



2020 INDIANA RESIDENTIAL CODE

General Information for Decks, Porches or Balconies

- 1) Footings
 - a. Depth: 36" below finished grade minimum
 - b. Column (post): shall be supported on a 6" thick pad of poured concrete
- 2) Lumber
 - a. Use only approved treated lumber
 - b. Do not exceed allowable spans
- 3) Stairways
 - a. Maximum of 8-1/4" riser
 - b. Minimum 9" tread (run)
 - c. All risers shall be uniform in size. The greatest riser height shall not exceed the smallest by more than 3/8"
 - d. Open risers located more than 30 inches (762 mm), as measured vertically, to the floor or grade below shall not permit the passage of a 4-inch diameter (102 mm) sphere.
 - e. A nosing projection not less than 3/4 inch (19 mm) and not more than 1-1/4 inches (32 mm) shall be provided on stairways. A nosing projection is not required where the tread depth is not less than 11 inches (279 mm).
- 4) Handrails and Guardrails
 - a. Handrails are required on at least one side of a stairway with four or more risers.
 - b. Handrails shall be installed at a height between 34"- 38" measured vertically from the nosing of the treads and serve each tread the full length of the interior stairs with four or more risers and exterior stairs with two or more risers.
 - c. Surfaces 30" or more above grade shall have guardrails installed at a minimum height of 36"
 - d. Spacing of guardrail openings shall not allow the passage of a 4" diameter sphere
 - e. Required guards shall not be constructed with horizontal rails or other ornamental patterns that result in a ladder effect
 - f. The triangle openings formed by the riser, tread and bottom rail of a guard at the open side of a stairway shall not allow the passage of a 6" diameter sphere
- 5) Flooring (Deck Surface)
 - a. Where the deck is supported by an exterior wall, it shall be positively anchored to the primary structure and designed for both vertical and lateral loads as applicable. Such attachment shall not be accomplished using toenails or nails subject to



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withdrawal. Decks shall be self-supporting where a positive attachment to the primary structure is not possible. When a deck has cantilevered framing members, it shall be designed and constructed to resist uplift resulting from the full live load acting on the cantilevered portion of the deck.

6) Deck Joist Spans for Common Lumber Species (ft. – in.)

SPECIES ^a	SIZE	ALLOWABLE JOIST SPAN ^b			MAXIMUM CANTILEVER ^{c,f}		
		SPACING OF DECK JOISTS (Inches)			SPACING OF DECK JOISTS WITH CANTILEVERS ^d (Inches)		
		12	16	24	12	16	24
Southern pine	2 x 6	9-11	9-0	7-7	1-3	1-4	1-6
	2 x 8	13-1	11-10	9-8	2-1	2-3	2-5
	2 x 10	16-2	14-0	11-5	3-4	3-6	2-10
	2 x 12	18-0	16-6	13-6	4-6	4-2	3-4
Douglas fir-larch ^e , hem-fir ^d , spruce-pine-fir ^d	2 x 6	9-6	8-8	7-2	1-2	1-3	1-5
	2 x 8	12-6	11-1	9-1	1-11	2-1	2-3
	2 x 10	15-8	13-7	11-1	3-1	3-5	2-9
	2 x 12	18-0	15-9	12-10	4-6	3-11	3-3
Redwood, western cedars, ponderosa pine ^e , red pine ^e	2 x 6	8-10	8-0	7-0	1-0	1-1	1-2
	2 x 8	11-8	10-7	8-8	1-8	1-10	2-0
	2 x 10	14-11	13-0	10-7	2-8	2-10	2-8
	2 x 12	17-5	15-1	12-4	3-10	3-9	3-1

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 0.0479 kPa, 1 pound = 0.454 kg.

a. No. 2 grade with wet service factor.

b. Ground snow load, live load = 40 psf, dead load = 10 psf, L/Δ = 360.

c. Ground snow load, live load = 40 psf, dead load = 10 psf, L/Δ = 360 at main span, L/Δ = 180 at cantilever with a 220-pound point load applied to end.

d. Includes incising factor.

e. Northern species with no incising factor.

f. Cantilevered spans not exceeding the nominal depth of the joist are permitted.

- 7) The ends of joist shall have not less than 1-1/2 inches (38 mm) of bearing on wood or metal and not less than 3 inches (76 mm) of bearing on concrete or masonry over its entire width. Joist framing into the side of a beam or ledger board shall be supported by approved joist hangers.
- 8) Fasteners for treated and fire-retardant wood shall be of hot-dipped galvanized steel, stainless steel, silicon bronze or copper of proper size and type. Bolts may be only steel of 1/2" diameter or greater.