

TABLE R602.7(1)

GIRDER SPANS AND HEADER SPANS FOR EXTERIOR BEARING WALLS

HEADERS SUPPORTING	SIZE	GROUND SNOW LOAD (psf) <sup>a</sup>					
		50					
		Building width <sup>a</sup> (feet)					
		20		26		36	
		Span	NJ <sup>d</sup>	Span	NJ <sup>d</sup>	Span	NJ <sup>d</sup>
Roof and ceiling	2-2x4	3-2	1	2-9	1	2-6	1
	2-2x6	4-8	1	4-1	1	3-8	2
	2-2x8	5-11	2	5-2	2	4-7	2
	2-2x10	7-3	2	6-3	2	5-7	2
	2-2x12	8-5	2	7-3	2	6-6	2
	3-2x8	7-5	1	6-5	2	5-9	2
	3-2x10	9-1	2	7-10	2	7-0	2
	3-2x12	10-7	2	9-2	2	8-2	2
	4-2x8	8-4	1	7-5	1	6-8	1
	4-2x10	10-6	1	9-1	2	8-2	2
	4-2x12	12-2	2	10-7	2	9-5	2
	Roof, ceiling and one center-bearing floors	2-2x4	2-9	1	2-5	1	2-2
2-2x6		4-1	1	3-7	2	3-3	2
2-2x8		5-2	2	4-6	2	4-1	2
2-2x10		6-4	2	5-6	2	5-0	2
2-2x12		7-4	2	6-5	2	5-9	3
3-2x8		6-5	2	5-8	2	5-1	2
3-2x10		7-11	2	6-11	2	6-3	2
3-2x12		9-2	2	8-0	2	7-3	2
4-2x8		7-5	2	6-6	2	5-11	2
4-2x10		9-1	2	8-0	2	7-2	2
4-2x12		10-7	2	9-3	2	8-4	2
Roof, ceiling and one clear span floors		2-2x4	2-7	1	2-3	1	2-0
	2-2x6	3-10	2	3-4	2	3-0	2
	2-2x8	4-10	2	4-2	2	3-9	2
	2-2x10	5-11	2	5-1	2	4-7	3
	2-2x12	6-10	2	5-11	3	5-4	3
	3-2x8	6-1	2	5-3	2	4-8	2
	3-2x10	7-5	2	6-5	2	5-9	2
	3-2x12	8-7	2	7-5	2	6-8	2
	4-2x8	7-0	2	6-1	2	5-5	2
	4-2x10	8-7	2	7-5	2	6-7	2
	4-2x12	9-11	2	8-7	2	7-8	2

  

HEADERS SUPPORTING	SIZE	GROUND SNOW LOAD (psf) <sup>a</sup>					
		50					
		Building width <sup>a</sup> (feet)					
		20		26		36	
		Span	NJ <sup>d</sup>	Span	NJ <sup>d</sup>	Span	NJ <sup>d</sup>
Roof, ceiling and two center-bearing floors	2-2x4	2-6	1	2-2	1	1-11	1
	2-2x6	3-8	2	3-2	2	2-10	2
	2-2x8	4-7	2	4-0	2	3-8	2
	2-2x10	5-8	2	4-11	2	4-5	3
	2-2x12	6-6	2	5-9	3	5-2	3
	3-2x8	5-9	2	5-1	2	4-7	2
	3-2x10	7-1	2	6-2	2	5-7	2
	3-2x12	8-2	2	7-2	2	6-5	3
	4-2x8	6-8	1	5-10	2	5-3	2
	4-2x10	8-2	2	7-2	2	6-5	2
	4-2x12	9-5	2	8-3	2	7-5	2
	Roof, ceiling and two clear span floors	2-2x4	2-0	1	1-8	1	1-5
2-2x6		3-0	2	2-7	2	2-3	2
2-2x8		3-10	2	3-4	2	2-11	3
2-2x10		4-8	2	4-0	3	3-7	3
3-2x12		5-5	3	4-8	3	4-2	3
4-2x8		4-9	2	4-1	2	3-8	2
4-2x10		5-10	2	5-0	2	4-6	3
3-2x12		6-9	2	5-10	3	5-3	3
4-2x8		5-6	2	4-9	2	4-3	2
4-2x10		6-9	2	5-10	2	5-2	2
4-2x12		7-9	2	6-9	2	6-0	3

TABLE R602.7(3)  
GIRDER AND HEADER SPANS<sup>a</sup> FOR OPEN PORCHES  
(Maximum span for Douglas fir-larch, hem-fir, southern pine and spruce-pine-fir<sup>b</sup>)

SIZE	SUPPORTING ROOF						SUPPORTING FLOOR	
	GROUND SNOW LOAD (psf)							
	30		50		70			
	DEPTH OF PORCH <sup>a</sup> (feet)							
	8		14		8			
2-2 x 6	7-6	5-8	6-2	4-8	5-4	4-0	6-4	4-9
2-2 x 8	10-1	7-7	8-3	6-2	7-1	5-4	8-5	6-4
2-2 x 10	12-4	9-4	10-1	7-7	8-9	6-7	10-4	7-9
2-2 x 12	14-4	10-10	11-8	8-10	10-1	7-8	11-11	9-0

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

- a. Spans are given in feet and inches.
- b. Tabulated values assume #2 grade lumber, wet service and incising for refractory species. Use 30 psf ground snow load for cases in which ground snow load is less than 30 psf and the roof live load is equal to or less than 20 psf.

**TOWN OF COLONIE  
BUILDING DEPARTMENT**

**SPRUCE - PINE - FIR  
NO 1 & 2 "E" 1,400,000  
ALLOWABLE SPANS**

**FLOOR JOISTS**

Table – R502.3.1(2)

		<u>SPAN</u>
		40 LB. LOAD
2 X 6	24" O.C.	7' 5"
	16" O.C.	9' 1"
	12" O.C.	10' 3"
2 X 8	24" O.C.	9' 5"
	16" O.C.	11' 6"
	12" O.C.	13' 3"
2 X 10	24" O.C.	11' 6"
	16" O.C.	14' 1"
	12" O.C.	16' 3"
2 X 12	24" O.C.	13' 4"
	16" O.C.	16' 3"
	12" O.C.	18' 10"

**CEILING JOISTS**

Table – R802.4(2)

		<u>SPAN</u>
		20 LB LOAD
2 X 4	24" O.C.	7' 2"
	16" O.C.	8' 7"
	12" O.C.	9' 5"
2 X 6	24" O.C.	10' 6"
	16" O.C.	12' 10"
	12" O.C.	14' 9"
2 X 8	24" O.C.	13' 3"
	16" O.C.	16' 3"
	12" O.C.	18' 9"
2 X 10	24" O.C.	16' 3"
	16" O.C.	19' 10"
	12" O.C.	22' 11"

**RAFTERS**

Table – R802.5.1(6)

		<u>SPAN</u>
		20 LB LOAD
2 X 4	24" O.C.	5' 0"
	16" O.C.	6' 2"
	12" O.C.	6' 11"
2 X 6	24" O.C.	7' 4"
	16" O.C.	9' 0"
	12" O.C.	10' 5"
2 X 8	24" O.C.	9' 4"
	16" O.C.	11' 5"
	12" O.C.	13' 2"
2 X 10	24" O.C.	11' 5"
	16" O.C.	13' 11"
	12" O.C.	16' 1"
2 X 12	24" O.C.	13' 2"
	16" O.C.	16' 2"
	12" O.C.	18' 8"