

SECTION 27 05 53

IDENTIFICATION FOR COMMUNICATIONS SYSTEMS

PART 1 - GENERAL

1.1 SCOPE

- A. This section details product and execution requirements for labeling of communications cabling, termination components, pathways and spaces.
- B. All Backbone and Horizontal Cables, Communications Outlets and Termination components (e.g. Copper and Fiber Optic Patch Panels) shall be clearly labeled by the Contractor to identify them as unique throughout the project.

1.2 RELATED WORK

- A. Refer to Section 27 00 00 "Common Work Results for Communications" which identifies related specification sections in this and other Divisions (if applicable).
- B. All cable pathways and their components shall be designed, manufactured, and tested in accordance with the latest applicable industry standards and codes, including the following:
- C. ANSI/TIA/EIA-606-C - Administration Standard for the Telecommunications Infrastructure of Commercial Buildings.

1.3 REFERENCES & STANDARDS

- A. Refer to Section 27 00 00 "Common Work Results for Communications" which identifies pertinent References & Standards.

1.4 DEFINITIONS AND ABBREVIATIONS

- A. Refer to Section 27 00 00 "Common Work Results for Communications" which provides information on Definitions and Abbreviations used in this and related sections.

1.5 WORK BY OWNER

- A. Refer to Section 27 00 00 "Common Work Results for Communications" which identifies Work by the Owner affecting the sub-system(s) covered by this section.

1.6 SUBMITTALS

- A. Refer to Section 27 00 00 "Common Work Results for Communications" which provides general guidelines for product and/or installation information to be submitted by the contractor.
- B. Prior to installation, the Contractor shall provide samples of all label types planned for the project. These samples shall include examples of the lettering to be used and shall follow the standards detailed below.

1.7 QUALITY ASSURANCE

- A. Refer to Section 27 00 00 "Common Work Results for Communications" which identifies general quality assurance requirements for the project.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Labels shall be machine generated and be permanent.
- B. Each outlet shall be labelled with a unique identifier
- C. No hand written or non permanent labels allowed unless specifically noted otherwise.
- D. All labels and markings shall be physically and chemically resistant to damage that would make the label unreadable.
- E. Characters on all labels shall be Black printed on a background of contrasting color. Distribution frame layouts, color coding and numbering schemes are to be approved by NYU IT prior to installation.
- F. Labels shall match the Communications Outlet layout and Patch Panel design and shall be as large as practicable (up to 16-point) to fit properly.
 - 1. No lettering shall be smaller than 10-point.
- G. Cable labels shall be self-laminating, White/Transparent Vinyl and incorporate an integrated clear lamination which, when the label is wrapped around the cable, covers the printed part of the label.
 - 1. Labels shall be of adequate size to accommodate the circumference of the cable(s) being marked and properly self-laminate over the full extent of the printed area of the label.
 - 2. Labels used on larger cables (e.g. Copper Backbone) may be wrapped with clear non-removable tape.
- H. Manufacturers: Subject to compliance with specifications preferably with Traffolyte labels or as a minimum with an indelible label machine.

PART 3 - EXECUTION

3.1 GENERAL

- A. All cables, jacks, faceplates, patch panels, connecting blocks, racks, and cabinets shall be labeled with machine generated labels according to the specifications below and in accordance with TIA labeling standards.
- B. All Cables shall be identified and labeled AT BOTH ENDS with self-adhesive, self- laminating, with white matte finish printing area, clear plastic shield labels. Labels shall be placed within approximately 6" from termination point.
- C. Cable labels shall be wrapped around the cable (not a "flag").
- D. The printed identifier shall be covered by the clear laminating part of the cable label.

3.2 BUILDING AND ROOM IDENTIFIERS

- A. Intermediate Distribution Frame Room (IDF)
 - 1. The IDF room number shall be based on the client room numbering
- B. Building Distribution Frame Room (BDF)
 - 1. The BDF room number shall be based on the client room numbering.

