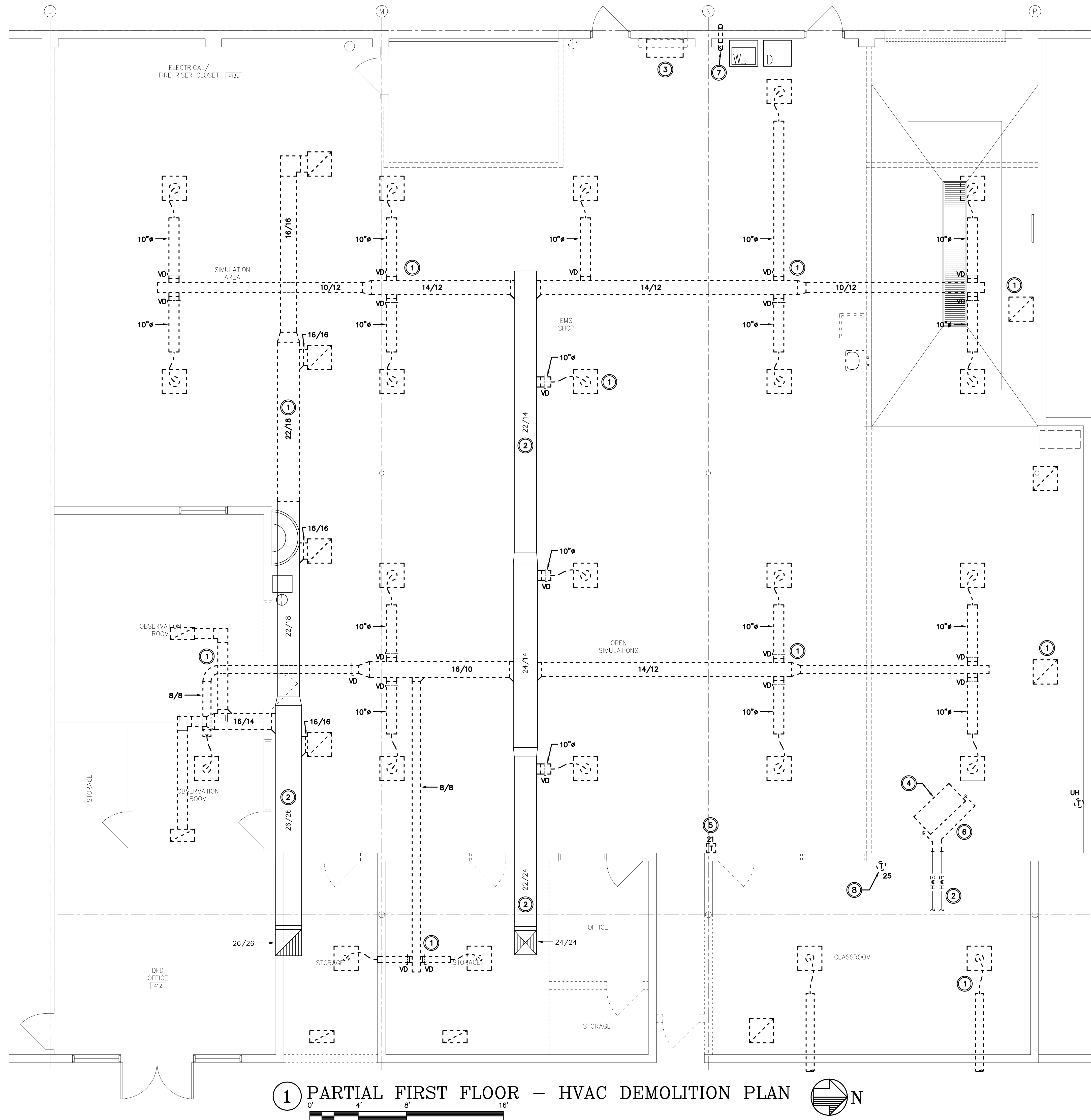


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- NOTES:**
- ① REMOVE ITEMS SHOWN BOLD AND DASHED (TYPICAL).
 - ② EXISTING ITEMS TO REMAIN SHOWN LIGHT (TYPICAL).
 - ③ REMOVE PROPELLOR EXHAUST FAN AND LOUVER. REMOVE ALL ASSOCIATED CONTROLS. OFFER EQUIPMENT TO OWNER PRIOR TO DISPOSAL.
 - ④ REMOVE HOT WATER UNIT HEATER. REMOVE ALL ASSOCIATED CONTROLS. OFFER EQUIPMENT TO OWNER PRIOR TO DISPOSAL.
 - ⑤ REMOVE EXISTING TEMPERATURE SENSOR. RETURN TO OWNER.
