

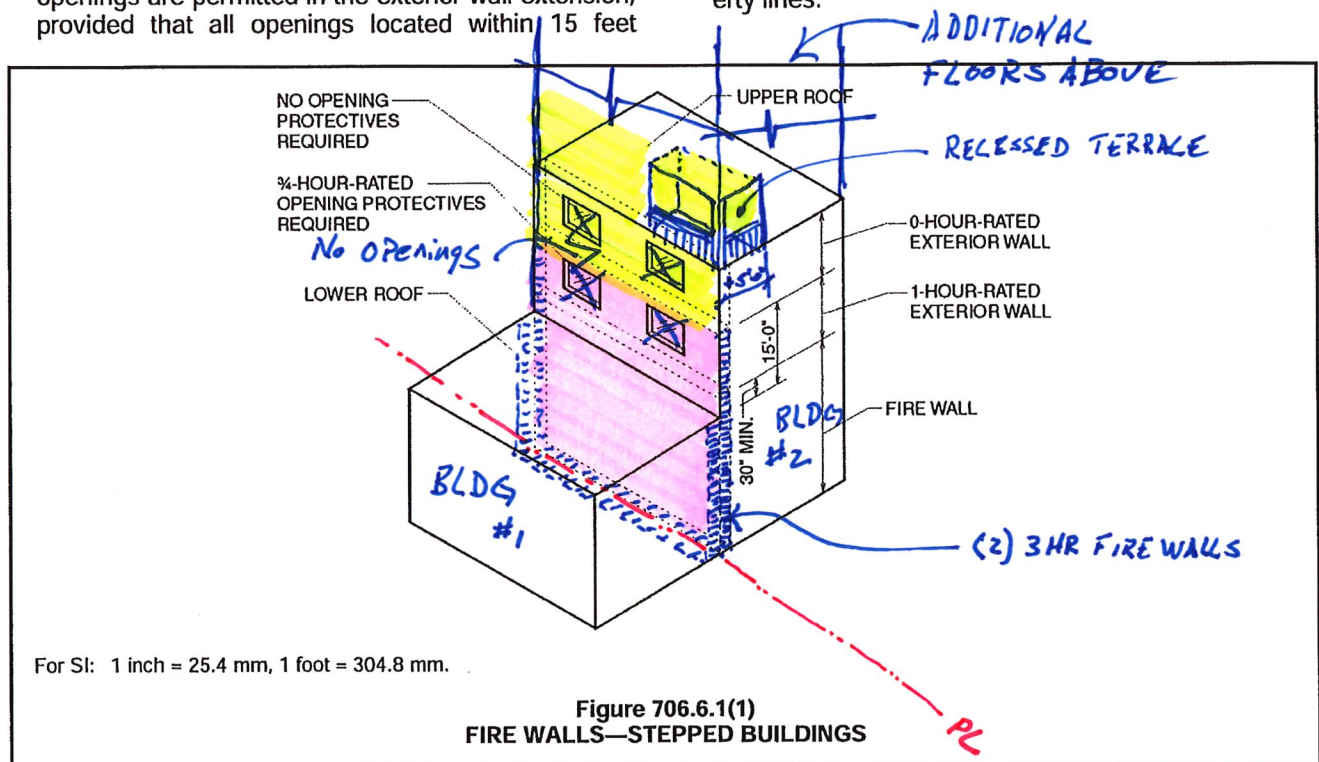
elements for the rated roof assembly has a fire-resistance rating of not less than 1 hour.

2. Openings in the lower roof shall not be located within 10 feet (3048 mm) of the fire wall.

❖ The basic provisions of Section 706.6 require that a parapet extend a minimum of 30 inches (762 mm) above the roof surfaces on both sides of the fire wall, which would then require fire walls separating buildings with different roof heights to extend 30 inches (762 mm) above the highest roof surface. The provisions of Section 706.6.1 address situations where a fire wall separates adjacent buildings with a difference in roof height. These provisions acknowledge that fire exposure to the exterior wall of an adjacent building from the roof of a lower building represents, to a certain extent, a reduced hazard.

