

Certified Air Test and Balance Report Procedures Of the HVAC System

Required for Giles W Dalby Correctional Facilities

April 2022

1. GATHER DESIGN INFORMATION

- Plans
- Specifications
- Equipment and control data
- Mark plans, number outlets, prepare system diagram sketch

2. AIR TESTING AND BALANCING:

- Locate actual registers, grills, equipment, controls & dampers
- Identify each register/grill to area served
- Set all system dampers to the "open" position
- Check filters and coils to make sure they are clear of debris
- Switch the thermostat fan switch to the "on" position with system in full coiling at 55 F to start high speed blower
- Check for proper fan position
- Drill test holes for static pressure and temperature
- Testing Outlets:
 - Measure each supply outlet, total readings
 - Measure each return inlet, total readings
 - Compare actual airflow to design airflow conditions
 - Adjust blower to obtain required total airflow
 - Re-measure air at supply and return grills
 - Adjust dampers to open and adjust air flow
 - Measure total airflow to be at a rate within $\pm 10\%$
- Record any system deficiencies materials
- Mark damper settings

3. FINAL EQUIPMENT TESTING:

- Record equipment and motor nameplate data
- Record sheave, pulley & belt sizes data
- Test and record full load motor amperes
- Test and record voltage
- Test and record motor & fan RPM
- Test and record supply and return static pressures
- Test and Record entering air temperatures (heating and cooling)
- Test and record exiting air temperatures (heating and cooling)
- Return thermostat to normal operation conditions

4. REPORT COMPLETION:

- Cover letter including:
 - Project description & location
 - Installing contractor
 - Certification statement that project is correctly balanced
- HVAC Systems Report
- Symbols Diagram
- Symbols Legend
- Duct Traverse or Pulley Data Forms, if needed
- Instrument list, including calibration dates
- Certification of calibration, if needed

*Some areas of inspection may be occupied. Accommodations will be made as much as possible for HVAC inspection in these areas.