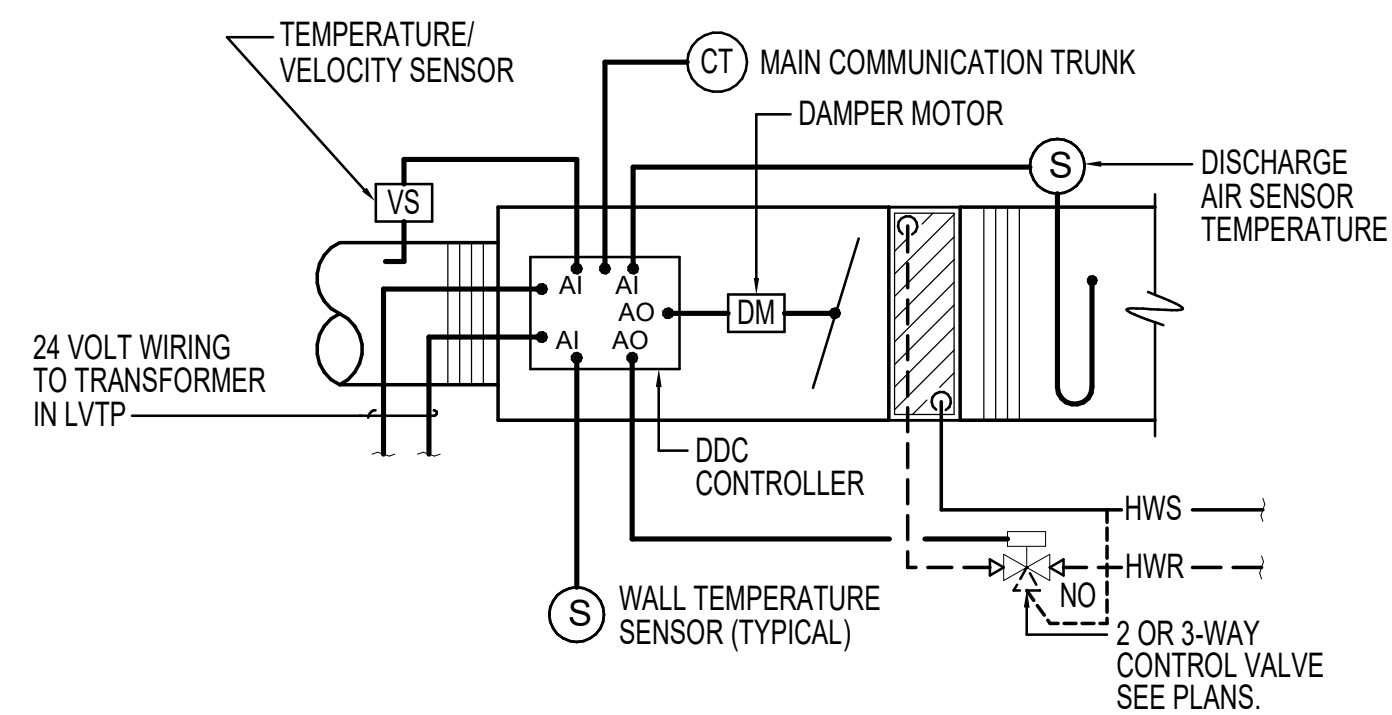
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	DEPARTMENT OF THE AIR FORCE		SCOTT ARNOLD
	75TH AIR BASE WING		
	75TH CIVIL ENGINEER GROUP		

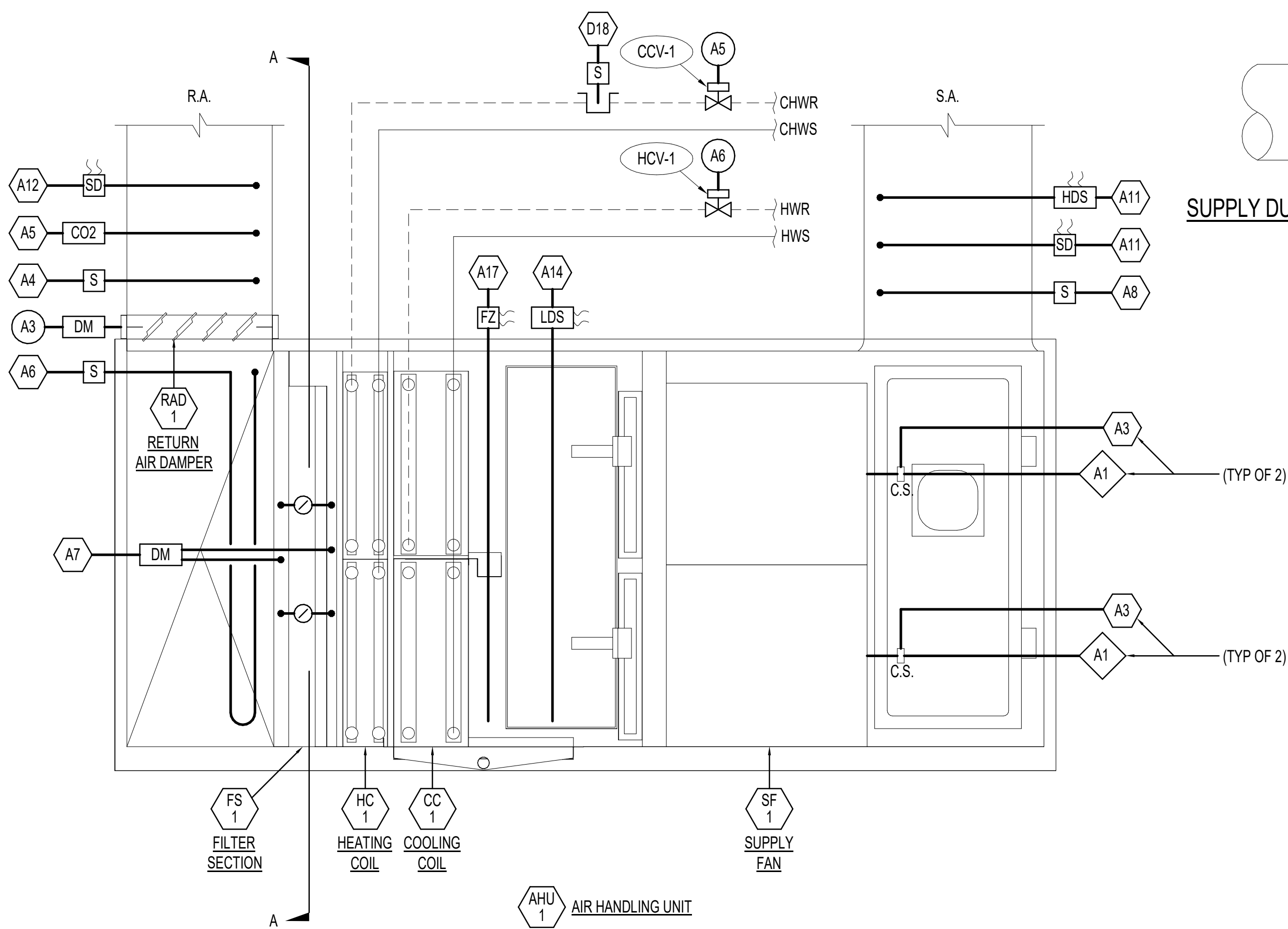
HAFB 309th SOFTWARE ENGINEERING FACILITY	MECHANICAL CONTROL DIAGRAMS
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MI601

