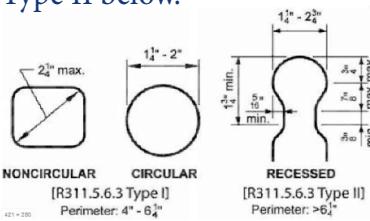


# How to Design a Deck

## General Requirements:

1. Decks more than 30" above finished grade at any point within 36" horizontally to the edge of the open side are required to have a guardrail not shorter than 36".
2. Stair railing, handrails, and landings are required with 4 or more risers. Handrails need to be 34"-38" measured vertically off the nosing of the treads. Handrails must have returns.
3. Handrails must return to the guardrail and be either Type I or Type II below.

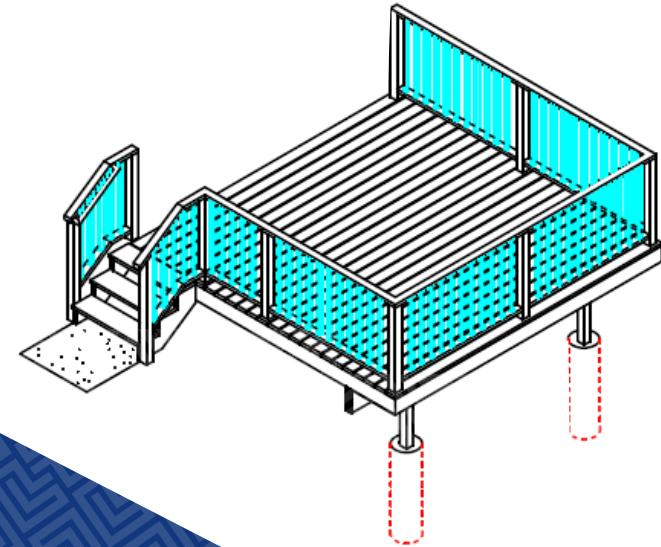


4. Deck risers can't exceed 7-3/4" and must not have more than 3/8" variance between and two risers. Stair treads must be a minimum of 10". There may not be more than 3/8" variance between tread depth.
5. Deck stairs are required to be a minimum of 36" wide. Where the stairs have two or more risers they will be served by a landing extending past the last tread nosing a minimum of 36" for the width of the stairs.
6. Supporting posts must rest on top and be connected to the footing.
7. Please reference the Footing Sizes table in this pamphlet (Table C) to ensure that you have the proper footing size.
8. Flashing is required to separate the deck from the house.
9. Deck cannot be supported by a cantilever.



