



Residential Exterior Stairs & Decks

Bulletin 3

Division of Building, Safety, and Inspection for 2015 International Codes

This handout provides answers to commonly asked questions about the design, construction, and placement of landings, decks, stairs, and railings for site built and manufactured homes.

Do I need a permit to build my landing or deck?

You will need a building permit to build a landing or deck if it exceeds 200 square feet in area, is over 30 inches above grade at any point, if it attaches to a dwelling, or if it serves the exit door required by [Section R311.4](#).



Do I need a separate permit for the landing or deck on my proposed new home?

No, we will be glad to review your landing or deck along with your house plans. No additional permit will be required as long as you show the location and framing of the attached deck on your site plan and house plan. The fee for the deck will be added to the house permit.

Do normal zoning yard setbacks apply to landings and decks and handrails?

Any structure more than 30 inches above grade must meet normal setbacks. If you are close to a property line you should contact the Permit Information Line @ 253-798-3739.

What type of landing or deck materials are allowed?

Approved materials for exterior decks include treated outdoor wood and wood with natural resistance to decay. New composite materials are available. Check the manufacturer's listing before using.

Non-treated wood other than noted above is not acceptable.

Do I need a guard (railing) around my landing or deck?

You will need a code compliant guard (railing) around your landing or deck if the walking surface is 30 inches or more above grade at any point within 36 inches horizontally.

Can I get a final inspection on my new house before I build my attached landing or deck?

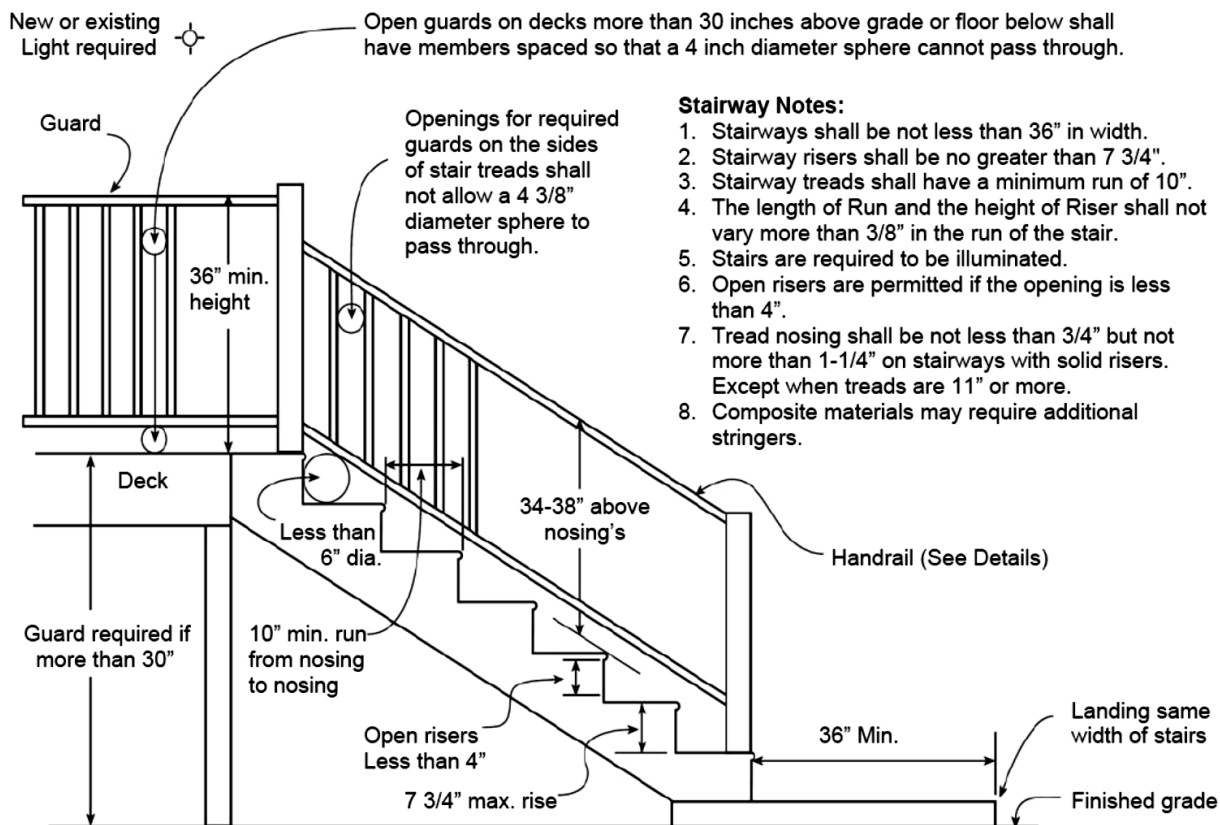
You must have a code compliant landing or deck at least 3 feet by 3 feet at the required exits in order to obtain a final inspection.

