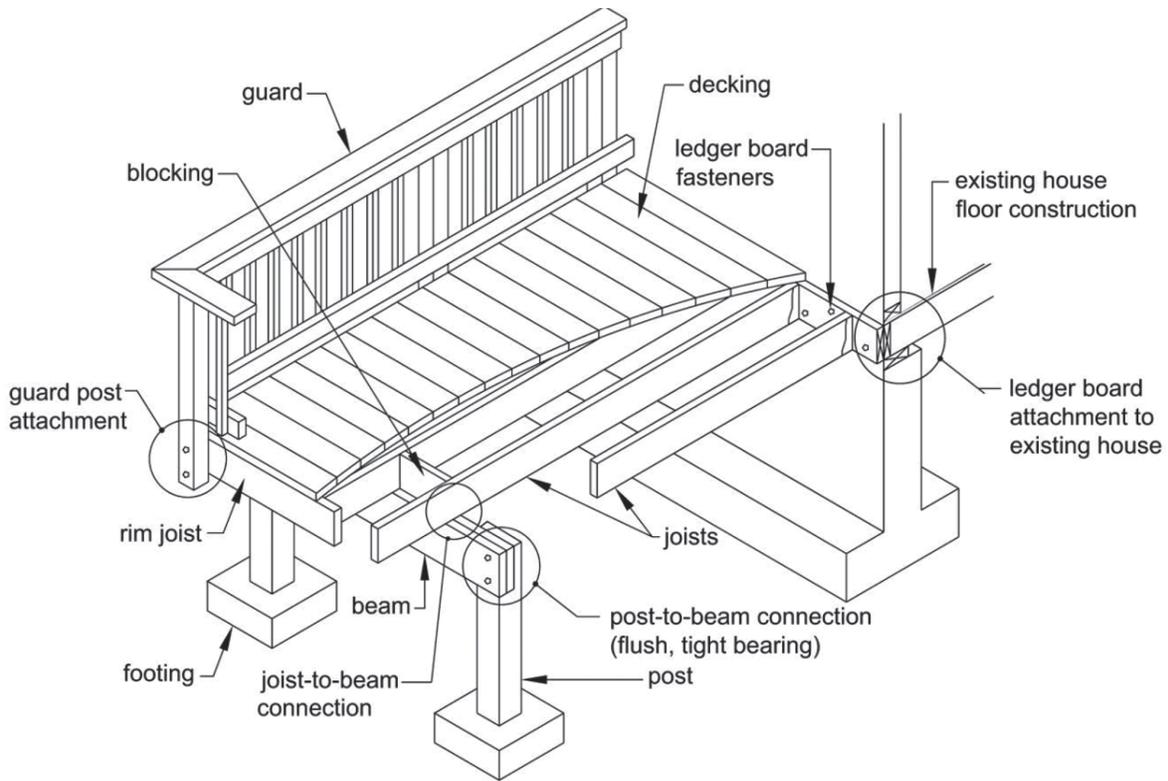




# RESIDENTIAL DECK SPECIFICATIONS



<b>Name:</b>			
<b>Address:</b>			
<b>Deck Size:</b>	<b>FT</b>	<b>X</b>	<b>FT</b>
<b>Floor Joist Size:</b>	<b>IN</b>	<b>X</b>	<b>IN</b>
<b>Floor Joist Clear Span:</b>	<b>FT</b>	<b>X</b>	<b>IN</b>
<b>Double Carrier / Beam Size:</b>	<b>FT</b>	<b>X</b>	<b>IN</b>
<b>Treated Poles Size:</b>	<b>IN</b>	<b>X</b>	<b>IN</b>
<b>Footings Depth Below Grade:</b>			<b>IN</b>
<b>Deck Floor Material:</b>			
<b>Floor Joist Spacings:</b>	<b>INCHES ON CENTER</b>		
<b>Floor Joist Cantilever:</b>	<b>FT</b>	<b>X</b>	<b>IN</b>
<b>Post Spacing:</b>	<b>IN</b>	<b>X</b>	<b>IN</b>
<b>Footings:</b>	<b>WIDTH</b>	<b>IN</b>	<b>X</b> <b>HEIGHT</b> <b>IN</b>
<b>Is the deck attached to the house?</b> <input type="checkbox"/> YES <input type="checkbox"/> NO			

## SOME REQUIREMENTS OF THE 2015 MICHIGAN RESIDENTIAL CODE CHAPTER 5, SECTION R507

### Guards

- Are required if the floor and stairs measure more than 30" above grade.
- Shall have a minimum height of 36" for floors and 34" for stairs off the nose of the tread.
- Shall be constructed so a 4" sphere cannot pass through.