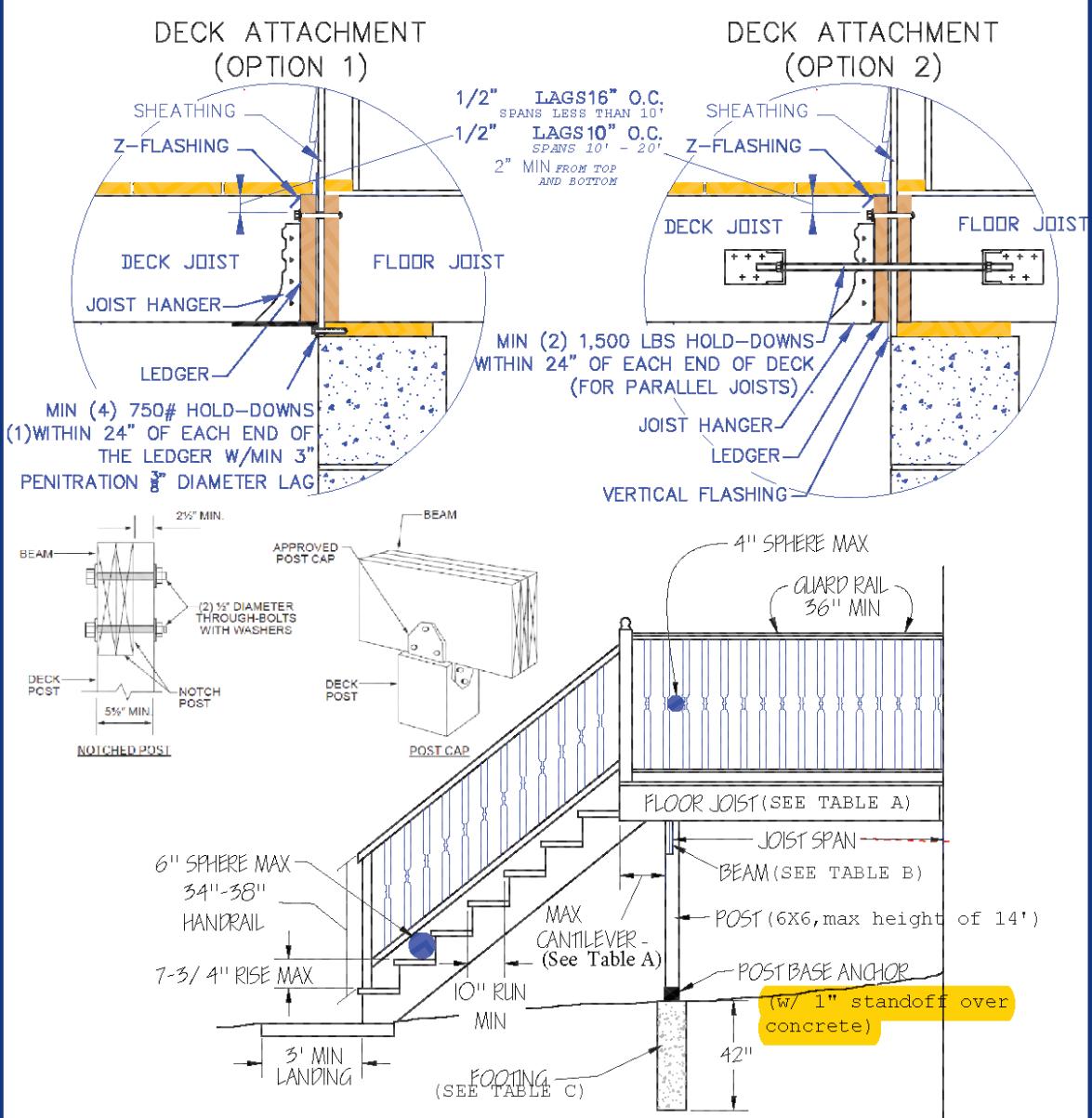
SPECIES	SIZE	ALLOWABLE JOIST SPAN			MAXIMUM CANTILEVER		
		12	16	24	12	16	24
Southern Pine	2 X 6	9'-11"	9'-0"	7'-7"	1'-3"	1'-4"	1'-6"
	2 X 8	13'-1"	11'-10"	9'-8"	2'-1"	2'-3"	2'-5"
	2 X 10	16'-2"	14'-0"	11'-5"	3'-4"	3'-6"	2'-10"
	2 X 12	18'-0"	16'-6"	13'-6"	4'-6"	4'-2"	3'-4"
Douglas Fir	2 X 6	9'-6"	8'-8"	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	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"

SPECIES	SIZE	Deck Joist Span less than or equal to:						
		6	8	10	12	14	16	18
Southern Pine	1 - 2 X 6	4'-11"	4'-0"	3'-7"	3'-3"	3'-0"	2'-10"	2'-8"
	1 - 2 X 8	5'-11"	5'-1"	4'-7"	4'-2"	2'-10"	3'-7"	3'-5"
	1 - 2 X 10	7'-0"	6'-0"	5'-5"	4'-11"	4'-7"	4'-3"	4'-0"
	1 - 2 X 12	8'-3"	7'-1"	6'-4"	5'-10"	5'-5"	5'-0"	4'-9"
	2 - 2 X 6	6'-11"	5'-11"	5'-4"	4'-10"	4'-6"	4'-3"	4'-0"
	2 - 2 X 8	8'-9"	7'-7"	6'-9"	6'-2"	5'-9"	5'-4"	5'-0"
	2 - 2 X 10	10'-4"	9'-0"	8'-0"	7'-4"	6'-9"	6'-4"	6'-0"
	2 - 2 X 12	12'-2"	10'-7"	9'-5"	8'-7"	8'-0"	7'-6"	7'-0"
	3 - 2 X 6	8'-2"	7'-5"	6'-8"	6'-1"	5'-8"	5'-3"	5'-0"
	3 - 2 X 8	10'-10"	9'-6"	8'-6"	7'-9"	7'-2"	6'-8"	6'-4"
	3 - 2 X 10	13'-0"	11'-3"	10'-0"	9'-2"	8'-6"	7'-11"	7'-6"
	3 - 2 X 12	15'-3"	13'-3"	11'-10"	10'-9"	10'-0"	9'-4"	8'-10"
Douglas Fir	3 X 6 or 2 - 2 X 6	5'-5"	4'-8"	4'-2"	3'-10"	3'-6"	3'-1"	2'-9"
	3 X 8 or 2 - 2 X 8	6'-10"	5'-11"	5'-4"	4'-10"	4'-6"	4'-1"	3'-8"
	3 X 10 or 2-2X10	8'-4"	7'-3"	6'-6"	5'-11"	5'-6"	5'-1"	4'-8"
	Redwood	9'-8"	8'-5"	7'-6"	6'-10"	6'-4"	5'-11"	5'-7"
	Western Cedar	6'-5"	5'-6"	4'-11"	4'-6"	4'-2"	3'-11"	3'-8"
	Ponderosa Pine	8'-5"	7'-3"	6'-6"	5'-11"	5'-6"	5'-2"	4'-10"
	Red Pine	9'-11"	8'-7"	7'-8"	7'-0"	6'-6"	6'-1"	5'-8"
	4 X 12	11'-5"	9'-11"	8'-10"	8'-1"	7'-6"	7'-0"	6'-7"
	3 - 2 X 6	7'-4"	6'-8"	6'-0"	5'-6"	5'-1"	4'-9"	4'-6"
	3 - 2 X 8	9'-8"	8'-6"	7'-7"	6'-11"	6'-5"	6'-0"	5'-8"
	3 - 2 X 10	12'-0"	10'-5"	9'-4"	8'-6"	7'-10"	7'-4"	6'-11"
	3 - 2 X 12	13'-11"	12'-1"	10'-9"	9'-10"	9'-1"	8'-6"	8'-1"



