LABELING SCHEME

WORK AREA FACEPLATE LABELING
THE TYPE (VOICE, DATA) AND THE COLOR OF THE ICONS FOR EACH OUTLET ON THE WORK AREA FACEPLATE MUST DIRECTLY CORRESPOND WITH THE ICON ON THE PATCH PANELS. EVERY UTP CABLE PRESENT AT EACH FACEPLATE MUST HAVE ITS OWN UNIQUE IDENTIFIER (LABEL). LABELS SHALL BE BLACK LETTERING ON WHITE BACKGROUND. HAND WRITTEN LABELS ARE NOT ACCEPTABLE.

EACH FACEPLATE LOCATION SHALL BE LABELED WITH THE FOLLOWING INFORMATION FOR EACH UTP CABLE:

S = IDENTIFIES THE TELECOMMUNICATIONS SPACE (ALPHA CHARACTER)
Y* = IDENTIFIES THE RACK NUMBER WITHIN THE TELECOMMUNICATIONS SPACE (NUMERIC CHARACTER)
A = IDENTIFIES THE PATCH PANEL LOCATION STARTING FROM THE TOP OF THE RACK/CABINET (ALPHA CHARACTER)
P = IDENTIFIES THE PORT ON THE PATCH PANEL (NUMERIC CHARACTER)

* USED WHEN MORE THAN ONE RACK IS USED FOR THE HORIZONTAL CABLE TERMINATIONS IN A TELECOMMUNICATIONS SPACE

PATCH PANEL LABELING
THE TYPE (VOICE, DATA) AND THE COLOR OF THE ICONS FOR EACH OUTLET ON THE PATCH PANELS MUST DIRECTLY CORRESPOND WITH THE ICON ON THE WORK AREA FACEPLATE. EACH PATCH PANEL SHALL BE LABELED IN THREE LOCATIONS - LEFT SIDE MIDDLE, MIDDLE AND RIGHT SIDE MIDDLE, STARTING WITH THE TOP PATCH PANEL. LABELS SHALL BE BLACK LETTERING ON WHITE BACKGROUND. HAND WRITTEN LABELS ARE NOT ACCEPTABLE.

EACH PATCH PANEL SHALL BE LABELED WITH THE FOLLOWING INFORMATION:

A = IDENTIFIES THE PATCH PANEL LOCATION STARTING FROM THE TOP OF THE RACK/CABINET

NOTE: NO NEED TO LABEL PORTS ON THE PATCH PANEL

HORIZONTAL CABLE LABELING
ALL HORIZONTAL CABLES MUST BE LABELED WITH ITS OWN UNIQUE IDENTIFIER. LABELS SHALL BE BLACK LETTERING ON WHITE BACKGROUND CONTAINING THE CABLE IDENTIFIER. THE LABELS SHALL BE PLACED ON THE CABLE 4-INCHES FROM THE POINT OF TERMINATION AND IN THE SAME DIRECTION FOR ALL CABLES. HAND WRITTEN LABELS ARE NOT ACCEPTABLE.

EACH HORIZONTAL CABLE LABEL SHALL FOLLOW THE SAME LABELING SCHEME AS THE WORK AREA FACEPLATE LABELING SCHEME.

RACK LABELING
ALL RACKS SHALL BE LABELED AT THE TOP AND BOTTOM OF THE RACK. LABELS SHALL BE BLACK LETTERING ON YELLOW BACKGROUND 24 POINT FONT.

EACH RACK SHALL BE LABELED WITH THE FOLLOWING INFORMATION;

ER OR TR
B = IDENTIFIES AS ER OR TR
S = IDENTIFIES THE TELECOMMUNICATIONS SPACE
R = IDENTIFIES THE RACK IN THE TELECOMMUNICATIONS SPACE

EXAMPLE: ER-E-01
INDICATES ER, TELECOMMUNICATIONS SPACE E, RACK 01

FIBER OPTIC BACKBONE CABLE LABELING
ALL FIBER OPTIC BACKBONE CABLES MUST BE LABELED WITH ITS OWN UNIQUE IDENTIFIER. LABELS SHALL BE BLACK LETTERING ON WHITE BACKGROUND CONTAINING THE CABLE IDENTIFIER. THE LABELS SHALL BE PLACED ON THE CABLE JACKET 4-INCHES FROM POINT OF JACKET REMOVAL AND IN THE SAME DIRECTION FOR ALL CABLES. HAND WRITTEN LABELS ARE NOT ACCEPTABLE.

