

RESIDENTIAL RAMPS

2009 International Residential Code.

R311.8 Ramps.

R311.8.1 Maximum slope. Ramps shall have a maximum slope of one unit vertical in twelve units horizontal (8.3 percent slope).

Exception: Where it is technically infeasible to comply because of site constraints, ramps may have a maximum slope of one unit vertical in eight horizontal (12.5 Percent slope).

R311.8.2 Landings required. A minimum 3-foot by 3-foot landing shall be provided:

1. At the top and bottom of ramps.
2. Where doors open onto ramps.
3. Where ramps change direction.

R311.8.3 Handrails required. Handrails shall be provided on at least one side of all ramps exceeding a slope of one unit vertical in 12 units horizontal (8.33-percent slope).

R311.8.3.1 Height. Handrail height, measured above the finished surface of the ramp slope, shall not be less than 34 inches and not more than 38 inches.

R311.8.3.2 Handrail grip size. Handrails on ramps shall comply with Section R311.5.8.3. (See below)

R311.8.3.3. Continuity. Handrails where required on ramps shall be continuous for the full length of the ramp. 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 1.5 inches between the wall and the handrails.

R311.7.7.3Grip-size. All required handrails shall be of one of the following types or provide equivalent graspability.

1. Type I. Handrails with a circular cross section shall have an outside diameter of at least 1 1/4 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 6 1/4 inches (160 mm) with a maximum cross section of dimension of 2 1/4 inches (57 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).

2. Type II. Handrails with a perimeter greater than 61/4 inches (160 mm) shall have a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of 3/4 inch (19 mm) measured vertically from the tallest portion of the profile and achieve a depth of at least 5/16 inch (8 mm) within 7/8 inch (22 mm) below the widest portion of the profile. This required depth shall continue for at least 3/8 inch (10 mm) to a level that is not less than 13/4 inches (45 mm) below the tallest portion of the profile. The minimum width of the handrail above the recess shall be 11/4 inches (32 mm) to a maximum of 23/4 inches (70 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).

R311.7.7.4 Exterior wood/plastic composite handrails.

Wood/plastic composite handrails shall comply with the provisions of Section R317.4.

R317.4 Wood/plastic composites. Wood/plastic composites used in exterior deck boards, stair treads, handrails and guardrail systems shall bear a *label* indicating the required performance levels and demonstrating compliance with the provisions of ASTM D 7032.

R317.4.1 Wood/plastic composites shall be installed in accordance with the manufacturer's instructions.