

FILE NAME: \\s:\projects\2023\18MECHANICAL\18MECHANICAL.dwg DATE PLOTTED: 9/11/2023 9:58:15 AM PLOTTER: HP DesignJet T1100e

SPLIT SYSTEMS SCHEDULE

TAG	MAKE/MODEL	NOMINAL TONS	TOTAL CFM	OA CFM	COOLING TOTAL MBH	HEATING KW	POWER
CU-1/AHU-1	TRANE 4TTA	1.5	9,000	300	90,000	18.12	208/3/60
CU-2/AHU-2	TRANE 4TTA	5	2,000	200	60,000	11.71	208/3/60
CU-3/AHU-3	TRANE 4TTA	5	2,000	200	60,000	11.71	208/3/60
CU-4/AHU-4	TRANE 4TTA	5	2,000	200	60,000	11.71	208/3/60
CU-5/AHU-5	TRANE 4TTA	5	2,000	200	60,000	11.71	208/3/60

FRESH AIR CALCULATIONS

IMC 2021 Tbl 403.3.1.1
Conference Rm

$$Vbz = Rp Pz + Ra Az$$

$$Rp = 5$$

$$Pz = 50 \text{ per } 1000 \text{ ft}^2 = 15.0 \text{ people}$$

$$Ra = 0.06$$

$$Az = 315.0 \text{ ft}^2 \cdot 5\% \text{ for furniture} = 299.25 \text{ ft}^2$$

$$Vbz = 92.77 \text{ cfm fresh air}$$

Main Entry Lobbies

$$Vbz = Rp Pz + Ra Az$$

$$Rp = 5$$

$$Pz = 10 \text{ per } = 1.9 \text{ people}$$

$$Ra = 0.06$$

$$Az = 186.0 \text{ ft}^2 \cdot 0\% = 186.0 \text{ ft}^2$$

$$Vbz = 20.46 \text{ cfm fresh air}$$

Office Spaces

$$Vbz = Rp Pz + Ra Az$$

$$Rp = 5$$

$$Pz = 5 \text{ per } 1000 \text{ ft}^2 = 11.5 \text{ people}$$

$$Ra = 0.06$$

$$Az = 2428.60 \text{ ft}^2 \cdot 5\% \text{ furniture} = 2,307.17 \text{ ft}^2$$