EACH FIBER OPTIC BACKBONE CABLE SHALL BE LABELED WITH THE FOLLOWING INFORMATION:

S1 = IDENTIFIES THE TELECOMMUNICATIONS SPACE (TS) CONTAINING THE TERMINATION
S2 = IDENTIFIES THE REMOTE TELECOMMUNICATIONS SPACE CONTAINING THE OTHER END OF THE TERMINATIONS
N = IDENTIFIES THE TOTAL STRAND COUNT OF THE FIBER OPTIC BACKBONE CABLE
MM = IDENTIFIES THE FIBER OPTIC BACKBONE CABLE AS MULTIMODE
SM = IDENTIFIES THE FIBER OPTIC BACLBON CABLE AS SINGLEMODE
R = IDENTIFIES FIBER OPTIC BACKBONE REDUNDANCY, PRIMARY OR SECONDARY ROUTE

FIBER BACKBONE ENCLOSURE LABELING
EACH FIBER ENCLOSURE LABEL CARD SHALL BE LABELED WITH THE REMOTE TELECOMMUNICATIONS SPACE AND ROUTE. LABELS SHALL BE BLACK LETTERING ON WHITE BACKGROUND. THE LABELS SHALL BE PLACED ON THE CORRESPONDING LABEL CARD SLOT AND IN THE SAME DIRECTION FOR ALL LABELS. HAND WRITTEN LABELS ARE NOT ACCEPTABLE.

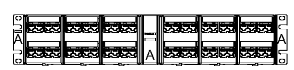
EACH FIBER ENCLOSURE SLOT SHALL BE LABELED WITH THE FOLLOWING INFORMATION:

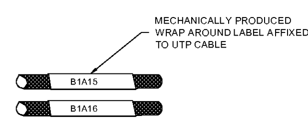
S2 = IDENTIFIES THE REMOTE TELECOMMUNICATIONS SPACE CONTAINING THE OTHER END OF THE TERMINATIONS
R = INDETIFIES FIBER OPTIC BACKBONE REDUNDANCY, PRIMARY OR SECONDARY ROUTE