 - ⑥ REMOVE HEATING WATER PIPING BACK TO ABOVE CEILING LEVEL AND CAP.
 - ⑦ REMOVE OLD DUST COLLECTION SYSTEM 4" EXHAUST DUCT.
 - ⑧ REMOVE EXISTING TEMPERATURE CONTROL DEVICE FOR RELOCATION. REFER TO 1/M-1 FOR NEW LOCATION.

① PARTIAL FIRST FLOOR - HVAC DEMOLITION PLAN



PROJECT #: 20160101.01

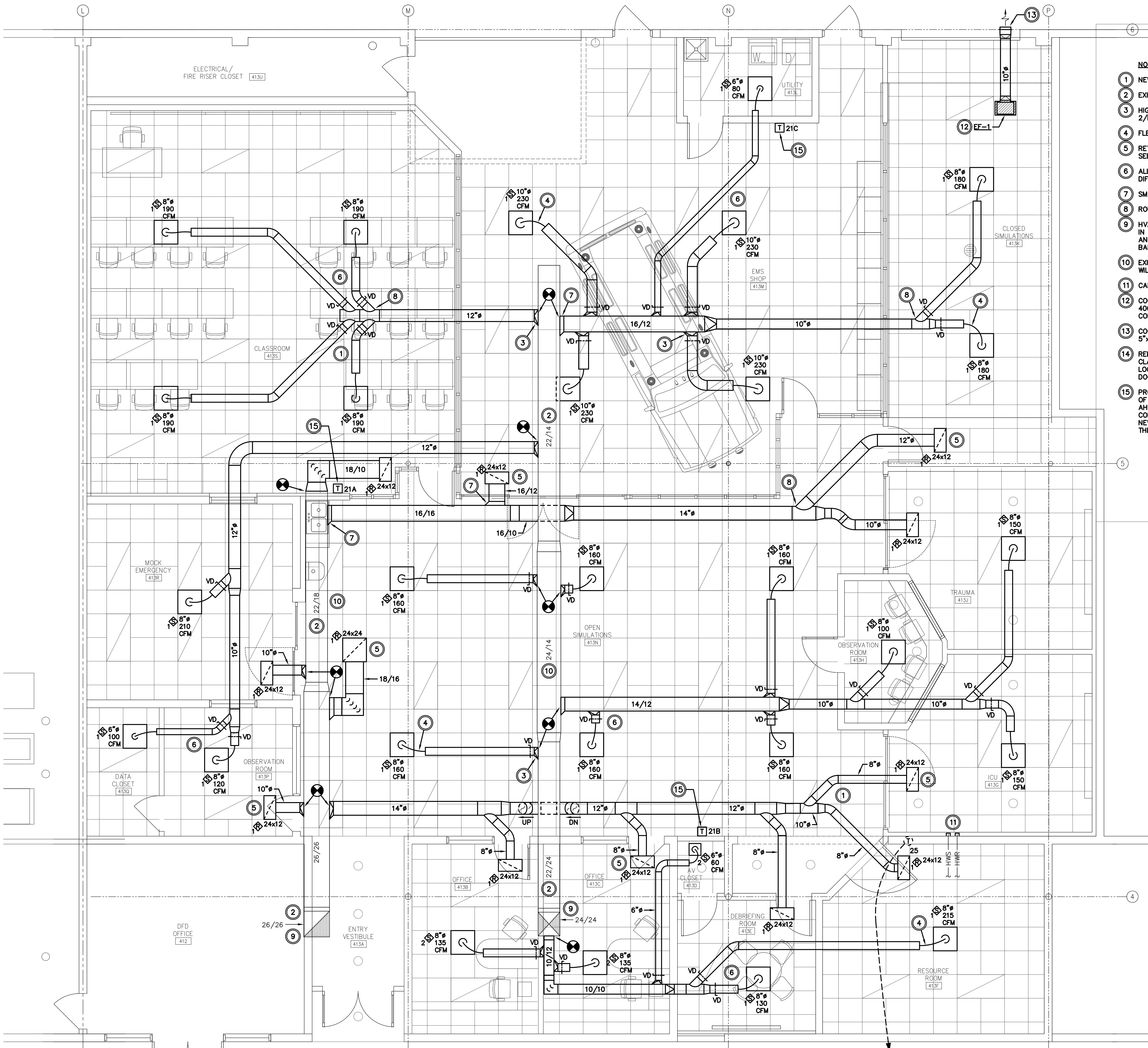
ISSUE DATES:

11/16/2016	35% Submittal
12/16/2016	Design Development Sub.
1/20/2017	100% Submittal
1/26/2017	Construction Docs.

