



Planning and Development Department

**DRAWING CHECKLISTS FOR REAR AND SIDE YARD DECKS**

This list contains basic drawings that must be submitted for this type of project. Your individual projects may require additional information. See attached sample drawings.

**Site Plan**

- Show all property lines, all existing structures and all proposed new work
- Dimension all setbacks from edge of proposed structure to the adjacent property lines and to adjacent structures on the same lot
- Show location of any required screening/fencing and provide description

**Footings/Foundation/Floor Framing Plan**

- Use of grid paper may be acceptable; provide grid scale; such as 1 square = 1ft.
- Draw to same scale as floor plan
- Show location of all footings and support posts and dimension spacing of posts in each direction
- Dimension any overhangs
- Provide footing size (i.e.: 12x12 or 14" dia.) and beam size (i.e.: 2- 2x10)
- Provide size and spacing of joists (i.e., 2x8 @ 16" o.c.)
- Provide size of ledger board (ledger boards cannot be smaller than joists)
- Provide information on stair stringers (max 18" o.c. for cut stair stringers)

**Floor Plan**

- Use of grid paper may be acceptable; provide grid scale; such as 1 square = 1ft.
- Draw to same scale as Footings/Foundation/Floor Framing plan (per sample drawing - floor plan may be shown on Footings/Foundation/Floor Framing Plan)
- Show boundaries of floor area and provide all outer dimensions.
- Show any stair location and dimensions (min 3' clear stair width)
- For roofed decks show location of support posts for roofs
- Show location of all openings onto structure and indicate stairs, guardrails and decking as required

**Typical Section**

- Show how all framing members are fastened together and supported by footings. Label and dimension all foundations and footings; all components of floor and roof framing, such as support post, beams, joists, stair stringers, rafters, connectors, decking, roofing felt, shingles, gutters, etc.

**Elevations (for Roofed Decks)**

- Provide front and one side elevation

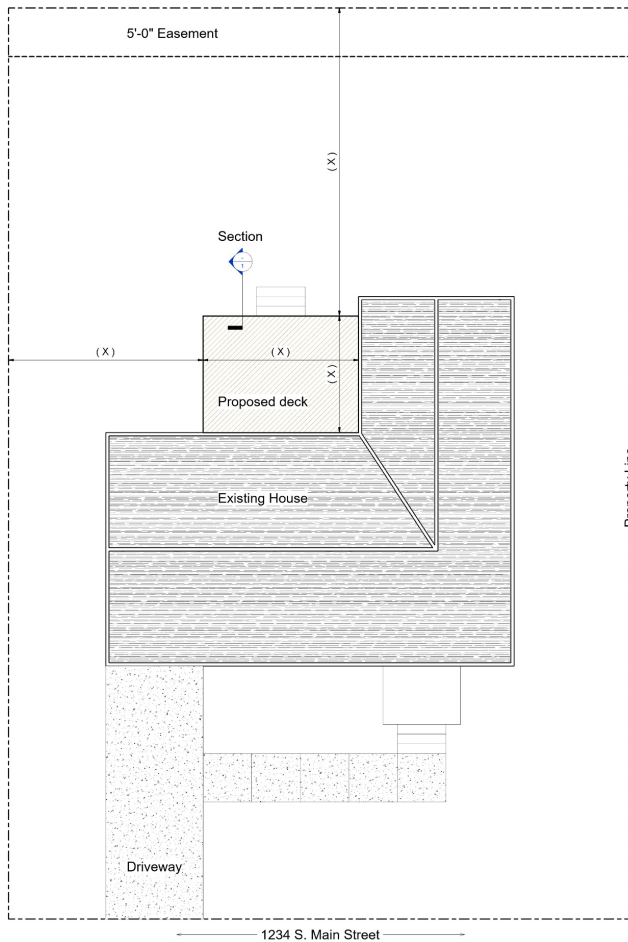
Freestanding decks (not attached to the dwelling) are exempt from building code review if they do not exceed 200 SF, are not more than 30" above adjacent grade at any point and do not serve the main required egress; however, such decks shall still comply with the provisions of the Building Code.

