

**19 MECHANICAL PLAN**  
SCALE: 3/16"=1'-0"

FIRST FLOOR



**20 MECHANICAL PLAN**  
SCALE: 3/16"=1'-0"

SECOND FLOOR

**GENERAL NOTES**

1. CONCEALED DUCTWORK TO BE GALVANIZED SHEET METAL WRAPPED WITH FIBROUS GLASS DUCT WRAP WITH FSK VAPOR BARRIER, MIN R-6. INSTALLED PER SMACNA STANDARDS. DUCT WORK IMMEDIATELY DOWNSTREAM FROM RTU SHALL BE LINED FOR SOUND ATTENUATION.
2. EXPOSED DUCTWORK TO BE GALVANIZED SHEET METAL LINED WITH FIBROUS GLASS DUCT LINER, MIN R-6. INSTALLED PER SMACNA STANDARDS.
3. ROUND FLEXIBLE DUCT TO BE UL-181, CLASS 1, AIR DUCT MATERIALS.
4. DUCT SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS.
5. IN ALL SYSTEMS OVER 2000 CFM AND LESS THAN 15,000 CFM, SMOKE DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 72E IN THE RETURN DUCT DOWNSTREAM OF THE AIR HANDLING UNIT AND ALL FILTERS TO AUTOMATICALLY STOP THE FAN.
6. PROVIDE UL LISTED 125 °F FIRESTAT IN RETURN AIR OF EACH SYSTEM UNDER 2000 CFM TO SHUT DOWN THE FAN IN THE EVENT OF FIRE.
7. PROVIDE UL RATED FIRE DAMPERS WHERE REQUIRED AT ALL DUCT PENETRATIONS OF FIRE RATED ASSEMBLIES AND WHERE REQUIRED BY CODE, INCLUDING OUTSIDE AIR INTAKES AND EXHAUST FANS.
8. CONDENSATE DRAINS TO BE PVC PIPE RUN TO PLUMBERS P-TRAP WITHIN FIVE FEET OF AIR HANDLING UNITS.
9. ALL AIR HANDLING SYSTEMS TO BE BALANCED TO ASSURE PROPER AIR FLOWS PER PLANS.
10. ALL THERMOSTATS TO BE AUTOMATIC CHANGEOVER WITH HEAT SWITCH.
11. EXHAUST FAN SHALL BE CONTROLLED BY A SWITCH ON THE WALL IN THE SAME LOCATION AS LIGHT SWITCH(S). PROVIDE BACK DRAFT FAN.
12. PROVIDE AND INSTALL WATER PROOF GRILLE VENT IN PROPER ROOF LOCATION FOR PLUMBING FIXTURE EXHAUST.
13. ALL SUPPLY AIR VENTS SHALL BE EQUIPPED WITH AIR CONTROL DAMPERS AT THE REGISTER.
14. LOCATE OUTDOOR UNITS AS SHOWN ON ARCHITECTURAL DRAWINGS.
15. REFRIGERANT LINES SHALL BE SIZED BY UNIT MANUFACTURER AND INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
16. FRESH AIR SHALL BE SUPPLIED TO EACH AIR HANDLER THROUGH EXTERIOR WALL DUCT SUPPLIED WITH A CONTROL DAMPER.
17. ALL ELECTRICAL, MECHANICAL, AND PLUMBING PENETRATING FIRE WALLS SHALL BE FIRE GALLED. PENETRATIONS THROUGH RATED CONSTRUCTION SHALL BE SEALED WITH A MATERIAL CAPABLE OF PREVENTING THE PASSAGE OF FLAMES AND HOT GASES WHEN TESTED IN ACCORDANCE WITH ASTM-E8-14).
18. ALL MECHANICAL SYMBOLS ARE DRAWN DIAGRAMMATICALLY. CONTRACTOR TO VERIFY WITH OWNER LOCATIONS OF VENTS, DAMPERS, REGISTERS, ETC.
19. FLEXIBLE DUCTWORK LENGTH NOT TO EXCEED 12'-0". SUPPORT FLEX DUCT TO PREVENT SAGGING.
20. REFER TO REFLECTED CEILING PLAN FOR FINAL GRILLE AND DIFFUSER LOCATIONS AND COORDINATE AS REQUIRED.
21. FINAL LOCATION OF TEMPERATURE CONTROLS TO BE COORDINATED WITH OWNER AT JOB SITE.
22. PROVIDE AND INSTALL SMOKE DETECTORS AS APPROVED BY LOCAL A.H.J.S. PLACE NEAR R/A AND S/A OPENINGS OF AHU AND PROVIDE, WITH ACCESS PANEL, WIRING BY ELECTRICAL CONTRACTOR.
23. FRESH AIR INTAKES ARE REQUIRED TO HAVE MOTORIZED OR GRAVITY DAMPERS TO SHUT OFF WHEN SYSTEM IS NOT RUNNING.
24. PROVIDE BIRD SCREENS AT ALL EXTERIOR MECHANICAL PENETRATIONS.
25. COORDINATE WALL MOUNTED THERMOSTAT LOCATIONS WITH ALL OWNER FURNISHED ITEMS EITHER WALL MOUNTED OR FLOOR MOUNTED AGAINST PARTITIONS. REFER TO ARCHITECTURAL DRAWINGS.

