

RESIDENTIAL DECKS – Based on 2018 IRC

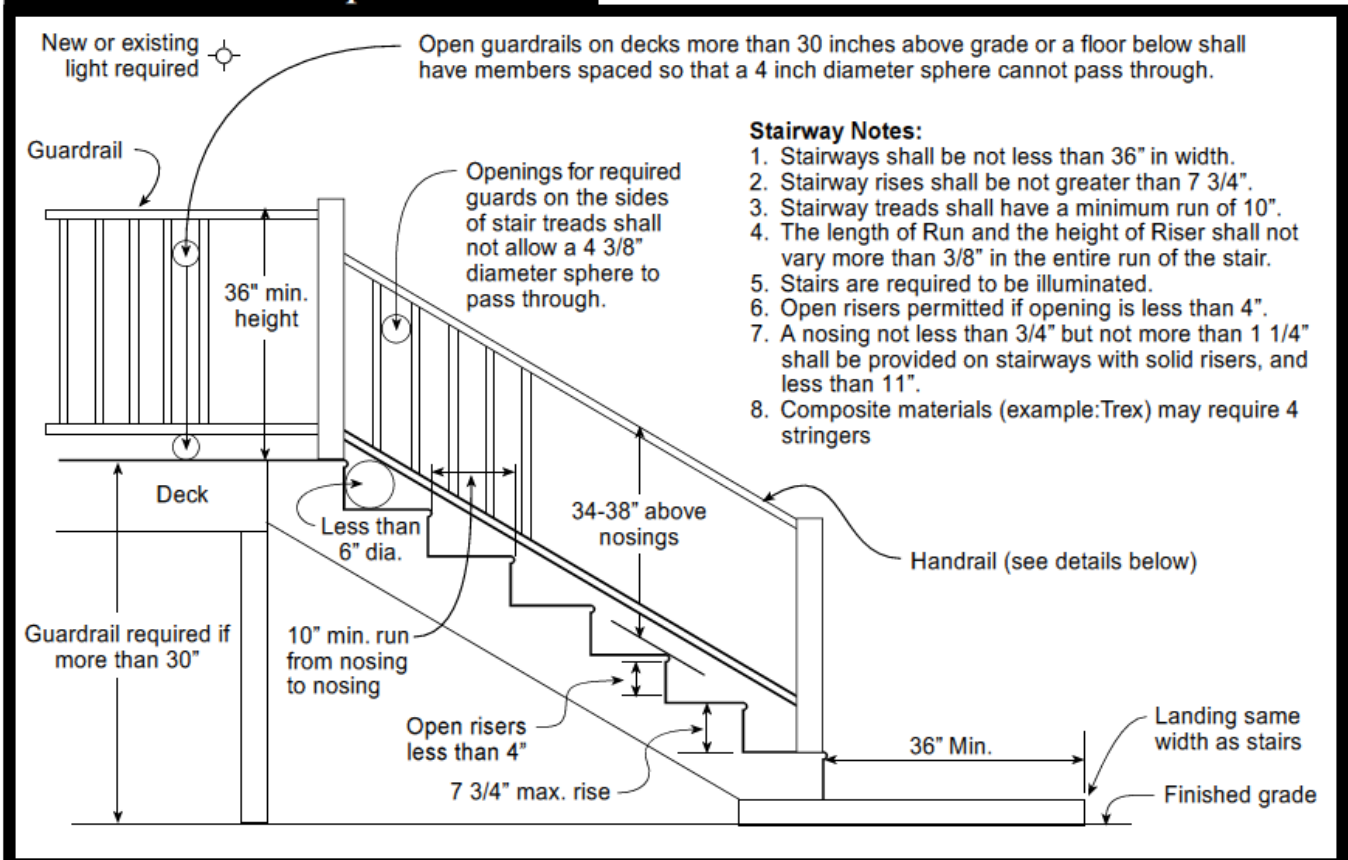
When to Call for Inspections

1. **Footing/ Post Holes** – Holes dug, clean and free from debris. Prior to concrete placement
2. **Framing** – If deck is close to the ground and framing verification will be difficult
3. **Framing/ Final** – Deck, stairs, guards, handrails, and landing all complete.
4. **Other Inspections** – Separate electrical, plumbing, and mechanical inspections are required if those systems are included in your project.