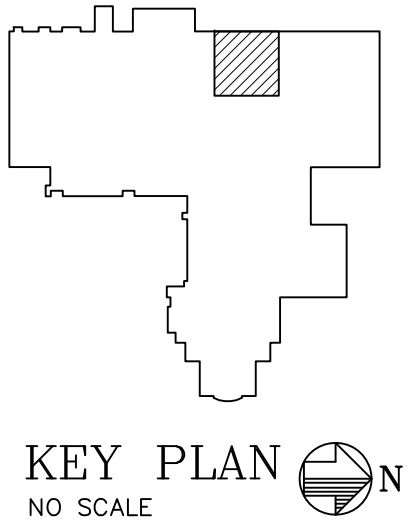
SHEET NUMBER:
M-1D



- NOTES:**
- 1 NEW ITEMS SHOWN BOLD (TYPICAL).
 - 2 EXISTING ITEMS SHOWN LIGHT (TYPICAL).
 - 3 HIGH EFFICIENCY DUCT TAKEOFF (TYPICAL). SEE DETAIL 2/MD-1.
 - 4 FLEXIBLE DUCTWORK (TYPICAL).
 - 5 RETURN/EXHAUST GRILLE WITH DUCTED OUTLET (TYPICAL). SEE DETAIL 1/MD-1.
 - 6 ALL RUNOUTS TO DIFFUSERS SHALL BE SAME SIZE AS DIFFUSER NECK (TYPICAL).
 - 7 SMACNA FIG. 4-6 45° FITTING (TYPICAL).
 - 8 ROUND DUCT WYE TAP FITTING (TYPICAL).
 - 9 HVAC TO THIS AREA WILL BE FED BY EXISTING AHU-21 IN THE MECHANICAL MEZZANINE ABOVE. INSPECT UNIT AND REPORT ANY DEFICIENCIES TO THE OWNER. BALANCE UNIT TO AIRFLOW INDICATED ON THE PLAN.
 - 10 EXISTING LINED SUPPLY AND RETURN TRUNK DUCTWORK WILL REMAIN.
 - 11 CAP EXISTING HEATING WATER LINES ABOVE CEILING.
 - 12 COOK GEMINI GC-622 OR APPROVED EQUIVALENT. 400 CFM, 0.25 SP, 135 WATTS, 115/1/60, 3.0 SONES. CONTROL BY WALL SWITCH. COORDINATE WITH DIV. 26.
 - 13 COOK GALVANIZED WALL CAP WITH BIRD SCREEN 5"x11" DUCT CONNECTION.
 - 14 RELOCATE EXISTING THERMOSTAT FOR AHU-25 TO CLASSROOM 129 ON EAST SIDE OF CORRIDOR. LOCATE THERMOSTAT ADJACENT TO CLASSROOM DOOR. MOUNT AT 54" AFF.
 - 15 PROVIDE (3) TEMPERATURE SENSORS. THE AVERAGE OF THE THREE SENSORS SHALL BE USED TO CONTROL AHU-21. MAKE ALL CHANGES REQUIRED TO AHU-21 CONTROL HARDWARE OR SOFTWARE TO IMPLEMENT THIS NEW CONTROL SEQUENCE. UPDATE GRAPHICS TO SHOW THE SPACE TEMPERATURE AT EACH SENSOR.



