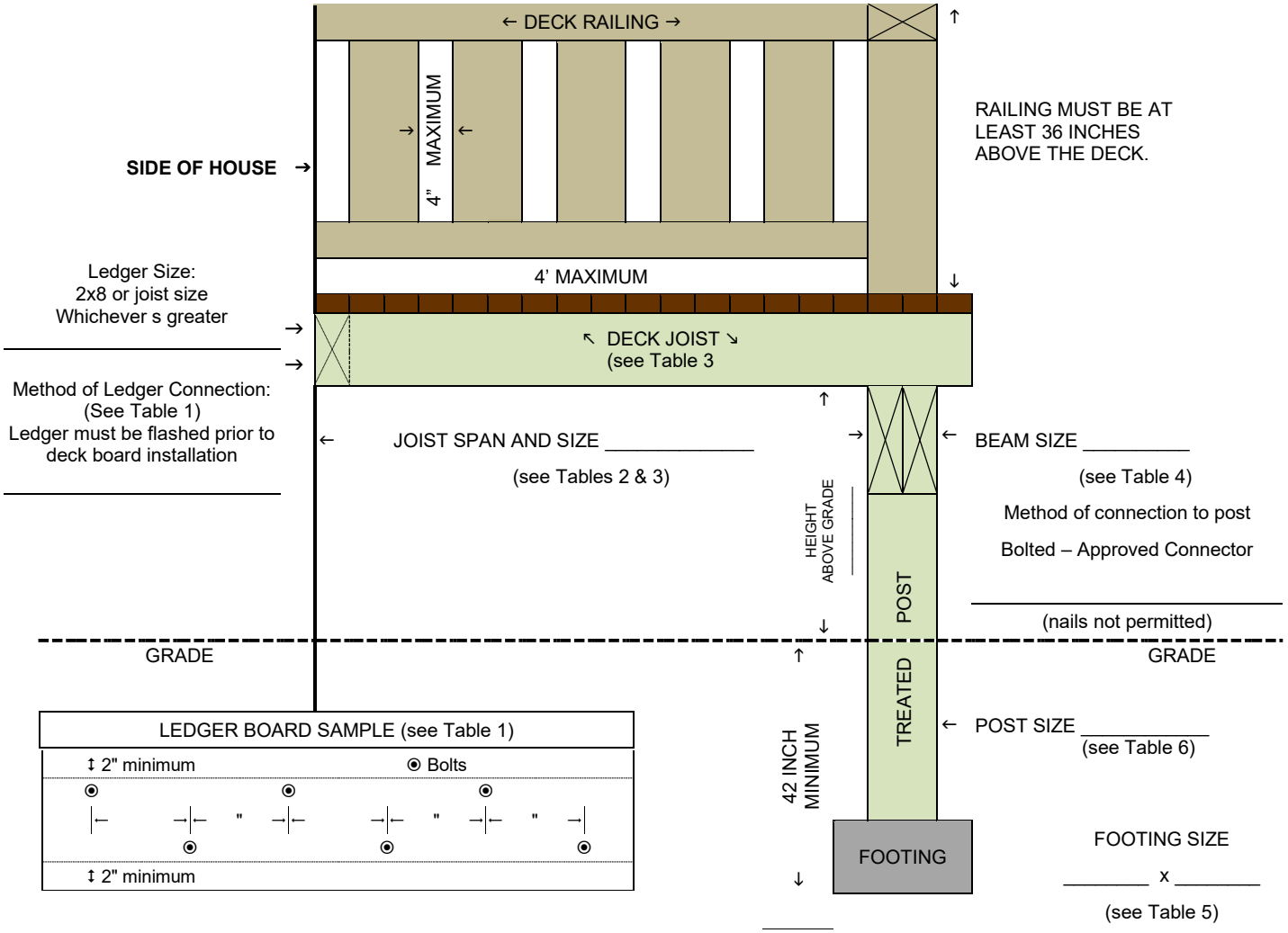
Eaton County
Construction Codes Department

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"OUR GOAL IS TO PROVIDE A SAFER PLACE TO LIVE, WORK AND PLAY"

DECK PLAN AND SITE DETAIL

REVISED July 2016

Draw Deck showing dimensions, post locations, beams, stairs and spacing of joists.
Provide joist span between beams and beam span between posts.



STANDARD WOOD DECKS

TABLE 1
DECK LEDGER CONNECTION TO BAND JOIST (Deck live load = 40 psf, deck dead load = 10 psf, snow load ≤ 40 psf)

CONNECTION DETAILS	JOIST SPAN						
	6" and less	6'1" to 8'	8'1" to 10'	10'1" to 12'	12'1" to 14'	14'1" to 16'	16'1" to 18'
	On-center spacing of fasteners						
1/2-inch diameter lag screw with 1/2-inch maximum sheathing	30	23	18	15	13	11	10
1/2-inch diameter bolt with 1/2-inch maximum sheathing	36	36	34	29	24	21	19
1/2-inch diameter bolt with 1-inch maximum sheathing	36	36	29	24	21	18	16
Ledgers shall be flashed in accordance with Section R703.4 to prevent water from contacting the house band joist.							