A code complying guard may be placed across secondary exits.

NOTE: The International Residential Code requires all construction to be done to code standards whether or not a building permit is required.

If you have any questions about methods of construction, please contact the Building Division at (253) 798-3741.

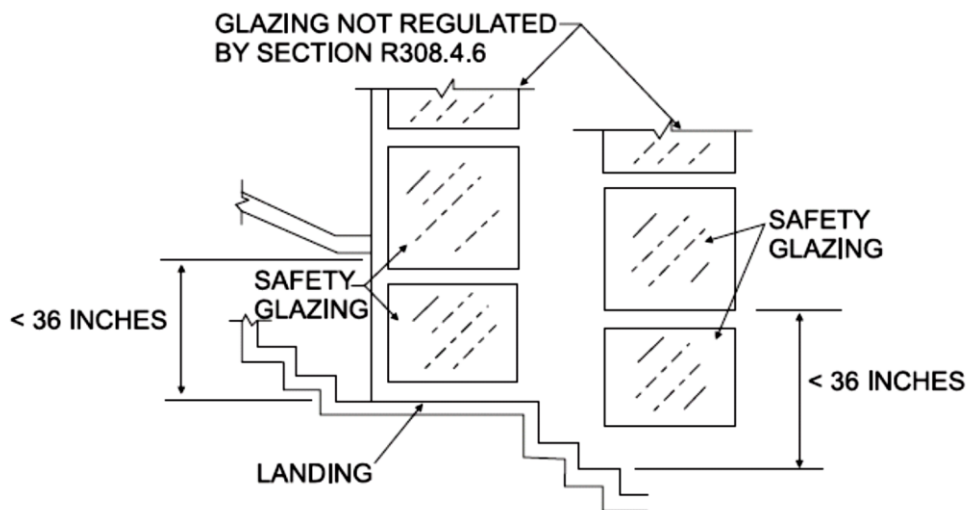
The following diagrams are examples of the code requirements based on the 2015 International Residential Code for single-story decks. The 2015 International Residential Code Section R507 contains additional information and details specific to deck construction.



SAFETY GLAZING:

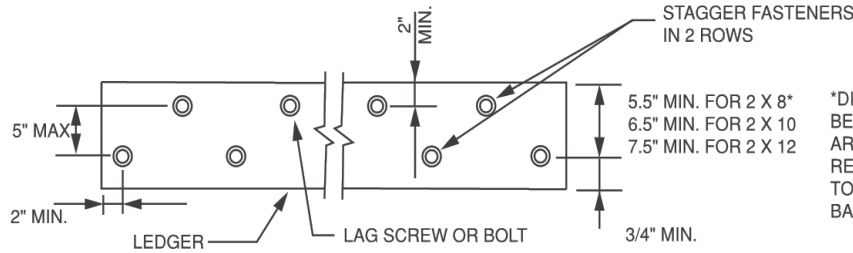
Glazing where the bottom exposed edge of the glazing is less than 36 inches above the plane of the adjacent walking surface of stairways, landings between flights of stairs and ramps shall be considered a hazardous location. [IRC R308.4.6]

Glazing adjacent to the landing at the bottom of a stairway where the glazing is less than 36 inches above the landing and within a 60 inch arc measured from the bottom tread shall be considered a hazardous location. [IRC R308.4.7]

