VAV WITH REHEAT CONTROL DIAGRAM

LOCATION: SEE CONTRACT DWGS
SERVES: SEE CONTRACT DWGS

INSTALLATION NOTES:
1. VAV BOX INSTALLED BY MECHANICAL CONTRACTOR WITH 3 TO 5 STRAIGHT DUCT DIAMETERS UPSTREAM OF BOX TO PROVIDE PROPER FLOW SENSE.
2. TEC-1 TO BE MOUNTED IN MANUFACTURER SUPPLIED CONTROLLER ENCLOSURE.
3. REFER TO BUILDING POWER TRUNK DRAWING FOR 24 VAC POWER.
4. MOUNT ACTUATOR WITH DAMPER IN FULL OPEN POSITION. VERIFY TEC-1 AND ACTUATOR REQUIREMENT WITH THE BOX MANUFACTURER.
5. LOCATE AS SHOWN ON FLOOR PLANS/CONTRACT DOCUMENTS.

CONTROL SCHEDULE

- ROOM TEMPERATURE
  - HEATING SET POINT
  - COOLING SET POINT
- VALUE OPEN MAXIMUM AIR
- SUPPLY AIR
- REHEAT AIR
- MINIMUM AIR
- VALVE CLOSED

SEQUENCE OF OPERATION: (VAV WITH REHEAT)

THE VARIABLE VOLUME (VAV) TERMINAL UNIT IS CONTROLLED INDEPENDENT OF SYSTEM PRESSURE FLUCTUATIONS BY AN APPLICATION SPECIFIC DDC CONTROLLER USING ELECTRIC ACTUATION. THE SPACE SERVED BY THE VAV TERMINAL UNIT IS CONTROLLED IN OCCUPIED AND UNOCCUPIED MODES AS FOLLOWS.

OCCUPIED

THE VAV TERMINAL UNIT IS CONTROLLED WITHIN USER DEFINED MAXIMUM AND MINIMUM SUPPLY AIR VOLUME SETTINGS. THE CONTROLLER MONITORS THE ROOM TEMPERATURE SENSOR AND AIR VELOCITY SENSOR AND MODULATES THE SUPPLY AIR VOLUME IN SEQUENCE WITH THE REHEAT AND RADIATION VALVES TO MAINTAIN THE ROOM TEMPERATURE AT SET POINT. ON A CALL FOR HEATING THE SUPPLY AIR VOLUME WILL REMAIN AT MINIMUM AND THE HH REHEAT VALVE WILL MODULATE TO MAINTAIN SPACE TEMPERATURE SET POINT. WHEN THE SPACE TEMPERATURE RISES ABOVE SET POINT THE HEATING VALVE(S) WILL MODULATE CLOSED AND AIR VOLUMES WILL INCREASE TOWARDS THE BOXES MAXIMUM CFM SETTING.

UNOCCUPIED

THE TERMINAL UNIT IS CONTROLLED USING THE NIGHT SET POINT AND/OR AIR VOLUME SETTINGS. THE CONTROLLER MAY RESET TO THE OCCUPIED MODE FOR A PREDETERMINED TIME PERIOD UPON A SIGNAL FROM THE CONTROL SYSTEM OR MANUALLY AT THE ROOM SENSOR.

DISCHARGE AIR COMMISSIONING SENSOR IS INSTALLED AND USED FOR DIAGNOSTIC PURPOSES ONLY.