1 PARTIAL FIRST FLOOR - HVAC PLAN

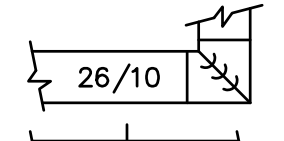
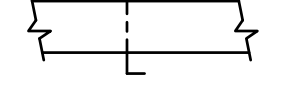


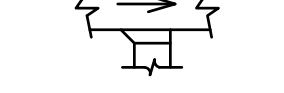



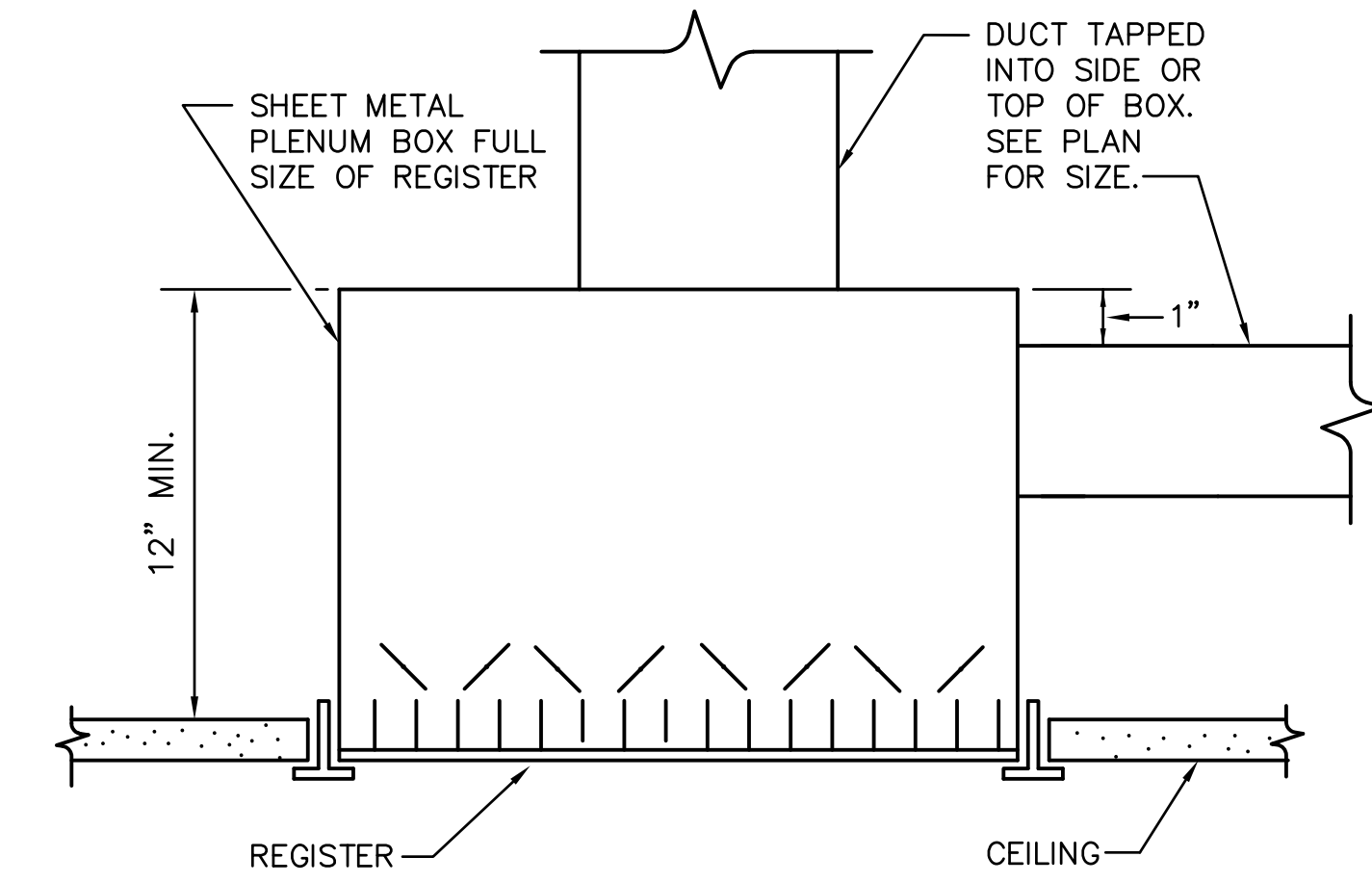
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GRILLE & REGISTER SCHEDULE					
MARK	MANUFACTURER	MODEL	DAMPER	FINISH	REMARKS
S-1	TITUS	TMS	OBD	WHITE	LAY-IN
S-2	ACCUTHERM	TF-HC	N.A.	WHITE	MOUNT DIFFUSER TO DUCT AND SUPPORT FROM STRUCTURE AS REQUIRED.
R-1	TITUS	50F	-	ALUM.	LAY IN, 1/2"x1 1/2" EGG CRATE

