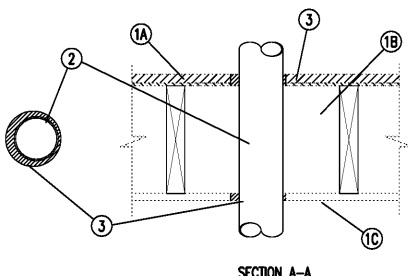


Order Plans @ [www.charlancba.com](http://www.charlancba.com)

### UL DESIGN F-C-7013

**System No. F-C-7013**  
F Rating - 1 Hr  
T Rating - 0 Hr



**SECTION A-A**

1. Floor-Ceiling Assembly - The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction features of the floor-ceiling assembly are summarized below.

**A. Flooring System** - Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture as specified in the individual Floor-Ceiling Design. Max diam of opening shall be 5-1/4 in. (133 mm).

**B. Wood Joist** - Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members with bridging as required and with ends freestoppped.

**C. Gypsum Board** - Nom 5/8 in. (16 mm) thick, 4 ft (1219 mm) wide as specified in the individual Floor-Ceiling Design. Max diam of opening shall be 5-1/4 in. (133 mm).

1.1. Chase Wall - (Not Shown, Optional) - The through penetrant (Item 2) may be routed through a 1 hr fire-rated single, double or staggered wood stud/gypsum wallboard chase wall having a fire rating consistent with that of the floor-ceiling assembly. The chase wall shall be constructed of the materials and in the manner specified in the individual L100 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

**A. Studs** - Nom 2 by 4 in. (51 by 102 mm) lumber or double nom 2 by 4 in. (51 by 102 mm) lumber studs.

**B. Side Plate** - Nom 2 by 6 in. (51 by 152 mm) lumber or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Max diam of opening shall be 5-1/4 in.

**C. Top Plate** - The double top plate shall consist of two nom 2 by 6 in. (51 by 152 mm) lumber plates or two sets of nom 2 by 4 in. (51 by 102 mm) lumber plates tightly butted. Max diam of opening is 5-1/4 in. (133 mm).

**D. Gypsum Board** - Thickness, type, number of layers and fasteners shall be as specified in individual Wall and Partition Design.

2. Steel Duct - Nom 4 in. (102 mm) diam (or smaller) No. 28 gauge (or heavier) steel duct to be installed either concentrically or eccentrically within the firestop system. The annular space between duct and penetrator opening shall be min 1/4 in. to max 3/4 in. Steel duct to be rigidly supported on both sides of floor-ceiling assembly.

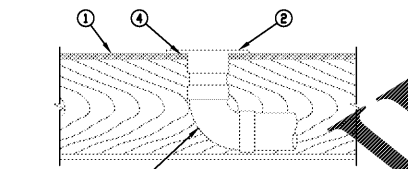
3. Fill, Void or Cavity Material - Sealant - Min 3/4 in. (19 mm) thickness of sealant applied within the annular space. Flush with top surface of floor or side plate. Min 5/8 in. (16 mm) thickness of sealant applied within annular space. Flush with bottom surface of gypsum board or lower top plate.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. - FS-One Sealant

\*Bearing the UL Classification Mark

### UL DESIGN F-C-2203

**System No. F-C-2203**  
F Ratings - 1 Hr  
T Ratings - 1 Hr



**SECTION A-A**

1. Floor-Ceiling Assembly - The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction features of the floor-ceiling assembly are summarized below:

**A. Flooring System** - Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture as specified in the individual Floor-Ceiling Design. Max diam of opening shall be 5 in. (127 mm).

**B. Wood Joist** - Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members with bridging as required and with ends freestoppped.

**C. Gypsum Board** - Nom 5/8 in. (16 mm) thick, 4 ft (1219 mm) wide as specified in the individual Floor-Ceiling Design. Max diam of opening shall be 5 in. (127 mm).

**D. Drain Piping** - Nom 4 in. (102 mm) diam (or smaller) Schedule 40 acrylonitrile butadiene styrene (ABS) or polyvinyl chloride (PVC) drain pipe and 90 degree elbow for use in vented (drain, waste or vent) piping systems. Pipe installed concentrically within freestop system.

