

WEST NAVARRE INTERMEDIATE SCHOOL
5 CLASSROOM ADDITION

SECTION 15950 - TESTING, ADJUSTING, AND BALANCING

PART 1 - GENERAL

1.1 SUMMARY

- A. THE OWNER WILL PROVIDE UNDER SEPARATE CONTRACT FOR TAB SERVICES TO BE PERFORMED BY A TAB CONTRACTOR. THE MECHANICAL CONTRACTOR SHALL ASSIST THE TAB CONTRACTOR AS REQUIRED BY PART 3 OF THIS SPECIFICATION:

1.2 PROJECT CONDITIONS

- A. COOPERATE WITH OWNER DURING TAB OPERATIONS TO MINIMIZE CONFLICTS WITH OWNER'S OPERATIONS.

1.3 COORDINATION

- A. COORDINATE THE EFFORTS OF FACTORY-AUTHORIZED SERVICE REPRESENTATIVES FOR SYSTEMS AND EQUIPMENT, HVAC CONTROLS INSTALLERS, AND OTHER MECHANICS TO OPERATE HVAC SYSTEMS AND EQUIPMENT TO SUPPORT AND ASSIST TAB ACTIVITIES.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. EXAMINE THE CONTRACT DOCUMENTS TO BECOME FAMILIAR WITH PROJECT REQUIREMENTS AND TO DISCOVER CONDITIONS IN SYSTEMS' DESIGNS THAT MAY PRECLUDE PROPER TAB OF SYSTEMS AND EQUIPMENT.
 - 1. VERIFY THAT BALANCING DEVICES, SUCH AS MANUAL VOLUME DAMPERS, ARE REQUIRED BY THE CONTRACT DOCUMENTS. VERIFY THAT QUANTITIES AND LOCATIONS OF THESE BALANCING DEVICES ARE ACCESSIBLE AND APPROPRIATE FOR EFFECTIVE BALANCING AND FOR EFFICIENT SYSTEM AND EQUIPMENT OPERATION.
- B. EXAMINE DESIGN DATA, INCLUDING HVAC SYSTEM DESCRIPTIONS, STATEMENTS OF DESIGN ASSUMPTIONS FOR ENVIRONMENTAL CONDITIONS AND SYSTEMS' OUTPUT, AND STATEMENTS OF PHILOSOPHIES AND ASSUMPTIONS ABOUT HVAC SYSTEM AND EQUIPMENT CONTROLS.
- C. EXAMINE HVAC SYSTEM AND EQUIPMENT INSTALLATIONS TO VERIFY THAT INDICATED BALANCING DEVICES, SUCH AS MANUAL VOLUME DAMPERS, ARE PROPERLY INSTALLED, AND THAT THEIR LOCATIONS ARE ACCESSIBLE AND APPROPRIATE FOR EFFECTIVE BALANCING AND FOR EFFICIENT SYSTEM AND EQUIPMENT OPERATION.

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- D. EXAMINE SYSTEMS FOR FUNCTIONAL DEFICIENCIES THAT CANNOT BE CORRECTED BY ADJUSTING AND BALANCING.
- E. EXAMINE HVAC EQUIPMENT TO ENSURE THAT CLEAN FILTERS HAVE BEEN INSTALLED, BEARINGS ARE GREASED, BELTS ARE ALIGNED AND TIGHT, AND EQUIPMENT WITH FUNCTIONING CONTROLS IS READY FOR OPERATION.
- F. EXAMINE EQUIPMENT FOR INSTALLATION AND FOR PROPERLY OPERATING INTERLOCKS AND CONTROLS.
- G. EXAMINE AUTOMATIC TEMPERATURE SYSTEM COMPONENTS TO VERIFY THE FOLLOWING:
 - 1. DAMPERS AND OTHER CONTROLLED DEVICES ARE OPERATED BY THE INTENDED CONTROLLER.
 - 2. DAMPERS ARE IN THE POSITION INDICATED BY THE CONTROLLER.
 - 3. INTEGRITY OF DAMPERS FOR FREE AND FULL OPERATION AND FOR TIGHTNESS OF FULLY CLOSED AND FULLY OPEN POSITIONS.
 - 4. THERMOSTATS ARE LOCATED TO AVOID ADVERSE EFFECTS OF SUNLIGHT, DRAFTS, AND COLD WALLS.
 - 5. SENSORS ARE LOCATED TO SENSE ONLY THE INTENDED CONDITIONS.
 - 6. SEQUENCE OF OPERATION FOR CONTROL MODES IS ACCORDING TO THE CONTRACT DOCUMENTS.
 - 7. CONTROLLER SET POINTS ARE SET AT INDICATED VALUES.
 - 8. INTERLOCKED SYSTEMS ARE OPERATING.
 - 9. CHANGEOVER FROM HEATING TO COOLING MODE OCCURS ACCORDING TO INDICATED VALUES.
- H. RESOLVE DEFICIENCIES DISCOVERED BEFORE TAB PROCEDURES.

3.2 GENERAL PROCEDURES FOR TESTING AND BALANCING

- A. CUT INSULATION, DUCTS, PIPES, AND EQUIPMENT CABINETS FOR INSTALLATION OF TEST PROBES TO THE MINIMUM EXTENT NECESSARY TO ALLOW ADEQUATE PERFORMANCE OF PROCEDURES. AFTER TESTING AND BALANCING, CLOSE PROBE HOLES AND PATCH INSULATION WITH NEW MATERIALS IDENTICAL TO THOSE REMOVED. RESTORE VAPOR BARRIER AND FINISH ACCORDING TO INSULATION SPECIFICATIONS FOR THIS PROJECT.
- B. MARK EQUIPMENT AND BALANCING DEVICE SETTINGS WITH PAINT OR OTHER SUITABLE, PERMANENT IDENTIFICATION MATERIAL, INCLUDING DAMPER-CONTROL POSITIONS, VALVE POSITION INDICATORS, FAN-SPEED-CONTROL LEVERS, AND SIMILAR CONTROLS AND DEVICES, TO SHOW FINAL SETTINGS.

3.3 FINAL REPORT REQUIREMENTS

- A. THE TAB CONTRACTOR WILL PROVIDE TO THE MECHANICAL CONTRACTOR A PUNCH LIST OF DEFICIENCIES WHICH SHALL BE RESOLVED BY THE MECHANICAL CONTRACTOR AS SOON AS POSSIBLE. ADDITIONAL FEES FROM THE TAB CONTRACTOR CAUSED BY DELAYS FROM THE MECHANICAL CONTRACTOR SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND SHALL BE AFFECTED BY A DEDUCTIVE CHANGE ORDER TO THE CONTRACT. RELEASE OF THE MECHANICAL

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CONTRACTOR FINAL 10% RETAINAGE SHALL NOT BE RELEASED UNTIL SUCCESSFUL
COMPLETION OF THE TAB EFFORT.