### Stairway

- Shall be a minimum of 36" in width.
- Shall have a maximum riser height of 8.25" and a minimum tread depth of 9".

### Handrails

- Are required on 4 or more risers.
- Shall have a minimum height of 34" and a maximum height of 38" measured vertically off the of the tread.
- Shall be continuous for the full length of the stairway and ends shall be returned to wall or post.
- Type I handrails shall be graspable measuring at least 1.25" and not greater than 2" in diameter unless the perimeter of a non-circular handrail is less than 6.25", then it is allowed to be 2.25" in width.
- Type II handrails with a perimeter greater than 6.25" shall provide a graspable finger recess area on both sides of the profile that meets code requirements. The width of the handrail shall be no less than 1.25" and not more than 2.25".

### Spans

- Joist spacing & spans and beam spans shall meet the requirements of Tables R507.4, R507.5, and R507.6 (*min. 1.5" bearing*)

## Maximum Joist Spans and Overhangs

Deck joists shall be permitted to cantilever not greater than one-fourth of the actual, adjacent joist span.

### Joist Spacing (O.C.)

Species	Size	12"	16"	24"
		Allowable Span		
Southern Pine	2x6	9'-11"	9'-0"	7'-7"
	2x8	13'-1"	11'-10"	9'-8"
	2x10	16'-2"	14'-0"	11'-5"
	2x12	18'-0" <sup>7</sup>	16'-6"	13'-6"
Douglas Fir-Larch, Hem-Fir, Spruce- Pine-fire	2x6	9'-6"	8'-4"	6'-10"
	2x8	12'-6"	11'-1"	9'-1"
	2x10	15'-8"	13'-7"	11'-1"
	2x12	18'-0" <sup>7</sup>	15'-9"	12'-10"
Redwood, Western Cedars, Ponderosa Pine, Red Pine	2x6	8'-10"	8'-0"	6'-10"
	2x8	11'-8"	10'-7"	8'-8"
	2x10	14'-11"	13'-0"	10'-7"
	2x12	17'-5"	15'-1"	12'-4"

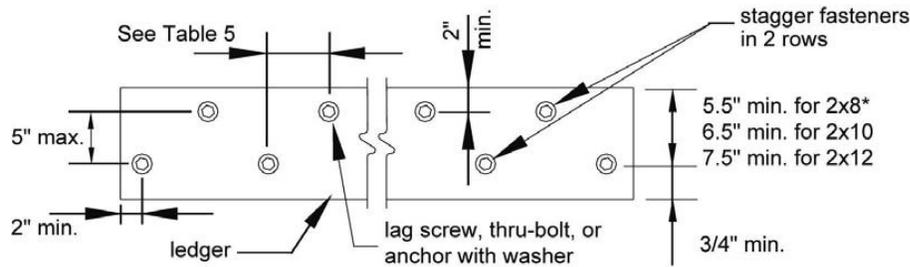
### Footing Sizes For Decks (Without Roof)

TOTAL SPAN OF JOISTS BETWEEN SUPPORTS	SUPPORT POST SPACING FOR 1500 LB PER SQUARE FOOT SOIL BEARING CAPACITY						
	4 FEET	6 FEET	8 FEET	10 FEET	12 FEET	14 FEET	16 FEET
4 FEET	4X8	4X10	4X10	6X12	6X14	6X14	6X14
6 FEET	4X10	6X12	6X14	6X14	8X16	8X16	8X18
8 FEET	4X10	6X14	6X14	8X16	8X18	10X20	10X20
10 FEET	6X12	6X14	8X16	8X18	10X20	10X22	10X22
12 FEET	6X14	8X16	8X18	10X20	10X22	12X24	12X24
14 FEET	6X14	8X16	10X20	10X22	12X24	12X26	12X26
16 FEET	6X14	8X16	10X20	12X24	12X26	14X28	14X28