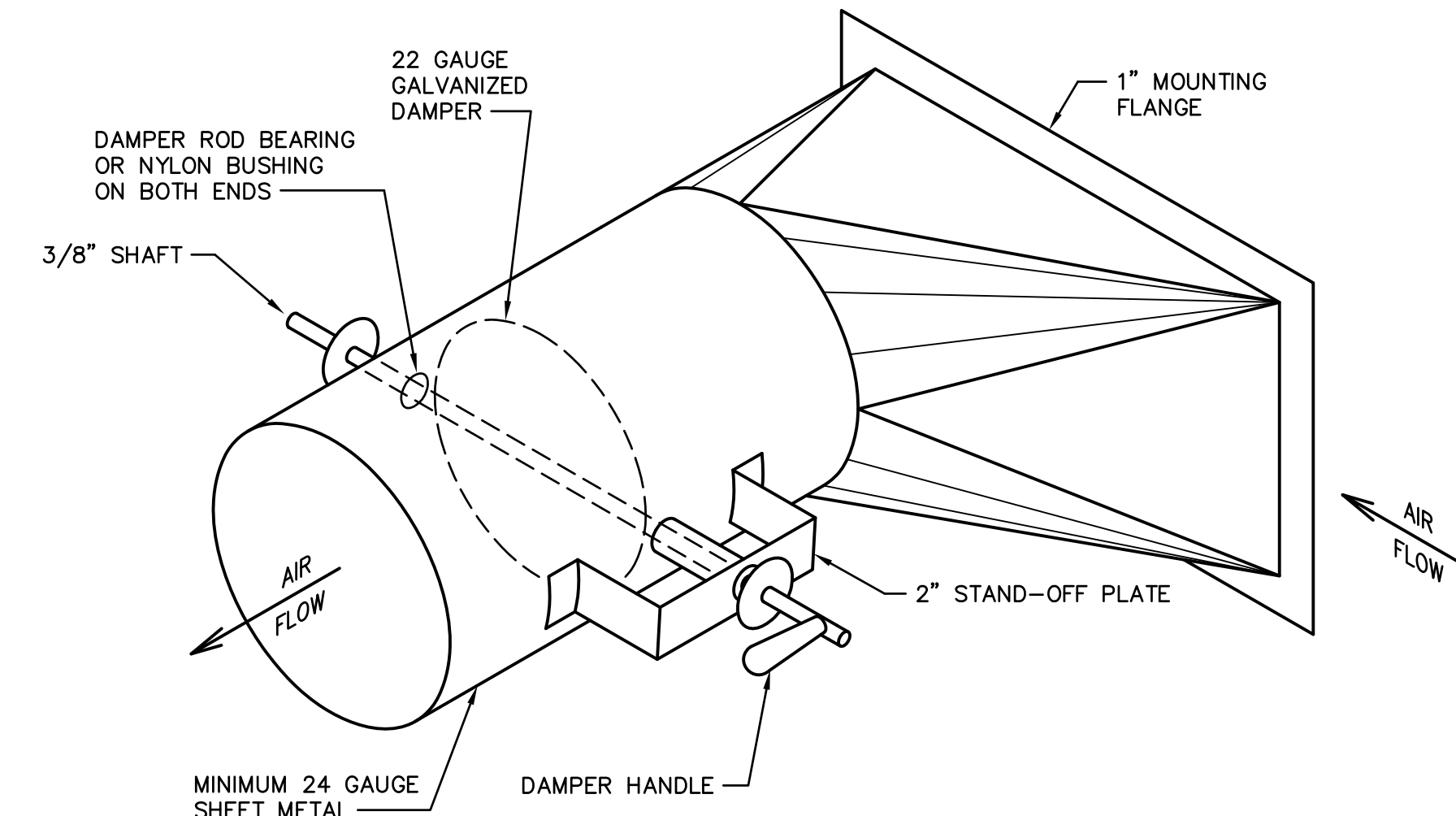
DUCT PRESSURE CLASSES			
FAN NO.	DUCT INVOLVED	POSITIVE (P) OR NEGATIVE (N) PRESSURE	MINIMUM PRESSURE CLASS, IN. W.G.
AHU SYSTEM	FROM AHU TO TERMINAL UNIT	P	4
	DOWNSTREAM OF TERMINAL UNIT	P	2 RECTANGULAR 10 ROUND (SPIRAL)
	RETURN AIR	N	2 THRU 24" DUCT 4 ABOVE 24" DUCT
EACH EXHAUST SYSTEM	DUCTS 24" & SMALLER IN EITHER DIMENSION	N	2
	DUCTS GREATER THAN 24" IN EITHER DIMENSION	N	4
ALL SYSTEMS	ROUND DUCTS (SPIRAL)	N/P	10
	OVAL DUCTS (SPIRAL)	N/P	10

