ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	MBH	THOUSAND BTUs PER HOUR
AHU	AIR HANDLING UNIT	MCA	MINIMUM CIRCUIT AMPS
BHP	BRAKE HORSE POWER	MOCP	MAXIMUM OVER CURRENT PROTECTION
BTU	BRITISH THERMAL UNIT		
CFM	CUBIC FEET PER MINUTE	NC	NORMALLY CLOSED
CV	CONSTANT VOLUME	NO	NORMALLY OPENED
CU	CONDENSING UNIT	NTS	NOT TO SCALE
DB	DRY BULB TEMPERATURE (°F)	OA	OUTSIDE AIR
DDC	DIRECT DIGITAL CONTROLS	PSI	POUNDS PER SQUARE INCH
DOAS	DEDICATED OUTSIDE AIR SYSTEM	PSIG	PSI GAUGE
DN	DOWN	PVC	POLYVINYL CHLORIDE PIPE
EAT	ENTERING AIR TEMPERATURE	RA	RETURN AIR
EF	EXHAUST FAN	RH	RELATIVE HUMIDITY
ESP	EXTERNAL STATIC PRESSURE	RHC	REHEAT COIL
EWT	ENTERING WATER TEMPERATURE	RLA	RUNNING LOAD AMPS
FCU	FAN COIL UNIT	RPM	REVOLUTIONS PER MINUTE
FD	FIRE DAMPER	RS/RL	REFRIGERANT SUCTION & LIQUID LINES
FLA	FULL LOAD AMPS		
FPI	FINS PER INCH	RTU	ROOFTOP AIR HANDLING UNIT
FPM	FEET PER MINUTE	SA	SUPPLY AIR
GPM	GALLONS PER MINUTE	SF	SUPPLY FAN
IV	INTAKE VENTILATOR	SP	STATIC PRESSURE
KW	KILOWATT	TSP	TOTAL STATIC PRESSURE
LAT	LEAVING AIR TEMPERATURE	VAV	VARIABLE AIR VOLUME
LRA	LOCKED ROTOR AMPS	VRF	VARIABLE REFRIGERANT FLOW
LWT	LEAVING WATER TEMPERATURE	VFD	VARIABLE FREQUENCY DRIVE
		WB	WET BULB TEMPERATURE (°F)

GENERAL MECHANICAL SYMBOLS

- 1 — REVISION NUMBER SHOWN ON PLANS
- POINT WHERE NEW CONNECTS TO EXISTING
- DEMOLISH TO POINT INDICATED
- 1 / M-001 — NUMBER OF DETAIL ON SHEET / NUMBER OF SHEET WHERE DETAIL APPEARS
- 1 — KEYNOTE

CONTINUATION SYMBOLS:

- ROUND DUCT
- RECTANGULAR DUCT

SPACE TAG:

- OFFICE — SPACE NAME
- 101 — SPACE NUMBER
- 100 SF — SPACE AREA
- ITEM TO BE DEMOLISHED
- AREA NOT IN CONTRACT

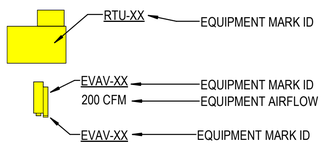
HVAC ENERGY DESIGN CONDITIONS

LOCATION:	EAST CAMDEN, AR
OUTDOOR SUMMER (0.4% OCCURANCE):	98°F DB / 78°F WB
OUTDOOR WINTER (99.0% OCCURANCE):	21°F DB / 19°F WB
INSIDE SETPOINT SUMMER:	72°F DB / 55% MAX RH.
INSIDE SETPOINT WINTER:	70°F DB

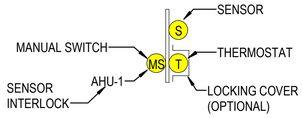
SEISMIC DESIGN CONDITIONS

1. SEISMIC DESIGN DATA:
   A. SEISMIC DESIGN CATEGORY: C
   B. MECHANICAL COMPONENTS IMPORTANCE FACTOR: 1.0
2. SEISMIC RESTRAINTS ARE **NOT** REQUIRED FOR THE MECHANICAL COMPONENTS AND SYSTEMS PER THE REQUIREMENTS FOR THE INTERNATIONAL BUILDING CODE (IBC) AS DEFINED PER ASCE 7 - SECTION 13.6.

MECHANICAL EQUIPMENT TAGS



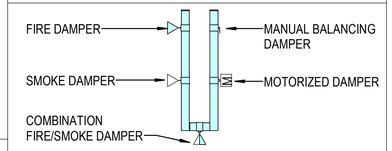
MECHANICAL DATA DEVICES



HVAC DUCTWORK LEGEND

- 22/14 — SQUARE DUCT SIZE TAG (WIDTH x HEIGHT)
- 22/14Ø — OVAL DUCT SIZE TAG (WIDTH / HEIGHT)
- 22Ø — ROUND DUCT SIZE TAG (DIAMETER)
- (E) — EXISTING DUCT TAG
- (D) — DUCT BEING DEMOLISHED
- S/A — SUPPLY AIR
- O/A — OUTSIDE AIR
- R/A — RETURN AIR
- E/A — EXHAUST AIR
- DROP — RECTANGULAR SUPPLY/OUTSIDE AIR DUCT RISE
- DROP — ROUND SUPPLY/OUTSIDE AIR DUCT RISE
- DROP — RECTANGULAR RETURN AIR DUCT RISE
- DROP — ROUND RETURN AIR DUCT RISE
- DROP — RECTANGULAR EXHAUST AIR DUCT RISE
- DROP — ROUND EXHAUST AIR DUCT RISE
- FLEXIBLE CONNECTION
- 90° ELBOW W/ TURNING VANE
- 90° BEND, ROUND DUCT
- 45° BEND, ROUND DUCT
- 45° RECTANGULAR DUCT
- 30° OR LESS FOR ALL SIMILAR FITTINGS (TOP / SIDE)
- RECTANGULAR TRANSITION (TOP / SIDE)

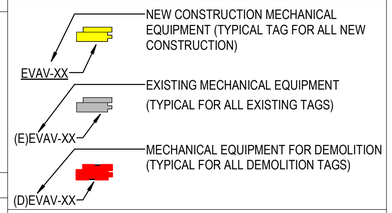
DUCT ACCESSORIES



HVAC GRILLES/DIFFUSERS

- SUPPLY DIFFUSER (SEE PLANS OR SCHEDULE FOR SIZES)
- RETURN GRILLE (SEE PLANS OR SCHEDULE FOR SIZES)
- EXHAUST GRILLE (SEE PLANS OR SCHEDULE FOR SIZES)

MECHANICAL PHASING



MECHANICAL SHEET SET NOTE

* NOTE *

ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET. SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THE CONTAINED REFERENCE DRAWINGS.