### Deck Post Height - TABLE 1

Deck Post Size	Max Height
4X4	8'
4X6	8'
6X6	14'

## Ledger Fastener Spacing and Clearances



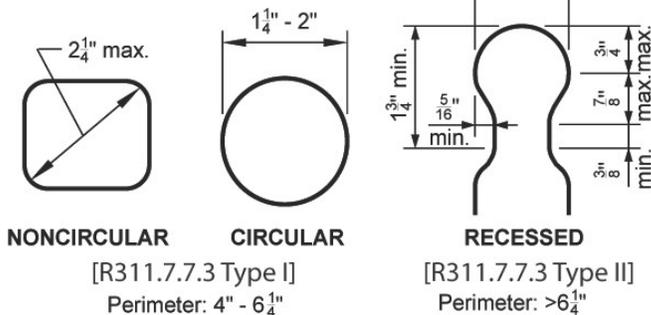
### SEE TABLE 2

\*Distance can be reduced to 4.5" if lag screws are used or bolt spacing is reduced to that of lag screws to attach 2x8 ledgers to 2x8 band joists (1/2" stacked washers not permitted)

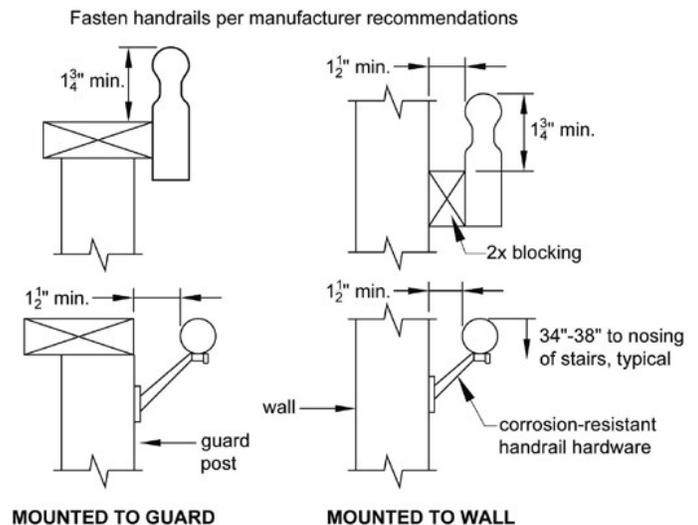
## Fastener Spacing - TABLE 2

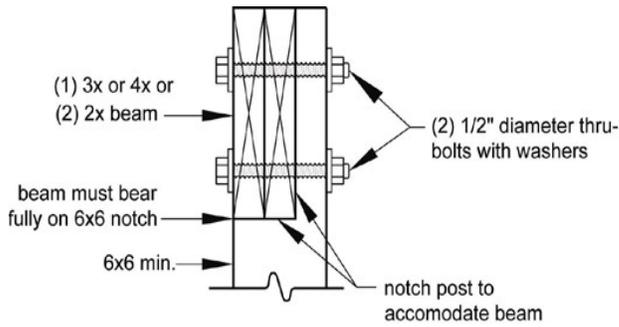
	Rim Board or Band Joist	Joist Span						
		6'-0" and less	6'-1" to 8'-0"	8'-1" to 10'-0"	10'-1" to 12'-0"	12'-1" to 14'-0"	14'-1" to 16'-0"	16'-1" to 18'-0"
<b>Connection Details</b>		<b>On-Center Spacing of Fasteners</b>						
<b>1/2" diameter lag screw with 15/32" maximum sheathing</b>	1" EWP	24"	18"	14"	12"	10"	9"	8"
	1-1/8" EWP	28"	21"	16"	14"	12"	10"	9"
	1-1/2" Lumber	30"	23"	18"	15"	13"	11"	10"
<b>1/2" diameter bolt with 15/32" maximum sheathing</b>	1" EWP	24"	18"	14"	12"	10"	9"	8"
	1-1/8" EWP	28"	21"	16"	14"	12"	10"	9"
	1-1/2" Lumber	36"	36"	34"	29"	24"	21"	19"
<b>1/2" diameter bolt with 15/32" maximum sheathing and 1/2" stacked washers</b>	1-1/2" Lumber	36"	36"	29"	24"	21"	18"	16"

