

Technical Tip

Fire Walls Terminating at the Interior Side of ZIP System® on an Exterior Wall (Exposed to Fire on Interior Face Only)

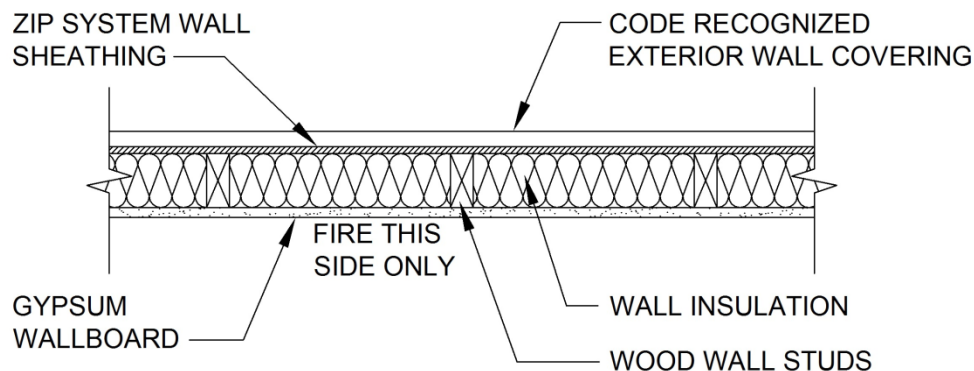
DISCLAIMER: The following fire-protection options are provided to assist in the installation of ZIP System® product(s) and may not apply to every situation. As with all fire-rated assemblies, the Designer-of-Record must provide written approval for the specification and use of fire-protected assemblies or elements. Consult your local building authority for fire-rated construction deemed as acceptable in the jurisdiction having authority. Huber Engineered Woods accepts no responsibility or liability for fire-rated assemblies.

OPTION 1: Construct a fire-rated wall assembly in accordance with Underwriters Laboratories Inc.® or the Gypsum Association Fire Resistance Design Manual, GA-600 using wood structural panels. ZIP System sheathing panels are identified with the certification marking as “Sheathing” compliant with PS-2. Therefore, ZIP System Sheathing can be used in any fire-rated assembly using wood structural panels as long as it satisfies minimum thickness requirements.

Refer to the UL® Fire Resistance Directory or GA-600 for published fire-rated wall assemblies options using wood structural panels.

OPTION 2: Construct wall system in accordance section 703.3, *Alternative Methods for Determining Fire Resistance*, Method 3, of the 2006 International Building code. Section 703.3, Method 3, allows the fire rating of the wall system to be calculated to be equal to the sum of the time assigned to the 5/8” Type X interior gypsum, the time assigned to the framing members and the time assigned for additional contribution of specific insulation types and thicknesses. The ZIP System wall sheathing is not included in the calculation because it is assumed that if the studs fail, the entire wall assembly will fail.

OPTION 2: Satisfies section 705.5 (2006 IBC) and 706.5 (2009 IBC) Horizontal Continuity, Exception 1.





HORIZONTAL WALL SECTION

IBC 2006, Table 721.6.2(1), *Time Assigned to Wallboard Members.*

Description of Finish	Time (minutes)
1/2-inch gypsum wallboard	15
5/8-inch gypsum wallboard	30
1/2-inch Type X gypsum wallboard	25
5/8-inch Type X gypsum wallboard	40

IBC 2006, Table 721.6.2(2), *Time Assigned to Contribution of Wood Frame.*

Description	Time Assigned To Frame (minutes)
Wood studs 16 inches o.c.	20
Wood floor and roof joists 16 inches o.c.	10

IBC 2006, Table 721.6.2(5), *Time Assigned For Additional Protection.*

Description of Additional Protection (spaces between studs must be completely filled)	Fire Resistance (minutes)
Glass fiber mineral wool batts ($\geq 2\#$ per ft^3) or Rockwool or Slag material wool batts ($\geq 3.3\#$ per ft^3) or Cellulose insulation (nom. density $\geq 2.6\#$ per ft^3)	15

Exterior Wall Example A:

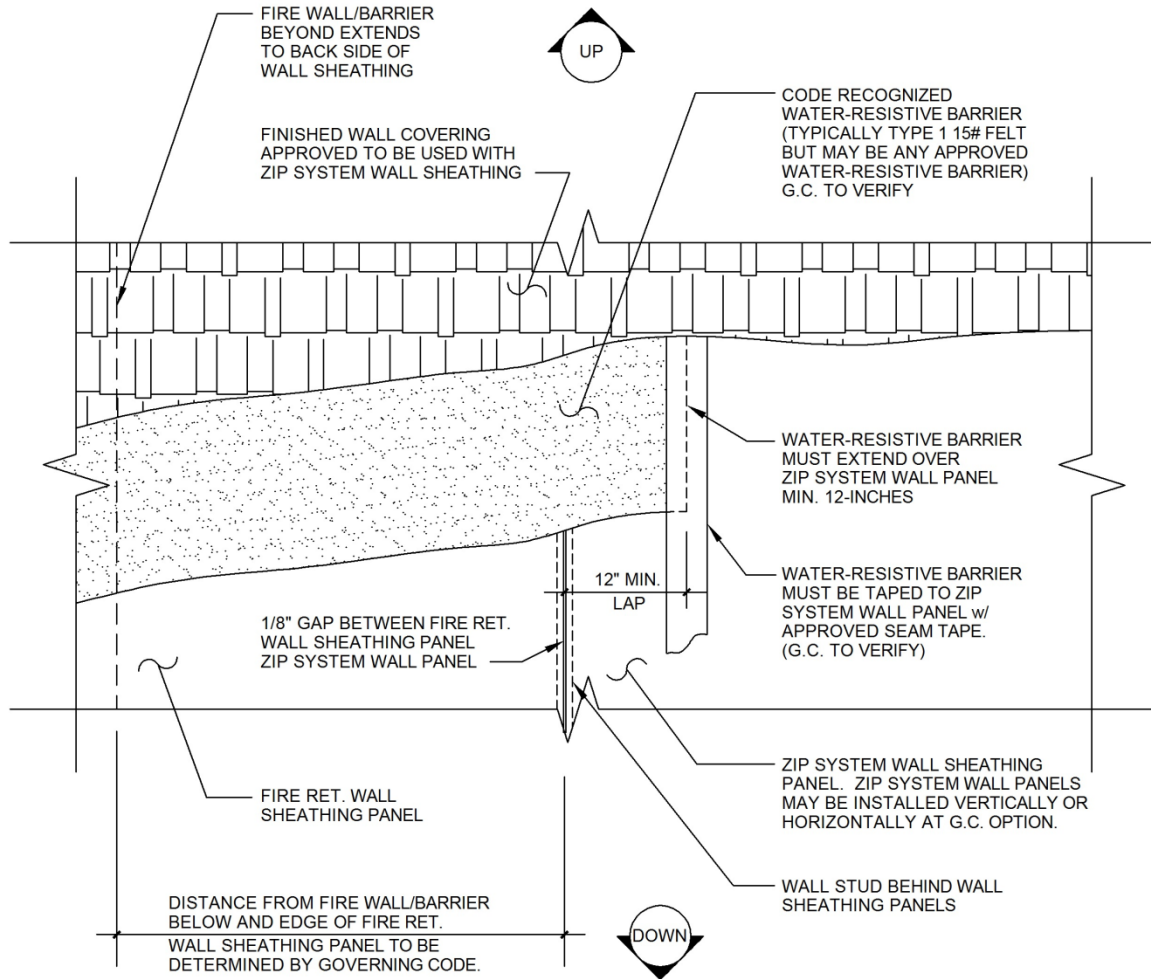
Wood Wall Studs - 2x4 Wall Studs spaced at 16" o.c.	=	20 minutes
Gypsum Wallboard - 5/8-inch Type X gypsum wallboard	=	<u>40 minutes</u>
Total	=	60 minutes

Exterior Wall Example B:

Wood Wall Studs - 2x4 Wall Studs spaced at 16" o.c.	=	20 minutes
Gypsum Wallboard - 1/2-inch Type X gypsum wallboard	=	25 minutes
Wall Insulation - Rockwool batts ($\geq 3.3\#$ per ft^3)	=	<u>15 minutes</u>
Total	=	60 minutes

OPTION 3: Construct a wall system using fire-retardant-treated (FRT) plywood 4-feet minimum each side of fire wall. Transition FRT plywood to ZIP System sheathing using the following detail:

OPTION 3 satisfies section 705.5 (2006 IBC) and 706.5 (2009 IBC) *Horizontal Continuity*, Exception 2, of the IBC.



ELEVATION VIEW
EXT. FACE OF WALL SHOWN IN DETAIL

ZIP SYSTEM[®] WALL SHEATHING AND FIRE RETARDANT WALL SHEATHING JOINT DETAIL