



DECK

2021 IRC & 2023 NEC

Submittal Documents:

- Completed [Application](#) signed by the applicant with a breakdown of all valuations and a brief description of the full scope of work.
- Plot Plan of the lot with all setbacks from property lines for Planning Division review.
- Completed Plan Review Questionnaire on page 2.
- Completed [ICC Deck Handout](#) including a plan of deck showing length/spans, spacing, and sizes of all joists, beams, ledger boards, columns, and stairs, a site plan, design criteria, building materials, lumber species, grade and sizes, stair details, handrail and guard details. Note caisson sizes according to Table R507.3.1.
- Any electrical work being done in association with the deck, one-line or scope of work.

Design Minimum Requirements:

- 40 psf Ground Live Load
- 1500 psf soil bearing capacity (unless stated otherwise in the Soils report)

Inspections Needed:

- Caissons Inspection - If Engineered Plans or Helical Piers.
- Deck Frame - Always
- Deck Final - Always (can be at the same time as the framing inspection if there is 5' clearance under the deck, and no structural members or connections are covered up).
- Electrical Rough and Electrical Final - (depending on the valuation on the application).



COMMUNITY DEVELOPMENT: BUILDING DEPARTMENT

One DesCombes Dr • Broomfield, CO 80020 • Office 303.438.6370 • Fax 303.438.6207 • buildingpermits@broomfield.org

Plan Review Questionnaire:

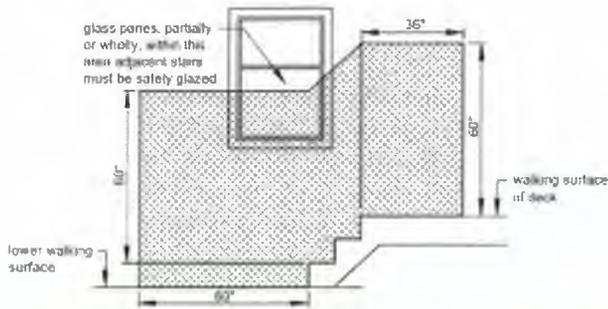
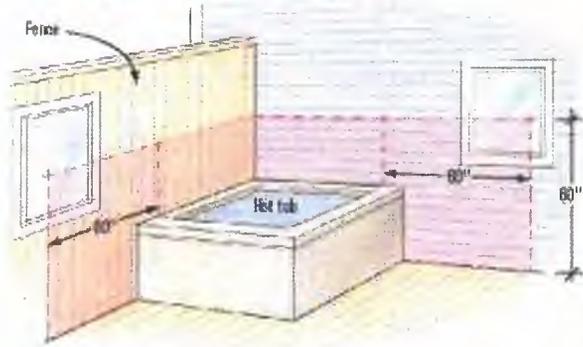
Deck Material:	Wood	Metal <i>Engineered design required</i>
Is this:	A new or replacement deck	An addition
Is the deck more than 30 inches above grade?	Yes <i>Guard rail(s) required</i>	No
Will there be a hot tub or fireplace over the deck?	Yes <i>Engineered design required</i>	No
Is Electrical work required for this project? This work will need to be included in the scope of work and the plan set submitted.	Yes	No
Windows adjacent to the sides of stairways and the top landing within 36" horizontally and 60" vertically will require safety glazing. Windows adjacent to the bottom landing within 60" horizontally and 60" vertically will require safety glazing. Will any of these examples apply to this project?	Yes <i>Safety glazing required, and please note location(s) on site plan</i>	No
Will the deck clearance be less than 36 inches above any required egress/escape window wells?	Yes <i>Opening needed through deck, please note on structural plan</i>	No
Will any ledgerboard(s) attach to a cantilevered portion of the house, such as a bay window, bumpout or overhang ?	Yes <i>Engineered design required</i>	No
Decks that have a 5' clearance from grade to the bottom of the structure will not need a rough inspection. Will there be a 5' clearance under the deck?	Yes	No

I certify that my answers to the questionnaire above are true and complete. I understand that inspections are required prior to concealing any work and are the responsibility of both the contractor and the homeowner. I understand that any changes to the plans will require additional review and written approval from the Building Division and may require approval from the Planning Division prior to proceeding with construction.

Owner signature: _____ Date: _____

Contractor Signature: _____ Date: _____

Pools, Hot Tubs, and Spas Need Safe Glass



(E)

Broomfield Municipal Code: Section R308.4.6 is amended to read as follows:

R308.4.6 **Glazing adjacent to stairs and ramps:** Glazing where the bottom exposed edge of the glazing is less than **60** inches (1524 mm) above the plane of the adjacent walking surface of stairways, landings between flights of stairs and ramps shall be considered a hazardous location.

EXCEPTIONS:

1. When a rail is installed on the accessible side(s) of the glazing 34 to 38 inches (864 to 965 mm) above the walking surface and the plane of glass is more than 18 inches (457 mm) horizontally from the rail. The rail shall be capable of withstanding a horizontal load of 50 pounds per linear foot (730 N/m) without contacting the glass and be a minimum of 1½ inches (38 mm) in cross sectional height.
2. Glazing 36 inches (914 mm) or more measured horizontally from the walking surface.

(F)

Section R308.4.7 is amended to read as follows:

R308.4.7 **Glazing adjacent to the bottom stair landing:** Glazing adjacent to the landing at the bottom of a stairway where the glazing is less than **60** inches (1524 mm) above the landing and within a **60** inch (1524 mm) horizontal arc less than 180 degrees the bottom tread shall be considered a hazardous location.

EXCEPTION: The glazing is protected by a guard complying with Section R312 and the plane of glass is more than 18 inches (457 mm) from the guard.

CITY & COUNTY OF BROOMFIELD RESIDENTIAL DECK PLAN REVIEW & PERMIT CONDITIONS

1. It is the owner's responsibility to obtain any Homeowner's Association and/or Architectural Control Committee approvals that may be applicable.
2. Deck ledgers shall be properly anchored to the house wall studs or to the rim joist by through bolts with nuts and washers or by compliant lag screws. See "Building Guide" for details of required flashing at the ledger. Masonry veneer, manufactured stone, and cantilevered floors are not suitable for deck support.
Connecting a deck to a cantilever shall require stamped engineered plans.
3. Laminated wood beams shall be protected from the weather unless tested for exposure.
4. Deck joists are to have compliant joist hangers and compliant fasteners at the ledger and rim joists. Use nails designed for the purpose. Do not use roofing nails, screws, etc.
5. Connectors such as hangers, caps, bases, and all fasteners shall be hot-dipped galvanized for use with pressure treated lumber.
6. Deck joists that cantilever more than 10 inches over beams shall have solid blocking at the support and a full depth rim joist at the ends. Hangers at ledger shall provide the required uplift resistance. Cantilevered deck joists more than 5 feet above grade shall be attached to the beam with hurricane clips or straps to resist wind uplift.
7. Deck posts are to be mechanically anchored to the caissons and to the beam above. Use post caps, strapping, or brackets designed for this purpose.
8. The framing system shall be inspected prior to concealment. All joists and beams shall have 1½ inches of full bearing. Call for a rough frame inspection prior to decking for all decks less than 5 feet above grade.
9. Each basement is required to have at least one emergency escape and rescue opening directly to an exterior yard. If an existing sleeping room or basement has its only emergency escape/rescue window or door located below the proposed new deck, the deck shall not cover or obstruct the required window well opening. A grate or cover is permitted provided that it is openable from the inside without the use of a key, or any special knowledge or force more than required for the window. A ladder may be required if the deck increases the effective depth of the window well to more than 44 inches.
10. Glazing closer than 5 feet from stairs and landings shall comply with IRC Section R308; safety glazing may be required.
11. A solid, level landing that is at least as wide as the steps, but not less than 36" x 36" shall be provided at the bottom of the steps. Landings may slope a maximum of ¼ inch per foot. Complying handrails are required when there are 4 or more risers. See attached "Building Guide" for stair requirements.
12. Composite decking material shall have a valid evaluation report, and installation shall comply with manufacturer's requirements.
13. New or additional deck areas shall be provided with at least one receptacle outlet located within the perimeter of the deck or porch, not more than 6 ½ feet above the floor.
14. Deck has been reviewed to meet the minimum requirements of the IRC, and has not been reviewed for any additional loads imposed by planters, hot tubs, etc. Please refer to the attached "Building Guide" for decks for additional information.

**TABLE R507.3.1
MINIMUM FOOTING SIZE FOR DECKS**

LIVE OR GROUND SNOW LOAD ^b (psf)	TRIBUTARY AREA (ft ²)	LOAD-BEARING VALUE OF SOILS ^{a, c, d} (psf)								
		1,500*			2,000*			≥ 3,000*		
		Side of a square footing (inches)	Diameter of a round footing (Inches)	Thickness (Inches) ^f	Side of a square footing (inches)	Diameter of a round footing (inches)	Thickness (inches) ^f	Side of a square footing (inches)	Diameter of a round footing (inches)	Thickness (inches) ^f
40	5	7	8	6	7	8	6	7	8	6
	20	10	12	6	9	9	6	7	8	6
	40	14	16	6	12	14	6	10	12	6
	60	17	19	6	15	17	6	12	14	6
	80	20	22	7	17	19	6	14	16	6
	100	22	25	8	19	21	6	15	17	6
	120	24	27	9	21	23	7	17	19	6
	140	26	29	10	22	25	8	18	21	6
50	5	7	8	6	7	8	6	7	8	6
	20	11	13	6	10	11	6	8	9	6
	40	15	17	6	13	15	6	11	13	6
	60	19	21	6	16	18	6	13	15	6
	80	21	24	8	19	21	6	15	17	6
	100	24	27	9	21	23	7	17	19	6
	120	26	30	10	23	26	8	19	21	6
	140	28	32	11	25	28	9	20	23	7
60	5	7	8	6	7	8	6	7	8	6
	20	12	14	6	11	12	6	9	10	6
	40	16	19	6	14	16	8	12	14	6
	60	20	23	7	17	20	6	14	16	6
	80	23	26	9	20	23	7	16	19	6
	100	26	29	10	22	25	8	18	21	6
	120	28	32	11	25	28	9	20	23	7
	140	31	35	12	27	30	10	22	24	8
70	5	7	8	6	7	8	6	7	8	6
	20	12	14	6	11	13	6	9	10	6
	40	18	20	6	15	17	6	12	14	6
	60	21	24	8	19	21	6	15	17	6
	80	25	28	9	21	24	8	18	20	6
	100	28	31	11	24	27	9	20	22	7
	120	30	34	12	26	30	10	21	24	8
	140	33	37	13	28	32	11	23	26	9
160	35	40	15	30	34	12	25	28	9	

For SI: 1 inch = 25.4 mm, 1 square foot = 0.0929 m², 1 pound per square foot = 0.0479 kPa.

- a. Interpolation permitted, extrapolation not permitted.
- b. Based on highest load case: Dead + Live or Dead + Snow.
- c. Footing dimensions shall allow complete bearing of the post.
- d. If the support is a brick or CMU pier, the footing shall have a minimum 2-inch projection on all sides.
- e. Area, in square feet, of deck surface supported by post and footings.
- f. Minimum thickness shall only apply to plain concrete footings.

**TABLE R507.2.3
FASTENER AND CONNECTOR SPECIFICATIONS FOR DECKS^{a, b}**

ITEM	MATERIAL	MINIMUM FINISH/COATING	ALTERNATE FINISH/COATING ^c
Nails and glulam rivets	In accordance with ASTM F1667	Hot-dipped galvanized per ASTM A153, Class D for 3/8-inch diameter and less	Stainless steel, silicon bronze or copper
Bolts ^c	In accordance with ASTM A307 (bolts), ASTM A563 (nuts), ASTM F844 (washers)	Hot-dipped galvanized per ASTM A153, Class C (Class D for 3/8-inch diameter and less) or mechanically galvanized per ASTM B695, Class 55 or 410 stainless steel	Stainless steel, silicon bronze or copper
Lag screws ^d (including nuts and washers)			
Metal connectors	Per manufacturer's specification	ASTM A653 type G185 zinc-coated galvanized steel or post hot-dipped galvanized per ASTM A123 providing a minimum average coating weight of 2.0 oz./ft ² (total both sides)	Stainless steel

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

- a. Equivalent materials, coatings and finishes shall be permitted.
- b. Fasteners and connectors exposed to salt water or located within 300 feet of a salt water shoreline shall be stainless steel.
- c. Holes for bolts shall be drilled a minimum 1/32 inch and a maximum 1/16 inch larger than the bolt.
- d. Lag screws 1/2 inch and larger shall be predrilled to avoid wood splitting per the *National Design Specification (NDS) for Wood Construction*.
- e. Stainless-steel-driven fasteners shall be in accordance with ASTM F1667.

R507.3 Footings. Decks shall be supported on concrete footings or other approved structural systems designed to accommodate all loads in accordance with Section R301. Deck footings shall be sized to carry the imposed loads from the deck structure to the ground as shown in Figure R507.3.

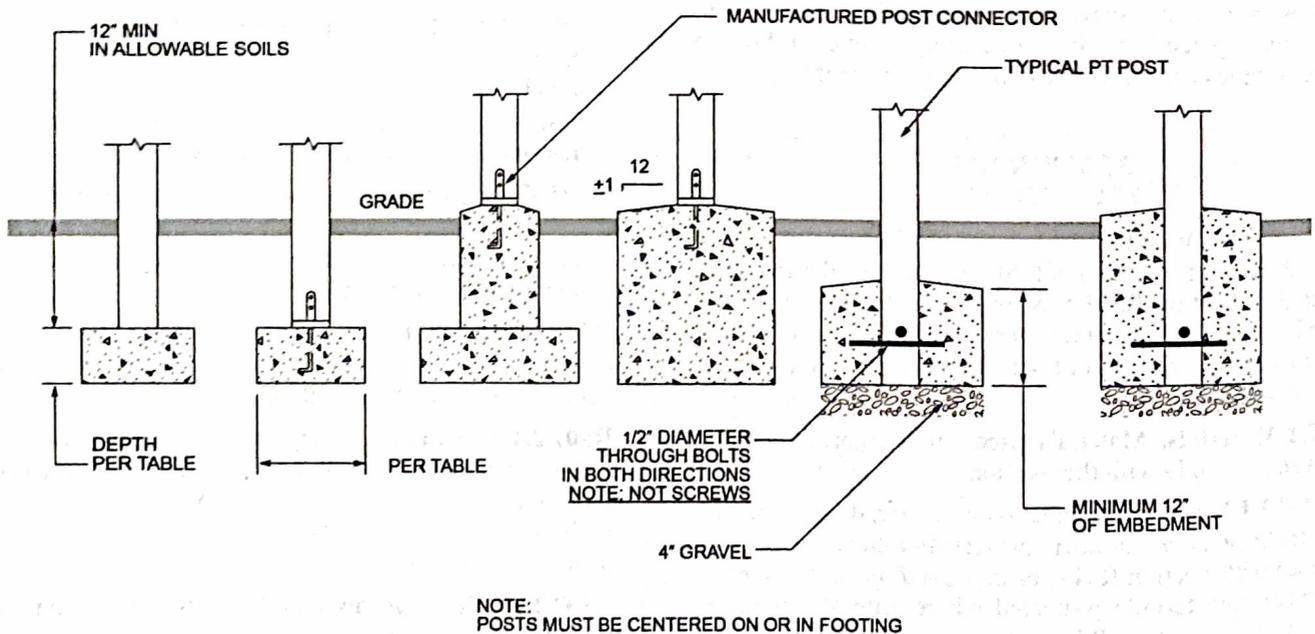
Exceptions:

1. Footings shall not be required for free-standing decks consisting of joists directly supported on grade over their entire length.
2. Footings shall not be required for free-standing decks that meet all of the following criteria:
 - 2.1. The joists bear directly on precast concrete pier blocks at grade without support by beams or posts.

- 2.2. The area of the deck does not exceed 200 square feet (18.6 m²).
- 2.3. The walking surface is not more than 20 inches (508 mm) above grade at any point within 36 inches (914 mm) measured horizontally from the edge.

R507.3.1 Minimum size. The minimum size of concrete footings shall be in accordance with Table R507.3.1, based on the tributary area and allowable soil-bearing pressure in accordance with Table R401.4.1.

R507.3.2 Minimum depth. Deck footings shall be placed not less than 12 inches (305 mm) below the undisturbed ground surface.



For SI: 1 inch = 25.4 mm.

**FIGURE R507.3
DECK POSTS TO DECK FOOTING CONNECTION**

R507.3.3 Frost protection. Where decks are attached to a frost-protected structure, deck footings shall be protected from frost by one or more of the following methods:

1. Extending below the frost line specified in Table R301.2.

2. Erecting on solid rock.

3. Other approved methods of frost protection.

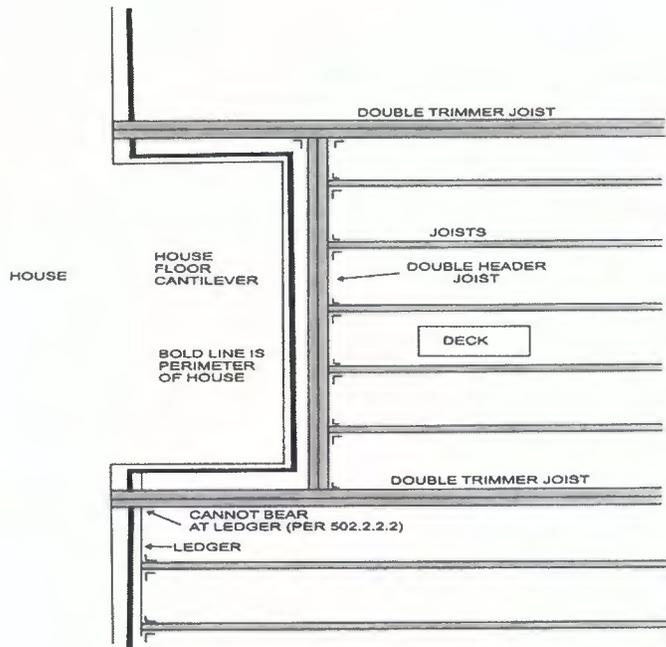
R507.4 Deck posts. For single-level decks, wood post size shall be in accordance with Table R507.4.

**TABLE R507.4
DECK POST HEIGHT**

LOADS (psf) ^b	POST SPECIES ^c	POST SIZE ^d	TRIBUTARY AREA (ft ²) ^{e, h}							
			20	40	60	80	100	120	140	160
			MAXIMUM DECK POST HEIGHT ^a (feet-inches)							
40 live load	Southern pine	4 × 4	14-0	13-8	11-0	9-5	8-4	7-5	6-9	6-2
		4 × 6	14-0	14-0	13-11	12-0	10-8	9-8	8-10	8-2
		6 × 6	14-0	14-0	14-0	14-0	14-0	14-0	14-0	14-0
		8 × 8	14-0	14-0	14-0	14-0	14-0	14-0	14-0	14-0
	Douglas fir ^e Hem-fir ^e Spruce-pine-fir ^e	4 × 4	14-0	13-6	10-10	9-3	8-0	7-0	6-2	5-3
		4 × 6	14-0	14-0	13-10	11-10	10-6	9-5	8-7	7-10
		6 × 6	14-0	14-0	14-0	14-0	14-0	14-0	14-0	14-0
		8 × 8	14-0	14-0	14-0	14-0	14-0	14-0	14-0	14-0
	Redwood ^f Western cedars ^f Ponderosa pine ^f Red pine ^f	4 × 4	14-0	13-2	10-3	8-1	5-8	NP	NP	NP
		4 × 6	14-0	14-0	13-6	11-4	9-9	8-4	6-9	4-7
		6 × 6	14-0	14-0	14-0	14-0	14-0	14-0	13-7	9-7
		8 × 8	14-0	14-0	14-0	14-0	14-0	14-0	14-0	14-0
50 ground snow load	Southern pine	4 × 4	14-0	12-2	9-10	8-5	7-5	6-7	5-11	5-4
		4 × 6	14-0	14-0	12-6	10-9	9-6	8-7	7-10	7-3
		6 × 6	14-0	14-0	14-0	14-0	14-0	14-0	14-0	13-4
		8 × 8	14-0	14-0	14-0	14-0	14-0	14-0	14-0	14-0
	Douglas fir ^e Hem-fir ^e Spruce-pine-fir ^e	4 × 4	14-0	12-1	9-8	8-2	7-1	6-2	5-3	4-2
		4 × 6	14-0	14-0	12-4	10-7	9-4	8-4	7-7	6-11
		6 × 6	14-0	14-0	14-0	14-0	14-0	14-0	14-0	12-10
		8 × 8	14-0	14-0	14-0	14-0	14-0	14-0	14-0	14-0
	Redwood ^f Western cedars ^f Ponderosa pine ^f Red pine ^f	4 × 4	14-0	11-8	9-0	6-10	3-7	NP	NP	NP
		4 × 6	14-0	14-0	12-0	10-0	8-6	7-0	5-3	NP
		6 × 6	14-0	14-0	14-0	14-0	14-0	14-0	10-8	2-4
		8 × 8	14-0	14-0	14-0	14-0	14-0	14-0	14-0	14-0
60 ground snow load	Southern pine	4 × 4	14-0	11-1	8-11	7-7	6-7	5-10	5-2	4-6
		4 × 6	14-0	14-0	11-4	9-9	8-7	7-9	7-1	6-6
		6 × 6	14-0	14-0	14-0	14-0	14-0	14-0	12-9	11-2
		8 × 8	14-0	14-0	14-0	14-0	14-0	14-0	14-0	14-0
	Douglas fir ^e Hem-fir ^e Spruce-pine-fir ^e	4 × 4	14-0	10-11	8-8	7-3	6-2	5-0	3-7	NP
		4 × 6	14-0	13-11	11-2	9-7	8-4	7-5	6-8	5-11
		6 × 6	14-0	14-0	14-0	14-0	14-0	14-0	12-2	10-2
		8 × 8	14-0	14-0	14-0	14-0	14-0	14-0	14-0	14-0
	Redwood ^f Western cedars ^f Ponderosa pine ^f Red pine ^f	4 × 4	14-0	10-6	7-9	4-7	NP	NP	NP	NP
		4 × 6	14-0	13-7	10-9	8-9	7-0	4-9	NP	NP
		6 × 6	14-0	14-0	14-0	14-0	14-0	9-9	NP	NP
		8 × 8	14-0	14-0	14-0	14-0	14-0	14-0	14-0	14-0

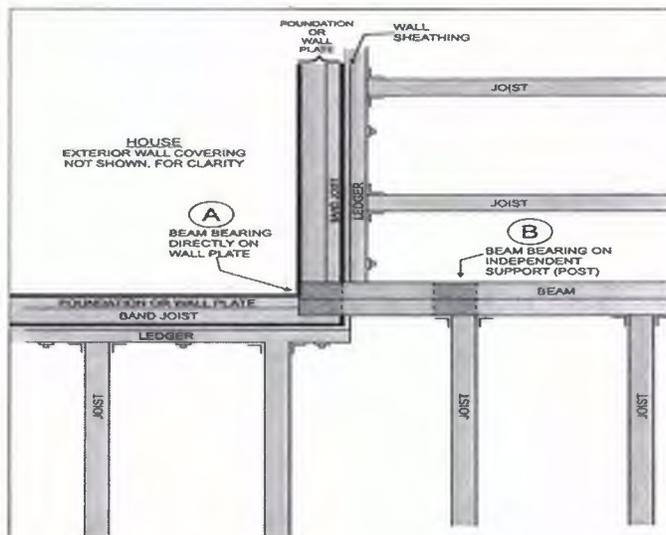
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Example of deck framing around house cantilever.



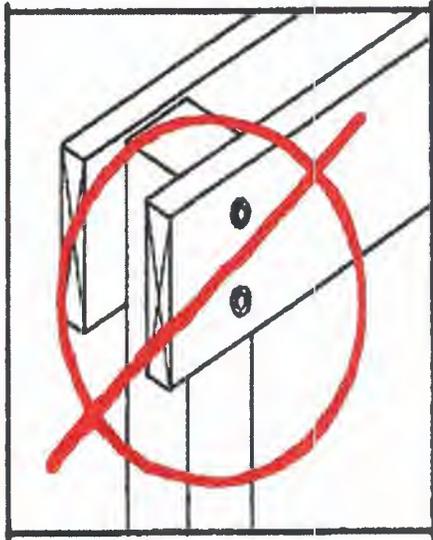
Illustrations only

Example of beam framing to foundation, not to ledger.

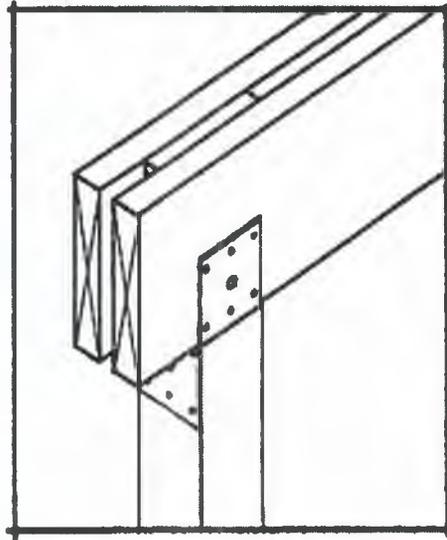


Example 4-16: This example is a typical deck frame constructed around the outside corner of an existing structure. The beam used to carry the joists on one side of the deck cannot be attached to the ledger or band joist. Option "A" shows the beam extending into the existing structure and resting on the foundation or wall plate below, while "B" depicts an independent support provided underneath the beam, such as a post and/or pier.

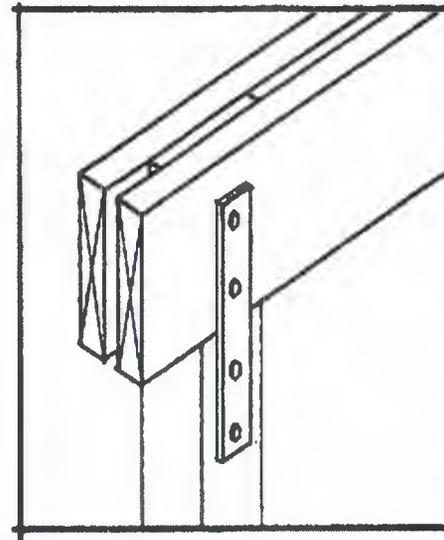
TYPICAL COLUMN TO BEAM CONNECTIONS:



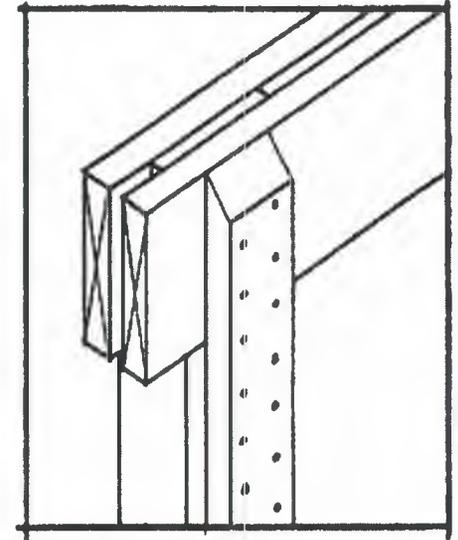
BOLTED THRU



MANUFACTURED STEEL CAP

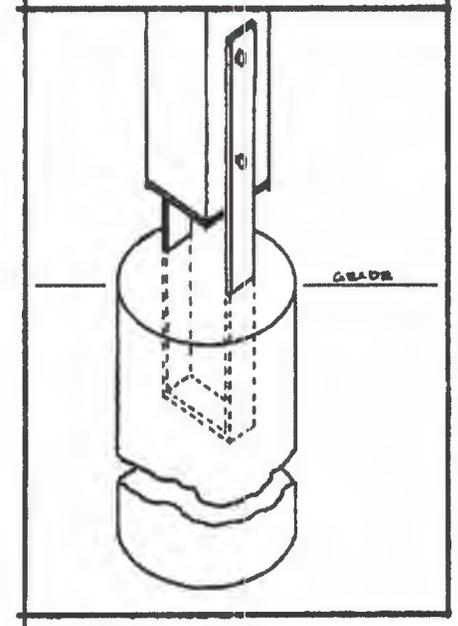
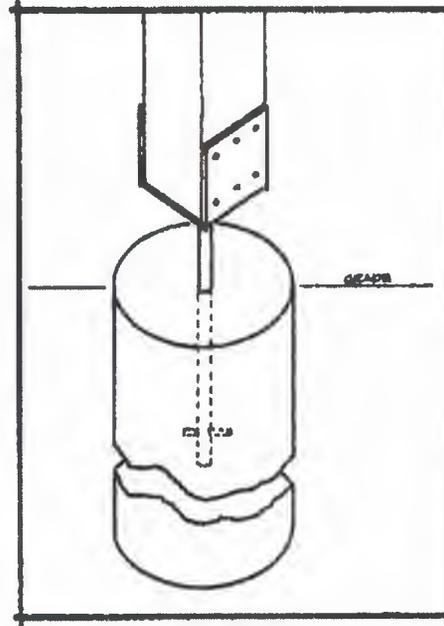
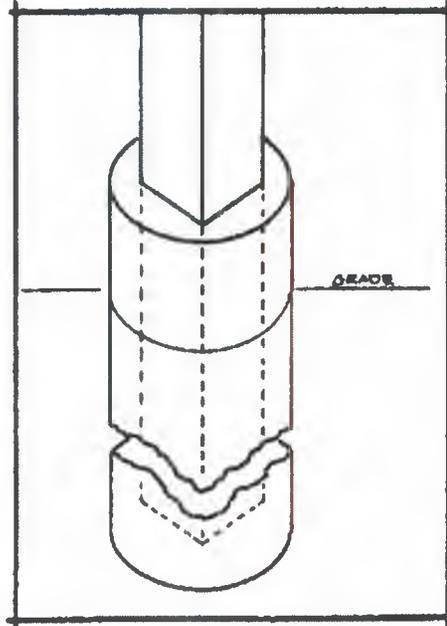
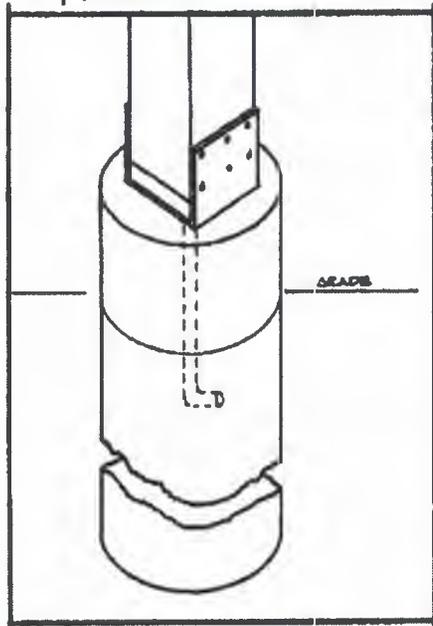


