



CITY OF TWIN FALLS BUILDING SAFETY DEPARTMENT

RESIDENTIAL HANDRAILS

CONSTRUCTION TIP SHEET 2

Residential Handrails

This tip sheet reflects code requirements of the 2018 International Residential Code (IRC) with IDAHO State Amendments as applicable.

Where Required

Handrails are required on at least one side of each continuous run of treads or flight with four or more risers.

Typical Details

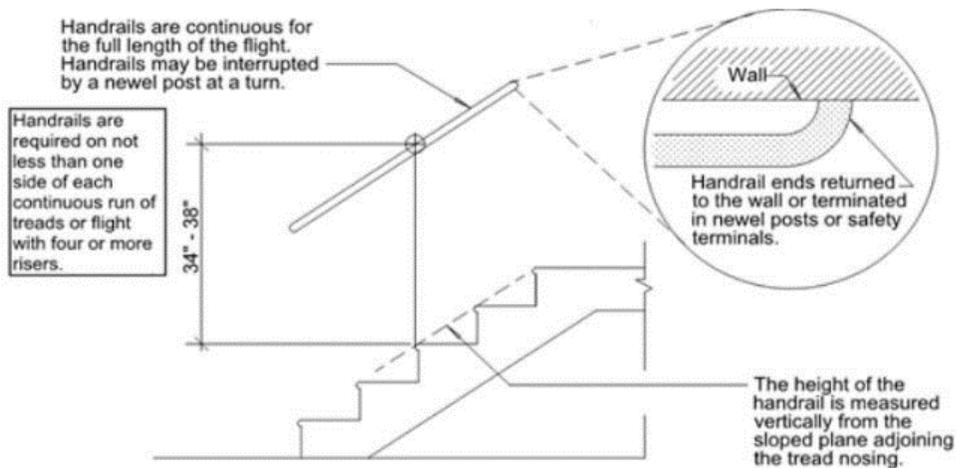


Figure 1: Typical Handrail Elevation (IRC R311.7.8)

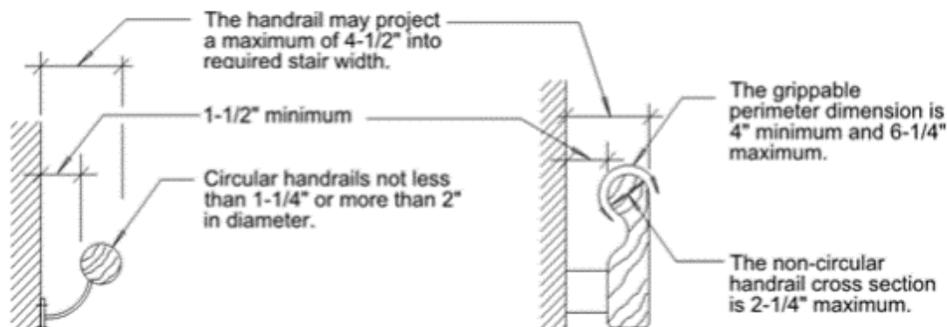


Figure 2: Type I Handrails (IRC R311.7.8.5)

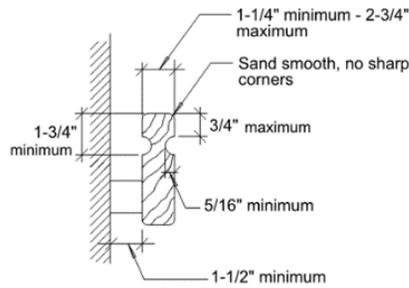


Figure 3: Type II Handrails (At handrails with a perimeter greater than 6-1/4 inches) (IRC R311.7.8.5)

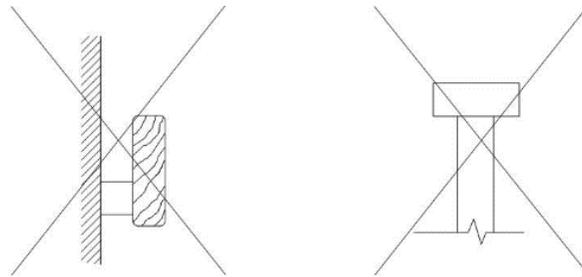


Figure 4: Unacceptable Handrails

Handrails

Handrails are required on at least one side for stairways with four or more risers. (R311.7.8)

R311.7.8.1 Height. Handrail 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).

R311.7.8.2 Handrail projection. Handrails shall not project more than 4 1/2 inches (114 mm) on either side of the stairway.

Exception: Where nosings of landings, floors or passing flights project into the stairway reducing the clearance at passing handrails, handrails shall project not more than 6 1/2 inches (165 mm) into the stairway, provided that the stair width and handrail clearance are not reduced to less than that required.

R311.7.8.3 Handrail clearance. Handrails adjacent to a wall shall have a space of not less than 1 1/2 inches (38mm) between the wall and the handrails.

R311.7.8.4 Continuity. Handrails 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.

Exceptions:

1. Handrail continuity shall be permitted to be interrupted by a newel post at a turn in a flight with winders, at a landing, or over the lowest tread.
2. A volute, turnout or starting easing shall be allowed to terminate over the lowest tread.

