

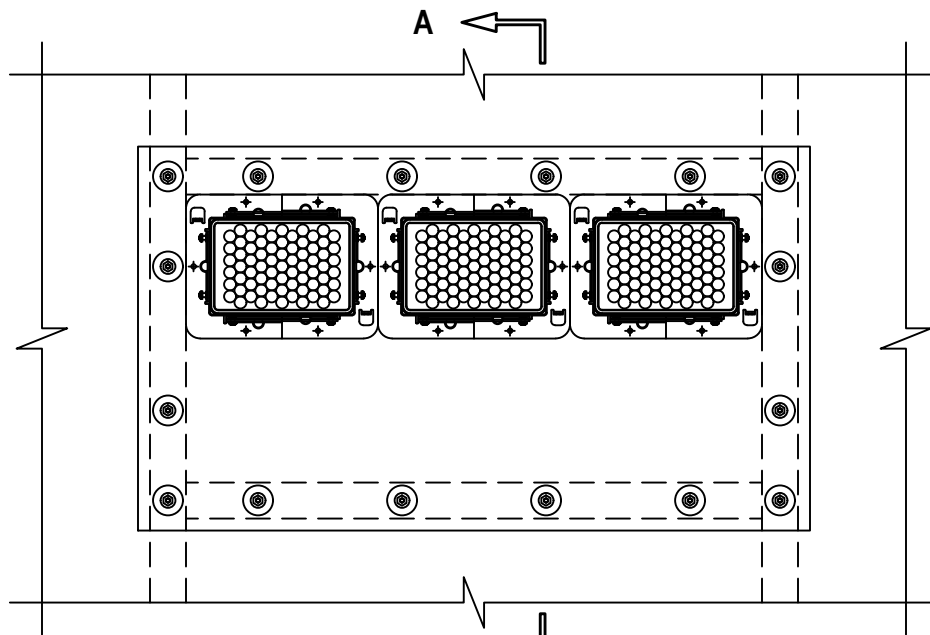
UL/cUL SYSTEM NO. W-L-3486

CABLE BUNDLES THROUGH GYPSUM WALL ASSEMBLY

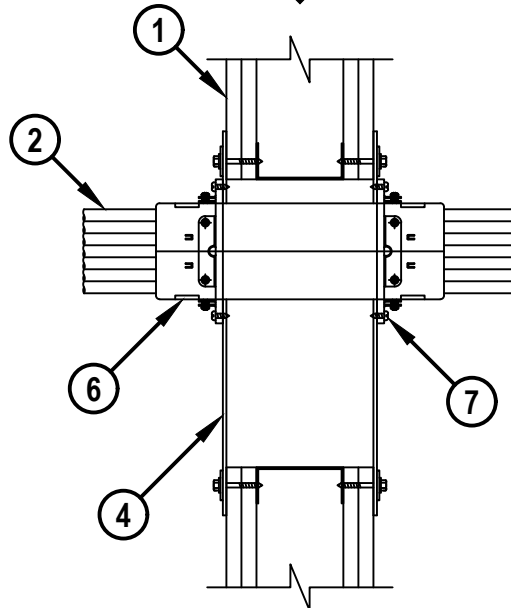
F-RATING = 1-HR. OR 2-HR.

T-RATING = 0-HR.

FRONT VIEW



SECTION A-A



WL 3486b.061924



HILTI, Inc.
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Sheet	1 of 3
Scale	1/8" = 1"
Date	June 19, 2024

Drawing No.

WL
3486b

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CABLE BUNDLES THROUGH GYPSUM WALL ASSEMBLY

F-RATING = 1-HR. OR 2-HR.

T-RATING = 0-HR.