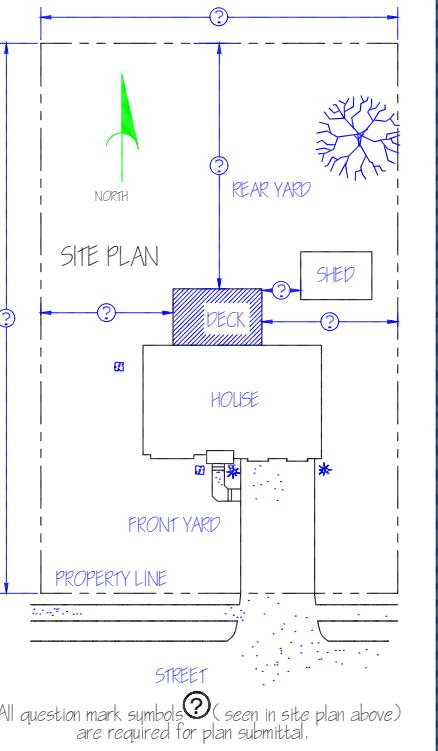
Community Development Department  
8116 Park View Blvd  
La Vista, Ne 68128  
(402) 593-6400

# Post & Footing Sizes

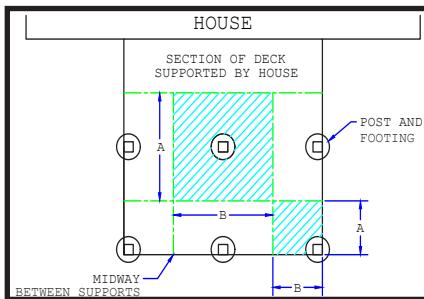


## Distances Required On Site Plan

Distance minimums are dependent on zoning requirements. Additional neighborhood covenants and easements may apply.



1. First determine the square footage of the area being supported by each post/footing. This is done by determining the mid points between supports (as seen in the diagram to the right).



The following equation will give you the tributary (load) area in square feet: (A) x (B) = Tributary Area

2. Once you have determined the tributary area, find the corresponding tributary area in Table C to find the required footing sizes based on footing type (round or square).
3. If you intend to place a roof, hot tub, or other heavy item on or over your deck, other building codes may apply that could change the required footing sizes for your deck. If you are uncertain, please reach out to us for clarification on code requirements.
4. Post sizes must be 6" X 6" with a maximum height of 14 feet.
5. Continue with beam and joist sizing on the back of this pamphlet (Tables A & B)

C Footing Sizes			
LIVE OR GROUND SNOW LOAD (PSF)	TRIBUTARY AREA (SQ. FT.)	LOAD BEARING VALUE OF SOILS (PSF)	
		1500 <sup>e</sup>	
50	Side of a square footing (inches)	Diameter of a round footing (inches)	Thickness (inches)
	20	12	14
	40	15	17
	60	19	21
	80	21	24
	100	24	27
	120	26	30
140	28	32	11
	160	30	12

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Call before you dig.