

# APPENDIX A

## Assembly Occupancies

### A.1 HOW TO USE THIS APPENDIX

This appendix contains information related to assembly occupancies.

In addition to the generic information listed in the “Requirements” section in Guideline E-01, the information in the “Plan Requirements” section of this appendix must be provided on your plan.

### A.2 SCOPE

#### A.2.1 OCCUPANCY CLASSIFICATION

**A2.1.1 Assembly Occupancies** – Assembly occupancies are buildings or portions of buildings used for the gathering of 50 or more people for purposes such as civic, social or religious functions; recreation; food or drink consumption; awaiting transportation (e.g., airports, train and subway platforms/stations); or production facilities with live audience stages. Training rooms, classrooms, lecture halls, and similar spaces used for education or instruction of adults are also considered assemblies when the occupant load is 50 or more. Accessory dining and gathering spaces for employees, such as break rooms and conference rooms, in businesses, factories, and similar occupancies are also considered assemblies when greater than 750 square feet in area.

**A.2.1.2 Aggregate assembly spaces** – Where no individual room used for the purposes listed above has an occupant load of 50 or more but multiple similar rooms located in the same general part of a building have an aggregate occupant load of 50 or more, the portion of the building containing these rooms may be classified as an assembly occupancy. See the scenarios in Buildings 1 through 4 in Attachment A.1 for examples.

**A.2.1.3 Division** – Assembly occupancies are separated into Divisions, depending on the type of use or activities taking place. An assembly space used for multiple functions may have more than one Division.

A-1: theaters, performing arts centers, television and radio studios with live audiences, and similar facilities

A-2: restaurants, bars, lounges, banquet halls, nightclubs, cafeterias, employee break rooms, and other facilities intended for food and/or drink consumption

A-3: meeting/conference/training/lecture rooms, places of worship, gymnasiums, indoor sports areas without spectator seating, and other similar spaces used for general assembly purposes and not classified under another Division

A-4: indoor sports arenas with spectator seating

A-5: outdoor sports arenas and stadia, amusement park structures, grandstands and bleachers

**A.2.1.4     Multiple Occupancies/Uses** – Where more than one division is applicable, conformance with the most stringent requirements for each division will be required. For example, an event center may host both meetings (A-3) and banquets (A-2) simultaneously in the same building or at different times in a single room. The same is applicable when more than one occupancy is present, such as when an A occupancy multi-purpose room also serves part-time as a play area for an E occupancy daycare – the space would have to comply with the most stringent requirements for an A and an E occupancy.

**A.2.1.5     Occupied Roofs** – Occupied roofs are assigned the occupancy they most nearly resemble and where allowed by code, the sprinkler, alarm and means of egress provisions can be found in CBC 503.1.4. From a firefighting perspective these occupied roofs function as a story although they do not technically meet the definition of a story for the purpose of calculating the allowable area or story limitation set forth in the CBC Chapter 5. Please note that overhead structures are not allowed more than 48 inches above the surface of the occupied roof.

## A.3 PLAN REQUIREMENTS

### A.3.1 OCCUPANT LOAD

**A.3.1.1 Occupant load factors, CBC 1004, Table 1004.5** – Refer to the table provided below and CBC Table 1004.1.2 for the appropriate occupant load factor for each space. When a space can have more than one use, the occupant load factor giving the greatest number of occupants must be used.

USE	OCCUPANT LOAD FACTOR (sq. ft./person)
Lobby areas	15
Waiting area or Queuing area in a restaurant, theater, or amusement ride	5
Lobby or similar pre-function space serving a gymnasium, theater, or other assembly	5
Dining areas, conference rooms, break rooms, lounges, clubhouses or cafeterias with tables and chairs or similar furnishings	15
Classrooms and training rooms with rows of tables and chairs or individual desks arranged for instruction	20
Multipurpose rooms and other spaces used for assembly purposes (unfurnished or with only chairs)	7