GENERAL NOTES

1 ALL WORK SHALL COMPLY WITH THE 2021 EDITION OF THE "INTERNATIONAL MECHANICAL CODE", THE 2014 EDITION OF THE "ARKANSAS ENERGY CODE", NFPA 90A, AND ALL CITY, STATE, AND LOCAL REQUIREMENTS.

2 REFER TO THE SPECIFICATIONS FOR ALL REQUIREMENTS

3 REFER TO ARCHITECTURAL PLANS FOR: - REFLECTED CEILING PLAN FOR EXACT LOCATION OF AIR DEVICES AND CEILING TYPES. - EXACT LOCATIONS AND MOUNTING HEIGHTS OF EXTERIOR LOUVERS. - FIRE RATED WALLS AND PARTITIONS. PROVIDE FIRE DAMPERS IN DUCT PENETRATIONS OF ALL FIRE RATED WALLS AND PARTITIONS AS NECESSARY TO MEET CITY AND STATE REQUIREMENTS. - ALL WALL AND ROOF PENETRATIONS AND EQUIPMENT MOUNTING DETAILS.

4 ALL DUCTWORK SHALL BE CONSTRUCTED FROM GALVANIZED STEEL IN CONFORMANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS," LATEST EDITION

5 U.L. LISTED FLEXIBLE DUCT RUN-OUTS MAY BE USED, BUT SHALL NOT EXCEED 5'-0" IN LENGTH. ALL FLEXIBLE DUCT TO BE PROPERLY SUPPORTED WITH NO KINKS OR HARD BENDS.

6 DUCT FITTINGS: - SUPPLY TAKE-OFFS TO CEILING SUPPLY DIFFUSERS TO BE CONICAL TAP OR 45° SIDE TAP. - ALL DUCT RUN-OUTS TO HAVE LOCKING QUADRANT VOLUME DAMPERS. PROVIDE STAND-OFF BRACKET TO ACCOMMODATE INSULATION THICKNESS. - ALL 90° ROUND ELBOWS TO HAVE R/D=1.5 (UNLESS OTHERWISE NOTED). - ALL 90° RECTANGULAR ELBOWS TO HAVE TURNING VANES (UNLESS OTHERWISE NOTED). - PROVIDE HARD ELBOW WHEN TRANSITIONING FROM RIGID TO FLEXIBLE DUCT WHEN CONNECTING TO AIR DEVICES. REFER TO DETAIL.

7 DUCTWORK TO BE COORDINATED WITH STRUCTURAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION, COMPONENTS AND SYSTEMS. ALL DUCTWORK THAT HAS TO BE OFFSET DUE TO AN OBSTRUCTION SHALL BE SLOPED WITH 2-30° ELBOWS UNLESS OTHERWISE NOTED.

8 PROVIDE ACCESS PANELS IN CEILINGS OTHER THAN LAY-IN TYPE WHERE NECESSARY: - CLOSELY COORDINATE LOCATIONS AND SIZE OF ACCESS PANELS WITH INSTALLED EQUIPMENT TO ACHIEVE GREATEST ACCESSIBILITY FOR MAINTENANCE PURPOSES. - PROVIDE ACCESS PANEL AT BALANCING DAMPERS, FIRE DAMPERS, CONTROLS, VALVES, TRAPS, CLEAN OUTS, ETC. - PROVIDE ACCESS PANELS FOR GREASE DUCTS, AS REQUIRED BY NFPA 96, FOR CLEANING PURPOSES, AT CHANGES IN DIRECTION, ETC.

9 COMPLETELY INSULATE THE TOPS OF ALL CEILING DIFFUSERS.

10 CLOSELY COORDINATE LOCATIONS OF INSTALLED EQUIPMENT TO ACHIEVE THE GREATEST ACCESSIBILITY.

11 MAINTAIN 10'-0" MINIMUM CLEARANCE BETWEEN OUTSIDE AIR INTAKES AND ALL EXHAUST FANS, FLUES, PLUMBING VENTS, ETC.

12 PROVIDE FLEXIBLE CONNECTIONS AT INLETS AND OUTLETS OF ALL AIR HANDLING UNITS, MAKE-UP AIR UNITS, FURNACES, AND/OR EXHAUST FANS.

13 PROVIDE 4" CONCRETE PADS UNDER ALL GROUND MOUNTED CONDENSING UNITS. EACH PAD TO EXTEND A MINIMUM OF 6" BEYOND OUTLINE OF UNIT ON ALL SIDES.

14 PROVIDE 6" CONCRETE PADS UNDER ALL GROUND MOUNTED AIR PACKAGED UNITS. EACH PAD TO EXTEND A MINIMUM OF 6" BEYOND OUTLINE OF UNIT ON ALL SIDES.

15 FIRESTOP ALL PIPE AND DUCT PENETRATIONS THROUGH FIRE RATED ASSEMBLIES.

16 CONDENSATE PIPING SHALL BE COMPRISED OF TYPE "M", DWV COPPER, OR SCHEDULE 40 PVC. PVC EXPOSED TO SUNLIGHT SHALL HAVE UV RESISTANT COATING.

17 ALL WALL-MOUNTED, OCCUPANT-CONTROLLED HVAC DEVICES, I.E., THERMOSTATS, HUMIDISTAT, CO2 CONTROLLERS, CONTROL PANELS, ETC., SHALL BE MOUNTED 4'-0" ABOVE FINISHED FLOOR. CONTROLS LOCATED IN PUBLIC AREAS SHALL HAVE CLEAR PLASTIC LOCKING COVERS.

