



**City of Houston
Building Inspection
CODE WORD 2006**

INTERPRETATIONS AND APPLICATIONS OF
THE HOUSTON ADOPTED CODES
2006 IBC, 2006 IRC, 2011 NEC, 2006 UMC, 2006 UPC,
2006 IECC, 2009 IECC and ASHRAE 90.1-2007

No:	2006-61	Page:	1	of	1
PUBLICATION:	July 11, 2013				
SUBJECT:	Policy- New Design Values for visually graded Southern Pine dimensional lumber				
CODE(S):	Residential and Building				
SECTION(S)	Various				

Effective June 1, 2013, the Southern Forest Products Association modified and reduced the recognized design allowances of visually graded Southern Yellow Pine lumber.

The 2006 Building and Residential Codes were published and adopted prior to these reductions being known or published and currently contain less stringent allowances.

In response to this industry change, the City of Houston will utilize the new recognized span tables published by the Southern Pine Inspection Bureau as of June 1.

For ease of use, the span tables are included herein for reference and replace the following tables:

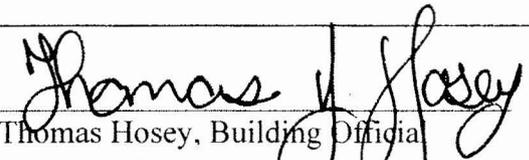
IRC

Floor Joists	R502.3.1 (1) - R502.3.1(2)
Cantilever Spans	R502.3.3 (1) - R502.3.3(2)
Girder and Header Spans	R502.5 (1) - R502.5(2)
Ceiling Joists	R802.4 (1) - R802.4(2)
Rafter Spans	R802.5.1 (1) - R802.5.1(8)

IBC

Floor Joists	2308.8(1) – 2308.8(2)
Header and Girder	2308.9.5 and 2308.9.6
Ceiling Joists	2308.10.2(1) - 2308.10.2(2)
Rafter Spans	2308.10.3(1) - 2308.10.3(6)

This change will not affect currently approved projects or plans that are in the plan review process nor other lumber species.

Approved: 
Thomas Hosey, Building Official

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

¹The 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 became 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'.

The Southern Forest Products Association (SFPA) does not test lumber or establish design values. Accordingly, neither SFPA, nor its members, warrant that the design values on which the span tables are based are correct, and disclaim responsibility for injury or damage resulting from the use of such span tables.

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

¹The 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 became 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'.

The Southern Forest Products Association (SFPA) does not test lumber or establish design values. Accordingly, neither SFPA, nor its members, warrant that the design values on which the span tables are based are correct, and disclaim responsibility for injury or damage resulting from the use of such span tables.

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

¹The 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 became 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 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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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 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
of Visually Graded Southern Pine Dimension Lumber

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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