**DRAWN DIAGRAMMATICALLY FOR CLARITY. FIELD VERIFY PLACEMENT OF ALL EQUIPMENT PRIOR TO FABRICATION.**

**MECHANICAL LEGEND**

	SUPPLY AIR GRILLE		EXHAUST FAN
	RETURN AIR GRILLE		EXHAUST MOTOR
	DOOR GRILLE 16X16 W/FIRE DAMPER		THERMOSTAT
	SUPPLY DUCT		FIRE DAMPER
	VARIABLE DAMPER		ROUND FLEX DUCT-MAX. LENGTH 12'-0". MIN. R-6. DUCT SIZE AS FOLLOWS: 250 CFM TO 350 CFM = 8" 200 CFM TO 250 CFM = 6" 150 CFM TO 200 CFM = 7" 100 CFM TO 150 CFM = 6"
	FIRE DAMPER WITH FUSIBLE LINK		N.G. - NATURAL GAS
			M.A.U. - MAKE UP AIR

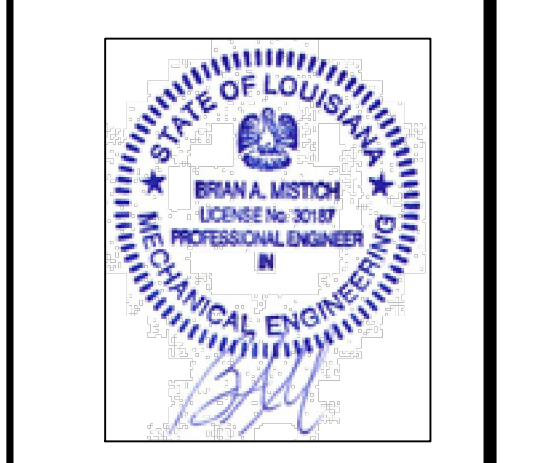
1. INSTALL R/A GRILLE 8" ABOVE FINISHED FLOOR.
2. ALL RATED WALLS SHALL HAVE FIRE DAMPERS

**THIS WORK SHALL MEET ALL HVAC CODES**

1. 2021 EDITION OF THE IMC
2. 2021 IECC ENERGY CODE

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#	DESCRIPTION	REVISIONS	DATE
1	ADDED FIRE DAMPERS PER ARCHITECT		01-22-26



