

2.16.5. Smoke barrier Penetrations

- 2.16.5.1.** Penetrations for cables, cable trays, conduits, pipes, tubes, vents, wires, and similar items to accommodate electrical, mechanical, plumbing, and communications systems that pass through a wall, floor, or floor-ceiling assembly constructed as a smoke barrier, or through the ceiling membrane of a roof-ceiling of a smoke barrier, shall be protected by a listed system or a material capable of restricting the transfer of smoke.
- 2.16.5.2.** Where a smoke barrier is also constructed as a fire barrier, the penetrations shall be protected to limit the spread of fire for a time period equal to the fire resistance rating of the assembly, to restrict the transfer of smoke.
- 2.16.5.3.** Where sprinklers penetrate a single membrane of a fire resistance-rated assembly in buildings equipped throughout with an approved automatic fire sprinkler system, non-combustible escutcheon plates shall be permitted, provided that the space around each sprinkler penetration does not exceed $\frac{1}{2}$ in. (13 mm), measured between the edge of the membrane and the sprinkler.
- 2.16.5.4.** Where the penetration item uses a sleeve to penetrate the smoke barrier, the sleeve shall be securely set in the smoke barrier, and the space between the item and the sleeve shall be filled with a listed system or a material capable of restricting the transfer of smoke.
- 2.16.5.5.** Where designs take transmission of vibrations into consideration, any vibration isolation shall meet one of the following conditions:
- It shall be made on either side of the fire barrier.
 - It shall be designed for the specific purpose.

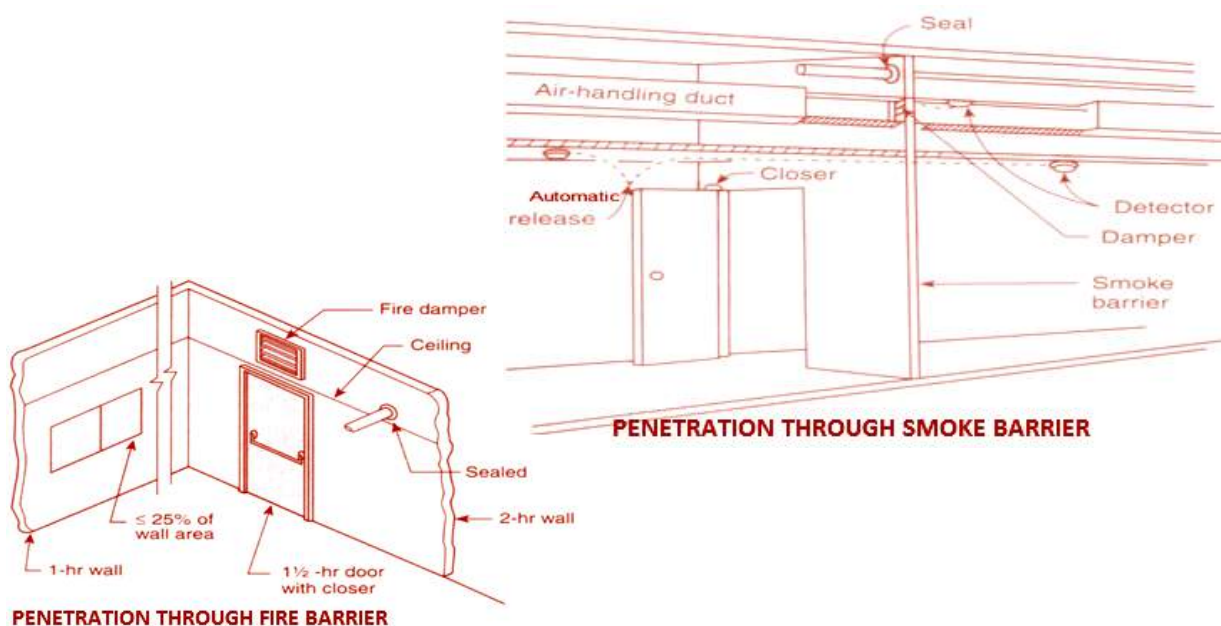


Figure 1.15.: Penetrations of Barriers