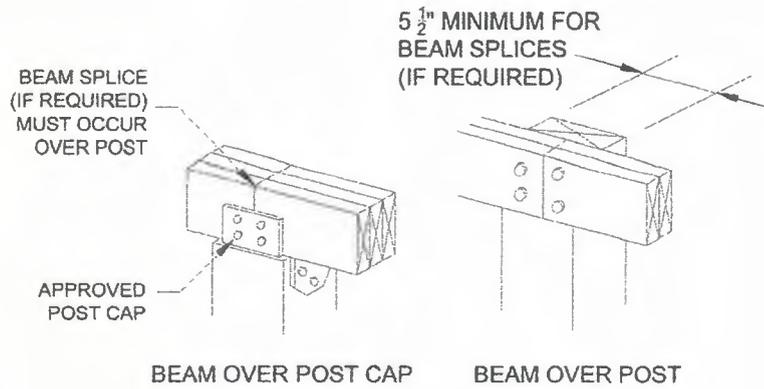
STEEL STRAPS - BOLTED THRU



2x4 - NAILED OR SCREWED

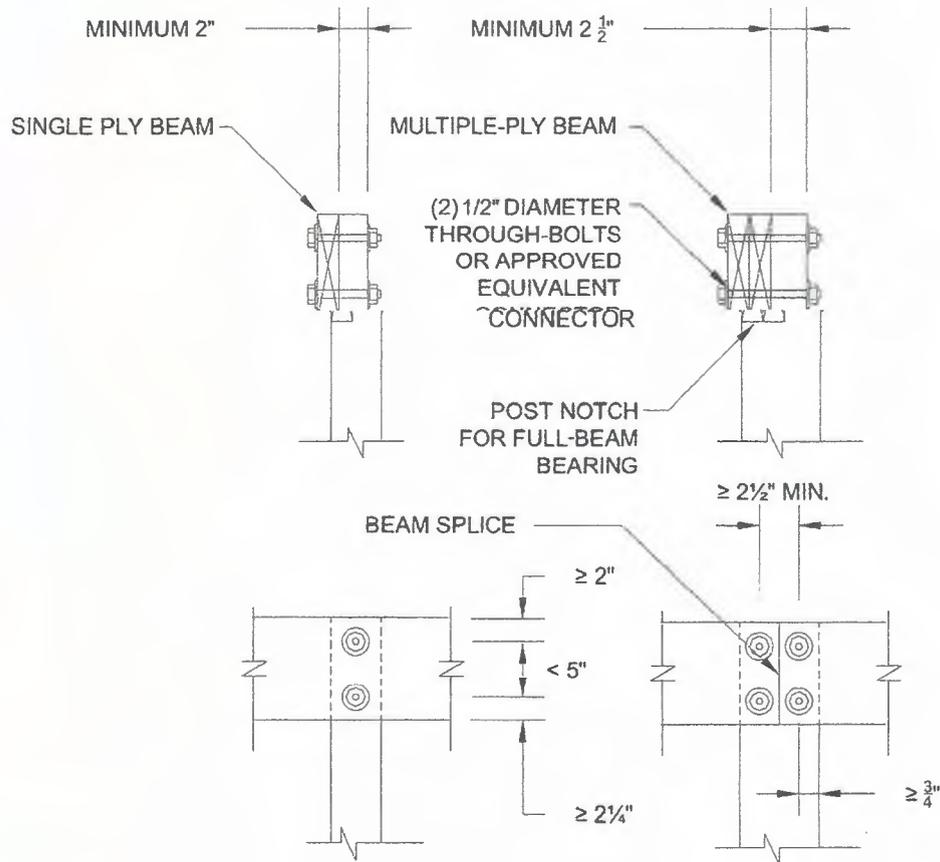
TYPICAL COLUMN TO RAFTER CONNECTIONS:





For SI: 1 inch = 25.4 mm.

FIGURE R507.5.1(1)
DECK BEAM TO DECK POST



For SI: 1 inch = 25.4 mm.

FIGURE R507.5.1(2)
NOTCHED POST-TO-BEAM CONNECTION

FLOORS

R507.9.1.3 Ledger to band joist details. Fasteners used in deck ledger connections in accordance with Table R507.9.1.3(1) shall be hot-dipped galvanized or stainless steel and shall be installed in accordance with Table R507.9.1.3(2) and Figures R507.9.1.3(1) and R507.9.1.3(2).

R507.9.1.4 Alternate ledger details. Alternate framing configurations supporting a ledger constructed to meet the load requirements of Section R301.5 shall be permitted.

