

Single Family Residential Uncovered Decks and Porches

Directions

1. Fill in the blanks. Please print legibly.
2. Indicate in the check box which detail from page 3 will be used.

Address: _____

Size and Amount of Lags

(example: Two 1/2"x 4 1/2" lags @ 16" O.C.)

Type of decking _____ x _____ - _____
(example: 1 x 4 or 2 x 6 - Trex)

Deck Section

Existing bldg.

Electrical outlet required on decks over 20 sq. ft.

Approved flashing required

Beam splices to occur over posts with 1 1/2" bearing

36" high guard with balusters spaced so that a 4 inch diameter sphere cannot pass through

2x _____ joists spaced _____" apart
(example: 2 x 10" spaced 24" apart)

_____ x _____ beam
(example: (2) 2 x 10 - see detail B)

2x _____ rim joist
(example: 2 x 10 - see Alternate B1 & B2)

_____ x _____ posts spaced _____ apart
(example: 4 x 4 posts spaced 8" apart)

Span _____
(example: 13' - 4")

Type of siding (existing) _____

Details A (see page 2)

Check one
☐ Detail B1
☐ Detail B2
 (see page 3)

Conditions such as attachment to cantilevers or veneers may require Engineer's approval

Span

6 Ft. 8 in. min. (see note)

Detail C (see page 3)

Finished grade

Below Frost Line

Note: Emergency escape windows are allowed to be installed under decks and porches provided the location of the deck allows the emergency escape window to be fully opened and provides a path not less than 36" in height to a yard or court. 6'8" required for walk out basements or patios.

Note: A plot plan (plan view) showing the dimensions of your project or additions and its relationships to existing buildings or structures on the property must be included. In addition to project dimensions, your plot plan must also show other details such as post locations and spacing, joist and beam spans, and any other pertinent information not shown on the section drawing.



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Detail A

TABLE R507.2
DECK LEDGER CONNECTION TO BAND JOIST^{a, b}
 (Deck live load = 40 psf, deck dead load = 10 psf, snow load ≤ 40 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}	30	23	18	15	13	11	10
1/2-inch diameter bolt with 1/2-inch maximum sheathing ^d	36	36	34	29	24	21	19
1/2-inch diameter bolt with 1-inch maximum sheathing ^e	36	36	29	24	21	18	16

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

- Ledgers shall be flashed in accordance with Section R703.8 to prevent water from contacting the house band joist.
- Snow load shall not be assumed to act concurrently with live load.
- The tip of the lag screw shall fully extend beyond the inside face of the band joist.
- Sheathing shall be wood structural panel or solid sawn lumber.
- 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.