4. Fill, Void or Cavity Material - Sealant - Min 3/4 in. (19 mm) thickness of fill material applied within the annulus, flush with the bottom surface of floor.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. - FS-One Sealant

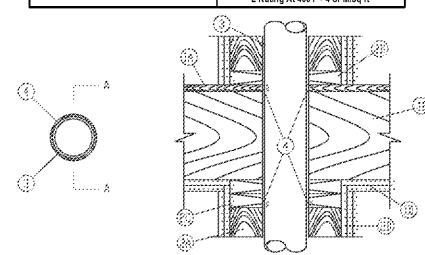
5. Water Closet - (Not Shown) - Floor mounted vitreous china water closet.

\*Bearing the UL Classification Mark

### UL DESIGN F-C-1009

**System No. F-C-1009**

ANSI/UL 1479 (ASTM E814)	CANULC S115
F Rating - 1 and 2 Hr (See Item 1)	F Rating - 1 and 2 Hr (See Item 1)
T Rating - 1/4 Hr	T Rating - 1/4 Hr
L Rating At Ambient - Less Than 1 CFM/sq ft	L Rating At Ambient - Less Than 1 CFM/sq ft
L Rating At 400 F - 4 CFM/sq ft	L Rating At 400 F - 4 CFM/sq ft



**SECTION A-A**

1. Floor-Ceiling Assembly - The 1 or 2 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction features of the floor-ceiling assembly are summarized below:

**A. Flooring System** - Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture as specified in the individual Floor-Ceiling Design. Max diam of opening shall be 5 in. (127 mm).

**B. Wood Joist** - Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members with bridging as required and with ends freestoppped.

**C. Furring Channels** - (Not Shown) - (As required) Resilient galvanized steel furring installed in accordance with the manner specified in the individual L500 Series Designs in the Fire Resistance Directory.

**D. Gypsum Board** - Thickness, type, number of layers and fasteners shall be as specified in the individual Floor-Ceiling Design. Max diam of opening shall be 5 in. (127 mm).

2. Chase Wall - (Optional) - The through penetrant (Item 3) may be routed through a 1 or 2 hr fire-rated single, double or staggered wood stud/gypsum wallboard chase wall having a fire rating consistent with that of the floor-ceiling assembly. Depth of chase wall to be min 1 in. (25 mm) greater than the diameter of the through penetrant. The chase wall shall be constructed of the materials and in the manner specified in the individual L200 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

**A. Studs** - Nom 2 by 4 in. (51 by 102 mm) or double nom 2 by 4 in. (51 by 102 mm) studs are allowed for through penetrants (Item 3) not exceeding nom 2 in. diam.

**B. Side Plate** - Nom 2 by 4 in. (51 by 102 mm) or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Diam of opening to be min 1 in. (25 mm) greater than diam of pipe. As an alternate, the opening may be equal to or greater than the diam of the pipe. Plates may be discontinuous over opening, terminating at two opposing edges of opening. Max length of discontinuity to be 1 in. (25 mm) greater than diam of through penetrant.

**C. Top Plate** - The double top plate shall consist of two nom 2 by 4 in. (51 by 102 mm) or two sets of nom 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Diam of opening to be min 1 in. (25 mm) greater than diam of pipe. As an alternate, the opening may be equal to or greater than the diam of the pipe. Plates may be discontinuous over opening, terminating at two opposing edges of opening. Max length of discontinuity to be 1 in. (25 mm) greater than diam of through penetrant.

**D. Side Plate** - When lumber plates are discontinuous, nom 1-1/2 in. (38 mm) (or heavier) metal plates shall be installed to connect each discontinuous lumber plate and to provide a lap for the fill material. Seal plates shall lap 2 in. (51 mm) into each discontinuous lumber plate and secured to lumber plates with two screws or nails.

**E. Gypsum Board** - Thickness, type, number of layers and fasteners shall be as specified in individual Wall and Partition Design.

3. Through Penetrants - One metallic pipe, conduit, tubing to be installed within the firestop system. The penetrant shall be rigidly supported on both sides of floor assembly. The annular space between the pipe or pipe opening and the floor-ceiling assembly shall be min 1/4 in. (6 mm) to max 3/4 in. (19 mm). The following types are permitted:

**A. Steel Pipe** - Nom 4 in. diam (or smaller) Schedule 40 acrylonitrile butadiene styrene (ABS) or polyvinyl chloride (PVC) pipe.

