

# 2021 Virginia Construction Code

## CHAPTER 5 GENERAL BUILDING HEIGHTS AND AREAS

### SECTION 508 MIXED USE AND OCCUPANCY

#### 508.1 General.

Each portion of a building shall be individually classified in accordance with [Section 302.1](#). Where a building contains more than one occupancy group, the building or portion thereof shall comply with the applicable provisions of [Section 508.2](#), [508.3](#), [508.4](#) or [508.5](#), or a combination of these sections.

#### Exceptions:

1. Occupancies separated in accordance with [Section 510](#).
2. Where required by [Table 415.6.5](#), areas of Group H-1, H-2 and H-3 occupancies shall be located in a *detached building* or structure.

#### 508.2 Accessory occupancies.

Accessory occupancies are those occupancies that are ancillary to the main occupancy of the building or portion thereof. Accessory occupancies shall comply with the provisions of [Sections 508.2.1](#) through [508.2.4](#).

##### 508.2.1 Occupancy classification.

Accessory occupancies shall be individually classified in accordance with [Section 302.1](#). The requirements of this code shall apply to each portion of the building based on the occupancy classification of that space.

##### 508.2.2 Allowable building height.

The allowable height and number of *stories* of the building containing accessory occupancies shall be in accordance with [Section 504](#) for the main occupancy of the building.

##### 508.2.3 Allowable building area.

The allowable area of the building shall be based on the applicable provisions of [Section 506](#) for the main occupancy of the building. Aggregate accessory occupancies shall not occupy more than 10 percent of the floor area of the *story* in which they are located and shall not exceed the tabular values for nonsprinklered buildings in [Table 506.2](#) for each such accessory occupancy.

##### 508.2.4 Separation of occupancies.

No separation is required between accessory occupancies and the main occupancy.

#### Exceptions:

1. Group H-2, H-3, H-4 and H-5 occupancies shall be separated from all other occupancies in accordance with [Section 508.4](#).
2. Group I-1, R-1, R-2 and R-3 *dwelling units* and *sleeping units* shall be separated from other *dwelling* or *sleeping units* and from accessory occupancies contiguous to them in accordance with the requirements of [Section 420](#).

#### 508.3 Nonseparated occupancies.

Buildings or portions of buildings that comply with the provisions of this section shall be considered as nonseparated occupancies.

##### 508.3.1 Occupancy classification.

Nonseparated occupancies shall be individually classified in accordance with [Section 302.1](#). The requirements of this code shall apply to each portion of the building based on the occupancy classification of that space. In addition, the most restrictive provisions of [Chapter 9](#) that apply to the nonseparated occupancies shall apply to the total nonseparated occupancy area.

##### 508.3.1.1 High-rise buildings.

Where nonseparated occupancies occur in a *high-rise building*, the most restrictive requirements of [Section 403](#) that apply to the nonseparated occupancies shall apply throughout the *high-rise building*.

##### 508.3.1.2 Group I-2, Condition 2 occupancies.

Where one of the nonseparated occupancies is Group I-2, Condition 2, the most restrictive requirements of [Sections 407](#), [509](#) and [712](#) shall apply throughout the *fire area* containing the Group I-2 occupancy. The most restrictive requirements of [Chapter 10](#) shall apply to the path of egress from the Group I-2, Condition 2 occupancy up to and including the *exit discharge*.

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### 508.3.2 Allowable building area, height and number of stories.

The allowable *building area*, *height* and number of *stories* of the building or portion thereof shall be based on the most restrictive allowances for the occupancy groups under consideration for the type of construction of the building in accordance with [Section 503.1](#).

### 508.3.3 Separation.

No separation is required between nonseparated occupancies.

#### Exceptions:

1. Group H-2, H-3, H-4 and H-5 occupancies shall be separated from all other occupancies in accordance with [Section 508.4](#).
2. Group I-1, R-1, R-2 and R-3 *dwelling units* and *sleeping units* shall be separated from other *dwelling* or *sleeping units* and from other occupancies contiguous to them in accordance with the requirements of [Section 420](#).