**RESISTANCE REDUCTION**

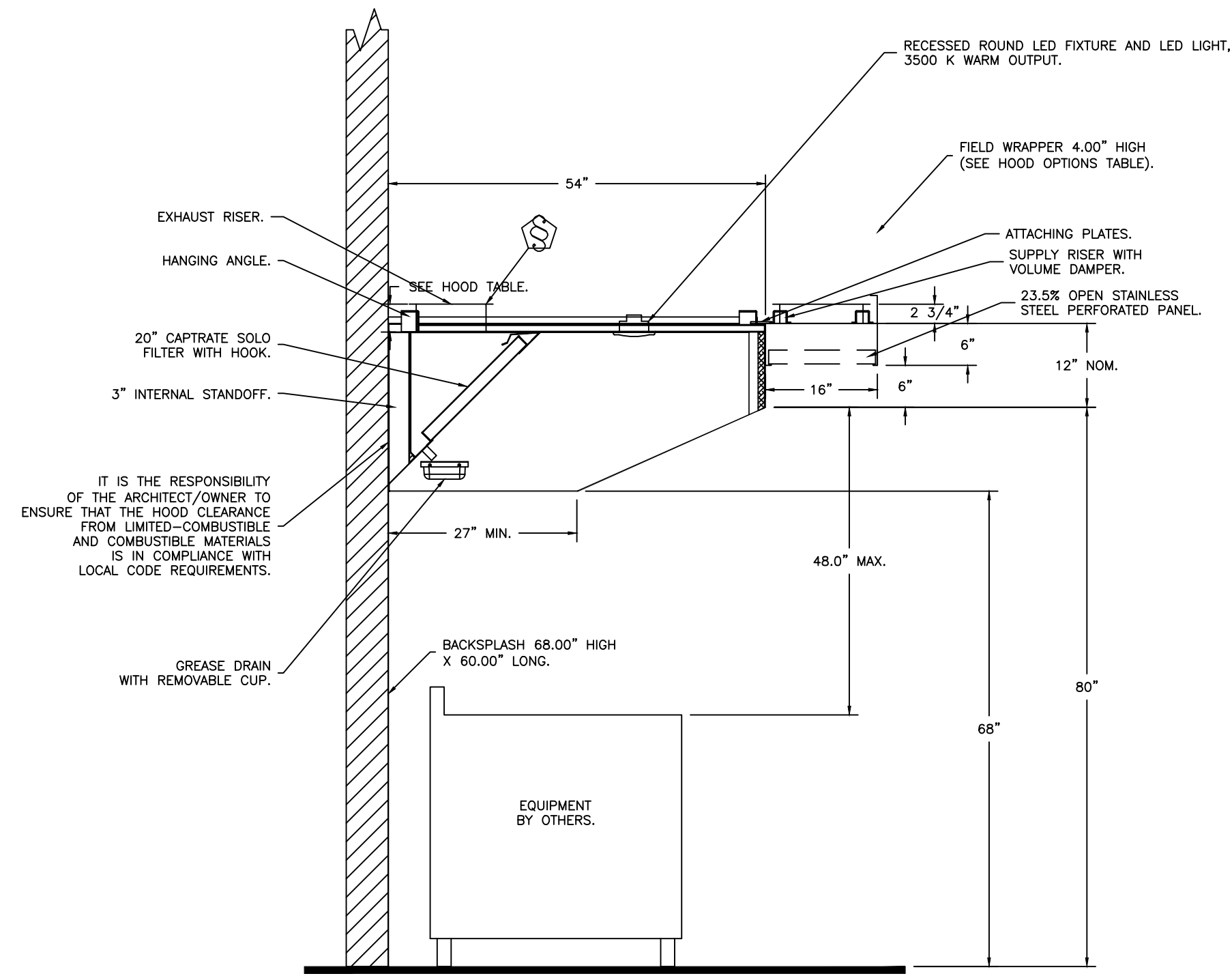
428 PELICANY STREET  
NEW ORLEANS, LA 70130  
JOB No: 2470  
DATE: 09-30-2025  
CHECKED BY:  
DRAWN BY:

