

SECTION 16132
WIREWAYS AND SURFACE RACEWAYS

PART 1 - GENERAL

1.01 PROVISIONS INCLUDED

- A. The general provisions of the Contract, including General and Supplementary General Conditions, and Division 1 General Requirements, apply to work specified in this Section.
- B. Requirements of Section 16050, "Basic Electrical Materials and Methods," apply to this Section.

1.02 SUMMARY

- A. Furnish and install wireway and surface raceways. Furnish complete systems, including, without limitation covers, elbows, fittings, and all materials and devices required to install, support, secure, and protect electrical conductors.
 - 1. Quantities: Furnish quantities sufficient for a complete installation as indicated on drawings.
- B. Related Work Specified in Other Sections:
 - 1. Raceways, Section 16130.
 - 2. Boxes, Section 16135.
 - 3. Hangers and supports, Section 16070.
 - 4. Electrical identification, Section 16075.
 - 5. Grounding, Section 16060.

1.03 REFERENCES

- A. National Fire Protection Association: NFPA 70, National Electrical Code (NEC).
- B. Underwriter's Laboratories (UL): UL 870, "Wireways, Auxiliary Gutters and Associated Fittings."

1.04 SUBMITTALS

- A. Product Data: Submit manufacturer's catalog cuts, technical specifications and installation instructions for each type of wireway and surface raceway furnished for this project.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing the work of this section with minimum three years experience.
- B. Sole Source:
 - 1. Furnish all wireways and fittings from a single manufacturer.
 - 2. Furnish all surface raceways of each type from a single manufacturer.

1.06 COORDINATION

- A. Coordinate the work of this section with other work of the Contract. Coordinate the placement of wireways with HVAC and Plumbing piping and equipment prior to installation. If required for proper coordination, prepare coordination drawings as specified in Section 16050.

PART 2 - MATERIALS

2.01 MANUFACTURERS

- A. Acceptable Manufacturers: Provide products manufactured by one of the following:
 - 1. Wireway: Hoffman, Lee Products Co., or Square D.
 - 2. Surface non-metallic raceway: Panduit.

2.02 WIREWAYS

- A. Wireways: Steel enclosed wiring trough designed to house electrical wiring. Fabricate from steel gauges as specified below, in sizes shown on drawings; finished with ANSI 40 gray epoxy paint. Furnish wireways with removeable covers and sides to permit complete lay-in of conductors through the entire wireway run. Furnish straight wireway lengths with hinged cover.
 - 1. Wireway sizes less than 8 inch square: 16 gauge steel
 - 2. Wireway sizes 8 inch square or larger: 14 gauge steel.
- B. Fittings and Accessories: Furnish couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps and other fittings to match and mate with wireway, as required for complete system.
 - 1. Elbows: Use 45 degree elbow bends with inside radius of elbow at least 12 inches. Make up 90 degree bends from two 45-degree elbows; do not use 90 degree elbows..

2.03 SURFACE NON-METAL RACEWAY

- A. Two-Compartment Surface Raceway: Two-channel construction with snap-on separate covers, with two separate wiring compartments to facilitate installation of power cables up to 600 volt and low tension wiring per TIA/EIA-569 standard.
 - 1. Rigid polyvinyl chloride (PVC) high impact resistant plastic with the manufacturer's standard color – gray, white and ivory, to be selected by Architect.
 - 2. Faceplates: Snap-on type, to accept standard NEMA 20 Amp duplex receptacles and communication jack modules per University standard.
 - 3. Accessories and fittings: Furnish elbows, end cap and couplings, mounting brackets, device mounting brackets and wire retainers for a complete installation. Type of the devices, locations and spacing are shown on the drawings.
 - 4. Acceptable Product: Panduit Type Twin-70.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Inspect job conditions and related work and report to the Architect any conditions adversely affecting raceway work.

3.02 GENERAL INSTALLATION REQUIREMENTS

- A. Install wireways and surface raceways in conformance with manufacturer's printed installation instructions.
- B. Install wireways plumb, level, and true to finished lines and levels; rigidly support and securely fasten in place.
- C. Install wireways on walls, ceilings, and floor at locations indicated on drawings. Provide fittings as required. Use expansion shields, concrete inserts, masonry shields, or other anchoring devices appropriate to the construction on which raceway is mounted.
- D. Support surface metal raceway at 18 inches on center maximum spacing, at each end, and at each device box. Provide blank cover sections at sinks and basins, extending cover sections 6 inches on both sides of the basin. Make transitions to other types of wiring with proper fittings.

3.03 CLEANING

- A. Clean wireways and surface raceways before energizing.
- B. If wireways and raceways contain moisture, completely dry them before energizing.

END OF SECTION 16132