SECTION 27 11 19

COMMUNICATIONS TERMINATION BLOCKS AND PATCH PANELS

PART 1 - GENERAL

1.1 STIPULATIONS

A. The specifications sections “General Conditions to the Construction Contract”, “Special Conditions” and “Division 01 – General Requirements” form a part of the Section by this reference thereto, and shall have the same force and effect as if printed herewith in full.

1.2 SUMMARY

A. This section includes the minimal requirements for termination blocks and patch panels installed in the telecommunications rooms.

B. Provide labor, materials, and equipment necessary to complete the work of this Section, including but not limited to the following:

1. Copper Patch Panels
2. Optical Fiber Enclosures
3. Termination Blocks

1.3 REFERENCES

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions apply to this Section.

B. Related Documents and Sections:

1. Division 01 – General Requirements
2. Section 27 00 00 – Communications General
3. Section 27 05 26 – Grounding and Bonding for Communications Systems
4. Section 27 05 28 – Pathways for Communications Systems
5. Section 27 11 16 – Communications Cabinets, Racks, Frames and Enclosures
6. Section 27 11 23 – Communications Cable Management and Ladder Rack
7. Section 27 13 13 – Communications Copper Backbone Cabling
8. Section 27 13 23 – Communications Optical Fiber Backbone Cabling

C. The following codes, associations, acts and agencies, as required by law;

1. NFPA-70, 2011 (National Electric Code)
2. National Electrical Safety Code (NESC)
3. Occupational Safety and Health Administration (OSHA)

D. The current edition of the following standards:

1. Refer to Section 27 00 00 – Communications General

E. The current edition of the following guidelines:

1. Refer to Section 27 00 00 – Communications General

F. When a discrepancy arises between the above-mentioned codes, standards or guidelines and the standards contained in this document, it shall be brought to the attention of the Owner immediately for resolution. The more stringent of the two guidelines shall be implemented.

1.4 SYSTEM DESCRIPTION

A. Provides specifications for wall and rack/cabinet-mounted blocks, patch bays, and patch panel components utilized to terminate various telecommunications infrastructure cabling and connectivity.

B. At a minimum performance, cabling shall be Category 6, unless otherwise noted. Coordinate this requirement with Owners IT Group.

1.5 SUBMITTALS

A. Refer to Section 27 00 00 – Communications General

B. Provide table of contents with all product names, manufacturer, and specific product number identified to accompany manufacturer's product information cut sheets or specifications sheets.

1.6 QUALITY ASSURANCE

A. All cable and equipment shall be installed in a neat and workmanlike manner. All methods of construction that are not specifically described or indicated in the contract documents shall be subject to the control and approval of the Owner or Owner Representative. Equipment and materials shall be of the quality and manufacture indicated. The equipment specified is based upon the acceptable manufacturers listed.

B. Strictly adhere to all Building Industry Consulting Service International (BICSI), Electronic Industries Alliance (EIA) and Telecommunications Industry Association (TIA) recommended installation practices when installing data cabling.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Acceptable Manufacturers

1. Copper cabling modular patch panels
2. CommScope
3. Hubbell
4. Legrand
5. Approved Equal

B. Fiber optic cabling patch panels

1. CommScope
2. Hubbell
3. Corning
4. Approved Equal

2.2 COPPER PATCH PANELS

A. Flat style panels as indicated on drawings.

B. Panel finish shall be black.

C. Shall be modular style and accept Category 6 jack modules.

D. Suitable for mounting in standard EIA 19-inch racks.

E. Provided with a minimum of 24 connectors, as defined in this specification, housed in 1 RU of usable rack height.

F. Strain relief for each cable terminated on the connector. Provide strain relief bars on the rear of all panels.

G. Store cable reserve with no bends sharper than 2-inch bend radius.

H. Provide sufficient finger space to allow connectors to be mounted and demounted readily.

I. Space for labeling of each individual connector.

J. Shall allow any individual cable to be terminated or otherwise handled without disturbing other cables.

K. Complete with designation strips

L. Jack modules

1. Shall be connector termination on rear.
2. Use for workstation cabling terminations and riser cable terminations as indicated on drawings.
3. Shall meet or exceed the channel specifications of the ANSI/TIA/EIA-568.2-D standard for a Category 6 system up to 250 MHz
4. EIA/TIA T568B wiring scheme.

2.3 OPTICAL FIBER ENCLOSURES

A. Rack-mounted Fiber Enclosures shall be sized appropriately to house the required strands of fiber, associated splices, and provide room for future expansion.

B. Shall be 2U or 4U in height and fit into a standard 19-inch wide rack.

C. Shall have a front cover that swings down. Labeling shall also be integrated on the fiber enclosure and fiber inserts.

D. Closet Connector Housing

1. Shall accept 6 and 8 pack SC adapter panels, verify type with Owner IT Group.
2. Multimode optical fiber shall be connected to Aqua bulkheads.
3. Singlemode optical fiber shall be connected to Yellow bulkheads.
4. Shall meet or exceed the channel specifications of the ANSI/TIA-568.3-D standard for Fiber Optics.

2.4 TERMINATION BLOCKS

A. Shall be 110 IDC style

B. Shall be 300 pair

C. Blocks shall contain color-coded tips on the base wiring block and well as on the connector blocks and shall incorporate back openings for cable feed-through.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Patch panels shall be modular; cables should not be terminated directly into the patch panel.

B. Cables should not be terminated in the patch panel until the SRU Project Manager confirms all room numbers are final.

C. Cables shall be terminated on both ends (patch panel and station ports) using the same jack color.

D. Each patch panel should consist of a single color. Violet and Orange jacks can be terminated at the end of a Blue patch panel. Red jacks can be terminated at the end of a White patch panel.

E. Jacks shall be inserted into the patch panels sequentially by room number then jack number.

F. All Patch Panels, Distribution Panels, and Blocks shall be securely mounted in the rack or on the wall with a minimum of four (4) rack screws located in the four corners of each panel/block.

G. All Panels shall be arranged in sequential order from top to bottom and left to right within racks and shall be labeled in alphanumeric order per the Owners IT Group approved labeling scheme.

H. Panels for shielded cabling, where applicable, shall be bonded and grounded to rack frames within which they are installed and terminated directly to the TGB (Telecommunications Grounding Busbar) within each TR space.

I. Follow all manufacturers' instructions. Pay special attention to the cable/system manufacturer's recommended minimum bend radius.

J. Coordinate with all other trades prior to installation.

K. Quantity on drawings is illustrative in nature. Provide as many wall-blocks, patch panels, enclosures, and modular cassettes to support the necessary quantity of cable pairs and strands.

L. Coordinate with Owners IT Group for planned quantity and type of cable pairs and strands that will be used to bring service into building.

3.2 CLOSEOUT ACTIVITIES

A. Contractor shall provide documentation of all telecommunications system components under this section utilized throughout the building for review and reference by the Owner and A/E team.

END OF SECTION