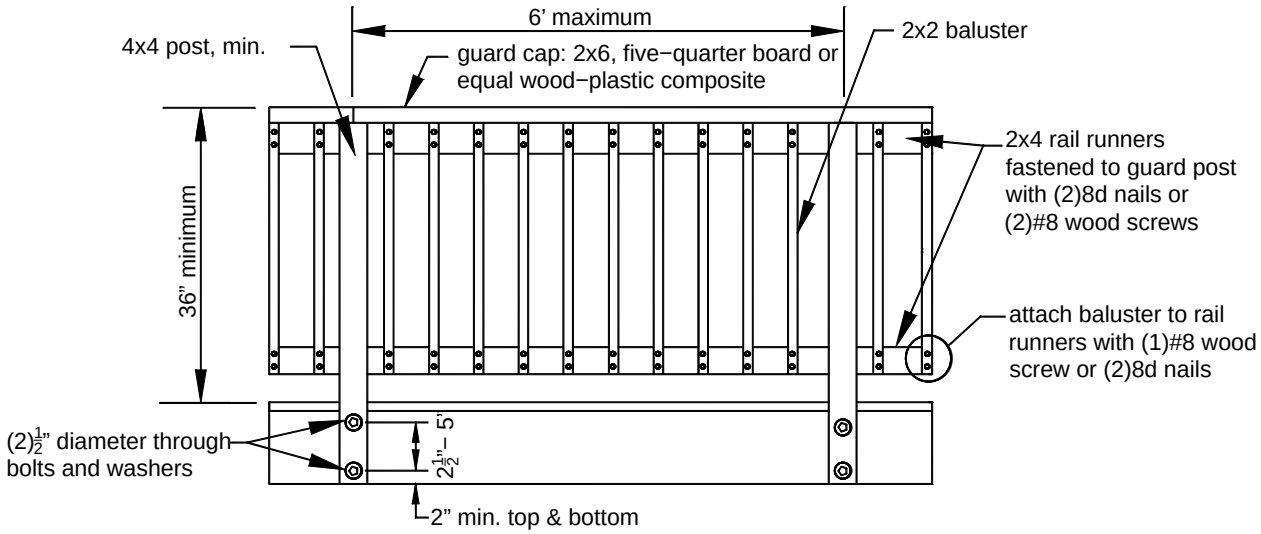
Figure 24
GUARDS



Guard posts. Guard posts must be attached to the deck structure in accordance with all of the following:

Notching guard posts, as shown in Figure 25, is prohibited.

1. Notching guard posts, as shown in Figure 25, is prohibited.
2. Hold−down anchors must have a minimum capacity of 1,800 pounds.
3. Guard posts may be attached to either side of the end joist or rim joist.
4. Bolt holes for a post must be at least 2 inches from the wood edge, at least 2½ inches apart, and no more than 5 inches apart.
5. Hold−down anchors, as shown in Figures 26 and 27, must be used to attach the guard post to the end joist and rim joist, respectively.