You must notify your inspector when the job is ready for inspection. Call the inspector between the hours of 8:00am – 4:30pm weekdays. Please allow for 24 hours of advanced notice.

The location of the deck on the lot will be subject to all zoning requirements.

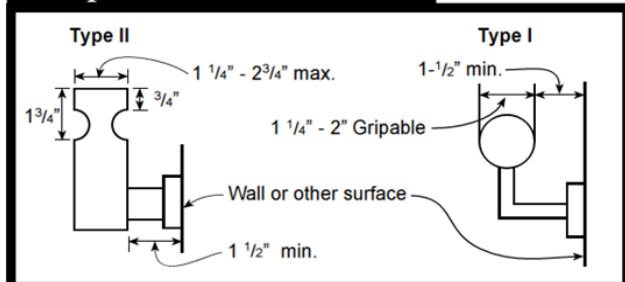
Stair & Handrail Specifications



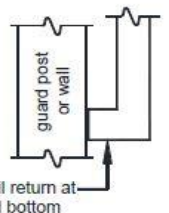
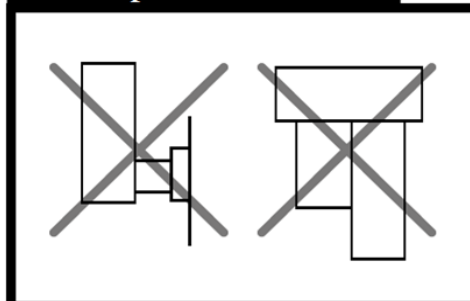
Handrail Notes:

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 311.5.6.2 IRC)

Acceptable Handrail Details

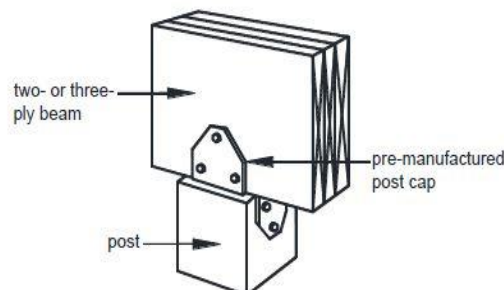
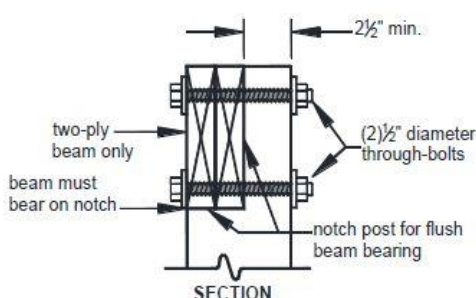