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1. GYPSUM WALL ASSEMBLY (UL/cUL CLASSIFIED U400, V400, OR W400 SERIES) (1-HR. OR 2-HR. FIRE-RATING) (2-HR. SHOWN) TO INCLUDE THE FOLLOWING CONSTRUCTION FEATURES :
 - A. [NOT SHOWN] STEEL STUDS TO BE MINIMUM 3-5/8" WIDE (SPACED MAXIMUM 24" OC). OPENING TO BE COMPLETELY FRAMED OUT.
 - B. NOMINAL 5/8" THICK GYPSUM WALLBOARD. TYPE, NUMBER OF LAYERS, AND SHEET ORIENTATION AS SPECIFIED IN THE INDIVIDUAL UL DESIGN.
2. CABLE BUNDLE TO BE ANY COMBINATION OF THE FOLLOWING :
 - A. MAXIMUM 100 PAIR NO. 24 AWG TELEPHONE CABLE WITH PVC JACKET AND INSULATION.
 - B. MAXIMUM 7/C NO. 12 AWG COPPER CONDUCTOR CONTROL CABLE WITH PVC OR XLPE JACKET AND INSULATION.
 - C. MAXIMUM 750 KCMIL SINGLE CONDUCTOR COPPER CABLE WITH THERMOPLASTIC INSULATION AND PVC JACKET.
 - D. MAXIMUM 4/0 AWG TYPE RHH GROUND CABLE.
 - E. MAXIMUM 4 PAIR NO 23 AWG CAT 7 COMPUTER CABLE.
 - F. MAXIMUM RG 6/U COAXIAL CABLE WITH FLUORINATED ETHYLENE INSULATION AND JACKETING.
 - G. MAXIMUM 1/2" FIBER-OPTIC CABLE WITH PVC OR PE JACKET AND INSULATION.
 - H. MAXIMUM 20/C NO. 22 AWG SHIELDED PRINTER CABLE WITH PVC JACKET.
 - I. MAXIMUM 1/4" DIAMETER S-VIDEO CABLE CONSISTING OF 2 MAX 24 AWG 75 OHM COAX OR TWISTED PAIR CABLE WITH PE INSULATION AND PVC JACKET.
 - J. MAXIMUM 2/C NO. 18 AWG POWER OR NON-POWER LIMITED FIRE ALARM CABLE WITH OR WITHOUT METAL JACKET (MANUFACTURED BY AFC CABLE SYSTEMS, INC.).
 - K. MAXIMUM 3/C NO. 12 AWG METAL CLAD CABLE.
 - L. ANY CABLES, METAL-CLAD CABLES, OR ARMORED CABLES CURRENTLY LISTED UNDER THE THROUGH PENETRATING PRODUCTS CATEGORY.
3. [NOT SHOWN] MINIMUM 1/4" DIAMETER BEAD OF HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT APPLIED UNDER COMPOSITE SHEET AROUND PERIMETER OF OPENING IN GYPSUM WALL.

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4. HILTI CFS-COS FIRESTOP COMPOSITE SHEET CUT TO OVERLAP WALL A MINIMUM OF 2". COMPOSITE SHEET INSTALLED WITH THE ALUMINUM FOIL FACING AGAINST THE WALL AND SECURED WITH MIN 3/16" DIAMETER BY 1-1/4" (FOR 1-HR.) OR 2-1/2" (FOR 2-HR.) LONG DRYWALL SCREWS WITH 1" DIAMETER STEEL FENDER WASHERS AT MAX 2" FROM ENDS AND MAXIMUM 6" C/C. COMPOSITE SHEET CUT TO TIGHTLY FOLLOW THE CONTOUR OF THE FIRESTOP DEVICES.
5. [NOT SHOWN] MINIMUM 2" WIDE STAINLESS STEEL COVER STRIP (MIN 26 GA) CENTERED OVER ENTIRE LENGTH OF BUTTED SEAM OR SLIT MADE IN THE COMPOSITE SHEET. STEEL COVER STRIP SECURED TO COMPOSITE SHEET WITH 3/4" SHEET METAL SCREWS SPACED MAX 3" OC ALTERNATING ON EACH SIDE OF SEAM OR SLIT.
6. HILTI CFS-MSL [S, M, OR L] MODULAR SLEEVE (MAX QTY. = 5) TO BE CENTERED IN THE WALL. DEVICE TO BE INSTALLED WITH A GASKET AND HILTI CFS-MSL P [S, M, OR L] AND TIGHTENED USING SET SCREW IN DEVICE FLANGE. DEVICES MAY BE INSTALLED ADJACENT TO EACH OTHER WITH GASKETS AND HILTI CFS-MSL GPR 9" x 4" OR CFS-MSL GPR 12" x 4" RETROFIT GANGPLATE.
7. SECURE DEVICE FLANGES TO COMPOSITE SHEET ON BOTH SIDES OF WALL WITH TWO 1/2" LONG STEEL SCREWS WHEN CFS-MSL P FLANGE IS USED. WHEN CFS-MSL GPR RETROFIT GANGPLATE IS USED SECURE DEVICE AT EVERY OTHER HOLE IN FLANGE.

- NOTES :**
1. MAXIMUM SIZE OF OPENING = 24" x 12".
 2. ANNULAR SPACE BETWEEN HILTI CFS-MSL MODULAR SLEEVE AND HILTI CFS-COS FIRESTOP COMPOSITE SHEET = MINIMUM 0", MAXIMUM 1/4". OPENINGS TO BE SPACED A MIN 2" APART.
 3. AS AN ALTERNATE TO GASKETS, ONE LAYER OF HILTI CP 619T FIRESTOP PUTTY ROLL OR 1/2" BEAD HILTI FS-ONE MAX APPLIED AROUND PERIMETER OF DEVICES COVERING ANNULAR SPACE MAY BE USE PRIOR TO FLANGE BEING INSTALLED.
 4. CABLES TO FILL 0 TO 100% OF VISUAL FILL OF EACH DEVICE.

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