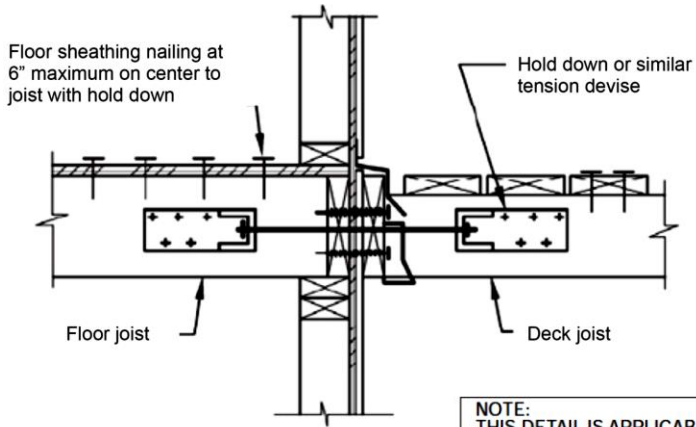


ATTACHMENTS:

Example of a deck ledger connection to rim/band joist.



*DISTANCE SHALL BE PERMITTED TO BE REDUCED TO 4.5" IF LAG SCREWS ARE USED OR BOLT SPACING IS REDUCED TO THAT OF LAG SCREWS TO ATTACH 2 X 8 LEDGERS TO 2 X 8 BAND JOISTS.



NOTE: THIS DETAIL IS APPLICABLE WHERE FLOOR JOISTS ARE PARALLEL TO DECK JOISTS.

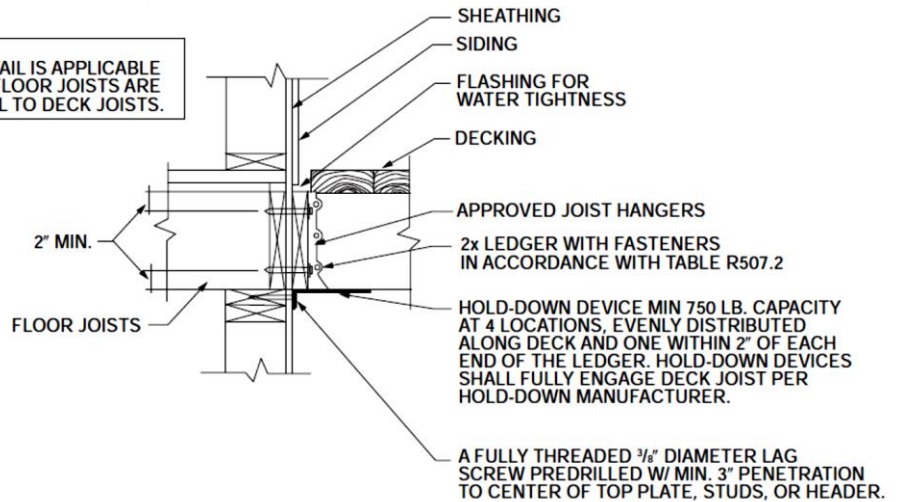


TABLE R507.2

DECK LEDGER CONNECTION TO BAND JOIST^{a, b} (Deck live load = 60 psf, deck dead load = 10 psf, snow load ≤ 60 psf)

CONNECTION DETAILS	JOIST SPAN						
	6' and less	6'1" to 8'	8'1" to 10'	10'1" to 12'	12'1" to 14'	14'1" to 16'	16'1" to 18'
On-center spacing of fasteners							
1/2 inch diameter lag screw with 1/2 inch maximum sheathing ^{c, d}	22	16	13	11	9	8	7
1/2 inch diameter bolt with 1/2 inch maximum sheathing ^d	30	22	18	15	13	11	10
1/2 inch diameter bolt with 1 inch maximum sheathing ^e	26	19	16	13	11	10	9

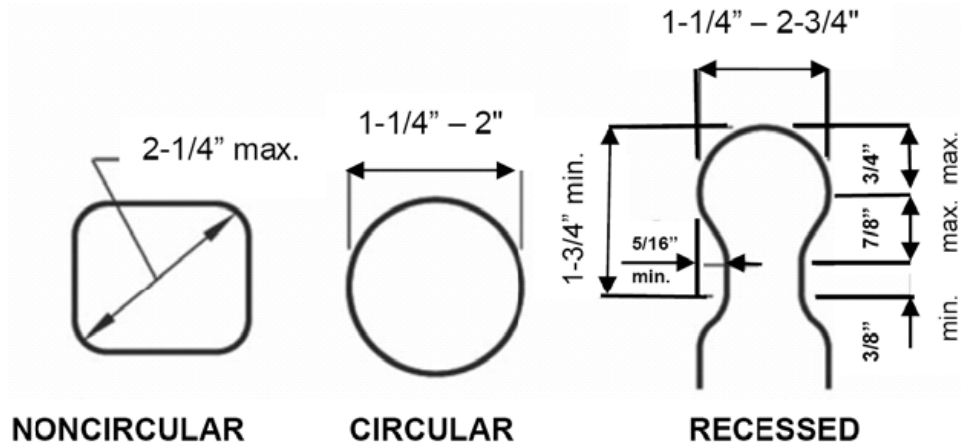
For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 0.0479 kPa.