18 COORDINATE WORK CLOSELY WITH CONTROL CONTRACTOR. PROVIDE ALL NECESSARY DUCT, PIPE TAPS, TEES, WELLS, CONTROL DAMPERS, AIR MEASURING STATIONS, AND OTHER ACCESSORIES REQUIRED BY CONTROL SYSTEM

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Project

AEROJET ROCKETDYNE
A17 CONTROL BUILDING
EAST CAMDEN, ARKANSAS

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CERTIFICATE OF AUTHORIZATION — CROMWELL ARCHITECTS/ENGINEERS #5 — ARKANSAS ENGINEER

STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — No. 11828 — JOEL FUNKHOUSER

02-20-2025

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Project Number **2024-210**

Issue Date **02-20-2025**

Sheet Title

MECHANICAL LEGEND AND SYMBOLS

Sheet Number

M-001

KEYED NOTES

1 CONDENSATE DRAIN PIT. SEE DETAIL ON M-502.

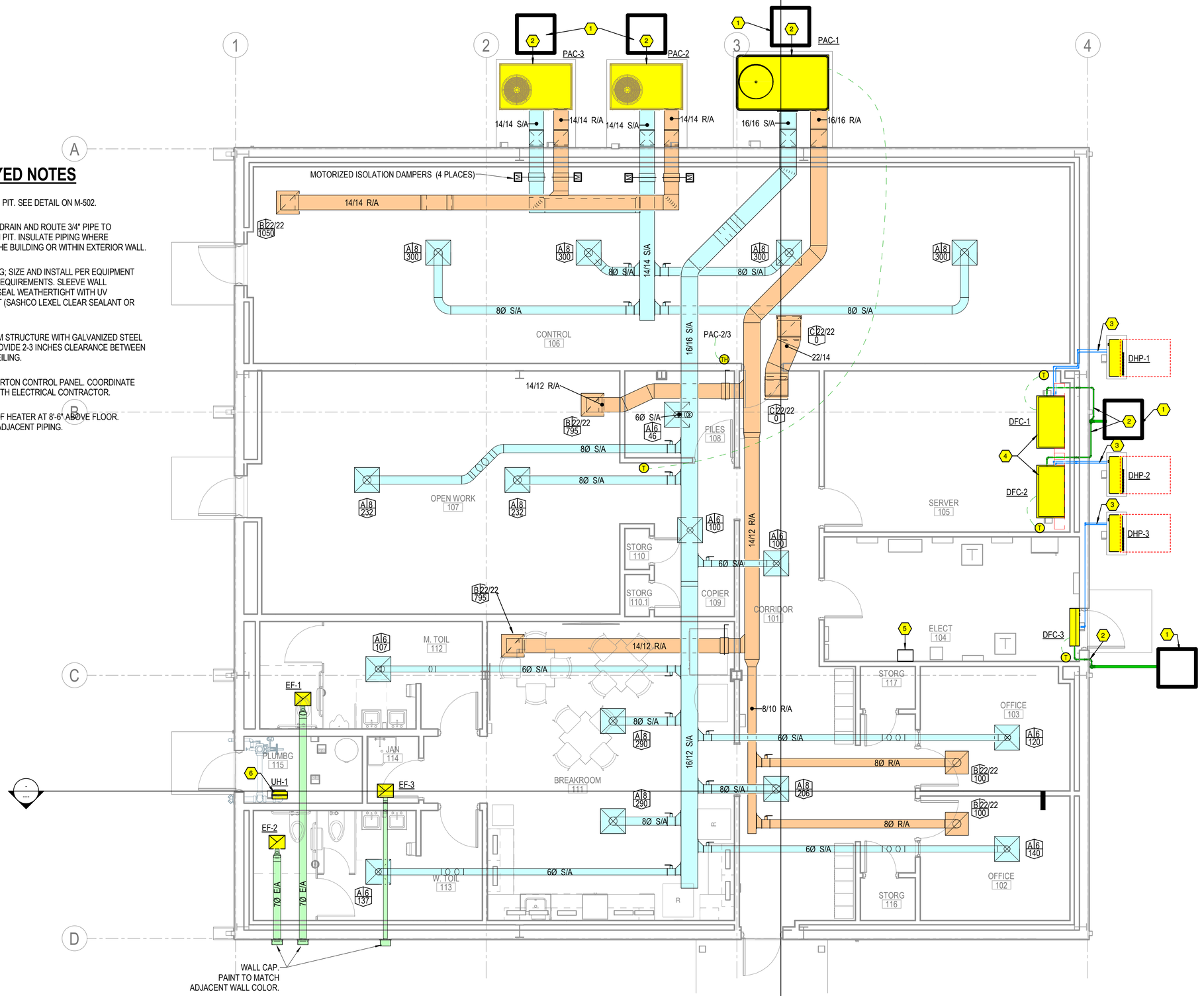
2 TRAP CONDENSATE DRAIN AND ROUTE 3/4" PIPE TO CONDENSATE DRAIN PIT. INSULATE PIPING WHERE INSTALLED INSIDE THE BUILDING OR WITHIN EXTERIOR WALL.

3 REFRIGERANT PIPING; SIZE AND INSTALL PER EQUIPMENT MANUFACTURER'S REQUIREMENTS. SLEEVE WALL PENETRATION AND SEAL WEATHERTIGHT WITH UV RESISTANT SEALANT (SASHCO LEXEL CLEAR SEALANT OR EQUAL).

4 SUSPEND UNIT FROM STRUCTURE WITH GALVANIZED STEEL THREADED ROD. PROVIDE 2-3 INCHES CLEARANCE BETWEEN TOP OF UNIT AND CEILING.