EXAMPLE: TR-AF PRIMARY
INDICATES REMOTE TELECOMMUNICATIONS SPACE TR-AF, PRIMARY PATHWAY

S	Y*	A	P
ALPHA	NUMERIC	ALPHA	NUMERIC
TELECOM SPACE	RACK	PANEL	PORT

EXAMPLE:
B1A05
TELECOMMUNICATIONS SPACE B, RACK 01, PATCH PANEL A, PORT 05



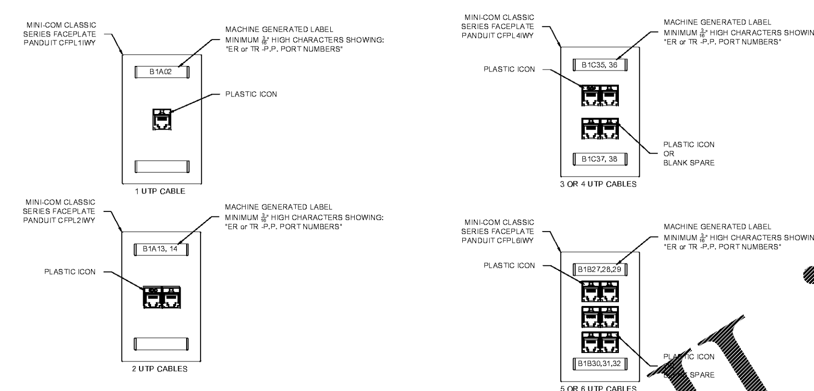


EXAMPLE:
ERE-01
INDICATES ER, TELECOMMUNICATIONS SPACE E, RACK 01

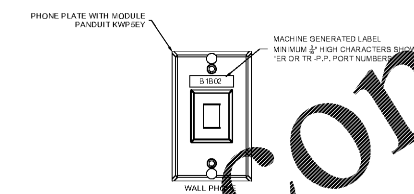
S1	S2	-	N	SM	R
ALPHA	ALPHA		NUMERIC	ALPHA	ALPHA
TS 1	TS 2		COUNT	TYPE	ROUTE

EXAMPLE:
ERE/TRB-12MMP
INDICATES TELECOMMUNICATIONS SPACE ERE TO TELECOMMUNICATIONS SPACE TRB, 12-STRAND, MULTIMODE, SECONDARY PATHWAY.

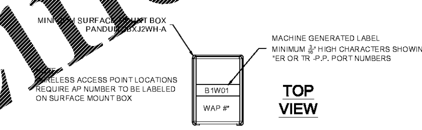
FLUSH MOUNTED FACEPLATES



WALL MOUNT PHONE FACEPLATE



SURFACE MOUNT BOX



COLOR CODE GUIDELINES

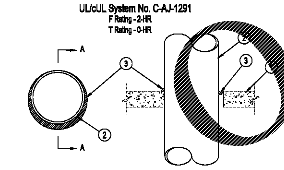
THE FOLLOWING COLORS SHALL BE USED TO PROVIDE COMMONALITY WITHIN THE STRUCTURED CABLING SYSTEM. PROVIDE CATEGORY 6 OUTLETS, ICONS AND PATCH CORDS BASED ON TYPE OF APPLICATIONS BEING PROVIDED:

- BLUE - REGISTERS AND SCO
- YELLOW - ISP (IF CONNECTED THROUGH PATCH PANEL)
- ORANGE - SECURITY DEVICES, POS CO-CONTROLLER, & DEMARCATION POINT ANALOG EXTENSIONS
- RED - CATALINA
- VIOLET - ENERGY MANAGEMENT & ISP PERIPHERALS (PRINTERS, PC'S, ASMA, ETC.)
- OFF WHITE - TELEPHONE
- GREEN - PHARMACY WORKSTATION / PRINTER, & DEMARCATION POINT T1 CIRCUIT EXTENSIONS
- BLACK - POS MASTER CONTROLLER
- GRAY - TIME CLOCKS, SCALES, & RISER/TIE CABLES TO TR'S
- WHITE - WIRELESS ACCESS POINTS

1 LABELING DETAIL
SCALE: NTS

METAL PIPE THROUGH CONCRETE FLOOR/WALL OR BLOCKWALL

UL/cUL System No. C-AJ-1291
F Rating - 2-HR
T Rating - 0-HR

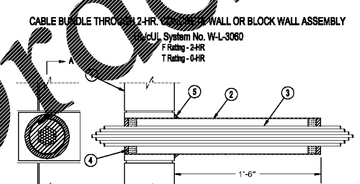


1. [illegible] - Min 2-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified [illegible]. Max diam of opening is 30-7/8 in. See [illegible] (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. [illegible] - One metallic pipe or conduit to be installed either concentrically or eccentrically within the firestop system. The annular space between pipe or conduit and periphery of opening shall be min 0 in. to max 7/8 in. Pipe or conduit to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes or conduits may be used:
   A. [illegible] - Nom 30 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. [illegible] - Nom 30 in. diam (or smaller) cast or ductile iron pipe.
   C. [illegible] - Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.
   D. [illegible] - Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.
   E. [illegible] - Nom 6 in. diam (or smaller) steel conduit.
   F. [illegible] - Nom 4 in. diam (or smaller) steel electrical metallic tubing (EMT).
3. [illegible] - Min 1/2 in. thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall. At the point contact location between pipe and concrete, a min 1/4 in. diam bead of fill material shall be applied at the concrete/pipe interface on the top surface of floor and on both surfaces of wall.
   [illegible] - FS-ONE Sealant

