

## SECTION 27 05 30 - INTERIOR COMMUNICATIONS PATHWAYS

## PART 1 GENERAL

## 1.1 DESCRIPTION

- A. The interior communications pathways shall be in the most direct and efficient path possible. All conduits are to be sized so the cable load does not go beyond 40% fill. Cable paths shall be capable of future use and a string is to be left after cabling has been completed.
- B. The Fire Rating of any structured penetrated during construction will be restored by the contractor who made the penetration.
- C. All conduit stubs shall terminate with an end connector and plastic bushing. No cable path will have a junction box in a location that is not accessible after the project is complete. Only factory ells (no more than three) are allowed between junction boxes.

## 1.2 QUALITY ASSURANCE

- A. Industry standards permit the use of EMT for installation of conductors in circuits rated below and above 600 volts, nominal, and in accordance with Article 348 of the National Electric Code.
- B. The National Electric Code® (NEC®) establishes the minimum requirements for a safe electrical installation. Because of the varied environments in which electrical equipment is installed, local amendments are often added. **Always consult local codes prior to any installation.**

## 1.3 SUBMITTALS

- A. Submit product data describing all equipment.

## PART 2 PRODUCTS

## 2.1 ACCEPTABLE MANUFACTURERS

- A. Any Electric Metallic Tubing manufactured in accordance with the latest edition of the following:
  - 1. American National Standards Institute - C80.3
  - 2. Underwriters Laboratories Standard - UL 797
  - 3. National Electric Code® 2002 - Article 358 (NEC® 1999 Article 348) Federal Specification - WW-C-563A

- B. Caddy J-Hooks and supports
- C. Cable Tray
  - 1. FlexTray, Cablofil, Cable-Mgr or approved equal.

## PART 3 EXECUTION

### 3.1 INSTALLATION

- A. Conduit
  - 1. All conduits are to be installed with the most efficient route possible. No cable pathway will have more the 40% fill as recommended by the TIA/EIA Standards, verify cable load prior to installing conduit paths.
  - 2. It is the responsibility of the contractor that is awarded the project to confirm the schedule for installation with the General Contractor.
  - 3. Conduit paths shall terminate with end connectors and plastic bushings whether in junction boxes or stubs in accessible ceiling space.
  - 4. Any penetrations made for the cable paths is the to be fire-stopped by the contractor who made the penetration.
  - 5. Conduits will be installed and supported in a manner that meets or exceeds the requirements of the AHJ.
  - 6. All low voltage outlets shall utilize a 1" conduit and double gang extra deep junction box. Conduit shall stub to accessible ceiling space and terminate with an end connector and thread on plastic bushing.
  - 7. Floor boxes with space allocated for low voltage cabling will be provided a minimum of (2) 1" conduits, unless otherwise noted on plans.
- B. Cable Tray
  - 1. Cable tray is to be supported within 2' of each splice for each piece with no more than 6' between supports.
- C. J-hooks
  - 1. For best cable support J-hooks should be placed every 5 feet maximum and at corners as required for a clean and professional install.

## D. Grounding

1. All interior pathways will be grounded per industry standard utilizing a continuous ground. If cable tray/ladder rack is painted a portion will have the paint removed to have the ground lug attached for metal-to-metal contact.

END OF SECTION 27 05 30