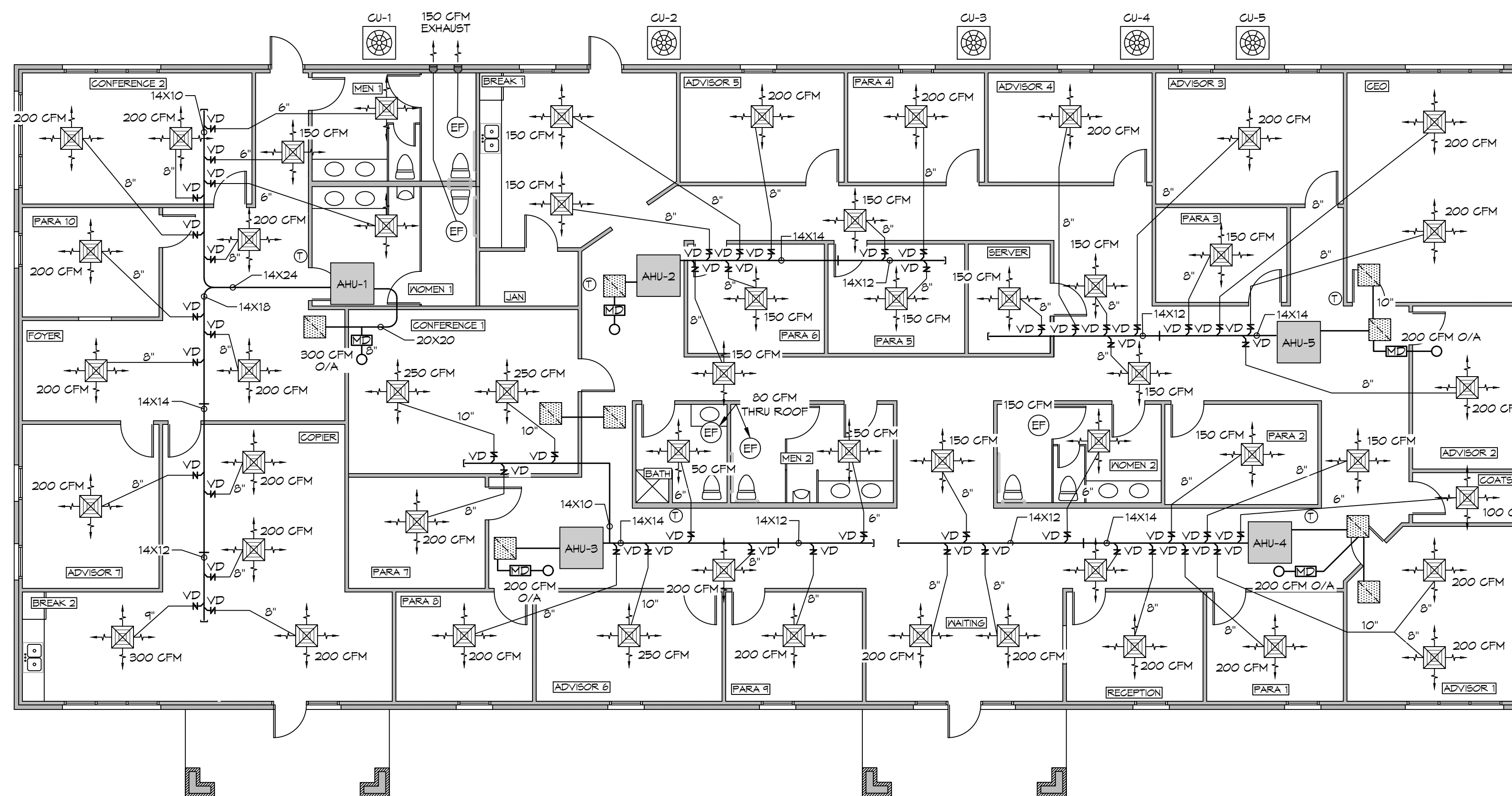
$$Vbz = 196.1 \text{ cfm fresh air}$$

$$\text{Total fresh air required} = 309.3 \text{ cfm fresh air}$$

GENERAL NOTES

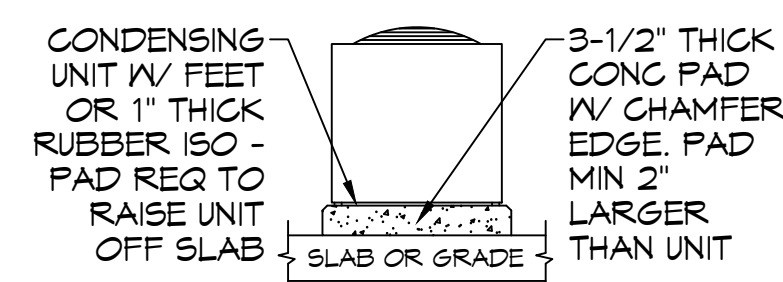
- ALL WORK AND MATERIAL SHALL CONFORM STRICTLY TO THE LATEST LOCAL CITY, PARISH, STATE AND NATIONAL GOVERNING CODES. MUST MEET IMC 2021 REQUIREMENTS.
- CONCEALED DUCTWORK TO BE GALVANIZED SHEET METAL WRAPPED WITH FIBROUS GLASS DUCT WRAP WITH FSK VAPOR BARRIER, MIN R-6, INSTALLED PER SMACNA STANDARDS. DUCT WORK IMMEDIATELY DOWNSTREAM FROM RTU SHALL BE LINED FOR SOUND ATTENUATION.
- EXPOSED DUCTWORK TO BE GALVANIZED SHEET METAL LINED WITH FIBROUS GLASS DUCT LINER, MIN R-6, INSTALLED PER SMACNA STANDARDS.
- ROUND FLEXIBLE DUCT TO BE UL-181, CLASS 1, AIR DUCT MATERIALS.
- DUCT SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS.
- 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.
- 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.
- 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.
- CONDENSATE DRAINS TO BE PVC PIPE RUN TO PLUMBERS P-TRAP WITHIN FIVE FEET OF AIR HANDLING UNITS.
- ALL AIR HANDLING SYSTEMS TO BE BALANCED TO ASSURE PROPER AIR FLOWS PER PLANS.
- ALL THERMOSTATS TO BE AUTOMATIC CHANGEOVER WITH HEAT SWITCH.
- EXHAUST FAN SHALL BE CONTROLLED BY A SWITCH ON THE WALL IN THE SAME LOCATION AS LIGHT SWITCH(S). PROVIDE BACK DRAFT DAMPER.
- PROVIDE AND INSTALL WATER PROOF GRILLE VENT IN PROPER ROOF LOCATION FOR PLUMBING FIXTURE EXHAUST.
- ALL SUPPLY AIR VENTS SHALL BE EQUIPPED WITH AIR CONTROL DAMPERS AT THE REGISTER.
- LOCATE OUTDOOR UNITS AS SHOWN ON ARCHITECTURAL DRAWINGS.
- REFRIGERANT LINES SHALL BE SIZED BY UNIT MANUFACTURER AND INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
- FRESH AIR SHALL BE SUPPLIED TO EACH AIR HANDLER THROUGH EXTERIOR WALL DUCT SUPPLIED WITH A CONTROL DAMPER.
- ALL ELECTRICAL, MECHANICAL, AND PLUMBING PENETRATING FIRE WALLS SHALL BE FIRE CALKED. (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).
- ALL MECHANICAL SYMBOLS ARE DRAWN DIAGRAMMATICALLY. CONTRACTOR TO VERIFY WITH OWNER LOCATIONS OF VENTS, DAMPERS, REGISTERS, ETC.
- REFER TO REFLECTED CEILING PLAN FOR FINAL GRILLE AND DIFFUSER LOCATIONS AND COORDINATE AS REQUIRED.
- FINAL LOCATION OF TEMPERATURE CONTROLS TO BE COORDINATED WITH OWNER AT JOB SITE.
- PROVIDE AND INSTALL SMOKE DETECTORS AS APPROVED BY LOCAL AHJ'S. PLACE NEAR R/A AND S/A OPENINGS OF AHU AND PROVIDE, WITH ACCESS PANEL, WIRING BY ELECTRICAL CONTRACTOR.