3.3 ANGLED NON-MODULAR PATCH PANEL

- A. Angled Non-Modular Patch Panels used to terminate Horizontal Cabling shall be labeled following:
 - 1. All patch panels shall be labeled with a letter designation ¾" high black text on white background.
 - 2. All ports on patch panels shall be labeled in accordance with design documents using the compatible Ortronics labeling system for the panel.
 - 3. Horizontal cabling: Ports for horizontal station cabling shall be labeled with the room number, outlet ID and jack designation.
 - 4. Refer to section pertaining to work area outlet labeling

3.4 CONDUIT AND RISER/BACKBONE CABLING AND TERMINATION HARDWARE

- A. All riser cabling shall be labeled with the source and destination cabinet/rack, patch panel/block and port information. Labels shall be 2" width and font shall be as large as possible. Labels every 5 feet on conduits

and every 5 feet and termination point each backbone cables with a unique identifying code as follows:

MSO-XO BDF ← FIBER CABLE DO NOT CUT → MSD-XD IDF A

where:

MSO – Building Origination

MSD – Building Destination

XO - Floor Origination

XD – Floor Destination

BDF – IT Room Origination

IDF A – IT room Destination

B. Each Fiber Optic Patch Panel shall be clearly labeled with a unique identifying code to identify:

- The near end optical fiber adapter (e.g., coupler) letter.
- The used ports.
- The far end IDF room number.
- The far end coupler letter.
- Fiber type (e.g., M50 or SM)
- Far end used ports.

1. The cable identifiers are to be secured to the front cover of the panel enclosure.
2. Patch panel labels shall be visible from front of panel without opening panel cover.
3. Place patch panel labels for fiber strands on manufacturer designated labeling areas.

C. The labels material and hardware:

1. Custom 3.0"W x 4.0"L labels - Brady PN: Y4057851 - Qty of 5000
2. Custom 3.0"W x 8.0"L labels - Brady PN: Y4057815 - Qty of 5000
3. Ink ribbon for above labels - Brady PN: IP-R4307
4. Brady IP300 printer - Brady PN: IP-300

3.5 HORIZONTAL COPPER CABLING AND TERMINATION HARDWARE

A. Label each cable at the termination point with a unique identifying code as follows:

1AR2-A01 TO 2BR1-B01 (###)

where:

1AR2= 1A the source Telecommunications Room Number designation (first number is floor number and second letter is IDF designation) and R2 is Rack Designation

A01 = A is patch panel Location and 01 is port number

2BR1 = 1B the Destination Telecommunications Room Number designation (first number is floor number and second letter is IDF designation) and R1 is Rack Designation

B01 = B is patch panel Location and 01 is port number

= Pair Count

B. Multipair cables (e.g., 25 pair, 50 pair) shall be labeled with designation strips.

1. Blocks for riser cabling shall be labeled with the vertical or rack and block or panel of the opposite end terminations. Labels must also include the start and end pair numbers or cable numbers on each row of terminations.
2. Each Designation Strip shall be labeled to indicate the far end room number of the cable which is terminated on that block and a sequential cable number.
3. Each horizontal row shall be labeled with the position (pair) identifier for the pairs terminated on that block.
 - a. Only the 1st and 25th Position on each row need to be identified (e.g. pairs 1 & 25, 26 & 50, etc.).

3.6 WORK AREA OUTLET AND HORIZONTAL CABLING

- A. The Communications Outlet shall be located in zones as indicated on detail drawings with a unique identifier.

3.7 POSITION NUMBER DETAIL

- A. Each Communications Outlet shall be labeled with a unique identifier.
 1. Each cable terminated at the Communications Outlet will be labeled with the same identifying code(s).
 2. Faceplates shall be labeled with ¼" high black text on white background as indicated on standard outlet details.
 3. Each individual Jack shall be installed with a color-coded Ortronics icon insert.

3.8 INNERDUCT

- A. All inter-cabinet cabling shall be labeled with the source and destination cabinet/rack, patch panel, and pair/port information. Labels shall be 2" width and font shall be as large as possible.
 1. This includes areas where the innerduct is installed in trays and in equipment rooms.
- B. The innerduct shall be labeled with a durable Yellow Polyethylene tag that reads "CAUTION FIBER OPTIC CABLE"
 1. The tag shall provide blank spaces for adding fiber count and cable destination information.
 2. The destination of the cable(s) contained in the Innerduct and the fiber count shall be marked on the tag.
 - a. Hand lettering is acceptable on this tag, using an indelible type ink.
- C. The tag shall be secured to the Innerduct using self-locking ties.

- D. Note: If armored optical fiber cable is used, the use of innerduct may not be required.

3.9 TELECOMMUNICATIONS BONDING AND GROUNDING:

- A. All telecommunications bonding and grounding should be labeled as close as practicable (i.e. for ease of access and to read the label) to the point of termination.
- B. Labels shall be non-metallic and include the following:

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| <p style="text-align: center;">WARNING</p> <p style="text-align: center;">IF THIS BONDING CONNECTOR OR CABLE IS LOOSE OR MUST BE REMOVED, PLEASE CALL THE BUILDING TELECOMMUNICATIONS MANAGER.</p> |
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END OF SECTION