R311.7.8.5 Grip size. 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 not less than 1 1/4 inches (32 mm) and not greater than 2 inches (51mm). If the handrail is not circular, it shall have a perimeter of not less than 4 inches (102 mm) and not greater than 6 1/4 inches (160 mm) and a cross section of not more than 2 1/4 inches (57 mm). Edges shall have a radius of not less than 0.01 inch (0.25 mm).

2. Type II. Handrails with a perimeter greater than 6 1/4 inches (160 mm) shall have a graspable finger recess area on both sides of the profile. The finger recess shall begin within 3/4 inch (19 mm) measured vertically from the tallest portion of the profile and have a depth of not less than 5/16 inch (8 mm) within 7/8 inch (22 mm) below the widest portion of the profile. This required depth shall

continue for not less than 3/8 inch (10 mm) to a level that is not less than 1 3/4 inches (45 mm) below the tallest portion of the profile. The width of the handrail above the recess shall be not less than 1 1/4 inches (32 mm) and not more than 2 3/4 inches (70 mm). Edges shall have a radius of not less than 0.01 inch (0.25 mm).

Stair runs with 4 or more risers require a handrail. See Tip Sheet 2 for more information on the requirements for handrails. R311.7.8

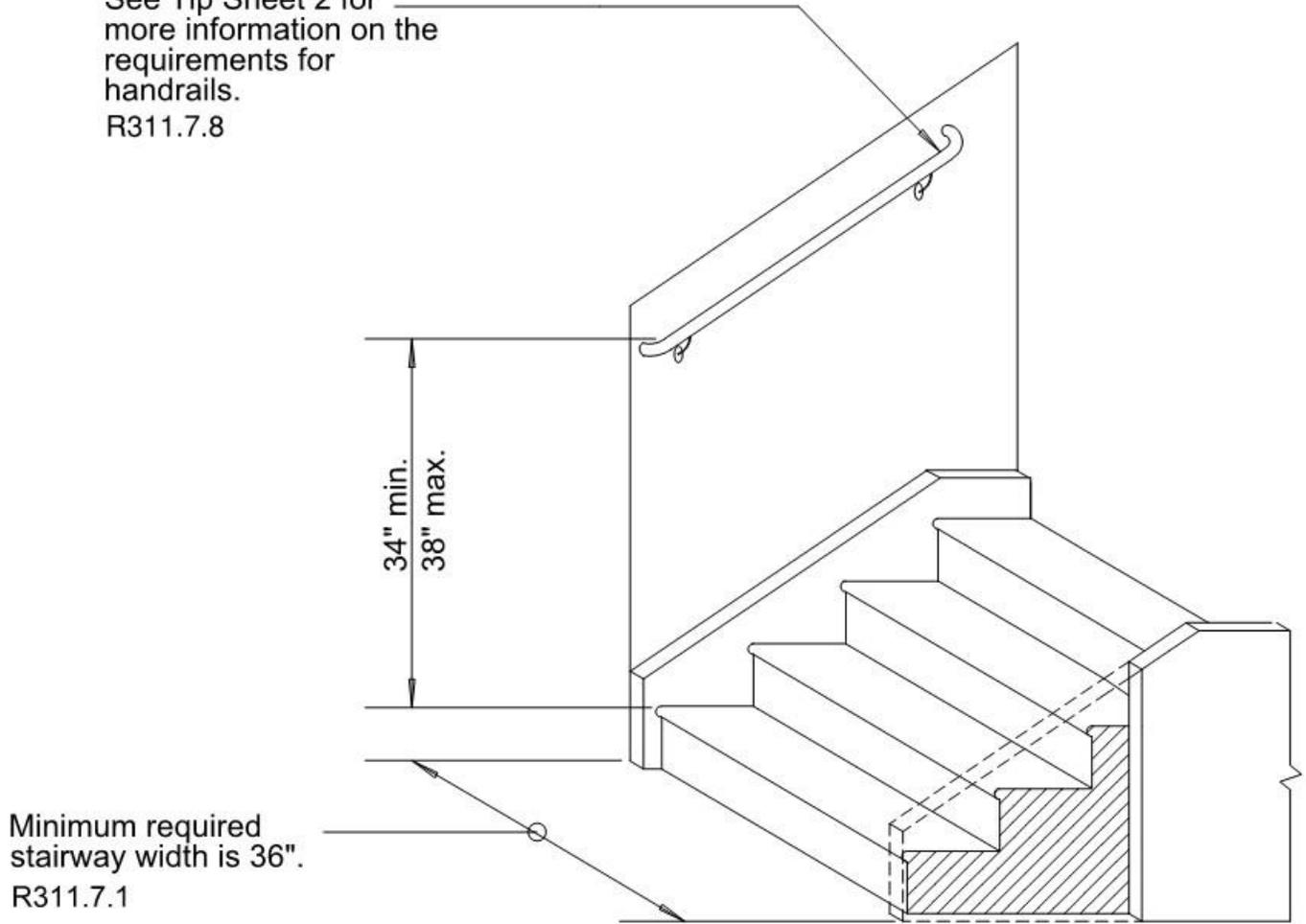


Figure 2: Typical Stair Elevation

Matthew Long C.B.O.

SIGNATURE: _____

DATE: June 4, 2021