SHEET 75 OF 123

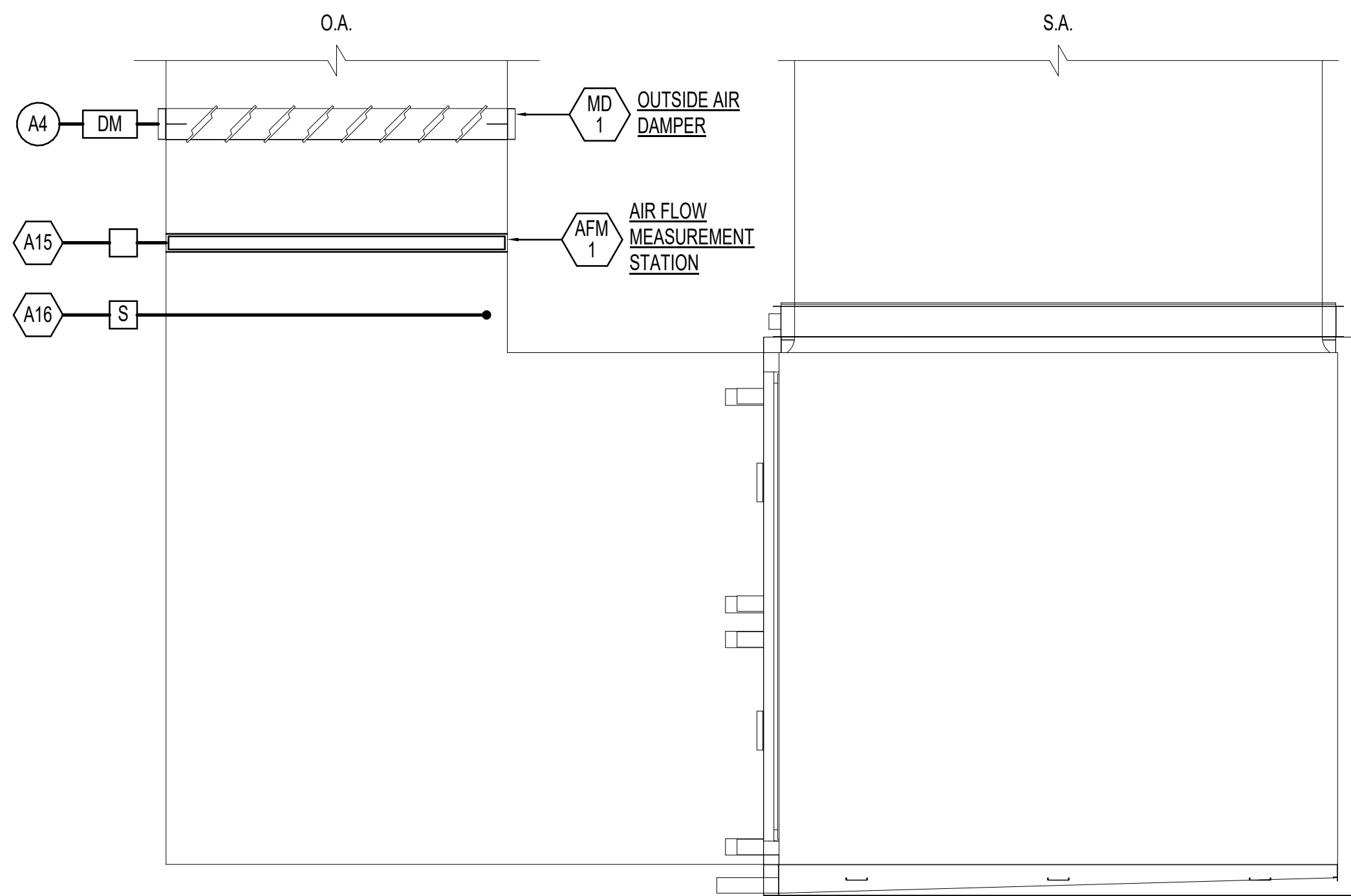


CONTROL VALVE SCHEDULE								
SYMBOL	VALVE TYPE	OPERATOR TYPE	GPM	PRESSURE DIFF. PSI	MIN. REQ'D CV	CIRCULATING FLUID	DUTY	REMARKS
CCV-1	2-WAY	ELECTRIC MODULATING	83	3	47.9	30% PROPYLENE GLYCOL CHILLED WATER	AHU-1 COOLING COIL	
HCV-1	2-WAY	ELECTRIC MODULATING	17.2	3	9.93	30% PROPYLENE GLYCOL HEATING WATER	AHU-1 HEATING COIL	
CHCV-1	2-WAY	ELECTRIC MODULATING	0.5	3	0.29	30% PROPYLENE GLYCOL HEATING WATER	CH-1 HEATING COIL	
VHCV-04	2-WAY	ELECTRIC MODULATING	0.5	3	0.29	30% PROPYLENE GLYCOL HEATING WATER	VAVR-04 HEATING COIL	
VHCV-05	2-WAY	ELECTRIC MODULATING	0.5	3	0.29	30% PROPYLENE GLYCOL HEATING WATER	VAVR-05 HEATING COIL	
VHCV-06	2-WAY	ELECTRIC MODULATING	0.5	3	0.29	30% PROPYLENE GLYCOL HEATING WATER	VAVR-06 HEATING COIL	
VHCV-07	2-WAY	ELECTRIC MODULATING	0.5	3	0.29	30% PROPYLENE GLYCOL HEATING WATER	VAVR-07 HEATING COIL	
VHCV-12	2-WAY	ELECTRIC MODULATING	1.6	3	0.92	30% PROPYLENE GLYCOL HEATING WATER	VAVR-12 HEATING COIL	
VHCV-16	2-WAY	ELECTRIC MODULATING	0.5	3	0.29	30% PROPYLENE GLYCOL HEATING WATER	VAVR-16 HEATING COIL	
VHCV-17	2-WAY	ELECTRIC MODULATING	1	3	0.58	30% PROPYLENE GLYCOL HEATING WATER	VAVR-17 HEATING COIL	
VHCV-18	2-WAY	ELECTRIC MODULATING	0.5	3	0.29	30% PROPYLENE GLYCOL HEATING WATER	VAVR-18 HEATING COIL	
VHCV-23	2-WAY	ELECTRIC MODULATING	1.4	3	0.81	30% PROPYLENE GLYCOL HEATING WATER	VAVR-23 HEATING COIL	
VHCV-24	2-WAY	ELECTRIC MODULATING	2.1	3	1.21	30% PROPYLENE GLYCOL HEATING WATER	VAVR-24 HEATING COIL	
VHCV-25	2-WAY	ELECTRIC MODULATING	2.1	3	1.21	30% PROPYLENE GLYCOL HEATING WATER	VAVR-25 HEATING COIL	
VHCV-26	2-WAY	ELECTRIC MODULATING	2.1	3	1.21	30% PROPYLENE GLYCOL HEATING WATER	VAVR-26 HEATING COIL	



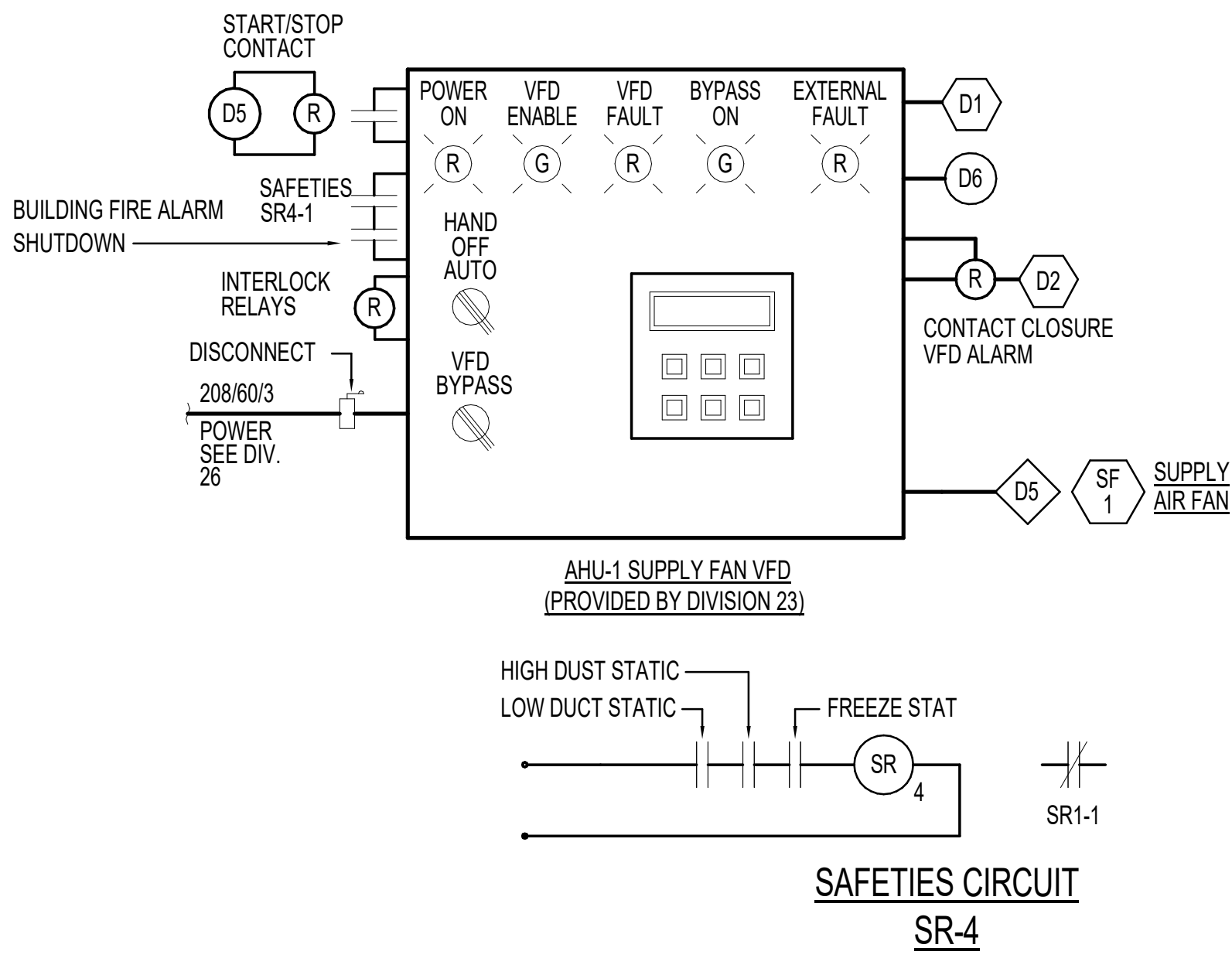
SUPPLY DUCT STATIC PRESSURE

LOCATE UPSTREAM FROM FURTHEST AIR TERMINAL BOX FROM AIR HANDLING UNIT.