ALL DRAWINGS MUST SHOW PROJECT ADDRESS

SEPARATE PERMITS ARE REQUIRED FOR MECHANICAL, PLUMBING AND ELECTRIC WORK IF PERFORMED

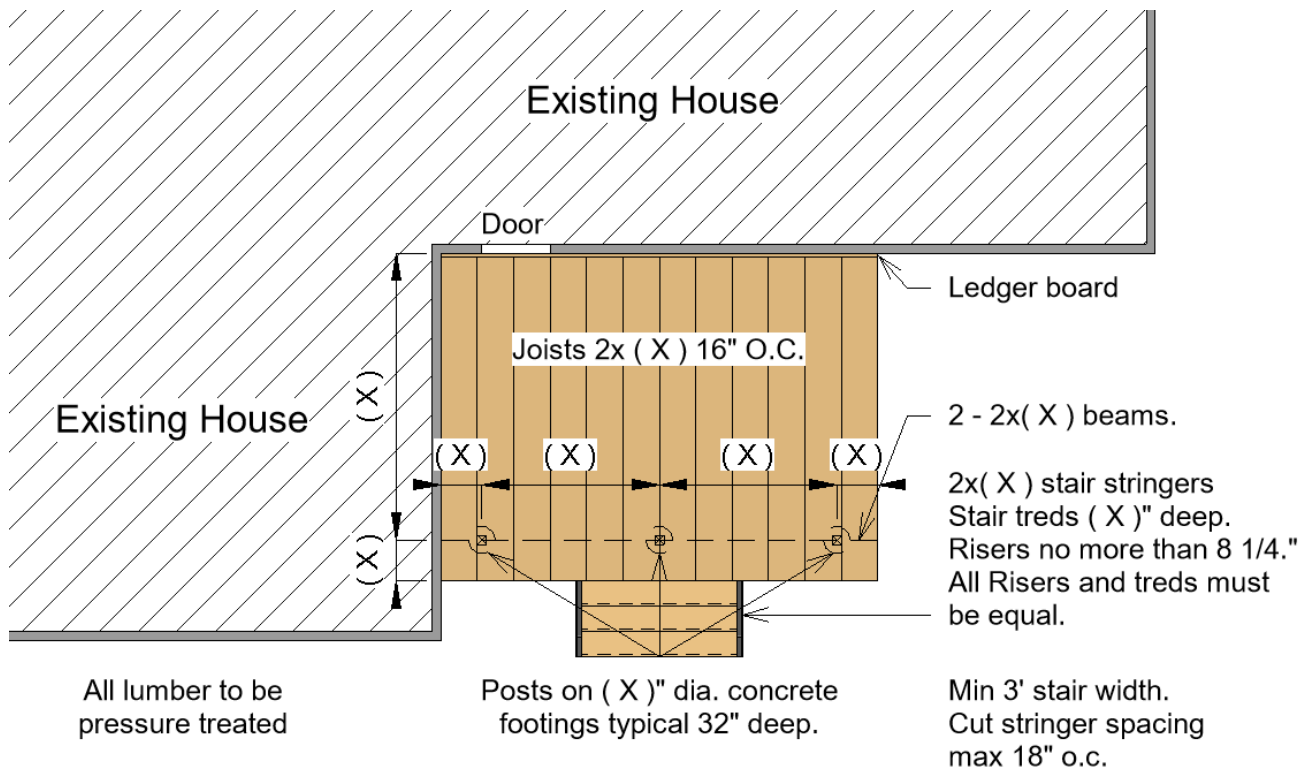
WORK MUST ALSO MEET ZONING REQUIREMENTS. ZONING DOES NOT PERMIT DECKS IN FRONT THE YARD AND THERE ARE ADDITIONAL REQUIREMENTS FOR DECKS ON CORNER LOTS