MECHANICAL LEGEND

CC	CANVAS CONNECTION	EAT	ENTERING AIR TEMPERATURE
◇	DIFFUSER OR GRILLE NOTATION	TEMP	TEMPERATURE
CFM	CUBIC FEET PER MINUTE OF AIR	UH	UNIT HEATER
⊖	THERMOSTAT	BTUH	BTU PER HOUR
⊕	HUMIDISTAT	MBTUH	THOUSANDS OF BTU PER HOUR
⊠	TEMPERATURE SENSOR	GPM	GALLONS PER MINUTE
⊡	HUMIDITY SENSOR	RPM	REVOLUTIONS PER MINUTE
BDD	BACKDRAFT DAMPER	TDH	TOTAL DYNAMIC HEAD
VD	VOLUME DAMPER	DIA	DIAMETER
FD	FIRE DAMPER	CENT	CENTRIFUGAL
	DUCTWORK WITH TURNING VANES (DOUBLE WALL). SIZE INDICATED IS CLEAR INSIDE DIMENSION.	PSI	POUNDS PER SQUARE INCH
	VOLUME DAMPER IN DUCTWORK	ΔP	PRESSURE DIFFERENCE
	SUPPLY AIR DUCT UP/DOWN	HP	HORSEPOWER
	RETURN OR EXHAUST AIR DUCT UP/DOWN	KW	KILOWATTS
	45° TAKE-OFF PER SMACNA FIG. 2-6	PH	PHASE
OA	OUTSIDE AIR	W.G.	WATER GAUGE
RA	RETURN AIR	S.P.	STATIC PRESSURE
SA	SUPPLY AIR	N.O.	NORMALLY OPEN
BOT	BOTTOM ELEVATION	N.C.	NORMALLY CLOSED
AFF	ABOVE FINISHED FLOOR	B.S.	BIRDSCREEN
DN	DOWN	ALUM	ALUMINUM
CONN	CONNECTION OR CONNECTED	CS	CONDENSER WATER SUPPLY
	CONNECTION POINT TO EXISTING	CR	CONDENSER WATER RETURN
AHU	AIR HANDLING UNIT	CWS	CHILLED WATER SUPPLY
EF	EXHAUST FAN	CWR	CHILLED WATER RETURN
EWT	ENTERING WATER TEMPERATURE	HWS	HEATING WATER SUPPLY
LWT	LEAVING WATER TEMPERATURE	HWR	HEATING WATER RETURN

