

2015 SBC Code Interpretation

SBC 1604.5

Risk Category Occupant Load Calculations

Release Date: February 27, 2020

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The following interpretation, policy or code alternate is intended to provide guidance to staff for consistency of review and is subject to change without notice. Application of this interpretation, policy or code alternate to specific projects may vary.

Code Issue: What does SDCI allow for converting gross to net floor area when calculating building occupant load versus the 5,000-occupant threshold for a Risk Category III designation? Does SDCI allow consideration of non-simultaneous occupancy?

Code Modification:

A building's Risk Category designation per SBC Table 1604.5 may depend on the building's calculated occupant load. Footnote "a" allows the net floor area to be used in the occupant load calculations when SBC Table 1004.1.2 refers to gross floor area. Programming is often not far enough along to measure the net floor area when the Risk Category needs to be determined for structural design purposes.

SDCI will accept the following gross to net area conversions and non-simultaneous use assumptions when calculating the occupant load for Risk Category designation. Unless noted otherwise, gross occupant load factors per 2015 SBC Table 1004.1.2 shall be used to calculate the occupant load based on the designated function of the space. The percent reduction listed shall be applied to convert the gross calculated occupant load to the net calculated occupant load. These reductions are permitted for calculating occupant load relative to the 5,000-occupant threshold for Risk Category III designation only and do not apply to other provisions of the building code.

- Parking
 - 50% gross to account for circulation and non-simultaneous occupancy.
- Office
 - 85% gross to account for circulation.
 - Office occupant load factor of 150 gross per the 2018 IBC shall be permitted.
- Office Assembly (including accessory assembly occupancies per SBC 508.2)
 - 85% gross to account for circulation, kitchen, landscaping, etc., or
 - 100% net.
 - No occupant load at Cafeterias within a tenant space serving only those tenants within the building to account for non-simultaneous occupancy.
- Assembly
 - 85% gross.
- Pre-function adjacent to Ballroom
 - No occupant load if occupant load factor of 15 net results in a lower occupant load than associated ballrooms.

- Residential
 - 75% gross, or
 - 100% net. Net occupant load calculation shall be permitted to exclude circulation, bathrooms, storage, permanent fixtures. Circulation includes external corridors and hallways internal to unit.
 - No occupant load at private balconies
- Residential Assembly (including accessory assembly occupancies per SBC 508.2)
 - 85% gross to account for circulation, kitchen, landscaping, etc., or
 - 100% net.
 - No occupant load at green roofs provided they are not occupied.
- Retail
 - 75% gross to account for circulation, storage, and restrooms.
- Restaurants (public)
 - 75% gross to account for circulation, storage, kitchen, and restrooms.
- Exercise Rooms
 - 85% gross to account for circulation at fixed equipment areas only.
 - Pools, hot tubs, and locker rooms to be included in gross floor area.
- Storage/Mech/Bike Storage/Loading Dock
 - No occupant load.

Use of this Code Interpretation requires a formal [Code Modification](#) proposal to be submitted to SDCI.

For questions about whether this code solution applies to your project:

- *If you have submitted a permit application, contact the Building Code plan reviewer assigned to your application*
- *If you have not submitted an application, send us a question through the SDCI website <http://www.seattle.gov/dpd/toolsresources/sendusaproblem/default.htm> or in person at the Applicant Services Center. Visit the Applicant Services Center website for more information about hours and location <http://www.seattle.gov/dpd/aboutus/whoweare/applicantservicescenter/default.htm>*