

## RESIDENTIAL

## DECK CONSTRUCTION – FAQ's

### Joist Spans:

SPECIES <sup>b</sup>	SIZE	ALLOWABLE JOIST SPAN <sup>c</sup>		
		Spacing of deck joists (inches)		
		12	16	24
Southern pine	2 x 6	9-11	9-0	7-7
	2 x 8	13-1	11-10	9-8
	2 x 10	16-2	14-0	11-5
	2 x 12	18-0	16-6	13-6

### Decking Spans:

MATERIAL TYPE AND NOMINAL SIZE	MAXIMUM JOIST SPACING	
	PERPENDICULAR TO JOIST	DIAGONAL TO JOIST <sup>a</sup>
<sup>5</sup> / <sub>4</sub> -inch thick wood	16	12
2-inch thick wood	24	16
Wood/plastic composite	Per R507.3	Per R507.3

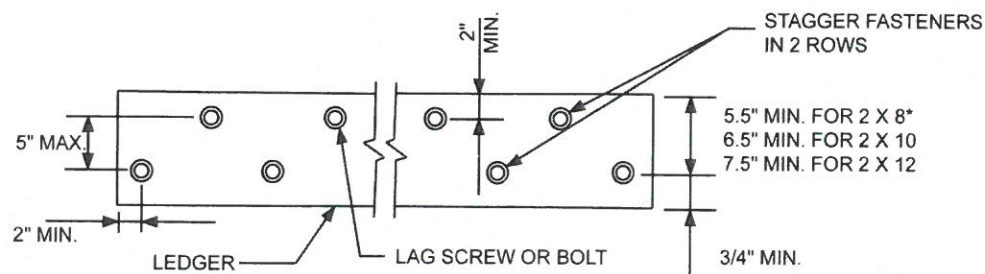
### Bearing Bands:

SPECIES <sup>d</sup>	SIZE <sup>e</sup>	DECK JOIST SPAN (feet) LESS THAN OR EQUAL TO:						
		6	8	10	12	14	16	18
Southern pine	2-2x6	6-11	5-11	5-4	4-10	4-6	4-3	4-0
	2-2x8	8-9	7-7	6-9	6-2	5-9	5-4	5-0
	2-2x10	10-4	9-0	8-0	7-4	6-9	6-4	6-0
	2-2x12	12-2	10-7	9-5	8-7	8-0	7-6	7-0
	3-2x6	8-2	7-5	6-8	6-1	5-8	5-3	5-0
	3-2x8	10-10	9-6	8-6	7-9	7-2	6-8	6-4
	3-2x10	13-0	11-3	10-0	9-2	8-6	7-11	7-6
	3-2x12	15-3	13-3	11-10	10-9	10-0	9-4	8-10

### Bolting:

Ledger bands must be bolted through the house band or the deck must be self-supporting.

Manufactured (mobile) home decks must also be self-supporting.



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'
Connection details	On-center spacing of fasteners <sup>d,e</sup>						
<sup>1</sup> / <sub>2</sub> inch diameter lag screw with <sup>15</sup> / <sub>32</sub> inch maximum sheathing <sup>a</sup>	30	23	18	15	13	11	10
<sup>1</sup> / <sub>2</sub> inch diameter bolt with <sup>15</sup> / <sub>32</sub> inch maximum sheathing	36	36	34	29	24	21	19
<sup>1</sup> / <sub>2</sub> inch diameter bolt with <sup>15</sup> / <sub>32</sub> inch maximum sheathing and <sup>1</sup> / <sub>2</sub> inch stacked washers <sup>b,h</sup>	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.

a. The tip of the lag screw shall fully extend beyond the inside face of the band joist.

b. The maximum gap between the face of the ledger board and face of the wall sheathing shall be <sup>1</sup>/<sub>2</sub> inch.

c. Ledgers shall be flashed to prevent water from contacting the house band joist.

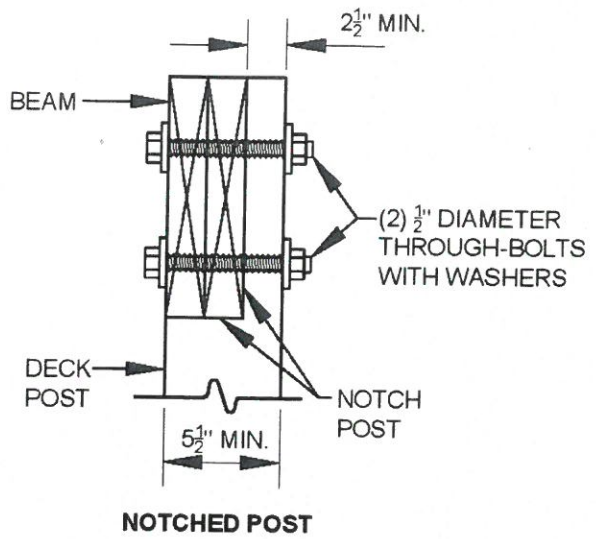
d. Lag screws and bolts shall be staggered in accordance with Section R507.2.1.

**Post:**

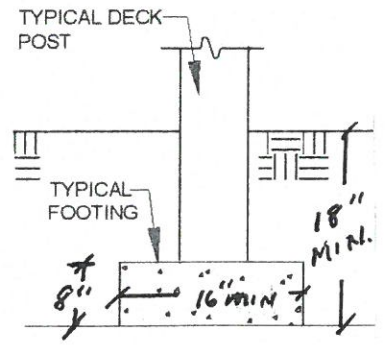
**TABLE R507.8  
DECK POST HEIGHT<sup>a</sup> (feet)**

DECK POST SIZE	MAXIMUM HEIGHT <sup>a</sup>
4x4	8
4x6	8
6x6	14

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.  
a. Measured to the underside of the beam.



**Pier Footings:**



**Stairs & Rails:**

- A minimum 36" deck or landing is required outside each exterior door.
- Deck or landing must be within 8 1/4" of the top of threshold unless the door swings out.
- Guardrails are required if the deck is over 30" above grade anywhere within 36".
- Guardrails are required to be a minimum of 36" high.
- Guardrails may have no opening greater than 4".
- Guardrails for stairs must be a minimum of 34" above the front edge of the treads.
- Guardrails for stairs may have no opening greater than 4 3/8" including the riser.
- A handrail is required on one side of stairs if there are 4 or more risers.
- Handrails must be between 34" and 38" from the front edge of the treads.
- Stairs must have a minimum 9" tread and maximum 8 1/4" rise.

**THE GENERAL INFORMATION PROVIDED IS BASED ON THE 2012 VIRGINIA RESIDENTIAL CODE  
SUBJECT TO FIELD INSPECTIONS FOR CODE COMPLIANCE**

**FOR SPECIFIC CODE QUESTIONS PLEASE CONTACT THE BUILDING OFFICE AT (434) 332-9596**

GLM-4/17