

SECTION 16180 EQUIPMENT WIRING SYSTEMS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Electrical connections to equipment specified under other Sections, including connections to built-in residential appliances and mechanical HVAC equipment.

1.2 RELATED WORK

- A. Division 11 - Appliances.
- B. Division 13 - Sprinkler System
- C. Division 15 - Mechanical Equipment.
- D. Section 16111 - Conduit.
- E. Section 16120 - Wire and Cable.
- F. Section 16130 - Boxes.
- G. Section 16441 - Disconnect Switches.

1.3 REFERENCES

- A. ANSI/NFPA 70 - National Electrical Code.

PART 2 - PRODUCTS

2.1 DISCONNECT SWITCHES

- A. Provide disconnect switches as specified under Section 16441.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Verify that equipment is ready for electrical connection, wiring, and energization.

3.2 PREPARATION

- A. Review Equipment submittals prior to installation and electrical rough-in. Verify location, size, and type of connections. Coordinate details of equipment connections with supplier and installer.

3.3 INSTALLATION

- A. Use wire and cable with insulation suitable for temperatures encountered in heat-producing equipment.
- B. Make conduit connections to mechanical equipment using flexible cable or flexible conduit.
- C. Make wiring connections in control panel or in wiring compartment of pre-wired equipment in accordance with manufacturer's instructions. Provide interconnecting wiring where indicated.
- D. Install all controllers, control stations, and control devices such as limit switches, speed switches, and temperature switches that are supplied with equipment items. Connect with conduit and wiring.
- E. Provide a local means of disconnect for all motor loads except where factory supplied controllers are provided which contain disconnecting means.
- F. Reference to specification Section where control connection and wiring provisions are specified.

3.4 MECHANICAL SYSTEMS EQUIPMENT CONNECTIONS

- A. Except where provided as an integral element by the equipment manufacturer, provide a combination type magnetic motor starter for all 240-volt fans and/or pumps. Mount starters locally at equipment item as shown on Drawings. Starters shall be as specified under Section 16481.
- B. Where specifically indicated on the Contract Drawings, provide variable speed drives for 240-volt fans and/or pumps. Mount drives adjacent to motors being served. Variable speed drives shall be as specified under Section 16485.
- C. Except where provided as an integral element by the equipment manufacturer, provide a SPST manual motor starter switch for all 120-volt motors that are part of mechanical systems equipment items. Mount manual switches locally at motors. Manual switches shall be as specified under Section 16481.
- D. Where noted on the Drawings that an equipment item is to be connected with a local speed switch, make all necessary connections to the speed switch (furnished under Division 15) and to the equipment motor.
- E. Provide an emergency cut-off boiler switch at all doors to the Boiler Room and interlock switches such that turning off any switch shall shut off all boilers.

END OF SECTION