FOR REVIEW ONLY
NOT FOR
CONSTRUCTION

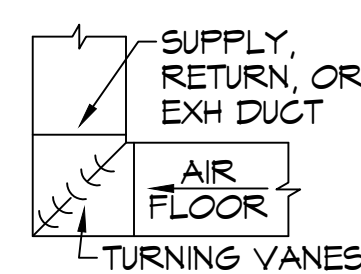


18MECHANICAL PLAN

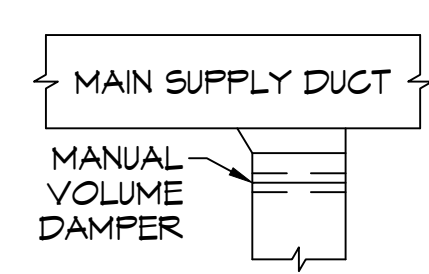
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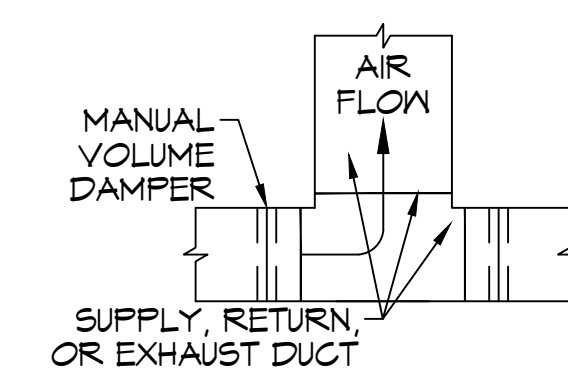
CONDENSING UNIT MOUNT



SQUARE ELBOW



SUPPLY DUCT TAKE-OFF



DUCT SPLITTER

TYPICAL HVAC DETAILS

SCALE: NTS

DRAWN DIAGRAMMATICALLY FOR CLARITY. FIELD VERIFY PLACEMENT OF ALL EQUIPMENT

MECHANICAL LEGEND

	SUPPLY AIR GRILLE		EXHAUST FAN
	RETURN AIR GRILLE		THERMOSTAT
	DAMPER CONTROL		
	SUPPLY DUCT		
	RETURN AIR DUCT		
	EXHAUST DUCT		

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#	DESCRIPTION	DATE

SEAL:

NEW OFFICE BUILDING
TRUWEALTH LLC
 2479 DATE: 9-11-2023
 JOB No: DFD
 DRAWN BY: TT
 CHECKED BY:

SHEET TITLE:
MECHANICAL PLAN

DRAWING NUMBER:
M101

SHEET No: