

1. DEMOLISH ALL DIFFUSERS, DUCTWORK, SUPPORTS AND FLEXIBLE CONNECTIONS BACK TO AIR HANDLING UNIT LOCATIONS.

1. DEMOLISH DUCTWORK UP TO ROOF CURB. PREPARE FOR RECONNECTION IN NEW WORK.
2. DEMOLISH DUCTWORK UP TO SUPPLY AND RETURN DUCT CONNECTIONS AT AIR HANDLING UNIT.
3. DEMOLISH DUCT UP TO ROOF CAP.

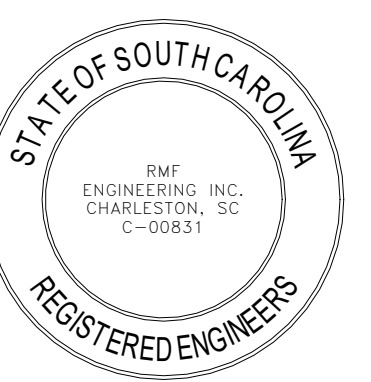


CONSULTANT LOGO



RMF ENGINEERING, INC.
194 SEVEN FARMS DRIVE
SUITE G
CHARLESTON, SC 29492
843-971-9639 F: 843-971-9641
RMF PROJECT #: 03250343.A0

SEALS



Central Carolina Technical College

CCTC IDQ Building M300 Renovation 2

506 N Guilford Dr, Summit, SC 29150

ISSUE DATE: 03/27/2026
PHASE: CONSTRUCTION DOCUMENTS

SHEET ISSUE:		
NO.	DATE	DESCRIPTION
1	07/17/2026	Addendum 1

PROJECT MANAGER:
DESIGNED BY:
DRAWN BY:

ZSL
EAM
EAM

SHEET TITLE:
**MECHANICAL
DUCTWORK -
DEMOLITION**

SHEET NO.

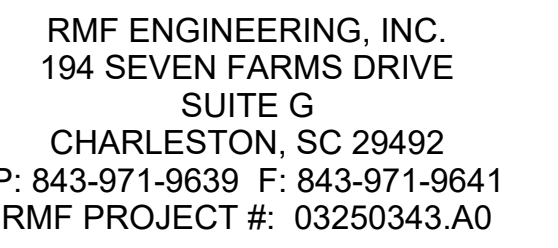
PROJ. NO.
024198.03

MD-101



SCALE: 1/4" = 1'-0"

1. CONTRACTOR SHALL CAREFULLY REMOVE AIR HANDLING UNIT FROM CURB AND TURN OVER TO OWNER AT A SUITABLE PERMANENT LOCATION DETERMINED BY THE OWNER.
2. DEMOLISH HOOD TO CURB AND PREPARE TO CAP.
3. DEMOLISH EXHAUST FAN CAP, CURB, AND DUCTWORK THROUGH ROOF. PREPARE TO REUSE PENETRATION FOR EF-1 SHOWN ON M-102.

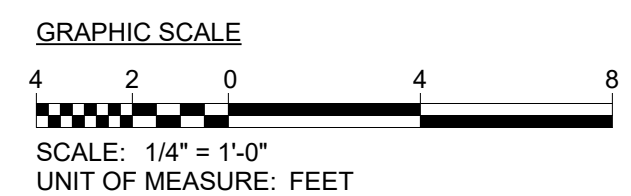


SEALS

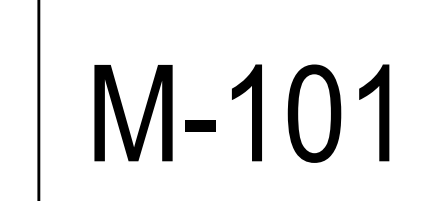
506 N Guignard Dr, Sumter, SC 29150

NO.	DATE	DESCRIPTION
1	07/17/2026	Addendum 1

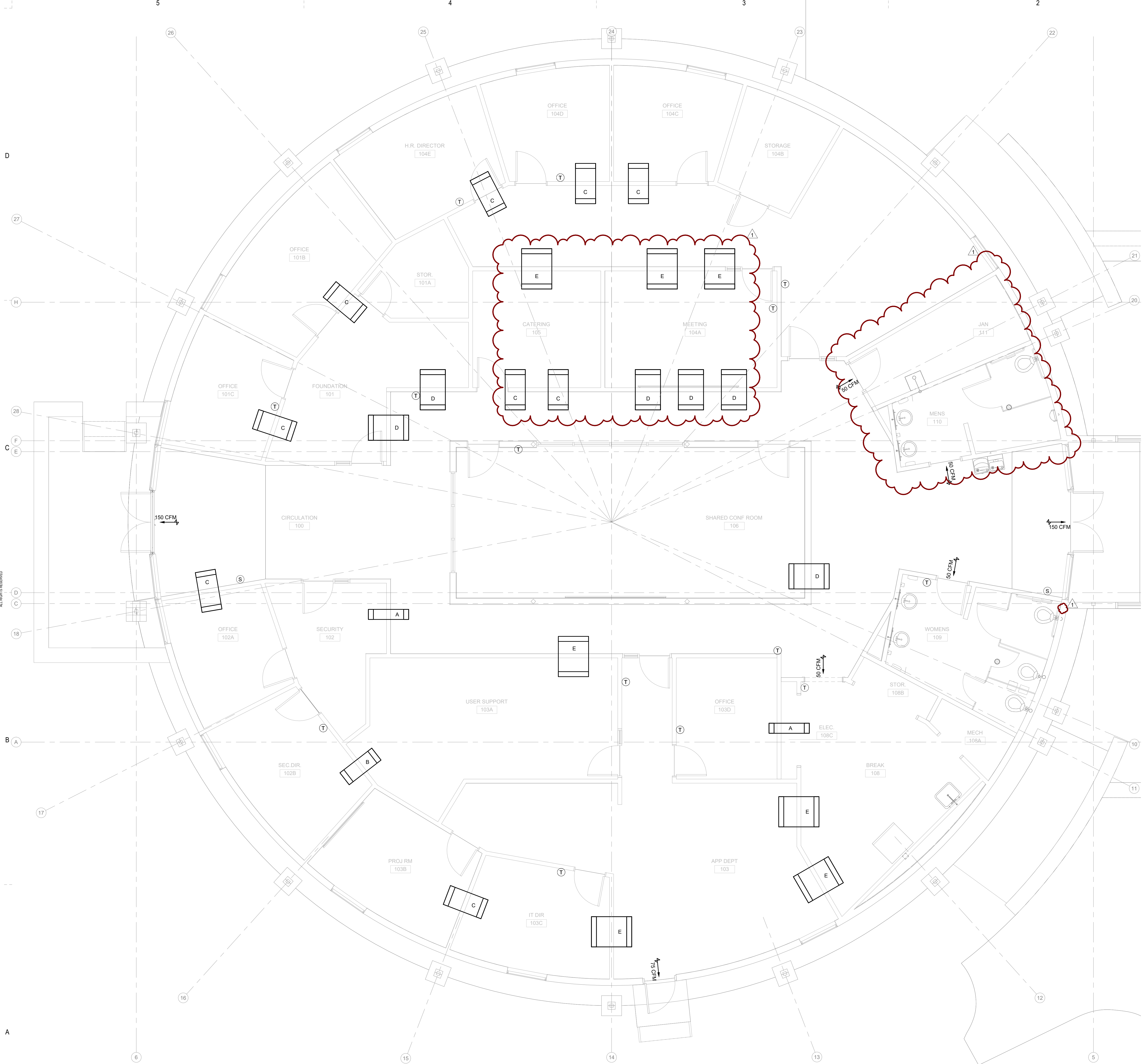
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024198.03



MD-102



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HVAC AIR BALANCE AND TRANSFER DUCTWORK - NEW WORK
SCALE: 1/4" = 1'-0"

GENERAL NOTES

1. INSTALL TRANSFER DUCTS TIGHT TO STRUCTURE ABOVE OR AS HIGH AS POSSIBLE.

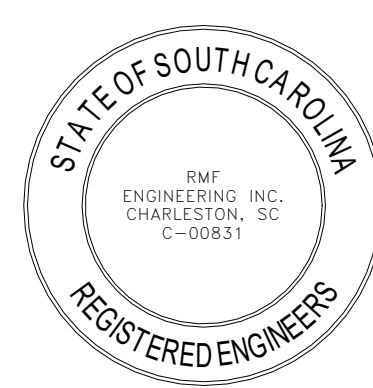


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SEALS



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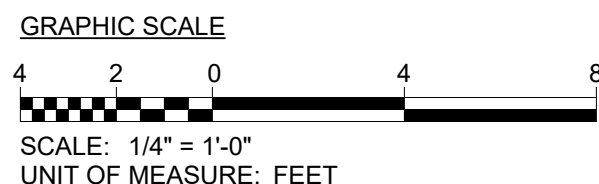
SHEET ISSUE:
NO. DATE DESCRIPTION
1 07/17/2026 Addendum 1

PROJECT MANAGER: Designer
DESIGNED BY: Designer
DRAWN BY: Author

HVAC AIR BALANCE - NEW WORK

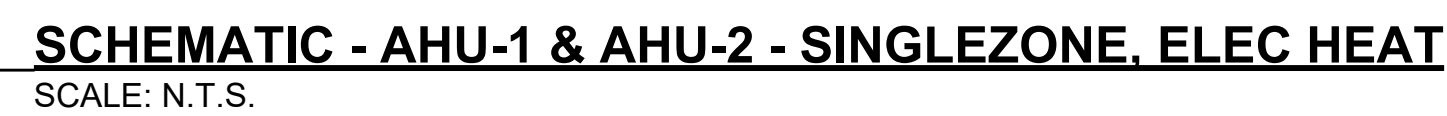
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M-201



1

1. ALL ITEMS LOCATED WITHIN THE DASHED LINE ARE PART OF THE EXISTING AIR HANDLING UNIT.
2. STATIC PRESSURE SENSOR SHALL BE LOCATED IN THE SUPPLY DUCTWORK AT THE POINT(S) OF MINIMUM STATIC PRESSURE (TYPICALLY 2/3 DOWNSTREAM) AND THE INITIAL BALANCE SET POINT DETERMINED THROUGH TEST AND BALANCE.
3. DETECTOR PROVIDED BY DIV 26 INSTALLED BY DIV 23.



SEQUENCE OF OPERATION

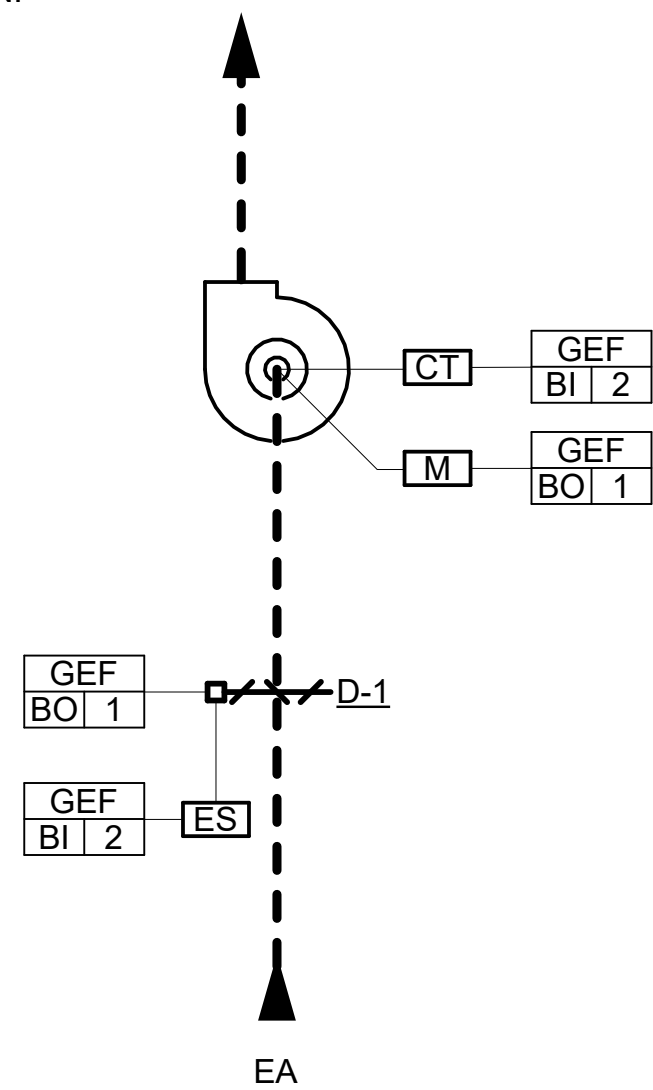
PART 1 - GENERAL

A. SYSTEM CONTROL

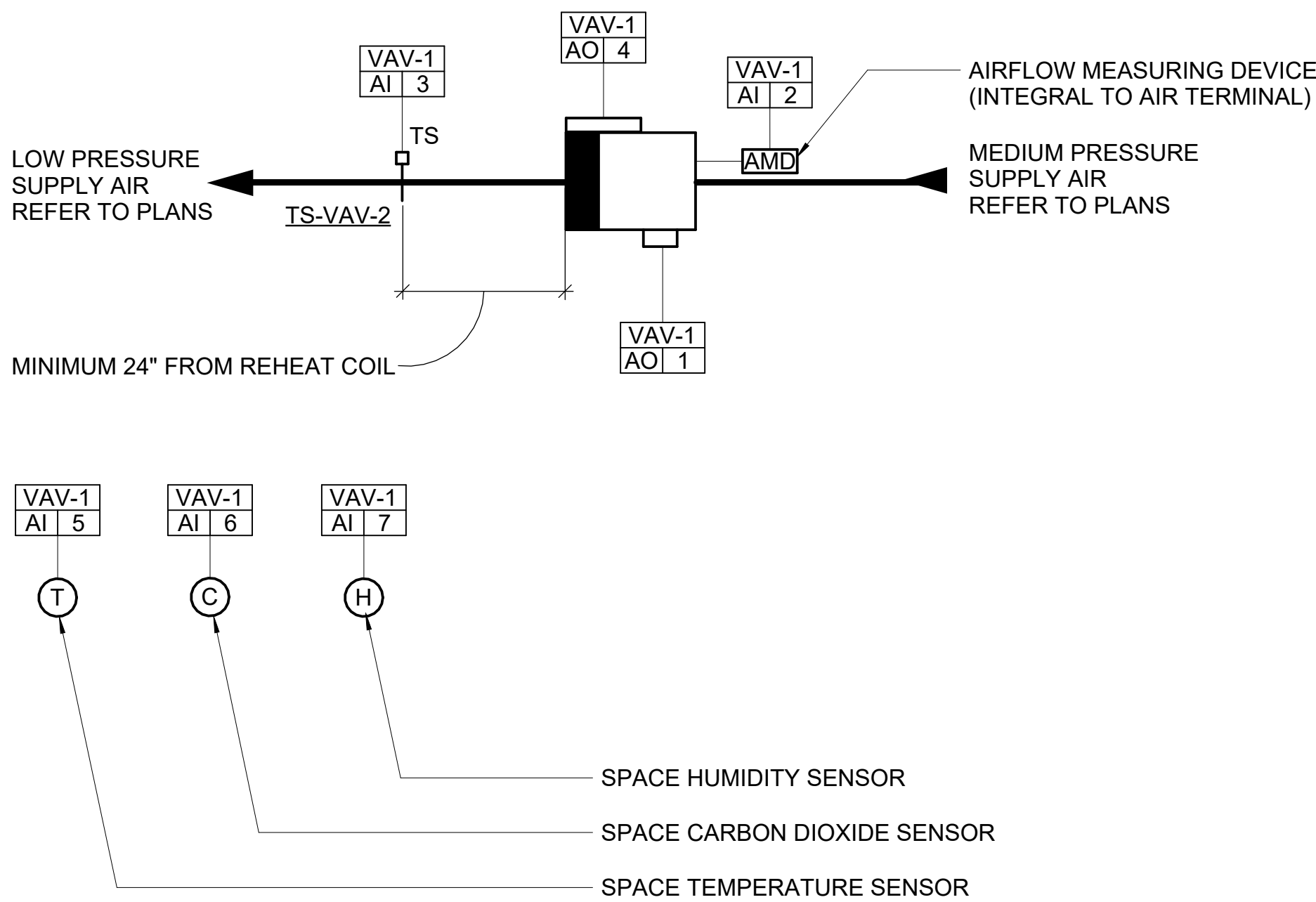
1. EXHAUST FAN SHALL BE MANUALLY INDEXED TO THE AUTOMATIC MODE AT ITS STARTER H-O-A SWITCH.
2. THE EXHAUST FAN SHALL BE ENERGIZED VIA REMOTE SIGNAL FROM THE BUILDING AUTOMATION SYSTEM (BAS). THE BAS SHALL DETERMINE AND OPERATE THE UNIT ON AN OPTIMAL OCCUPIED AND UNOCCUPIED SCHEDULE WITH A 365 DAY/24 HOUR GRAPHIC INTERFACE SCHEDULE PROGRAM.
3. WHEN ENERGIZED, EXHAUST FAN SHALL START AND RUN CONTINUOUSLY AFTER ISOLATION DAMPER HAS BEEN PROVEN OPEN.
4. WHEN THE EXHAUST FAN IS DEENERGIZED THROUGH THE BAS, ALL CONTROLS SHALL RETURN TO THEIR NORMAL POSITION READY FOR RESTARTING. THE EXHAUST FAN SHALL DEENERGIZE AND, AFTER AN ADJUSTABLE INTERVAL, ISOLATION DAMPER SHALL CLOSE.

B. ALARMS & FAILURE MODES

1. A FAILURE OF THE EXHAUST FAN, AS SENSED BY ITS RESPECTIVE CURRENT TRANSDUCER, SHALL BE ALARMED TO THE BAS. UPON SENSING FAILURE, THE BAS SHALL INDICATE ALARM AND DISABLE THE FAILED FAN.
2. A FAILURE OF THE ISOLATION DAMPER THAT IS REQUIRED TO BE PROVEN OPEN FOR NORMAL OPERATION SHALL BE ALARMED TO THE BAS. UPON SENDING FAILURE, THE BAS SHALL INDICATE ALARM, DISABLE THE EXHAUST FAN, AND RETURN ALL CONTROLS TO THEIR NORMAL POSITION.



1 SCHEMATIC - GENERAL EXHAUST FAN
SCALE: N.T.S.



3 SCHEMATIC - VARIABLE AIR VOLUME SUPPLY AIR TERMINAL UNIT WITH ELECTRIC REHEAT
SCALE: N.T.S.

SEQUENCE OF OPERATION

PART 1 - GENERAL

- A. THE VARIABLE VOLUME SUPPLY AIR TERMINAL UNIT SHALL OPERATE ON AN OCCUPIED/UNOCCUPIED SCHEDULE. OCCUPIED/UNOCCUPIED MODES SHALL BE AS DETERMINED BY THE OCCUPIED/UNOCCUPIED PROGRAM OF THE BUILDING AUTOMATION SYSTEM (BAS).
- B. THE MINIMUM AND MAXIMUM HEATING AIRFLOW SETPOINTS SHALL BE COORDINATED WITH THE APPROVED TERMINAL UNIT MANUFACTURER TO ENSURE ACCEPTABLE AIRFLOWS THROUGH ENERGIZED ELECTRIC COILS THROUGHOUT THE ENTIRE OPERATING RANGE.
- C. OCCUPIED MODE

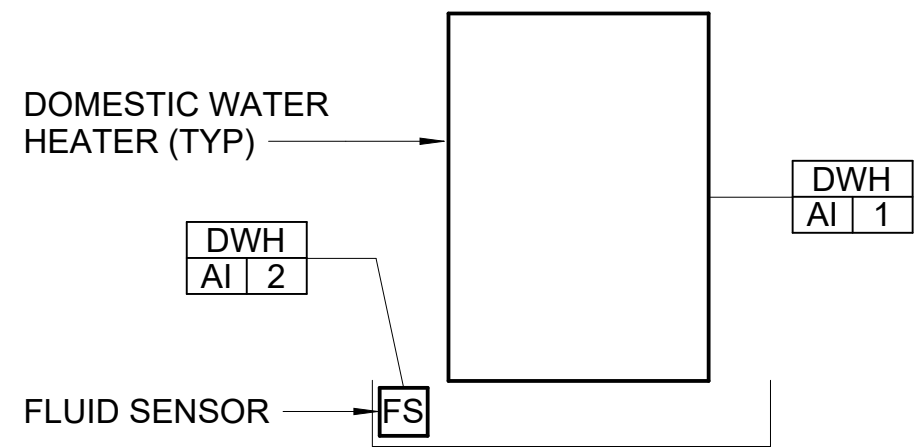
1. WHEN THE OCCUPIED MODE IS INITIATED, THE SUPPLY AIR TERMINAL AIR VOLUME REGULATOR SHALL INITIALLY OPEN TO ITS MINIMUM POSITION AND THE ELECTRIC RESISTANCE HEATING COIL SHALL BE DEENERGIZED.
2. ON A RISE IN SPACE TEMPERATURE ABOVE THE OCCUPIED SETPOINT, THE AIR VOLUME REGULATOR SHALL MODULATE TOWARD IT'S MAXIMUM POSITION SET POINT TO MAINTAIN SPACE TEMPERATURE SETPOINT.
3. ON A DROP IN SPACE TEMPERATURE BELOW THE OCCUPIED SET POINT, THE AIR VOLUME REGULATOR SHALL MODULATE TOWARD IT'S MINIMUM POSITION SET POINT TO MAINTAIN SPACE TEMPERATURE SETPOINT.
4. WHEN THE AIR VOLUME REGULATOR REACHES ITS MINIMUM POSITION SET POINT AND THE SPACE TEMPERATURE FALLS BELOW SETPOINT THE ELECTRIC RESISTANCE HEATING COIL SHALL ENERGIZE AND MODULATE (VIA SCR CONTROL) TO MAINTAIN SPACE TEMPERATURE SETPOINT.
5. ON A CONTINUED FALL IN SPACE TEMPERATURE THE ELECTRIC RESISTANCE HEATING COIL SHALL CONTINUE TO MODULATE UNTIL THE DISCHARGE AIR TEMPERATURE REACHES THE DESIGN MAXIMUM OF 84°F.
6. ON A FURTHER DROP IN SPACE TEMPERATURE WITH THE DISCHARGE AIR TEMPERATURE AT ITS DESIGN MAXIMUM, THE AIR VOLUME REGULATOR SHALL MODULATE FROM ITS MINIMUM AIRFLOW TO ITS MAXIMUM HEATING AIRFLOW WHILE MAINTAINING THE MAXIMUM DISCHARGE AIR TEMPERATURE OF 84°F.
7. ON A RISE IN SPACE TEMPERATURE, THE REVERSE SHALL OCCUR.
8. WHEN THE SPACE TEMPERATURE IS BETWEEN ITS OCCUPIED COOLING AND HEATING SETPOINTS THE AIR VOLUME REGULATOR SHALL BE AT ITS MINIMUM POSITION SET POINT AND THE ELECTRIC RESISTANCE HEATING COIL SHALL BE DEENERGIZED.

D. UNOCCUPIED MODE

1. WHEN THE UNOCCUPIED MODE IS INITIATED, THE AIR VOLUME REGULATOR SHALL CLOSE TO MINIMUM POSITION AND THE ELECTRIC RESISTANCE HEATING COIL SHALL BE DEENERGIZED.
2. THE UNOCCUPIED SEQUENCE OF OPERATION SHALL BE THE SAME AS THE OCCUPIED SEQUENCE OF OPERATION, CONTROLLING TO THE UNOCCUPIED SETPOINTS.
3. WHEN THE SPACE TEMPERATURE IS BETWEEN ITS UNOCCUPIED COOLING AND HEATING SETPOINTS THE AIR VOLUME REGULATOR SHALL BE AT ITS MINIMUM POSITION SET POINT AND THE ELECTRIC RESISTANCE HEATING COIL SHALL BE DEENERGIZED.

SEQUENCE OF OPERATION

- A. THE BUILDING AUTOMATION SYSTEM (BAS) SHALL CONNECT TO THE AUXILIARY CONTACTS WITHIN THE WATER HEATER CONTROL PANEL.
- B. THE BAS SHALL AUTOMATICALLY TURN THE DOMESTIC WATER HEATER OFF DURING THE UNOCCUPIED PERIOD (ADJ) AND ON DURING THE OCCUPIED PERIOD (ADJ).
 1. THE DOMESTIC HOT WATER HEATER SHALL OPERATE ON AN OCCUPIED/UNOCCUPIED SCHEDULE AND SHALL BE TEMPERATURE CONTROLLED.
- C. THE BAS SHALL BE ABLE TO REMOTELY CONTROL AND MONITOR THE DOMESTIC HOT WATER HEATER. ALL CONTROL FEATURES AND MONITORING POINTS DISPLAYED LOCALLY AT THE HOT WATER CONTROL PANEL SHALL BE AVAILABLE THROUGH THE BAS.
- D. UPON DETECTION OF WATER WITHIN THE DRAIN PAN, AN ALARM SIGNAL SHALL BE SENT TO THE BAS.



2 SCHEMATIC - DOMESTIC HOT WATER HEATER
SCALE: N.T.S.

E. WARM-UP MODE

1. THE AIR VOLUME REGULATOR SHALL BE OPEN TO MAXIMUM HEATING POSITION AND THE ELECTRIC RESISTANCE HEATING COIL SHALL ENERGIZE AND MODULATE (VIA SCR CONTROL) TO MAINTAIN THE OCCUPIED ROOM TEMPERATURE SET POINT.

F. COOL-DOWN MODE

1. THE ELECTRIC RESISTANCE HEATING COIL SHALL BE DEENERGIZED. THE AIR VOLUME REGULATOR SHALL INITIALLY BE OPEN TO MAXIMUM COOLING POSITION AND SHALL MODULATE TO MAINTAIN THE OCCUPIED ROOM TEMPERATURE SET POINT.

G. CO2 LEVEL CONTROL (FOR SPACES WITH CO2 SENSORS)

1. WHEN THE SPACE CO2 LEVEL EXCEEDS THE HIGH LIMIT SET POINT OF 1100 PPM FOR 5 MINUTES, THE AIR VOLUME REGULATOR SHALL MODULATE TO MAXIMUM COOLING POSITION. THE ELECTRIC RESISTANCE HEATING COIL SHALL MODULATE (VIA SCR CONTROL) TO MAINTAIN SPACE TEMPERATURE SET POINT.
2. THE AIR VOLUME REGULATOR SHALL BE INDEXED BACK TO THE NORMAL SEQUENCE OF OPERATION AFTER THE SPACE CO2 LEVEL HAS BEEN RETURNED BELOW THE CO2 SET POINT FOR A PERIOD OF 15 MINUTES.
3. IF AFTER 15 MINUTES THE SPACE CO2 LEVEL CONTINUES TO EXCEED THE HIGH LIMIT SET POINT, THE AHU OUTDOOR AIR DAMPER SHALL INCREMENTALLY OPEN (REFER TO AHU SEQUENCE).

- H. THE AIR TERMINAL UNIT AND ASSOCIATED AHU MAY BE PLACED INTO THEIR OCCUPIED MODES FOR A SCHEDULED OVERRIDE PERIOD FROM A CENTRAL COMMAND FROM THE BAS, OR THE AIR TERMINAL UNIT AND ASSOCIATED AHU MAY BE PLACED INTO THEIR OCCUPIED MODES FOR A 2-HOUR OVERRIDE PERIOD BY PUSHING THE OVERRIDE BUTTON LOCATED ON THE SPACE TEMPERATURE SENSOR SERVING THE AIR TERMINAL UNIT.
- I. UPON LOSS OF POWER, AIR VOLUME REGULATOR SHALL FAIL TO THE LAST POSITION HELD PRIOR TO LOSS OF POWER.
- J. TERMINAL UNITS SHALL REQUIRE PROOF OF AIR FLOW BEFORE ACTIVATING THE ELECTRIC RESISTANCE HEATING ELEMENTS.