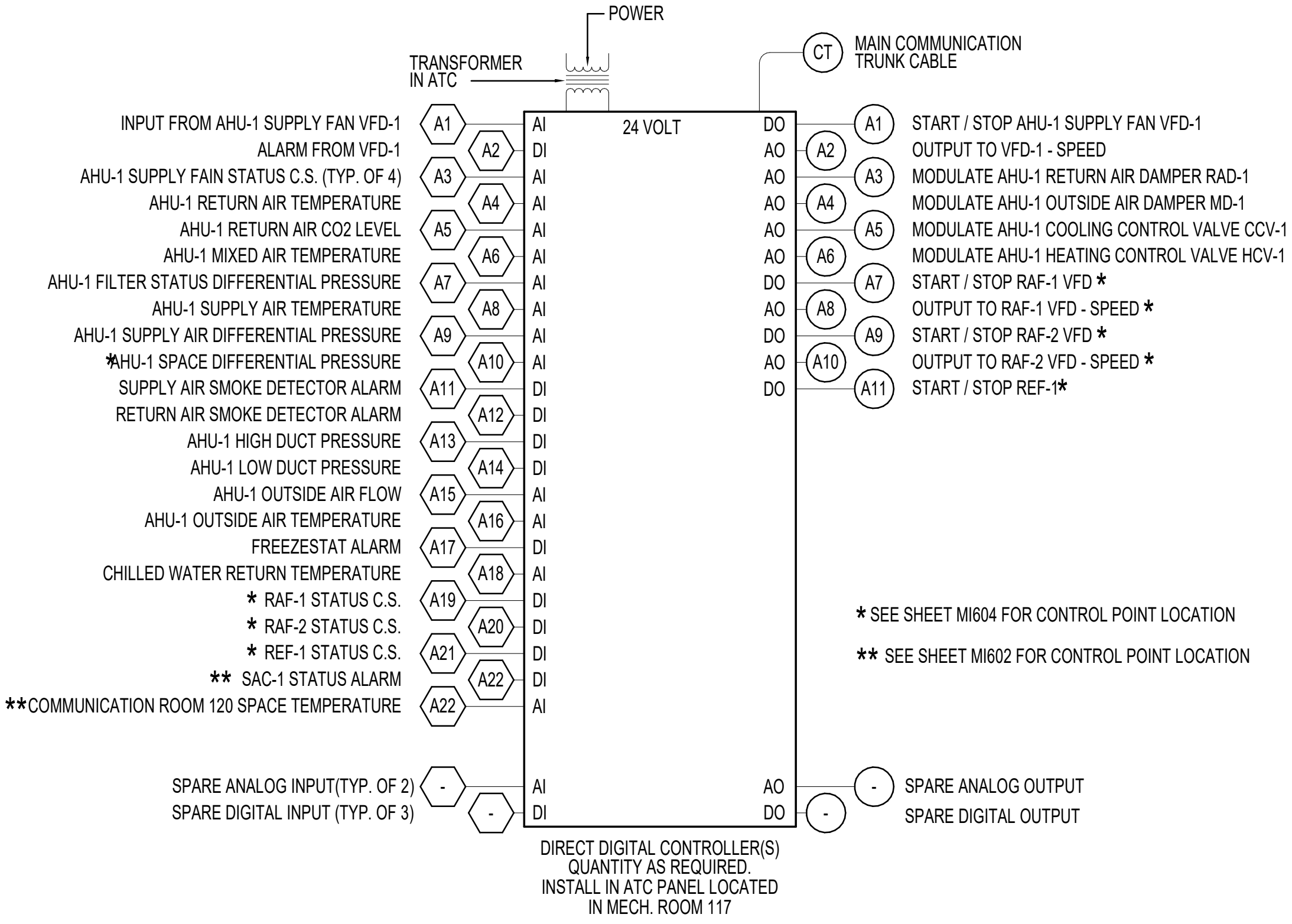


VIEW A-A

AHU 1 AIR HANDLING UNIT



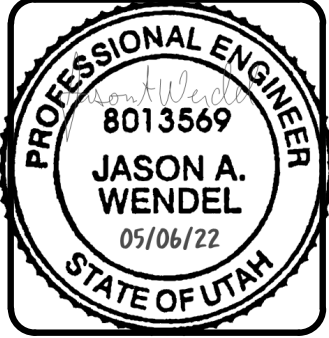
SAFETIES CIRCUIT
SR-4



1 AIR HANDLING SYSTEM AHU-1 CONTROL DIAGRAM
MI603 SCALE NONE



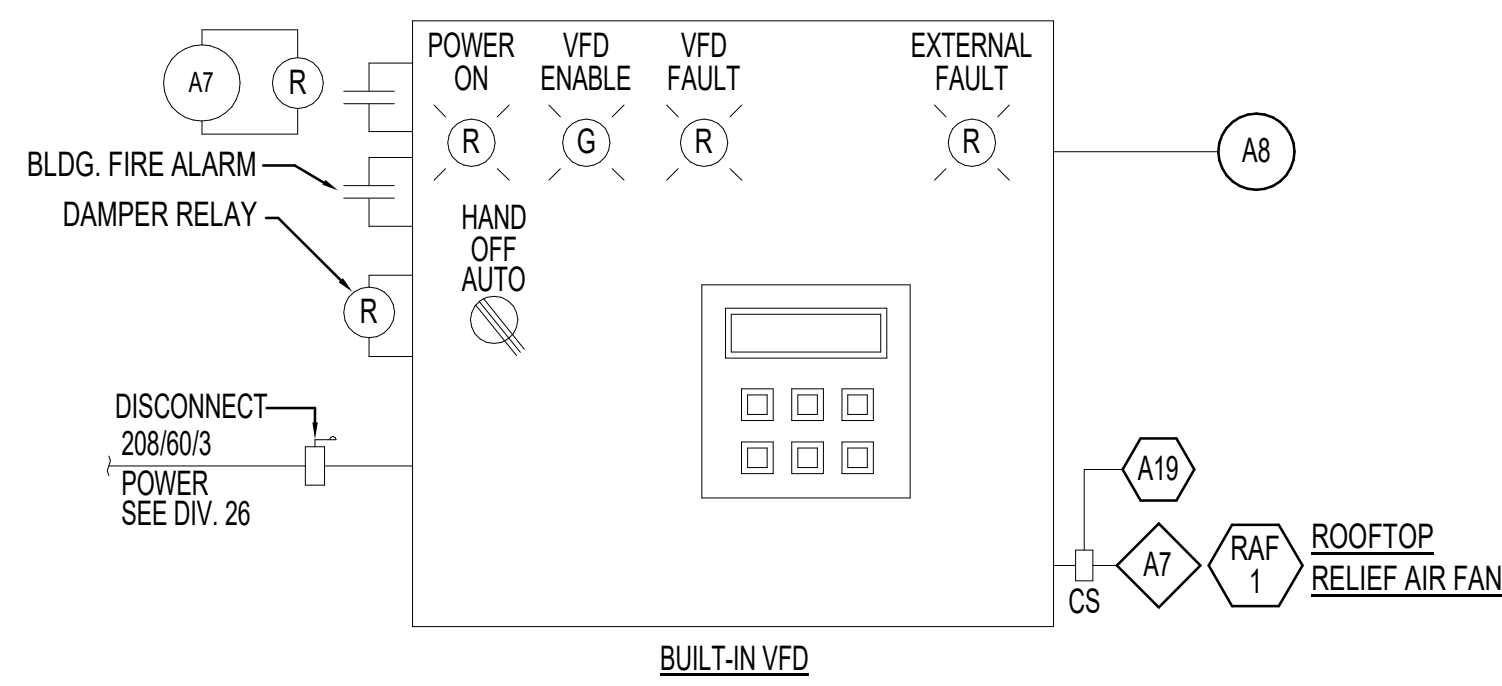
