

CITY OF WESTPORT BUILDING DEPT.

Basic Deck Structure

To use this handout as your plans, fill in the blanks and follow directions on this page and following pages. All decks and landings under 30" in height do not require a permit.

This document applies to single story decks only with 10' max height!!!

Deck Style: (check one)

Freestanding _____

Attached to structure _____

Note: Decks and Roof Covers for Manufactured Homes must be freestanding.

DECK SIZE: List all decks or portions thereof from Page 2

① _____ x _____ = _____ sq.ft.

② _____ x _____ = _____ sq.ft.

③ _____ x _____ = _____ sq.ft.

④ _____ x _____ = _____ sq.ft.

Total Deck Area: _____ sq.ft.

DECK HEIGHT(h): _____

DECKING(d): _____

JOIST SIZE(j): _____

See Span Tables on Page 4.

Spacing: _____

Span: _____

BEAM SIZE(b): _____

See Span Tables on Page 4.

Spacing: _____

Span: _____

POST SIZE(p): _____

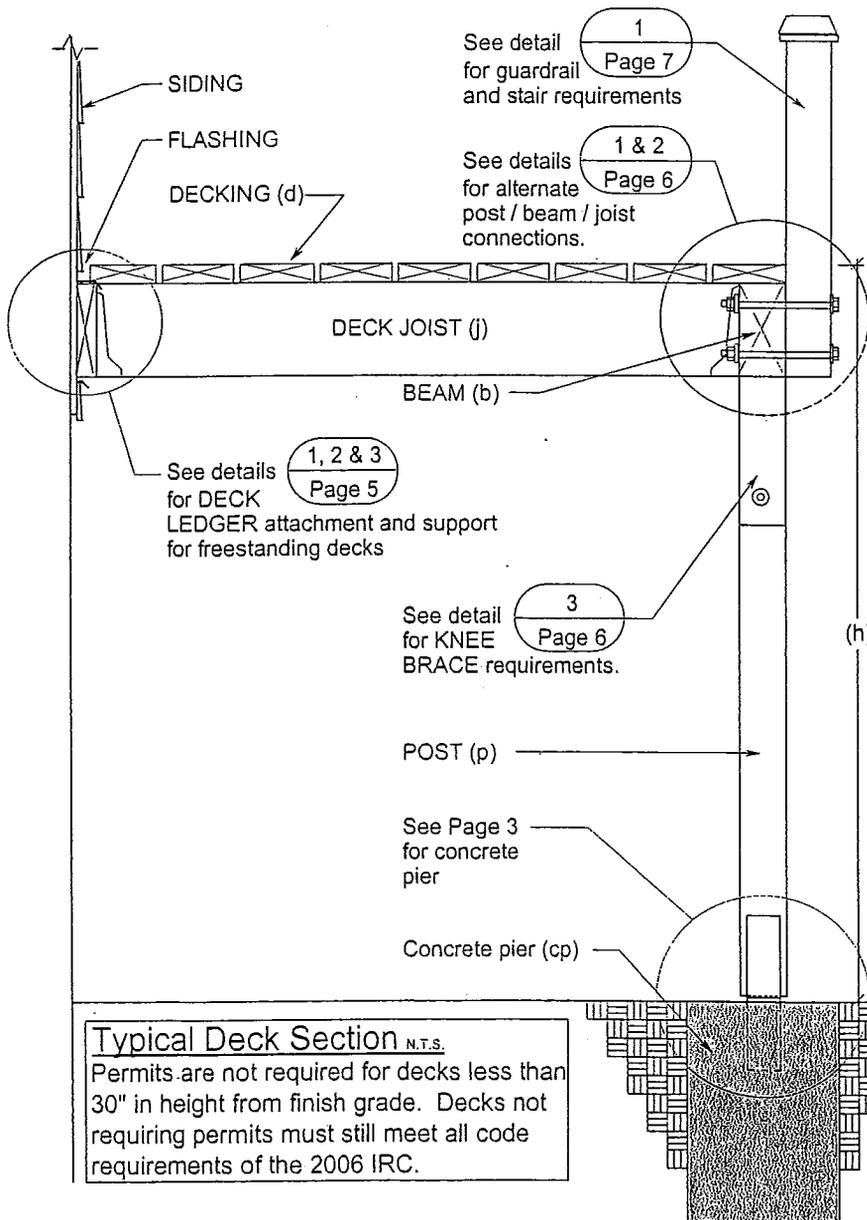
See Post Schedule on Page 3.