**CONTACT THE PLANNING AND DEVELOPMENT DEPARTMENT AT 937-296-2441 WITH ANY QUESTIONS**

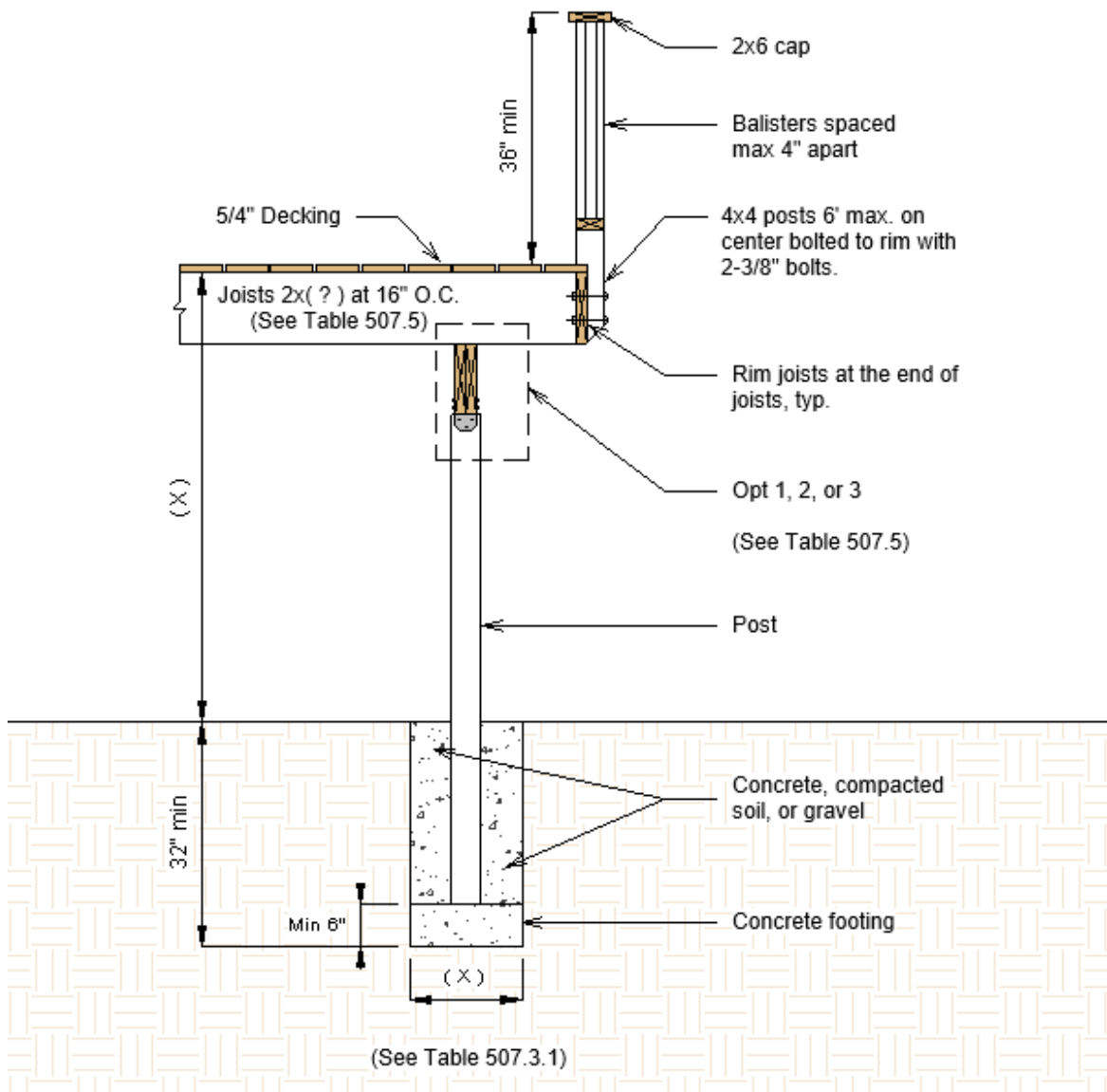


1. Decks to be supported by a minimum of 4x4 posts supported on concrete footings bearing at 32" min below grade. Footings must be sized to adequately distribute deck loads to soil.
2. Multiple beam plies shall be fastened together. Beams are to be fully supported on top of or notched into posts.
3. Guardrails are required if deck floor is elevated 30" or more above adjacent grade. Guardrails must be 36" min above deck floor.
4. Steps to be min 36" wide. A handrail is required on at least one side of stairs with four or more risers. Max riser height 8 1/4". Min tread depth 9". Stringer spacing as required for stringer type.
5. Per Zoning requirements decks may be located no closer than 3' to side and rear lot lines and should not be built within easements.
6. Per Zoning requirements any deck closer than 8' to the side or rear lot line must be screened from the neighbor's property by a 4' high solid fence or evergreen hedge.

