

2021 Virginia Construction Code

CHAPTER 4 SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY

SECTION 423 STORM SHELTERS

423.1 General.

This section applies to the construction of storm shelters constructed as separate detached buildings or constructed as rooms or spaces within buildings for the purpose of providing protection from storms that produce high winds, such as tornadoes and hurricanes, during the storm. [This section specifies where storm shelters are required and provides requirements for the design and construction of storm shelters.](#) Design of facilities for use as emergency shelters after the storm are outside the scope of ICC 500 and shall comply with [Table 1604.5](#) as a Risk Category IV Structure.

423.2 Construction.

[Storm shelters](#) shall be constructed in accordance with [this code and ICC 500](#) and shall be designated as hurricane shelters, tornado shelters, or combined hurricane and tornado shelters. Buildings or structures that are also designated as emergency shelters shall also comply with [Table 1604.5](#) as Risk Category IV structures.

[Any storm shelter not required by this section shall be permitted to be constructed, provided that such structures meet the requirements of this code and ICC 500.](#)

423.3 Occupancy classification.

[The occupancy classification for a storm shelter shall be determined in accordance with this section.](#)

423.3.1 Dedicated storm shelters.

[A facility designed to be occupied solely as a storm shelter shall be classified as Group A-3 for the determination of requirements other than those covered in ICC 500.](#)

Exceptions:

- [1. The occupancy category for dedicated storm shelters with an occupant load of fewer than 50 persons as determined in accordance with ICC 500 shall be in accordance with Section 303.](#)
- [2. The occupancy category for a dedicated residential storm shelter shall be the Group R occupancy served.](#)

423.3.2 Storm shelters within host buildings.

[Where designated storm shelters are constructed as a room or space within a host building that will normally be occupied for other purposes, the requirements of this code for the occupancy of the building, or the individual rooms or spaces thereof, shall apply unless otherwise required by ICC 500.](#)

423.4 Critical emergency operations.

[In areas where the shelter design wind speed for tornados in accordance with Figure 304.2\(1\) of ICC 500 is 250 mph, 911 call stations, emergency operation centers and fire, rescue, ambulance and police stations shall comply with Table 1604.5 as a Risk Category IV structure and shall be provided with a storm shelter constructed in accordance with ICC 500.](#)

423.5 Group E occupancies.

[In areas where the shelter design wind speed for tornados is 250 mph in accordance with Figure 304.2\(1\) of ICC 500, all Group E occupancies with an occupant load of 50 or more shall have a storm shelter constructed in accordance with ICC 500.](#)

Exceptions:

- [1. Group E day care facilities.](#)
- [2. Group E occupancies accessory to places of religious worship.](#)
- [3. Buildings meeting the requirements for shelter design in ICC 500.](#)

423.5.1 Required occupant capacity.

[The required occupant capacity of the storm shelter shall include all of the buildings on the site and shall be the greater of the following:](#)

- [1. The total occupant load of the classrooms, vocational rooms and offices in the Group E occupancy.](#)
- [2. The occupant load of the largest indoor assembly space that is associated with the Group E occupancy.](#)

Exceptions:

- [1. Where a new building is being added on an existing Group E site, and where the new building is not of sufficient size to accommodate the required occupant capacity of the storm shelter for all of the buildings on the site, the storm shelter shall at a minimum accommodate the required occupant capacity for the new building.](#)

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2. Where approved by the *building official*, the required occupant capacity of the shelter shall be permitted to be reduced by the occupant capacity of any existing *storm shelters* on the site.

423.5.2 Location.

Storm shelters shall be located within the buildings they serve or shall be located where the maximum distance of travel from not fewer than one exterior door of each building to a door of the shelter serving that building does not exceed 1,000 feet (305 m).