5 LOCATION FOR ALLERTON CONTROL PANEL. COORDINATE EXACT LOCATION WITH ELECTRICAL CONTRACTOR.

6 INSTALL WITH TOP OF HEATER AT 8'-6" ABOVE FLOOR. COORDINATE WITH ADJACENT PIPING.



1 FIRST FLOOR MECHANICAL PLAN
1/4" = 1'-0"
0 2 4 8

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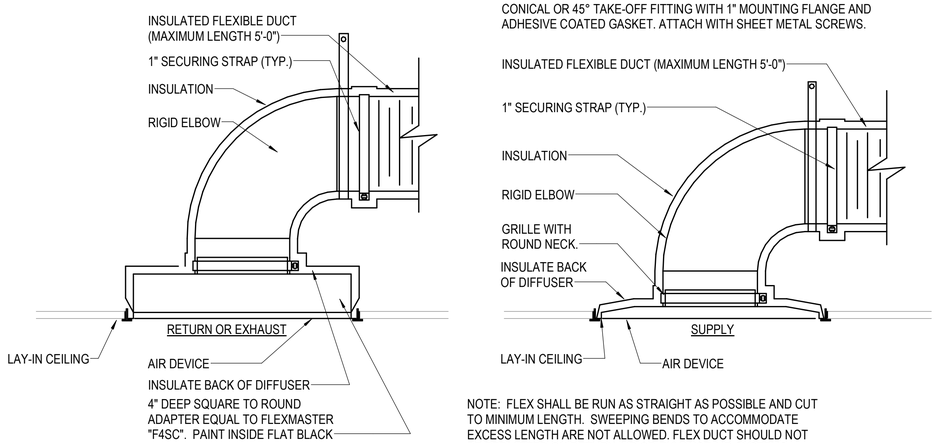
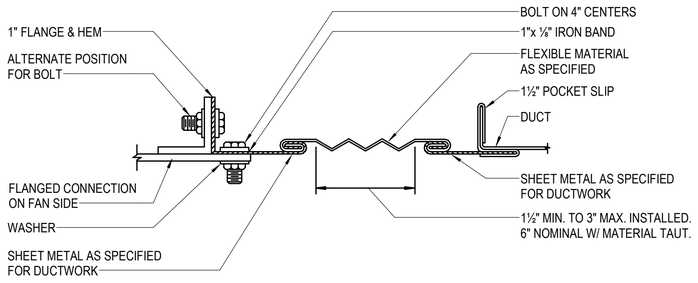
Issue Date 02-20-2025
Sheet Title MECHANICAL PLAN
Sheet Number M-101

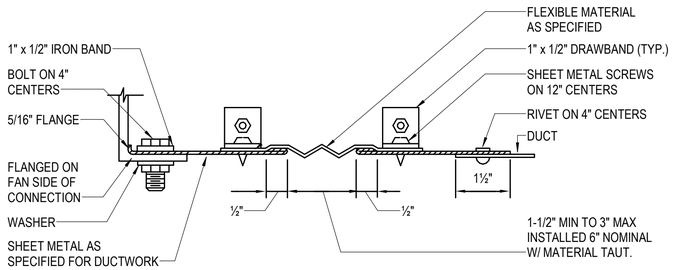


NOTE: FLEX SHALL BE RUN AS STRAIGHT AS POSSIBLE AND CUT TO MINIMUM LENGTH. SWEEPING BENDS TO ACCOMMODATE EXCESS LENGTH ARE NOT ALLOWED. FLEX DUCT SHOULD NOT BE PERMITTED ON RETURN AIR OR EXHAUST AIR SYSTEMS.

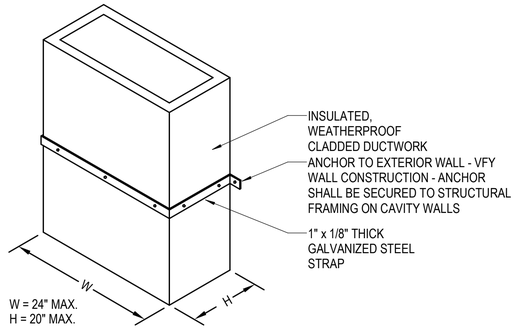
1 AIR DEVICE CONNECTION
NOT TO SCALE



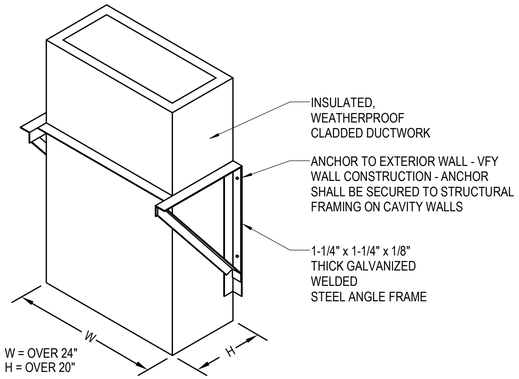
2 FLEXIBLE CONNECTION RECTANGUALR
NOT TO SCALE



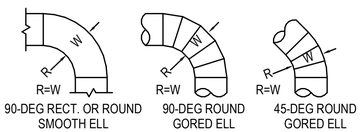
3 FLEXIBLE CONNECTION ROUND
NOT TO SCALE



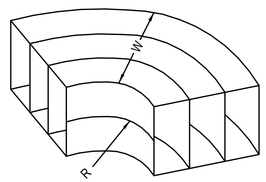
NOTES:
1. PROVIDE SUPPORT AT 12' O.C. MAX.
2. ANCHOR ANGLE IRON SUPPORTS TO WALL AT 12" O.C. SPACING MAX.
3. ALL BRACE-TO-DUCT FASTENERS SHALL BE EQUALLY SPACED AT 8" O.C.