Unacceptable Handrails

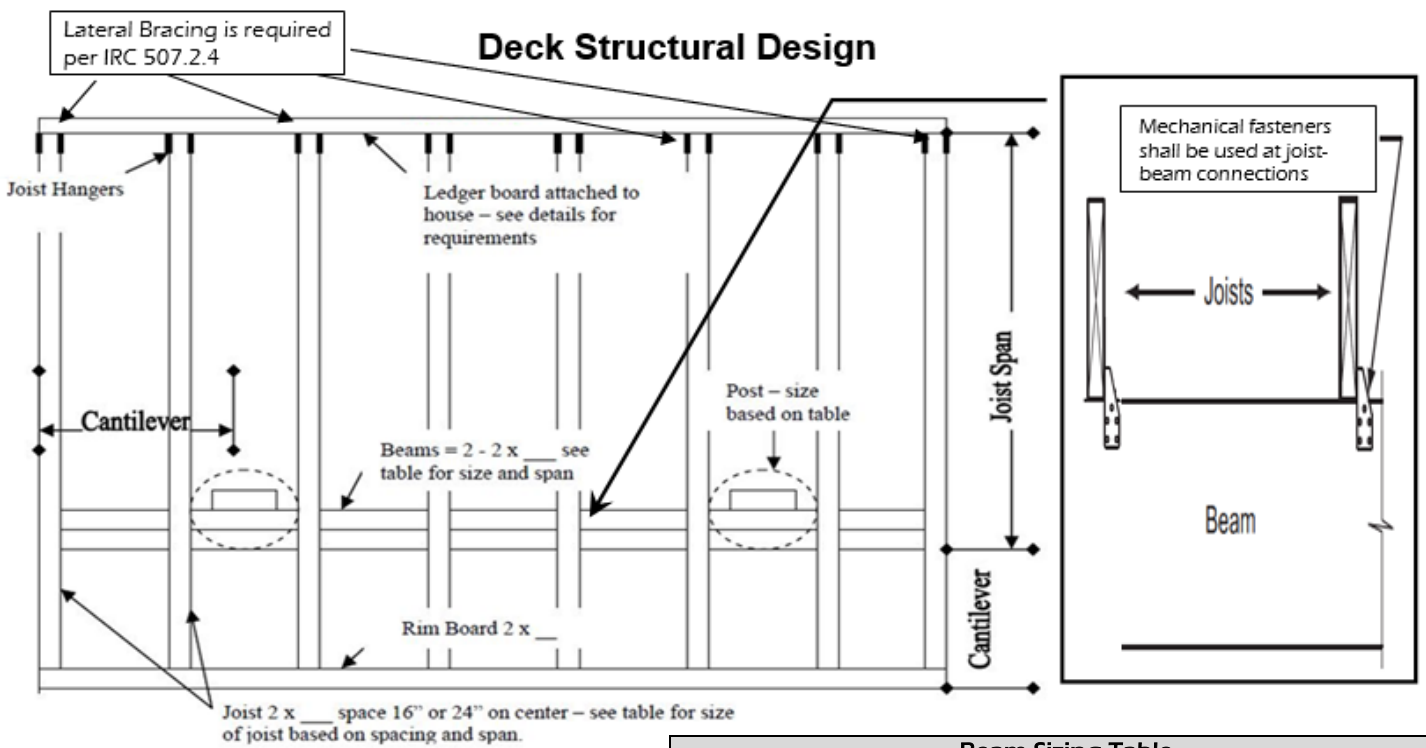


Handrail Return Example

Post/ Beam Connection



Deck Structural Design



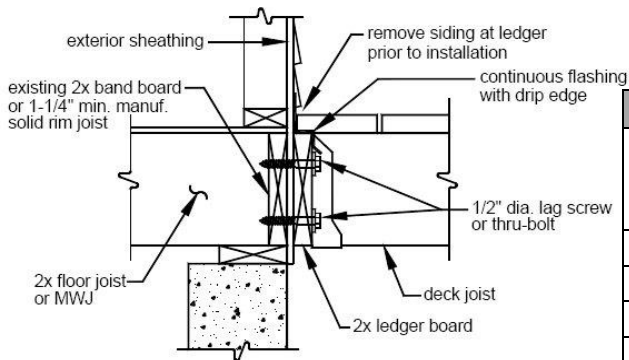
Joist Spans			
Joist Size and Spacing	Spacing (inches)	Allowable Joist Span (feet-inches)	Max. Cantilever * (feet-inches)
2 x 6	12" o.c.	9-11	1-3
	16" o.c.	9-0	1-4
	24" o.c.	7-7	1-6
2 x 8	12" o.c.	13-1	2-1
	16" o.c.	11-10	2-3
	24" o.c.	9-8	2-5
2 x 10	12" o.c.	16-2	3-4
	16" o.c.	14-0	3-6
	24" o.c.	11-5	2-10
2 x 12	12" o.c.	18-0	4-6
	16" o.c.	16-6	4-2
	24" o.c.	13-6	3-4

