

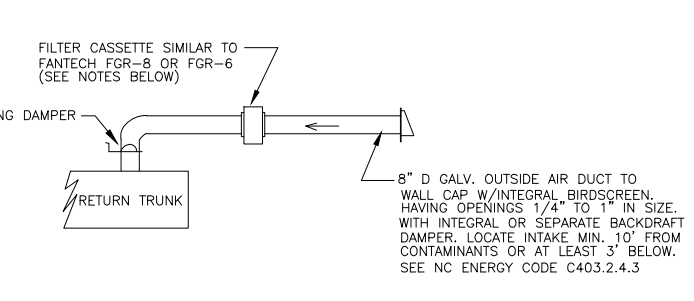
MECHANICAL PLAN EXISTING/DEMOLITION  
SCALE: 1/8" = 1 FT.

- MECHANICAL KEY NOTES**
- INSTALL NEW SPLIT SYSTEM HEAT PUMP FOR NEW OFFICES
  - INSTALL NEW EXHAUST FAN FOR NEW TOILET ROOM
  - INSTALL NEW DUCTS/GRILLS FROM EXISTING AIR HANDLER TO CONDITION NEW TRAINING ROOM. CREATE TWO ZONE SYSTEM TO CONTROL TRAINING ROOM SEPARATELY.

**WALL LEGEND**

- EXISTING WALL, UL 1419; TWO HOUR RATED
- EXISTING UNRATED PARTITION WALL (NOT ON BLD. PERIMETER). 3 5/8" METAL STUD, 16" OC; ONE LAYER 5/8" DRYWALL EACH SIDE

**OPTIONAL DEMAND CONTROL FOR OUTSIDE AIR (NOT REQUIRED)**  
IF DESIRED BY OWNER TO REDUCE OUTSIDE AIR WHEN TRAINING ROOM IS NOT IN USE, INSTALL OPTIONAL CO<sub>2</sub> SENSOR IN TRAINING ROOM. PAIR WITH MODULATING DAMPER IN OUTSIDE AIR DUCT TO CONTROL OUTSIDE AIR FLOW FROM 100 CFM TO MAXIMUM 310 CFM. SYSTEM SHALL BE AS MANUFACTURED BY YOUNG REGULATOR OR SIMILAR.



OUTSIDE AIR FOR AH-1 (REFERENCE TABLE 403.3.1.1 NC MECH. CODE)			TOTAL
OFFICE	677 SF / 1000 X 5 = 4 PERSONS		
O.A. = 4 PERSONS X 5 CFM + (677 X .06)			
	= 20 + 41		61
	= 61 CFM		
TRAINING ROOM			
810 SF / 1000 X 50 = 40 PERSONS			
O.A. = 40 PERSONS X 5 CFM + (810 X .06)			
	= 200 + 48		248
	= 248 CFM		
		AH-1	309