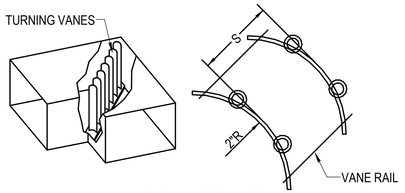
4 EXTERIOR VERTICAL RECTANGULAR DUCT SUPPORT
NOT TO SCALE



STANDARD RADIUS ELL



RECTANGULAR SHORT RADIUS ELL



MITERED ELL

NOTES:
1. WHERE STANDARD RADIUS TURNS ARE NOT POSSIBLE, MITERED ELL'S WITH TURNING VANES SHALL BE PROVIDED FOR ALL CHANGES IN HORIZONTAL AND VERTICAL DUCT DIRECTION 45-DEGREEOR GREATER.
2. CONSTRUCT ELBOWS IN ACCORDANCE WITH SMACNA HVAC DUCTCONSTRUCTION STANDARDS - METAL AND FLEXIBLE.
3. AIR VELOCITIES 1200 FPM AND LESS:
   A. TURNING VANE ELBOW SHALL BE TURNING VANE ELBOW SHALL BE SINGLE WIDTH VANES FOR VANE LENGTHS UP TO 24"
   B. TURNING VANE ELBOW SHALL BE ASHRAE FITTING CR3-15 WITH DOUBLE WIDTH VANES FOR VANE LENGTHS OVER 24".
4. AIR VELOCITIES OVER 1200 FPM: TURNING VANE ELBOW SHALL BE ASHRAE FITTING CR3-15 WITH DOUBLE WIDTH VANES.
5. ROUND ELBOWS SHALL BE SMOOTH OR GORED. 90-DEGREE GORED ELL'S SHALL BE MINIMUM 5-PIECE AND 45-DEGREE GORED ELL'S SHALL BE MINIMUM 3-PIECE.
6. VANES SHALL BE WELDED TO THE VANE RAIL IN DUCT SYSTEMS WITH AIR VELOCITIES 3000 FPM AND HIGHER.
7. ELBOWS WITH MITERED THROATS/RADIUS HEELS AND ELBOWS WITH MITERED THROATS/CHAMFERED HEELS ARE NOT ACCEPTABLE.

5 DUCT ELBOW
NOT TO SCALE

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CONSTRUCTION DOCUMENTS

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ARKANSAS ENGINEER

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REGISTERED PROFESSIONAL ENGINEER
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JOEL FUNKHOUSER
02-20-2025

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Project Number **2024-210**

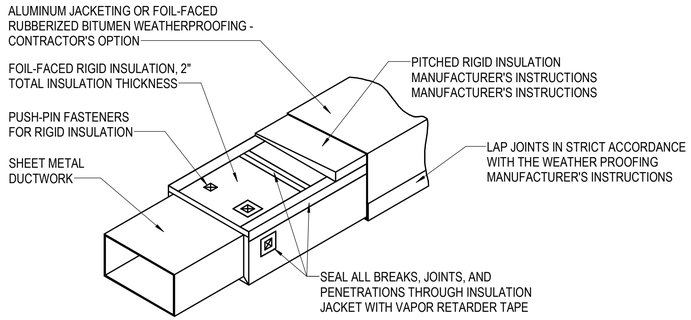
Issue Date **02-20-2025**

Sheet Title

MECHANICAL DETAILS

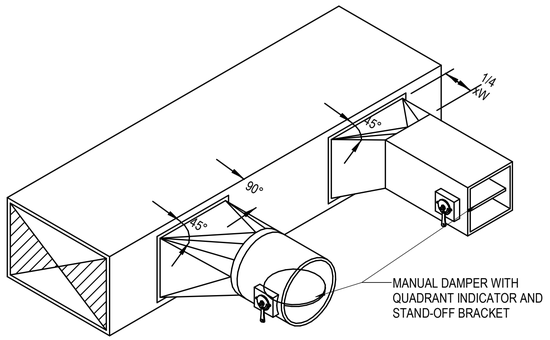
Sheet Number

M-501

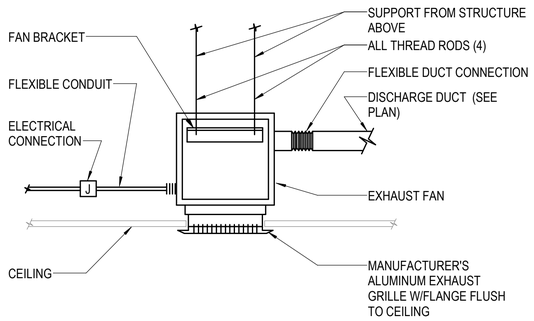


NOTES:
1. ALL SHEET METAL DUCT JOINTS AND SEAMS SHALL BE THOROUGHLY COATED WITH A U.L. 181 COMPLIANT SEALANT, SMACNA SEAL CLASS A, HARDCAST OR EQUAL.
2. COMBINATION VAPOR/WEATHER/UV BARRIER SHALL BE EQUAL TO POLYGUARD ALUMAGUARD RUBBERIZED BITUMEN FOIL FACED MEMBRANE WITH ASPHALT/ASPHALT LAP SEALS. INSTALL IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
3. WHERE THE DUCTWORK PENETRATED THE BUILDING ENVELOPE, THE EXTERIOR WEATHERPROOF INSULATION SHALL EXTEND MIN. 6" INTO THE BUILDING INTERIOR BEFORE TRANSITIONING TO THE INTERIOR DUCT INSULATION SPECIFICATION.

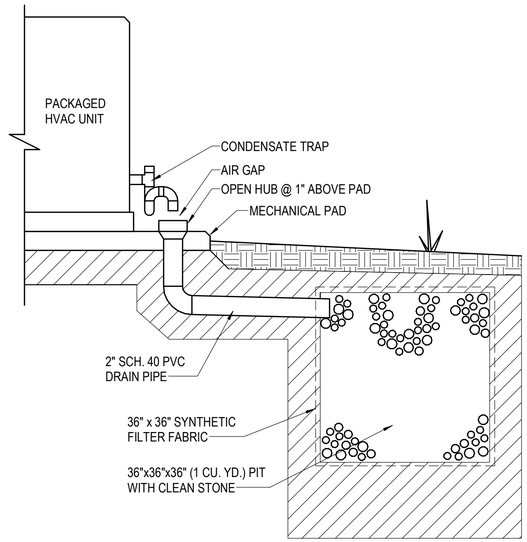
1 EXTERIOR DUCT INSULATION WEATHERPROOFING
NOT TO SCALE



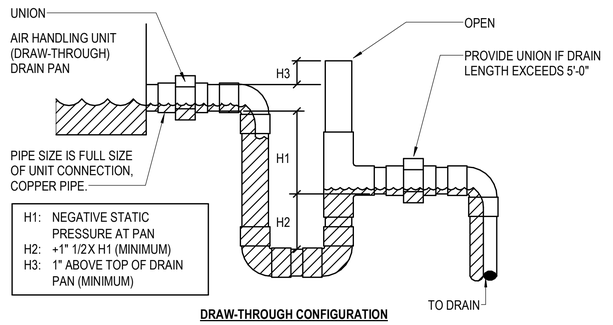
2 DUCT TAKEOFF
NOT TO SCALE



3 CEILING MOUNTED EXHAUST FAN
NOT TO SCALE



4 CONDENSATE DRAIN PIT
NOT TO SCALE



DRAW-THROUGH CONFIGURATION

5 CONDENSATE TRAP (DRAW THRU)
NOT TO SCALE

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Issue Date **02-20-2025**
Sheet Title
MECHANICAL DETAILS
Sheet Number
M-502