**B. Iron Pipe** - Nom 4 in. diam (or smaller) Schedule 40 acrylonitrile butadiene styrene (ABS) or polyvinyl chloride (PVC) pipe.

**C. Conduit** - Nom 1/2 in. diam (or smaller) rigid electrical conduit.

**D. Copper Tubing** - 1/2 in. diam (or smaller) Type K, Type L or Type M copper tubing.

**E. Copper Pipe** - 1/2 in. diam (or smaller) Regular (or heavy-wall) copper pipe.

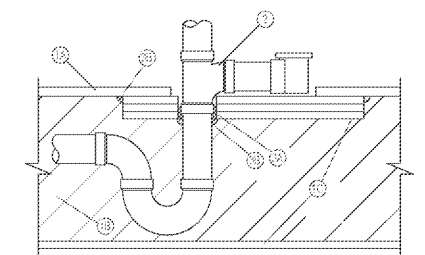
4. Fill, Void or Cavity Material - Sealant - Min 3/4 in. (19 mm) thickness of fill material applied within the annulus, flush with the top surface of floor or side plate. Min 5/8 in. (16 mm) thickness of sealant applied within the annulus, flush with bottom surface of floor or side plate.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. - CP801S, CFS-S-31L, CG, CP800 or FS-One Sealant. (Note: L-1911 and L-1912 sealants apply only when used with HILTI CP801S Sealant.)

\*Bearing the UL Classification Mark

### UL DESIGN F-C-2189

**System No. F-C-2189**  
F Rating - 1 Hr  
T Rating - 1 Hr



**SECTION A-A**

1. Floor-Ceiling Assembly - The fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction details of the floor-ceiling assembly are summarized below:

**A. Flooring System** - Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture as specified in the individual Floor-Ceiling Design. Rectangular cutout in flooring to accommodate the bathtub drain piping (Item 2) to be max 8 by 12 in.

**B. Wood Joist** - Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members with bridging as required and with ends freestoppped.

**C. Gypsum Board** - Nom 5/8 in. (16 mm) thick, 4 ft (1219 mm) wide as specified in the individual Floor-Ceiling Design. Three pieces of gypsum board, each min 4 in. longer and wider than the cutout in the flooring, above attached to bottom of flooring joist with butted, in addition, min 1/2 in. diam by 2 in. high bead of FS-One Sealant to be applied to the top perimeter of each piece of gypsum board prior to its installation. Diam of opening hole-sawed through both layers of the gypsum board shall be 1/2 in. larger than outside diam of bathtub drain piping (Item 2).

2. Drain Piping - Nom 2 in. diam (or smaller) Schedule 40 cellular or solid core PVC or ABS pipe and drain fittings cemented together and provided with PVC or ABS bathtub waste/overflow fitting.

3. Freestop System - The freestop system shall consist of the following:

**A. Fill, Void or Cavity Material** - Wrap Strip - Nom 3/16 in. thick by 1 in. wide intumescent wrap strip. One wrap strip is continuously wrapped around the outer circumference of the drain pipe within joint cavity and held in place with pieces of tape. Wrap strip shall not annular space of cutout in gypsum board such that the bottom surface of the wrap strip is flush with the bottom surface of the gypsum board.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. - CP848-E W2511\* Wrap Strip

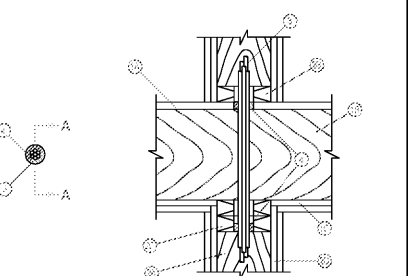
**B. Fill, Void or Cavity Material** - Caulk - Min 1/2 in. diam bead of Sealant to be applied around the perimeter of the gypsum board at its interface with the wood floor. Additional 1/2 in. diam bead to be applied to the bottom of the wrap strip at its interface with the drain pipe.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. - FS-One Sealant

\*Bearing the UL Classification Mark

### U.L. DESIGN F-C-3012

**System No. F-C-3012**  
F Ratings - 1 and 2 Hr (See Item 1)  
T Ratings - 0, 1 and 1-3/4 Hr (See Item 3)



**SECTION A-A**

1. Floor-Ceiling Assembly - The 1 or 2 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction features of the floor-ceiling assembly are summarized below:

**A. Flooring System** - Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture as specified in the individual Floor-Ceiling Design. Max diam of opening for 1 or 2 hr assembly is 2-1/2 in. (64 mm) or 2 in. (51 mm), respectively.