Figure 25

POST NOTCHING PROHIBITED

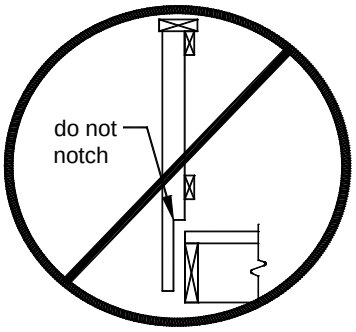


Figure 26
GUARD POST TO END JOIST

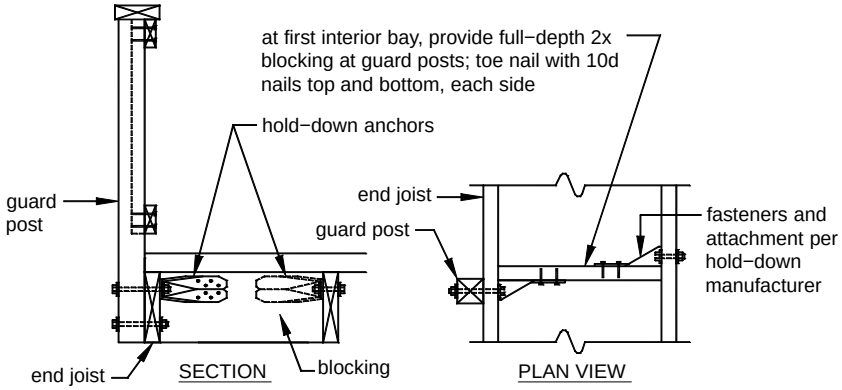
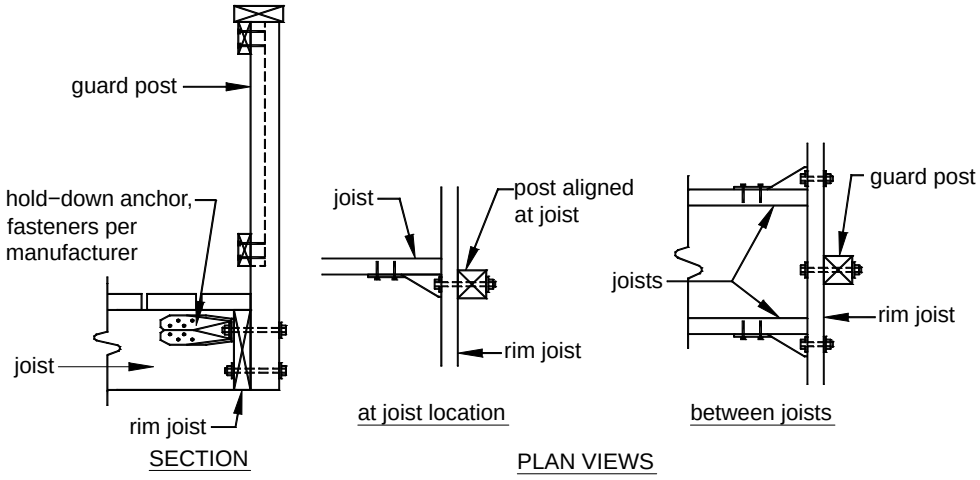


Figure 26
GUARD POST TO RIM JOIST

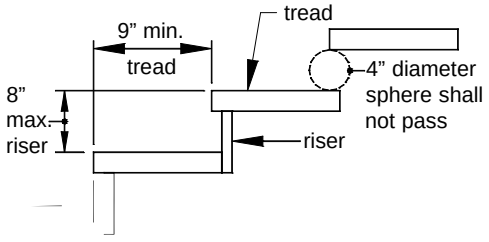


SECTION 14: STAIRS

Stair dimensions. Stair dimensions must comply with all of the following:

1. The minimum width of a stairway is 36 inches.
2. Handrails and associated trim may project a maximum of 4 1/2 inches into the required width at each side of the stairway. The minimum clear width at and below the handrail, including at treads and landings, cannot be less than 31 1/2 inches where a handrail is installed on one side, and 27 inches where handrails are provided on both sides.
3. Stair geometry and openings must be as shown in Figure 27.

Figure 27
TREADS AND RISERS



4. Within a stairway flight, the largest tread depth may not exceed the smallest tread depth by more than 3/8 inch, and the largest riser height may not exceed the smallest riser height by more than 3/8 inch.
5. If the total vertical height of a stairway exceeds 12 feet, an intermediate landing is required and must be constructed as a free−standing deck with flush beams and with posts.
6. Any landing width must equal or exceed the total width of the stairway it serves.

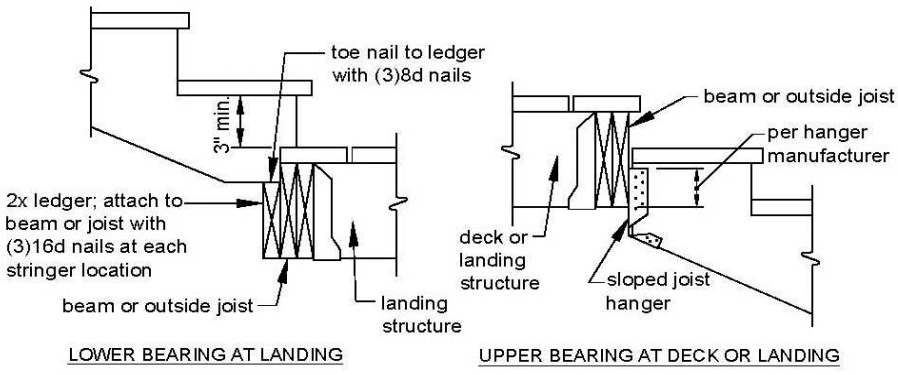
Stair stringers. Stringers must comply with all of the following:

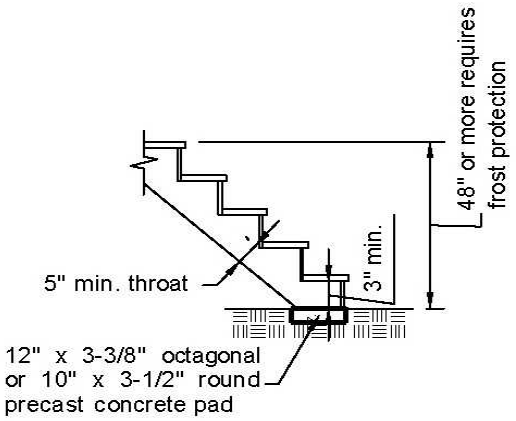
1. Stringers must be sawn or solid 2”x12”s complying with the above tread and riser dimensions.
2. Cut stringers must be spaced no more than 18 inches on center.
3. Stringers must bear on a solid surface, a minimum of 3 1/2 inches thick and 8 inches in diameter, and attach to the deck or a landing in accordance with Figure 28. Prior to placement of solid surface, all loose or organic material shall be removed.
4. Stringer−span length is measured using the horizontally projected distance between the centerlines of bearing at each end.
5. The span length of a cut stringer must not exceed 6 feet−0 inches, and the throat size of cut stringers must not be less than 5 inches, as shown in Figure 29.

Solid−stringer exception: Stringers for a stairway that has a width of 36 inches may have a horizontally projected span of up to 13 feet 3 inches if the stairway is framed solely with 2 solid stringers.

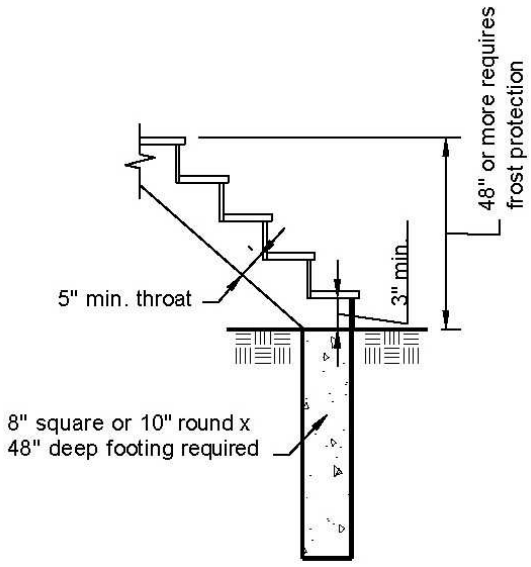
Intermediate−supported stringers: If the total stringer length exceeds the above dimensions, a 4”x4” post may be provided to support the stringer and shorten its span length. The 4”x4” post must be notched and bolted to the stringer in accordance with Figure 2. The post must bear over the middle one−third of a footing that is constructed in accordance with Figure 29 and must be attached as shown in Figure 2. An intermediate landing as described above may also be provided to shorten the stringer span.

