CHAPTER 5 GENERAL BUILDING HEIGHTS AND AREAS

SECTION 507 IBC Interpretation No. 20-03 2000 Edition Issued: 10-31-03

This interpretation pertains to all sub-sections addressed in **SECTION 507 UNLIMITED AREA BUILDINGS**. Text of the listed sections is presented below:

507.1 Unsprinklered, one-story

507.2 Sprinklered, one-story

507.3 Two-story

507.4 Reduced open space

507.5 High-hazard use groups

507.6 Aircraft paint hanger

507.7 Group E buildings

507.8 Motion picture theaters

507.1 Unsprinklered, one-story. The area of a one-story, Group F-2 or S-2 building shall not be limited when the building is surrounded and adjoined by public ways or yards not less than 60 feet (18 288 mm) in width.

507.2 Sprinklered, one-story. The area of a one-story, Group A-4, B, F, M or S building shall not be limited when the building is provided with an automatic sprinkler system throughout in accordance with §903.3.1.1, and is surrounded and adjoined by public ways or yards not less than 60 feet (18 288 mm) in width.

Exceptions:

- 1. Buildings and structures of Types I and II construction for rack storage facilities, which do not have access by the public shall not be limited in height provided that such buildings conform to the requirements of Section 507.1 and NFPA 231C.
- 2. The automatic sprinkler system shall not be required in areas occupied for indoor participant sports, such as tennis, skating, swimming and equestrian activities, in occupancies in Group A-4, provided that:
 - 2.1. Exit doors directly to the outside are provided for occupants of the participant sports areas, and
 - 2.2. The building is equipped with a fire alarm system with manual fire alarm boxes installed in accordance with Section 907.
- **507.3 Two-story.** The area of a two-story, Group B, F, M or S building shall not be limited when the building is provided with an automatic sprinkler system in accordance with Section 903.3.1.1 throughout, and is surrounded and adjoined by public ways or yards not less than 60 feet (18 288 mm) in width.
- **507.4 Reduced open space.** The permanent open space of 60 feet (18 288 mm) required in Sections 507.1, 507.2 and 507.3 shall be permitted to be reduced to not less than 40 feet (12 192 mm) provided the following requirements are met:
 - 1. The reduced open space shall not be allowed for more than 75 percent of the perimeter of the building.
 - 2. The exterior wall facing the reduced open space shall have a minimum fire-resistance rating of 3 hours.
 - 3. Openings in the exterior wall, facing the reduced open space, shall have opening protectives with a fire-resistance rating of 3 hours.

507.5 High-hazard use groups. Groups H-2, H-3 and H-4 fire areas shall be permitted in unlimited area buildings having occupancies in Use Groups F and S, in accordance with the limitations of this section. Fire areas located at the perimeter of the unlimited area building shall not exceed 10 percent of the area of the building nor the area limitations specified in Table 503 as modified by Section 506.2, based upon the percentage of the perimeter of the fire area that fronts on a street or other unoccupied space. Other fire areas shall not exceed 25 percent of the area limitations specified in Table 503. Fire-resistance rating requirements of fire barrier assemblies shall be in accordance with Table 302.3.3.

507.6 Aircraft paint hangar. The area of a one-story, Group H-2 aircraft paint hangar shall not be limited where such aircraft paint hangar complies with the provisions of Section 412.4 and is entirely surrounded by public ways or yards not less in width than one and one-half times the height of the building.

507.7 Group E **buildings.** The area of a one-story Group E building of Type II, IIIA or IV construction shall not be limited when the following criteria are met:

- 1. Each classroom shall have not less than two means of egress, with one of the means of egress being a direct exit to the outside of the building complying with Section 1005.
- 2. The building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.
- 3. The building is surrounded and adjoined by public ways or yards not less than 60 feet (18 288 mm) in width.

507.8 Motion picture theaters. In buildings of Type I or II construction, the area of one-story motion picture theaters shall not be limited when the building is provided with an automatic sprinkler system throughout in accordance with Section 903.3.1.1 and is surrounded and adjoined by public ways or yards not less than 60 feet (18 288 mm) in width.

Q1: Are structures such as tanks, cooling towers, generators, and trash dumpsters permitted within the 60-foot public way or yard that is required to surround and adjoin an unlimited area building?

A1: Yes. An unlimited area building must be surrounded by a fire separation distance of not less than 60 feet. The fire separation distance, as defined in Section 702.1, is the distance measured from the face of the unlimited area building to an interior lot line, the centerline of an adjacent street, alley or public way, or to an imaginary line between another building on the same property. No other building is permitted within the 60-foot fire separation distance. The purpose of the fire separation distance is to establish a minimum separation between buildings that will serve to reduce the possibility that a fire in one building can spread to another building. It is not the intent to prohibit elements other than buildings from being located within the fire separation distance.

Q2: Is an automotive parking lot permitted within the 60-foot public way or yard that is required to surround and adjoin an unlimited area building?

A2: Yes. A public way can contain a street or alley that is specifically dedicated for vehicular circulation and parking. Vehicular circulation and parking are permitted within the portion of the 60-foot fire separation distance that extends beyond the building property and into a public way. Likewise, vehicular circulation and parking are permitted within the portion of the 60-foot fire separation distance that is located within the building property.

Q3: Is the 60-foot yard that is required to surround an unlimited area building required to be publicly owned?

A3: No. The 60-foot fire separation (open space) must be located on the same property as the building or on property dedicated for public use. The property on which the building is located may be privately owned or publicly owned.