SHEET TITLE:  
MECHANICAL PLAN,  
FIRST & SECOND FLOOR

DRAWING NUMBER:  
**M101**

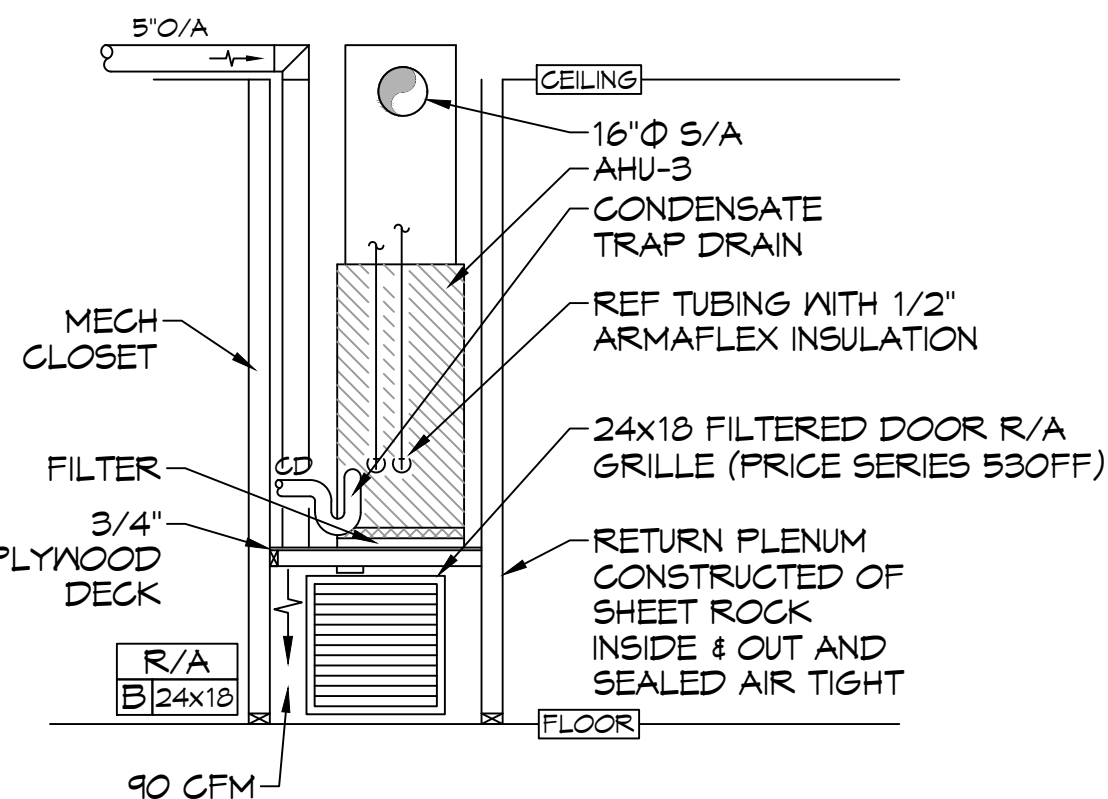
SHEET No: 9 of 15





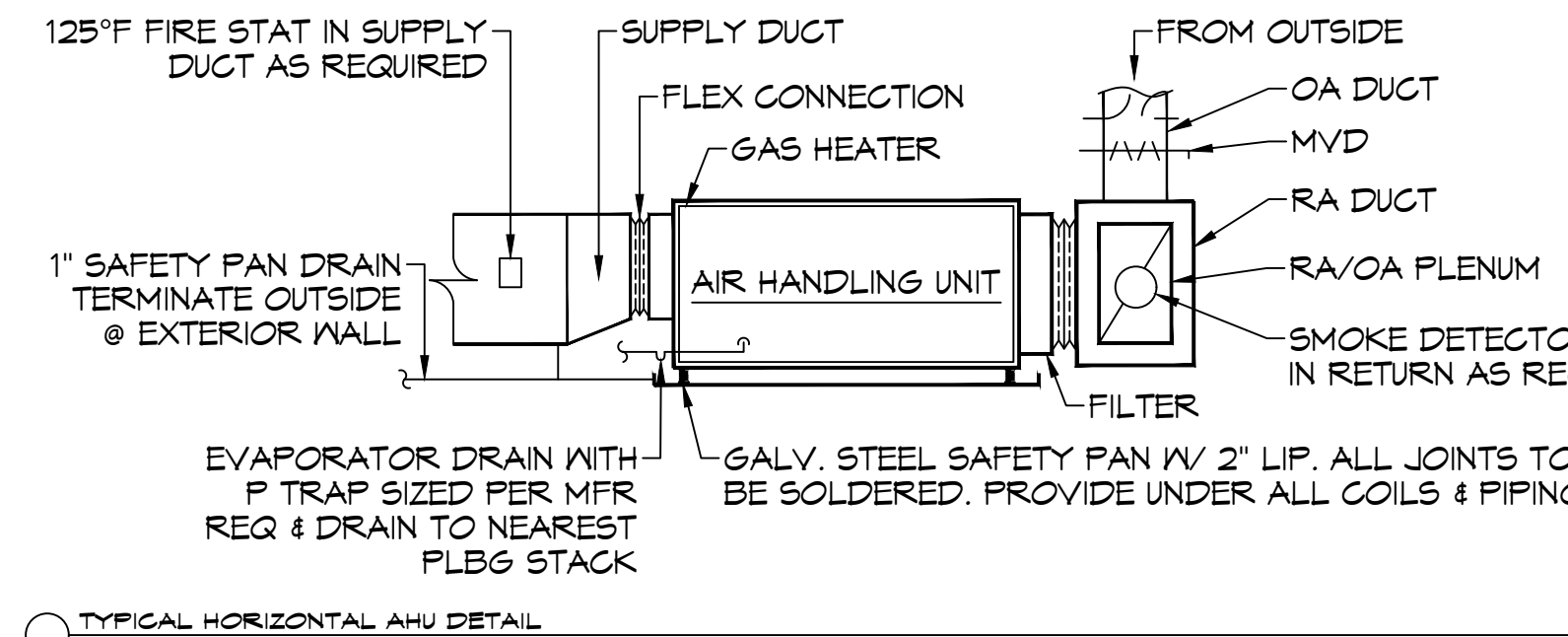
