



**Construction Code Interpretation
2018-SBC**

**CCI 2018-SBC 714.4.2
Membrane Penetrations of Walls and Partitions**

Release Date: August 1, 2024

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The following interpretation is intended to provide guidance to staff for consistency of review and is subject to change without notice. Application of this interpretation to specific projects may vary.

Code Issue:

[S] 714.4.2 Where walls or partitions are required to have a fire-resistance rating, recessed fixtures shall be installed such that the required fire resistance will not be reduced.

How is fire-resistance rating maintained around a wall recess or insert? Where is this required?

Code Interpretation:

Section 714.4.2 includes a list of exceptions which mainly covers metallic electrical boxes and smaller penetrations. This guide aims to clarify when protection is required at larger penetrations and provides a prescriptive option to satisfy 714.4.2 requirements.

Load-bearing walls

- Load-bearing walls that are fire-rated only because of their construction type (SBC Table 601) do not require opening/penetration protection.

Exterior walls

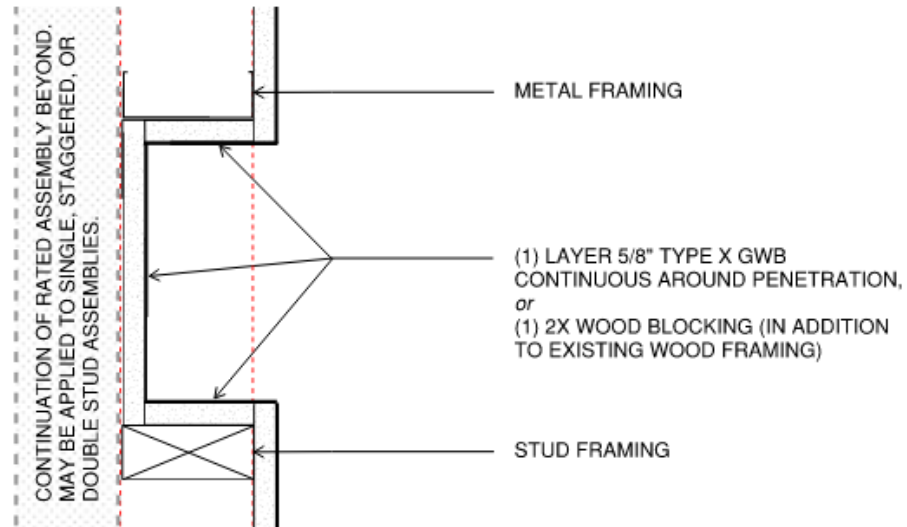
- Exterior walls that are allowed to have unprotected openings according to Table 705.8 do not require opening/penetration protection (includes both load bearing and non-load bearing walls).

Fire Partitions and Fire Barriers

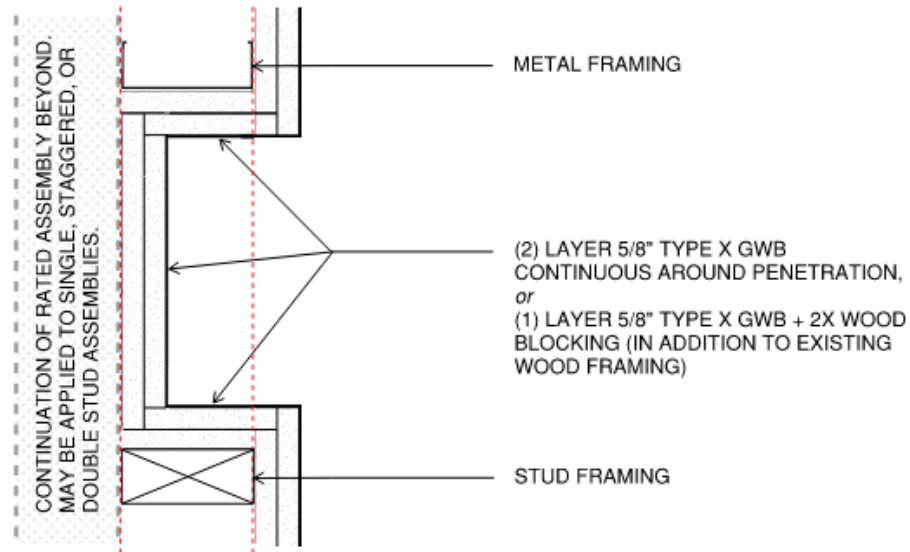
- Recessed fixtures (non-listed) located in Fire Barriers (SBC 707) or Fire Partitions (SBC 708) require additional protection. Figure 1 illustrates the minimum acceptable construction methods that meet the requirements of SBC 714.4.2.



1-HR
ASSEMBLY



2-HR
ASSEMBLY



- a) FOR ALL CONDITIONS, A UL LISTED BOX TESTED AS A MEMBRANE PENETRATION FIRESTOP IS ACCEPTABLE (SBC 714.4.2 EXCEPTION 4).
- b) THE SKETCHES ABOVE CANNOT BE APPLIED TO 3-HR WALLS OR WALLS AT AN EXIT ENCLOSURE.
- c) MAXIMUM SIZE 6 SF.
- d) MAY NOT OCCUR BACK-TO-BACK ON EACH SIDE OF ASSEMBLY.
- e) LOCATION OF BLOCKING AND STUDS ARE INTERCHANGEABLE.

FIGURE 1
PROTECTION OF MEMBRANE PENETRATIONS MADE BY RECESSED FIXTURES
IN FIRE BARRIERS OR FIRE PARTITIONS



For questions about whether this code interpretation applies to your project:

- If you have submitted a permit application, contact the Building Code plan reviewer assigned to your application.
- If you have not submitted an application, send us a question through the SDCI website.

<http://www.seattle.gov/sdci/resources/send-us-a-question> or via the Applicant Services Center.

Visit the Applicant Services Center website for more information about hours and services.

<http://www.seattle.gov/sdci/about-us/who-we-are/applicant-services-center>