PACKAGED COOLING/HEATING UNIT (DX HEAT PUMP)

MARK	SERVES	COOLING CAPACITY				INDOOR FAN				HEAT PUMP HEATING		O.S.A.	AUXILIARY ELECTRIC HEAT				CONDENSING UNIT				AMB. TEMP. °F	ELECTRICAL DATA				SEER	REFRIG.	WEIGHT (LB)	MANUFACTURER	MODEL	REMARKS
		TOTAL (BTUH)	SENSIBLE (BTUH)	ENTERING AIR TEMP.		NO.	HP (EA.)	CFM	ESP	HEATING BTUH AT 47 F	COP AT 47 F		KW	STAGES	VOLTS	Ø	NO.	TYPE	NO.	TYPE		MCA	MOCP	VOLTS	Ø						
				DB°F	WB°F												CONDENSER FAN		COMPRESSOR												
PAC-1	BLDG A17	59,430	46,700	80	67	1	1	2,000	1.0	61,470	3.8	210	18	2	480	3	1	PROPELLER	1	SCROLL	95	43	45	480	3	16.4	R-454B	926	TRANE	WHK060	ALL NOTES

NOTES:
1. PROVIDE WITH HEAT PUMP THERMOSTAT.
2. PROVIDE MERV 8 FILTERS.
3. PROVIDE SUPPLY DUCT SMOKE DETECTOR.
4. MOTORIZED OSA DAMPER
5. BACNET INTERFACE

PACKAGED COOLING/HEATING UNIT (DX COOLING W/ ELECTRIC HEAT)

MARK	SERVES	COOLING CAPACITY				INDOOR FAN				O.S.A. (CFM)	ELECTRIC HEATING				CONDENSING UNIT			AMB. TEMP. °F	ELECTRICAL DATA				SEER	REFRIG.	WEIGHT (LB)	MANUFACTURER	MODEL	REMARKS
		TOTAL (BTUH)	SENSIBLE (MBH)	ENTERING AIR TEMP.											CONDENSER FAN		COMPRESSOR											
				DB°F	WB°F	NO.	HP (EA.)	CFM	ESP		KW	STAGES	VOLTS	Ø	NO.	TYPE	NO.		MCA	MOCP	VOLTS	Ø						
PAC-2	CONTROL 106	37,540	27,510	80	67	1	3/4	1,200	1.0	150	12	SCR MODULATING	480	3	1	PROPELLER	1	95	23	25	480	3	17.1	R-454B	660	TRANE	THK036	ALL NOTES
PAC-3	CONTROL 106	37,540	27,510	80	67	1	3/4	1,200	1.0	150	12	SCR MODULATING	480	3	1	PROPELLER	1	95	23	25	480	3	17.1	R-454B	660	TRANE	THK036	ALL NOTES

NOTES:
1. COOLING ONLY MCA IS 11 AMPS.
2. COOLING ONLY MOCP IS 15.
3. OWNER TO REWIRE ELECTRIC HEAT TO A SEPARATE ELEC CIRCUIT.
4. PROVIDE MERV 8 FILTERS.
5. MOTORIZED OSA DAMPER
6. BACNET INTERFACE

DUCTLESS SPLIT SYSTEM (HEAT PUMP)

MARK		SERVES	INDOOR UNIT TYPE	COOLING (BTUH)	47F HEATING (BTUH)	5F HEATING (BTUH)	ELECTRICAL DATA				SEER	REFRIG.	MANUFACTURER	MODEL		REMARKS
INDOOR	OUTDOOR						MCA	MOCP	VOLTS	Ø				INDOOR	OUTDOOR	
DFC-1	DHP-1	SERVER 105	SUSPENDED HORIZONTAL	28,200	32,000	12,800	22	35	208	1	18	R-454B	TRANE	PCA-AK30NL	PUZ-AH30NL	ALL NOTES
DFC-2	DHP-2	SERVER 105	SUSPENDED HORIZONTAL	28,200	32,000	12,800	22	35	208	1	18	R-454B	TRANE	PCA-AK30NL	PUZ-AH30NL	ALL NOTES
DFC-3	DHP-3	ELECTRIC 104	WALL MOUNTED	24,000	26,000	15,200	19	25	208	1	21	R-410A	MITSUBISHI	PKA-A24KA8	PUZ-A24NHA7	ALL NOTES

NOTES:
1. PROVIDE MANUFACTURER'S WIRED THERMOSTAT.
2. PROVIDE CONDENSATE PUMP.
3. PROVIDE LOW AMBIENT KIT DOWN TO 0°F.
4. OUTDOOR UNIT PROVIDES POWER TO INDOOR UNIT.
5. BACNET CARD FOR REMOTE MONITORING BY ALLERTON SYSTEM.

UNIT HEATERS - ELECTRIC

MARK	LOCATION	CFM	KW	FAN HP	ELECTRICAL DATA				MANUFACTURER	MODEL	REMARKS
					MCA	MOCP	VOLTS	Ø			
UH-1	PLUMBING 115	350	3	1/100	5	15	480	3	QMARK	MUH	ALL NOTES

NOTES:
1. PROVIDE ADJUSTABLE DISCHARGE LOUVER..
2. PROVIDE WALL MOUNTED THERMOSTAT.
3. PROVIDE WALL BRACKET.

EXHAUST FAN

MARK	SERVES	TYPE	DRIVE	FAN DATA		MOTOR DATA			MAX SONES LEVEL	WEIGHT (LBS.)	MANUFACTURER	MODEL	REMARKS
				CFM	ESP	WATTS	VOLTS	Ø					
EF-1	MEN'S TOILET 112	CEILING	DIRECT	150	0.375	128	120	1	4	10	GREENHECK	SP-B150	ALL NOTES
EF-2	WOMEN'S TOILET 113	CEILING	DIRECT	150	0.375	128	120	1	4	10	GREENHECK	SP-B150	ALL NOTES
EF-3	JANITOR 114	CEILING	DIRECT	30	0.25	38	120	1	4	9	GREENHECK	SP-B50	ALL NOTES

NOTES:
1. PROVIDE SPEED CONTROLLER.
2. PROVIDE PLUG STYLE ELECTRICAL DISCONNECT.
3. PROVIDE BACKDRAFT DAMPER.