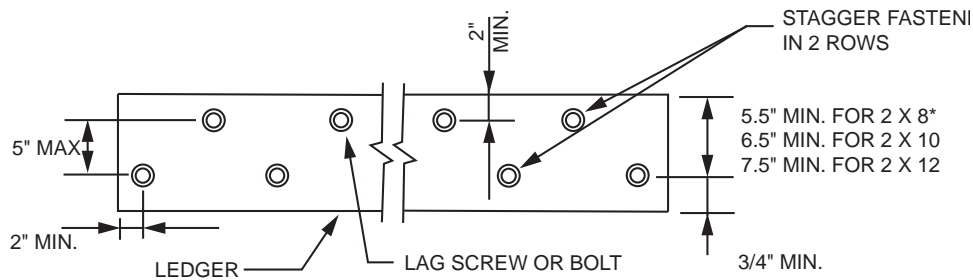


FIGURE R507.2.1(1)
PLACEMENT OF LAG SCREWS AND BOLTS IN LEDGERS

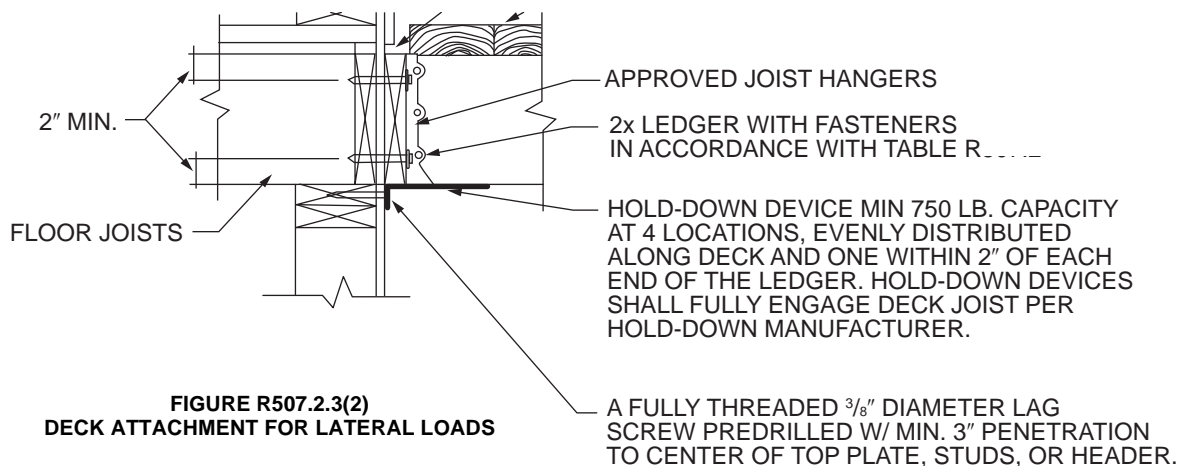
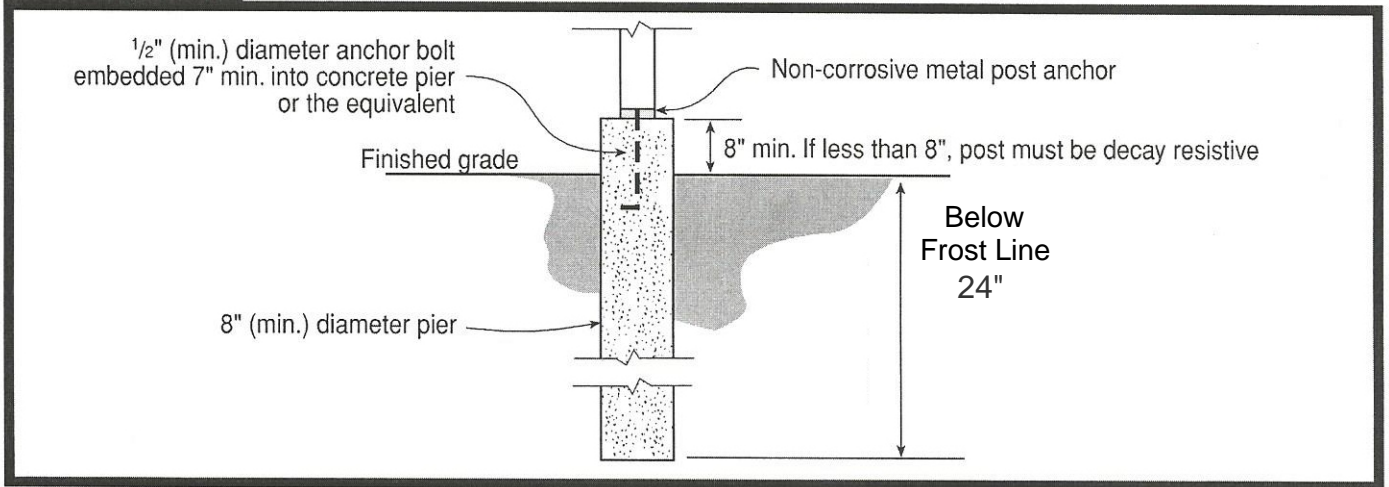
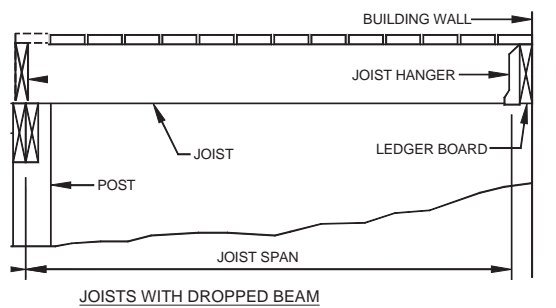