## Plot Plan: Sample



## Deck Framing Plan: Sample

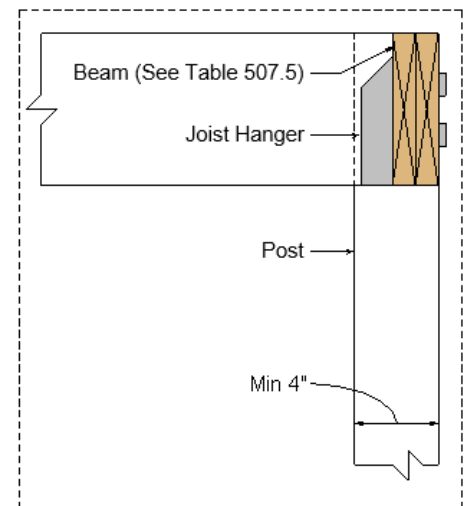
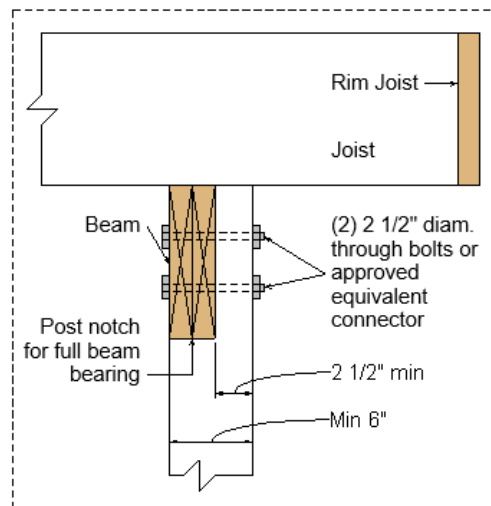
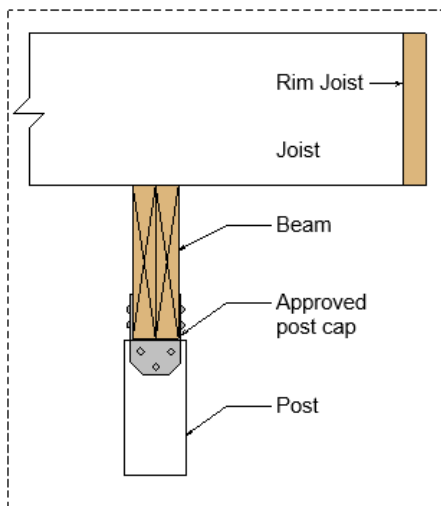