## Handrail Grip Size

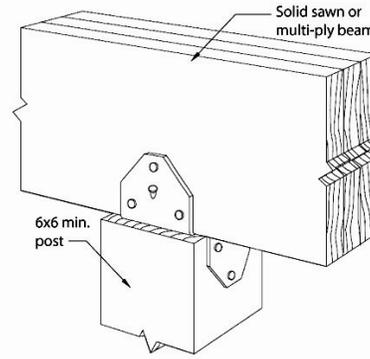


## Handrail Mounting Examples

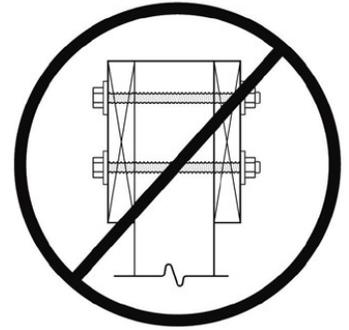




**Notched Post**



**Post Cap**



**Prohibited Connection**

## Deck Beam Spans

### Joist Spans (L) Less Than or Equal to:

Species	Size	6'	8'	10'	12'	14'	16'	18'
<b>Southern Pine</b>	<b>2-2x6</b>	6'-11"	5'-11"	5'-4"	4'-10"	4'-6"	4'-3"	4'-0"
	<b>2-2x8</b>	8-9"	7'-7"	6'-9"	6'-2"	5'-9"	5'-4"	5'-0"
	<b>2-2x10</b>	10'-4"	9'-0"	8'-0"	7'-4"	6'-9"	6'-4"	6'-0"
	<b>2-2x12</b>	12'-2"	10'-7"	9'-5"	8'-7"	8'-0"	7'-6"	7'-0"
	<b>3-2x6</b>	8'-2"	7'-5"	6'-8"	6'-1"	5'-8"	5'-3"	5'-0"
	<b>3-2x8</b>	10'-10"	9'-6"	8'-6"	7'-9"	7'-2"	6'-8"	6'-4"
	<b>3-2x10</b>	13'-0"	11'-3"	10'-0"	9'-2"	8'-6"	7'-11"	7'-6"
	<b>3-2x12</b>	15'-3"	13'-3"	11'-10"	10'-9"	10'-0"	9'-4"	8'-10"
<b>Douglas Fir- Larch, Hem-Fir, Spruce-Pine-Fir, Redwood, Western Cedars, Ponderosa Pine, Red Pine</b>	<b>3x6 or 2-2x6</b>	5'-5"	4'-8"	4'-2"	3'-10"	3'-6"	3'-1"	2'-9"
	<b>3x8 or 2-2x8</b>	6'-10"	5'-11"	5'-4"	4'-10"	4'-6"	4'-1"	3'-8"
	<b>3x10 or 2-2x10</b>	8'-4"	7'-3"	6'-6"	5'-11"	5'-6"	5'-1"	4'-8"
	<b>3x12 or 2-2x12</b>	9'-8"	8'-5"	7'-6"	6'-10"	6'-4"	5'-11"	5'-7"
	<b>4x6</b>	6'-5"	5'-6"	4'-11"	4'-6"	4'-2"	3'-11"	3'-8"
	<b>4x8</b>	8'-5"	7'-3"	6'-6"	5'-11"	5'-6"	5'-2"	4'-10"
	<b>4x10</b>	9'-11"	8'-7"	7'-8"	7'-0"	6'-6"	6'-1"	5'-8"
	<b>4x12</b>	11'-5"	9'-11"	8'-10"	8'-1"	7'-6"	7'-0"	6'-7"
	<b>3-2x6</b>	7'-4"	6'-8"	6'-0"	5'-6"	5'-1"	4'-9"	4'-6"
	<b>3-2x8</b>	9'-8"	8'-6"	7'-7"	6'-11"	6'-5"	6'-0"	5'-8"
<b>3-2x10</b>	12'-0"	10'-5"	9'-4"	8'-6"	7'-10"	7'-4"	6'-11"	
<b>3-2x12</b>	13'-11"	12'-1"	10'-9"	9'-10"	9'-1"	8'-6"	8'-1"	