Figure 28
STRINGER BEARING





LOWER BEARING AT FOOTING



LOWER BEARING AT FOOTING – FROST PROTECTED

Figure 29
STRINGER BEARING

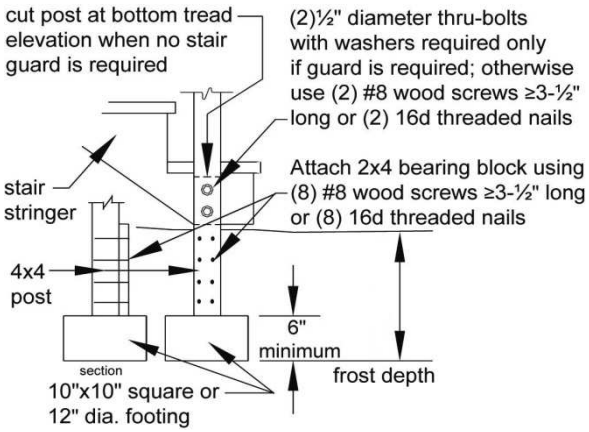
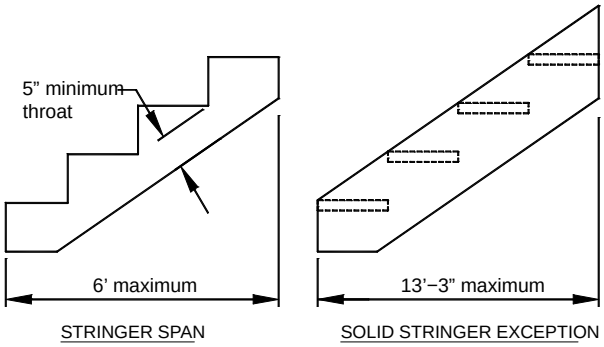


Figure 30
STRINGER SPAN LENGTH



STRINGER SPAN SOLID STRINGER EXCEPTION

Tread and riser material. Treads and risers must comply with all of the following:

1. Tread material must be equivalent to the decking specified in section 12 and be attached in accordance with Figure 31, except wood−plastic composites must be attached in accordance with the manufacturer's instructions.
2. Stairs constructed using the solid−stringer exception noted above must have treads constructed of 2x wood material only and be attached in accordance with Figure 30.
3. Risers that are not open (as shown in Figure 27) must be framed with 1x lumber minimum or an manufacturer recommended wood−plastic composite.

Figure 31
STAIRWAY TREADS

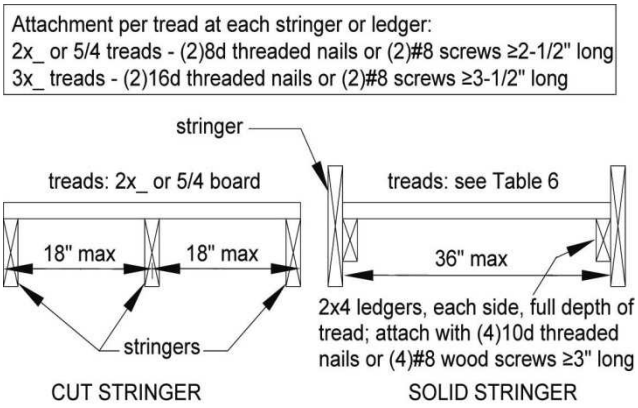


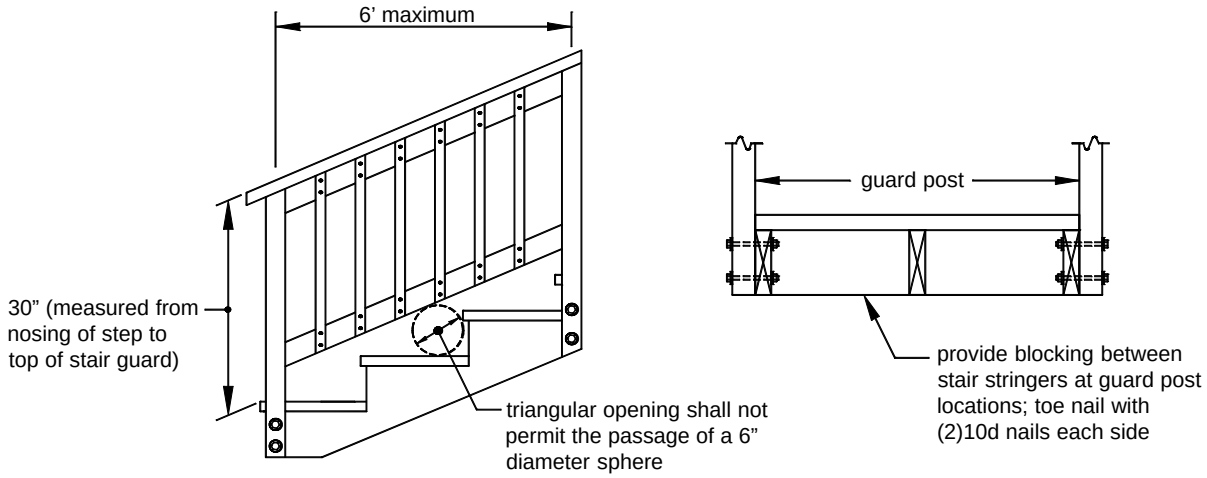
Table 7
MINIMUM TREAD SIZES[1]