**TABLE R507.9.1.3(1)
DECK LEDGER CONNECTION TO BAND JOIST**

LOAD ^c (psf)	JOIST SPAN ^a (feet)	ON-CENTER SPACING OF FASTENERS ^b (inches)		
		1/2-inch diameter lag screw with 1/2-inch maximum sheathing ^{d, e}	1/2-inch diameter bolt with 1/2-inch maximum sheathing ^e	1/2-inch diameter bolt with 1-inch maximum sheathing ^f
40 live load	6	30	36	36
	8	23	36	36
	10	18	34	29
	12	15	29	24
	14	13	24	21
	16	11	21	18
	18	10	19	16
50 ground snow load	6	29	36	36
	8	22	36	35
	10	17	33	28
	12	14	27	23
	14	12	23	20
	16	11	20	17
	18	9	18	15
60 ground snow load	6	25	36	36
	8	18	35	30
	10	15	28	24
	12	12	23	20
	14	10	20	17
	16	9	17	15
	18	8	15	13
70 ground snow load	6	22	36	35
	8	16	31	26
	10	13	25	21
	12	11	20	17
	14	9	17	15
	16	8	15	13
	18	7	13	11

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 0.0479 kPa.

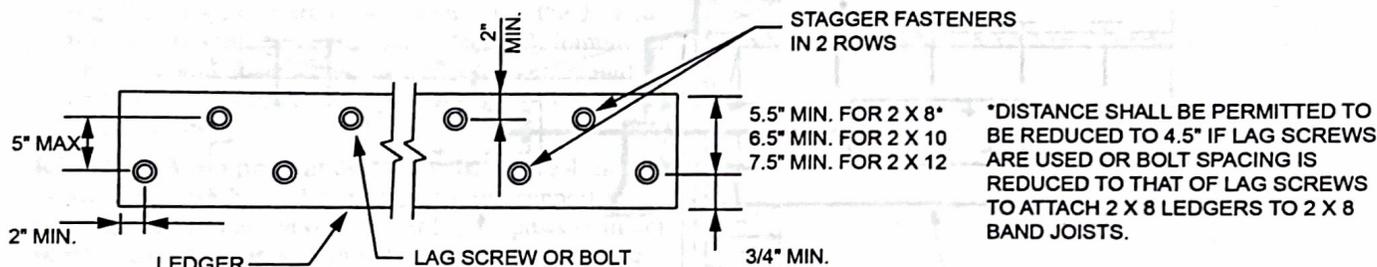
- a. Interpolation permitted. Extrapolation is not permitted.
- b. Ledgers shall be flashed in accordance with Section R703.4 to prevent water from contacting the house band joist.
- c. Dead Load = 10 psf. Snow load shall not be assumed to act concurrently with live load.
- d. The tip of the lag screw shall fully extend beyond the inside face of the band joist.
- e. Sheathing shall be wood structural panel or solid sawn lumber.
- f. Sheathing shall be permitted to be wood structural panel, gypsum board, fiberboard, lumber or foam sheathing. Up to 1/2-inch thickness of stacked washers shall be permitted to substitute for up to 1/2 inch of allowable sheathing thickness where combined with wood structural panel or lumber sheathing.

TABLE R507.9.1.3(2)
PLACEMENT OF LAG SCREWS AND BOLTS IN DECK LEDGERS AND BAND JOISTS

MINIMUM END AND EDGE DISTANCES AND SPACING BETWEEN ROWS				
	TOP EDGE	BOTTOM EDGE	ENDS	ROW SPACING
Ledger ^a	2 inches ^d	3/4 inch	2 inches ^b	1 5/8 inches ^b
Band Joist ^c	3/4 inch	2 inches	2 inches ^b	1 5/8 inches ^b

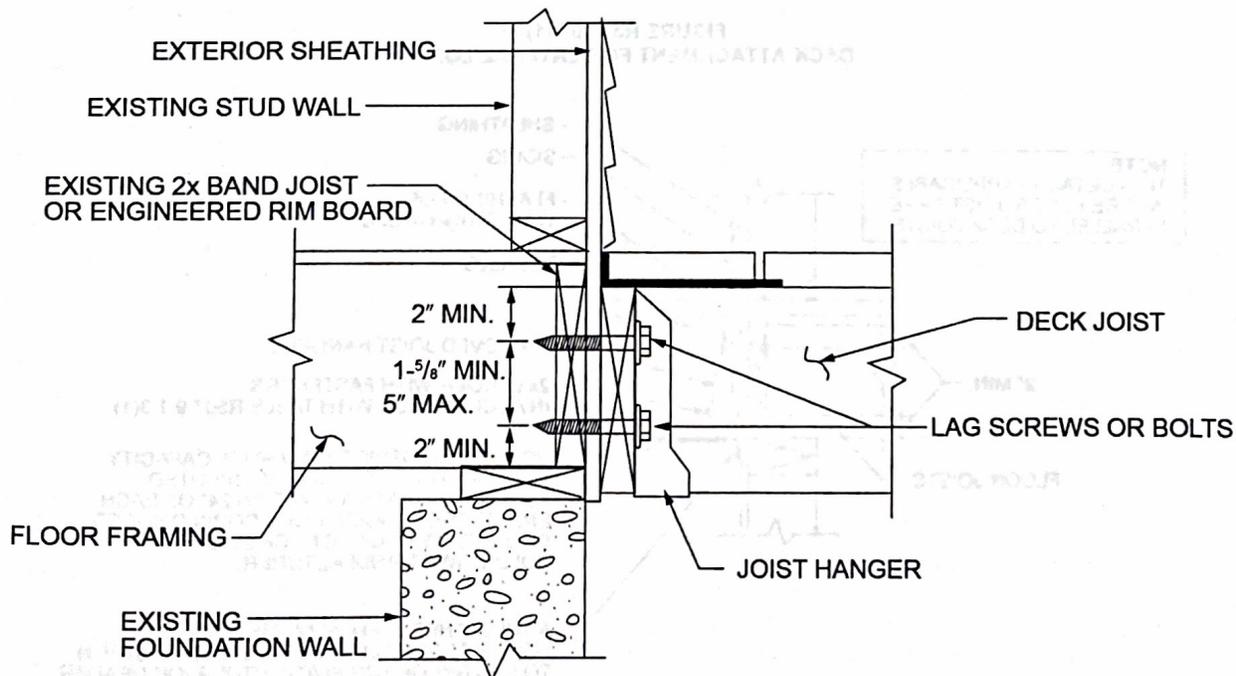
For SI: 1 inch = 25.4 mm.