CONCRETE PIERS(cp): _____

See Concrete Pier Schedule on Page 3.

Pier Type: _____

SIZE: _____ "x _____ "deep

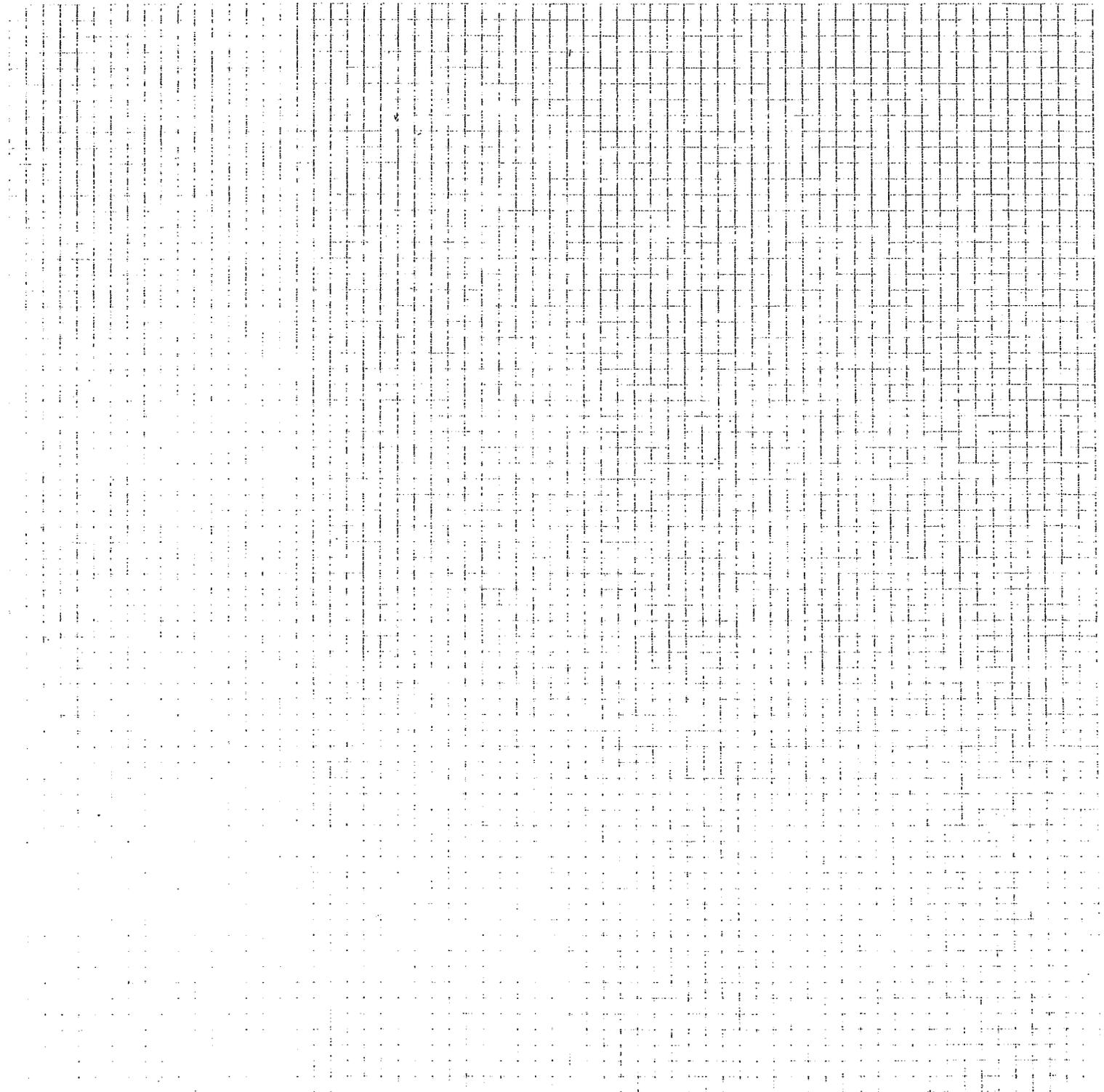


Typical Deck Section N.T.S.

Permits are not required for decks less than 30" in height from finish grade. Decks not requiring permits must still meet all code requirements of the 2006 IRC.