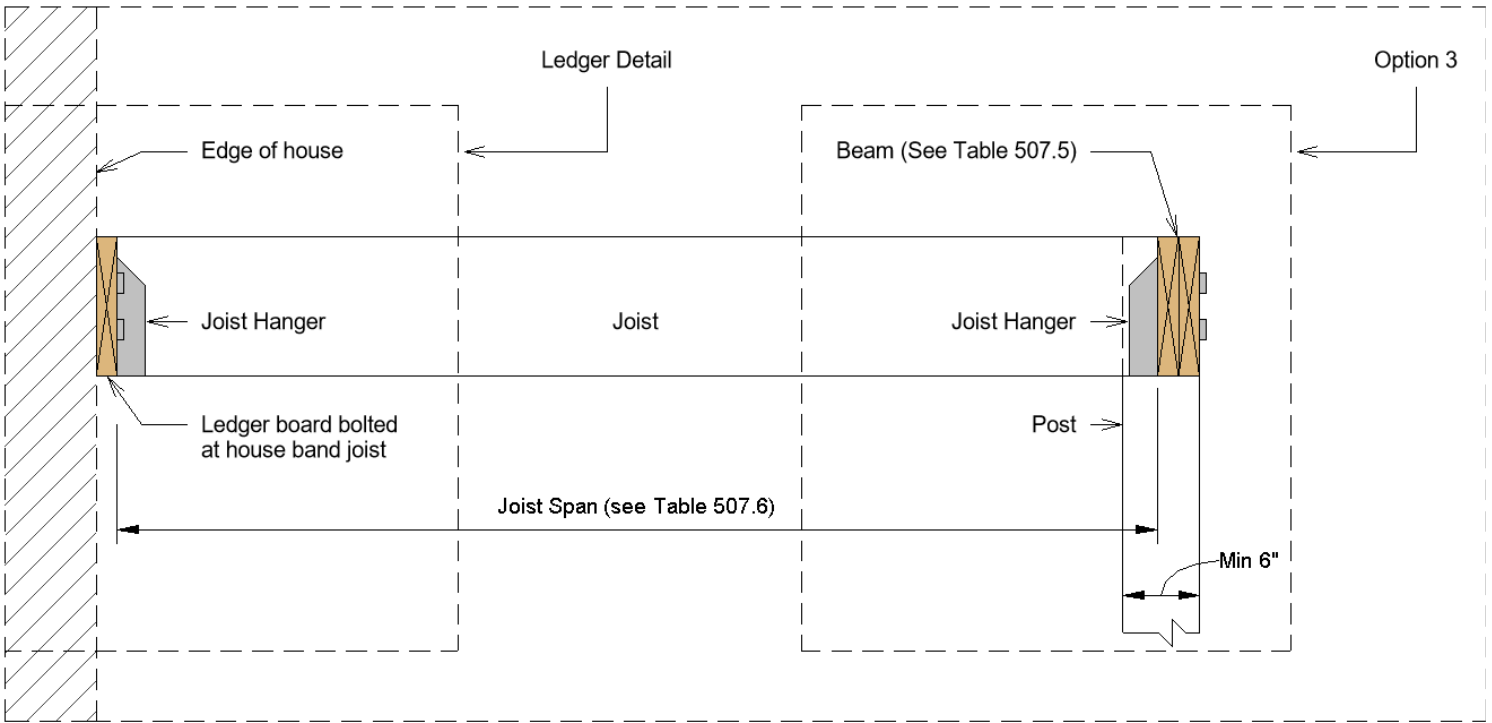
## Deck Section: Sample

Option 1: Beam Over Post

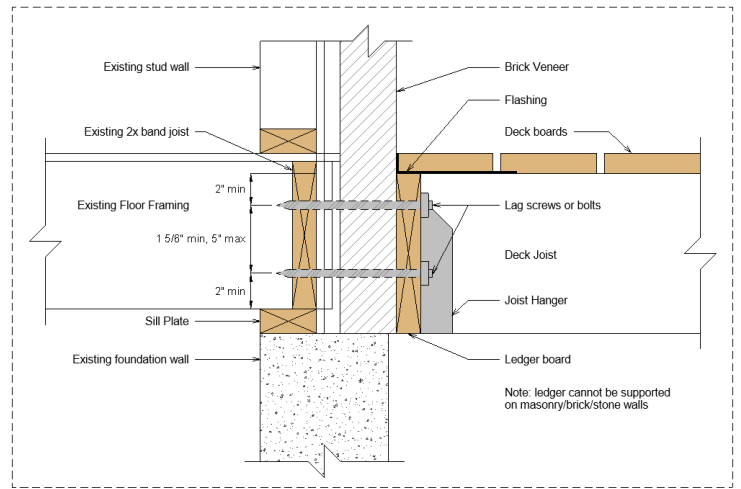
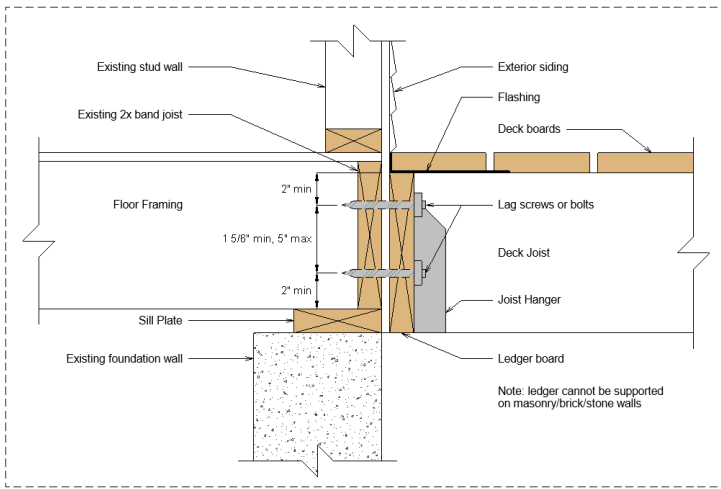
Option 2: Beam Notched into Post