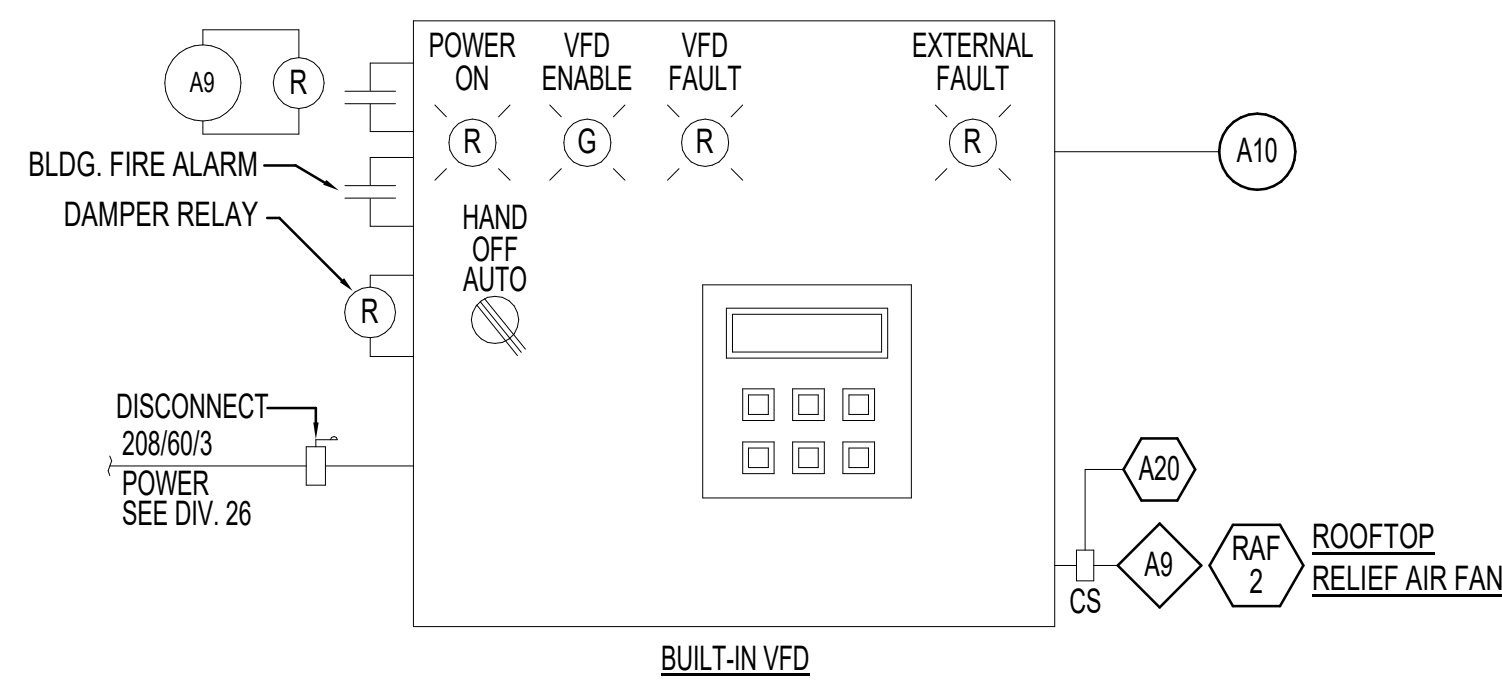
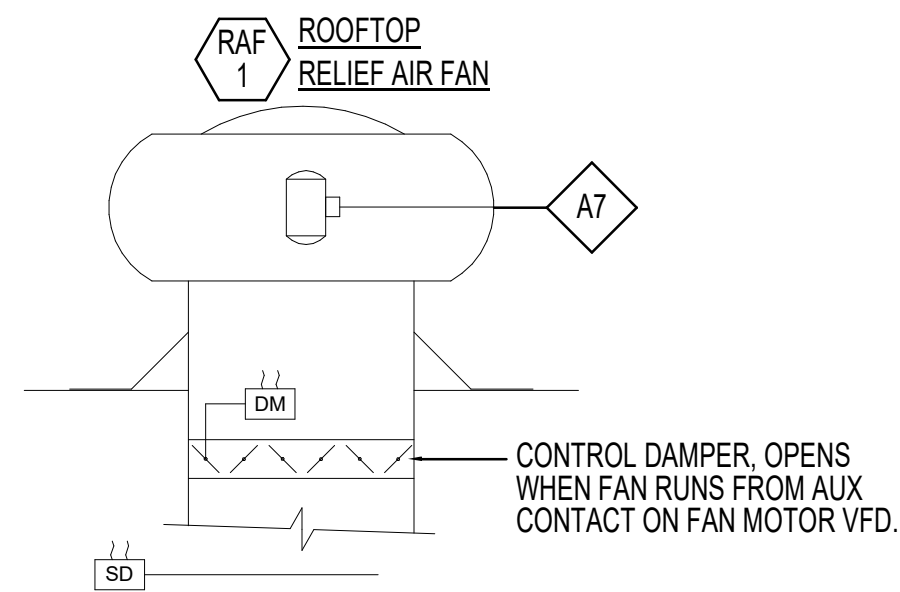
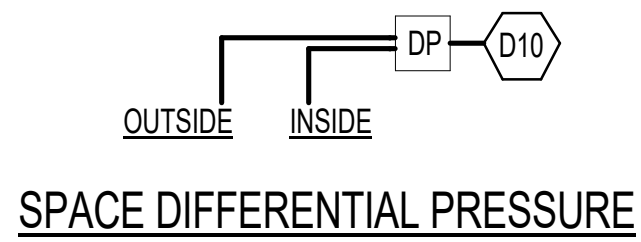
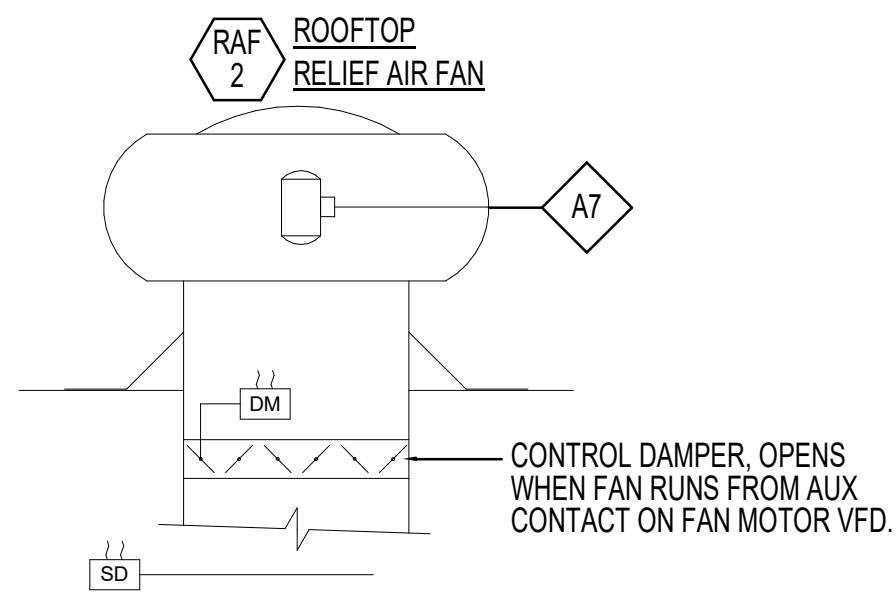
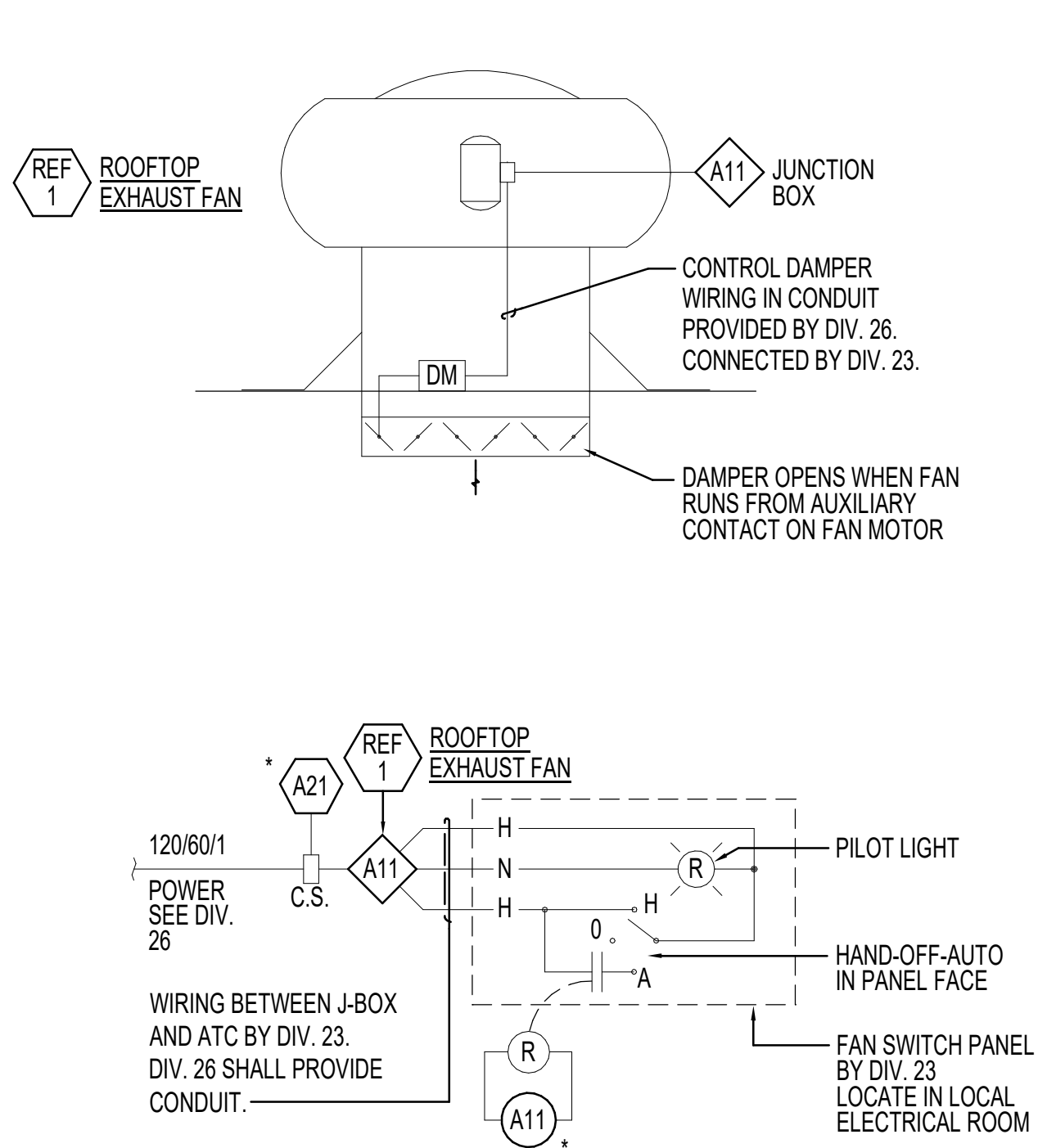
DATE	APPR	MARK



