

SECTION 27 15 00 – HORIZONTAL COPPER CABLING**PART 1 GENERAL****1.01 DESCRIPTION**

- A. Horizontal cabling will consist of Category grade cabling from MDF/IDF/IT/Equipment Rooms out to station outlet(s), camera(s), wall phone, or wall/ceiling-mounted devices.
- B. Provide all jumper management, D-Rings, J-hooks, voice blocks and accessories needed for a complete and professional installation.
- C. All equipment needed for a complete install whether specified directly or not to properly route, terminate, and test the Horizontal Cabling is to be part of the bid.

1.02 QUALITY ASSURANCE

- A. The vendor shall comply with the following standards and codes:
 - 1. National Electrical Code.
 - 2. Refer Section 27 01 00 for additional requirements.
 - 3. UL Listed.
- B. Refer Section 27 01 00 for additional requirements.
- C. System Installers
 - 1. Shall have no less than 3 years of documented work experience on projects of equivalent size and technical difficulty. If you are using a Subcontractor their installers must meet the requirements, this is a requirement of the installer not the bidder.
 - 2. "Experience" is defined as the completion of an operational system, with the system being successfully operated by the customer for its intended purpose for at least one year.
 - 3. Must have current certification, from the Manufacturer, on the system to be installed

PART 2 PRODUCTS**2.01 ACCEPTABLE MANUFACTURERS**

- A. Panduit, Hubbell, Leviton, or approved equal.
- B. Cable manufacturer must comply with termination hardware, cabling submitted must provide and end-to-end solution.

2.02 MATERIALS

- A. Cable
 - 1. Category Cabling
 - a. Cable 5e for resident cabling from "smart panels" to wall outlets.
 - b. Category 6a/6+ for WAP/Wifi outlets.
 - c. Category 6 to wall outlets in the 2nd floor office space.
 - d. Blue for Cat 5e or Cat 6
 - e. White for Cat 6a or Cat 6+
 - f. Jacket type will be by ceiling space as required by code.
 - 2. Coaxial Cable
 - a. Quad shielded
 - b. Foil
 - c. RG-6
 - d. Jacket type will be by ceiling space as required by code.

- B. Patch Panels
 - 1. Unloaded
 - 2. 48 port
 - 3. Part of the Structured Cabling System.
- C. Faceplates/Wall box
 - 1. Will fit industry standard junction boxes whether single or double gang, style will be indicated on plans.
 - 2. Blank for any used ports.
 - 3. Color will be set by Architect.
- D. Jacks
 - 1. Grade to match cabling terminating.
 - 2. Must be compliant with TIA/EIA Requirements.
 - 3. Non keyed style design.
 - 4. Color shall match jacket cable terminated.
- E. Smart Panel
 - 1. Non-metallic
 - 2. RF-Transparent structured media enclosure
 - 3. Vented Door
 - 4. 180 degree hinge
 - 5. 35"H x 14.5"W

PART 3 INSTALLATION

3.01 CABLES

- A. Cable/port count will be at minimum (2) per location (standard or WAP). Additional cable/port count will be as indicated on plans.
- B. All Cables within the Equipment room shall be routed to avoid any electrical interference. Cable that route from wall-mount equipment shall utilize D-rings to get to the closest cable tray. All cables within Data/IT/Equipment Room shall be dressed and neatly bundled utilizing velcro cable ties.
- C. If D-Rings are used be sure to size them leaving room for growth.
- D. Cables in ceiling space will be supported every 5' minimum and secured in a professional manner. If cable tray is available cables utilizing the tray will be separated by system and loosely bundled with velcro cable ties.
- E. The interior communications pathways shall be in the most direct and efficient path possible. Cables are to be bundled and share a common path whenever possible. Size J-hooks for appropriate load and follow manufacturer recommendation for fill. Cables shall not be laying on ceiling tiles or using other systems i.e. electrical conduit, plumbing pipe, HVAC duct for support.
- F. Approx. 12" to 16" of slack left supported above ceiling before entering the conduit at the station end.
- G. Small slack loop left at the Equipment Room/IT/Data Room.
- H. Follow manufacturer recommendation for pulling tension and bend radius.

3.02 TERMINATION

- A. Termination in IDF/MDF will be based on type of cable and system utilizing the cable. The termination equipment type and location shall be indicated on the plans. Verify proper pin-out with onsite IT staff, whether 568A or 568B, prior to termination.
- B. Station side will verify pin-out prior to termination. Termination of cables will be sequential as numbered for ease of outlet identification. Verify labeling style with plans or onsite Owner Representative.

END OF SECTION