Option 3: No Cantilever





### Attached Deck Section: Sample

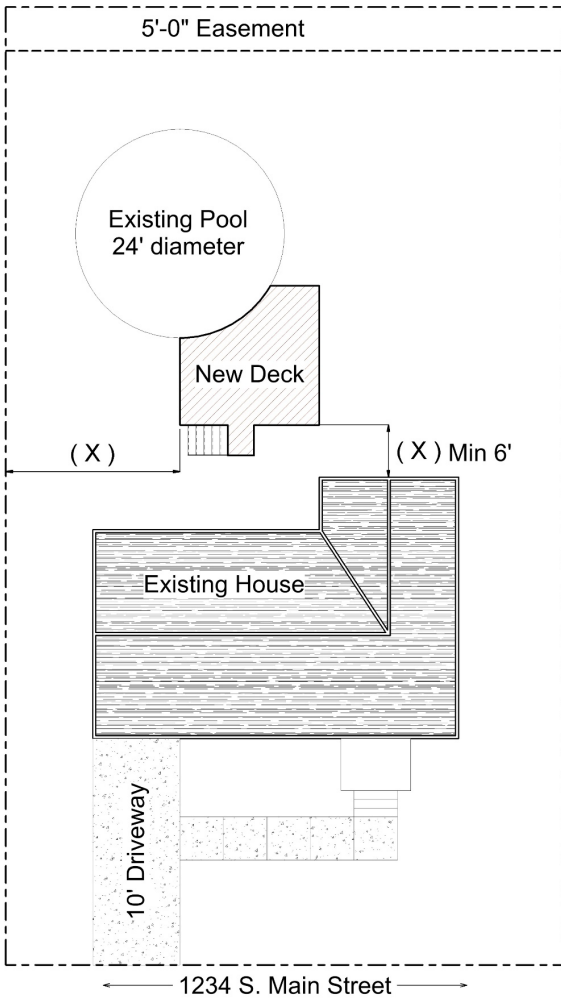


### Ledger Detail: Sample 1

### Ledger Detail: Sample 2 (Brick)

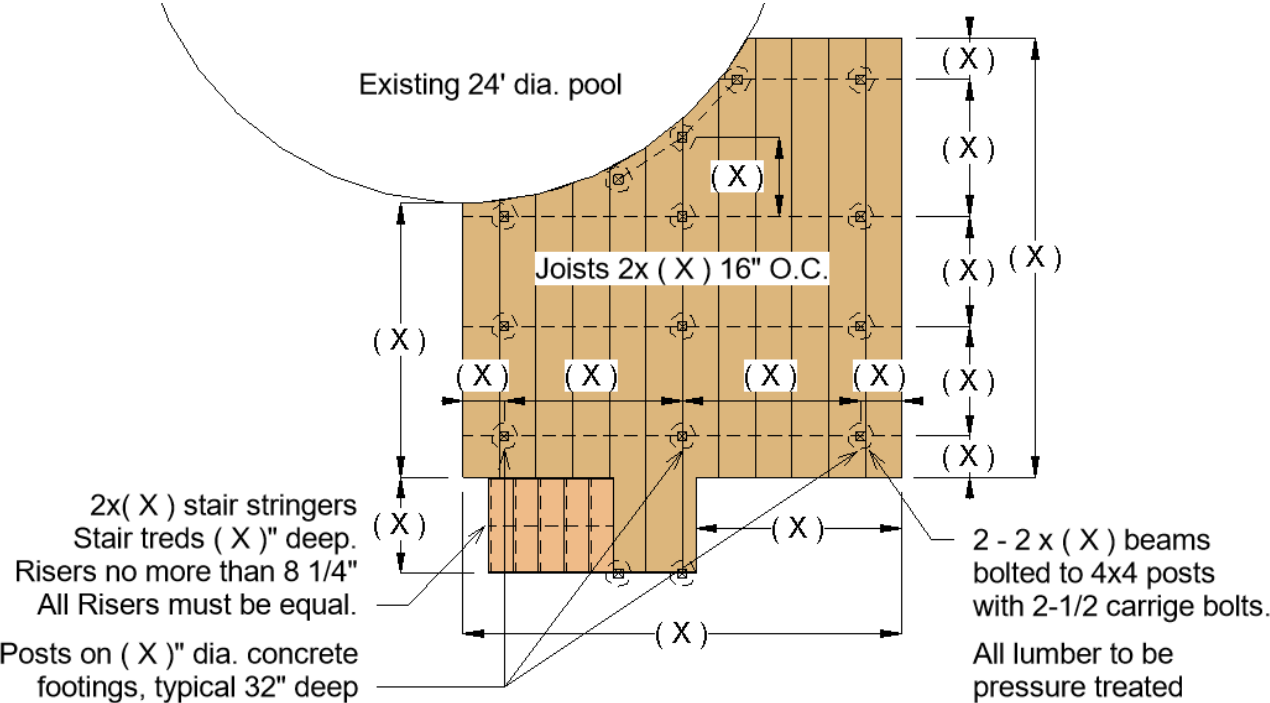
1. Deck ledger boards shall be a minimum 2x8 nominal and must be greater than or equal to the size of the joist.
2. Deck ledgers shall be fastened to house rim board and shall not support concentrated loads from beams or girders.
3. Deck ledgers shall not be supported on stone or masonry veneer. The tip of lag screws shall fully extend beyond the inside face of the band joist.
4. Fasteners shall be min 1 1/2" diameter lag screws or through bolts with washers
5. Fasteners, including nuts and washers for preservative-treated wood shall be hot dipped zinc-coated galvanized steel, stainless steel, silicone, bronze, or copper.

(See tables on following page)



1. Decks to be supported by a minimum of 4x4 posts supported on concrete footings bearing at 32" min below grade. Footings must be sized to adequately distribute deck loads to soil.
2. Multiple beam plies shall be fastened together. Beams are to be fully supported on top of or notched into posts.
3. Guardrails are required if deck floor is elevated 30" or more above adjacent grade. Guardrails must be 36" min above deck floor.
4. Steps to be min 36" wide. A handrail is required on at least one side of stairs with four or more risers. Max riser height 8 1/4". Min tread depth 9". Stringer spacing as required for stringer type. Max 18" o.c. cut stringer spacing.
5. Per Zoning requirements decks may be located no closer than 3' to side and rear lot lines and should not be built within easements.
6. Per Zoning requirements any deck closer than 8' to the side or rear lot line must be screened from the neighbor's property by a 4' high solid fence or evergreen hedge.

