



Community Development Division

200 W. Oak Street - 3rd Floor
PO Box 1190
Fort Collins, CO 80521
970-498-7700

Decks

Residential Deck Information

When is a Building Permit Required?

A permit is required if ANY of the following is true:

- Deck is greater than 30 inches above ground, OR
- Deck serves as the main entry/exit to a structure.

If NONE of these are true, no permit is required.

Note: Decks must meet setback requirements of the Larimer County Land Use Code, whether or not a permit is required. For setback information, please call the Planner on Call at (970) 498-7679.

What Needs to be Submitted with a Building Permit Application?

- Residential Building Permit Application form.
- Two (2) full sets of plans drawn to scale (for example, 1/8", 3/16" or 1/4" = 1'), including plan view, cross sections, and elevations, showing all structural elements including footings, posts, beams, joists, ledger and connections.
- Four (4) copies of plot plans drawn to scale (see plot plan handout).
- Check or cash for plot plan and plan review fee .



Graphic from Colorado Chapter of the International Code Council



Deck Details:

All lumber must be treated or naturally decay-resistant.

Piers or pads are required to support a deck. If attached to the structure, footings must be minimum 30" below grade. Foundation plan must be stamped by a Colorado Registered Engineer if location or design warrants.

Posts over 10 feet high must be "x" braced.

If deck exceeds 30" above grade, a guardrail is required, 36" in height minimum, with intermediate railings spaced such that a 4" sphere cannot fit through, including between bottom rail and deck.

If installing stairs, stair rise must be a minimum of 4" and a maximum of 7 3/4". Tread run must be a minimum of 10" with 3/4" to 1 1/4" nosing. Elimination of nosing requires an 11" minimum run. Variation of rise or run over the entire stairs shall not exceed 3/8".

If more than three risers are installed, a continuous, graspable stair handrail is required, 34" to 38" above the tread nosing, returned to posts at top and bottom, with maximum 4 3/8" spacing between rails.

See attached pages for deck details and allowed spans.



NEED MORE INFORMATION?
Contact the Building Department at
970-498-7700

BEAM SPAN

(Based on 45psf Snow Load & 10psf Dead Load for elevations below 6000')

JOIST SPAN		6	7	8	9	10	11	12	13	14	15	
	4'	2-2"x 6"	2-2"x 6"	2-2" x 6"	2-2" x 6"	2-2" x 6"	2-2"x 10"	2-2" x 8"	2-2"x 8"	2-2"x 10"	2-2"x 10"	2-2"x 10"
	5'	2-2"x 6"	2-2"x 6"	2-2" x 6"	2-2" x 6"	2-2" x 8"	2-2"x 10"	2-2" x10"	2-2"x 10"	2-2"x 10"	2-2"x 12"	
	6'	2-2"x 6"	2-2"x 6"	2-2" x 6"	2-2" x 8"	2-2" x 8"	2-2"x 10"	2-2" x10"	2-2"x 10"	2-2"x 12"	2-2"x 12"	
	7'	2-2"x 6"	2-2"x 6"	2-2" x 8"	2-2" x 8"	2-2"x 10"	2-2"x 10"	2-2" x10"	2-2"x 12"	3-2"x 12"	3-2"x 12"	
	8'	2-2"x 6"	2-2"x 6"	2-2" x 8"	2-2" x 8"	2-2"x 10"	2-2"x 10"	2-2" x10"	3-2"x 12"	3-2"x 12"	3-2"x 12"	
	9'	2-2"x 6"	2-2"x 6"	2-2" x 8"	2-2"x 10"	2-2"x 10"	2-2"x 12"	2-2" x12"	3-2"x 12"	3-2"x 12"	3-2"x 12"	
	10'	2-2"x 6"	2-2"x 8"	2-2" x 8"	2-2"x 10"	2-2"x 10"	2-2"x 12"	3-2" x12"	3-2"x 12"	3-2"x 12"		
	11'	2-2"x 6"	2-2"x 8"	2-2"x 10"	2-2"x 10"	2-2"x 12"	3-2"x 12"	3-2" x 12"	3-2"x 12"	3-2"x 12"		
	12'	2-2"x 8"	2-2"x 8"	2-2"x 10"	2-2"x 10"	2-2"x 12"	3-2"x 12"	3-2" x 12"	3-2"x 12"			
	13'	2-2"x 8"	2-2"x 8"	2-2"x 10"	2-2"x 12"	2-2"x 12"	3-2"x 12"	3-2" x 12"	3-2"x 12"			
	14'	2-2"x 8"	2-2"x 8"	2-2"x 10"	2-2"x 12"	2-2"x 12"	3-2"x 12"	3-2" x 12"				
	15'	2-2"x 8"	2-2"x 10"	2-2"x 10"	2-2"x 12"	3-2"x 12"	3-2"x 12"	3-2" x 12"				
16'	2-2"x 8"	2-2"x 10"	2-2"x 10"	2-2"x 12"	3-2"x 12"							
17'	2-2"x 8"	2-2"x 10"	2-2"x 12"	3-2"x 12"	3-2"x 12"							
18'	2-2"x 8"	2-2"x 10"	2-2"x 12"	3-2"x 12"	3-2"x 12"							

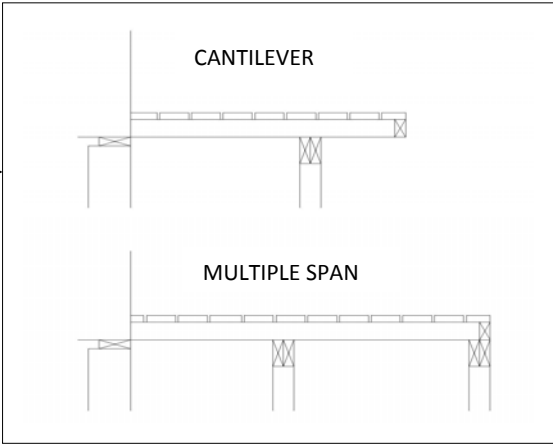
THIS AREA TO
BE SIZED BY
OTHERS

SPACED AT 12 INCHES		SPACED AT 16 INCHES		SPACED AT 24 INCHES	
FEET	MIN. SIZE	FEET	MIN. SIZE	FEET	MIN. SIZE
6	2"x 6"	6	2"x 6"	6	2"x 6"
7	2"x 6"	7	2"x 6"	7	2"x 6"
8	2"x 6"	8	2"x 6"	8	2"x 6"
9	2"x 6"	9	2"x 6"	9	2"x 8"
10	2"x 6"	10	2"x 8"	10	2"x 8"
11	2"x 6"	11	2"x 8"	11	2"x 10"
12	2"x 8"	12	2"x 8"	12	2"x 10"
13	2"x 8"	13	2"x 10"	13	2"x 12"
14	2"x 8"	14	2"x 10"	14	2"x 12"
15	2"x 10"	15	2"x 10"	15	FAILURE
16	2"x 10"	16	2"x 12"	16	FAILURE
17	2"x 10"	17	2"x 12"	17	FAILURE
18	2"x 12"	18	FAILURE	18	FAILURE

NOTES:

- Neither table addresses cantilevers or multiple spans
- All calculations based on Hem-Fir #2
- Firewood storage and/or hot tubs are not permitted using these tables
- All beams must be fully supported
- Lumber must be protected from exterior elements.

Larimer County Deck Handout **does not** apply to these deck designs. They must be designed by others to accepted engineering standards.



BEAM SPAN

(Based on 70 psf Snow Load & 10 psf Dead Load for elevations between 6000' to 8000')

JOIST SPAN		6	7	8	9	10	11	12	13	14	15
	4'	2-2x6's	2-2x6's	2-2x8's	2-2x8's	2-2x8's	2-2x10's	2-2x10's	2x2x12's	2x2x12's	3-2x12's
	5'	2-2x6's	2-2x6's	2-2x8's	2-2x8's	2-2x8's	2-2x10's	2-2x10's	2x2x12's	2x2x12's	3-2x12's
	6'	2-2x6's	2-2x8's	2-2x8's	2-2x8's	2-2x10's	2x2x12's	2x2x12's	3-2x12's	3-2x12's	3-2x12's
	7'	2-2x6's	2-2x8's	2-2x10's	2x2x12's	2x2x12's	2x2x12's	2x2x12's	3-2x12's	3-2x12's	
	8'	2-2x8's	2-2x8's	2-2x10's	2x2x12's	2x2x12's	3-2x12's	3-2x12's			
	9'	2-2x8's	2-2x8's	2-2x10's	2x2x12's	2x2x12's	3-2x12's	3-2x12's			
	10'	2-2x8's	2-2x10's	2x2x12's	3-2x12's	3-2x12's	3-2x12's	3-2x12's			
	11'	2-2x8's	2-2x10's	2x2x12's	3-2x12's	3-2x12's					
	12'	2-2x8's	2-2x10's	2x2x12's	3-2x12's	3-2x12's					
	13'	2-2x8's	2-2x10's	2x2x12's	3-2x12's	3-2x12's					
	14'	2-2x10's	2x2x12's	2x2x12's	3-2x12's	3-2x12's					
	15'	2-2x10's	2x2x12's	3-2x12's	3-2x12's	3-2x12's					
	16'	2-2x10's	2x2x12's	3-2x12's	3-2x12's						
	17'	2-2x10's	2x2x12's	3-2x12's	3-2x12's						
18'	2-2x10's	2x2x12's	3-2x12's	3-2x12's							

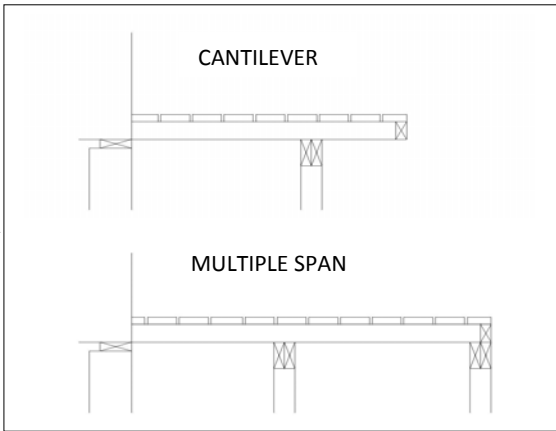
THIS AREA TO
BE SIZED BY
OTHERS

JOIST SPAN TABLE AND ON-CENTER SPACING 70 psf Snow Load					
SPACED AT 12 INCHES		SPACED AT 16 INCHES		SPACED AT 24 INCHES	
FEET	MIN. SIZE	FEET	MIN. SIZE	FEET	MIN. SIZE
6	2"x 6"	6	2"x 6"	6	2"x 6"
7	2"x 6"	7	2"x 6"	7	2"x 8"
8	2"x 6"	8	2"x 8"	8	2"x 8"
9	2"x 6"	9	2"x 8"	9	2"x 8"
10	2"x 8"	10	2"x 8"	10	2"x 10"
11	2"x 8"	11	2"x 8"	11	2"x 10"
12	2"x 8"	12	2"x 8"	12	2"x 10"
13	2"x 8"	13	2"x 10"	13	2"x 12"
14	2"x 8"	14	2"x 10"	14	FAILURE
15	2"x 10"	15	2"x 12"	15	FAILURE
16	2"x 10"	16	2"x 12"	16	FAILURE
17	2"x 10"	17	2"x 12"	17	FAILURE
18	2"x 12"	18	FAILURE	18	FAILURE

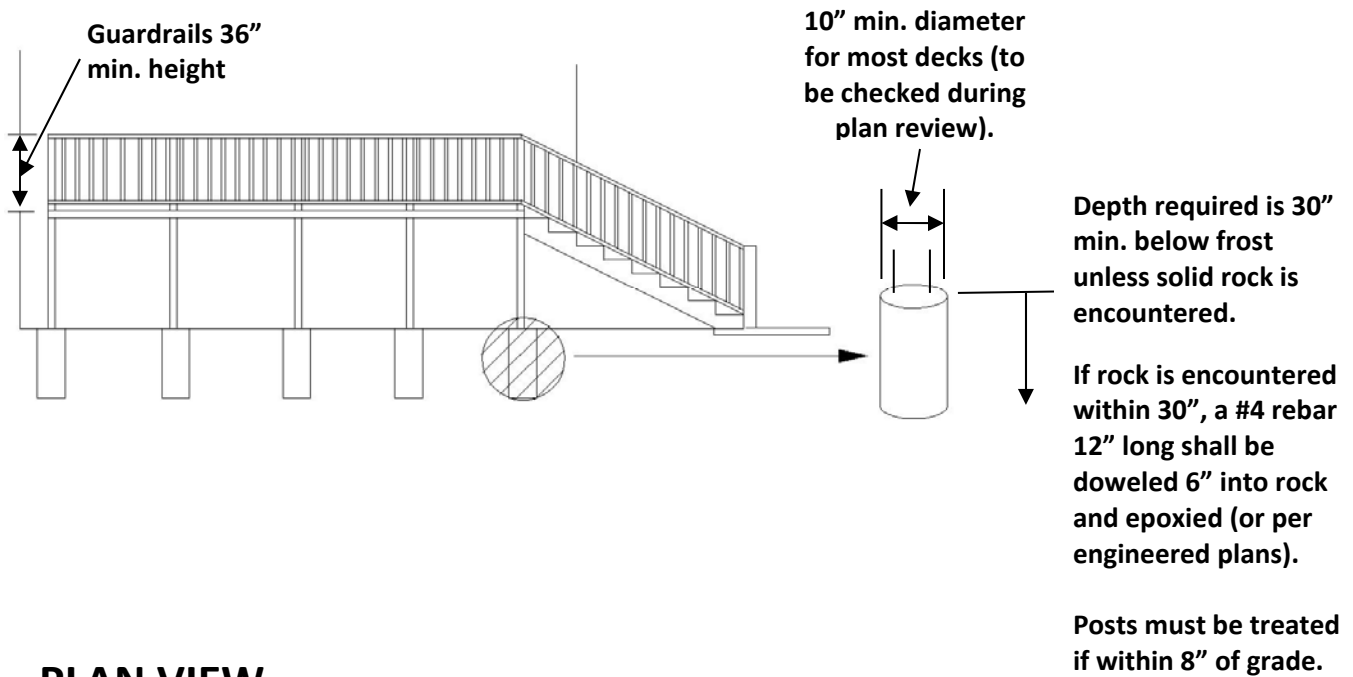
NOTES:

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- Lumber must be protected from exterior elements.

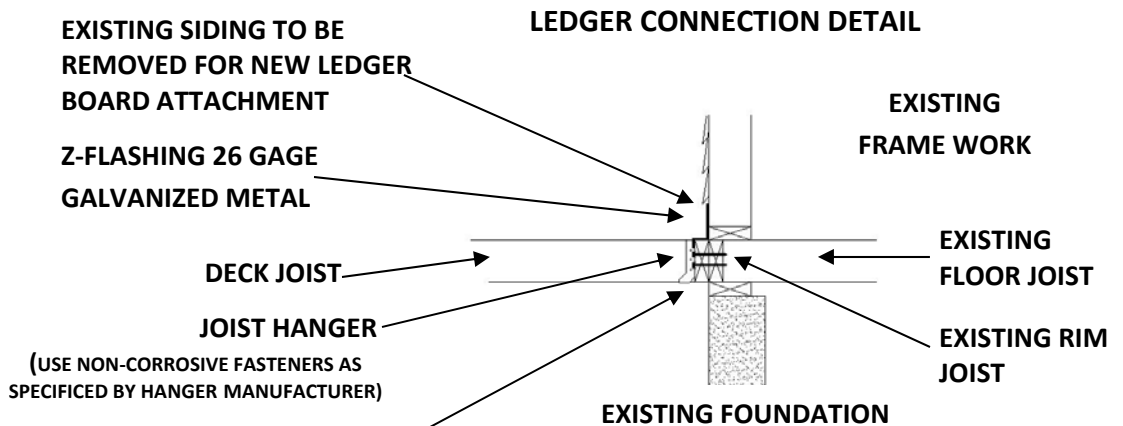
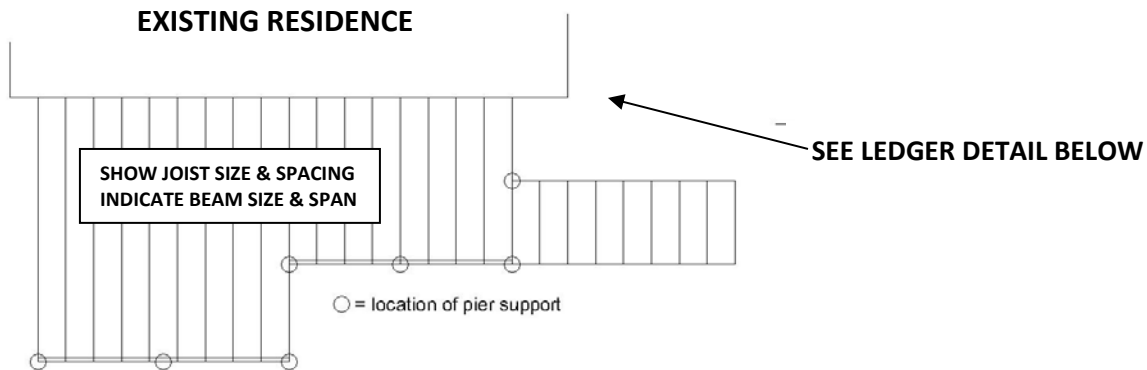
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ELEVATION DETAIL



PLAN VIEW



(2) 1/2" LAG BOLTS OR LAG SCREWS AT 16" ON CENTER OR 5/16" LEDGER LOKS PER MANUFACTURER'S SPECIFICATIONS (WHICH MUST FULLY PENETRATE THROUGH THE RIM BOARD), OR REFER TO TABLE 502.2.2.1 IN 2015 IRC