DESIGNED BY: Designer	CHECKED BY: Checker
CAPITAL PROJECT NO. 1043925	SITE CODE --
OTHER PROJECT NO. 7596233	ISSUE DATE 05/10/2022
BASE PROJECT MANAGER KESM/M200806	BASE PROJECT MANAGER SCOTT ARNOLD

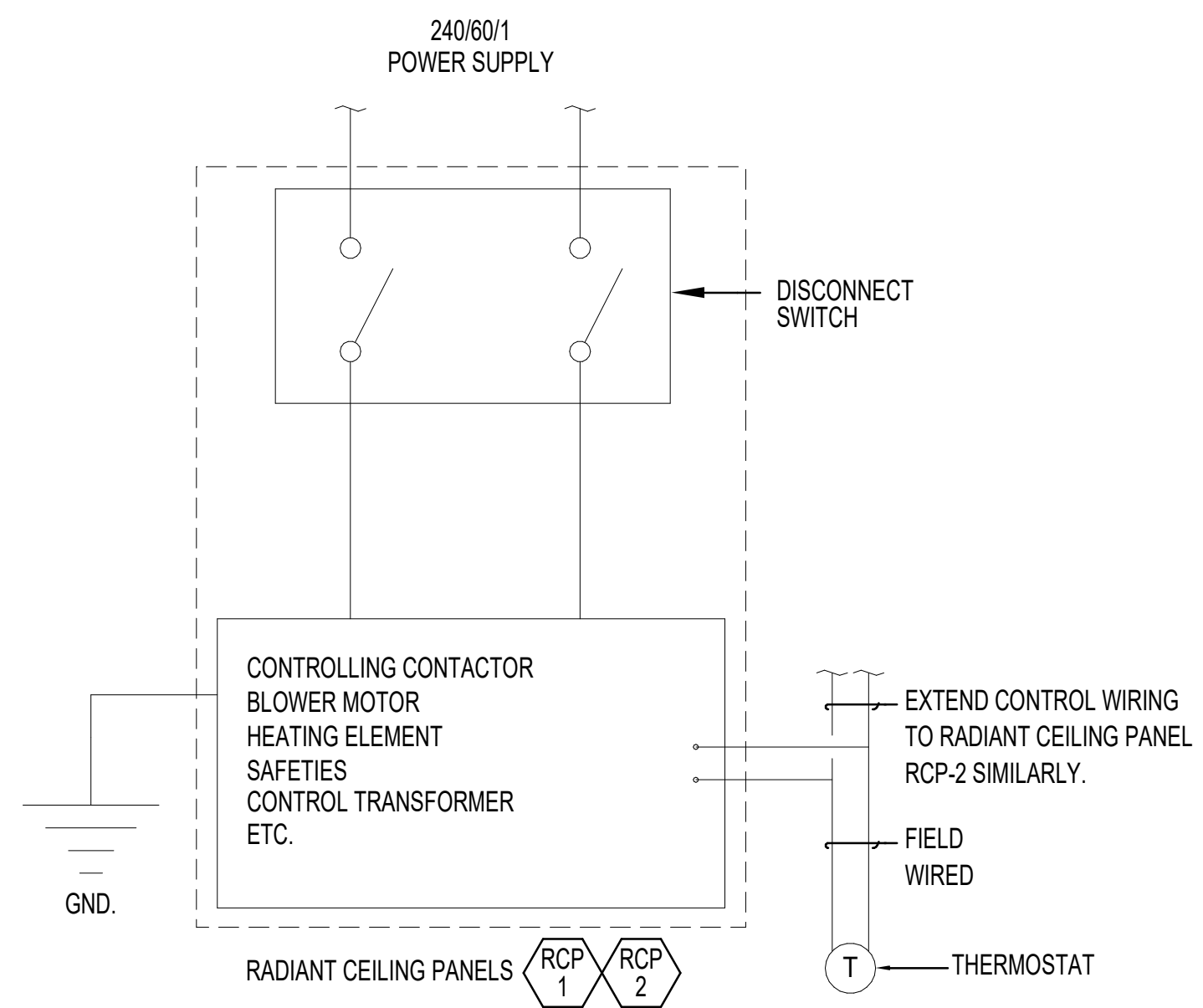
HAFB 309th SOFTWARE
ENGINEERING FACILITY
MECHANICAL CONTROL DIAGRAMS

MI603
SHEET 77 OF 123



EXHAUST AND RELIEF FAN CONTROL DIAGRAMS

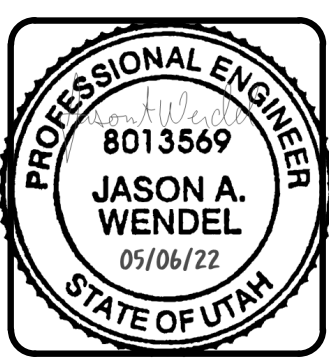
NOTE: SEE SHEET M1603 FOR CONTROL POINT REFERENCES.



ELECTRIC UNIT HEATER CONTROL DIAGRAM
SCALE: NONE TYPICAL FOR EUH-1

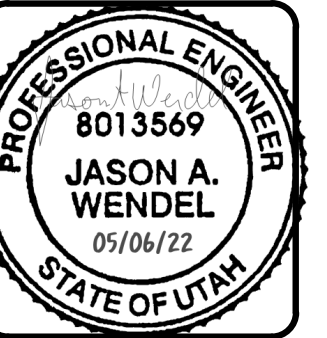
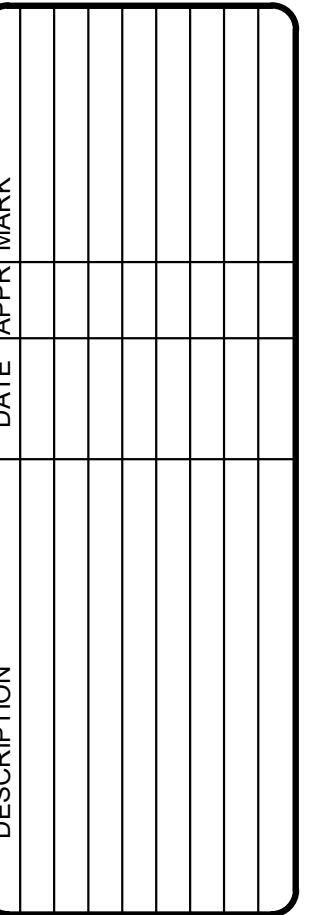


DATE	APPROVAL
DESCRIPTION	



DESIGNED BY: Designer	CHECKED BY: Checker
DATE: 10/4/2025	DATE: 05/10/2022
PROJECT NO: 7596233	PROJECT NO: 7596233
PROJECT NAME: 75TH AIR BASE WING	PROJECT NAME: 75TH AIR BASE WING
DESIGNER: JASON A. WENDEL	CHECKER: SCOTT ARNOLD

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MECHANICAL CONTROL DIAGRAMS



	DEPARTMENT OF THE AIR FORCE 75TH AIR BASE WING 75TH CIVIL ENGINEER GROUP	
	Designer CAPITAL PROJECT NO. 1043925	Checker SITE CODE **
	OTHER PROJECT NO. 7596233	ISSUE DATE 05/10/2022
	BASE PROJECT MANAGER SCOTT ARNOLD	