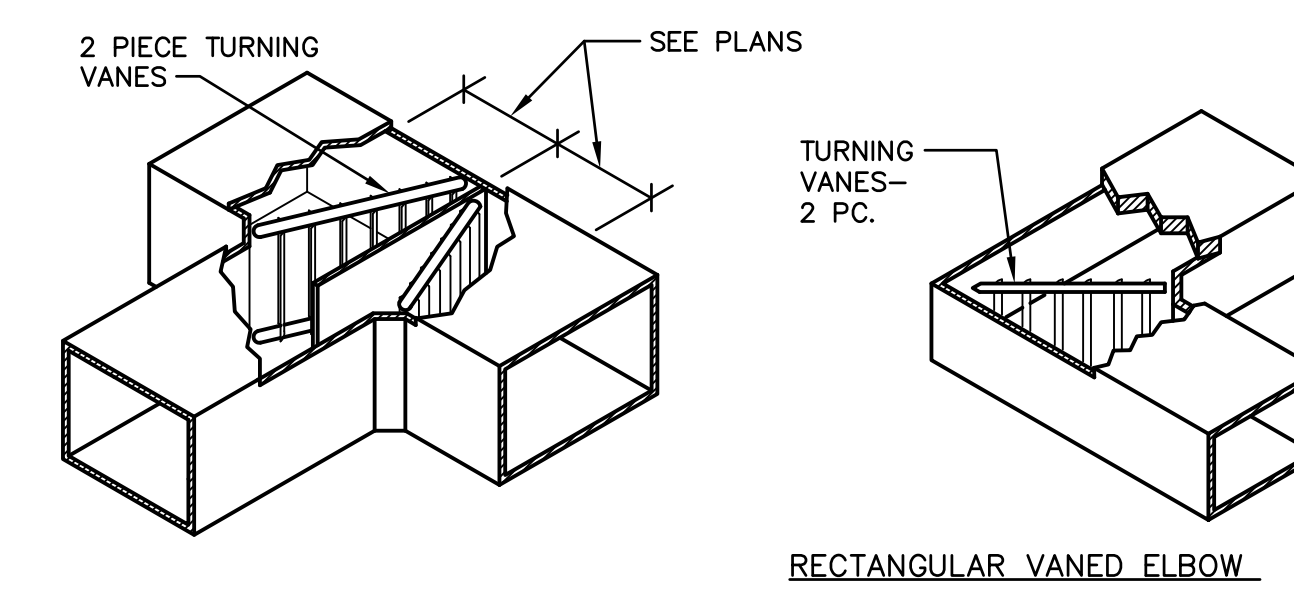
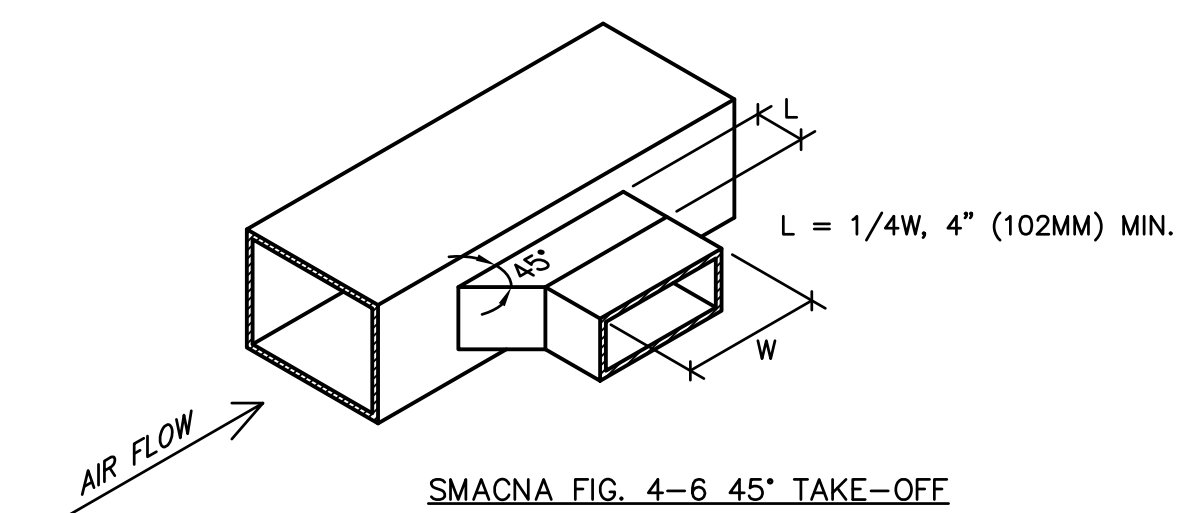


1 RETURN AND EXHAUST REGISTER DETAIL
NO SCALE



- NOTES: 1. SEE SMACNA FIG. 4-6 FOR DIMENSIONS.
2. PERMANENTLY MARK FULL OPEN, FULL CLOSED, AND BALANCED AIRFLOW DAMPER HANDLE POSITIONS.
3. OMIT DAMPER WHERE FITTING IS USED IN RETURN APPLICATIONS.
4. AIR FLOW IS REVERSED IN RETURN AND EXHAUST APPLICATIONS.

2 HIGH EFFICIENCY DUCT TAKE-OFF
NO SCALE



- NOTES:
1- DUCT DETAILS SHOWN ARE FOR LINED AND UNLINED SHEET METAL DUCTS.
2- REFER TO SMACNA DUCT MANUAL FOR ADDITIONAL DETAILS AND/OR INFORMATION IF REQUIRED.

3 AIR CONDITIONING DUCTWORK FITTING DETAILS
NO SCALE