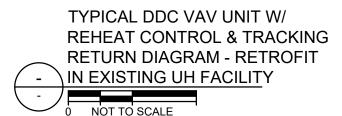


- The Mechanical Systems Control Contractor (MSCC) shall be responsible for the selection of, providing & installing all DDC controllers & control devices to accomplish the sequence of operation specified herein. All products, manufacturers & installation requirements shall conform to Masterspec 230905 - "Mechanical Systems Controls".
- The MSCC shall provide & install all DDC & related wiring, conduit & j-hook hanging systems. See Masterspec 230905 - "Mechanical Systems Controls" for raceway/conduit, cabling and labeling requirements.
- MSCC shall integrate unit controls back to the UMH unified front end (i.e. Desigo) per standards outlined in Masterspec 230905 -"Mechanical Systems Controls".
- 4. The Systems Integrator (SI) shall be responsible for the integration of all DDC devices and points, point instantiation and the creation of all graphics on the UMH Desigo front-end. See Masterspec 230924 - "Systems Integration"



## **SEQUENCE OF OPERATION:**

## A. Normal Mode:

- A.1. On a call for cooling, the thermostat signals for the heating control valve to modulate toward the closed position. On a further call for cooling, the thermostat signals for the volume damper to modulate from its minimum setting to its maximum setting.
- A.2. On a call for heating, the thermostat signals the volume damper to modulate towards its minimum position. On a further call for heating, the thermostat signals the heating coil valve to modulate toward the full open position.

## B. Smoke Control Mode:

- B.1. Upon loss of either supply air or return air duct pressure (i.e. 0.25" or less), as sensed by local pressure switches mounted in respective VAV SA inlet & RA discharge ducts, both the SA & tracking RA VAV boxes shall go to 100% open. Upon increase in both SA and RA duct pressure (0.25" or greater), VAV boxes shall resume normal operation per above.
- C. To support pressure switch maintenance issues, the MSCC shall program an override point which shall allow the BMS to monitor the active pressure switch input status, but can allow a system operator to override the VAV box control into either "Normal Mode" or "Smoke Control Mode".

Note to Editor: Delete the following paragraph and associated occupancy sensor in above diagram if occupancy sensors are not used:

D. When VAV box senses that the space is unoccupied, minimum airflow reduces to 0 CFM and the VAV box modulates to maintain temperature range of 70°F - 74°F.



2101 Commonwealth, Suite B Ann Arbor, MI 48105 FAX: (734) 763-0417

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FILE: D230905H-8.dwg ISSUE: August 2016 TYPICAL DDC VAV UNIT W/
REHEAT CONTROL & TRACKING
RETURN DIAGRAM WITH OCCUP
SENSOR - RETROFIT IN
EXISTING UH FACILITY