

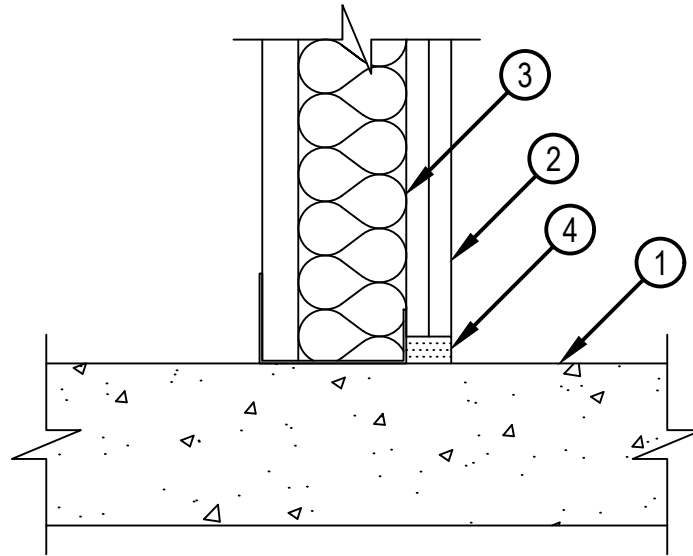
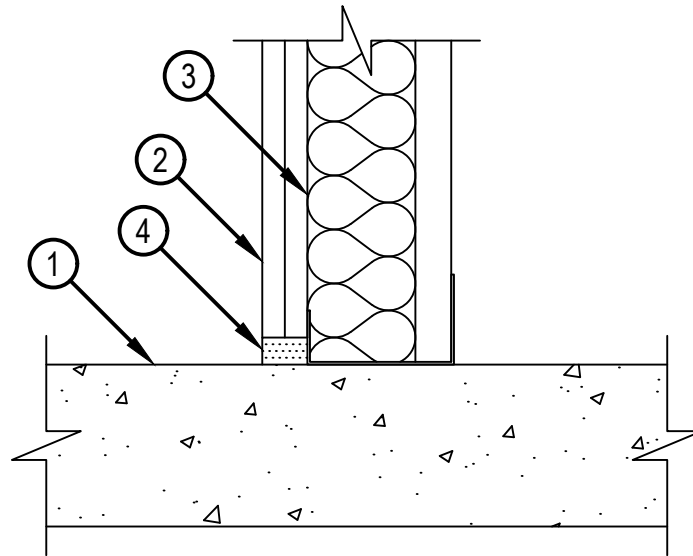


Classified by Underwriters Laboratories, Inc. to UL 2079 and CAN/ULC-S115

# System No. BW-S-0070

BWS 0070

ANSI/UL2079	CAN/ULC S115
Assembly Ratings — 1 and 2 Hr (See Item 2 & Item 4A)	F Rating — 1 and 2 Hr (See Item 2 & Item 4A)
Nominal Joint Width — 3/4 in.	FT Rating — 1 and 2 Hr (See Item 2 & Item 4A)
L Rating at Ambient — Less than 1 CFM/Lin Ft	FH Rating — 1 and 2 Hr (See Item 2 & Item 4A)
L Rating at 400°F — Less than 1 CFM/Lin Ft	FTH Rating — 1 and 2 Hr (See Item 2 & Item 4A)
	Nominal Joint Width - 19 mm
	L Rating at Ambient — Less than 1.55 L/s/m Ft
	L Rating at 400°F — Less than 1.55 L/s/m



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1. Floor Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) structural concrete. Floor may also be constructed of any 6 in. (152 mm) thick UL Classified hollow-core Precast Concrete Units\*.  
See Precast Concrete Units category in the Fire Resistance Directory for names of manufactures.
  - 1A. — (Not Shown, Alternate) The fire-rated fluted steel floor unit/concrete floor assembly shall be constructed of the materials and in the manner described in the individual D700 or D900 Series Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:
    - A. Steel Floor and Form Units\* — Max 3 in. (76 mm) deep galv steel fluted units.
    - B. Concrete — Min 2-1/2 in. (64 mm) thick reinforced concrete, as measured from the top plane of the floor units.
2. Shaft Wall Assembly — The 1 or 2 hr fire rated shaft wall assembly shall be constructed of the materials and in the manner described in the individual U400, V400 or W400 Series Wall and Partition Design in the UL Fire Resistance Directory. In addition, the wall may incorporate a head-of-wall joint system as specified in the HW Series Joint Systems in the UL Fire Resistance Directory. The wall shall include the following construction features:
  - A. Steel Floor And Ceiling Runners — "J"-shaped runner, min 4 in. (102 mm) wide with unequal legs of min 1 in. (25 mm) and 2-1/4 in. (57 mm), fabricated from min 20 MSG galv steel. Runners positioned with short leg toward finished side of wall. Runners attached to walls and floor with steel fasteners spaced max 24 in. (610 mm) OC. As an alternate to the "J"-shaped floor runner, a min 4 in. (102 mm) wide by 1 or 1-1/4 in. (25 or 32 mm) deep channel formed from min 20 MSG galv steel may be used.
  - B. Steel Studs — "C-T"-shaped steel studs to be min 4 in. (102 mm) wide and formed of min 20 MSG galv steel. Studs cut 1/2 to 3/4 in. (13 to 19 mm) less in length than assembly height with bottom nesting in and resting on floor runner and with top nesting in ceiling runner. Studs spaced 24 in. (610 mm) OC. After installation of gypsum board liner panels (Item 2D), studs secured to flange of floor runner on finished side of wall only with No. 6 by 1/2 in. (13 mm) long self-drilling, self-tapping steel screws.
  - C. Gypsum Board\* — 1 in. (25 mm) thick by 24 in. (610 mm) wide gypsum board liner panels. Panels cut 1/2 to 1 in. (13 to 25 mm) less in length than floor to ceiling height. Vertical edges inserted in "T"-shaped section of "C-T" studs. Free edge of end panels attached to long leg of "J" runner (Item 2A) with 1-5/8 in. (41 mm) long Type S steel screws spaced max 12 in. (305 mm) OC.
  - D. Gypsum Board\* — Gypsum board sheets, 5/8 in. (16 mm) thick Type X or type C, applied in one or two layers on finished side of wall as specified in the individual U400, V400 or W400 Series Wall and Partition Design. A max 3/4 in. (19 mm) gap shall be maintained between the bottom of the gypsum board and the top surface of the concrete floor.  
The hourly Assembly, F, FT, FT and FTH Ratings of the joint system are equal to the hourly rating of the wall.
3. Batts and Blankets\* — Any glass fiber insulation bearing the UL Classification Marking as to fire resistance or surface burning characteristics, of a width and thickness to completely fill stud cavity. Insulation batts friction fit to completely fill all stud cavities of the wall assembly.  
See Batts and Blankets (BZJZ) category in the Fire Resistance Directory for names of manufacturers.
4. Joint System — Max separation between top of floor and bottom of finished side of wall is 3/4 in. (19 mm) at time of installation — The joint system consists of the following:
  - A. Bottom Track Seal\* — CFS-BTS is secured to steel floor runner with adhesive backing and resting tight to the top of the concrete floor assembly prior to installation of the gypsum board. Product to be compressed 1/2 in. at seam location by compressing each side evenly prior to installation of gypsum board.  
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-BTS 5/8 in. Bottom Track Seal (for use in 1 hr system) CFS-BTS 1-1/4 in. Bottom Track Seal (for use in 2 hr system)

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.