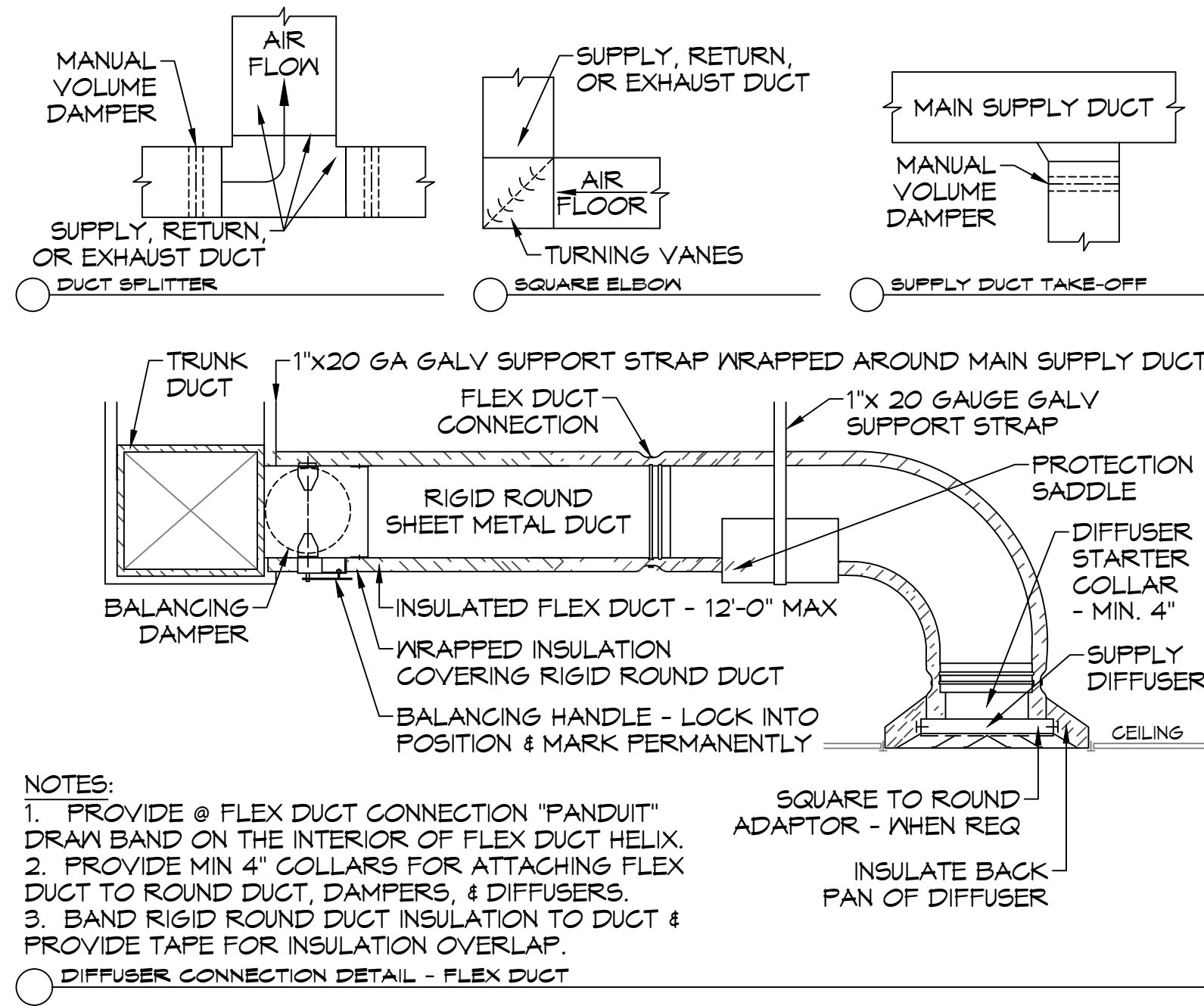
SECTION VIEW - MODEL 5412ESX-2-PSP-F HOOD - #1 (KH-1)