TABLE 2
MAXIMUM JOIST SPACING FOR DECK BOARDS

MATERIAL TYPE AND NOMINAL SIZE	MAXIMUM ON-CENTER JOIST SPACING	
	Perpendicular to joist	Diagonal to joist (45 maximum)
11/4-inch-thick wood, 5/4 deck board	16 inches	12 inches
2-inch-thick wood, 2x4, 2x6, etc.	24 inches	16 inches
Plastic composite decking	In accordance with Section R507.3	In accordance with Section R507.3

TABLE 3
DECK JOIST SPANS FOR COMMON LUMBER SPECIES (ft. - in.)

SPECIES	SIZE	SPACING OF DECK JOISTS WITH NO CANTILEVER (inches)			SPACING OF DECK JOISTS WITH CANTILEVERS (inches)		
		12	16	24	12	16	24
Southern pine	2 x 6	9-11	9-0	7-7	6-8	6-8	6-8
	2 x 8	13-1	11-10	9-8	10-1	10-1	9-8
	2 x10	16-2	14-0	11-5	14-6	14-0	11-5
	2 x12	18-0	16-6	13-6	18-0	16-6	13-6
Douglas fir-larch , hem-fir, spruce-pine-fir	2 x 6	9-6	8-8	7-2	6-3	6-3	6-3
	2 x 8	12-6	11-1	9-1	9-5	9-5	9-1
	2 x10	15-8	13-7	11-1	13-7	13-7	11-1
	2 x12	18-0	15-9	12-10	18-0	15-9	12-10
Redwood, western cedars, ponderosa pinee , red pine	2 x 6	8-10	8-0	7-0	5-7	5-7	5-7
	2 x 8	11-8	10-7	8-8	8-6	8-6	8-6
	2 x10	14-11	13-0	10-7	12-3	12-3	10-7
	2 x12	17-5	15-1	12-4	16-5	15-1	12-4

TABLE 4
DECK BEAM SPAN LENGTHS (ft. - in.)

SPECIES	SIZE	DECK JOIST SPAN LESS THAN OR EQUAL TO: (feet)						
		6	8	10	12	14	16	18
Southern pine	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
Douglas fir-larch , hem-fir, spruce-pine-fir, redwood, western cedars, ponderosa pine, red pine	3 x 6 or 2 – 2 x 6	5-5	4-8	4-2	3-10	3-6	3-1	2-9
	3 x 8 or 2 – 2 x 8	6-10	5-11	5-4	4-10	4-6	4-1	3-8
	3 x 10 or 2 – 2 x 10	8-4	7-3	6-6	5-11	5-6	5-1	4-8
	3 x 12 or 2 – 2 x 12	9-8	8-5	7-6	6-10	6-4	5-11	5-7
	4 x 6	6-5	5-6	4-11	4-6	4-2	3-11	3-8
	4 x 8	8-5	7-3	6-6	5-11	5-6	5-2	4-10
	4 x 10	9-11	8-7	7-8	7-0	6-6	6-1	5-8
	4 x 12	11-5	9-11	8-10	8-1	7-6	7-0	6-7
	3 – 2 x 6	7-4	6-8	6-0	5-6	5-1	4-9	4-6
	3 – 2 x 8	9-8	8-6	7-7	6-11	6-5	6-0	5-8
	3 – 2 x 10	12-0	10-5	9-4	8-6	7-10	7-4	6-11
	3 – 2 x 12	13-11	12-1	10-9	9-10	9-1	8-6	8-1

TABLE 5
FOOTING SIZES FOR DECKS (WITHOUT ROOF)

TOTAL SPAN OF JOISTS BETWEEN SUPPORTS	SUPPORT POST SPACING FOR 1500 LB PER SQUARE FOOT SOIL BEARING CAPACITY						
	4 FEET	6 FEET	8 FEET	10 FEET	12 FEET	14 FEET	16 FEET
4 FEET	4X8	4X10	4X10	6X12	6X14	6X14	6X14
6 FEET	4X10	6X12	6X14	6X14	8X16	8X16	8X18
8 FEET	4X10	6X14	6X14	8X16	8X18	10X20	10X20
10 FEET	6X12	6X14	8X16	8X18	10X20	10X22	10X22
12 FEET	6X14	8X16	8X18	10X20	10X22	12X24	12X24
14 FEET	6X14	8X16	10X20	10X22	12X24	12X26	12X26
16 FEET	6X14	8X16	10X20	12X24	12X26	14X28	14X28

TABLE 6

DECK POST SIZE	MAX HEIGHT
4 x 4	8'
4 x 6	8'
6 x 6	14'