**B. Wood Joist** - Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members with bridging as required and with ends freestoppped.

**C. Furring Channels** - (Not Shown) - (As required) - Resilient galvanized steel furring installed in accordance with the manner specified in the individual L500 Series Designs in the Fire Resistance Directory.

**D. Gypsum Board** - Thickness, type, number of layers and fasteners shall be as specified in the individual Floor-Ceiling Design. Max diam of opening for 1 or 2 hr assembly is 2-1/2 in. (64 mm) or 2 in. (51 mm), respectively.

The F Rating of the freestop system is equal to the rating of the floor-ceiling assembly.

2. Chase Wall - (Optional) - The through penetrant (Item 3) shall be routed through a 1 or 2 hr fire-rated single, double or staggered wood stud/gypsum wallboard chase wall having a fire rating consistent with that of the floor-ceiling assembly. The chase wall shall be constructed of the materials and in the manner specified in the individual L500 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

**A. Studs** - Nom 2 by 4 in. (51 by 102 mm) or double nom 2 by 4 in. (51 by 102 mm) lumber studs.

**B. Side Plate** - Nom 2 by 6 in. (51 by 152 mm) lumber or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Max diam of opening for 1 or 2 hr assembly is 2-1/2 in. (64 mm) or 2 in. (51 mm), respectively.

**C. Top Plate** - The double top plate shall consist of two nom 2 by 6 in. (51 by 152 mm) or two sets of parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Max diam of opening for 1 or 2 hr assembly is 2-1/2 in. (64 mm) or 2 in. (51 mm), respectively.

**D. Gypsum Board** - Thickness, type, number of layers and fasteners shall be as specified in individual Wall and Partition Design.

Cables - In 1 hr fire-rated assembly, aggregate cross-sectional area of cables in opening to be max 45 percent of cross-sectional area of the opening (max 2 in. (51 mm) diam bundle). Cables to be rigidly supported on both sides of assembly. Any combination of the following types and sizes of copper conductors may be used:

**A. Max 12 AWG** copper cable with polyvinyl chloride (PVC) insulation and jacketing.

**B. Max 10 AWG** copper cable with polyvinyl chloride (PVC) insulation and jacketing.

**C. Max 3C with ground No. 20 AWG** aluminum or copper type SER cable with polyvinyl chloride (PVC) insulation.

**D. Max 3C with ground No. 12 AWG** MC (SPL) cable with polyvinyl chloride (PVC) insulation.

**E. Max 3C with ground No. 12 AWG** MC (SPL) cable with polyvinyl chloride (PVC) insulation.

**F. Max 1 in. diam metal clad (TCC) cable with PVC jacket.**

**G. Max 4C with ground No. 300 kcmil (or smaller) aluminum SER cable with PVC insulation and jacket.**

**H. Max 4C with ground No. 300 kcmil (or smaller) aluminum SER cable with PVC insulation and jacket.**

**I. Through Penetrating Product** - Any cables, Metal-Clad Cable or Armored Cable - currently Classified under the Through Penetrating Product category.

See Through Penetrating Product (HPL) category in the Fire Resistance Directory for names of manufacturers.

The T Rating is 1 and 1-3/4 hr for 1 and 2 hr rated assemblies, respectively, for cables 3A through 3G. The T Rating is 0 for cables 3H and 3I.

