

IRC Code Handout

IRC Section R311.7.4: Treads & Risers

Treads & Risers

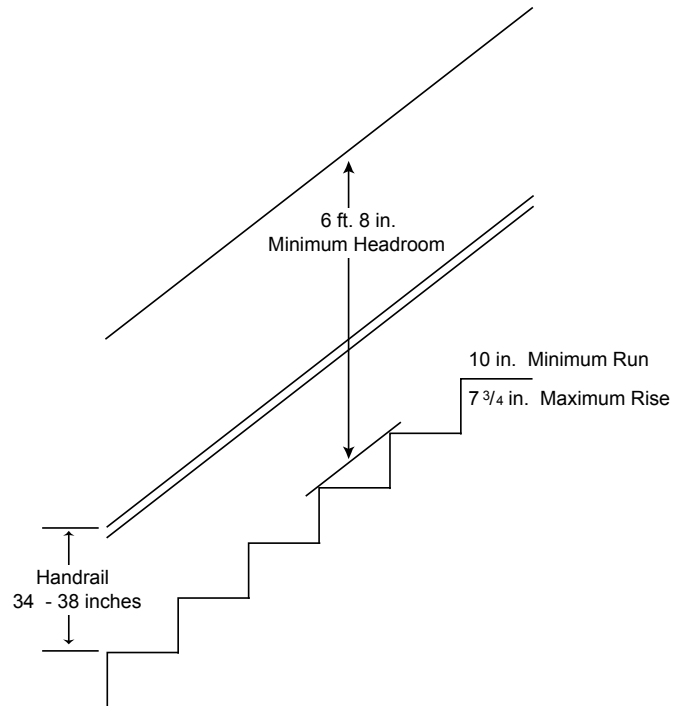
R311.7.4.1 Riser Height

R311.7.4.2 Tread Depth

Treads & Risers. The maximum riser height shall be 7¾ inches (196 mm) and the minimum tread depth shall be 10 inches (254 mm). The riser height shall be measured vertically between leading edges of the adjacent treads. The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. Treads with a depth less than 11" are required to have a minimum nosing of ¾" and a maximum nosing of 1¼".

The walking surface of treads and landings of a stairway shall be sloped no steeper than one unit vertical in 48 units horizontal (2-percent slope). The greatest riser height within any flight of stairs shall not exceed the smallest by more than ¾-inch (9.5 mm). The greatest tread depth within any flight of stairs shall not exceed the smallest by more than ¾-inch (9.5 mm).

Stairway Example



IRC Code Handout

IRC Code Section R311.7.7: Handrails

Handrails

Handrails

Handrails shall be provided on at least one side of each continuous run of treads or flight with four or more risers.

Height

Handrails height, measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm).

Continuity

Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1½ inch (38 mm) between the wall and the handrails.

Exceptions:

1. Handrails shall be permitted to be interrupted by a newel post at the turn.
2. The use of a volute, turnout, starting easing or starting newel shall be allowed over the lowest tread.

Handrail Grip Size

Type I. Handrails with a circular cross section shall have an outside diameter of at least 1¼ inches (32 mm) and not greater than 2 inches (51 mm). If the handrail is not circular it shall have a perimeter dimension of at least 4 inches (102 mm) and not greater than 6¼ inches (160 mm) with a maximum cross section of dimension of 2¼ inches (57 mm). Edges shall have a radius of .01 inch.