Follow instructions below to draw your deck floor plan. (Attach more plan pages if necessary)

1. Draw the floor plan of all deck structure(s), including all stairway accesses.
2. Number all decks or portions thereof as per the Deck Size list on Page 1.
3. Show all post/pier locations, and beam locations and directions.
4. Show deck joist direction (to include any and all variations of joist direction).
4. Show existing buildings next to all deck areas.



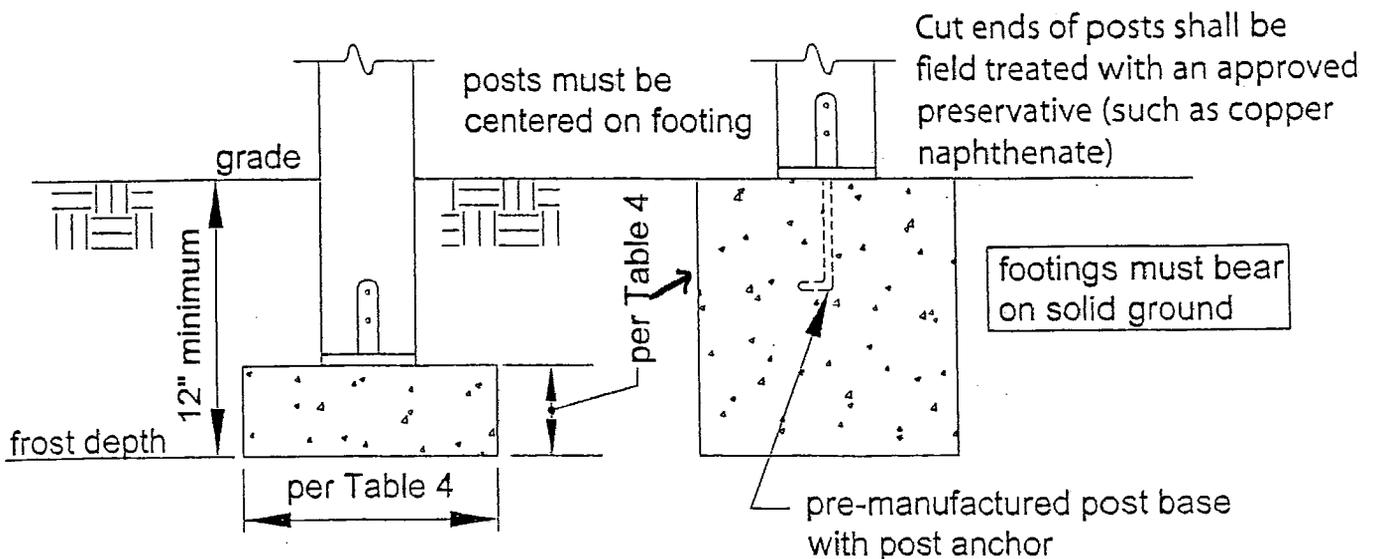
Deck Post Schedule				
Deck Height	Deck Type	Post/Pier Connection	Post Size ⁽¹⁾	Knee ⁽²⁾ Brace
<30" (permit not required)	Free-standing	Column base	4x4	Yes
	Attached	Column base	4x4	No
30" - 4'0"	Free-standing	Column base	4x4	Yes
	Attached	Column base	4x4	No
>4'0" - 6'0"	Free-standing	Column base	4x4	Yes
	Attached	Column base	4x4	Yes
>6'0" - 8'0"	Free-standing	Column base	4x4	Yes
	Attached	Column base	4x4	Yes
>8'0" - 10'0"	Free-standing	Column base	6x6	Yes
	Attached	Column base	6x6	Yes

- 1) Minimum nominal postsize required.
- 2) See Detail 3 on Page 6 for knee brace requirements.

Table 4. Footing Sizes²

Beam Span, LB	Joist Span, Lj	Round ¹ Diameter	Footing Thickness ³
6'	<10'	12"	12"
	<14'	18"	12"
	<18'	20"	12"
8'	<10'	18"	12"
	<14'	20"	12"
	<18'	24"	12"
10'	<10'	20"	12"
	<14'	22"	12"
	<18'	26"	12"
12'	<10'	20"	18"
	<14'	24"	18"
	<18'	28"	18"
14'	<10'	22"	18"
	<14'	26"	18"
	<18'	30"	18"
16'	<10'	24"	22"
	<14'	28"	22"
	<18'	32"	22"
18'	<10'	26"	22"
	<14'	30"	22"
	<18'	34"	22"

1. Square footings are permitted to have widths 2" less than the given diameter of round footings.
2. Assumes 1,500 psf soil bearing capacity.
3. Assumes 2,500 psi compressive strength of concrete. Coordinate footing thickness with post base and anchor requirements.