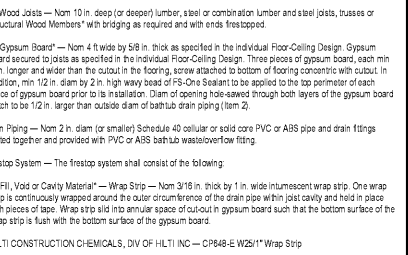
4. Fill, Void or Cavity Material - Sealant - Min 3/4 in. (19 mm) thickness of fill material applied within the annulus, flush with top surface of floor or side plate. Min 5/8 in. (16 mm) thickness of fill material also applied within the annulus, flush with bottom surface of ceiling or lower top plate.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. - FS81A Sealant or FS-One Sealant

\*Bearing the UL Classification Mark

### UL DESIGN F-C-2189

**System No. F-C-2189**  
F Rating - 1 Hr  
T Rating - 1 Hr



**SECTION A-A**

1. Floor-Ceiling Assembly - The fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction details of the floor-ceiling assembly are summarized below:

**A. Flooring System** - Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture as specified in the individual Floor-Ceiling Design. Rectangular cutout in flooring to accommodate the bathtub drain piping (Item 2) to be max 8 by 12 in.

**B. Wood Joist** - Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members with bridging as required and with ends freestoppped.

**C. Gypsum Board** - Nom 5/8 in. (16 mm) thick, 4 ft (1219 mm) wide as specified in the individual Floor-Ceiling Design. Three pieces of gypsum board, each min 4 in. longer and wider than the cutout in the flooring, above attached to bottom of flooring joist with butted, in addition, min 1/2 in. diam by 2 in. high bead of FS-One Sealant to be applied to the top perimeter of each piece of gypsum board prior to its installation. Diam of opening hole-sawed through both layers of the gypsum board shall be 1/2 in. larger than outside diam of bathtub drain piping (Item 2).

2. Drain Piping - Nom 2 in. diam (or smaller) Schedule 40 cellular or solid core PVC or ABS pipe and drain fittings cemented together and provided with PVC or ABS bathtub waste/overflow fitting.

3. Freestop System - The freestop system shall consist of the following:

**A. Fill, Void or Cavity Material** - Wrap Strip - Nom 3/16 in. thick by 1 in. wide intumescent wrap strip. One wrap strip is continuously wrapped around the outer circumference of the drain pipe within joint cavity and held in place with pieces of tape. Wrap strip shall not annular space of cutout in gypsum board such that the bottom surface of the wrap strip is flush with the bottom surface of the gypsum board.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. - CP848-E W2511\* Wrap Strip

**B. Fill, Void or Cavity Material** - Caulk - Min 1/2 in. diam bead of Sealant to be applied around the perimeter of the gypsum board at its interface with the wood floor. Additional 1/2 in. diam bead to be applied to the bottom of the wrap strip at its interface with the drain pipe.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. - FS-One Sealant

\*Bearing the UL Classification Mark

### PENETRATIONS

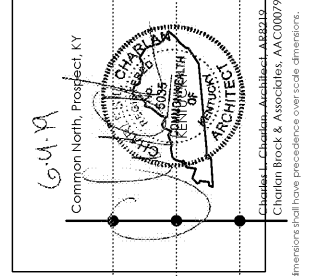
GENERAL - PENETRATIONS THROUGH ALL OR A PORTION OF A WALL OR PARTITION ASSEMBLY CAN SIGNIFICANTLY AFFECT THE HOURLY RATING. THESE PENETRATIONS MAY INCLUDE, BUT ARE NOT LIMITED TO, SUCH ITEMS AS PIPING, ELECTRICAL ACCESS OR AIR DISTRIBUTION. SPECIFICATIONS FOR THROUGH-PENETRATION FIRESTOP DEVICES AND THROUGH-PENETRATION FIRESTOP SYSTEMS ARE CONTAINED IN THE BUILDING MATERIALS DIRECTORY. THE CATEGORY OF OUTLET BOXES AND FITTINGS CLASSIFIED FOR FIRE RESISTANCE INCLUDES CLASSIFICATION FOR NONMETALLIC OUTLET AND SWITCH BOXES FOR USE IN WALL OR PARTITION ASSEMBLIES. THE INFORMATION GIVEN FOR EACH CLASSIFICATION INCLUDES THE MODEL NUMBERS FOR THE CLASSIFIED PRODUCTS, A DESCRIPTION OF THE RATED ASSEMBLY, THE SPACING LIMITATIONS FOR THE BOXES AND THE INSTALLATION DETAILS. LISTED SINGLE AND DOUBLE GANG METALLIC OUTLET AND SWITCH BOXES WITH METALLIC OR NONMETALLIC COVER PLATES MAY BE USED IN BEARING AND NONBEARING WOOD STUD AND STEEL STUD WALLS WITH RATINGS NOT EXCEEDING 2 HR. THESE WALLS SHALL HAVE GYPSUM WALLBOARD FACINGS SIMILAR TO THOSE SHOWN IN DESIGN NOS. U301, U411, AND U475. THE SURFACE AREA OF INDIVIDUAL METALLIC OUTLET OR SWITCH BOXES SHALL NOT EXCEED 16 SQ. IN. THE AGGREGATE SURFACE AREA OF THE BOXES SHALL NOT EXCEED 100 SQ. IN. PER 100 SQ. FT. BOXES LOCATED ON OPPOSITE SIDES OF WALLS OR PARTITION SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF 24 IN. THE METALLIC OUTLET OR SWITCH BOXES SHALL BE SECURELY FASTENED TO THE STUDS AND THE OPENING IN THE WALLBOARD FACINGS SHALL BE CUT SO THAT THE CLEARANCE BETWEEN THE BOX AND THE WALLBOARD DOES NOT EXCEED 1/8 IN.