- a. Ledgers shall be flashed in accordance with Section R703.4 to prevent water from contacting the house band joist.
- b. Snow load shall not be assumed to act concurrently with live load.
- c. The tip of the lag screw shall fully extend beyond the inside face of the band joist.
- d. Sheathing shall be wood structural panel or solid sawn lumber.
- e. Sheathing shall be permitted to be wood structural panel, gypsum board, fiberboard, lumber or foam sheathing. Up to 1/2-inch thickness of stacked washers shall be permitted to substitute for up to 1/2-inch of allowable sheathing thickness where combined with wood structural panel or lumber sheathing.

STAIR HANDRAIL REQUIREMENTS:

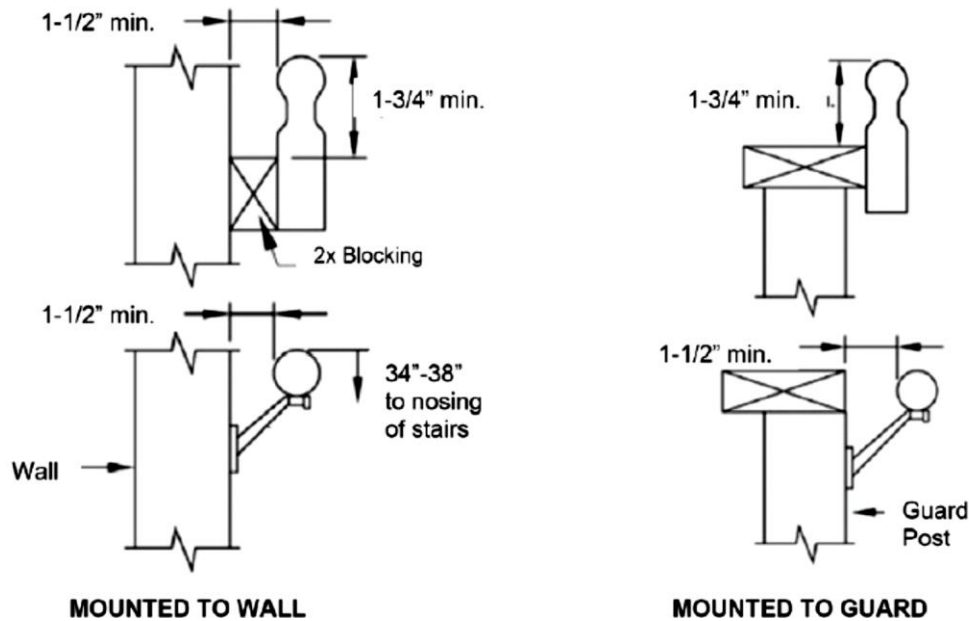
All stairs with 4 or more risers shall have a handrail on at least one side. The handrail height measured vertically from the sloped plane adjoining the nosing shall not be less than 34 inches or more than 38 inches. Handrails shall run continuously from a point directly over the lowest riser to a point directly over the highest riser and shall return to the guard at each end. Handrails may be interrupted by guard posts at a turn in the stair [R311.7.8.2].

Handrails shall be graspable and shall be composed of decay-resistant and corrosion-resistant material. Handrail shall be Type I, Type II, or provide equivalent graspability.



Type I (perimeter dimensions 4"-6 1/4")

Type II (perimeter dimensions < 6 1/4")



American Forest & Paper Association Inc. has published the "Prescriptive Residential Wood Deck Construction Guide" based on the 2015 International Residential Code.

The construction details in this document are accepted in Pierce County for single-level residential wood decks only.