Joist and Beam Span Table

Span Tables based on the use of No.2 Hem-Fir or better
50 p.s.f. loading (10 p.s.f. Dead Load + 40 p.s.f. Live Load)
Joist and Beam spans assume maximum 24" overhang

Joist Size(1)	Spacing of Joists	Maximum Span of Joists	Maximum Span of Deck Beams between Posts(2)			
			4x6	4x8	4x10	4x12
2x6	12" o.c.	10 ft.- 0 in.	5 ft.- 1 in.	6 ft.- 9 in.	8 ft.- 3 in.	9 ft.- 7 in.
	16" o.c.	9 ft.- 1 in.	5 ft.- 4 in.	7 ft.- 1 in.	8 ft.- 8 in.	10 ft.- 1 in.
	24" o.c.	7 ft.- 11 in.	5 ft.- 8 in.	7 ft.- 6 in.	9 ft.- 3 in.	10 ft.- 9 in.
2x8	12" o.c.	13 ft.- 2 in.	4 ft.- 6 in.	5 ft.- 11 in.	7 ft.- 3 in.	8 ft.- 5 in.
	16" o.c.	12 ft.- 0 in.	4 ft.- 8 in.	6 ft.- 2 in.	7 ft.- 6 in.	8 ft.- 9 in.
	24" o.c.	10 ft.- 2 in.	5 ft.- 1 in.	6 ft.- 9 in.	8 ft.- 3 in.	9 ft.- 7 in.
2x10	12" o.c.	16 ft.- 10 in.	3 ft.- 11 in.	5 ft.- 2 in.	6 ft.- 4 in.	7 ft.- 4 in.
	16" o.c.	15 ft.- 2 in.	4 ft.- 2 in.	5 ft.- 6 in.	6 ft.- 9 in.	7 ft.- 10 in.
	24" o.c.	12 ft.- 5 in.	4 ft.- 7 in.	6 ft.- 0 in.	7 ft.- 4 in.	8 ft.- 7 in.
2x12	12" o.c.	20 ft.- 4 in.	3 ft.- 5 in.	4 ft.- 6 in.	5 ft.- 9 in.	6 ft.- 8 in.
	16" o.c.	17 ft.- 7 in.	3 ft.- 9 in.	4 ft.- 11 in.	6 ft.- 2 in.	7 ft.- 2 in.
	24" o.c.	14 ft.- 4 in.	4 ft.- 3 in.	5 ft.- 7 in.	6 ft.- 10 in.	8 ft.- 0 in.

1) Deck ledgers must be a minimum size of 2x8 nominal and of equal size or larger than the installed joists. See Deck Ledger fastener details on Page 5.

Construction Materials

- 1) Joists and Beams shall be minimum Hem-fir #2 & better.
- 2) Posts must be of naturally durable wood or pressure-treated. All posts imbedded in concrete must be ground contact pressure-treated. See Post and Pier Schedule on Page 3 for required post size.
- 3) All fasteners (nails, screws, bolts, etc.) and connecting hardware must be corrosion resistant, such as; stainless steel, hot-dipped galvanized, or as specifically required for the specified wood preservative used. All hardware shall be installed as per manufacturers installation instructions and installed with maximum fastener amounts listed.

Deck Construction Connections

Connection		Fastener
1)	Deck ledger to home; at 24" o.c. w/washers and - deck ledger to home: at 16" o.c.	5/8" bolts or lags and - (3) 16d
2)	Joists to deck ledger; hanger size to match joist size.	LU26 min.
3)	Joist to deck beam below; toenail each side.	(3) 8d or (2) 10d
4)	Blocking to joist; toenail each side, each end	(2) 8d
5)	Rim joist to joists; end nail, or toenail each side	(3) 16d, or (3) 8d
6)	Guardrail posts; w/washers	(2) 1/2 bolts
7)	Knee braces using 4x4; each end w/washers.	(1) 1/2" lag
8)	Knee braces using 2x6; each end, each side of post and beam.	(4) 16d

***Note** - Yellow zinc decking screws are not allowed for use in structural components of deck and guardrails.