AIR DEVICE

MARK	TYPE	DESCRIPTION	MATERIAL	FINISH	MOUNTING	FACE SIZE (IN)	NECK SIZE (IN)	MAX FLOW (CFM)	MAX D.P. (IN. W.C.)	OBD	DIRECTIONAL BLADES	FILTER	MANUFACTURER	MODEL	REMARKS
A	SUPPLY	DIFFUSER	STEEL	WHITE	CEILING	24X24	6	160	0.05	YES	NO	NO	TITUS	TMS	ALL NOTES
A	SUPPLY	DIFFUSER	STEEL	WHITE	CEILING	24X24	8	300	0.05	YES	NO	NO	TITUS	TMS	ALL NOTES
B	RETURN	EGGCRATE GRILLE	ALUMINUM	WHITE	CEILING	24X24	22X22	1,600	0.05	NO	NO	NO	TITUS	50F	ALL NOTES
C	TRANSFER	EGGCRATE GRILLE	ALUMINUM	WHITE	CEILING	24X24	22X22	150	0.02	NO	NO	NO	TITUS	50F	ALL NOTES

NOTES:
1. PROVIDE MODEL "TRM" MOUNTING FRAME FOR GYPSUM CEILING LOCATIONS.
2. OBD = OPTIONAL BALANCING DAMPER (OPPOSED BLADE OR RADIAL).

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Project

AEROJET ROCKETDYNE
A17 CONTROL BUILDING
EAST CAMDEN,
ARKANSAS

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CERTIFICATE OF AUTHORIZATION
CROMWELL ARCHITECTS/ ENGINEERS #5
ARKANSAS ENGINEER

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11828
JOEL FUNKHOUSER
02-20-2025

Notes

2. **THIS SHEET DESIGNED FOR COLOR PRINTING. CRITICAL INFORMATION MAY BE LOST WITH BLACK AND WHITE PRINTING.**

Project Number **2024-210**

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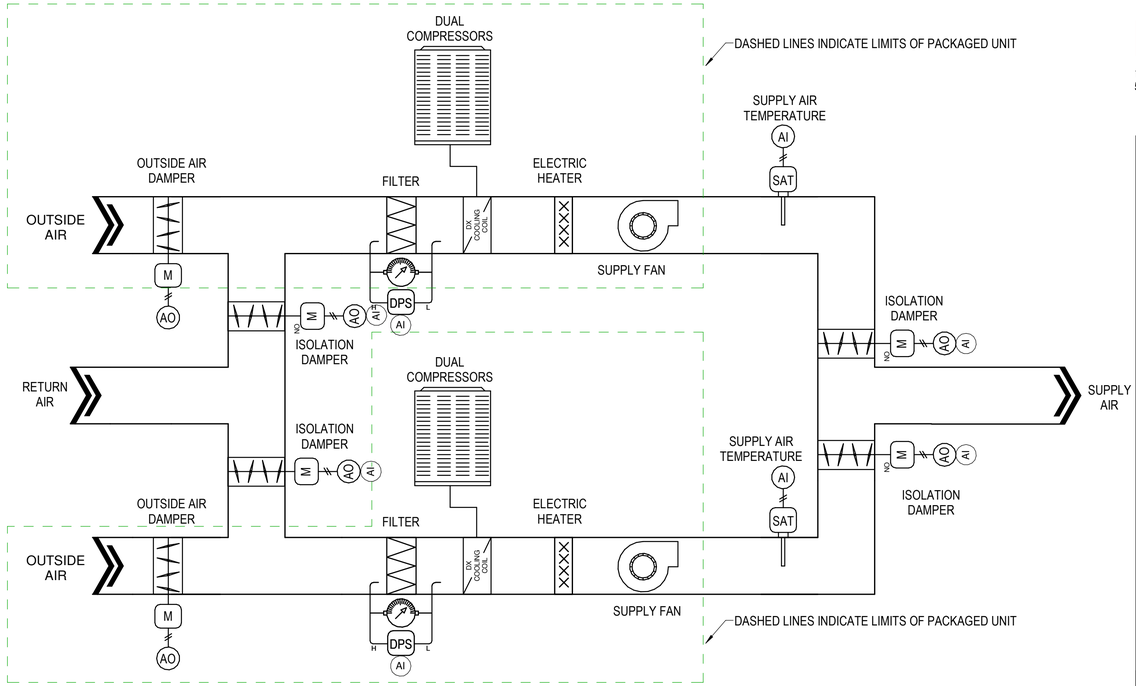
Sheet Title

MECHANICAL SCHEDULES

Sheet Number

M-601



SEQUENCE OF OPERATIONS

BUILDING AUTOMATION SYSTEM:
THE UNIT WILL BE CONTROLLED BY THE ALLERTON BUILDING AUTOMATION SYSTEM (BAS).

SPACE SETPOINTS:
COOL OCCUPIED / UNOCCUPIED: 75/78 F
HEAT OCCUPIED / UNOCCUPIED: 70/67 F
DEHUMIDIFICATION OCCUPIED / UNOCCUPIED: 50%/50% RELATIVE HUMIDITY

LEAD/LAG CONTROLS:
THE UNITS ARE SIZED FOR 100% REDUNDANCY. IF THE LEAD UNIT'S COOLING SUPPLY AIR TEMPERATURE EXCEEDS 65 F FOR MORE THAN 10 MINUTES, AND ALARM WILL BE GENERATED, THE LEAD UNIT WILL BE SHUT OFF AND THE LAG UNIT WILL BE ACTIVATED. THE LEAD AND LAG UNIT WILL BE ALTERNATED EVERY 7 DAYS. THE TWO UNITS WILL NOT RUN AT THE SAME TIME.

RETURN/SUPPLY ISOLATION DAMPERS:
THE RETURN AND SUPPLY DUCT ISOLATION DAMPER WILL OPEN FOR THE UNIT THAT IS RUNNING. THE RETURN AND SUPPLY DUCT ISOLATION DAMPER WILL CLOSE FOR THE UNIT THAT IS NOT RUNNING.