**Deck with Pool Plot Plan: Sample**



**Deck with Pool Framing Plan: Sample**

## Minimum Footing Size for Decks: Table 507.3.1

LIVE OR GROUND SNOW LOAD (psf) (*b)	TRIBUTARY AREA (sq. ft.)	LOAD BEARING VALUE OF SOILS (psf) (*a, c, and d)					
		1500 (*a)			2000 (*a)		
		Side of a square footing (inches)	Diameter of a round footing (inches)	Thickness (inches)	Side of a square footing (inches)	Diameter of a round footing (inches)	Thickness (inches)
40	20	12	14	6	12	14	6
	40	14	16	6	12	14	6
	60	17	19	6	15	17	6
	80	20	22	7	17	19	6
	100	22	25	8	19	21	6
	120	24	27	9	21	23	7
	140	26	29	10	22	25	8
	160	28	31	11	24	27	9

- a. Interpolation permitted; extrapolation not permitted.
- b. Based on highest load case: Dead + Live or Dead + Snow.
- c. Assumes minimum square footing to be 12 inches x 12 inches x 6 inches for 6 x 6 post.
- d. If the support is a brick or CMU pier, the footing shall have a minimum of 2-inch projection on all sides.
- e. Area, in square feet, of deck surface supported by post and footings.

## Deck Beam Span Lengths: Table 507.5

Species (*c)	Size (*d)	DECK JOIST SPAN LESS THAN OR EQUAL TO: (feet)						
		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

- a. Ground snow load, live load = 40psf, dead load = 10 psf,  $L/\Delta = 360$  at main span,  $L/\Delta = 180$  at cantilever with a 220-pound point load applied at the end.
- b. Beams supporting deck joists from one side only.
- c. No. 2 grade, wet service factor.
- d. Beam depth shall be greater than or equal to depth of joists with a flush beam condition.
- e. Includes incising factor.
- f. Northern species, incising factor not included.
- g. Beam cantilevers are limited to the advancement beam's span divided by 4.

## Deck Joist Spans: Table 507.6

Species (*a)	Size	ALLOWABLE JOIST SPAN (*b)			MAXIMUM CANTILEVER (*c, f)		
		Spacing of Deck Joists (inches)			Spacing of Deck Joists with Cantilevers (inches) (*c)		
		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-larch, (*d)	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
Hem-fir, (*d)	2 x 10	15 – 8	13 – 7	11 – 1	3 – 1	3 – 5	2 – 9
Spruce-Pine-fir (*d)	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
	Western Cedars,	2 x 8	11 – 8	10 – 7	8 – 8	1 – 10	2 – 0
Ponderosa Pine (*e)	2 x 10	14 – 11	13 – 0	10 – 7	2 – 8	2 – 10	2 – 8
Red Pine (*e)	2 x 12	17 – 5	15 – 1	12 – 4	3 – 10	3 – 9	3 – 1

- a. No. 2 grade with wet service factor.
- b. Ground snow load, live load = 40psf, dead load = 10psf,  $L/\Delta = 360$ .
- c. Ground snow load, live load = 40psf, dead load = 10psf,  $L/\Delta = 360$  at main span,  $L/\Delta = 180$  at cantilever with a 220-pound point load applied to end.
- d. Includes incising factor.
- e. Northern species with no incising factor.
- f. Cantilevered spans not exceeding the nominal depth of the joist are permitted.



## Deck Ledger Connection to Band Joist: Table 507.9.1.3(1)

Connector Details	JOIST SPAN						
	≤ 6"	6'-1" to 8'-0"	8'-1" to 10'-0"	10'-1" to 12'-0"	12'-1" to 14'-0"	14'-1" to 16'-0"	16'-1" to 18'-0"
	On-center spacing of fasteners						
½" diameter lag screw with ½" max sheathing (*c, d)	30	23	18	15	13	11	10
½" diameter bolt with ½" max sheathing (*d)	36	36	34	29	24	21	19
½" diameter bolt with 1" max sheathing (*e)	36	36	29	24	21	18	16

- a. Ledgers shall be flashed in accordance with Section 703.4 to prevent water from contacting the house band joist.
- b. Snow load shall not be assumed to act concurrently with live load.
- c. The tip of the lag screw shall fully extend beyond the inside face of the band joist.
- d. Sheathing shall be wood structural panel or solid sawn lumber.
- e. Sheathing shall be permitted to be wood structural panel, gypsum board, fiberboard, lumber, or foam sheathing. Up to ½" thickness of stacked washers shall be permitted to substitute for up to ½" of allowable sheathing thickness where combined with wood structural panel or lumber sheathing.