780 CMR TABLE 5502.5(1)
GIRDER SPANS[a] AND HEADER SPANS[a] FOR EXTERIOR BEARING WALLS
(Maximum spans for Douglas fir-larch, hem-fir, southern pine and spruce-pine-fir[b] and required number of jack studs)

GIRDERS AND HEADERS SUPPORTING	SIZE	GROUND SNOW LOAD (psf)[e]											
		30						50					
		Building width[c] (feet)											
		20		28		36		20		28		36	
		Span	NJ[d]	Span	NJ[d]	Span	NJ[d]	Span	NJ[d]	Span	NJ[d]	Span	NJ[d]
Roof and ceiling	2-2 x 4	3- 6	1	3- 2	1	2- 10	1	3- 2	1	2- 9	1	2- 6	1
	2-2 x 6	5- 5	1	4- 8	1	4- 2	1	4- 8	1	4- 0	1	3- 8	2
	2-2 x 8	6- 10	1	5- 11	2	5- 4	2	5- 11	2	5- 2	2	4- 7	2
	2-2 x 10	8- 5	2	7- 3	2	6- 6	2	7- 3	2	6- 3	2	5- 7	2
	2-2 x 12	9- 9	2	8- 5	2	7- 6	2	8- 5	2	7- 3	2	6- 6	2
	3-2 x 8	8- 4	1	7- 5	1	6- 8	1	7- 5	1	6- 5	2	5- 9	2
	3-2 x 10	10- 6	1	9- 1	2	8- 2	2	9- 1	2	7- 10	2	7- 0	2
	3-2 x 12	12- 2	2	10- 7	2	9- 5	2	10- 7	2	9- 2	2	8- 2	2
	4-2 x 8	~~7- 0~~	~~1~~	~~6- 1~~	~~2~~	~~5- 5~~	~~2~~	~~6- 1~~	~~2~~	~~5- 3~~	~~2~~	~~4- 8~~	~~2~~
	4-2 x 10	11- 8	1	10- 6	1	9- 5	2	10- 6	1	9- 1	2	8- 2	2
	4-2 x 12	14-1	1	12- 2	2	10- 11	2	12- 2	2	10- 7	2	9- 5	2
Roof, ceiling and one center-bearing floor	2-2 x 4	3- 1	1	2- 9	1	2- 5	1	2- 9	1	2- 5	1	2- 2	1
	2-2 x 6	4- 6	1	4- 0	1	3- 7	2	4- 0	1	3- 7	2	3- 3	2
	2-2 x 8	5- 9	2	5- 0	2	4- 6	2	5- 2	2	4- 6	2	4- 0	2
	2-2 x 10	7- 0	2	6- 2	2	5- 6	2	6- 4	2	5- 6	2	5- 0	2
	2-2 x 12	8- 1	2	7- 1	2	6- 5	2	7- 4	2	6- 5	2	5- 9	3
	3-2 x 8	7- 2	1	6- 3	2	5- 8	2	6- 5	2	5- 8	2	5- 1	2
	3-2 x 10	8- 9	2	7- 8	2	6- 11	2	7- 11	2	6- 11	2	6- 3	2
	3-2 x 12	10- 2	2	8- 11	2	8- 1	2	9- 2	2	8- 1	2	7- 3	2
	4-2 x 8	~~5- 10~~	~~2~~	~~5- 2~~	~~2~~	~~4- 8~~	~~2~~	~~5- 3~~	~~2~~	~~4- 7~~	~~2~~	~~4- 2~~	~~2~~
	4-2 x 10	10- 1	1	8- 10	2	8- 1	2	9- 1	2	8- 1	2	7- 2	2
	4-2 x 12	11- 9	2	10- 3	2	9- 3	2	10- 7	2	9- 3	2	8- 4	2
Roof, ceiling and one clear span floor	2-2 x 4	2- 8	1	2- 4	1	2- 1	1	2- 7	1	2- 3	1	2- 1	1
	2-2 x 6	3- 11	1	3- 5	2	3- 1	2	3- 10	2	3- 4	2	3- 1	2
	2-2 x 8	5- 0	2	4- 4	2	3- 10	2	4- 10	2	4- 2	2	3- 9	2
	2-2 x 10	6- 1	2	5- 3	2	4- 8	2	5- 11	2	5- 1	2	4- 7	3
	2-2 x 12	7- 1	2	6- 1	3	5- 5	3	6- 10	2	5- 11	3	5- 4	3
	3-2 x 8	6- 3	2	5- 5	2	4- 10	2	6- 1	2	5- 3	2	4- 8	2
	3-2 x 10	7- 7	2	6- 7	2	5- 11	2	7- 5	2	6- 5	2	5- 9	2
	3-2 x 12	8- 10	2	7- 8	2	6- 10	2	8- 7	2	7- 5	2	6- 8	2
	4-2 x 8	~~5- 1~~	~~2~~	~~4- 5~~	~~2~~	~~3- 11~~	~~2~~	~~4- 11~~	~~2~~	~~4- 3~~	~~2~~	~~3- 10~~	~~2~~
	4-2 x 10	8- 9	2	7- 7	2	6- 10	2	8- 7	2	7- 5	2	6- 7	2
	4-2 x 12	10- 2	2	8- 10	2	7- 11	2	9- 11	2	8- 7	2	7- 8	2
Roof, ceiling and two center-bearing floors	2-2 x 4	2- 7	1	2- 3	1	2- 1	1	2- 6	1	2- 2	1	1- 11	1
	2-2 x 6	3- 9	2	3- 3	2	2- 11	2	3- 8	2	3- 2	2	2- 10	2
	2-2 x 8	4- 9	2	4- 2	2	3- 9	2	4- 7	2	4- 0	2	3- 8	2
	2-2 x 10	5- 9	2	5- 1	2	4- 7	3	5- 8	2	4- 11	2	4- 5	3
	2-2 x 12	6- 8	2	5- 10	3	5- 3	3	6- 6	2	5- 9	3	5- 2	3
	3-2 x 8	5- 11	2	5- 2	2	4- 8	2	5- 9	2	5- 1	2	4- 7	2
	3-2 x 10	7- 3	2	6- 4	2	5- 8	2	7- 1	2	6- 2	2	5- 7	2
	3-2 x 12	8- 5	2	7- 4	2	6- 7	2	8- 2	2	7- 2	2	6- 5	3
	4-2 x 8	~~4- 10~~	~~2~~	~~4- 3~~	~~2~~	~~3- 10~~	~~2~~	~~4- 9~~	~~2~~	~~4- 2~~	~~2~~	~~3- 9~~	~~2~~
	4-2 x 10	8- 4	2	7- 4	2	6- 7	2	8- 2	2	7- 2	2	6- 5	2
	4-2 x 12	9- 8	2	8- 6	2	7- 8	2	9- 5	2	8- 3	2	7- 5	2
Roof, ceiling and two clear span floor	2-2 x 4	2- 7	1	1-8	1	1- 6	2	2- 0	1	1- 8	1	1- 5	2
	2-2 x 6	3- 1	2	2- 8	2	2- 4	2	3- 0	2	2- 7	2	2- 3	2
	2-2 x 8	3- 10	2	3- 4	3	3- 0	3	3- 10	2	3- 4	2	2- 11	3
	2-2 x 10	4- 9	2	4- 1	3	3- 8	3	4- 8	2	4- 0	3	3- 7	3
	2-2 x 12	5- 6	3	4- 9	3	4- 3	3	5- 5	3	4- 8	3	4- 2	3
	3-2 x 8	4- 10	2	4- 2	2	3- 9	2	4- 9	2	4- 1	2	3- 8	2
	3-2 x 10	5- 11	2	5- 1	2	4- 7	3	5- 10	2	5- 0	2	4- 6	3
	3-2 x 12	6- 10	2	5- 11	3	5- 4	3	6- 9	2	5- 10	3	5- 3	3
	4-2 x 8	5- 7	2	4- 10	2	4- 4	2	5- 6	2	4- 9	2	4- 3	2
	4-2 x 10	6- 10	2	5- 11	2	5- 3	2	6- 9	2	5- 10	2	5- 2	2
	4-2 x 12	7- 11	2	6- 10	2	6- 2	3	7- 9	2	6- 9	2	6- 0	3

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For SI: 1 inch = 25.4 mm, 1 pound per square foot = 0.0479kN/m^2.

a. Spans are given in feet and inches.

b. Tabulated values assume #2 grade lumber.

c. Building width is measured perpendicular to the ridge. For widths between those shown, spans are permitted to be interpolated.

d. NJ - Number ofjack studs required to support each end. Where the number of requiredjack studs equals one, the headeris permitted to be supported by an approved framing anchor attached to the full-height wall stud and to the header.

e. 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.

CORRECT VALUES FOR TABLE 3502.5(1)

TABLE R502.5(1)
GIRDER SPANS[a] AND HEADER SPANS[a] FOR EXTERIOR BEARING WALLS
(Maximum spans for Douglas fir-larch, hem-fir, southern pine and spruce-pine-fir[b] and required number of jack studs)

GIRDERS AND HEADERS SUPPORTING	SIZE	GROUND SNOW LOAD (psf)[e]																	
		30						50						70					
		Building width[c] (feet)																	
		20		28		36		20		28		36		20		28		36	
		Span	NJ[d]	Span	NJ[d]	Span	NJ[d]	Span	NJ[d]	Span	NJ[d]	Span	NJ[d]	Span	NJ[d]	Span	NJ[d]	Span	NJ[d]
Roof and ceiling	2-2×4	3-6	1	3-2	1	2-10	1	3-2	1	2-9	1	2-6	1	2-10	1	2-6	1	2-3	1
	2-2×6	5-5	1	4-8	1	4-2	1	4-8	1	4-1	1	3-8	2	4-2	1	3-8	2	3-3	2
	2-2×8	6-10	1	5-11	2	5-4	2	5-11	2	5-2	2	4-7	2	5-4	2	4-7	2	4-1	2
	2-2×10	8-5	2	7-3	2	6-6	2	7-3	2	6-3	2	5-7	2	6-6	2	5-7	2	5-0	2
	2-2×12	9-9	2	8-5	2	7-6	2	8-5	2	7-3	2	6-6	2	7-6	2	6-6	2	5-10	3
	3-2×8	8-4	1	7-5	1	6-8	1	7-5	1	6-5	2	5-9	2	6-8	1	5-9	2	5-2	2
	3-2×10	10-6	1	9-1	2	8-2	2	9-1	2	7-10	2	7-0	2	8-2	2	7-0	2	6-4	2
	3-2×12	12-2	2	10-7	2	9-5	2	10-7	2	9-2	2	8-2	2	9-5	2	8-2	2	7-4	2
	4-2×8	9-2	1	8-4	1	7-8	1	8-4	1	7-5	1	6-8	1	7-8	1	6-8	1	5-11	2
	4-2×10	11-8	1	10-6	1	9-5	2	10-6	1	9-1	2	8-2	2	9-5	2	8-2	2	7-3	2
	4-2×12	14-1	1	12-2	2	10-11	2	12-2	2	10-7	2	9-5	2	10-11	2	9-5	2	8-5	2
Roof, ceiling and one center-bearing floor	2-2×4	3-1	1	2-9	1	2-5	1	2-9	1	2-5	1	2-2	1	2-7	1	2-3	1	2-0	1
	2-2×6	4-6	1	4-0	1	3-7	2	4-1	1	3-7	2	3-3	2	3-9	2	3-3	2	2-11	2
	2-2×8	5-9	2	5-0	2	4-6	2	5-2	2	4-6	2	4-1	2	4-9	2	4-2	2	3-9	2
	2-2×10	7-0	2	6-2	2	5-6	2	6-4	2	5-6	2	5-0	2	5-9	2	5-1	2	4-7	3
	2-2×12	8-1	2	7-1	2	6-5	2	7-4	2	6-5	2	5-9	3	6-8	2	5-10	3	5-3	3
	3-2×8	7-2	1	6-3	2	5-8	2	6-5	2	5-8	2	5-1	2	5-11	2	5-2	2	4-8	2
	3-2×10	8-9	2	7-8	2	6-11	2	7-11	2	6-11	2	6-3	2	7-3	2	6-4	2	5-8	2
	3-2×12	10-2	2	8-11	2	8-0	2	9-2	2	8-0	2	7-3	2	8-5	2	7-4	2	6-7	2
	4-2×8	8-1	1	7-3	1	6-7	1	7-5	1	6-6	1	5-11	2	6-10	1	6-0	2	5-5	2
	4-2×10	10-1	1	8-10	2	8-0	2	9-1	2	8-0	2	7-2	2	8-4	2	7-4	2	6-7	2
	4-2×12	11-9	2	10-3	2	9-3	2	10-7	2	9-3	2	8-4	2	9-8	2	8-6	2	7-7	2
Roof, ceiling and one clear span floor	2-2×4	2-8	1	2-4	1	2-1	1	2-7	1	2-3	1	2-0	1	2-5	1	2-1	1	1-10	1
	2-2×6	3-11	1	3-5	2	3-0	2	3-10	2	3-4	2	3-0	2	3-6	2	3-1	2	2-9	2
	2-2×8	5-0	2	4-4	2	3-10	2	4-10	2	4-2	2	3-9	2	4-6	2	3-11	2	3-6	2
	2-2×10	6-1	2	5-3	2	4-8	2	5-11	2	5-1	2	4-7	3	5-6	2	4-9	2	4-3	3
	2-2×12	7-1	2	6-1	3	5-5	3	6-10	2	5-11	3	5-4	3	6-4	2	5-6	3	5-0	3
	3-2×8	6-3	2	5-5	2	4-10	2	6-1	2	5-3	2	4-8	2	5-7	2	4-11	2	4-5	2
	3-2×10	7-7	2	6-7	2	5-11	2	7-5	2	6-5	2	5-9	2	6-10	2	6-0	2	5-4	2
	3-2×12	8-10	2	7-8	2	6-10	2	8-7	2	7-5	2	6-8	2	7-11	2	6-11	2	6-3	2
	4-2×8	7-2	1	6-3	2	5-7	2	7-0	1	6-1	2	5-5	2	6-6	1	5-8	2	5-1	2
	4-2×10	8-9	2	7-7	2	6-10	2	8-7	2	7-5	2	6-7	2	7-11	2	6-11	2	6-2	2
	4-2×12	10-2	2	8-10	2	7-11	2	9-11	2	8-7	2	7-8	2	9-2	2	8-0	2	7-2	2
Roof, ceiling and two center-bearing floors	2-2×4	2-7	1	2-3	1	2-0	1	2-6	1	2-2	1	1-11	1	2-4	1	2-0	1	1-9	1
	2-2×6	3-9	2	3-3	2	2-11	2	3-8	2	3-2	2	2-10	2	3-5	2	3-0	2	2-8	2
	2-2×8	4-9	2	4-2	2	3-9	2	4-7	2	4-0	2	3-8	2	4-4	2	3-9	2	3-5	2
	2-2×10	5-9	2	5-1	2	4-7	3	5-8	2	4-11	2	4-5	3	5-3	2	4-7	3	4-2	3
	2-2×12	6-8	2	5-10	3	5-3	3	6-6	2	5-9	3	5-2	3	6-1	3	5-4	3	4-10	3
	3-2×8	5-11	2	5-2	2	4-8	2	5-9	2	5-1	2	4-7	2	5-5	2	4-9	2	4-3	2
	3-2×10	7-3	2	6-4	2	5-8	2	7-1	2	6-2	2	5-7	2	6-7	2	5-9	2	5-3	2
	3-2×12	8-5	2	7-4	2	6-7	2	8-2	2	7-2	2	6-5	3	7-8	2	6-9	2	6-1	3
	4-2×8	6-10	1	6-0	2	5-5	2	6-8	1	5-10	2	5-3	2	6-3	2	5-6	2	4-11	2
	4-2×10	8-4	2	7-4	2	6-7	2	8-2	2	7-2	2	6-5	2	7-7	2	6-8	2	6-0	2
	4-2×12	9-8	2	8-6	2	7-8	2	9-5	2	8-3	2	7-5	2	8-10	2	7-9	2	7-0	2

(continued)