



**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

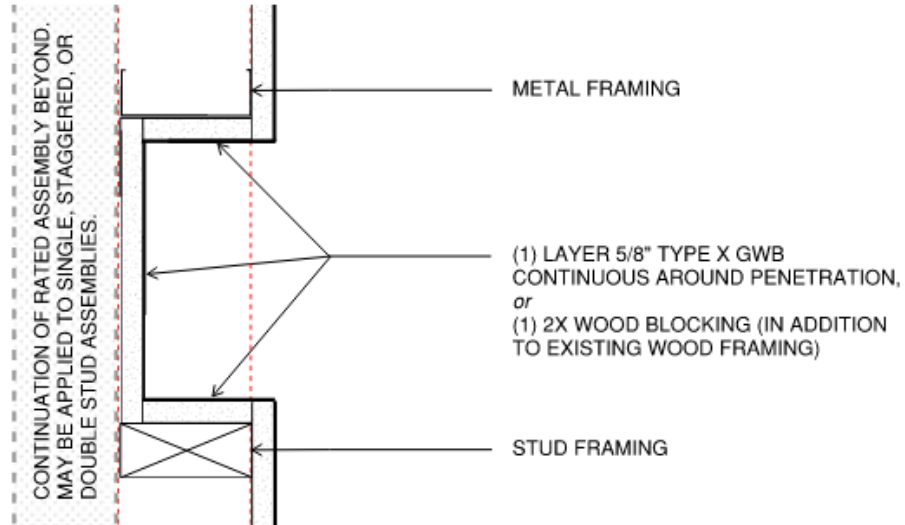
- Exterior walls that are allowed to have unprotected openings according to Table 705.8 do not require opening/penetration protection (includes both load bearing and non-load bearing walls).

Fire Partitions and Fire Barriers

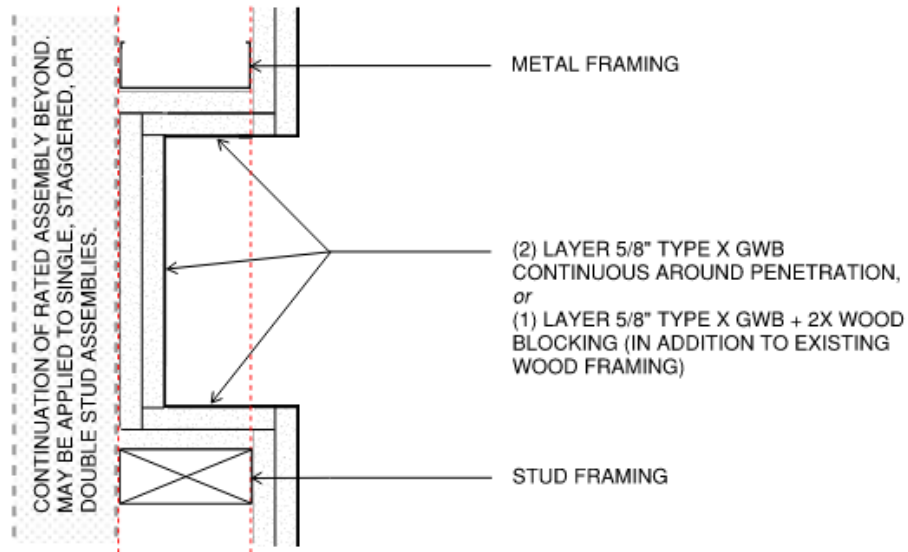
- Recessed fixtures (non-listed) located in Fire Barriers (SBC 707) or Fire Partitions (SBC 708) require additional protection. Figure 1 illustrates the minimum acceptable construction methods that meet the requirements of SBC 714.4.2.



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>