

SOUTHERN PINE SPAN TABLES

Maximum Spans
given in feet and inches

Table 7 Floor Joists – 60 psf live load, 20 psf dead load, $\ell/360$

Corridors (maximum 1.5" lightweight concrete)

Size inches	Spacing inches on center	Grade									
		Dense Select Structural	Select Structural	NonDense Select Structural	No. 1 Dense	No. 1 NonDense	No. 2 Dense	No. 2 NonDense	No. 3	No. 3	No. 3
2 x 6	12	9-11	9-9	9-7	9-9	9-7	9-4	9-7	9-4	8-11	7-5
	16	9-0	8-10	8-8	8-10	8-8	8-6	8-8	8-3	7-11	6-5
	24	7-10	7-9	7-7	7-9	7-7	7-4	7-3	6-9	6-5	5-3
2 x 8	12	13-1	12-10	12-7	12-10	12-7	12-4	12-7	12-4	11-9	9-5
	16	11-11	11-8	11-5	11-8	11-5	11-3	11-5	10-8	10-2	8-2
	24	10-5	10-2	10-0	10-2	9-9	9-3	9-5	8-8	8-4	6-8
2 x 10	12	16-8	16-5	16-1	16-5	16-1	15-8	15-8	14-8	13-11	11-1
	16	15-2	14-11	14-7	14-11	14-2	13-7	13-7	12-9	12-1	9-7
	24	13-3	13-0	12-9	12-2	11-7	11-1	11-1	10-5	9-10	7-10
2 x 12	12	20-3	19-11	19-7	19-11	19-6	18-8	18-8	17-2	16-7	13-2
	16	18-5	18-1	17-9	17-6	16-11	16-2	16-2	14-11	14-4	11-5
	24	16-1	15-10	15-6	14-4	13-9	13-2	13-2	12-2	11-9	9-4

These spans are based on the 1993 AFPA (formerly NFPA) Span Tables for Joists and Rafters and the 1991 SPIB Grading Rules. They are intended for use in covered structures or where the moisture content in use does not exceed 19 percent for an extended period of time. Loading conditions are expressed in psf (pounds per square foot). Deflection is limited to span in inches divided by 360 and is based on live load only. Check sources of supply for availability of lumber in lengths greater than 20'-0".

These grades are the most commonly available.



Maximum Spans: Southern Pine Joists & Rafters

Southern Pine Marketing Council

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Maximum Spans
given in feet and inches

Table 8 Ceiling Joists – 10 psf live load, 5 psf dead load, $\ell/240$

Drywall ceiling; No attic storage

Size inches	Spacing inches on center	Grade										
		Dense Select Structural	Select Structural	NonDense Select Structural	No. 1 Dense	No. 1 NonDense	No. 2 Dense	No. 2 NonDense	No. 3	No. 3	No. 3	Standard
2 x 4	12	13-2	12-11	12-8	12-11	12-8	12-5	12-8	12-5	11-10	11-7	9-11
	16	11-11	11-9	11-6	11-9	11-6	11-3	11-6	11-3	10-9	10-0	8-7
	24	10-5	10-3	10-0	10-3	10-0	9-10	10-0	9-10	9-5	8-2	7-0
2 x 6	12	20-8	20-3	19-11	20-3	19-11	19-6	19-11	19-6	18-8	17-1	
	16	18-9	18-5	18-1	18-5	18-1	17-8	18-1	17-8	16-11	14-9	
	24	16-4	16-1	15-9	16-1	15-9	15-6	15-9	15-6	14-9	12-1	
2 x 8	12	26-0*	26-0*	26-0*	26-0*	26-0*	25-8	26-0*	25-8	24-7	21-8	
	16	24-8	24-3	23-10	24-3	23-10	23-4	23-10	23-4	22-4	18-9	
	24	21-7	21-2	20-10	21-2	20-10	20-5	20-10	20-1	19-2	15-4	
2 x 10	12	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	25-7	
	16	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	26-0*	22-2	
	24	26-0*	26-0*	26-0*	26-0*	26-0*	25-7	25-7	24-0	22-9	18-1	

Table 9 Ceiling Joists – 20 psf live load, 10 psf dead load, $\ell/240$

Drywall ceiling; No future room development, but limited attic storage available

Size inches	Spacing inches on center	Grade										
		Dense Select Structural	Select Structural	NonDense Select Structural	No. 1 Dense	No. 1 NonDense	No. 2 Dense	No. 2 NonDense	No. 3	No. 3	No. 3	Standard
2 x 4	12	10-5	10-3	10-0	10-3	10-0	9-10	10-0	9-10	9-5	8-2	7-0
	16	9-6	9-4	9-1	9-4	9-1	8-11	9-1	8-11	8-7	7-1	6-1
	24	8-3	8-1	8-0	8-1	8-0	7-10	8-0	7-8	7-3	5-9	4-11
2 x 6	12	16-4	16-1	15-9	16-1	15-9	15-6	15-9	15-6	14-9	12-1	
	16	14-11	14-7	14-4	14-7	14-4	14-1	14-4	13-6	12-11	10-5	
	24	13-0	12-9	12-6	12-9	12-6	12-0	11-10	11-0	10-6	8-6	
2 x 8	12	21-7	21-2	20-10	21-2	20-10	20-5	20-10	20-1	19-2	15-4	
	16	19-7	19-3	18-11	19-3	18-11	18-5	18-9	17-5	16-7	13-3	
	24	17-2	16-10	16-6	16-8	15-11	15-1	15-4	14-2	13-7	10-10	
2 x 10	12	26-0*	26-0*	26-0*	26-0*	26-0*	25-7	25-7	24-0	22-9	18-1	
	16	25-0	24-7	24-1	24-5	23-2	22-2	22-2	20-9	19-9	15-8	
	24	21-10	21-6	21-1	19-11	18-11	18-1	18-1	17-0	16-1	12-10	

These spans are based on the 1993 AFPA (formerly NFPA) Span Tables for Joists and Rafters and the 1991 SPIB Grading Rules. They are intended for use in covered structures or where the moisture content in use does not exceed 19 percent for an extended period of time. Loading conditions are expressed in psf (pounds per square foot). Deflection is limited to span in inches divided by 240 and is based on live load only. Check sources of supply for availability of lumber in lengths greater than 20'-0".

*The listed maximum span has been limited to 26'-0" based on material availability.

These grades are the most commonly available.

Maximum Spans: Southern Pine Joists & Rafters

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