

270553-TC

Identification for Telecommunications Systems

PART 1: GENERAL

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 labeling of the telecommunications infrastructure as described on the Drawings and/or required by these specifications.
 - B. It is the intent of the MAA to create a Class 3 system of administration As per ANSI/TIA/EIA 606-A Standards. As such, all elements must be labeled with unique identifiers as described in the following sections.
 - C. This includes minimum requirements for the following:
 - 1. Labeling Communications Cabling
 - 2. Labeling Communications Closet Hardware
 - 3. Labeling Conduit/Hand hole/Inner duct
 - 4. Labeling Patch Panel Jumpers
- 2 A. The Cable Labeling Hierarchy will be the following unless otherwise noted for all Cables,
Room number, Row number, Rack number, Panel number, Port number
- NT109.1.5.3.1-24 (states current location)**
24 SM (states number of strands)
C134A.2.5.1.1-25-48 (states far end location)
- B. Contractor shall submit for approval by OT Engineer labeling scheme that provides all required information

PART 2 – PRODUCTS

LABELS – OSP

- A. The size, color and contrast of all labels should be selected to ensure that the identifiers are easily read.
- B. All labels are to be mechanically printed, no hand printed labels allowed for any component.
- C. Labels should be visible during the installation of and normal maintenance of the infrastructure. Labels should be resistant to the environmental conditions at the point of installation (such as moisture, heat or ultraviolet light) and should have a design life equal to or greater than that of the labeled component.
- D. Provide vinyl substrate with a white printing area and black print. If cable jacket is white, provide cable label with printing area that is any other color than white, preferably orange or yellow – so that the labels are easily distinguishable.
- E. Labels shall be flexible vinyl or other substrates to apply easy and flex as cables are bent.
- F. Labels shall use tie wraps to firmly support laminate label to cable.

LABELS – ISP

- A. All riser cables shall be labeled with self-laminating marking tape, Brady ID-Pro labeler, Panduit LS7 labeler, or equivalent labeling system. Labels shall be Black on White, Bold, 3mm in size, Style normal.

PART 3: EXECUTION

LABELING INSTALLATION

- A. Horizontal Copper Cable Labeling:
 - 1. All horizontal cables shall be labeled with self-laminating marking tape, with approved labeling system. Identification shall be as follows:
 - 2. At the TR end, the cables shall be labeled with the location of where the other end of the cable is terminated including room number, TO number, and jack position. Place label on a visible part of cable within 12” of termination point for ease of identification after termination.

- a. Example: cable going to room 114, first TO, first jack position would be labeled as: 114-1A1. A cable in the second TO, third jack position would be 114-2A3.
 3. At the TO end, the cables shall be labeled 4" from termination with the following: TR – Rack.Patch Panel.Port. This shall be visible by removing outlet cover plate.
Example: TR Room 114, rack row 1, rack 1, patch panel 1, port 03 would be: 114 – 1.1.1.03
 - b. For voice cabling in older building with separate voice closets and no patch panels, include the TR and as much information as practical such as column, row, block number, and port number or pairs.
 4. For CATV coaxial drop cables, at the splitter or tap, the cables shall be labeled with the location where the other end of the cable is terminated including room number, TO number, and jack position. If not collocated with a TO, indicate room number at a minimum. Place label on a visible part of cable within 12" of termination point for ease of identification after termination.
 5. For coaxial cables at the TO, they shall be labeled 4" from termination with the room number where the splitter or tap is. This shall be visible by removing outlet cover plate.
- B. Telecommunications Outlet (TO) Labeling Scheme:
1. TO's are labeled alphanumerically in a clockwise rotation around the room. Typically, the first TO located to the left of the main entrance of the room is labeled 1A, followed by 2A, 3A, etc.
- C. Horizontal 8 position punch block Labeling for voice:
1. If the cables are for room terminations, label the appropriate corresponding space for the port with the room number, TO, and jack position.
- D. Patch Panel Labeling:
1. For station cabling going to a TO, label each port on the patch panel with the room number, TO, and jack position.
Example: A cable in room 114, first TO, first jack position would be labeled as: 114-1A1. A cable in the second TO, third jack position would be 114-2A3.

