

CHAPTER 5

GENERAL BUILDING HEIGHTS AND AREAS

SECTION 501 GENERAL

501.1 Scope. The provisions of this chapter control the height and area of structures hereafter erected and additions to existing structures.

[F] 501.2 Premises identification. Approved numbers or addresses shall be provided for new buildings in such a position as to be clearly visible and legible from the street or roadway fronting the property. Letters or numbers shall be a minimum 3 inches (76 mm) in height for occupancies in Group R-2 and R-3 and not less than 5 inches for other occupancies, and stroke of letters and numbers shall have a minimum stroke of 0.5 inch (12.7 mm) of a contrasting color to the background itself.

501.2.1 Enforcement by building official – Owners to affix and maintain building numbers. The building official shall determine the address of any property in the City in accordance with the numbering system established in this Chapter.

Whenever the irregularity of plats, the changing direction of streets, avenues, or other highways, the interruption of the continuity of highways or any other condition causes doubt or difference of opinion as to the correct number of any piece of property or any building thereon, the number shall be determined by the building official. He/she shall be guided by the specific provisions of this chapter as far as they are applicable and when not applicable by such rules as may be established to carry out the intent of this chapter.

The owner of any building or other structure shall maintain the street number of each building and structure in a conspicuous place over or near the principal street entrance or entrances, or in other conspicuous places as is necessary for the easy locating of such address.

Exception: Where there are multiple buildings on a site, the building official may waive the requirement for posting an address on appurtenant or accessory buildings where individual identification of each building is not essential.

Where a property has frontage along more than one named street or for any other property where there may be confusion regarding the address of a building or structure, the building official may require the complete address, including street number and street name to be conspicuously posted.

Buildings served by a private road or a common driveway shall post their address number(s) at the head of the road or driveway in a manner that can be easily read from the intersecting street. Where the existing street grid may not adequately allow for the assignment of street addresses which will promote the easy locating of such addresses, or for any other reason consistent with the intent of this chap-

ter, the building official may assign a name to the private road or common driveway which shall be used for addressing purposes. In addition, one or more property owners along the road or driveway may be required to post a sign displaying the assigned name at a location near the intersection of the road or driveway with a named public street.

Should the building official find that any building, structure or premises are not provided with numbers as herein required, or are not correctly numbered, he/she shall notify the owner, agent or tenant of the correct street number and shall require that the same shall be properly placed, in accordance with the provisions of this chapter, within a reasonable length of time. It is unlawful for any person to fail to comply with such notice.

501.2.2 Numbering system prescribed. The numerical designation of all doorways and entrances to buildings and lots fronting upon the named right-of-ways of the City are established in accordance with the following system:

Except where otherwise specified, 100 numbers are allotted to each block, provided that where a named right-of-way intervenes between consecutively numbered right-of-ways, 50 numbers shall be allotted for each block; one whole number is allotted to each 20 feet (6096 mm) of frontage in each block; even numbers shall be used on the northerly side of named right-of-ways extending in an easterly and westerly direction and on the easterly side of named right-of-ways extending in a northerly and southerly direction; odd numbers shall be used on the southerly side of named right-of-ways extending in an easterly and westerly direction and on the westerly side of named right-of-ways extending in a northerly and southerly direction.

In the case of irregular named right-of-ways, the frontages shall be numbered as near as may be according to the uniform series of block numbers with which they most nearly correspond.

501.2.3 Numbering of buildings.

501.2.3.1 Numbering of buildings downtown. Between Yesler Way and Denny Way all frontages upon named right-of-ways extending in a northerly and southerly direction and lying west of Broadway, East Union Street, Minor Avenue and Melrose Avenue shall be numbered as follows:

Yesler Way to Fir Street number 100 and upwards, Fir Street to Spruce Street number 150 and upwards, Spruce Street to Alder Street number 200 and upwards, continuing by consecutive hundreds to Pine Street; Pine Street to Olive Way number 1600 and upwards, Olive Way to Howell Street number 1700 and upwards, Howell Street to Stewart Street number 1800 and upwards, Stewart Street to Virginia Street number 1900 and upwards, continuing by consecutive hundreds to Denny Way.

Between East Yesler Way and East Denny Way all frontages upon named right-of-ways extending in a northerly and southerly direction and lying east of Broadway, East Union Street, Minor Avenue and Melrose Avenue shall be numbered as follows:

East Yesler Way to East Fir Street number 100 and upwards, East Fir Street to East Spruce Street number 150 and upwards, East Spruce Street to East Alder Street number 200 and upwards, continuing by consecutive hundreds to East Marion Street; East Marion Street to East Spring Street number 900 and upwards, East Spring Street to East Union Street number 1100 and upwards, East Union Street to East Pike Street number 1400 and upwards, continuing by consecutive hundreds to East Denny Way.

Between East Yesler Way and East Denny Way all frontages upon named right-of-ways extending in an easterly and westerly direction and lying west of Broadway, East Union Street, Minor Avenue and Melrose Avenue shall be numbered as follows:

Southwesterly from Elliott Avenue, or Alaskan Way if south of Lenora Street, number 51 and downwards; Elliott Avenue (or Alaskan Way) to Western Avenue number 52 and upwards; Western Avenue to First Avenue number 76 and upwards; First Avenue to Second Avenue number 100 and upwards, continuing northeasterly to Broadway, East Union Street, Minor Avenue, or Melrose Avenue by consecutive hundreds.

Between East Yesler Way and East Denny Way all frontages upon named right-of-ways extending in an easterly and westerly direction and lying east of Broadway, East Union Street, Minor Avenue and Melrose Avenue shall be numbered as follows:

Melrose Avenue to Bellevue Avenue number 300 and upwards, Bellevue Avenue to Summit Avenue number 400 and upwards, continuing by consecutive hundreds to Broadway.

Broadway to Tenth Avenue number 900 and upwards, Tenth Avenue to Eleventh Avenue number 1000 and upwards, continuing by consecutive hundreds corresponding with the numbered series of avenues eastward to Lake Washington.

On East Olive Way eastward from Melrose Avenue, the street numbers shall run upwards consecutively, eastward from the existing street numbers which are west of the Melrose Avenue intersection.