- a. Lag screws or bolts shall be staggered from the top to the bottom along the horizontal run of the deck ledger in accordance with Figure R507.9.1.3(1).
- b. Maximum 5 inches.
- c. For engineered rim joists, the manufacturer's recommendations shall govern.
- d. The minimum distance from bottom row of lag screws or bolts to the top edge of the ledger shall be in accordance with Figure R507.9.1.3(1).



For SI: 1 inch = 25.4 mm.

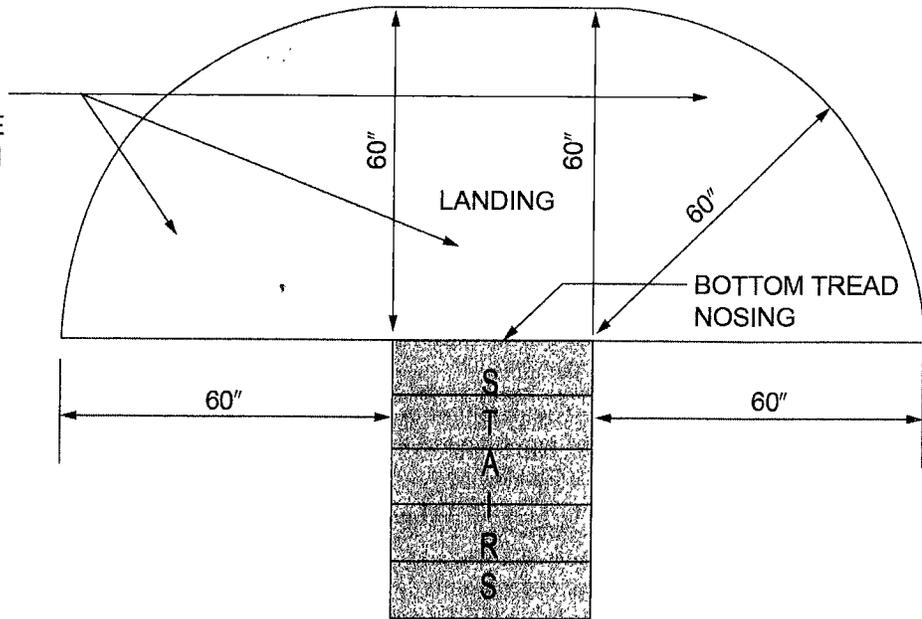
FIGURE R507.9.1.3(1)
PLACEMENT OF LAG SCREWS AND BOLTS IN LEDGERS



For SI: 1 inch = 25.4 mm.

FIGURE R507.9.1.3(2)
PLACEMENT OF LAG SCREWS AND BOLTS IN BAND JOISTS

GLAZING LESS THAN 36" ABOVE LANDINGS WITHIN THIS AREA ARE CONSIDERED TO BE IN HAZARDOUS LOCATIONS, UNLESS THE EXCEPTION TO SECTION R308.4.7 IS SATISFIED



For SI: 1 inch = 25.4 mm.

FIGURE R308.4.7
HAZARDOUS GLAZING LOCATIONS AT BOTTOM STAIR LANDINGS

R308.6.5 Screens not required. Screens shall not be required where laminated glass complying with Item 1 of Section R308.6.2 is used as single glazing or the inboard pane in multiple glazing. Screens shall not be required where fully tempered glass is used as single glazing or the inboard pane in multiple glazing and either of the following conditions is met:

1. The glass area is 16 square feet (1.49 m²) or less; the highest point of glass is not more than 12 feet (3658 mm) above a walking surface; the nominal glass thickness is not more than ³/₁₆ inch (4.8 mm); and for multiple glazing only the other pane or panes are fully tempered, laminated or wired glass.
2. The glass area is greater than 16 square feet (1.49 m²); the glass is sloped 30 degrees (0.52 rad) or less from vertical; and the highest point of glass is not more than 10 feet (3048 mm) above a walking surface.

R308.6.6 Glass in greenhouses. Any glazing material is permitted to be installed without screening in the sloped areas of greenhouses, provided that the greenhouse height at the ridge does not exceed 20 feet (6096 mm) above grade.

R308.6.7 Screen characteristics. The screen and its fastenings shall: be capable of supporting twice the weight of the glazing; be firmly and substantially fastened to the framing members; be installed within 4 inches (102 mm) of the glass; and have a mesh opening of not greater than 1 inch by 1 inch (25 mm by 25 mm).

R308.6.8 Curbs for skylights. *Unit skylights* installed in a roof with a pitch of less than three units vertical in 12 units horizontal (25-percent slope) shall be mounted on a curb extending not less than 4 inches (102 mm) above the plane of the roof, unless otherwise specified in the manufacturer's installation instructions.

R308.6.9 Testing and labeling. *Unit skylights* and *tubular daylighting devices* shall be tested by an approved independent laboratory, and bear a label identifying manufacturer, performance grade rating and approved inspection agency to indicate compliance with the requirements of AAMA/WDMA/CSA 101/I.S.2/A440.

R308.6.9.1 Comparative analysis for glass-glazed unit skylights. Structural wind load design pressures for glass-glazed *unit skylights* different than the size tested in accordance with Section R308.6.9 shall be permitted to be different than the design value of the tested unit where determined in accordance with one of the following comparative analysis methods:

1. Structural wind load design pressures for glass-glazed *unit skylights* smaller than the size tested in accordance with Section R308.6.9 shall be permitted to be higher than the design value of the tested unit provided that such higher pressures are determined by accepted engineering analysis. Components of the smaller unit shall be the same as those of the tested unit. Such calculated design pressures shall be validated by an additional test of the glass-glazed *unit skylight* having the highest allowable design pressure.
2. In accordance with WDMA I.S.11.