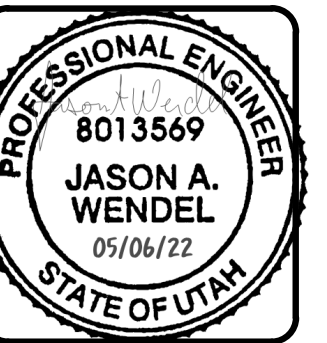
HAFB 309th SOFTWARE
ENGINEERING FACILITY

MECHANICAL CONTROL DIAGRAMS

MI605

SHEET 79 OF 123

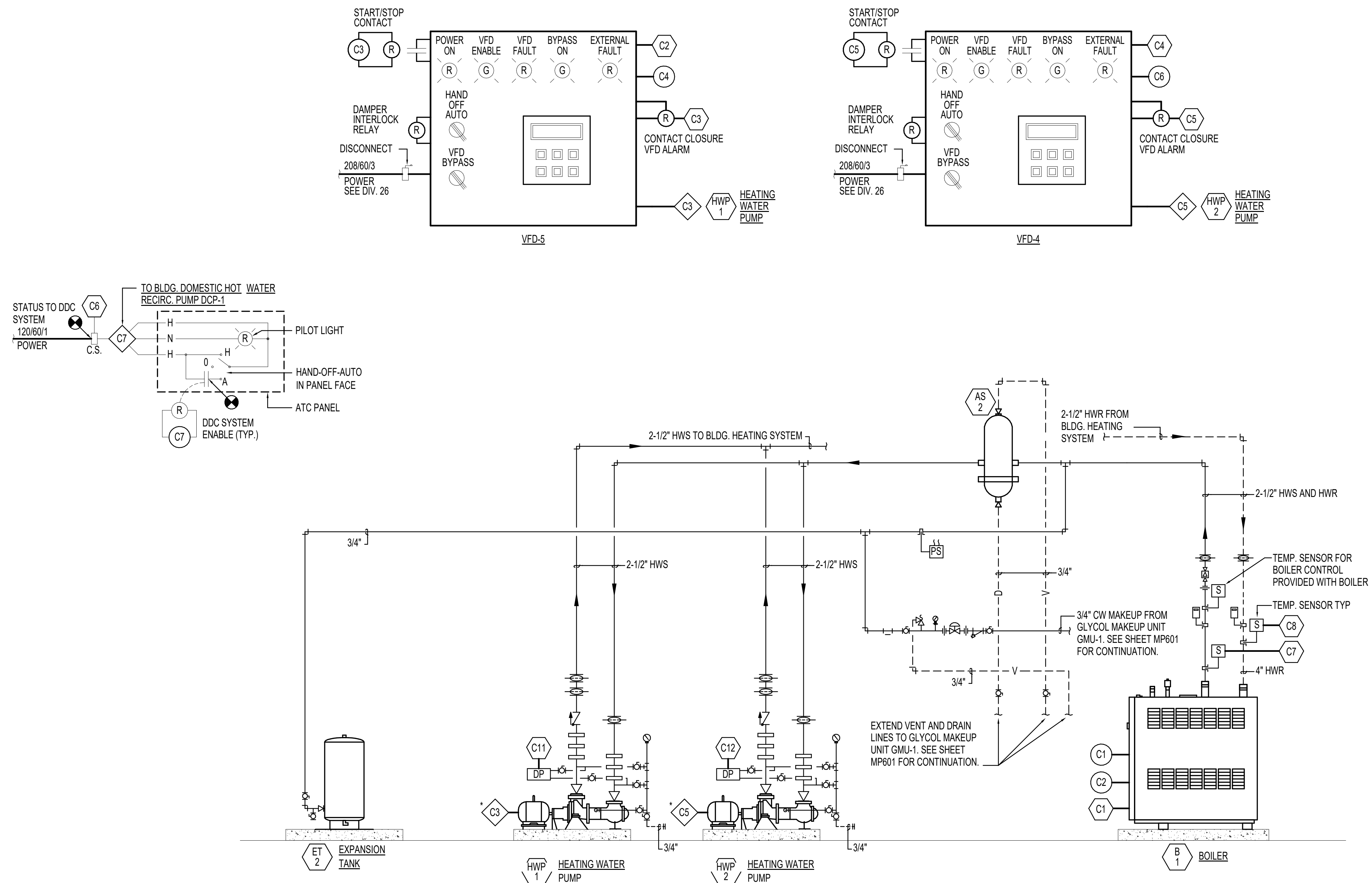
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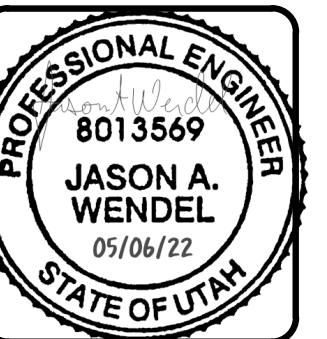
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	PROJECT NO: 1043825 PROJECT NAME: CAPITAL PROJECT #1 DRAWING NO: 1043825	CHECKED BY:  CHECKED DATE: 05/10/2022 CHECKED TIME: 10:00 AM CHECKED BY: SCOTT A. RICHARDSON	ISSUE DATE: 05/10/2022 ISSUE TIME: 10:00 AM ISSUE BY: SCOTT A. RICHARDSON

HAFB 309th SOFTWARE ENGINEERING FACILITY	MECHANICAL CONTROL DIAGRAMS
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MI606
SHEET 80 OF 123



1 HEATING WATER SYSTEM CONTROLS FLOW DIAGRAM

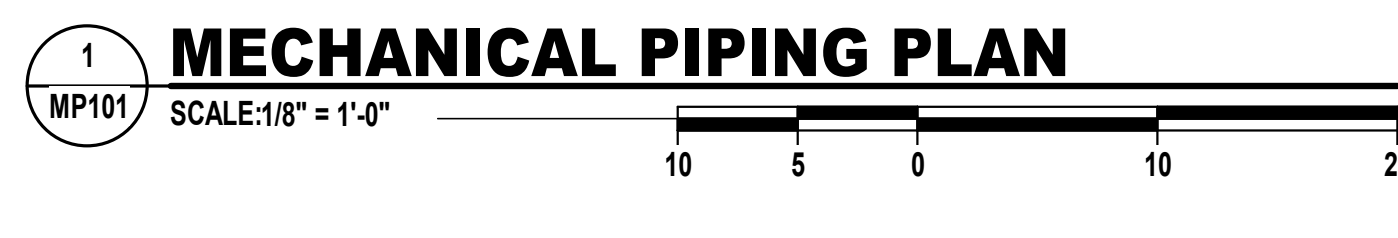
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	DEPARTMENT OF THE AIR FORCE		SCOTT ARNOLD
	75TH AIR BASE WING		
	75TH CIVIL ENGINEER GROUP		

HAFB 309th SOFTWARE
ENGINEERING FACILITY

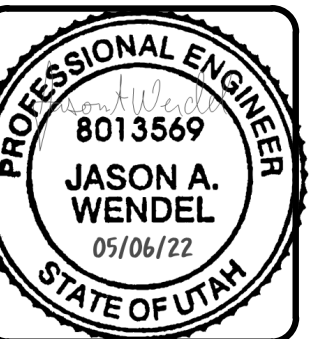
MECHANICAL CONTROL DIAGRAMS

MI607



A. ALL HWS/R PIPING BRANCHES TO VAVR BOXES TO BE 3/4" UNLESS NOTED OTHERWISE.

NOTE #	DESCRIPTION
1	REFRIGERANT PIPING.