501.2.3.2 Numbering of buildings south of downtown and east of the east waterway. South of Yesler Way the frontages upon the named right-of-ways extending in a northerly and southerly direction shall be numbered as follows:

Yesler Way (or East Yesler Way) to South Washington Street number 100 and upwards, South Washington Street to South Main Street number 200 and upwards, South Main Street to South Jackson St number 300 and upwards, South Jackson Street to South King Street

number 400 and upwards, continuing by consecutive hundreds to South Barton Place, with blocks and streets on Rainier Avenue South being taken as the controlling series.

South of South Barton Place, 51st Avenue South shall be taken as the controlling series to the southern City limits.

On Second Avenue Extension South from Fourth Avenue South to Yesler Way, the frontages shall be numbered as follows:

From Fourth Avenue South to South Jackson Street number 100 and upwards, South Jackson Street to South Main Street number 200 and upwards, South Main Street to South Washington Street number 300 and upwards, South Washington Street to Yesler Way number 400 and upwards.

South of Yesler Way the frontages upon named right-of-ways extending in an easterly and westerly direction shall be numbered as follows:

Westward from First Avenue South to the Harbor Line or East Waterway number 99 and downwards, First Avenue South to Occidental Avenue South number 100 and upwards, Occidental Avenue South to Second Avenue South number 150 and upwards, Second Avenue South to Third Avenue South number 200 and upwards, continuing by consecutive hundreds to Sixth Avenue South; Sixth Avenue South to Maynard Avenue South number 600 and upwards, Maynard Avenue South to Seventh Avenue South number 650 and upwards, Seventh Avenue South to Eighth Avenue South (or Airport Way south of South Hinds Street) number 700 and upwards, Eighth Avenue South (or Airport Way south of South Hinds Street) to Airport Way South (or Ninth Avenue South south of South Hinds Street) number 800 and upwards, Airport Way South (or Ninth Avenue South south of South Hinds Street) to Interstate-5 number 900 and upwards, continuing eastward by consecutive hundreds corresponding with the numbered series of avenues to Lake Washington.

501.2.3.3 Numbering of buildings between downtown and the Lake Washington Ship Canal. North of Denny Way, East Denny Way, and East Howell Street east of Madrona Drive the frontages upon the named right-of-ways extending in a northerly and southerly direction shall be numbered as follows:

Denny Way (and East or West Denny Way) to John Street (and East or West John Street) number 100 and upwards, continuing by consecutive hundreds, the blocks and streets on Queen Anne Avenue North being taken as a controlling series for numbering purposes west of Fairview Avenue North (or Fairview Avenue East) and south of Bertona Street (or West Bertona Street); 36th Avenue West being taken as the controlling series for numbering purposes west of Fairview Ave North (or Fairview Ave East) and north of Bertona Street (or West Bertona Street); 10th Avenue East being taken as the controlling series for numbering purposes east of Fairview Avenue North (or Fairview Avenue East).

Between Queen Anne Avenue North and Eastlake Avenue East (East Galer being the northeast boundary of this subsection) the frontages on the named right-of-ways extending in an easterly and westerly direction shall be numbered as follows:

Queen Anne Avenue North to First Avenue North number 1 and upwards, First Avenue North to Warren Avenue North number 100 and upwards, Warren Avenue North to Second Avenue North number 150 and upwards, Second Avenue North to Third Avenue North number 200 and upwards, continuing by consecutive hundreds corresponding to the numbered series of avenues with half hundreds in the case of Nob Hill, Taylor, Bigelow, Mayfair, and Dexter Avenues North, to Ninth Avenue North; Ninth Avenue North to Westlake Avenue North number 900 and upwards, Westlake Avenue North to Terry Avenue North number 950 and upwards, Terry Avenue North to Boren Avenue North number 1000 and upwards, Boren Avenue North to Fairview Avenue North number 1100 and upwards, Fairview Avenue North to Minor Avenue North number 1150 and upwards, Minor Avenue North to Pontius Avenue North number 1200 and upwards, Pontius Avenue North to Yale Avenue North number 1250 and upwards, Yale Avenue North to Eastlake Avenue East number 1300 and upwards.

East of Eastlake Avenue East (or Fairview Avenue East north of East Galer Street) and North of East Denny Way the frontages upon the named east-west right-of-ways extending in an easterly and westerly direction shall be numbered as follows:

Eastlake Avenue East to Melrose Avenue East number 200 and upwards continuing by consecutive hundreds eastward to Broadway East; Broadway East to Tenth Avenue East number 900 and upwards, Tenth Avenue East to Federal Avenue East number 1000 and upwards, Federal Avenue East to Eleventh Avenue East number 1050 and upwards, Eleventh Avenue East to Twelfth Avenue East number 1100 and upwards, continuing by consecutive hundreds eastward to Lake Washington.

West of Queen Anne Avenue North the frontages upon named east-west right-of-ways extending in an easterly and westerly direction shall be numbered westward as follows:

Queen Anne Avenue North to First Avenue West number 1 and upwards, First Avenue West to Second Avenue West number 100 and upwards, continuing by consecutive hundreds westward.

501.2.3.4 Numbering of buildings north of the Lake Washington Ship Canal. The plan for the numbering of frontages upon the various named right-of-ways in that portion of the City of Seattle lying north of the Lake Washington Ship Canal is established as follows:

The frontages upon the named right-of-ways extending in a northerly and southerly direction shall be numbered in accordance with the designations of the

intersecting numbered streets as follows: northward from the State Harbor Line, number 2900 and upwards.

The frontages upon the named right-of-ways extending in an easterly and westerly direction shall be numbered as follows:

West from First Avenue Northwest, commencing with 100, and continuing west in correspondence with the numbers of the avenues to Puget Sound.