Gymnasium, weight room, wrestling room, or other spaces dedicated to sports activities	50, or one person per piece of equipment, whichever results in a higher occupant load
Gymnasium, dance, aerobics, yoga, martial arts rooms when used for assembly purposes such as parties, social events, athletic meets, or demonstrations	50 performance area, 7 viewing/seating area
Swimming pool	50
Swimming pool deck	15
Locker rooms	50
Library stacks	100
Library reading rooms	50
Bench seating, pews	1 person per 18"
Booth seating; non-fixed seating at bars	1 person per 24"
Theater, seating area with fixed seats	Seat count
Theater, black box or without fixed seats	7
Stages, platforms, and similar areas	15
Gallery or museum	30
Commercial or catering kitchens	200
Kitchen space integral or open to a clubhouse or similar space	15
Storage and mechanical rooms	200
Offices and similar administrative areas for employees	150

**A.3.1.1.1 Non-fixed Seating** – Calculate the occupant load of dining areas at 15 square feet per person. If a bar is present, calculate the number of patrons sitting or standing at the bar at 24 inches per person; this will be in addition to the occupants seated elsewhere in the bar or dining areas.

**A.3.1.1.2 Combination Fixed/Non-fixed Seating** – Calculate the occupant load for fixed seating areas as shown above. Calculate the remaining area occupied by non-fixed tables and chairs at 15 square feet per person. The occupant load of the dining space will be the combined sum of these two totals.

**A.3.1.1.3 Furniture Plan** – a furniture layout plan will be required to justify use of the higher occupant load factor. In clubhouses where the kitchen is directly open to and integrated with the lounge area, use the same occupant load as applicable to the lounge area. Catering kitchens that are physically separated from the lounge area may be calculated at 200 square feet per person.

**A.3.1.2 Occupant Load Sign** – The occupant load to be posted on the occupant load sign(s) is the total of all publicly accessible spaces associated with the assembly use, for instance the waiting area, bar, and dining room in a restaurant, and typically does not account for those individuals that would normally be found in back-of-house

spaces supporting the assembly, such as a restaurant's kitchen area or manager's office when they have access to an exit separate from that used by the public.

### **A.3.2 CLASSROOMS ACCESSORY TO PLACES OF WORSHIP, CBC 303.1.4 –**

Sunday school rooms, religious study rooms for children, lecture halls, and similar classroom spaces found at places of religious worship that could otherwise be considered an E occupancy shall be classified as an A occupancy if all of the following apply:

- The occupant load of each of the classrooms is less than 100
- The classrooms qualify as an accessory use
- The rooms are located in the same building as the main sanctuary
- The aggregate area of the classrooms is less than 10% of the story occupied
- The classrooms are not used for commercial daycare (daycare outside of normal hours of services or when guardians do not remain on-site) or for educational purposes by persons not normally frequenting the place of worship.

### **A.3.3 EGRESS**

 **A.3.3.1 Panic Hardware, CBC 1010.2.9 –** Panic hardware shall be provided on all exit doors serving assembly spaces, with the exception of the main exit door for some buildings as described in the next section. Panic hardware shall be provided on doors serving spaces with 50 or more occupants in E, I-2, and I-2.1 occupancies and spaces used for assembly purposes that are not classified as "A" occupancies. Doors serving spaces containing hazardous materials in L occupancies and doors in H occupancies shall be provided with panic hardware regardless of occupant load. Signify this on the plan with a "PH" by each door or on the door schedule.

Per CBC 1010.1, where additional doors are provided for convenience purposes and those doors can function as egress doors, they shall be equipped with panic hardware when panic hardware is needed on the required egress doors. French doors/windows, secondary or tertiary entrance doors, or similar decorative or convenience doors shall not be equipped with knobs, levers, handles or similar hardware that would suggest that they are available for use as an exit door; key locks without operating knobs/levers, concealed latches, floor bolts, slide latches, and similar mechanisms may be used in lieu of operating knobs/levers to secure these assemblies.

**A.3.3.2 Panic Hardware on the Main Exit, CBC 1010.2.4 Exception 3 –** Panic hardware that would normally be required on the main exit door from a building housing an A occupancy with less than 300 occupants or a place of religious worship may be omitted if a durable sign is placed immediately adjacent to the door in a visible location and reads "*This door to remain unlocked when this space is occupied.*" Where the main exit consists of a pair of doors, the sign must read "*These doors to remain unlocked when this space is occupied.*" In projects undergoing tenant improvement, existing signs reading "*This door must remain unlocked during business hours*" or similar must be changed to read as described above.