*Max. Cantilever 1/4 joist span or table value, whichever is less

Beam Sizing Table							
Beam Size	Deck Joist Span Less than or Equal To: (feet)						
	6	8	10	12	14	16	18
Beam Spans (Feet-Inches)							
1-2x6	4-11	4-0	3-7	3-3	3-0	2-10	2-8
1-2x8	5-11	5-1	4-7	4-2	2-10	3-7	3-5
1-2x10	7-0	6-0	5-5	4-11	4-7	4-3	4-0
1-2x12	8-3	7-1	6-4	5-10	5-5	5-0	4-9
(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

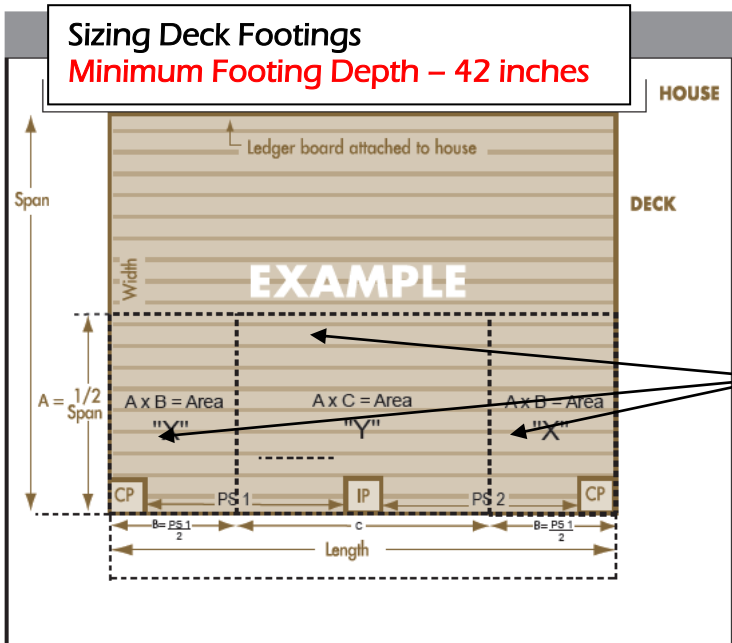
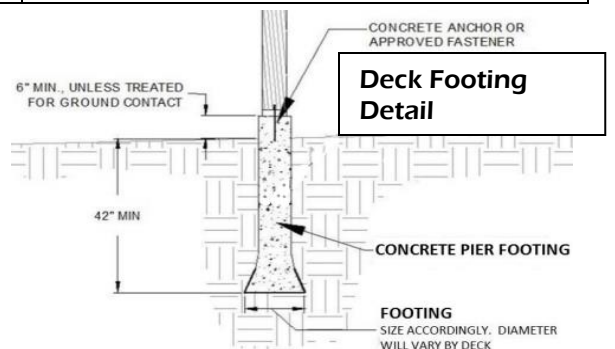
Beams may cantilever 1/4 of the adjacent beam span

Deck Ledger Detail Minimum Ledger size 2x8



Decking Materials Spans		
Material	Max Joist Spacing	
	Perpendicular	Diagonal
5/4 Decking	16"	12"
Nominal 2" Decking	24"	16"
Composite Decking	Follow Manufacturers Specs	

Deck Post Height	
Deck Post Size	Maximum Height (feet-in)
4x4	8'
4x6	8'
6x6	14'
*6'-9" for 3-ply beam	



Footing Size Table								
40 psf Live Load	Tributary Area (Sq. Ft)							
	10	20	30	40	50	60	70	80
Diameter of a Round Footing (inches)								
	8	10	12	14	16	18	18	20
Minimum thickness is 12 inches for all footings. Frost depth is 42 inches								
Assumed 2000 psf soil bearing								
Free-standing deck footing size shall be determined by this table.								
Minimum footing depth is 12 inches for free-standing decks.								