AIR BALANCE (FOR AH-2)		
IN	OUT	
AH-2 70 CFM	EF-2 80	

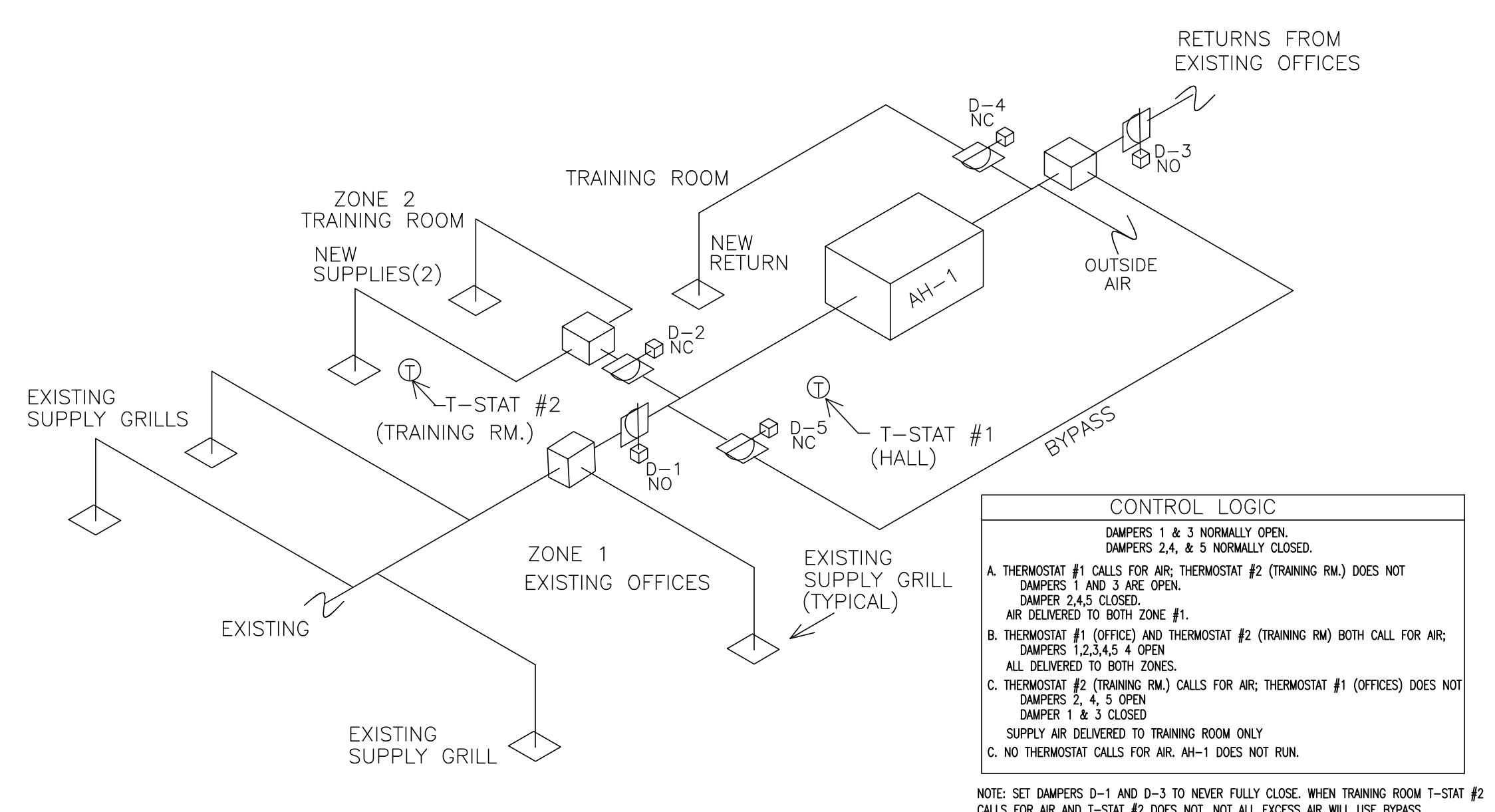
**SYMBOLS/ LEGEND**

- 24" x 24" SUPPLY GRILL
- 24" x 24" FILTER RETURN CEILING TYPE
- FILTER RETURN, WALL TYPE
- THERMOSTAT
- MOTORIZED CONTROL DAMPER
- NC NORMALLY CLOSED
- NO NORMALLY OPEN
- AFF ABOVE FINISHED FLOOR
- SPIN-IN FITTING W/LOCKING VOLUME DAMPER

HEAT PUMP UNIT SCHEDULE											
TAG	DESCRIPTION	LOCATION	STATUS	MANUFACTURER/ MODEL	TONS	VOLT.	PH	AMPS	OA CFM	REMARK	
AH-1	AIR HANDLER	ABV. CLG.	EXISTING	GOODMAN	3.0	208	1	-	309	1200	RESET OA DAMPER
HP-1	HEAT PUMP CONDENSER	GRADE	EXISTING	GSZ140361KE	3.0	208	1	-	NA	NA	
AH-2	AIR HANDLER	ABV. CLG.	NEW	BY OWNER	2.5	208	1	23	70	1000	3.8 KW HEAT STRIPS
HP-2	HEAT PUMP CONDENSER	GRADE	NEW	BY OWNER	2.5	208	1	18.1	NA	NA	

FAN SCHEDULE						
MARK	ROOM	STATUS	MANUFAC./ MODEL	CFM	TYPE	REMARK
EF-1	TOILET	EXISTING	EXISTING	80	VENTILATING	
EF-2	TOILET	NEW	BROAN L100 OR EQUAL	80	VENTILATING	OR PROVIDE EQUAL TO EXISTING EF-1