### 508.4 Separated occupancies.

Buildings or portions of buildings that comply with the provisions of this section shall be considered as separated occupancies.

**TABLE 508.4**  
**REQUIRED SEPARATION OF OCCUPANCIES (HOURS)<sup>f</sup>**

OCCUPANCY	A, E		I-1 <sup>a</sup> , I-3, I-4		I-2		R <sup>a</sup>		F-2, S-2 <sup>b</sup> , U		B <sup>e</sup> , F-1, M, S-1		H-1		H-2		H-3, H-4		H-5	
	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS
A, E	N	N	1	2	2	NP	1	2	N	1	1	2	NP	NP	3	4	2	3	2	NP
I-1 <sup>a</sup> , I-3, I-4	1	2	N	N	2	NP	1	NP	1	2	1	2	NP	NP	3	NP	2	NP	2	NP
I-2	2	NP	2	NP	N	N	2	NP	2	NP	2	NP	NP	NP	3	NP	2	NP	2	NP
R <sup>a</sup>	1	2	1	NP	2	NP	N	N	1 <sup>c</sup>	2 <sup>c</sup>	1	2	NP	NP	3	NP	2	NP	2	NP
F-2, S-2 <sup>b</sup> , U	N	1	1	2	2	NP	1 <sup>c</sup>	2 <sup>c</sup>	N	N	1	2	NP	NP	3	4	2	3	2	NP
B <sup>e</sup> , F-1, M, S-1	1	2	1	2	2	NP	1	2	1	2	N	N	NP	NP	2	3	1	2	1	NP
H-1	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	N	NP	NP	NP	NP	NP	NP	NP
H-2	3	4	3	NP	3	NP	3	NP	3	4	2	3	NP	NP	N	NP	1	NP	1	NP
H-3, H-4	2	3	2	NP	2	NP	2	NP	2	3	1	2	NP	NP	1	NP	1 <sup>d</sup>	NP	1	NP
H-5	2	NP	2	NP	2	NP	2	NP	2	NP	1	NP	NP	NP	1	NP	1	NP	N	NP

S = Buildings equipped throughout with an automatic sprinkler system installed in accordance with [Section 903.3.1.1](#).

NS = Buildings not equipped throughout with an automatic sprinkler system installed in accordance with [Section 903.3.1.1](#).

N = No separation requirement.

NP = Not Permitted.

- a. See [Section 420](#).
- b. The required separation from areas used only for private or pleasure vehicles shall be reduced by 1 hour but not to less than 1 hour.
- c. See [Sections 406.3.2 and 406.6.4](#).
- d. Separation is not required between occupancies of the same classification.
- e. See [Section 422.2](#) for *ambulatory care facilities*.
- f. Occupancy separations that serve to define fire area limits established in [Chapter 9](#) for requiring fire protection systems shall also comply with [Section 707.3.10](#) and [Table 707.3.10](#) in accordance with [Section 901.7](#).

#### 508.4.1 Occupancy classification.

Separated occupancies shall be individually classified in accordance with [Section 302.1](#). Each separated space shall

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comply with this code based on the occupancy classification of that portion of the building. The most restrictive provisions of [Chapter 9](#) that apply to the separate occupancies shall apply to the total nonfire-barrier-separated occupancy areas. Occupancy separations that serve to define *fire area* limits established in [Chapter 9](#) for requiring a *fire protection system* shall also comply with [Section 901.7](#).

#### **508.4.2 Allowable building area.**

In each *story*, the *building area* shall be such that the sum of the ratios of the actual *building area* of each separated occupancy divided by the allowable *building area* of each separated occupancy shall not exceed 1.

