

PART 1: GENERAL

1.01: SCOPE OF WORK

- A. Work covered by this Section shall consist of furnishing labor, equipment, supplies, materials, and testing unless otherwise specified, and in performing the following operations recognized as necessary for the installation, termination, and labeling of termination blocks and patch panels as described on the Drawings and/or required by these specifications.

1.02: RELATED SECTIONS

- A. Division 26, Electrical Division
- B. Division 27, Communicants Systems.
- C. Division 28, Electronic Safety and Security

PART 2: PRODUCTS

2.01 GENERAL

- A. The materials and products specified herein reflect the minimum acceptable standards of fabrication and manufacture. All materials and products supplied by the Contractor and specified herein are to be new, unused, of first quality and in original packaging or shipping containers and match the provided cabling system or as shown on drawings and described in Item 3.01.
- B. New buildings and major renovations will be treated differently than existing buildings.
- C. Approved horizontal cabling systems include those manufactured by:
 - 1. Ortronics / Legrand
 - 2. Or as Specified by UNM IT
- D. In existing areas cabling shall match the previously installed base cabling system, unless specified otherwise in project documents.
- E. New building construction and owner approved large-scale renovations will utilize

Category 6 and/or Category 6A F/UTP cabling and matching termination hardware. Contact UNM ITS/CNS Facilities Manager for approval of cabling systems before installation. All Category 6 cabling shall be a minimum of 23 AWG. 110 Termination Blocks for Copper Cables shall only be used for horizontal special applications (elevators, alarms etc...) and riser/distribution copper applications.

2.02 110 TERMINATION BLOCKS

- A. The 110 termination system shall match the horizontal cabling system.
- B. The 110 termination system shall include wiring block, standoff legs, and vertical/horizontal wire management on all sides of the termination blocks. The system shall also include (6) C-4's for 4 pair cable installations, and (5) C-5's for 25 pair wiring strip, and labels.
- C. Voice Patch Panels to be 8 position modular (8P4C), high density, 48 port, Pins (3, 4, 5 and 6), with Female Telco connectors. Connect patch panel with a 25 pair tails terminating on 110 blocks.
- D. The connection between terminal blocks is installed with cross connect wire.

2.03 BUILDING ENTRANCE TERMINALS and PROTECTOR BLOCKS

- A. Division 27, Section 271313 Communications Copper Backbone Cabling

2.04 PATCH PANELS

- A. Install category compliant modular patch panels black in color.
- B. In mixed use applications (Category 6/Category 6A F/UTP) install modular F/UTP patch panels capable of supporting both applications.
- C. Voice grade patch panels to be 8 position (8P4C) modular, high density, 48 port, Pins (3, 4, 5 and 6), with Female Telco connectors. Connect patch panel with a 25 pair tails terminating on 110 blocks.
- E. The connection between terminal blocks is installed with cross connects wire.

D. Wire and Cable Management

1. Horizontal Wire Managers shall be black and 2 RU in size.
2. Vertical Wire Managers shall be black in color, a minimum of 6" wide x 9.30" deep with a removable cover and shall also be compatible with the installed rack (CPI PN 12833-703 for reference).
3. Cable support managers are required at the rear of all patch panels.

2.05 FIBER ENCLOSURES, FIBER DISTRIBUTION UNITS (FDU's)**A. Rack Mounted FDU**

1. Shall be sized according to fiber strand count.
2. FDU's shall be dedicated to each cable installed.
3. No cables shall be added to an existing FDU.
4. Provide duplex LC coupler panels.
(a) Blue for SM, Aqua for 50um MM, Beige for 62.5um MM.
5. Provide FDU's manufactured to include the required splice trays to support up to a 48 strand optical fiber cable.
6. Provide separate splice tray enclosures for all cables over 48 strand optical fibers.
7. Provide 1 meter simplex pigtail assemblies with LC connectors to match the installed Corning optical fibers and splice at the FDU.
8. Vertical Wire Managers shall be black in color, a minimum of 6" wide x 9.30" deep with a removable cover and shall also be compatible with the installed rack (CPI PN 12833-703 for reference).

PART 3: EXECUTION**3.01 110 TERMINATION INSTALLATION**

- A. The ER and TR shall contain wiring blocks as required to terminate all incoming pairs and all outgoing pairs to all TRs.
- B. Locate telephone wiring blocks on fire-treated plywood backboards as specified on the Drawings or as specified herein.
- C. Labeling for riser cables shall designate the corresponding destination TR wiring block.

3.02 PATCHPANEL INSTALLATION

- A. Each TR shall contain patch panels as required to terminate all pairs on its respective floor or floors served.
- B. Install patch panels in 19 inch equipment racks as specified on the Drawings or as specified herein.
- C. Wire management to be mounted at the top and bottom of station cabling equipment racks and between every patch panel.
- D. Install no more than 8, 48 port patch panels (voice and data) per rack.
- E. Include vertical cable manager in between and on both sides of equipment rack.
- F. Patch panels for areas with a TR too small for an equipment rack, shall utilize wall mountable cabinets to mount the Chatsworth horizontal wire management and patch panels. Approve from UNM ITS/CNS prior to installation.

3.03 OPTICAL FIBER ENCLOSURES, FDU INSTALLATION

- A. Install rack mounted fiber FDUs at the top of the equipment racks where applicable.
- B. Install 1 FDU per fiber bundle. No sharing of FDU's without prior approval of UNM ITS/CNS.

Terminations Blocks and Patch Panels 27 11 19**END OF SECTION**