Example: A cable going to a floor box TO labeled FB1A in room 114 in the second jack position would be labeled as: 114-FB1A2

- E. Vertical/Riser/Intrabuilding Copper/Fiber Cable Labeling:
2. At the TR, the copper riser cables shall be labeled with from/to, cable number, and count information on both ends. Place label on a visible part of cable close to wiring block for ease of identification after termination.
- F. Interbuilding/Campus/Backbone Copper and Fiber Cable Labeling:
1. All interbuilding cables shall be labeled permanently with from/to information, cable type and size at each panel end.
 - a. Example: From Building 115 to 107, a 24-stand fiber single mode cable would be:

BLD115.105.1.1.1-24
BLD107.150.1.1.2.1-24
- G. Conduit, manhole and hand hole Labeling:
1. All interbuilding and intrabuilding Inner duct and conduit systems shall be labeled permanently with from/to information, Building, manhole/hand hole, bank, and conduit number.
Example: from/to BLD115.105.1.1.1-24 - MH5W.3.1
- H. Cable Function Color Code
1. As an additional level of identification that allows a field type to be quickly located, Color Coded strips, icons, and so on will be installed on all terminated wall plates and block areas. Common equipment refers to PBX equipment, host computer, LAN's and multiplexers. Miscellaneous refers to maintenance alarms, security, paging systems, and other systems and circuits not an integral part of common equipment. Refer to the table below:

<u>Function</u>	<u>Color</u>
Auxiliary and miscellaneous circuits	Yellow
Common equipment	Purple
Customer side of network interface	Green
First level backbone	White
Horizontal cabling to workstations	Blue
Interbuilding backbone	Brown
Key telephone systems	Red

Network side of network interface
Second level backbone

Orange
Gray

PART 4: BUILDING REFERENCE

<u>Building Reference</u>	<u>Identification</u>
BLD901	Building 901
BLD991	Building 991
TERM	BWI Terminal
ARFF	ARFF Building
KB	Kauffman Building
MAC	MAC Building
CARG<nnn>	Cargo Building <number>
MID	Mid-Field Cargo Building
HG	Parking-Hourly Garage
DA	Parking-Daily A Garage
LTA	Parking-Long Term A
LTB	Parking-Long Term B
EXP	Parking-Express Lot
EMP	Parking-Employee
ESP	Parking-ESP

PART 5: FACILITIES WARNING

Purpose:

The OT Facilities Warning Label marking standard has two main goals

- a. Disaster recovery. In the event of a disaster to the physical plant, room(s) or infrastructure the standard will expedite the identification of the OT facilities that are damaged.
- b. Contractor warning. When work is being done in the area they will know not to remove or relocate OT infrastructure.

Permanent Markings (Inside Plant)

NOTE: Office of Technology may be able to provide Warning Labels for small jobs. Call MAA Help Desk 410-859-7599 and give type of label needed and quantity required.

Specifications:

Labels shall be permanent pressure-sensitive, calendared white vinyl film, 2.5 -3 mils thick, UV silk-screened ink or printed using solvent inks. There shall be a clear coat laminate either silk-screened or using vinyl over laminate coating applied

The font shall be bold Arial 20-point font. Phone number shall be bold Arial 24-point font

Labels shall be 5.5 inches wide, 4.4 inches' high

Delineation stripes shall be 1.5 inches wide, 4.4 inches' high

The colors on the stripes shall be .5 inches' wide

Color Banding Raceways and exposed cables: Label exposed and accessible raceways of the systems listed below:

A. Only OT Approved warning labels shall be used.

B. Label Locations:

- a. At changes in direction,
- b. Within 5 feet of penetrations of walls, ceilings and floors.

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- c. At 50-foot maximum in straight runs, and at 25 foot maximum intervals in congested areas. This requirement may be waived in public areas at the discretion of the OT Engineer.
- d. On all junction boxes

Affix permanent labels to splice cases and to all cables within 24 inches of each window

C. Installation Standard

- 1. The stickers/Band will be installed so the phone number portion of the warning sticker is visible and readable from the ground.
- 2. The warning label may be trimmed to avoid overlap of the text

Permanent Markings (Outside Plant)

Shall follow the same marking standard as inside plant except for size and materials.

Label shall be designed to withstand the harsh environment where it will be used

Representative samples of approved OT warning labels

Telecommunications System: Green and Yellow

There shall be a written description between the end bands. For Telecommunications System, it will state:



**MAA Telecommunications System, DO NOT DISTURB
Contact MAA IT 410-859-7599**

**Fiber Optics Plant: Green and Orange
Copper Plant: Green and Yellow**



Emergency Paging System: Green and Red



Data Networks: Green and Black



IASS Plant: Green and Purple



Flight Information Display System (FIDS) Plant: Green and White



Common Use Terminal Equipment (CUTE) Plant: Green and Grey



Building Automation Plant: Green and Brown



Radio/RF Networks: Yellow and Orange



Fiber Optics Plant: Green and Orange