HOOD DETAIL

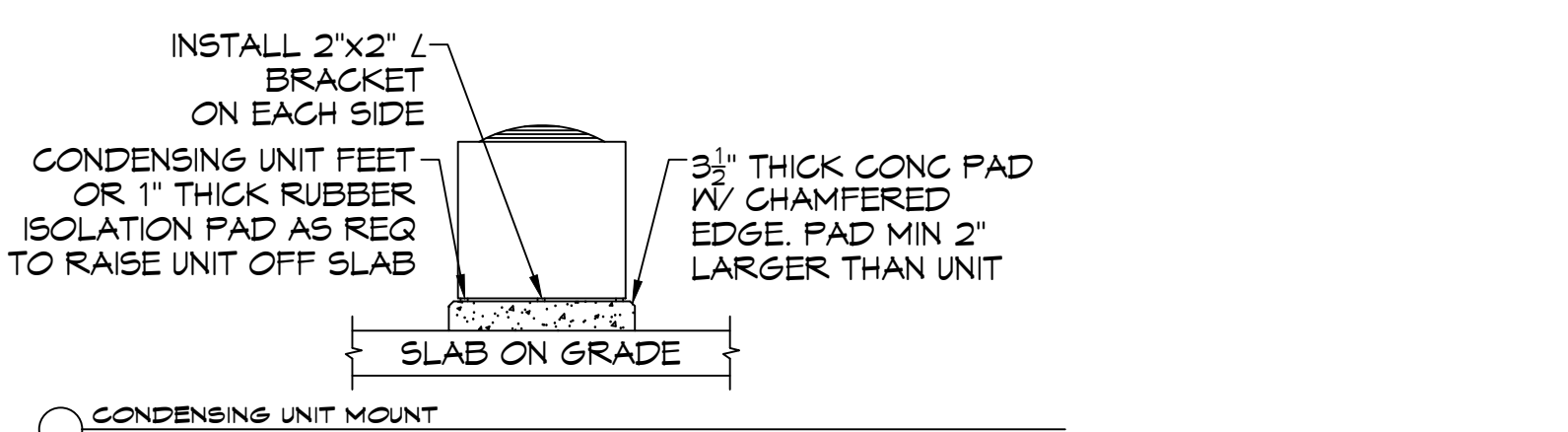


CLOSET DETAIL

**23 TYPICAL DETAILS**  
SCALE: N.T.S.



TYPICAL HORIZONTAL AHU DETAIL



CONDENSING UNIT MOUNT

DRAWN DIAGRAMMATICALLY FOR CLARITY. FIELD VERIFY PLACEMENT OF ALL EQUIPMENT

**MECHANICAL LEGEND**

	SUPPLY AIR GRILLE		EXHAUST FAN
	RETURN AIR GRILLE		EXHAUST MOTOR
	DAMPER CONTROL		THERMOSTAT
	SUPPLY DUCT		FIRE DAMPER
	RETURN AIR DUCT		
	EXHAUST DUCT		
	RATED WALL		
	CFM		
	MK SIZE		
	FIRE DAMPER WITH FUSIBLE LINK		

ROUND FLEX DUCT, MAX. LENGTH 12'-0", MIN. R-6 DUCT SIZE AS FOLLOWS:  
 250 CFM TO 350 CFM = 9"  
 300 CFM TO 350 CFM = 9"  
 150 CFM TO 200 CFM = 7"  
 100 CFM TO 150 CFM = 6"

- INSTALL R/A GRILLE 8" ABOVE FINISHED FLOOR
- ALL RATED WALLS SHALL HAVE FIRE DAMPERS

**DIFFUSER SCHEDULE**

Mark No.	Service	Neck Size	Description
A	Supply Air	Ref. Plan	Price 620D Register, Double Deflection w/ Damper
B	Supply Air	Ref. Plan	Four Slot Linear Slot Diffuser (48" x 1"), Price SDS w/ SDA Plenum
C	Supply Air	Ref. Plan	12" x 12" Adjustable Square Cone Diffuser, Price ASCDA w/ Insulated Back Panel
D	Supply Air	Ref. Plan	24" x 24" Adjustable Square Cone Diffuser, Price ASCDA w/ Insulated Back Panel
E	Return Air	Ref. Plan	12" X 12" Perforated, Ducted Return w/ Damper, Titus PAR
F	Return Air	Ref. Plan	24" X 24" Perforated, Ducted Return w/ Damper, Titus PAR
G	Return Air	Ref. Plan	Price 80 Eggcrate Return w/ Damper

1. Coordinate with Architect / Owner for colors and finish.

**EXHAUST FAN SCHEDULE**

TAG	FAN			POWER			MAKE / MODEL	REMARKS	
	AIRFLOW (CFM)	TSP (\"w/c)	AMPS	WATTS	VAC	PH			HZ
EF-1	150	0.1		42.8	120	1	60	Broan QTXE Series 150	1, 2
EF-2	70	0.2	0.4		120	1	60	Broan A80	1, 2
EF-3	415	0.6		72	120	1	60	Fantek DBF-4XLT	1, 3

1. Install per manufacturer's recommendations  
 2. Interlock with light switch  
 3. Furnish with pressure differential switch

**Ventilation Requirements**

Space	Occupancy Category	Overall Area (Ft <sup>2</sup> )	Occ. Area (Ft <sup>2</sup> )	Number of Occupants	IMC 403.3.1.1 Req'd CFM/Ft <sup>2</sup>	CFM/Person	Ventilation Req'd	Ventilation Provided
Nave / Worship	Religious Worship	3007	2857	225	0.06	5	1296	1300
Second Floor Laundry	Laundry	706	671	7	0.12	5	115	115
First Floor Office Area	Office	1166	1108	6	0.06	5	96	100
Front Vestibule Area	Reception	921	875	26	0.06	5	182	300
Multi-Purpose Area w/ Side Vestibule	Multipurpose	540	513	62	0.06	5	368	370
	Reception	130	124	4	0.06	5		