FIGURE R507.2.3(2)
DECK ATTACHMENT FOR LATERAL LOADS

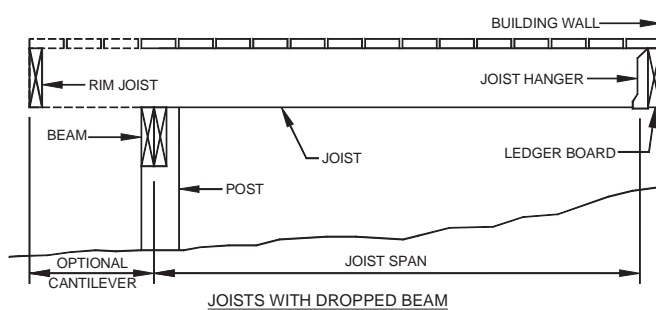
Detail C



Detail B



Detail B1



Detail B2

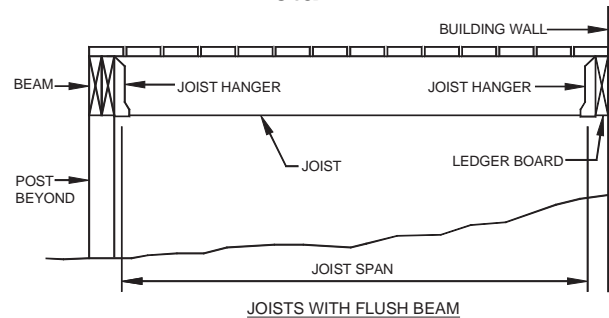


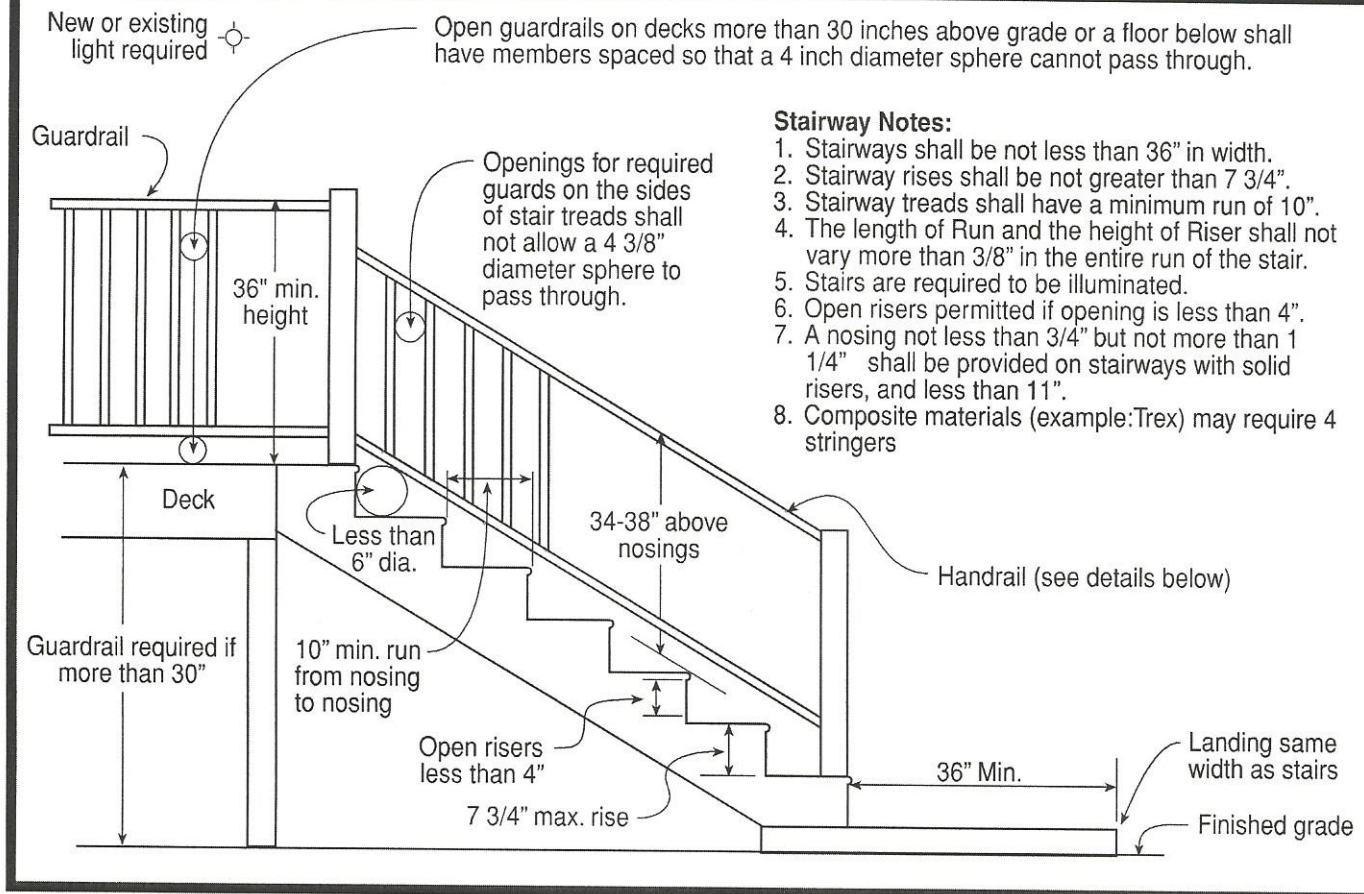
FIGURE R507.5
TYPICAL DECK JOIST SPANS

TABLE R507.5
DECK JOIST SPANS FOR COMMON LUMBER SPECIES^f (ft. - in.)

SPECIES ^a	SIZE	SPACING OF DECK JOISTS WITH NO CANTILEVER ^b (inches)			SPACING OF DECK JOISTS WITH CANTILEVERS ^c (inches)		
		12	16	24	12	16	24
Southern pine	2 × 6	9-11	9-0	7-7	6-8	6-8	6-8
	2 × 8	13-1	11-10	9-8	10-1	10-1	9-8
	2 × 10	16-2	14-0	11-5	14-6	14-0	11-5
	2 × 12	18-0	16-6	13-6	18-0	16-6	13-6
Douglas fir-larch ^d , hem-fir ^d spruce-pine-fir ^d	2 × 6	9-6	8-8	7-2	6-3	6-3	6-3
	2 × 8	12-6	11-1	9-1	9-5	9-5	9-1
	2 × 10	15-8	13-7	11-1	13-7	13-7	11-1
Redwood, western cedars, ponderosa pine ^e , red pine ^e	2 × 12	18-0	15-9	12-10	18-0	15-9	12-10
	2 × 6	8-10	8-0	7-0	5-7	5-7	5-7
