
K-12 OCCUPANCY CLASSIFICATION AND LOAD FACTORS

IR A-26

References:

California Code of Regulations (CCR), Title 24
Part 1, California Administrative Code (CAC)
2007 and 2010 CAC, Sections 303, and 304
Part 2, California Building Code (CBC)
2007 CBC, Section 305, 2010 CBC, Section 426
2007 and 2010 CBC, Sections 305, 1004, 1002,
and 1004.7. Table 1004.1.1

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Discipline: Fire and Life Safety

This Interpretation of Regulations (IR) is intended for use by the Division of the State Architect (DSA) staff, and as a resource for design professionals, to promote more uniform statewide criteria for plan review and construction inspection of projects within the jurisdiction of DSA which includes State of California public elementary and secondary schools (grades K-12), community colleges, and state-owned or state-leased essential services buildings. This IR indicates an acceptable method for achieving compliance with applicable codes and regulations, although other methods proposed by design professionals may be considered by DSA.

This IR is reviewed on a regular basis and is subject to revision at any time. Please check the DSA web site for currently effective IRs. Only IRs listed in the document at <http://www.dgs.ca.gov/dsa/Resources/IRManual.aspx> at the time of plan submittal to DSA are considered applicable.

Purpose: To provide clarification on occupancy classifications and occupant load factors for Kindergarten through grade 12 (K-12) school projects under the jurisdiction of the Division of the State Architect (DSA).

Background: The building code analysis for the project must reflect the occupancy classifications assigned and justify the construction types and use of areas shown. Occupancies may include:

- Accessory uses, per CBC Section 508.3.1
- Incidental Use, per CBC 508.2.5,
- Non separated, per CBC Section 508.3.2
- Separated, per CBC 508.2.4,
- or combination of these.

(See definitions for "net" and "gross" used in occupant load factors per 2010 CBC Chapter 10 Section 1002)

1. Occupancies and Load Factors:

- 1.1 General education classrooms** shall be classified as a group "E" Occupancy with an occupant load factor of 20 (net).
- 1.2 Science Lab Classrooms** where exempt amounts of hazardous materials are used or stored as identified in the CBC Table 307.1(1) and (2), the room shall be classified as a group "E" Occupancy, with an Occupant Load Factor of 50 (net).
- 1.3 Laboratories:** The group "L" designation for "Laboratories" will not apply to public schools (K-12).
- 1.4 Libraries** are classified as group "A-3" occupancy. The reading areas shall use the occupant load factor of 50 (net) and the book stack areas 100 (gross).
- 1.5 Shops for Woodworking, Auto, Metal/Welding,** and similar uses shall be classified as group "E" occupancies with an occupant load factor of 50 (net).

- 1.6 Home economics classrooms** shall be classified as a group "E" occupancy. Where there are stoves or sewing machines or other similar equipment in use, the occupant load factor of 50 (net) shall be applied.
- 1.7 Exercise Rooms** such as Weight Rooms, Aerobics Rooms, and Gymnasiums that do not have other uses or spectator seating: The occupancy classification shall be group "E" occupancy when occupant load is less than 50 persons and group "A-3" when occupant load exceeds 49 persons. An occupant load factor of 50 (gross) shall be used.
- 1.8 Locker Rooms** shall be classified as group "E" occupancy with an occupant load factor of 50 (gross).
- 1.9 Multi-Use Gymnasiums or Rooms:**
- 1.9.1** An occupancy classification of the most restrictive use shall be assigned to multi-use gyms or rooms.
- 1.9.2** Where bleachers (telescoping or fixed) are installed the occupant load shall be determined by the number of bleacher seats available (See 2007 and 2010 CBC, Section 1004.7). The open area(s) beyond the bleachers without fixed seating shall use an occupant load factor of 7 (net).
- 1.9.3** Raised Platforms and Stages shall use an occupant load factor of 15 (net) to determine the occupant load and exiting for platform area. At least one approved means of egress shall be provided from each side of a stage. Audience curtains or movable partitions shall not obstruct the required exiting from platforms or stages.
- 1.10 Kitchen:**
- 1.10.1** If the kitchen floor area is less than 10% of the total building floor area and the kitchen does not sell or supply cooked food to other campuses/sites, it shall be assessed as an "accessory space" to the adjacent occupancy. A separation wall is not required (CBC 508.3.1). Kitchen floor area shall include related spaces such as refrigerator, walk-in freezer, storage, etc. Commercial or noncommercial equipment is permitted.
- 1.10.2** If the kitchen area is designed as non-separated use per CBC 508.3, the most restrictive code requirements for all uses included in the space would apply.
- 1.10.3** If the kitchen floor area is greater than 10% of the total building area and is used for selling or distributing cooked food to other campuses, regardless of kitchen equipment type and sprinkler protection, it will be assessed as an "F1" occupancy classification, [High hazard]. A separation wall will be required per Table 508.4.
- Note:** A Type I kitchen hood and grease exhaust system with proper and listed fire suppression system installed per 904.11 is required in kitchens where grease laden vapors are produced.

1.11 Theaters and Auditoriums:

1.11.1 An Occupancy Classification of "A-1" shall be assigned where fixed seating is provided for viewing of productions and performing arts. The occupant load shall be determined by counting the number of seats.

1.11.2 Auditorium areas without fixed seating shall use an Occupant Load Factor of 7 (net) to determine the occupant load and exiting requirements.

1.12 Cafeterias: Cafeterias shall be classified a group "A-2" and shall have the occupant load calculated using 2007 and 2010 CBC, Section 1004.7, or use an occupant load factor of 15 (net) where tables and chairs are provided without fixed seating.

1.13 Day Care:

1.13.1 Day Care buildings, rooms and/or areas meeting the requirements of Section 305.2 shall be classified as a group "E" occupancy.

1.13.2 Per the State Fire Marshal's amendment to CBC Section 305.2, day care facilities with more than 6 occupants 2 years of age or older, *"where the occupants are not capable of responding to an emergency situation without physical assistance from the staff, shall be classified as an "I-4 occupancy."* Facilities dedicated to students as noted shall be subject to CBC Section 426 for exiting and other requirements.

1.13.3 The occupant load factor used to calculate the occupant load shall be 35 (net) for both a group "E" Day Care and group "I-4" occupancy.

1.14.4 In some instances, the DSA plan reviewer may question the group "E" occupancy designation, in which case the architect will be required to obtain a letter from the school district (Superintendent, or Facilities Director), to provide more information for DSA plan reviewer about occupants.

Information to be provided shall include:

- Age groups,
- Whether custodial or personal care is provided,
- Ability of occupants to evacuate the building unassisted.