

PART 1 - GENERAL

1.1 SECTION INCLUDES

- a. Plenum Rated Cable.
- b. Wall Plates.
- c. Patch Panels.
- d. Patch Panel Jacks.

1.2 RELATED SECTIONS

- a. Section 01330 Submittals.
- b. Division 16.

1.3 SUBMITTALS FOR REVIEW

- a. Submit in accordance with Section 01330.

1.4 REFERENCES

- a. ANSI/NFPA 70 – National Electrical Code.
- b. Underwriters Laboratories, Inc. (UL).

PART 2 - PRODUCTS

2.1 PLENUM RATED CABLE AND PULL STRING

Data Network Cable: Provide plenum rated cable meeting the following requirements:

- a. Category 6.
- b. Four unshielded twisted pair.
- c. Wire: Solid bare copper.
- d. Size: 24 AWG.
- e. Bandwidth: Minimum 250 MHz.
- f. Temperature range: -20 to 75 degree C.
- g. Insulation material: FEP.
- h. Jacket material: PVC.

- i. Standards:
 - (1) TIA/EIA 568-A Category 6.
 - (2) ISO/IEC 11801 2nd Edition draft.
 - (3) UL listed.
- 2.1.1 Telephone Cable: Provide plenum rated, unshielded, twisted pair cable meeting the following requirements:
 - a. Category 5.
 - b. (4) insulated pairs.
 - c. Size 24 AWG
 - d. Wire: Solid copper.
 - e. Bandwidth: Minimum 100 MHZ.
 - f. Standards:
 - (1) ICEA S-80-576.
 - (2) UL listed.
- 2.1.2 Pull String: Provide polypropylene string with a minimum breaking strength of 800 pounds.
- 2.2 WALL PLATES
Designed for Telephone/Network service.
 - 2.2.1 Four-port modular, double gang, flush-mounting.
 - a. Category 5E snap-in jacks for data network.
 - b. Snap-in jacks RJ45 for Telephone system.
 - 2.2.1.1 Match those indicated for power receptacle outlets in same spaces for materials and finish
 - 2.2.1.2 See Drawings for wall plate configuration required.
 - 2.2.1.3 Provide provisions for support of unit for wall telephone units.
- 2.3 PATCH PANEL
 - 2.3.1 Category 5E Patch Panels, shall be located in each of three network rooms # 131, 237 and 333.

The number of ports provided shall be adequate to support all data outlets shown on the contract drawings. Plus an additional 25% for future growth. Each network room shall support data outlets on that floor. EG: (room 131 shall support all outlets on the first floor).

- a. Mounting hardware and label designations included.
- b. Rack mountable.
- c. Front access.
- d. Jack Contacts: Beryllium copper with 50 micro-inch gold plating.
- e. Terminates 22-26 AWG solid conductors.
- f. High impact 94 V-O rated thermoplastic jack and adapter housing.
- g. Standards:
 - (1) UL 1863 verified and listed, category 5E file #E129878.
 - (2) CSA certified, file #LR 80837.
 - (3) Modular jacks per F.C.C. part 68.5.
 - (4) Complies with ISO/IEC 11801 and Cenelec EN50173.

2.3.1.1 Manufacturers Reference: Hubbell P5E48B.

2.4 PATCH PANEL JACKS

2.4.1 Provide connector jacks meeting the following requirements.

- a. Category 5E jacks for Category 5E patch panels.
- b. Match wiring standard of jacks with patch panel.
- c. Standards:
 - (1) Category 5E jacks comply with TIA/EIA-568-A requirements.
 - (2) Modules are UL listed, comply with NEC Article 800, and meet FCC part 68.

2.5 CONDUIT, BOXES, AND ASSOCIATED RACEWAY COMPONENTS

2.5.1 Provide conduit, boxes, and associated raceway components for the special systems work described on sheets SS1, SS2, and SS3 of the Drawings in accordance with Division 16.

PART 3 - EXECUTION

3.1 INSTALLATION

Conduit, Boxes, and Associated Raceway Components.

a. Install conduit, boxes, and associated raceway components for the special systems work described on the Drawings and in accordance with Division 16.

3.1.1 Plenum Rated Cable and Pull String

a. Install cable in conduit or cable tray as described on Drawings. Pull conductors at same time.

b. Installation.

(1) Route cable as described on Drawings.

(2) Install cable in continuous lengths from wall plates to locations described on Drawings.

(3) Install cable without damaging conductors and jacket. Do not bend cable to a smaller radius than recommended by manufacturer.

(4) Do not splice.

(5) Install Pull String in spare conduits.

3.1.2 Wall Plates

a. Terminate applicable to wall plate. See Drawings for wall plate configurations.

b. Mount wall plate to outlet box.

3.1.3 Patch Panel

a. Secure patch panel to Equipment rack per manufactures installation instructions.

b. Terminate network cable to Category 5E Patch Panels.

c. Terminate Telephone System cable to Modular 110 block panels.

d. Test cable for continuity.

END OF SECTION