In addition to the sign, the door shall be equipped with a locking device that is operable only by the use of a key and that visually indicates whether the door is secured (e.g., the word “LOCKED” or “OPEN” appears in a small window by the lock when it is engaged or disengaged). Other types of locks or latches, including thumb turns, slide bolts, or secondary deadbolts are not permitted.

Panic hardware may only be omitted from *a single door or a single set of double doors* serving as the *main exit* from an A occupancy with less than 300 occupants or a place of worship. Where a group of multiple single or double doors constitutes a single exit point, only one door or one double door may have a sign and indicating lock in lieu of panic hardware – all other doorways must have assemblies equipped with panic hardware.

#### **A.3.3.3 Exiting from A Occupancies with 300+ Occupants, CBC 1030.2, 1030.3**

– Buildings or portions thereof housing A Occupancies with an aggregate occupant load of 300 or more must have a main exit that is capable of accommodating at least one-half of the occupant load of the areas it serves. The remaining secondary exits serving the space shall also be capable of accommodating at least half of the occupant load. The main and secondary exits shall be sized such that loss of any single door or group of proximate doors does not reduce the available egress width by more than one half. Where a single door or set of double doors does not provide sufficient egress width to accommodate the number of occupants a group of adjacent doors may be considered the main exit provided that all such doors function equally as the primary exits from the space (e.g., the banks of double doors to each side of the ticket booth in a multi-theater complex). Additionally, certain structures such as stadia, convention centers, and some civic complexes may not have a well-defined primary entrance or may have multiple main entries oriented toward different streets or parking areas. Where this is the case, these multiple entries may be considered the main exit where they are distributed evenly around the building to facilitate the rapid evacuation of the assembly space(s).

**A.3.3.4 Measurement of Aisles and Aisle Accessways, CBC 1030.13.1**– The clear width of the means of egress in dining rooms shall be measured with the back of non-fixed seats located 19 inches from the edge of the table.

**A.3.3.5 Floor-level exit signs** – In addition to overhead visual exit signs, floor level exit signs shall be provided in interior corridors of Group A occupancies, unless the fire area is protected with sprinklers and the sprinkler system is supervised

### **A.3.4 SPRINKLERS**

**A.3.4.1 When Required, CBC 903.2.1** – Sprinklers shall be provided in assembly occupancies that meet any of the following criteria:

- 1) Multiple fire areas where occupancies share exit or exit access components and the combined occupant load is 300 or more persons.
- 2) A-1, A-3, A-4 occupancies

- (a) In fire areas >12,000 square feet
- (b) With fire areas having 300+ occupants
- (c) In fire areas that are located on a floor other than the level of exit discharge
- (d) In structures >12,000 square feet containing 2 or more fire areas with exhibition/display rooms not separated by 4-hour fire walls without penetrations
- (e) Fire areas containing a multi-theater complex

3) A-2 occupancies

- (a) In fire areas >5,000 square feet
- (b) With fire areas with 100+ occupants
- (c) In fire areas that are located on a floor other than the level of exit discharge
- (d) In structures >5,000 square feet containing 2 or more fire areas with A-2 occupancies not separated by 4-hour fire walls without penetrations.

4) A-5 occupancies

- (a) In concession stands, retail areas, press boxes, and other accessory use areas over 1,000 square feet

5) Stages and platforms, CBC 410.6, 2022 NFPA 13 Section 9.3.13

**A.3.4.2 Stages, platforms, and associated spaces** – In an otherwise un-sprinklered building, the portion of the building containing a stage, as defined in CBC Chapter 2, and all accessory spaces such as dressing rooms, lounges, green rooms, shops, and storerooms shall be sprinklered if the stage exceeds 1000 square feet or 50 feet in height or if curtains and scenery are retractable vertically. Sprinklers are also required if combustible hangings beyond a single main curtain, borders, legs, and a single backdrop are provided.

When sprinklers are required either for the stage area or throughout the occupancy or structure, the area underneath stages or raised platforms shall also be sprinklered. Sprinklers may be omitted beneath stages and platforms if the space beneath is less than 4 feet in height, and either of the following two conditions is satisfied:

- 1) the space beneath the stage or platform is completely filled with non-combustible insulation, or
- 2) the area underneath the stage or platform is not used for any purpose other than storage of tables and chairs or routing of low-voltage wiring, ducting, or similar equipment that does not present a fire hazard; and
  - i. the underside of the stage or platform is constructed to be either at least one-hour rated (5/8-inch Type X drywall or equivalent); or
  - ii. the stage or platform is constructed of fire-retardant treated wood.

**A.3.4.3 Sprinkler Coverage** – Sprinklers are required to be installed throughout the fire area containing the assembly occupancy and any fire areas that contain egress paths serving the assembly. Where the assembly is above or below the level of exit discharge, the sprinkler system shall also protect all floors between the assembly and

the level of exit discharge. In A-5 occupancies, sprinklers shall be required only in those individual areas indicated for that Division.

### **A.3.5 ALARMS, CBC 907.2.1**

**A.3.5.1 When Required** – An alarm system shall be provided when the occupant load of a fire area containing an A occupancy exceeds 299.

**A.3.5.2 Voice Evac Alarm** – When the occupant load exceeds 999, the alarm shall be provided with voice evacuation capability, including a pre-recorded voice message and a microphone. When applicable, note this on the coversheet of the plan.

**A.3.6 FIRE PITS, FIRE PLACES, AND OTHER SOURCES OF OPEN FLAME, CFC Chapter 3, CCR Title 19 Division 1** – As open flames are potential sources of ignition for structures and their contents and injury to occupants, they are prohibited from being installed in assembly occupancies without proper safeguards in place. Whenever fireplaces are proposed for an assembly, note on the plan that a mesh, glass, or other non-combustible screen shall be provided to prevent contact with the flame and embers from escaping. Fire pits *may* be permitted if they are designed to minimize the potential for accidental contact with the flame by use of a screen or a ledge, hearth, or other element intended by virtue of height, width, or location to prevent occupants from stumbling or falling into the flame. Open fire pits shall be located a minimum of 10 feet from combustible construction. Fireplaces and fire pits shall include a hood/chimney to vent hot gases and fumes if installed within or under a structure.

Open flame cooking devices utilizing charcoal or other solid fuel shall not be operated in restaurants except in the kitchen area or other locations at least 10 feet from combustible construction unless the restaurant is protected by an automatic sprinkler system. If such devices are used to cook foods that release grease-laden vapors, a Type I exhaust hood and a hood and duct extinguishing system shall be provided to protect the device.

Other use of open flame for decorative or cooking purposes shall be as required by CFC 308 and other applicable sections of the Building, Fire, and Mechanical Codes and CCR Title 19.

## ATTACHMENT A.1

### AGGREGATE ASSEMBLY SPACES

**BUILDING 1:** Each small meeting room has an occupant load of 20 and when considered individually would not be classified as an assembly. As the occupants of these meeting rooms are not concentrated in one part of their building, their potential exposure to a hazard, as a group, is not as high as it would be in either Building 2 or 3. The entire building would be classified as a B occupancy.

**BUILDING 2:** Each small meeting room has an occupant load of 20. Individually, each meeting room would not be classified as an assembly, but due to the proximity, combined occupant load, and egress system shared by the four meeting rooms shaded in blue, this part of the building presents a hazard that is very similar to the single meeting room in Building 3 and would be considered to be an assembly occupancy (A-3). Occupancy separation may be required for the interface between the office and assembly spaces, though egress requirements common to an assembly (e.g., panic hardware, door swing, exit signs, emergency lighting) would only be applied from the point where the combined occupant load has reached 50 (areas in red), not within each individual meeting room.

**BUILDING 3:** The large blue meeting room is the same area as the four individual blue meeting rooms in Building B and has the same aggregate occupant load of 80. This room would be classified as an assembly. Occupancy separation may be required between the A-3 occupancy meeting room and adjacent B occupancy office space, and assembly egress requirements (number of exits, panic hardware, door swing direction, etc.) would apply to the meeting room and along the egress path from the meeting room through the open office to the exterior.

**BUILDING 4:** In the karaoke facility in Building 4, each individual room has less than 50 occupants and would not qualify as an assembly on its own. However, when taken as a whole, the building contains more than 50 occupants who are in the building for the purpose of recreation, so the whole facility would be classified as an assembly. The individual karaoke rooms would not need to meet the egress requirements for an assembly occupancy, but the remainder of the egress system would.

