

Type III exterior wall-to-floor intersection

Condition

The proposed construction is a Construction Type III building framed with wood and wood-based products.

The floor-to-wall intersection has a platform framing detail where the floor's structural members bear on the wall below and support the wall above.

The exterior bearing walls are *fire-retardant-treated wood*.

The floor-ceiling assembly is framed with wood trusses or wood-based products. It is assumed that there are no available *fire-retardant-treated wood* products complying with IBC 2303.2 that could substitute for the commonly-used joists, trusses and rim boards used in the floor assembly.

Question

Can a platform framing detail be used in an exterior wall of a wood-framed Type III building? The key issues are:

1. The exterior bearing wall shall have a 2-hour fire-resistance rating. Table 601.
2. The exterior wall requires noncombustible construction or *fire-retardant-treated wood*. 602.3.
3. While a portion of the floor-ceiling assembly is in the plane of the exterior wall and supports its gravity loads, it is combustible construction and is not necessarily 2-hour fire-resistance rated.

Building Code Sections

2018 IBC:

TABLE 601
FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (HOURS)

BUILDING ELEMENT	TYPE I		TYPE II		TYPE III		TYPICAL
	A	B	A	B	A	B	
Primary structural frame ^f (see Section 202)	3 ^{a, b}	2 ^{a, b}	1 ^b	0	1 ^b	0	
Bearing walls							
Exterior ^{e, f}	3	2	1	0	2	2	
Interior	3 ^a	2 ^a	1	0	1	0	1
Nonbearing walls and partitions							

602.3 Type III. Type III construction is that type of construction in which the exterior walls are of noncombustible materials and the interior building elements are of any material permitted by this code. *Fire-retardant-treated wood* framing and sheathing complying with Section 2303.2 shall be permitted within *exterior wall* assemblies of a 2-hour rating or less.

705.6 Structural stability. *Exterior walls* shall extend to the height required by Section 705.11. Interior structural elements that brace the exterior wall but that are not located within the plane of the exterior wall shall have the minimum *fire-resistance rating* required in Table 601 for that structural element. Structural elements that brace the exterior wall but are located outside of the exterior wall or within the plane of the exterior wall shall have the minimum *fire-resistance rating* required in Tables 601 and 602 for the exterior wall.

Interpretation

We believe the fire-resistance designs of AWC DCA 3 meet the code intent for structural *fire resistance* and fire-resistance-rated construction separation of adjacent spaces. This is based on recent code development activity and approval of this *approved source*.

A platform framing detail can be used in an exterior wall of a Construction Type III building provided a *fire-resistance* design documented in an *approved source* is used.

Approved sources include the [American Wood Council](#) publication DCA 3 - Fire-Resistance-Rated Wood-Frame Wall and Floor/Ceiling.

Important notes

Last reviewed: 13 April 2023.

This code interpretation is provided to help applicants understand the building codes. It represents the opinion of the Salt Lake City Building Official in relation to a specific project at the time it was rendered. Per International Building Code Section 104.1, such interpretations shall be in compliance with the intent and purpose of the building code, and they shall not have the effect of waiving requirements specifically provided for in the building code. Therefore, do not assume that any interpretation would also apply to your project. Always consult with a Salt Lake City building plans examiner for specific interpretations as needed regarding your project.