EF-2 OPTION TO VENT THROUGH ROOF SIMILAR TO ORIGINAL BUILDING DESIGN



**CONTROL LOGIC**  
DAMPERS 1 & 3 NORMALLY OPEN.  
DAMPERS 2, 4, & 5 NORMALLY CLOSED.

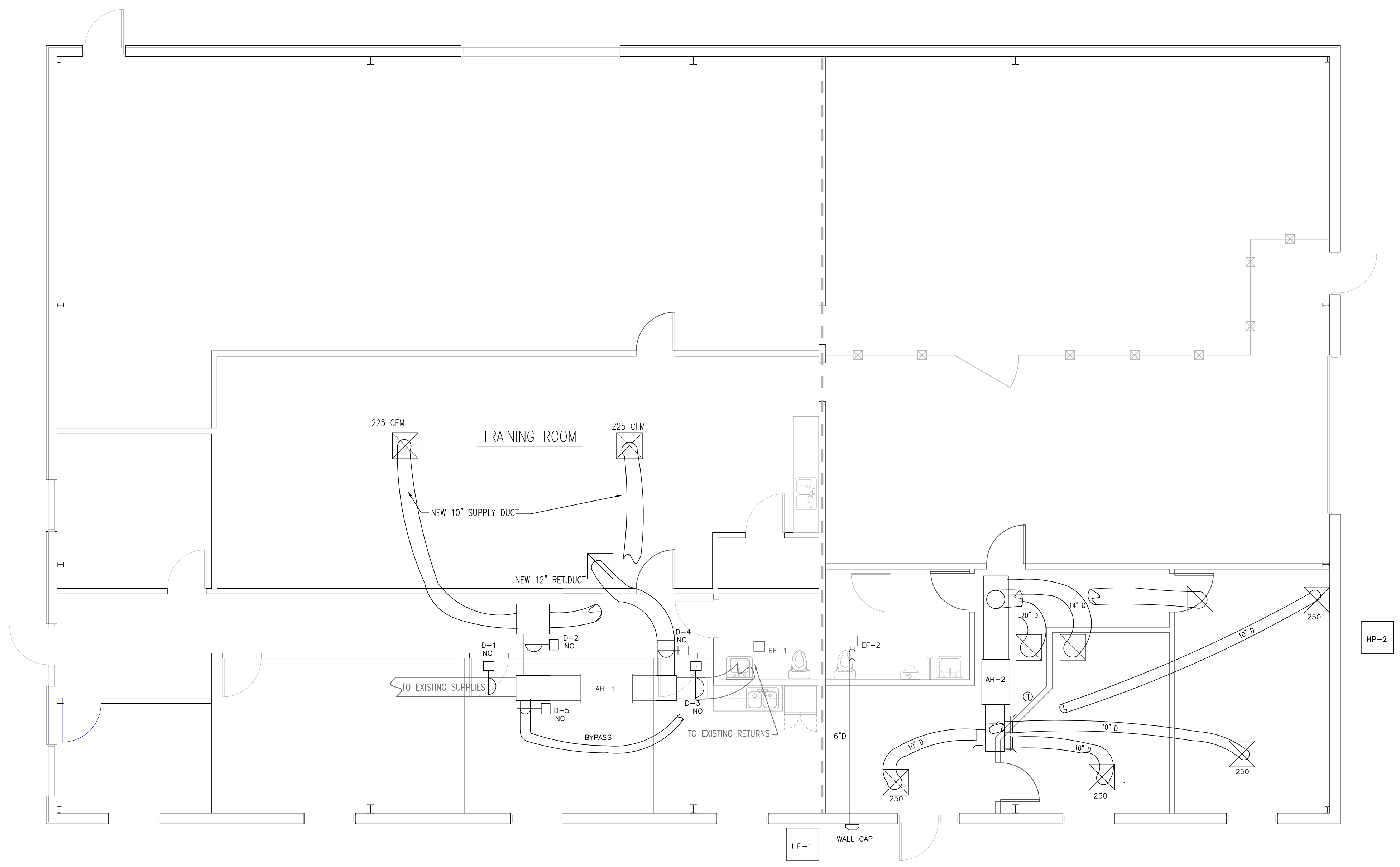
A. THERMOSTAT #1 CALLS FOR AIR; THERMOSTAT #2 (TRAINING RM) DOES NOT CALL FOR AIR; DAMPERS 1 AND 3 ARE OPEN.  
DAMPER 2, 4, 5 CLOSED.  
AIR DELIVERED TO BOTH ZONE #1.

B. THERMOSTAT #1 (OFFICE) AND THERMOSTAT #2 (TRAINING RM) BOTH CALL FOR AIR; DAMPERS 1, 2, 3, 4, 5 OPEN.  
ALL DELIVERED TO BOTH ZONES.

C. THERMOSTAT #2 (TRAINING RM) CALLS FOR AIR; THERMOSTAT #1 (OFFICE) DOES NOT CALL FOR AIR; DAMPERS 2, 4, 5 OPEN.  
DAMPER 1 & 3 CLOSED.  
SUPPLY AIR DELIVERED TO TRAINING ROOM ONLY.

C. NO THERMOSTAT CALLS FOR AIR; AH-1 DOES NOT RUN.

**ZONE CONTROL NOTES**  
INSTALL ZONING SYSTEM PER CONTROL SCHEMATIC. LOCATION OF ZONE CONTROLLER PANEL TO BE AS DETERMINED BY OWNER.  
INCLUDE FUNCTIONING SUPPLY AIR TEMPERATURE SENSOR TO PROTECT ROOF-TOP UNIT.  
SYSTEM COMPONENTS SHALL BE FROM ONE MANUFACTURER SUCH AS HONEYWELL, EWC CONTROLS, ARZEL, ETC.



MECH. PLAN PROPOSED SCALE: 3/16" = 1 FT.

FIRM # P-1150



DAWSON'S ELECTRIC ALTERATION  
280 JARCO DRIVE  
FUQUAY-VARINA, NC

DRAWN BY: CBM

PLOT DATE: 4-16-2024

ISSUED FOR: CONSTRUCTION

REVISIONS:

MECHANICAL PLAN

M-1