Sample plan for Corrective Action

Questionnaires will be utilized to determine occupant reaction to the thermal conditions in the space.

In addition, temperature and humidity recorders will be placed within the space. The recorded results will be reviewed monthly along with the occupant responses and necessary adjustments to the automatic temperature control system will be made. These temperature and humidity recorders will also be used in the initial commissioning of the systems in the space.

Below is the control strategy for the supply air to the plenum from the air towers:

System Run

1. When the unit is started, temperature sensor in the mixed air will modulate mixing dampers and heating coil control valve to maintain discharge air temperature setpoint of 64F.

2. Supply fan VFD shall modulate to maintain underfloor plenum static pressure setpoint initially set at 0.05 in.wc. Provide one differential pressure transmitter per Air Tower. Individual static pressure setpoints shall be determined by air balancer.

3. Space temperature sensors shall reset discharge temperature and static pressure setpoints as follows to satisfy the zone with greatest deviation from setpoint.

    a. As space temperature varies from 78F to 74F underfloor plenum static pressure shall reset from 0.05 in.wc. to 0.02 in.wc.
    b. On a continued raise in space temperature above 78F Air Tower discharge air temperature setpoint shall reset slowly down to 60F
    c. On a continued drop in space temperature below 74F Air Tower discharge air temperature setpoint shall reset slowly up to 70F Based upon the results from the occupant surveys, the setpoints can be adjusted, in order to control supply air volume and temperature in response to space conditions.

4. In addition, if more than 20% of building occupants express dissatisfaction with thermal conditions a thorough walk through will be completed by operations staff including review of O&M manuals, adjustment of setpoints, visual inspection of all ductwork registers and HVAC system supply and make-up diffusers and assessment of placement and operation of shading devices.

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