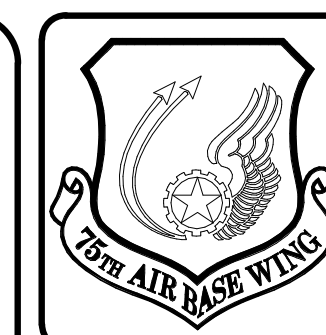
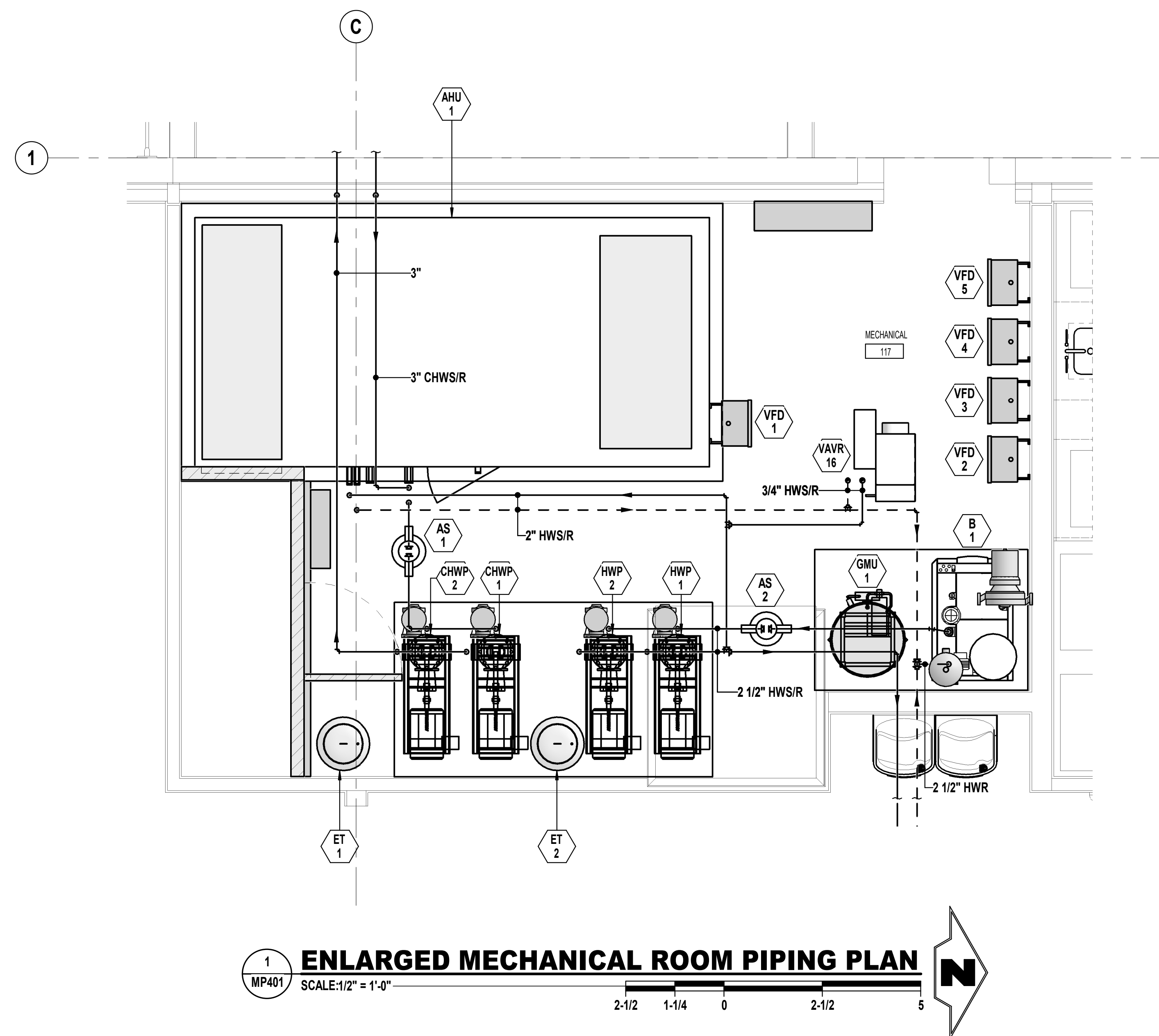
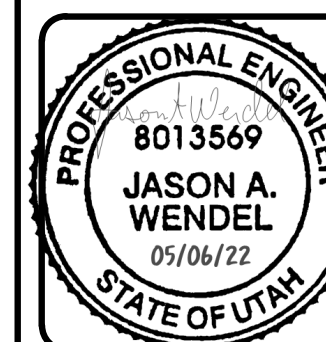
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	1043925	RTE CODE	
DEPARTMENT OF THE AIR FORCE 75TH AIR BASE WING 75TH CIVIL ENGINEER GROUP	OTHER PROJECT NO.	ISSUE DATE	
	7596233 KFSM200806 BASE PROJECT MANAGER	05/10/2022	
SCOTT ARNOLD			

HAFB 309th SOFTWARE ENGINEERING FACILITY	MECHANICAL PIPING PLAN
---	------------------------

MP101

SHEET 82 OF 123

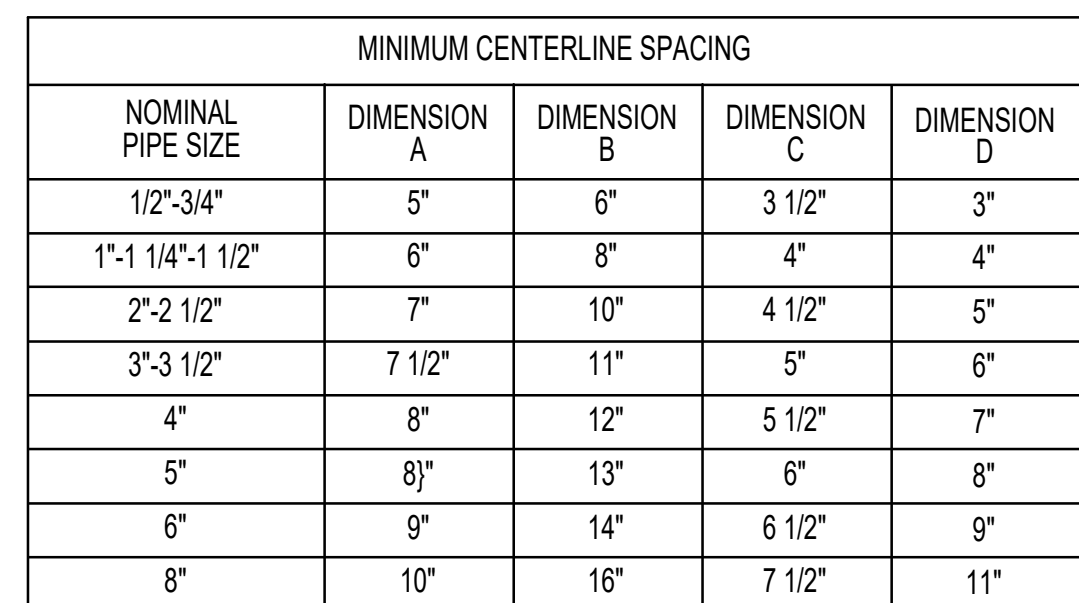
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	DESIGNED BY:	CHECKED BY:
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	1043925	**
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	7596233	05/10/2022
DEPARTMENT OF THE AIR FORCE 75TH AIR BASE WING 75TH CIVIL ENGINEER GROUP BASE PROJECT MANAGER		

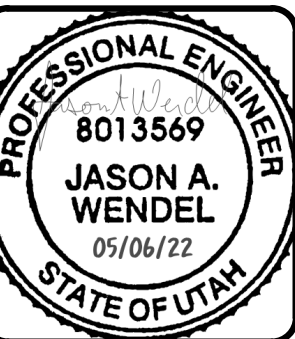
HAFB 309th SOFTWARE
ENGINEERING FACILITY
MECHANICAL ROOM PIPING PLAN

MP401

SHEET 83 OF 123



2 PIPE CLEARANCE DETAIL
 MP501 SCALE: NONE

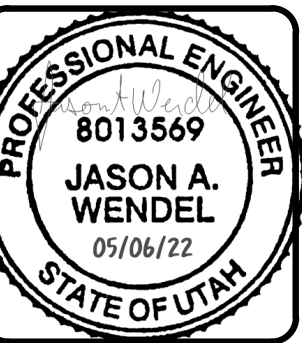
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HAFB 309th SOFTWARE
ENGINEERING FACILITY

MECHANICAL PIPING DETAILS

MP501

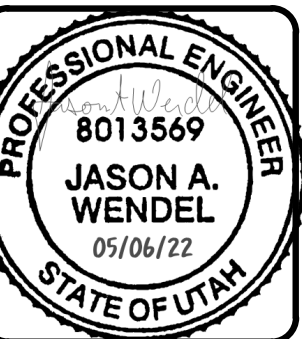
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DEPARTMENT OF THE AIR FORCE 75TH AIR BASE WING 75TH CIVIL ENGINEER GROUP		KRSJ200906 BASE PROJECT MANAGER		SCOTT ARNOLD

HAFB 309th SOFTWARE ENGINEERING FACILITY
MECHANICAL PIPING DETAILS

MP502

HEET 85 OF 123

[illegible]

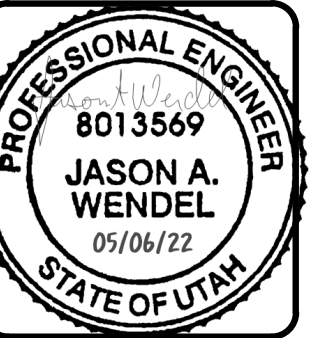
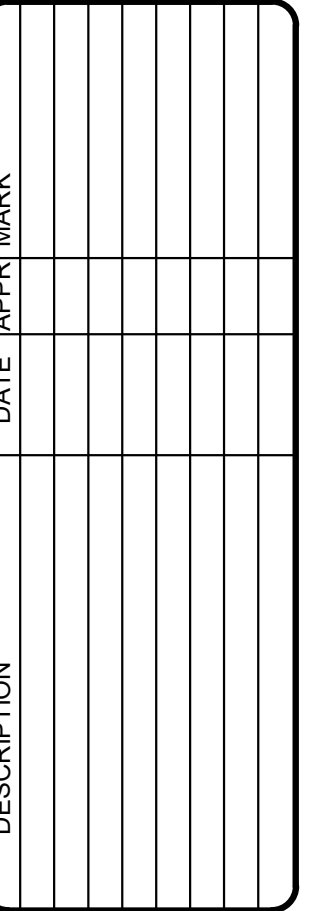
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HAFB 309th SOFTWARE ENGINEERING FACILITY
MECHANICAL PIPING DETAILS