*Bearing the UL Classification Marking

CABLE BUNDLE THROUGH 2-HR. CONCRETE WALL OR BLOCK WALL ASSEMBLY

UL/cUL System No. W-L-3060
F Rating - 2-HR
T Rating - 0-HR

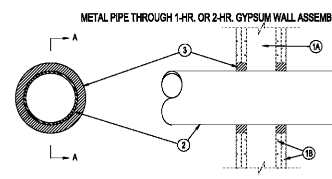


1. [illegible] (2-HR. Fire-Rating):
   A. Any lightweight or normal weight concrete wall (Min. 5" thick)
   B. Any UL/ULC classifield concrete block wall.
2. [illegible] - Maximum 4" nomial diameter steel pipe sleeve (schedule 40 or heavier).
3. [illegible]
   A. Maximum 7/c NO. 12 AWG cable.
   B. Maximum 25 pair NO. 24 AWG telephone cable.
   C. RG 59 coaxial cable.
   D. 3/C NO. 8 AWG metal clad cable.
   E. Maximum 5/8" diameter fiber-optic cable.
4. [illegible] - Minimum 5/8" depth Hilti FS-ONE intumescent firestop sealant.
5. [illegible]

Notes: 1. Maximum diameter of opening = 4".
2. Cables to fill a maximum 45% of cross-sectional area of opening.
3. Annular space = minimum 1/4", maximum 3/4".
4. Steel sleeve may be flush with wall surface or extended up to 18" beyond wall surface. When sleeve is extended beyond one or both sides of wall, apply 1/2" bead Hilti FS-ONE intumescent firestop sealant to wall/sleeve interface.

METAL PIPE THROUGH 1-HR. OR 2-HR. GYPSUM WALL ASSEMBLY

UL/cUL System No. W-L-1054
F Rating - 1 and 2 Hr
T Rating - 0 Hr
L Rating At Ambient - Less Than 1 CFM/Sq Ft
L Rating At 400 F - 4 CFM/Sq Ft

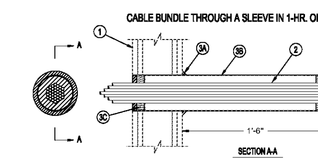


1. [illegible] The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. [illegible] - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC. When steel studs are used and the diam of opening exceeds the width of stud cavity, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw-attached to the steel studs at each end. The framed opening in the wall shall be 4 to 6 in. wider and 4 to 6 in. higher than the diam of the penetrating item such that, when the penetrating item is installed in the opening, a 2 to 3 in. clearance is present between the penetrating item and the framing on all four sides.
   B. [illegible] - 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 32-1/4 in. for steel stud walls. Max diam of opening is 14-1/2 in. for wood stud walls.
2. [illegible] - One metallic pipe, conduit or tubing to be centered within the firestop system. An annular space of min 0 in. to max 2-1/4 in. is required within firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
   A. [illegible] - Nom 30 in diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. [illegible] - Nom 30 in. diam (or smaller) cast or ductile iron pipe.
   C. [illegible] - Nom 4 in diam (or smaller) steel electrical metallic tubing or 6 in. diam steel conduit.
   D. [illegible] - Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.
   E. [illegible] - Nom 6 in. diam (or smaller) regular (or heavier) copper pipe.
3. [illegible] - In 1 hr fire rated assemblies, min 5/8 in. thickness of fill material applied within the annulus, flush with both surfaces of the wall. In 2 hr fire rated assemblies, min 1-1/4 in. thickness of fill material applied within the annulus, flush with both surfaces of wall.
   [illegible] - FS-ONE Sealant

*Bearing the UL Classification Marking

CABLE BUNDLE THROUGH A SLEEVE IN 1-HR. OR 2-HR. GYPSUM WALL ASSEMBLY

UL/cUL System No. W-L-3112
F Ratings - 1 & 2 Hr (See Item 1)
T Rating - 0 Hr



1. [illegible] The 1 or 2 hr fire rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. [illegible] Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC.
   B. [illegible] -5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 4-1/2 in.