East from First Avenue Northwest, commencing with 100 and continuing as follows: East from Palatine Avenue North, 200 and upwards; from Greenwood Avenue North, 300 and upwards; from Phinney Avenue North, 400 and upwards; from Francis Avenue North, 450 and upwards; from Dayton Avenue North, 500 and upwards; from Evanston Avenue North, 600 and upwards; from Fremont Avenue North, 700 and upwards; from North Park Avenue North, 800 and upwards; from Linden Avenue North, 900 and upwards (800 and upwards south of North 65th Street); from Aurora Avenue North, 900 and upwards (1100 and upwards north of North 65th Street); from Winslow Place North, 950 and upwards; from Whitman Avenue North 1000 and upwards; from Albion Place North, 1050 and upwards; from Woodland Park Avenue North, 1100 and upwards; from Nesbit Avenue North, 1150 and upwards; from Midvale Avenue North, 1200 and upwards; from Lenora Place North, 1250 and upwards; from Stone Avenue North (Stone Way North south of North 46th Street), 1300 and upwards; from Interlake Avenue North, 1400 and upwards; from Ashworth Avenue North, 1500 and upwards; from Carr Place North, 1550 and upwards; from Woodlawn Avenue North, 1600 and upwards, from Densmore Avenue North, 1700 and upwards; from Caroline Avenue North and Courtland Place North, 1750 and upwards; from Wallingford Avenue North, 1800 and upwards; from Burke Avenue North and Canfield Place North, 1900 and upwards; from Stroud Avenue North and Wayne Place North, 2000 and upwards; from Meridian Avenue North, 2100 and upwards; from Bagley Avenue North, 2200 and upwards; from Corliss Avenue North, 2300 and upwards; from Sunnyside Avenue North, 2400 and upwards; and from Eastern Avenue North, 2500 and upwards.

East from First Avenue Northeast, commencing with 100, and continuing east in correspondence with the numbered avenues to Lake Washington.

501.2.3.5 Numbering buildings on Harbor Island. The frontages upon named right-of-ways extending in a northerly and southerly direction shall be numbered as follows:

Southwest Massachusetts Street to Southwest Florida Street, number 1700 and upwards; Southwest Florida Street to Southwest Lander Street, number 2500 and upwards; Southwest Lander Street to Southwest Hanford Street, number 2700 and upwards; Southwest Hanford Street to Southwest Spokane Street, number 3200 and upwards.

The frontages upon named right-of-ways extending in an easterly and westerly direction shall be numbered as follows:

The East Waterway to 11th Avenue Southwest, number 900 and upwards; 11th Avenue Southwest to 13th Avenue Southwest, number 1100 and upwards; 13th Avenue Southwest to 16th Avenue Southwest, number 1300 and upwards; 16th Avenue Southwest to the West Waterway, number 1600 and upwards.

501.2.3.6 Numbering buildings west of the West Waterway and the Duwamish Waterway. The frontages upon named right-of-ways extending in a northerly and southerly direction, shall be numbered as follows:

North of Southwest Andover Street, commencing with 3800 and continuing north to the Duwamish Head by consecutive hundreds, the blocks and streets on California Avenue Southwest being taken as the controlling series for numbering purposes.

South of Southwest Andover Street, commencing with 4000 and continuing south to Southwest Roxbury Street by consecutive hundreds, the blocks and streets of California Avenue Southwest being taken as the controlling series for numbering purposes.

South of Southwest Roxbury Street, commencing with 9600 and continuing south to the south City limits by consecutive hundreds, in correspondence with the numbers of the intersecting streets.

The frontages upon named right-of-ways extending in an easterly and westerly direction, shall be numbered as follows:

West of California Avenue Southwest, commencing with 4300 and continuing westward in correspondence with the numbers of the intersecting avenues to Puget Sound.

East of California Avenue Southwest, commencing with 4200 and continuing eastward in correspondence with the numbers of the intersecting avenues to the Duwamish Waterway.

**SECTIONS 502
DEFINITIONS**

502.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

AREA, BUILDING. The area included within surrounding exterior walls (or exterior walls and fire walls) exclusive of vent shafts and courts. Areas of the building not provided with surrounding walls shall be included in the building area if such areas are included within the horizontal projection of the roof or floor above.

BASEMENT. That portion of a building that is partly or completely below grade plane (See “Story above grade plane” in Section 202). A basement shall be considered as a story above

grade plane where the finished surface of the floor above the basement is:

1. More than 6 feet (1829 mm) above grade plane;
2. More than 6 feet (1829 mm) above the finished ground level for more than 50 percent of the total building perimeter; or
3. More than 12 feet (3658 mm) above the finished ground level at any point for more than 25 feet (7620 mm) of the perimeter. Required driveways up to 22 feet (6706 mm) shall not be considered in calculating the 25 foot distance if there is at least 10 feet (3048 mm) between the driveway and all portions of the 25-foot area. See Figure 502.1

GRADE PLANE. A reference plane representing the average of finished ground level adjoining the building at exterior walls. Where the finished ground level slopes away from the exterior walls, the reference plane shall be established by the lowest points within the area between the building and the lot line or, where the lot line is more than 6 feet (1829 mm) from the building, between the building and a point 6 feet (1829 mm) from the building.

For grade of structures built over water, see Section 421.2.

HEIGHT, BUILDING. The vertical distance from grade plane to the average height of the highest roof surface.

HEIGHT, STORY. The vertical distance from top to top of two successive finished floor surfaces; and, for the topmost story, from the top of the floor finish to the top of the ceiling joists or, where there is not a ceiling, to the top of the roof rafters.

INDUSTRIAL EQUIPMENT PLATFORM. An unoccupied, elevated platform in an industrial occupancy used exclusively for mechanical systems or industrial process equipment, including the associated elevated walkways, stairs and ladders necessary to access the platform (see Section 505.5).

MEZZANINE. An intermediate level or levels between the floor and ceiling of any story with an aggregate floor area of not more than ~~one-third~~ one-half of the area of the room or space in which the level or levels are located (see Section 505).

STORY. That portion of a building included between the upper surface of a floor and the upper surface of the floor or roof next above (also see “Basement” and “Mezzanine”).

Interpretation I502a: An unenclosed and uncovered roof deck shall not be considered a story for the purpose of determining the number of stories in a building.

Interpretation I502b: In stepped or terraced buildings, the number of stories is the number counted from the first story above grade plane of the lowest building segment to the top story of the highest building segment. For purposes of this interpretation, portions of buildings divided by fire walls shall be considered separate buildings.

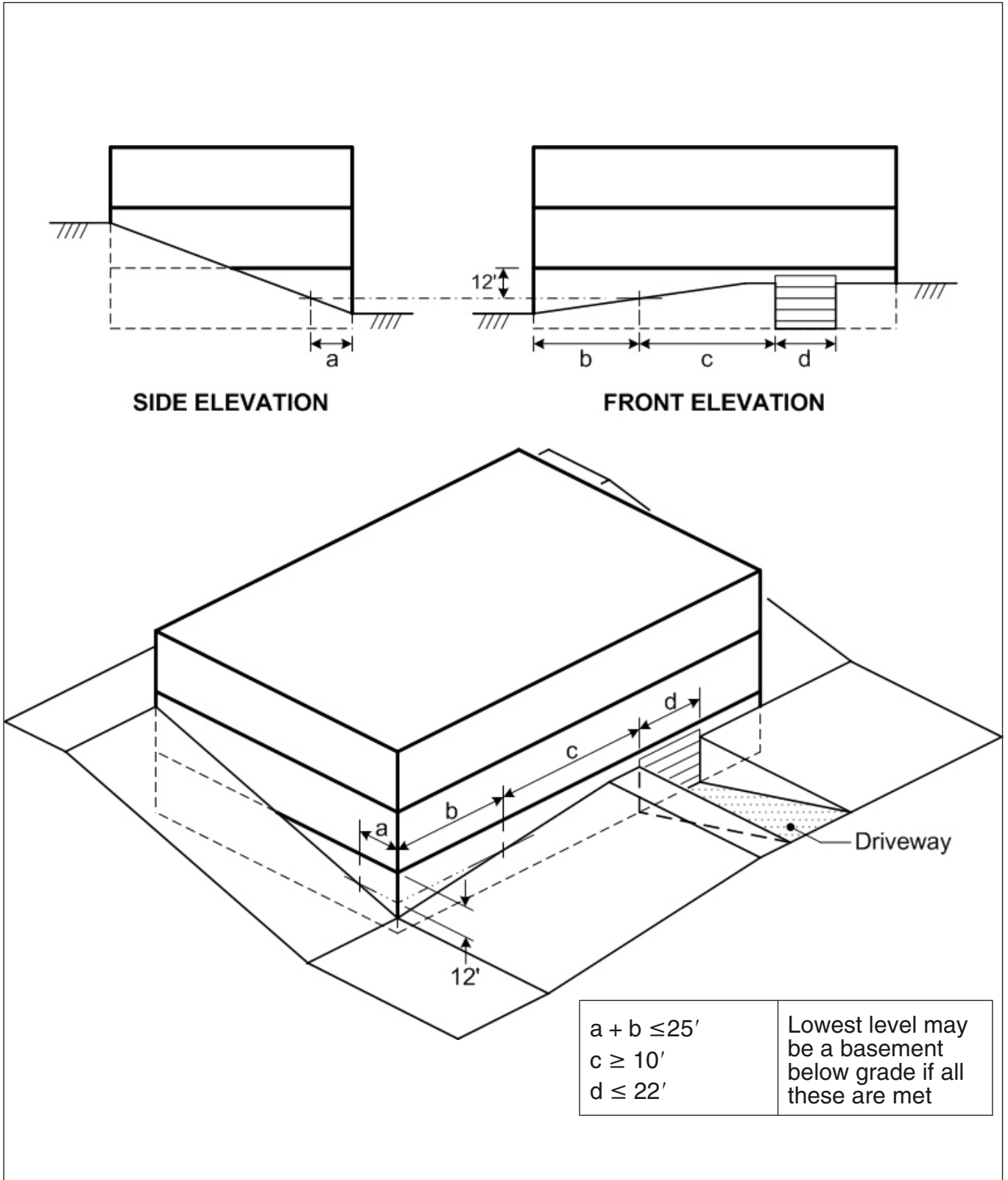


FIGURE 502.1

SECTION 503 GENERAL HEIGHT AND AREA LIMITATIONS

503.1 General. The height and area for buildings of different construction types shall be governed by the intended use of the building and shall not exceed the limits in Table 503 except as modified hereafter. Each part of a building included within the exterior walls or the exterior walls and fire walls where provided shall be permitted to be a separate building.

503.1.1 Basements. Basements that are not stories above grade plane need not be included in the total allowable area provided they do not exceed the area permitted for a one-story building.

503.1.2 Special industrial occupancies. Buildings and structures designed to house low-hazard industrial processes that require large areas and unusual heights to accommodate craneways or special machinery and equipment including, among others, rolling mills; structural metal fabrication shops and foundries; or the production and distribution of electric, gas or steam power, shall be exempt from the height and area limitations of Table 503.

503.1.3 Buildings on same lot. Two or more buildings on the same lot shall be regulated as separate buildings or shall be considered as portions of one building if the height of each building and the aggregate area of buildings are within the limitations of Table 503 as modified by Sections 504 and 506. The provisions of this code applicable to the aggregate building shall be applicable to each building.

503.1.4 Type I construction. Buildings of Type I construction permitted to be of unlimited tabular heights and areas are not subject to the special requirements that allow unlimited area buildings in Section 507 or unlimited height in Sections 503.1.2 and 504.3 or increased height and areas for other types of construction.

503.2 Party walls. Any wall located on a lot line between adjacent buildings, which is used or adapted for joint service between the two buildings, shall be constructed as a fire wall in accordance with Section 705, without openings and shall create separate buildings.

SECTION 504 HEIGHT MODIFICATIONS

504.1 General. The heights permitted by Table 503 shall only be increased in accordance with this section.

Exception: The height of one-story aircraft hangars, aircraft paint hangars and buildings used for the manufacturing of aircraft shall not be limited if the building is provided with an automatic fire-extinguishing system in accordance with Chapter 9 and is entirely surrounded by public ways or yards not less in width than one and one-half times the height of the building.

504.2 Automatic sprinkler system increase. Where a building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, the value specified in Table 503 for maximum height is increased by 20

feet (6096 mm) and the maximum number of stories is increased by one story. These increases are permitted in addition to the area increase in accordance with Sections 506.2 and 506.3. For Group R buildings equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.2, the value specified in Table 503 for maximum height is increased by 20 feet (6096 mm) and the maximum number of stories is increased by one story, but shall not exceed four stories or 60 feet (18 288 mm), respectively.

Exceptions:

1. Group I-2 of Type IIB, III, IV or V construction.
2. Group H-1, H-2, H-3 or H-5.
3. Fire-resistance rating substitution in accordance with Table 601, Note d.

504.3 Roof structures. Towers, spires, steeples and other roof structures shall be constructed of materials consistent with the required type of construction of the building except where other construction is permitted by Section 1509.2.1. Such structures shall not be used for habitation or storage. The structures shall be unlimited in height if of noncombustible materials and shall not extend more than 20 feet (6096 mm) above the allowable height if of combustible materials (see Chapter 15 for additional requirements).

SECTION 505 MEZZANINES

505.1 General. A mezzanine or mezzanines in compliance with this section shall be considered a portion of the floor below. Such mezzanines shall not contribute to either the building area or number of stories as regulated by Section 503.1. The area of the mezzanine shall be included in determining the fire area defined in Section 702. The clear height above and below the mezzanine floor construction shall not be less than 7 feet (2134 mm).

Interpretation I505.1: Mezzanines within individual dwelling units shall not be located above other dwelling units or common space other than corridors.

505.2 Area limitation. The aggregate area of a mezzanine or mezzanines within a room shall not exceed ~~one-third~~ one-half of the area of that room or space in which they are located. The enclosed portions of rooms shall not be included in a determination of the size of the room in which the mezzanine is located. In determining the allowable mezzanine area, the area of the mezzanine shall not be included in the area of the room.

Exceptions:

1. The aggregate area of mezzanines in buildings and structures of Type I or II construction for special industrial occupancies in accordance with Section 503.1.2 shall not exceed two-thirds of the area of the room.
2. The area of the mezzanine floor within a dwelling unit shall not exceed one half of the area of the main floor of the dwelling unit.

TABLE 503
ALLOWABLE HEIGHT AND BUILDING AREAS
 Height limitations shown as stories and feet above grade plane.
 Area limitations as determined by the definition of "Area, building," per floor.

GROUP	Hgt(feet) Hgt(S)	TYPE OF CONSTRUCTION								
		TYPE I		TYPE II		TYPE III		TYPE IV	TYPE V	
		A	B	A	B	A	B	HT	A	B
		UL	160	65	55	65	55	65	50	40
A-1	S A	UL UL	5 UL	3 15,500	2 8,500	3 14,000	2 8,500	3 15,000	2 11,500	1 5,500
A-2	S A	UL UL	11 UL	3 15,500	2 9,500	3 14,000	2 9,500	3 15,000	2 11,500	1 6,000
A-3	S A	UL UL	11 UL	3 15,500	2 9,500	3 14,000	2 9,500	3 15,000	2 11,500	1 6,000
A-4	S A	UL UL	11 UL	3 15,500	2 9,500	3 14,000	2 9,500	3 15,000	2 11,500	1 6,000
A-5	S A	UL UL	UL UL	UL UL	UL UL	UL UL	UL UL	UL UL	UL UL	UL UL
B	S A	UL UL	11 UL	5 37,500	4 23,000	5 28,500	4 19,000	5 36,000	3 18,000	2 9,000
E	S A	UL UL	5 UL	3 26,500	2 14,500	3 23,500	2 14,500	3 25,500	1 18,500	1 9,500
F-1	S A	UL UL	11 UL	4 25,000	2 15,500	3 19,000	2 12,000	4 33,500	2 14,000	1 8,500
F-2	S A	UL UL	11 UL	5 37,500	3 23,000	4 28,500	3 18,000	5 50,500	3 21,000	2 13,000
H-1	S A	1 21,000	1 16,500	1 11,000	1 7,000	1 9,500	1 7,000	1 10,500	1 7,500	NP NP
H-2	S A	UL 21,000	3 16,500	2 11,000	1 7,000	2 9,500	1 7,000	2 10,500	1 7,500	1 3,000
H-3	S A	UL UL	6 60,000	4 26,500	2 14,000	4 17,500	2 13,000	4 25,500	2 10,000	1 5,000
H-4	S A	UL UL	7 UL	5 37,500	3 17,500	5 28,500	3 17,500	5 36,000	3 18,000	2 6,500
H-5	S A	3 UL	3 UL	3 37,500	3 23,000	3 28,500	3 19,000	3 36,000	3 18,000	2 9,000
I-1	S A	UL UL	9 55,000	4 19,000	3 10,000	4 16,500	3 10,000	4 18,000	3 10,500	2 4,500
I-2	S A	UL UL	4 UL	2 15,000	1 11,000	1 12,000	NP NP	1 12,000	1 9,500	NP NP
I-3	S A	UL UL	4 UL	2 15,000	1 10,000	2 10,500	1 7,500	2 12,000	2 7,500	1 5,000
I-4	S A	UL UL	5 60,500	3 26,500	2 13,000	3 23,500	2 13,000	3 25,500	1 18,500	1 9,000
M	S A	UL UL	11 UL	4 21,500	4 12,500	4 18,500	4 12,500	4 20,500	3 14,000	1 9,000
R-1	S A	UL UL	11 UL	4 24,000	4 16,000	4 24,000	4 16,000	4 20,500	3 12,000	2 7,000
R-2 ^a	S A	UL UL	11 UL	4 24,000	4 16,000	4 24,000	4 16,000	4 20,500	3 12,000	2 7,000
R-3 ^a	S A	UL UL	11 UL	4 UL	4 UL	4 UL	4 UL	4 UL	3 UL	3 UL
R-4	S A	UL UL	11 UL	4 24,000	4 16,000	4 24,000	4 16,000	4 20,500	3 12,000	2 7,000
S-1	S A	UL UL	11 48,000	4 26,000	3 17,500	3 26,000	3 17,500	4 25,500	3 14,000	1 9,000
S-2 ^{b, c}	S A	UL UL	11 79,000	5 39,000	4 26,000	4 39,000	4 26,000	5 38,500	4 21,000	2 13,500
U ^c	S A	UL UL	5 35,500	4 19,000	2 8,500	3 14,000	2 8,500	4 18,000	2 9,000	1 5,500

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929 m².

UL = Unlimited, NP = Not permitted.

a. As applicable in Section 101.2.

b. For open parking structures, see Section 406.3.

c. For private garages, see Section 406.1.

Interpretation I505.2: Only such main floor area conforming to clear height requirements of Section 505.1 shall be used in calculating the allowable area of the mezzanine floor.

505.3 Egress. Each occupant of a mezzanine shall have access to at least two independent means of egress where the common path of egress travel exceeds the limitations of Section 1013.3. Where a stairway provides a means of exit access from a mezzanine, the maximum travel distance includes the distance traveled on the stairway measured in the plane of the tread nosing.

Exceptions:

1. A single means of egress shall be permitted in accordance with Section 1014.1.
2. Accessible means of egress shall be provided in accordance with Section 1007.

505.4 Openness. A mezzanine shall be open and unobstructed to the room in which such mezzanine is located except for walls not more than 42 inches (1067 mm) high, columns and posts.

Exceptions:

1. Mezzanines or portions thereof are not required to be open to the room in which the mezzanines are located, provided that the occupant load of the aggregate area of the enclosed space does not exceed 10.
2. A mezzanine having two or more means of egress is not required to be open to the room in which the mezzanine is located, if at least one of the means of egress provides direct access to an exit from the mezzanine level.
3. Mezzanines or portions thereof are not required to be open to the room in which the mezzanines are located, provided that the aggregate floor area of the enclosed space does not exceed 10 percent of the allowable mezzanine area.
4. In industrial facilities, mezzanines used for control equipment are permitted to be glazed on all sides.
5. In Group F occupancies of unlimited area, meeting the requirements of Section 507.2 or 507.3, mezzanines or portions thereof are not required to be open to the room in which the mezzanines are located, provided that an approved fire alarm system is installed throughout the entire building or structure and notification appliances are installed throughout the mezzanines in accordance with the provisions of NFPA 72. In addition, the fire alarm system shall be initiated by automatic sprinkler water flow.

505.5 Industrial equipment platforms. Industrial equipment platforms in buildings shall not be considered as a portion of the floor below. Such equipment platforms shall not contribute to either the building area or the number of stories as regulated by Section 503.1. The area of the industrial equipment platform shall not be included in determining the fire area. Industrial equipment platforms shall not be a part of any mezzanine, and such platforms and the walkways, stairs and ladders providing access to an equipment platform shall not serve as a part of the means of egress from the building.

505.5.1 Area limitations. The aggregate area of all industrial equipment platforms within a room shall not exceed two-thirds of the area of the room in which they occur. Where an equipment platform is located in the same room as a mezzanine, the area of the mezzanine shall be determined by Section 505.2, and the combined aggregate area of the equipment platforms and mezzanines shall not exceed two-thirds of the room in which they occur.

505.5.2 Fire suppression. Where located in a building that is required to be protected by an automatic sprinkler system, industrial equipment platforms shall be fully protected by sprinklers above and below the platform, where required by the standards referenced in Section 903.3.

505.5.3 Guards. Equipment platforms shall have guards where required by Section 1012.1.

**SECTION 506
AREA MODIFICATIONS**

506.1 General. The areas limited by Table 503 shall be permitted to be increased due to frontage (I_f) and automatic sprinkler system protection (I_s) in accordance with the following:

$$A_a = A_t + \left[\frac{A_t I_f}{100} \right] + \left[\frac{A_t I_s}{100} \right] \quad \text{(Equation 5-1)}$$

where:

- A_a = Allowable area per floor (square feet).
- A_t = Tabular area per floor in accordance with Table 503 (square feet).
- I_f = Area increase due to frontage (percent) as calculated in accordance with Section 506.2.
- I_s = Area increase due to sprinkler protection (percent) as calculated in accordance with Section 506.3.

~~**506.1.1 Basements.** A single basement need not be included in the total allowable area provided such basement does not exceed the area permitted for a one-story building.~~

506.2 Frontage increase. Every building shall adjoin or have access to a public way to receive an area increase for frontage. Where a building has more than 25 percent of its perimeter on a public way or open space having a minimum width of 20 feet (6096 mm), the frontage increase shall be determined in accordance with the following:

$$I_f = 100 \left[\frac{F}{P} - 0.25 \right] \frac{W}{30} \quad \text{(Equation 5-2)}$$

where:

- I_f = Area increase due to frontage.
- F = Building perimeter which fronts on a public way or open space having 20 feet (6096 mm) open minimum width (feet).
- P = Perimeter of entire building (feet).
- W = Width of public way or open space (feet) in accordance with Section 506.2.1.

506.2.1 Width limits. W must be at least 20 feet (6096 mm) and the quantity W divided by 30 shall not exceed 1.0. Where the value of W varies along the perimeter of the building, the calculation performed in accordance with Equation 5-2 shall be based on the weighted average of each portion of exterior wall and open space where the value of W is between 20 and 30 feet (6096 and 9144 mm).

Exception: The quantity W divided by 30 shall be permitted to not exceed 2.0 when all of the following conditions exist:

1. The building is permitted to be unlimited in area by Section 507; and
2. The only provision preventing unlimited area is compliance with the 60-foot (18 288 mm) public way or yard requirement, as applicable.

506.2.2 Open space limits. Such open space shall be either on the same lot or dedicated for public use and shall be accessed from a street or approved fire lane.

506.3 Automatic sprinkler system increase. Where a building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, the area limitation in Table 503 is permitted to be increased by an additional 200 percent ($I_s = 200$ percent) for multistory buildings and an additional 300 percent ($I_s = 300$ percent) for single-story buildings. These increases are permitted in addition to the height and story increases in accordance with Section 504.2.

Exceptions:

1. Buildings with an occupancy in Group H-1, H-2 or H-3.
2. Fire-resistance rating substitution in accordance with Table 601, Note d.

506.4 Area determination. The maximum area of a building with more than one story shall be determined by multiplying the allowable area of the first floor (A_a), as determined in Section 506.1, by the number of stories as listed below.

1. For two-story buildings, multiply by 2;
2. For three-story or higher buildings, multiply by 3; and,
3. No story shall exceed the allowable area per floor (A_a), as determined in Section 506.1 for the occupancies on that floor.

Exceptions:

1. Unlimited area buildings in accordance with Section 507.
2. The maximum area of a building equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.2 shall be determined by multiplying the allowable area per floor (A_a), as determined in Section 506.1 by the number of stories.

Note: NFPA 13R sprinkler systems are allowed in buildings of Group R up to and including four stories in height. See Section 903.3.1.2.

SECTION 507 UNLIMITED AREA BUILDINGS

507.1 Nonsprinklered, 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 B, F, M or S building or a one-story Group A-4 building of other than Type V construction 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.

Exceptions:

1. Buildings and structures of Type 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 Group A-3 buildings. The area of a one-story, Group A-3 building used as a church, community hall, dance hall, exhibition hall, gymnasium, lecture hall, indoor swimming pool or tennis court of Type I or II construction shall not be limited when all of the following criteria are met:

1. The building shall not have a stage other than a platform.
2. The building shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

3. The assembly floor shall be located at or within 21 inches (533 mm) of street or grade level and all exits are provided with ramps complying with Section 1010.1 to the street or grade level.
4. The building shall be surrounded and adjoined by public ways or yards not less than 60 feet (18 288 mm) in width.

507.6 High-hazard use groups. Group H-2, H-3 and H-4 fire areas shall be permitted in unlimited area buildings having occupancies in 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 302.3.2.

507.7 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.

507.8 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 1017.
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.

507.9 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.

SECTION 508 SPECIAL PROVISIONS

508.1 General. The provisions in this section shall permit the use of special conditions that are exempt from, or modify, the specific requirements of this chapter regarding the allowable heights and areas of buildings based on the occupancy classification and type of construction, provided the special condition complies with the provisions specified in this section for such condition and other applicable requirements of this code.

508.2 Group S-2 enclosed parking garage with Group A, B, M or R above. A basement and/or the first story above grade plane of a building shall be considered as a separate and distinct building for the purpose of determining area limitations, conti-

nity of fire walls, limitation of number of stories and type of construction, when all of the following conditions are met:

1. The basement and/or the first story above grade plane is of Type IA construction and is separated from the building above with a horizontal assembly having a minimum 3-hour fire-resistance rating.
2. Shaft, stairway, ramp or escalator enclosures through the horizontal assembly shall have not less than a 2-hour fire-resistance rating with opening protectives in accordance with Table 715.3.

Exception: Where the enclosure walls below the horizontal assembly have not less than a 3-hour fire-resistance rating with opening protectives in accordance with Table 715.3, the enclosure walls extending above the horizontal assembly shall be permitted to have a 1-hour fire-resistance rating provided:

1. The building above the horizontal assembly is not required to be of Type I construction;
 2. The enclosure connects less than four stories, and
 3. The enclosure opening protectives above the horizontal assembly have a minimum 1-hour fire protection rating.
3. The building above the horizontal assembly contains only Group A having an assembly room with an occupant load of less than 300, or Group B, M or R.
 4. The building below the horizontal assembly is a Group S-2 enclosed parking garage, used for the parking and storage of private motor vehicles.

Exceptions:

1. Entry lobbies, mechanical rooms and similar uses incidental to the operation of the building shall be permitted.
 2. Group A having an assembly room with an occupant load of less than 300, or Group B or M shall be permitted in addition to those uses incidental to the operation of the building (including storage areas), provided that the entire structure below the horizontal assembly is protected throughout by an approved automatic sprinkler system.
5. The maximum building height in feet shall not exceed the limits set forth in Table 503 for the least restrictive type of construction involved.

508.2.1 Special provisions for Group A; Group B; Group M; Group R-2; or Group S-2 enclosed parking garages.

508.2.1.1 General. Other provisions of this code notwithstanding, the lower stories of a building may be considered as a separate and distinct building for the purpose of area limitations, limitation of number of stories, and type of construction, when all of the following conditions are met:

1. The basement and/or lower stories are of Type IA construction and are separated from upper stories by a three-hour fire barrier. Stairways permitted to be constructed of wood above the fire barrier may

also be constructed of wood below the fire barrier. See Section 1002 for the definition of stairway.

2. The building contains only Group A with an occupant load less than 300; Group B; Group M; Group R-1; Group R-2; or Group S-2 enclosed parking garage used exclusively for the parking and storage of private motor vehicles.
3. The maximum building height in feet shall not exceed the limits set forth in Table 503 for the least type of construction involved.
4. Buildings constructed using the provisions of Section 508.2.1 shall be equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1.
5. Where the story or stories above the fire barrier are of Type IIA, Type IIIA, Type IV, or Type VA construction, the highest floor used for human occupancy shall be located not more than 75 feet above the lowest level of fire department vehicle access. Roof decks with an occupant load of less than 10 may be located above 75 feet.
6. Shaft, stairway, ramp or escalator enclosures through the horizontal assembly shall have not less than a 2-hour fire-resistance rating with opening protectives in accordance with Table 715.3.

Exception: Where the enclosure walls below the horizontal assembly have not less than a 3-hour fire-resistance rating with opening protectives in accordance with Table 715.3, the enclosure walls extending above the horizontal assembly shall be permitted to have a 1-hour fire-resistance rating provided:

1. The building above the horizontal assembly is not required to be of Type I construction;
 2. The enclosure connects less than four stories, and
 3. The enclosure opening protectives above the horizontal assembly have a minimum 1-hour fire protection rating.
7. For Type IIA, Type IIIA, Type IV and Type VA construction, the number of stories shall be measured according to Section 508.2.1.2.

508.2.1.2 Special story provisions for buildings with upper stories of Type IIA, Type IIIA, Type IV, or Type VA construction.

1. **Reference datums.** For purposes of this Section 508.2.1.2, the following two reference datums are established from which to measure the number of stories:

- 1.1. The finished floor of the second story when the first story is below the fire barrier; or
- 1.2. The finished floor of the third story in buildings where the second story is below a three-hour fire barrier and the finished floor of the third story is no more than 15

feet above the highest grade and no more than 25 feet above the lowest grade.

2. **Use of reference datums.** For buildings that comply with Section 508.2.1.1, the number of stories may be measured from either reference datum established in Item 1 of this Section 508.2.1.2.

Note: Figures 508(1) and 508(2) illustrate the application of Section 508.2.2. They are illustrations only. If there is a conflict or inconsistency between the figures and the code text, the code governs.

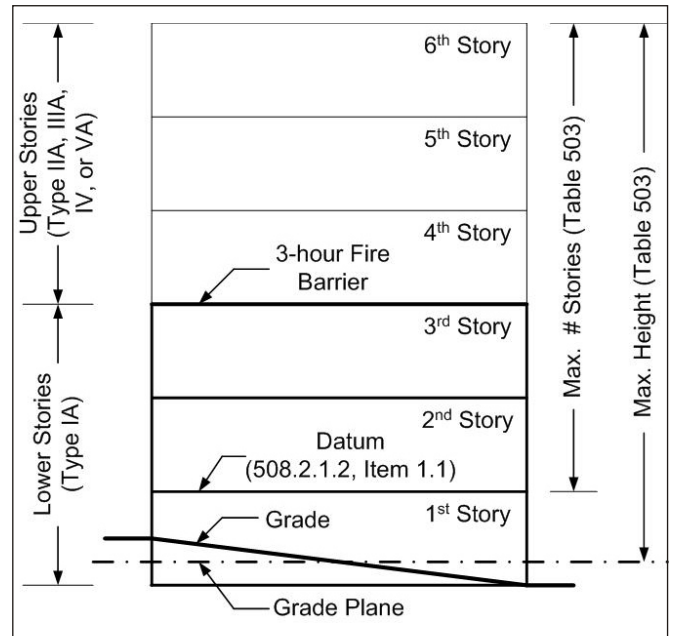


FIGURE 508(1)

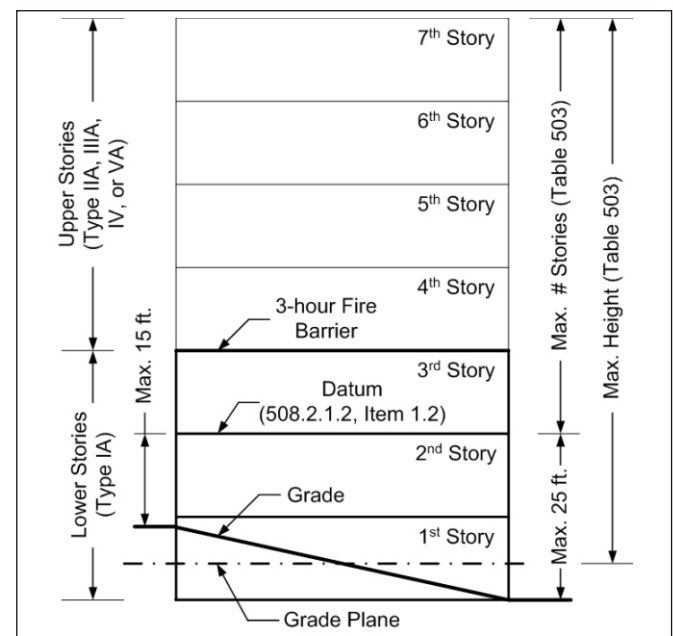


FIGURE 508(2)

508.3 Group S-2 enclosed parking garage with Group S-2 open parking garage above. A Group S-2 enclosed parking garage located in the basement or first story below a Group S-2 open parking garage shall be classified as a separate and distinct building for the purpose of determining the type of construction when the following conditions are met:

1. The allowable area of the structure shall be such that the sum of the ratios of the actual area divided by the allowable area for each separate occupancy shall not exceed 1.0.
2. The Group S-2 enclosed parking garage is of Type I or II construction and is at least equal to the fire-resistance requirements of the Group S-2 open parking garage.
3. The height and the number of the floors above the basement shall be limited as specified in Table 406.3.5.
4. The floor assembly separating the Group S-2 enclosed parking garage and Group S-2 open parking garage shall be protected as required for the floor assembly of the Group S-2 enclosed parking garage. Openings between the Group S-2 enclosed parking garage and Group S-2 open parking garage, except exit openings, shall not be required to be protected.
5. The Group S-2 enclosed parking garage is used exclusively for the parking or storage of private motor vehicles, but shall be permitted to contain an office, waiting room and toilet room having a total area of not more than 1,000 square feet (93 m²), and mechanical equipment rooms incidental to the operation of the building.

➔ **508.4 Parking beneath Group R.** Where a maximum one-story above grade plane Group S-2 parking garage, enclosed or open, or combination thereof, of Type I construction or open of Type IV construction, with grade entrance, is provided under a building of Group R, the number of stories to be used in determining the minimum type of construction shall be measured from the floor above such a parking area. The floor assembly between the parking garage and the Group R above shall comply with the type of construction required for the parking garage and shall also provide a fire-resistance rating not less than the mixed occupancy separation required in Section 302.3.2. The Group R occupancy shall be no more than four stories in height.

508.5 Group R-2 buildings of Type IIIA construction. The height limitation for buildings of Type IIIA construction in Group R-2 shall be increased to six stories and 75 feet (22 860 mm) where the first-floor construction above the basement has a fire-resistance rating of not less than 3 hours and the floor area is subdivided by 2-hour fire-resistance-rated fire walls into areas of not more than 3,000 square feet (279 m²).

508.6 Group R-2 buildings of Type IIA construction. The height limitation for buildings of Type IIA construction in Group R-2 shall be increased to nine stories and 100 feet (30 480 mm) where the building is separated by not less than 50 feet (15 240 mm) from any other building on the lot and from property lines, the exits are segregated in an area enclosed by a 2-hour fire-resistance-rated fire wall and the first-floor construction has a fire-resistance rating of not less than 1 1/2 hours.

508.7 Open parking garage beneath Groups A, I, B, M and R. Open parking garages constructed under Groups A, I, B, M and R shall not exceed the height and area limitations permitted under Section 406.3. The height and area of the portion of the building above the open parking garage shall not exceed the limitations in Section 503 for the upper occupancy. The height, in both feet and stories, of the portion of the building above the open parking garage shall be measured from grade plane and shall include both the open parking garage and the portion of the building above the parking garage.

508.7.1 Fire separation. Fire separation assemblies between the parking occupancy and the upper occupancy shall correspond to the required fire-resistance rating prescribed in Table 302.3.2 for the uses involved. The type of construction shall apply to each occupancy individually, except that structural members, including main bracing within the open parking structure, which is necessary to support the upper occupancy, shall be protected with the more restrictive fire-resistance-rated assemblies of the groups involved as shown in Table 601. Means of egress for the upper occupancy shall conform to Chapter 10 and shall be separated from the parking occupancy by fire barriers having at least a 2-hour fire-resistance rating as required by Section 706, with self-closing doors complying with Section 715. Means of egress from the open parking garage shall comply with Section 406.3.