Species	Cut Stringer	Solid Stringer
Douglas Fir/ Larch, Hem/ Fir, SPF[2]	2x4 or 5/4	2x8 or 3x4
Southern Pine	2x4 or 5/4	2x8
Redwood, Western Cedars, Ponderosa Pine[3], Red Pine[3]	2x4 or 5/4	2x10 or 3x4

[1] Assumes 300 lb concentrated load, L/288 deflection limit, No. 2 grade, and wet service conditions.
[2] Incising assumed for refractory species including Douglas fir−larch, hem−fir, and spruce−pine−fir.
[3] Design values based on northern species with no incising assumed.

Stair guards. Guards must be provided on all open sides of stairs consisting of more than 3 risers. Stair guards must comply with section 13 and Figure 32.

Figure 32
STAIR GUARDS



Stair handrails. A flight of stairs with more than 3 risers must have at least one handrail that complies with all of the following:

1. The handrail must be located at least 30 inches, but no more than 38 inches above the nosing of the treads – except that a volute, turnout, starting easing, or transition fitting may depart from these dimensions. Measurement must be taken from the nosing to the top of the rail.
2. The handrail must be attached to a stair guard or exterior wall acting as a barrier as shown in Figure 33.
3. The handrail and connecting hardware must be decay− and corrosion−resistant.
4. The handrail must have a smooth surface with no sharp corners and must be graspable, as shown in Figure 34. Recessed sections may be shaped from a 2"x6" or five−quarter board, as shown there.
5. Handrails must run continuously from a point directly over the lowest riser to a point directly over the highest riser.
6. Handrails may be interrupted by guard posts.

Figure 33
STAIR HANDRAILS

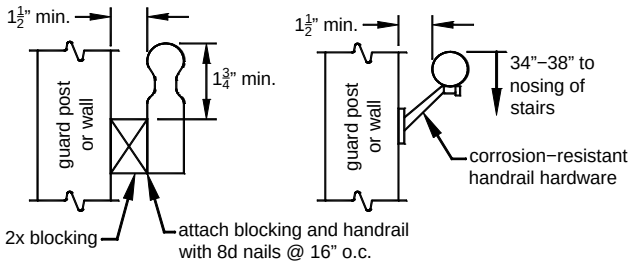
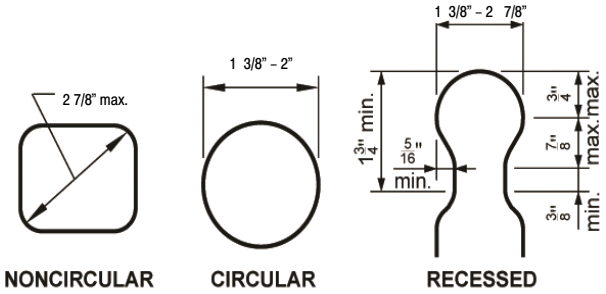


Figure 34
HANDRAIL GRASPABILITY



Spiral stairs. Stair dimensions above are for standard stairs secured in accordance with methods shown in this appendix. Spiral stairs are allowed at decks when designed in accordance with the provisions of Chapter SPS 321.04. Connection of spiral stairs to decks and the supporting load path shall be designed in accordance with accepted engineering practices and with applicable provisions of the Uniform Dwelling Code.

SECTION 15: FRAMING PLAN

A typical framing plan shows a bird's–eye or plan view of the joist and beam layout; the location of the ledger board, diagonal bracing or hold–down devices, posts, and footings; and the type, size, and spacing of the ledger board fasteners. You can use the sample typical deck framing plan shown on the next page in combination with the requirements in this document to complete your deck.