

STEPS TO FIND AN OCCUPANT LOAD

INTRODUCTION TO OCCUPANT LOAD SERIES BY MEYERFIRE UNIVERSITY | FEBRUARY 2023

SUMMARY

In this series we've looked at calculations for an individual room or area, but what about when we have an entire floor? Or an entire building?

When calculating an occupant load for a large area with multiple uses, we often group similar use areas together to make the calculation simpler and faster. This process is not defined by code but in general is conventional practice. These steps include:

- #1 Check for **local code amendments** on this process. Few amendments dictate that each room must be calculated separately, but they do exist.
- #2 Determine the **total area** of the floor plan or building, and make note of it.
- #3 Determine the **primary use** for the floor or building. This is the way the building is intended to be used, which affects the use and occupant load, not the building's occupancy type. Does the floor/building have one primary and consistent use throughout?
- #4 **Isolate** any room or space with a **different intended use** than that of the primary use area. We're going to calculate this isolated space separately.
- #5 **Isolate** any room or space which has an **occupant load near 50 or more**. This helps clarify which portions of the plans are subject to additional requirements. A large conference room with 50 or more occupants, for example, will usually require two exit access doors.
- #6 Determine the **area of each isolated room or space** (from the prior two steps) and the remaining area that falls under the primary use for the floor or building. If the applicable code uses *Net Area*, then exclude areas that are normally unoccupied or transient. Include these spaces for *Gross Area* calculations.
- #7 Apply an **occupant load factor to each isolated room or space**, and an Occupant Load Factor to the primary use area.
- #8 **Calculate the occupant load** for each isolated room/space and the primary use area by dividing the area by the occupant load factor and rounding up to the nearest whole number.
- #9 **Document** the area, assigned occupant load factor, and occupant load for each isolated space and the primary use space.



Example Life Safety Plan

(note that rooms with a similar intended use can be grouped together in an occupant load calculation)

VIDEO LINK

www.meyerfire.com/university/steps-to-calculate-an-occupant-load

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