AIRFLOW CONTROL, OCCUPIED HOURS:
THE FAN WILL RUN CONSTANTLY AND THE OUTSIDE AIR DAMPER WILL OPEN.

AIRFLOW CONTROL, UNOCCUPIED HOURS:
THE FAN WILL RUN INTERMITTENTLY AS REQUIRED UPON A CALL FOR COOLING, HEATING, OR DEHUMIDIFICATION AND THE OUTSIDE AIR DAMPER WILL OPEN WHEN THE FAN IS RUNNING (CLOSE WITH THE FAN IS NOT RUNNING).

COOLING MODE:
WHEN THE SPACE TEMPERATURE RISES ABOVE THE COOLING SETPOINT, THE COOLING MODE WILL BE ACTIVATED.

HEATING MODE:
WHEN THE SPACE TEMPERATURE FALLS BELOW THE HEATING SETPOINT, THE ELECTRIC HEATER WILL BE ACTIVATED AT 100%.

DEHUMIDIFICATION MODE:
WHEN THE SPACE RELATIVE HUMIDITY RISES ABOVE THE DEHUMIDIFICATION SETPOINT, THE UNIT'S DEHUMIDIFICATION MODE (COOLING PLUS MODULATING ELECTRIC REHEAT) WILL BE ACTIVATED. THE ELECTRIC HEAT WILL MODULATE TO PROVIDE 75 DEGREE SUPPLY AIR TEMPERATURE.

FILTER STATUS:
A DIFFERENTIAL PRESSURE SENSOR WILL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE FILTER. IF THE DIFFERENTIAL PRESSURE RISES ABOVE A PRESET VALUE DETERMINED DURING TAB WORK, A DIRTY FILTER ALARM WILL BE ANNUNCIATED.

UNOCCUPIED OVERRIDE:
IF A SPACE SENSOR SETPOINT IS ADJUSTED BY A USER DURING UNOCCUPIED MODE, THE SYSTEM WILL GO INTO OCCUPIED MODE FOR 90 MINUTES.

OCCUPIED HOURS

OCCUPIED HOURS ARE 6:00 AM - 6:00 PM 7 DAYS PER WEEK.

1 CONTROLS - PACKAGED HVAC UNITS PAC-2 AND PAC-3
NOT TO SCALE

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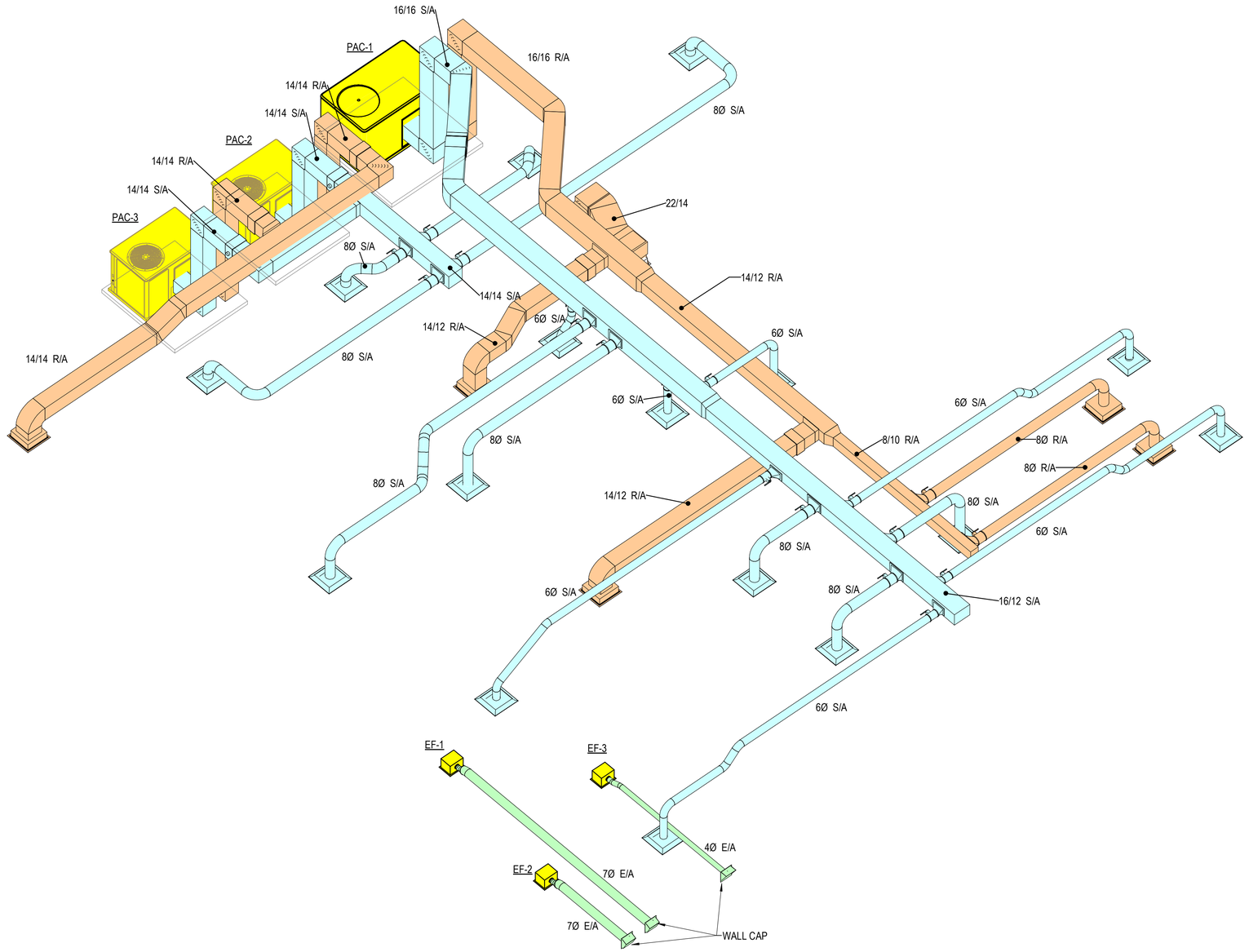

1 HVAC DUCTWORK ISOMETRIC
NOT TO SCALE

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ISOMETRIC

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