

780 CMR 5.00 GENERAL BUILDING HEIGHTS AND AREAS

780 CMR: STATE BOARD OF BUILDING REGULATIONS AND STANDARDS THE MASSACHUSETTS STATE BUILDING CODE

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 780 CMR 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 780 CMR 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 780 CMR 903.3.

505.5.3 Guards. Equipment platforms shall have guards where required by 780 CMR 1012.1.

780 CMR 506.0 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:

Equation 5-1

$$A_a = A_t + \frac{A_t I_f}{100} + \frac{A_t I_s}{100}$$

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 780 CMR 506.2.

I_s = Area increase due to sprinkler protection (percent) as calculated in accordance with 780 CMR 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% 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:

Equation 5-2

$$I_f = 100 \left[\frac{F}{P} - 0.25 \right] \frac{W}{30}$$

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 780 CMR 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 780 CMR 507.0; 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 780 CMR 903.3.1.1, the area limitation in Table 503 is permitted to be increased by an additional 200% ($I_s = 200\%$) for multistory buildings and an additional 300% ($I_s = 300\%$) for single-story buildings. These increases are permitted in addition to the height and story increases in accordance with 780 CMR 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 780 CMR 506.1, by the number of stories as listed below.

1. For two-story buildings, multiply by 2;