



Occupant Load Calculation

This edition of the Code Outreach Program is intended to guide code users in understanding how to calculate the occupant load of new and existing buildings and structures, or parts thereof, regulated by the Uniform Fire Prevention and Building Code (Uniform Code), with the exception of those buildings and structures regulated by the 2020 Residential Code of New York State.

To determine the maximum occupant load of a building, structure, or part thereof, that is either new or where required by the 2020 Existing Building Code of New York State (2020 EBCNYS), code users should generally utilize Section 1004 and Table 1004.5 of the 2020 Fire Code of New York State (2020 FCNYS) titled “Maximum Floor Area Allowances Per Occupant.” For areas with fixed seating, the occupant load shall be determined in accordance with Section 1004.6 of the 2020 FCNYS. Based on the calculated occupant load of the building, structure, or part thereof, a determination is made for the capacity of the means of egress in terms of size, number, location, and other applicable code provisions, using the remainder of Chapter 10 of the 2020 FCNYS. The same provisions apply to yards, patios, occupied roofs, and similar outdoor areas (see Section 1004.7). Parallel provisions are provided in Chapter 10 of the 2020 Building Code of New York State (2020 BCNYS). Additionally, provisions specific to *mall buildings* and *aircraft-related occupancies* that are either new or where required by the 2020 EBCNYS, are found in Chapter 4 of the 2020 BCNYS.

For existing buildings, Section 1031.11 of the 2020 FCNYS indicates that “*the occupant load of buildings or portions of buildings shall not exceed the capacity of the means of egress from the building or portions thereof.*” Similar to new construction, the maximum occupant load is calculated per Section 1004, however, the occupant load may need to be reduced based on the capacity of the existing means of egress facilities.

There are some exceptions to calculating the occupant load of buildings, structures, or parts thereof in accordance with Table 1004.5. For example, an exception to Section 1004.5 for areas without fixed seating allows the fire code official to approve an occupant load determined based on the actual number of occupants for whom “*the space, floor or building is designed, although [the values may be] less than those determined by calculation.*” Additionally, Section 1004.5.1 allows the occupant load to be increased beyond the numbers established in Table 1004.5, “*provided that all other requirements of the code are met*” based on the increased number, but in no instance shall the occupant load exceed 1 person per 7 square feet. This increase in occupant load may result in the need for additional means of egress facilities and may have an impact on other code provisions as outlined below.

In addition to determining the capacity of the means of egress, the occupant load affects the application of other code provisions. Some examples of code provisions that may be affected by the occupant load include, but are not limited to, determining the number of plumbing fixtures in accordance with Section 2902 of the 2020 BCNYS and determining fire protection and life safety system requirements in accordance with Chapter 9 of the 2020 BCNYS.

Both new and existing rooms or spaces that are assembly occupancies are required to post the occupant load in a conspicuous place, near the main exit or exit access doorway from the room or space (see Sections 1004.9 and 1031.12 of the 2020 FCNYS).

This Code Outreach Program was issued to guide code users in understanding how to calculate the occupant load of new and existing buildings and structures regulated by the Uniform Code. The occupant load of every space should be calculated in direct coordination with the authority having jurisdiction, such as the local building department where the building or structure is located. If an authority having jurisdiction has any further questions about code requirements for occupancy loads, please contact our Technical Support Unit by email at codes@dos.ny.gov or by calling 1-518-474-4073.

Please note that there could be additional restrictions on the occupancy or use of a building or structure, such as due to the recent Executive Orders issued by Governor Andrew Cuomo in light of the Covid-19 pandemic. For more information on how the Executive Orders impact the occupancy or use of a building or structure, please visit the Governor’s website at <https://www.governor.ny.gov/> and the New York Forward website on re-opening at <https://forward.ny.gov/>.

DBSC - A Division of Department of State
OFPC – An Office of the Division of Homeland Security & Emergency Services

If you have questions pertaining to the Code Outreach Program, email us at COP.codes@dos.ny.gov

If you have questions pertaining to the Uniform Code or Energy Code, email our technical support group at: codes@dos.ny.gov

To cancel your subscription to this email list, click on the unsubscribe link found [here](#).