SECTION 261120 - CABLE TRAYS

PART 1 - GENERAL

1.1 DESCRIPTION

A. General provisions and other electrical systems are specified in other Sections of Division 26.

B. This Section covers cable trays for security, audio visual, telephone, communications, and data cable.

C. This Section includes responsibilities and obligations in support of the performance verification specified in Section 260090, Electrical Performance Verification.

1.2 QUALITY ASSURANCE

A. Conform to the following:

1. NECA/NEMA 105-2015.
2. NFPA 70-2020.
3. North Carolina State Electrical Code-2018.
4. TIA 569-E-2-2019.

PART 2 - PRODUCTS

2.1 CABLE TRAYS

A. Cable trays shall form a wireway system and shall be the wire basket type, nominal 4" depth, steel construction. Cable trays shall include splices, end plates, dropouts, expansion connectors in straight runs of 125' or longer, radius bends, 90° bends, and support/accessory items for a complete installation. Edges, fittings, and hardware shall be finished free from burrs and sharp edges. Load-carrying ability of fittings shall be not less than the straight tray sections.

1. Cable trays shall be galvanized steel.
2. All changes in direction shall use factory fabricated turns and crosses with a 6" minimum bend radius.
3. Cable trays shall be classified by UL and rated as an equipment grounding conductor.
4. Trays shall be 0.191" minimum wire gauge construction. Tray shall be designed for a uniformly distributed cable load of 32 lb/ft when supported on 8' spans.
5. Manufacturer: B-Line, Cablofil, Flextray, Gulf Coast Systems, Mono-Systems, or Chatsworth CPI.

PART 3 - EXECUTION

3.1 GENERAL

A. Comply with manufacturer's written instructions.

B. Cable trays shall be secured in place and protected to prevent damage to the work during construction. Refer to Section 261900, Supporting Devices for support requirements and methods.

C. Exposed threads or field-cut edges of cable trays shall be immediately coated with a galvanizing compound after installation.

D. Support 8' on center, unless otherwise indicated on the Drawings, with 0.5" threaded rods on both sides.

E. Provide a bonding jumper or strap at each joint.

F. Install in accordance with TIA 569-E-2-2019.

3.2 LOCATION

A. In general, the cable tray installation shall follow the layout indicated on the Drawings. This layout is, however, diagrammatic only. Changes in the location, and offsets to accommodate building conditions, and coordination with the work of other trades, including equipment, piping and ductwork, shall be made prior to initial installation, without additional cost to the Owner. Offsets in conduit are not indicated on the Drawings and shall be furnished.

B. Unless otherwise indicated on the Drawings, cable trays shall be installed under all mechanical, electrical and structural building systems and above lay-in ceilings. Offset cable trays below obstructions.

C. Cable trays shall be run parallel with or at right angles to the building walls.

D. Cable trays shall be located to maintain a minimum 12" clearance above and 6" on both sides.

3.3 COORDINATION

A. Where cable trays must pass through structural members, obtain approval from the Architect regarding location and size of openings prior to drilling.

B. Cable trays that pass through expansion joints shall be provided with expansion fittings.

C. Where cable trays penetrate through the roof special detailed drawings shall be provided indicating the method utilized to maintain the integrity of the roof structure. Coordinate with the roof system manufacturer.

D. Where cable trays pass above inaccessible ceiling spaces of spans greater than 6' in length, provide 4" empty conduits (quantities as required to provide a cross sectional area equivalent to the associated cable tray section) in place of cable trays. Conduits shall be provided with insulated bushings on both ends and shall be bonded to cable trays.

3.4 PENETRATIONS AND SEALING

A. Provide penetrations and fire stopping for cable trays penetrating floors and partitions as specified in Section 260010, Electrical General.

END OF SECTION 261120