### NOTES

APPLY RUBBER GASKETS OR NON-HARDENING CAULK TO SEAL ALL OPENINGS AROUND PIPES AND CONDUITS THAT PENETRATE WALLS EVEN WHEN VISUALLY HIDDEN BEHIND DRYWALL LAYERS.

### APARTMENT RATED ASSEMBLIES AND PENETRATIONS

ASSEMBLY:	WALL TYPE:	RATING:	ASSEMBLY:	PENETRATIONS												
				STEEL PIPE	STEEL VENT DUCT	STEEL COLLAR	IRON PIPE	CONDUIT	COPPER TUBE	COPPER PIPING	SANITARY TEE	DRAIN PIPING	PVC	VENT PIPE	CABLES	
	EXTERIOR FRAME WALL	1 HOUR	UL-U356	UL-WL-1054	N/A	-	UL-WL-1085	UL-WL-1085	UL-WL-1085	UL-WL-1085	UL-WL-1085	UL-WL-1085	UL-WL-2098	-	UL-WL-3065	
	CORRIDOR FRAME WALL	1 HOUR	ESS-2323	UL-WL-1054	N/A	-	UL-WL-1085	UL-WL-1085	UL-WL-1085	UL-WL-1085	UL-WL-1085	UL-WL-1085	UL-WL-2098	-	UL-WL-3065	
	TENANT SEPARATION WALL	1 HOUR	UL-U341	UL-WL-1054	N/A	-	UL-WL-1085	UL-WL-1085	UL-WL-1085	UL-WL-1085	UL-WL-1085	UL-WL-1085	UL-WL-2098	-	UL-WL-3065	
	INTERIOR FRAME BEARING WALL	1 HOUR	UL-U305	UL-WL-1054	N/A	-	UL-WL-1085	UL-WL-1085	UL-WL-1085	UL-WL-1085	UL-WL-1085	UL-WL-1085	UL-WL-2098	-	UL-WL-3065	
	INTERIOR NON-BEARING WALL	NOT REQUIRED														
	FLOOR / CEILING ASSEMBLIES	1 HOUR	UL-L563	UL-F-C-1009	UL-F-C-7013	UL-F-C-2051	UL-F-C-1009	UL-F-C-1009	UL-F-C-1009 / 8009	UL-F-C-1009 / 8009	UL-F-C-1009 / 8009	UL-F-C-2203	UL-F-C-2203 / 2189	UL-F-C-8009	UL-F-C-2203	UL-W-L-3012
	ROOF / CEILING ASSEMBLIES	1 HOUR	UL-PS42		UL-F-C-7013										UL-F-C-2203	



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FIRE RATED ASSEMBLIES

PENETRATION DETAILS

date: 06-04-2019  
job no: 3789.15  
drawn by: JHB  
reviewed by: CBA  
file: 3789-A8.31  
issue history: