

Maximum Spans¹ for Southern Pine Effective June 1, 2013

All Sizes and Grades
of Visually Graded Southern Pine Dimension Lumber

Maximum spans in feet-inches

Table 1 Floor Joists – 30 psf live load, 10 psf dead load, 360 deflection

Size	Spacing In. o.c.	Dense Select Structural	Select Structural	NonDense Select Structural	No.1 Dense	No.1	No.1 NonDense	No.2 Dense	No.2	No.2 NonDense	No.3
2x4	12	7-11	7-10	7-6	7-10	7-6	7-2	7-6	7-2	7-0	6-2
	16	7-3	7-1	6-10	7-1	6-10	6-6	6-10	6-6	6-4	5-4
	24	6-4	6-2	6-0	6-2	6-0	5-8	5-11	5-8	5-7	4-4
2x6	12	12-6	12-3	11-10	12-3	11-10	11-3	11-10	11-3	11-0	9-2
	16	11-4	11-2	10-9	11-2	10-9	10-3	10-8	10-3	10-0	7-11
	24	9-11	9-9	9-4	9-9	9-4	8-11	8-9	8-6	8-4	6-5
2x8	12	16-6	16-2	15-7	16-2	15-7	14-11	15-7	14-11	14-6	11-6
	16	15-0	14-8	14-2	14-8	14-2	13-6	13-7	13-3	12-10	10-0
	24	13-1	12-10	12-4	12-10	12-4	11-9	11-1	10-10	10-6	8-2
2x10	12	21-0	20-8	19-10	20-8	19-10	19-0	18-8	18-1	17-6	13-11
	16	19-1	18-9	18-0	18-9	18-0	17-1	16-2	15-8	15-2	12-1
	24	16-8	16-5	15-9	15-8	14-8	13-11	13-2	12-10	12-5	9-10
2x12	12	25-7	25-1	24-2	25-1	24-2	23-1	22-0	21-4	20-7	16-6
	16	23-3	22-10	21-11	22-4	21-4	20-3	19-1	18-6	17-10	14-4
	24	20-3	19-11	19-2	18-3	17-5	16-6	15-7	15-1	14-7	11-8

¹On February 11, 2013, the Southern Pine Inspection Bureau published new design values for all sizes and grades of visually graded Southern Pine dimension lumber in *Supplement No. 13 to the 2002 Standard Grading Rules for Southern Pine Lumber*. These maximum spans were calculated using the new design values which become effective June 1, 2013. Applied loads are given in psf (pounds per square foot). Deflection is limited to the span in inches divided by 360 or 240 and is based on live load only. The load duration factor, C_D , is 1.0 unless shown as 1.15 for snow loads or 1.25 for construction loads. An asterisk (*) indicates the listed span has been limited to 26'0" based on availability; check sources of supply for lumber longer than 20'.

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Maximum Spans¹ for Southern Pine Effective June 1, 2013

All Sizes and Grades
of Visually Graded Southern Pine Dimension Lumber

Maximum spans in feet-inches

Table 2 Floor Joists – 40 psf live load, 10 psf dead load, 360 deflection

Size	Spacing In. o.c.	Dense Select Structural	Select Structural	NonDense Select Structural	No.1 Dense	No.1	No.1 NonDense	No.2 Dense	No.2	No.2 NonDense	No.3
2x4	12	7-3	7-1	6-10	7-1	6-10	6-6	6-10	6-6	6-4	5-6
	16	6-7	6-5	6-2	6-5	6-2	5-11	6-2	5-11	5-9	4-9
	24	5-9	5-8	5-5	5-8	5-5	5-2	5-4	5-1	5-0	3-11
2x6	12	11-4	11-2	10-9	11-2	10-9	10-3	10-9	10-3	10-0	8-2
	16	10-4	10-2	9-9	10-2	9-9	9-4	9-7	9-4	9-1	7-1
	24	9-0	8-10	8-6	8-10	8-6	8-2	7-10	7-7	7-5	5-9
2x8	12	15-0	14-8	14-2	14-8	14-2	13-6	14-0	13-6	13-2	10-3
	16	13-7	13-4	12-10	13-4	12-10	12-3	12-2	11-10	11-6	8-11
	24	11-11	11-8	11-3	11-8	11-3	10-6	9-11	9-8	9-5	7-3
2x10	12	19-1	18-9	18-0	18-9	18-0	17-3	16-8	16-2	15-8	12-6
	16	17-4	17-0	16-5	17-0	16-1	15-3	14-6	14-0	13-7	10-10
	24	15-2	14-11	14-4	14-0	13-1	12-6	11-10	11-5	11-1	8-10
2x12	12	23-3	22-10	21-11	22-10	21-11	20-11	19-8	19-1	18-5	14-9
	16	21-1	20-9	19-11	20-0	19-1	18-1	17-1	16-6	16-0	12-10
	24	18-5	18-1	17-5	16-4	15-7	14-9	13-11	13-6	13-0	10-5

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Maximum Spans¹ for Southern Pine Effective June 1, 2013

All Sizes and Grades
of Visually Graded Southern Pine Dimension Lumber

Maximum spans in feet-inches

Table 12 Wet-Service Floor Joists (MC>19%) – 40 psf live load, 10 psf dead load, 360 deflection

Size	Spacing In. o.c.	Dense Select Structural	Select Structural	NonDense Select Structural	No.1 Dense	No.1	No.1 NonDense	No.2 Dense	No.2	No.2 NonDense	No.3
2x4	12	7-0	6-10	6-7	6-10	6-7	6-4	6-7	6-4	6-2	5-6
	16	6-4	6-3	6-0	6-3	6-0	5-9	6-0	5-9	5-7	4-9
	24	5-6	5-5	5-3	5-5	5-3	5-0	4-11	5-0	4-11	3-11
2x6	12	11-0	10-9	10-4	10-9	10-4	9-11	10-4	9-11	9-8	8-2
	16	10-0	9-9	9-5	9-9	9-5	9-0	9-5	9-0	8-9	7-1
	24	8-8	8-7	8-3	8-7	8-2	7-8	7-10	7-7	7-5	5-9
2x8	12	14-5	14-2	13-8	14-2	13-8	13-1	13-8	13-1	12-9	10-3
	16	13-2	12-11	12-5	12-11	12-5	11-10	12-2	11-10	11-6	8-11
	24	11-6	11-3	10-10	10-9	10-4	10-4	9-11	9-8	9-5	7-3
2x10	12	18-5	18-1	17-5	18-1	17-5	16-8	16-8	16-2	15-8	12-6
	16	16-9	16-5	15-10	15-10	15-10	15-2	14-6	14-0	13-7	10-10
	24	14-8	14-4	13-10	12-11	13-1	12-6	11-10	11-5	11-1	8-10
2x12	12	22-5	22-0	21-2	22-0	21-2	20-3	19-8	19-1	18-5	14-9
	16	20-4	20-0	19-3	20-0	19-1	18-1	17-1	16-6	16-0	12-10
	24	17-10	17-6	16-10	16-4	15-7	14-9	13-11	13-6	13-0	10-5

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Maximum Spans¹ for Southern Pine Effective June 1, 2013

All Sizes and Grades
of Visually Graded Southern Pine Dimension Lumber

Maximum spans in feet-inches

Table 15 Ceiling Joists – 10 psf live load, 5 psf dead load, 240 deflection

Size	Spacing In. o.c.	Dense Select Structural	Select Structural	NonDense Select Structural	No.1 Dense	No.1	No.1 NonDense	No.2 Dense	No.2	No.2 NonDense	No.3
2x4	12	13-2	12-11	12-5	12-11	12-5	11-10	12-5	11-10	11-7	10-1
	16	11-11	11-9	11-3	11-9	11-3	10-9	11-3	10-9	10-6	8-9
	24	10-5	10-3	9-10	10-3	9-10	9-5	9-8	9-3	9-1	7-2
2x6	12	20-8	20-3	19-6	20-3	19-6	18-8	19-6	18-8	18-2	14-11
	16	18-9	18-5	17-8	18-5	17-8	16-11	17-5	16-11	16-6	12-11
	24	16-4	16-1	15-6	16-1	15-6	14-9	14-3	13-11	13-7	10-7
2x8	12	26-0*	26-0*	25-8	26-0*	25-8	24-7	25-7	24-7	24-0	18-9
	16	24-8	24-3	23-4	24-3	23-4	22-4	22-2	21-7	21-0	16-3
	24	21-7	21-2	20-5	21-2	20-5	19-3	18-1	17-7	17-2	13-3
2x10	12	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	22-9
	16	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	25-7	24-10	19-9
	24	26-0*	26-0*	26-0	25-7	23-11	22-9	21-7	20-11	20-3	16-1
2x12	12	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*
	16	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	23-4
	24	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	25-5	24-8	23-9	19-1

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Maximum Spans¹ for Southern Pine Effective June 1, 2013

All Sizes and Grades
of Visually Graded Southern Pine Dimension Lumber

Maximum spans in feet-inches

Table 16 Ceiling Joists – 20 psf live load, 10 psf dead load, 240 deflection

Size	Spacing In. o.c.	Dense Select Structural	Select Structural	NonDense Select Structural	No.1 Dense	No.1	No.1 NonDense	No.2 Dense	No.2	No.2 NonDense	No.3
2x4	12	10-5	10-3	9-10	10-3	9-10	9-5	9-8	9-3	9-1	7-2
	16	9-6	9-4	8-11	9-4	8-11	8-7	8-5	8-0	7-10	6-2
	24	8-3	8-1	7-10	8-0	7-8	7-2	6-10	6-7	6-5	5-1
2x6	12	16-4	16-1	15-6	16-1	15-6	14-9	14-3	13-11	13-7	10-7
	16	14-11	14-7	14-1	14-7	14-0	13-2	12-4	12-0	11-9	9-2
	24	13-0	12-9	12-3	12-0	11-5	10-9	10-1	9-10	9-7	7-5
2x8	12	21-7	21-2	20-5	21-2	20-5	19-3	18-1	17-7	17-2	13-3
	16	19-7	19-3	18-6	18-5	17-9	16-8	15-8	15-3	14-10	11-6
	24	17-2	16-10	16-2	15-1	14-6	13-7	12-10	12-6	12-1	9-5
2x10	12	26-0*	26-0*	26-0	25-7	23-11	22-9	21-7	20-11	20-3	16-1
	16	25-0	24-7	23-8	22-2	20-9	19-9	18-8	18-1	17-6	13-11
	24	21-10	21-6	20-3	18-1	16-11	16-1	15-3	14-9	14-4	11-5
2x12	12	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	25-5	24-8	23-9	19-1
	16	26-0*	26-0*	26-0*	25-10	24-8	23-4	22-0	21-4	20-7	16-6
	24	26-0*	25-5	23-9	21-1	20-1	19-1	18-0	17-5	16-10	13-6

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All Sizes and Grades
of Visually Graded Southern Pine Dimension Lumber

Maximum spans in feet-inches

Table 17 Rafters – 20 psf live load, 10 psf dead load, 240 deflection, $C_D = 1.15$

Size	Spacing In. o.c.	Dense Select Structural	Select Structural	NonDense Select Structural	No.1 Dense	No.1	No.1 NonDense	No.2 Dense	No.2	No.2 NonDense	No.3
2x4	12	10-5	10-3	9-10	10-3	9-10	9-5	9-10	9-5	9-2	7-8
	16	9-6	9-4	8-11	9-4	8-11	8-7	8-11	8-7	8-4	6-7
	24	8-3	8-1	7-10	8-1	7-10	7-6	7-4	7-0	6-10	5-5
2x6	12	16-4	16-1	15-6	16-1	15-6	14-9	15-3	14-9	14-5	11-4
	16	14-11	14-7	14-1	14-7	14-1	13-5	13-3	12-11	12-7	9-9
	24	13-0	12-9	12-3	12-9	12-3	11-7	10-10	10-7	10-3	8-0
2x8	12	21-7	21-2	20-5	21-2	20-5	19-6	19-5	18-11	18-5	14-3
	16	19-7	19-3	18-6	19-3	18-6	17-9	16-10	16-4	15-11	12-4
	24	17-2	16-10	16-2	16-2	15-6	14-7	13-9	13-4	13-0	10-1
2x10	12	26-0*	26-0*	26-0	26-0*	25-8	24-5	23-1	22-5	21-9	17-3
	16	25-0	24-7	23-8	23-9	22-3	21-2	20-0	19-5	18-10	15-0
	24	21-10	21-6	20-8	19-5	18-2	17-3	16-4	15-10	15-4	12-3
2x12	12	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	25-6	20-5
	16	26-0*	26-0*	26-0*	26-0*	26-0*	25-1	23-7	22-10	22-1	17-9
	24	26-0*	26-0*	25-1	22-7	21-7	20-5	19-3	18-8	18-0	14-6

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Maximum Spans¹ for Southern Pine Effective June 1, 2013

All Sizes and Grades
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Maximum spans in feet-inches

Table 41 Rafters – 20 psf live load, 10 psf dead load, 240 deflection, C_D = 1.25

Size	Spacing In. o.c.	Dense Select Structural	Select Structural	NonDense Select Structural	No.1 Dense	No.1	No.1 NonDense	No.2 Dense	No.2	No.2 NonDense	No.3
2x4	12	10-5	10-3	9-10	10-3	9-10	9-5	9-10	9-5	9-2	8-0
	16	9-6	9-4	8-11	9-4	8-11	8-7	8-11	8-7	8-4	6-11
	24	8-3	8-1	7-10	8-1	7-10	7-6	7-8	7-4	7-2	5-8
2x6	12	16-4	16-1	15-6	16-1	15-6	14-9	15-6	14-9	14-5	11-9
	16	14-11	14-7	14-1	14-7	14-1	13-5	13-10	13-5	13-1	10-2
	24	13-0	12-9	12-3	12-9	12-3	11-9	11-3	11-0	10-9	8-4
2x8	12	21-7	21-2	20-5	21-2	20-5	19-6	20-3	19-6	19-0	14-10
	16	19-7	19-3	18-6	19-3	18-6	17-9	17-6	17-1	16-7	12-10
	24	17-2	16-10	16-2	16-10	16-2	15-2	14-4	13-11	13-7	10-6
2x10	12	26-0*	26-0*	26-0	26-0*	26-0	24-10	24-1	23-5	22-8	18-0
	16	25-0	24-7	23-8	24-7	23-2	22-1	20-10	20-3	19-7	15-7
	24	21-10	21-6	20-8	20-3	18-11	18-0	17-0	16-6	16-0	12-9
2x12	12	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	21-4
	16	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	24-8	23-10	23-0	18-6
	24	26-0*	26-0*	25-1	23-7	22-6	21-4	20-1	19-6	18-10	15-1

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