#### **508.4.3 Allowable building height and number of stories.**

Each separated occupancy shall comply with the *building height limitations* and *story limitations* based on the type of construction of the building in accordance with [Section 503.1](#).

**Exception:** Special provisions of [Section 510](#) shall permit occupancies at *building heights* and number of *stories* other than provided in [Section 503.1](#).

#### **508.4.4 Separation.**

Individual occupancies shall be separated from adjacent occupancies in accordance with [Table 508.4](#).

##### **508.4.4.1 Construction.**

Required separations shall be *fire barriers* constructed in accordance with [Section 707](#) or *horizontal assemblies* constructed in accordance with [Section 711](#), or both, so as to completely separate adjacent occupancies. *Mass timber elements serving as fire barriers or horizontal assemblies to separate occupancies in Type IV-B or IV-C construction shall be separated from the interior of the building with an approved thermal barrier consisting of gypsum board that is not less than 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.*

Relocated

#### **508.5 Live/work units**

A *live/work unit* shall comply with [Sections 508.5](#) through [508.5.11](#).

**Exception:** *Dwelling or sleeping units* that include an office that is less than 10 percent of the area of the *dwelling unit* are permitted to be classified as *dwelling units* with accessory occupancies in accordance with [Section 508.2](#).

##### **508.5.1 Limitations.**

The following shall apply to *live/work areas*:

1. The *live/work unit* is permitted to be not greater than 3,000 square feet (279 m<sup>2</sup>) in area.
2. The nonresidential area is permitted to be not more than 50 percent of the area of each *live/work unit*.
3. The nonresidential area function shall be limited to the first or main floor only of the *live/work unit*.
4. Not more than five nonresidential workers or employees are allowed to occupy the nonresidential area at any one time.

##### **508.5.2 Occupancies.**

*Live/work units* shall be classified as a Group R-2 occupancy. Separation requirements found in [Sections 420](#) and [508](#) shall not apply within the *live/work unit* where the *live/work unit* is in compliance with [Section 508.5](#). Nonresidential uses that would otherwise be classified as either a Group H or S occupancy shall not be permitted in a *live/work unit*.

**Exception:** Storage shall be permitted in the *live/work unit* provided that the aggregate area of storage in the nonresidential portion of the *live/work unit* shall be limited to 10 percent of the space dedicated to nonresidential activities.

##### **508.5.3 Means of egress.**

Except as modified by this section, the *means of egress* components for a *live/work unit* shall be designed in accordance with [Chapter 10](#) for the function served.

##### **508.5.4 Egress capacity.**

The egress capacity for each element of the *live/work unit* shall be based on the *occupant load* for the function served in accordance with [Table 1004.5](#).

##### **508.5.5 Spiral stairways.**

*Spiral stairways* that conform to the requirements of [Section 1011.10](#) shall be permitted.

##### **508.5.6 Vertical openings.**

Floor openings between floor levels of a *live/work unit* are permitted without enclosure.

##### **[F] 508.5.7 Fire protection.**

The *live/work unit* shall be provided with a monitored *fire alarm* system where required by [Section 907.2.9](#) and an

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*automatic sprinkler system* in accordance with [Section 903.2.8](#).

**508.5.8 Structural.**

Floors within a *live/work unit* shall be designed for the *live loads* in [Table 1607.1](#), based on the function within the space.

**508.5.9 Accessibility.**

*Accessibility* shall be designed in accordance with [Chapter 11](#) for the function served.

**508.5.10 Ventilation.**

The applicable *ventilation* requirements of the [International Mechanical Code](#) shall apply to each area within the *live/work unit* for the function within that space.

**508.5.11 Plumbing facilities.**

The nonresidential area of the *live/work unit* shall be provided with minimum plumbing facilities as specified by [Chapter 29](#), based on the function of the nonresidential area. Where the nonresidential area of the *live/work unit* is required to be accessible by [Section 1108.6.2.1](#), the plumbing fixtures specified by [Chapter 29](#) shall be accessible.