

SECTION 27 15 13

COMMUNICATIONS COPPER HORIZONTAL CABLE

PART 1 - GENERAL

1.1 SUMMARY

- A. This section shall govern the products and installation of category copper horizontal cable

1.2 RELATED DOCUMENTS

- A. The latest versions of the following codes, standards, and guidelines shall be followed. Bring to ITS' immediate attention where construction documents or conditions differ from requirements in codes, standards, guidelines and specifications.
- B. The following codes, as required by law:
 - 1. National Electric Code (NEC)
- C. The following standards:
 - 1. ANSI/TIA-568-C.0, Generic Telecommunications Cabling for Customer Premises
 - 2. ANSI/TIA-568-C.2, Balanced Twisted-Pair Telecommunications Cabling and Components Standards
 - 3. ANSI/TIA-568-C.4, Broadband Coaxial Cabling and Components Standard
 - 4. TIA-569-B, Commercial Building Standard for Telecommunications Pathways and Spaces
- D. The following guidelines:
 - 1. BICSI, Telecommunications Distribution Methods Manual (TDMM)
 - 2. BICSI, Information Transport Systems Installation Methods Manual (ITSIMM)
- E. The following project specifications:
 - 1. 27 05 26 Grounding and Bonding for Communications
 - 2. 27 05 53 Identification for Communications Systems
 - 3. 27 11 19 Communications Terminations Blocks and Patch Panels
 - 4. 27 15 43 Communications Faceplates and Modular Jacks

1.3 SUBMITTALS

- A. The following submittals are due at the Pre-Construction Phase, in accordance with submittal requirements in Section 27 00 00 Communications:
 - 1. Product Information
 - a) Provide manufacturer's product information cutsheet or specifications sheet with the specific product number identified or filled out.
 - 2. Shop Drawings
 - a) Provide scaled drawings (not less than 1/8" = 1'-0") indicating routing of copper horizontal cabling.

- B. The following submittals are due Post-Construction, in accordance with the submittal requirements in Section 27 00 00 Communications:
 - 1. Record Drawings
 - a) Provide scaled drawings (not less than 1/8" = 1'-0") indicating actual installed routing of copper horizontal cabling. Design or shop drawings modified in the field will not be accepted.
 - 2. Manufacturer and Maintenance Manuals for all installed equipment

PART 2 – PRODUCTS

2.1 GENERAL REQUIREMENTS

- A. The Telecom sub-contractor shall utilize a single copper cable manufacturer for horizontal cable.

2.2 CATEGORY 5E

- A. Cable shall be balanced four-pair, unshielded, within an overall jacket.
- B. Cable performance shall meet the performance of category 5e of ANSI/TIA-568-C.2.
- C. Cable shall be rated per the NEC for the environment for which it is installed. (e.g., plenum, riser, wet-rated, etc.)
- D. Plenum-rated cable shall be blue with white or black lettering. Wet-rated cable shall be black with white lettering. The lettering (marking) shall indicate the following:
 - 1. Manufacturer name
 - 2. Pair count
 - 3. American Wire Gauge (AWG)
 - 4. Listing
 - 5. Performance rating (e.g., category 5e)
 - 6. Sequential length markings, in one foot increments
- E. Manufacturer shall be:
 - 1. For Panduit warranty - Certified cable partner of Panduit
 - 2. For Ortronics warranty - Certified cable partner of Ortronics
 - 3. For Mohawk warranty - Mohawk
 - 4. For Hitachi Cable Manchester warranty - Hitachi Cable Manchester
 - 5. For Superior Essex warranty – Superior Essex

2.3 CATEGORY 6 – TO BE USED ONLY FOR SECURITY IP CAMERA LOCATIONS

- A. Cable shall be balanced four-pair, unshielded, within an overall jacket.
- B. Cable performance shall meet the performance of category 6 of ANSI/TIA-568-C.2.
- C. Cable shall be rated per the NEC for the environment for which it is installed. (e.g., plenum, riser, wet-rated, etc.)
- D. Plenum-rated cable shall be green with white or black lettering. Wet-rated cable shall be black with white lettering. The lettering (marking) shall indicate the following:

1. Manufacturer name
 2. Pair count
 3. American Wire Gauge (AWG)
 4. Listing
 5. Performance rating (e.g., category 6)
 6. Sequential length markings, in one foot increments
- E. Manufacturer shall be:
1. For Panduit warranty - Certified cable partner of Panduit
 2. For Ortronics warranty - Certified cable partner of Ortronics
 3. For Mohawk warranty - Mohawk
 4. For Hitachi Cable Manchester warranty - Hitachi Cable Manchester
 5. For Superior Essex warranty – Superior Essex

PART 3 - EXECUTION

3.1 GENERAL

- A. Support all horizontal cabling continuously in conduit or cable tray, or every 5' with j-hooks.
- B. Maintain a minimum separation from EMI sources:
 1. 6" from power lines enclosed in a grounded metal conduit.
 2. 6" from fluorescent light fixtures
 3. 48" from electrical motors or transformers.
- C. Coordinate with all other trades prior to installation.
- D. Lubrication shall **not** be used on cable.
 1. Exception is allowed for wet-rated cables.
- E. No portion of cabling is to be painted for any length. Any cables that are painted are to be replaced at no cost to the owner/project.
- F. All copper horizontal cabling shall be tested in accordance with section 27 08 20 Copper Testing.
- G. For outside-plant cables to be installed as part of the contract documents that are not also rated for indoor/plenum use, provide a transition point and enclosure in an accessible ceiling location and transition to indoor/plenum cable.
 1. Indicate this location on the Record Drawings.

END OF SECTION