704.6.1

Secondary Attachments and Fireproofing

CHANGE TYPE: Modification

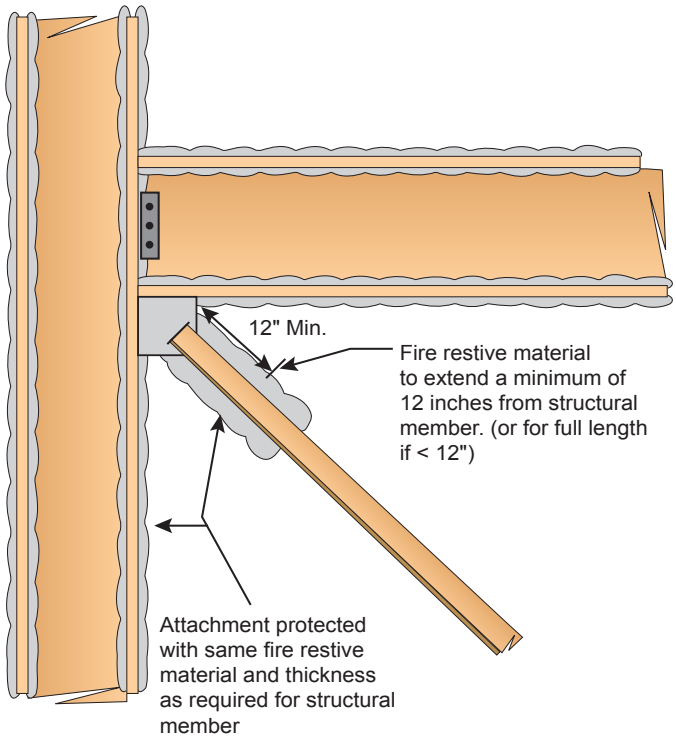
CHANGE SUMMARY: Guidance has been provided to ensure continuity of fire-resistive protection where secondary steel attaches to either primary or secondary fire-resistance-rated structural members.

2021 CODE TEXT: **704.6.1 Secondary attachments to structural members.** Where primary and secondary structural steel members require fire protection, secondary steel attachments to those structural members shall be protected with the same fire resistive material and thickness as required for the structural member. The protection shall extend away from the structural member a distance of not less than 12 inches (305 mm), or shall be applied to the entire length where the attachment is less than 12 inches (305 mm) long. Where an attachment is hollow and the ends are open, the fire-resistive material and thickness shall be applied to both the exterior and interior of the hollow steel attachment.

CHANGE SIGNIFICANCE: Structural frame members such as columns, beams and girders are typically regulated for fire resistance based on a building's type of construction. While Section 704.6 addressed protection for certain items that may be attached to a structural member, there was not enough detail to determine how the provisions would be applied to other elements. In many buildings, various items that do not require a fire-resistance rating end up being attached to structural elements that require protection. Examples of non-rated elements include lateral bracing elements for wind or seismic loads, or steel angles or tubes that are used to support an exterior curtainwall system. Where these nonrated and rated

International Code Council

Hollow attachment with open ends.



Protection of secondary attachments.

elements connect, the code has not clearly identified how much of the attached element needs to be protected. Where steel attachments connect to the structural system, heat transfer from the unprotected element into the structure can occur and compromise the fire-resistance rating of the member or assembly. Under this new provision, an attached steel element must be protected for a minimum distance of 12 inches from the point of contact with the structural member, or, if it is less than 12 inches long, then it must be protected for its entire length. This 12-inch dimension was selected because it has traditionally been used in the general notes portion of UL 263 (UL's *BXUV General Information for Fire-resistance Ratings*) and as a written policy of some jurisdictions.

One added aspect of this new provision addresses the protection of attached hollow members with open ends. Because heat can impact both the interior and exterior of a hollow member, the fire-resistive protection must be installed on both the interior and exterior of the attached element for the required 12-inch distance.