	2 × 8	11-8	10-7	8-8	8-6	8-6	8-6
	2 × 10	14-11	13-0	10-7	12-3	12-3	10-7
	2 × 12	17-5	15-1	12-4	16-5	15-1	12-4

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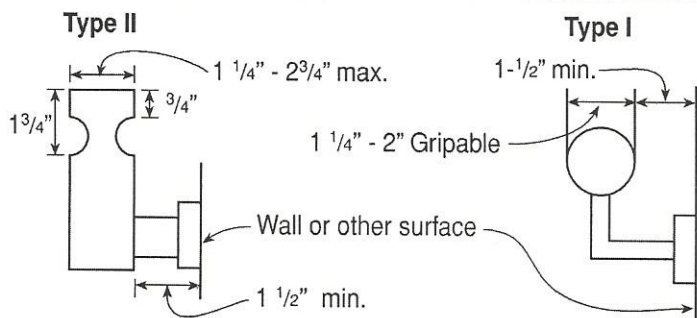
Stair & Handrail Specifications



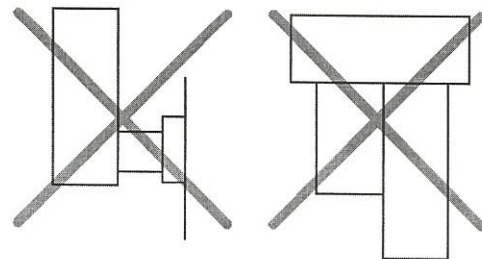
Handrail Notes:

1. Handrails shall be continuous on at least one side of stairs with 4 or more risers.
2. Top of the handrails shall be placed not less than 34 inches nor more than 38 inches above stair nosings.
3. The handgrip portion of handrails shall be not less than 1-1/4 inches nor more than 2 1/4 inches in cross section for non circular handrails.
4. Handrails shall be placed not less than 1-1/2 inches from any wall or other surface.
5. Handrails to be returned to wall, post or safety terminal (per 311.7.7.2 IRC)

Acceptable Handrail Details



Unacceptable Handrails



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