Basic Requirements for Means of Egress

Codes and standards that regulate a building’s means of egress system can be complicated, and will vary depending on the use of the particular building, area, or room. It is not possible to summarize all of these requirements in a single guideline. However, there are some basic requirements that apply to most, if not all, means of egress evaluations. These basic requirements are listed below, and are meant to help facility managers and designers recognize that a room or space is obviously over capacity, or that a second means of egress will be necessary. Please keep in mind that this is only a general guide, and should not be relied upon to set occupancy capacities. Our office must be consulted before increasing the posted occupancy limit for any room or space, and plans must be submitted to our office for any construction, remodeling, or renovation project that will alter the means of egress.

1. For any room or space with only one exit, the maximum occupant load should not exceed 50 people.

2. For any room or space with only two exits, the maximum occupant load should not exceed 500 people.

3. For any room or space with only three exits, the maximum occupant load should not exceed 1000 people.

4. For rooms with fixed seating (such as auditoriums), the occupant load should not exceed the number of fixed seats, plus the number of designated wheelchair spaces, if provided. The occupant load for the stage or platform would be calculated separately from the seating area.

5. For rooms with more than 50 occupants, doors must swing in the direction of egress (i.e. the doors must swing out of the room).

6. For rooms with more than 100 occupants, doors should be equipped with panic hardware (crash bars).

7. In buildings equipped throughout with automatic sprinkler protection, exit doors in each room should be separated by at least 1/3 of the diagonal dimension of the room. In other words, if the room has two doors, but they are very close to each other, it only counts as one door, and the maximum occupant load would still be limited to 50 or fewer. In buildings without automatic sprinkler protection, the doors must be separated by at least ½ the diagonal dimension of the room. For example, the diagonal dimension of a square, 50’ by 50’ room would be approximately 70 feet. In a sprinklered building, the exit doors in this room would have to be separated by at least 23 feet. In an unsprinklered building, the exit doors would have to be separated by at least 35 feet.

8. Exit doors should lead to a corridor, an exit stair enclosure, or directly to the exterior of the building. Exits should not pass through adjacent rooms, and should not pass through hazardous areas (such as kitchens, storage rooms, loading docks, etc.) However, in some cases, such as an auditorium where people exit through a lobby, egress through an adjacent room (the lobby) will be acceptable. If there are questions regarding egress through adjacent areas, they should be brought to our attention for further evaluation.

9. Exit doors must not be equipped with locking hardware that would allow an occupant to be locked inside the room or space. Exit doors should also not be equipped with secondary locking devices, such as
a deadbolt or slide bolt, etc. It should be possible to open any designated exit door using a single motion, without the use of a key, tool, or special knowledge.

10. Each occupant must be provided with at least .2 inches of egress width, which in classrooms will generally be restricted by the width of the exit doors. For example, if the exit door from a classroom is 32 inches wide, a maximum of 160 occupants could egress through that door. Of course, this is also restricted by the other rules above, and if there were only one door, no matter how wide, the maximum number of occupants would still be limited to 50. However, the width of the doors may come into play when evaluating larger rooms.

11. Occupancy is also limited by the size of the room, and depends on how the room is being used. Classroom occupancy is calculated at 20 square feet per person. Conference room occupancy is calculated at 15 square feet per person. Rooms without furniture (such as a relatively empty room used for a stand-up reception) would be calculated at 7 square feet per person.

12. Egress should always be limited to the smallest number of people calculated by the above methods. In other words, if a 500 square foot classroom has two doors, and the doors are separated by an adequate distance, and the doors are wide enough, and the doors swing out of the room, and the doors are equipped with the appropriate hardware, the occupant load would still be limited to 25 people, based on the size of the room (500 square feet divided by 20 square feet per occupant for a classroom). However, in such a case, the Code authority can allow an increase in the occupant load, based on an evaluation of that specific room. Basically, the Code allows the Authority Having Jurisdiction to increase the occupant limit, so long as the means of egress can accommodate the larger number of occupants.