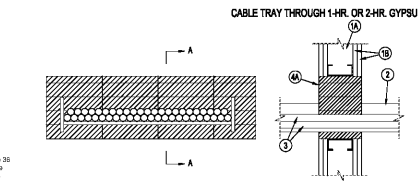
The hourly F rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. [illegible] - Aggregate cross-sectional area of cables in steel sleeve to be 36 percent of the aggregate cross-sectional area of the sleeve. Cables to be rigidly supported on both sides of wall assembly. Any combination of the following types and sizes of copper conductor cable may be used:
   A. Max 300 kcmil single conductor Type MTW, THHN, THWN or AWM power cables; cross-linked polyethylene (XLPE) insulation.
   B. Max 4 pair No. 24 AWG telephone cable intended for plenum applications.
   C. Max 3/C No. 12 AWG with polyvinyl chloride (PVC) insulation and jacket.
3. [illegible] - The firestop system shall consist of the following:
   A. [illegible] - Min 1/2 in. diam of sealant shall be applied around the perimeter of the sleeve on each side of the wall when sleeve extends beyond surface of wall.
      [illegible] FS-ONE Sealant
   B. [illegible] - Nom 4 in. diam (or smaller) steel electrical metallic tubing (EMT) or Schedule 5 steel pipe cast into wall assembly with joint compound. Sleeve max extend up to 18 in. beyond the wall surfaces.
   C. [illegible] - Min 1 in. thickness of min 4.0 pcf mineral wool batt insulation firmly packed into each end of sleeve as a permanent form. Packing material to be recessed from each end of sleeve as required to accommodate the required thickness of fill material.
   D. [illegible] - Min 1 in. thickness of fill material applied within the sleeve, flush with both ends.
      [illegible] CP618 Firestop Putty Stick

*Bearing the UL Classification Marking

CABLE TRAY THROUGH 1-HR. OR 2-HR. GYPSUM WALL ASSEMBLY

UL/cUL System No. W-L-4011
F Rating - 1 and 2 Hr (See Item 1)
T Rating - 0 Hr
L Rating At Ambient - 5 CFM/Sq Ft
L Rating At 400 F - 2 CFM/Sq Ft



1. [illegible] The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. [illegible] Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC. Additional framing member shall be installed in stud cavity containing through-penetrating item to form a rectangular box around penetrant.
   B. [illegible] -5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max size of opening 9 in. by 30 in.

The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
Min. finished wall thickness is 5 in.

2. [illegible] Max 24 in. wide by max 4 in. deep open-ladder cable tray with channel-shaped side rails formed of 0.10 in. thick aluminum or 0.060 in. thick steel and with 1-1/2 in. wide by 1 in. channel shape rungs spaced 9 in. OC. The annular space between the cable tray and the periphery of the opening shall be min 1 in. to max 4 in. Cable tray to be rigidly supported on both sides of floor or wall assembly.
3. [illegible] Aggregate cross-sectional area of cables in cable tray to be max 40 percent of the cross-sectional area of the cable tray. Any combination of the following types and sizes of copper conductor cables may be used:
   A. 1/C, 500 kcmil with thermoplastic insulation and PVC jacket.
   B. 300 pair - No. 24 AWG cable with PVC insulation and jacket
   C. Twenty-four fiberoptic cable with PVC subunit and jacket.
   D. Max three 1/C, No. 12 AWG wire, insulated with polyvinyl chloride, in a nom 3/4 in. [illegible]
4. [illegible] - The firestop system shall consist of the following:
   A. [illegible] - For walls 5 in. thick or less. Fire blocks centered within depth of opening with the long dimension placed horizontally. For walls greater than 5 in. thick, fire blocks installed with long dimension passed through the opening. In both cases, blocks to completely fill the entire volume of the opening in the wall assembly.
      [illegible] FS-Fire Block
   B. [illegible] Fill material to be forced into interstices of cables and between cables and cable trays to max extent possible on both surfaces of the penetration.
      [illegible] -FS-ONE Sealant

+Bearing the UL Listing Mark
*Bearing the UL Classification Marking

2 FIRE STOP DETAIL
SCALE: NTS

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FIRE PROTECTION

ISSUE LOG

NO.	REV.	DESCRIPTION	DATE
1	-	PERMIT SET	12/06/18
2	-	BID SET	03/21/19

JOB:	SCALE:
2018041	NO SCALE

SHEET NO.
LABELING AND FIRESTOP DETAIL
T5.1

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