Notes:  
 (1) Less 5% for furnishing

**SPLIT SYSTEM SCHEDULE**

Tag	Area Served	Tons (Nominal)	Total CFM	ESP	O/A (CFM)	Position	Make	AIR HANDLER						CONDENSER												
								Evaporator	DX Coil	Furnace	Cooling		Electric Heat kW	Gas Heat MBH (Inlet)	Motor HP	Power		Tag	Make	Model	Power		Remarks			
											TMBH	EDB				EWB	VAC				PH	VAC		PH	MCA	
AHU-1	Worship	20	7680	0.4	1300	Horizontal	Trane	TWE240E3				219.3	79.6	68.8	37.4		3	208	3	208	3	98	1, 2, 3, 4, 5			
AHU-2	Second Floor	2	885	0.5	115	Upflow	Goodman	CHPT1824	GMV95			22.5	79.1	66.8		45	1/2	208	1	CU-2	Goodman	GSX140241	208	1	10.3	2, 3, 4, 5, 6
AHU-3	First Floor	2-1/2	1080	0.5	100	Upflow	Goodman	CAPT3030	GMV95			27.4	78.9	66.8		45	1/2	208	1	CU-3	Goodman	GSX140301	208	1	16.7	2, 3, 4, 5, 6
AHU-4	Vestibule	3	1110	0.5	300	Horizontal	Goodman	CHPT3137	GMV95			34.4	80.5	71.7		45	1/2	208	1	CU-4	Goodman	GSX140361	208	1	18.8	2, 3, 4, 5, 6
AHU-5	Multi-purpose Room	5	1425	0.5	370	Upflow	Goodman	CAPT4860	GMV95			55.6	82.1	69.3		45	1/2	208	1	CU-5	Goodman	GSX140601	208	1	32.5	2, 3, 4, 5, 6

- NOTES:**
- Dual circuit air cooled condenser with scroll compressors, hot gas bypass, refrigerant and single point power connection. All control devices shall be provided to accommodate stand-alone integration with a programmable 24VAC.
  - Provide inlet filter box, single point power connection, expansion valve, time delay relay, condensate overflow switch & programmable 7/24 thermostat with lockable cover.
  - Cooling capacities to be rated in accordance with AHRJ standard 210/290 for ASHRAE standard design weather conditions in New Orleans, LA.
  - Install units in accordance with manufacturer's recommendations.
  - Provide Goodman high temperature drain pan kit for DX coils.
  - Provide new filters after commissioning and final acceptance.

**24 SCHEDULES**  
SCALE: N.T.S.

**AIR BALANCE SCHEDULE**

Space	Service	Supply Air (CFM)	Return Air (CFM)	Ventilation Air (CFM)	Exhaust Air		REMARKS
					Air Flow (CFM)	Description	
Nave / Worship	AHU-1	7680	8380	1300	0		1, 2
Second Floor Laundry Area	AHU-2	885	770	115	115	Laundry	1, 2
First Floor Office Area	AHU-3	1080	980	100	230	Hood w/ Make-up Restroom	1, 2, (3)
Front Vestibule Area	AHU-4	1110	810	300	290	Restrooms	1, 2
Multi-Purpose Area	AHU-5	1425	1055	370	0		1, 2

Notes:  
 1. Ventilation based on IBC Section 403.3.1.1 for Places of Religious Worship, Multipurpose and Office Space occupancies.  
 2. Total Ventilation air: 2,185 CFM; Total Exhaust air: 705 CFM; Total infiltration: 1,480 CFM.  
 3. Exhaust consists of 1,150 CFM for hood exhaust, less 920 CFM for make-up air

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**REVISIONS**

#	DESCRIPTION	DATE
1	ADDED FIRE DAMPERS PER ARCHITECT AND REVISED SCHEDULES	1-22-2026



**SIXTH FLOOR RESTROOMS**

DATE: 06-30-2025  
 CHECKED BY: [Signature]  
 DRAWN BY: [Signature]

SHEET TITLE:  
**MECHANICAL PLAN  
 DETAIL AND SCHEDULES**

DRAWING NUMBER:  
**M103**

SHEET No: 11 of 15