



Means of Egress: Handrails

No. FP-2010-12 March 23, 2010

Learning Objective: The student shall be able to describe the building and fire code requirements for handrails.

Handrails adjacent to stairways and ramps are an important part of the means of egress system. Occupants who are traveling routinely through a building, or urgently trying to escape an emergency, often need a handrail to stabilize their walking.

Handrails must be firmly attached to the building and be capable of withstanding a load of 50 pounds per linear foot (plf) (0.73 kN/m) applied in any direction at the top and to transfer the load through the supports to the structure.

Handrail gripping surfaces, like the one pictured, must be continuous from the beginning of the stairway or ramp to the point of exit discharge. Notice that the handrail in the picture turns parallel to the intermediate landing, then continues without interruption to the next floor level.



This handrail provides continuous gripping contact from the top floor to the bottom landing.

Handrail height, measured above the stair tread or finished surface of a ramp, should be between 34 and 38 inches (864-965 mm). The handrail height should remain consistent throughout the length of the stairs or ramp.

Those handrails that have a circular cross-section must have an outside diameter of at least 1- 1/4-inch (32 mm) and not more than 2 inches (51 mm). If the handrail is not circular, its perimeter must be between 4 and 6- 1/4-inches (102-160 mm) with a maximum cross sectional dimension of 2- 1/4-inches (57 mm). Clear space between the handrail and the adjacent wall must not be less than 1- 1/2-inch (38 mm) for jurisdictions enforcing the International Building Code, and 2- 1/4-inches (57 mm) for jurisdictions where National Fire Protection Association codes are in force.

Wide stairways should be arranged with intermediate handrails so all portions of the stairway width required for egress capacity are within 30 inches (762 mm) of a handrail. This does not mean all wide stairways must have intermediate handrails. The code official must first verify the width required for egress capacity and then confirm there is a handrail within 30 inches (762 mm) of that dimension.

For additional information, refer to your legally adopted building or fire code.

