**S-1 Occupancy**

**Moderate-hazard storage buildings occupied for storage uses that are not classified as Group S-2.**

- See Section 202 for definition of "Story above Grade Plane" and Section 502 for definition of "Building Height."
- See Section 504.2 for permitted height and story increases in a building protected by an automatic sprinkler system (not applicable for Groups H-1, H-2, H-3, H-5 and I-2 of Types IIb, III, IV and V construction).
- See Section 505 for buildings containing mezzanines.
- Area indicated is basic allowable for buildings one story in height per Table 503. See Sections 506.4 and 506.5 for allowable areas of buildings more than one story in height.
- See Section 506.2 for allowable area increases for adequate frontage.
- In fully sprinklered buildings, see Section 506.3 for area increases (not applicable for Groups H-1, H-2 and H-3).
- See Sections 506.4 and 506.5 for allowable area limitations for basements.
- For allowable area of mixed-occupancy buildings, see Sections 506.1.1 for party walls.
- Based on Table 602, nonbearing exterior walls having a fire separation distance of at least 30 feet do not require a fire-resistance rating.
- See Section 505.5 for fire-resistance-rated construction requirements for exterior walls when considering fire separation distance.
- For protection of projections from exterior walls, see Sections 705.2 and 1406.3. For parapet requirements, see Section 705.11.
- For exterior wall requirements for buildings on the same lot, see Section 705.3.
- In Type I buildings, the fire-resistance ratings of the primary structural frame and interior bearing walls are permitted to be reduced by 1 hour when the frame/walls support a roof only (see Note a, Table 601).
- In other than Type IV construction, interior nonbearing walls and partitions require no fire-resistance rating per Table 601. For interior non bearing partitions in Type IV construction, see Section 602.4.6.
- For use of combustible material in Type I and II construction, see Section 603.1.
- Reductions in the minimum construction types in high-rise buildings are permitted for Type IA and IB buildings (other than Groups F-1, M and S-1) as set forth in Section 403.2.1.1.
- Heavy timber shall be permitted where 1-hour or less fire-resistant construction is required (see Note c, Table 601).
- In Type I and II construction, fire-retardant-treated wood shall be permitted as part of the roof system, except in Type I buildings greater than two stories with the uppermost story less than 20 feet in height (see Section 603.1, #25.3).
- See Table 1505.1, Note c, for roof coverings of wood shakes or shingles.
- See Section 708.4 for shaft enclosure fire-resistance requirements. For exceptions to shaft enclosure provisions, see Section 708.2.
- For buildings not greater than 420 feet in height, the required rating of shaft enclosures in high-rise buildings (other than exit enclosures and elevator hoistways) may be reduced to 1-hour (see Section 403.2.1.2).
A shaft enclosure is not required in fully sprinklered buildings at openings for escalators and nonrequired stairways meeting specified conditions (see Section 708.2, Exception 2).

In other than Group I-2 and I-3 occupancies, a shaft enclosure is not required for openings that comply with the seven conditions of Exception 7 to Section 708.2.

See Table 803.9 for interior wall and ceiling finish requirements. For floor finishes, see Section 804.

In buildings fewer than three stories in height, Class B interior finishes are permitted in exit enclosures of nonsprinklered buildings and Class C for sprinklered buildings. (See Table 803.9, Note a)

See Table 508.2.5 for separation of incidental accessory occupancies.

In mixed-occupancy buildings regulated as non separated occupancies, the most restrictive type of construction shall apply to the entire building (see Section 508.3.1).

In a mixed-occupancy building where the provisions of Section 508.4 for separated occupancies are utilized, the occupancies shall be separated in accordance with Table 508.4.

Where a fire wall also separates occupancies that are required to be separated by a fire barrier, the most restrictive requirements of each separation shall apply (see Section 706.1).

See Table 715.4 for opening protective fire-protection ratings.

The maximum allowable area of unprotected openings in buildings (other than Group H-1, H-2 and H-3 occupancies) equipped throughout with an automatic sprinkler system ("UP, S") is equivalent to that allowed for protected openings. (See Table 705.8)

For the maximum area of unprotected and protect openings located in an exterior wall, use Equation 7-2 from Section 705.8.4.

See Section 705.8.1, Exception 2 for permitted unlimited unprotected openings in buildings whose exterior walls and exterior primary structural frame are not required to be fire-resistance rated.

Where dividing a building into multiple fire areas so as not to exceed the limits of Section 903.2 for required sprinkler systems, see Sections 707.3.9 and 901.7.

For special conditions for structures with a Group A-3, B, M, R or S occupancy above a 3-hour horizontal assembly with Group A-3, B, M, R or S-2 parking garage below, see Section 509.2.

The area of one or two-story Group B, F, M or S occupancies with automatic sprinkler systems may be unlimited where complying open space is provided around the building (see Sections 507.3 and 507.4).

For allowances and limitations on Group H-2, H-3 and H-4 fire areas in unlimited area buildings containing Group F or S occupancies, see Section 507.8.

An automatic sprinkler system shall be provided for Group F-1, M and S-1 occupancies (see Sections 903.2.4, 903.2.7 and 903.2.9) where one of the following conditions exists:

- The fire area exceeds 12,000 square feet.
- The sum of all fire areas exceeds 24,000 square feet.
- The fire area is located more than three stories above grade plane.

Exterior walls of Group S aircraft hangars shall have a minimum 2-hour fire-resistance rating where located less than 30 feet from a lot line or public way (see Section 412.4.1).

Group S aircraft hangars shall be provided with fire suppression as required by NFPA 409 (see Section 412.4.6).

An automatic sprinkler system shall be provided in all buildings containing a Group S-1 repair garage where one of the following conditions exists (see Section 903.2.8.1):

- Buildings two or more stories above grade plane with a fire area over 10,000 square feet that contains a repair garage.
- One-story buildings with a fire area over 12,000 square feet that contains a repair garage.
- Buildings with a repair garage in the basement.
- Fire area over 5,000 square feet used for the repair of commercial trucks or buses.
☐ A Group S-1 building used for the bulk storage of tires shall be provided with an automatic sprinkler system where the tire storage area exceeds 20,000 cubic feet (see Section 903.2.9.2).

☐ An automatic fire detection system shall be installed throughout high-piled combustible storage areas (Group S-1) where required by the International Fire Code (see Section 907.2.15).

☐ Where the separated use provisions require a fire barrier between Group S-2 occupancies and other occupancies, the fire rating may be reduced by 1-hour but to no less than 1-hour where the Group S-2 is limited to the parking of private vehicles (see Note b, Table 508.4).

☐ In other than Group R-3 and U occupancies, an automatic sprinkler system shall be provided on windowless stories as set forth in Section 903.2.11.1.

☐ An automatic sprinkler system shall be installed in all buildings with a floor level having an occupant load of 30 or more located 55 feet or more above the lowest level of fire department vehicle access (see Section 903.2.11.3). See exceptions for airport control towers, open parking garages and Group F-2 occupancies.

☐ An automatic sprinkler system is required where the fire area exceeds 5,000 square feet and is used for the storage of commercial trucks or buses. (See Section 903.2.9, Item 4)

☐ A manual fire alarm system is required for aerosol storage uses where required by the International Fire Code. (See Section 907.2.16 and IFC Chapter 28).

☐ Shaft rating is generally not applicable due to permitted number of stories. Because a story height increase (see Section 504.2) or a basement (see Section 506.4 or 506.5) will change the permitted number of stories, the shaft rating may be applicable.