

2021 Virginia Construction Code

CHAPTER 5 GENERAL BUILDING HEIGHTS AND AREAS

SECTION 509 INCIDENTAL USES

509.1 General

Incidental uses located within single occupancy or mixed occupancy buildings shall comply with the provisions of this section. Incidental uses are ancillary functions associated with a given occupancy that generally pose a greater level of risk to that occupancy and are limited to those uses specified in [Table 509.1](#).

Exception: Incidental uses within and serving a *dwelling unit* are not required to comply with this section.

**[F]TABLE 509.1
INCIDENTAL USES**

| ROOM OR AREA | SEPARATION AND/OR PROTECTION |
|---|---|
| Furnace room where any piece of equipment is over 400,000 Btu per hour input | 1 hour or provide automatic sprinkler system |
| Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower | 1 hour or provide automatic sprinkler system |
| Refrigerant machinery room | 1 hour or provide automatic sprinkler system |
| Hydrogen fuel gas rooms, not classified as Group H | 1 hour in Group B, F, M, S and U occupancies; 2 hours in Group A, E, I and R occupancies. |
| Incinerator rooms | 2 hours and provide automatic sprinkler system |
| Paint shops, not classified as Group H, located in occupancies other than Group F | 2 hours; or 1 hour and provide automatic sprinkler system |
| In Group E occupancies, laboratories and vocational shops not classified as Group H | 1 hour or provide automatic sprinkler system |
| In Group I-2 occupancies, laboratories not classified as Group H | 1 hour and provide automatic sprinkler system |
| In <i>ambulatory care facilities</i> , laboratories not classified as Group H | 1 hour or provide automatic sprinkler system |
| Laundry rooms over 100 square feet | 1 hour or provide automatic sprinkler system |
| In Group I-2, laundry rooms over 100 square feet | 1 hour |
| Group I-3 cells and Group I-2 patient rooms equipped with padded surfaces | 1 hour |
| In Group I-2, physical plant maintenance shops | 1 hour |
| In <i>ambulatory care facilities</i> or Group I-2 occupancies, waste and linen collection rooms with containers that have an aggregate volume of 10 cubic feet or greater | 1 hour |
| In other than <i>ambulatory care facilities</i> and Group I-2 occupancies, waste and linen collection rooms over 100 square feet | 1 hour or provide automatic sprinkler system |
| In <i>ambulatory care facilities</i> or Group I-2 occupancies, storage rooms greater than 100 square feet | 1 hour |
| Electrical installations and transformers | See Sections 110.26 through 110.34 and Sections 450.8 through 450.48 of NFPA 70 for protection and separation requirements. |

For SI: 1 square foot = 0.0929 m², 1 pound per square inch (psi) = 6.9 kPa, 1 British thermal unit (Btu) per hour = 0.293 watts, 1 horsepower = 746 watts, 1 gallon = 3.785 L, 1 cubic foot = 0.0283 m³.

509.2 Occupancy classification.

Incidental uses shall not be individually classified in accordance with [Section 302.1](#). Incidental uses shall be included in the building occupancies within which they are located.

509.3 Area limitations.

Incidental uses shall not occupy more than 10 percent of the *building area* of the *story* in which they are located.

509.4 Separation and protection.

The incidental uses specified in [Table 509.1](#) shall be separated from the remainder of the building or equipped with an *automatic sprinkler system*, or both, in accordance with the provisions of that table.

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509.4.1 Separation.

Where [Table 509.1](#) specifies a fire-resistance-rated separation, the incidental uses shall be separated from the remainder of the building by a *fire barrier* constructed in accordance with [Section 707](#) or a *horizontal assembly* constructed in accordance with [Section 711](#), or both. Construction supporting 1-hour *fire barriers* or *horizontal assemblies* used for incidental use separations in buildings of Type IIB, IIIB and VB construction is not required to be fire-resistance rated unless required by other sections of this code.

509.4.1.1 Type IV-B and IV-C construction.

Where [Table 509.1](#) specifies a fire-resistance-rated separation, *mass timber elements serving as fire barriers or horizontal assemblies* in Type IV-B or IV-C construction shall be separated from the interior of the incidental use with an *approved thermal barrier* consisting of *gypsum board* that is not less than $\frac{1}{2}$ inch (12.7 mm) in thickness or a material that is tested in accordance with and meets the acceptance criteria of both the Temperature Transmission Fire Test and the Integrity Fire Test of NFPA 275.

509.4.2 Protection.

Where [Table 509.1](#) permits an *automatic sprinkler system* without a *fire barrier*, the incidental uses shall be separated from the remainder of the building by construction capable of resisting the passage of smoke. The walls shall extend from the top of the foundation or floor assembly below to the underside of the ceiling that is a component of a fire-resistance-rated floor assembly or roof assembly above or to the underside of the floor or roof sheathing, deck or slab above. Doors shall be self- or automatic-closing upon detection of smoke in accordance with [Section 716.2.6.6](#). Doors shall not have air transfer openings and shall not be undercut in excess of the clearance permitted in accordance with [NFPA 80](#). Walls surrounding the incidental use shall not have air transfer openings unless provided with *smoke dampers* in accordance with [Section 710.8](#).

509.4.2.1 Protection limitation.

Where an *automatic sprinkler system* is provided in accordance with [Table 509.1](#), only the space occupied by the incidental use need be equipped with such a system.