This section retains the fire wall extension above the lower roof surface and places a 15-foot (4572 mm) limit on rated wall construction and opening protectives, while the exception allows the fire wall extension to be eliminated as long as a fire barrier, in the form of 1-hour-rated roof construction, is provided that extends a minimum of 10 feet (3048 mm) from the fire wall. The option provided by this section permits openings in an exterior wall that extend above the fire wall, where the fire wall extends 30 inches (762 mm) above the lower roof surface and the exterior wall extending above the fire wall is constructed as a 1-hour fire-resistance-rated wall, rated for exposure from both sides, for a distance of 15 feet (4572 mm) above the lower roof surface. Where the fire wall and exterior wall comply with these requirements, openings are permitted in the exterior wall extension, provided that all openings located within 15 feet

(4572 mm) of the lower roof surface are protected with $\frac{3}{4}$ -hour-rated opening protectives. Openings located more than 15 feet (4572 mm) above the lower roof surface are not required to have opening protectives [see Figure 706.6.1(1)]. The provisions of this section are similar to those contained in Section 704.10 for vertical exposure of exterior openings. They require that when the difference in height between the roof surfaces of the adjacent buildings is less than 15 feet (4572 mm), the exterior wall extension is required to extend to the underside of the upper roof deck [see Figure 706.6.1(2)]. The exception permits openings in the roof that extend above the fire wall, where: (a) the fire wall terminates at the bottom of the roof deck of the lower roof; (b) the lower roof assembly has a minimum 1-hour fire-resistance rating for a minimum distance of 10 feet (3048 mm) from the fire wall and (c) there are no openings located in the lower roof within 10 feet (3048 mm) of the fire wall. Openings located in the exterior wall above the lower roof surface are not required to have opening protectives [see Figure 706.6.1(3)]. It must be noted that all structural elements, including beams, columns and bearing walls that provide support for the fire-resistance-rated roof assembly, must also have a 1-hour fire-resistance rating for their entire length or span in order to maintain the effectiveness of the rated roof assembly. The provisions of this section are similar to those contained in Section 1022.7 for the protection of the exterior walls of exit stairways. The provisions for stepped buildings only apply where a fire wall is required in between the buildings and do not apply to party walls on real property lines.



resistance rating in accordance with Section 705.5, which relates to measurement of FSD. The last sentence of the exception reminds the user that the normal code requirements would still be applicable once the two buildings are considered as one. Therefore, if two types of construction are involved, then the lowest type of construction would be assumed for the entire building because there is no fire wall between them. In applying this last sentence it is probably easiest to determine what the requirement is if the user imagines what the code requirement would be if the buildings were pushed together. In such a case, it would be easier to see that a fire wall would be needed between portions of a building that are of two different construction types or the entire building would have to be viewed as the lowest possible type of construction. Regarding occupancies and associated allowable areas, they would be separated per Section 508.4 or considered as nonseparated occupancies per Section 508.3 and, therefore, use the most restrictive allowable area.

In order to help make sense of the last sentence of the exception, the idea of imagining the two buildings

being pushed together, as mentioned above, is helpful. Then realize that simply pulling the building apart should not increase or lessen the code requirements for that "single" building.

705.4 Materials. *Exterior walls* shall be of materials permitted by the building type of construction.

❖ The material (combustible or noncombustible) requirements for exterior walls are found in Sections 602.1 through 602.5. Only Type V construction allows exterior walls to be combustible construction. Other types of construction require exterior walls, or at least the framing members, to be noncombustible. Type I and II construction allows limited use of fire-retardant wood for exterior nonload-bearing walls. All types of construction allow insulation, exterior wall coverings and interior finish to be combustible within limits. See Sections 603, 720 and 1405.5 for materials allowed within and on framed exterior walls.

705.5 Fire-resistance ratings. *Exterior walls* shall be fire-resistance rated in accordance with Tables 601 and 602 and this section. The required *fire-resistance rating of exterior walls* with a *fire separation distance* of greater than 10 feet