MP503

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1. PROVIDE AND INSTALL 3/4" VALVED AIR VENTS AT ALL SYSTEM'S HIGH POINTS AND 3/4" VALVED DRAINS AT ALL SYSTEM LOW POINTS. EXTEND ALL VENTS AND DRAIN LINES TO GLYCOL MAKEUP UNIT OR TERMINATE WITH HOSE CONNECTION.
2. INSTALL ALL FLOOR MOUNTED EQUIPMENT ON REINFORCED CONCRETE HOUSEKEEPING PADS. SEE DETAILS.
3. SEE MI DRAWINGS FOR CONTROL AND MONITORING OF MECHANICAL EQUIPMENT.
4. CONTROL VALVE PORTING IS DIAGRAMMATIC. FIELD VERIFY ACTUAL PORTING OF TO BE INSTALLED CONTROL VALVE(S) PRIOR TO INSTALLATION, INSURING PROPER FLOW PATTERN.



	DEPARTMENT OF THE AIR FORCE 75TH AIR BASE WING 75TH CIVIL ENGINEER GROUP	
	Designer CAPITAL PROJECT NO. 1043925	Checker SITE CODE **
	OTHER PROJECT NO. 7596233	ISSUE DATE 05/10/2022
	BASE PROJECT MANAGER SCOTT ARNOLD	

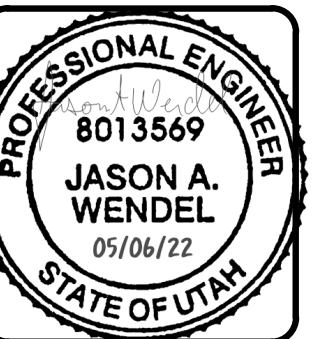
HAFB 309th SOFTWARE
ENGINEERING FACILITY

CHILLED WATER SYSTEM FLOW
DIAGRAM

MP601

SHEET 87 OF 123

1 CHILLED WATER SYSTEM FLOW DIAGRAM
MP601 SCALE: NONE

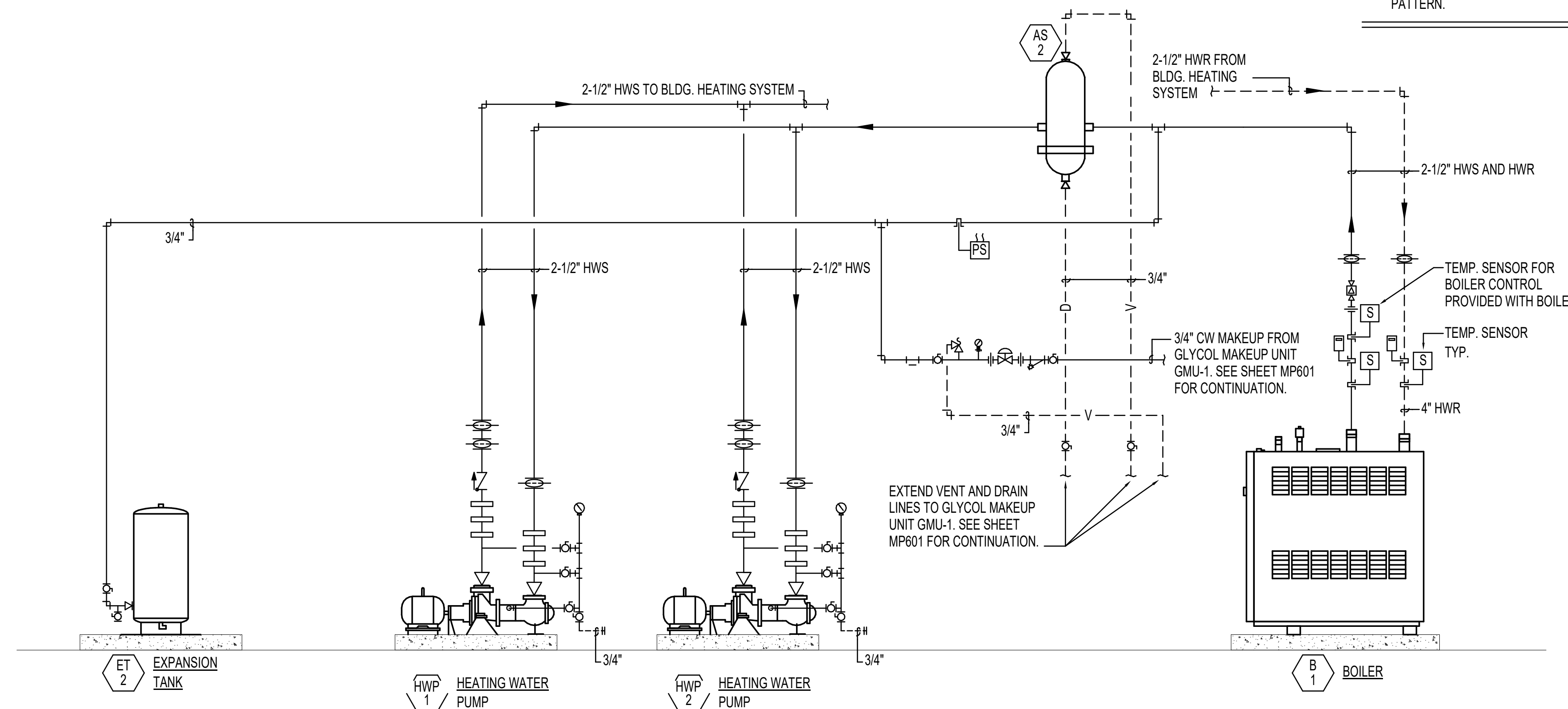
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	DEPARTMENT OF THE AIR FORCE		SCOTT ARNOLD
	75TH AIR BASE WING		
	75TH CIVIL ENGINEER GROUP		

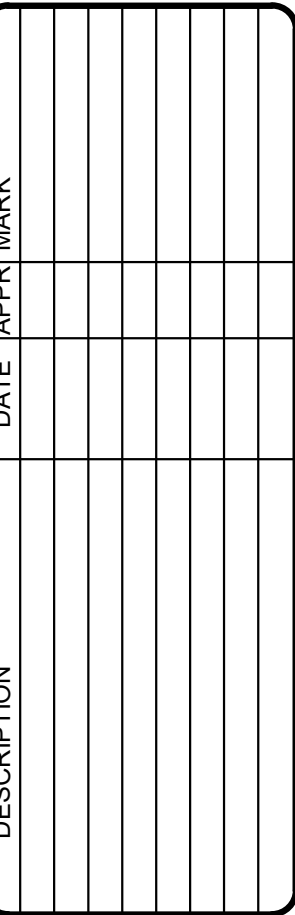
HAFB 309th SOFTWARE ENGINEERING FACILITY
HEATING WATER SYSTEM FLOW DIAGRAM

MP602

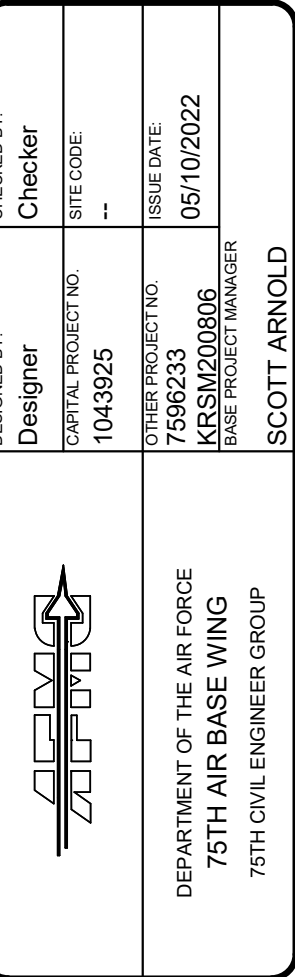
SHEET 88 OF 123



1 MP602 HEATING WATER SYSTEM FLOW DIAGRAM SCALE: NONE



PROFESSIONAL ENGINEER
8013569
JASON A. WENDEL
05/06/22
STATE OF UTAH



HAFB 309th SOFTWARE ENGINEERING FACILITY	HEATING AND CHILLED WATER FLOW DIAGRAMS
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HEET 89 OF 123