APPENDIX D: SPAN TABLES

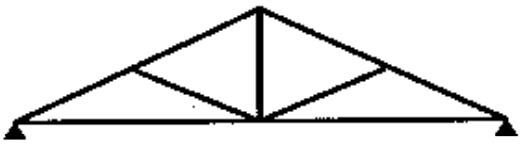
The representative truss span tables provided in this appendix are included in order to give architects, builders, designers and engineers an idea of the truss spans available for a particular load condition, load duration, lumber type and truss configuration.

These tables are intended only to be guidelines, as they do not contain all of the available designs, loadings, and/or configurations available to the user through today's sophisticated computer software programs. Individuals needing assistance beyond the scope of these span tables should consult their local WTCA member truss manufacturer (see Addendum to this text), or call WTCA Offices at 608/274-4849 for assistance.

Floor truss span tables are courtesy of Trussway, Ltd.

WTCA REPRESENTATIVE ROOF TRUSS SPANS

DESIGN CRITERIA		
TOP CHORD LIVE	= 20	PSF
TOP CHORD DEAD	= 10	PSF
BTM CHORD LIVE	= 0	PSF
BTM CHORD DEAD	= 10	PSF



SPACING: 24" o.c.	40
LDI: 15%	PSF

SOUTHERN PINE

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	21'-6" [3]	28'-2" [3]	21'-6" [3]	28'-2" [3]
#1	21'-6" [3]	28'-2" [3]	20'-8" [3]	27'-5" [3]
#2 DENSE	21'-6" [3]	28'-2" [3]	20'-1" [3]	27'-3" [3]
#2	21'-6" [3]	28'-2" [3]	18'-9" [3]	26'-3" [3]

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	21'-6" [3]	28'-2" [3]	21'-6" [3]	28'-2" [3]
#1	21'-6" [3]	28'-2" [3]	20'-8" [3]	27'-5" [3]
#2 DENSE	21'-6" [3]	28'-2" [3]	20'-1" [3]	27'-3" [3]
#2	21'-6" [3]	28'-2" [3]	18'-9" [3]	26'-3" [3]

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	21'-6" [3]	28'-2" [3]	21'-6" [3]	28'-2" [3]
#1	21'-6" [3]	28'-2" [3]	20'-8" [3]	27'-5" [3]
#2 DENSE	21'-6" [3]	28'-2" [3]	20'-1" [3]	27'-3" [3]
#2	21'-6" [3]	28'-2" [3]	18'-9" [3]	26'-3" [3]

DOUGLAS FIR-LARCH

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	22'-4" [3]	29'-0" [3]	22'-4" [3]	29'-0" [3]
#1 & BETTER	22'-4" [3]	29'-0" [3]	20'-7" [3]	28'-0" [3]
#1	22'-4" [3]	29'-0" [3]	19'-0" [3]	27'-0" [3]
#2	22'-4" [3]	29'-0" [3]	17'-3" [3]	26'-0" [3]

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	22'-4" [3]	29'-0" [3]	22'-4" [3]	29'-0" [3]
#1 & BETTER	22'-4" [3]	29'-0" [3]	20'-7" [3]	28'-0" [3]
#1	22'-4" [3]	29'-0" [3]	19'-0" [3]	27'-0" [3]
#2	22'-4" [3]	29'-0" [3]	17'-3" [3]	26'-0" [3]

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	22'-4" [3]	29'-0" [3]	22'-4" [3]	29'-0" [3]
#1 & BETTER	22'-4" [3]	29'-0" [3]	20'-7" [3]	28'-0" [3]
#1	22'-4" [3]	29'-0" [3]	19'-0" [3]	27'-0" [3]
#2	22'-4" [3]	29'-0" [3]	17'-3" [3]	26'-0" [3]

SPRUCE - PINE - FIR

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	19'-9" [3]	25'-10" [3]	19'-9" [3]	25'-10" [3]
#1	19'-9" [3]	25'-10" [3]	16'-10" [3]	24'-6" [3]
#2	19'-9" [3]	25'-10" [3]	15'-10" [3]	24'-6" [3]

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	19'-9" [3]	25'-10" [3]	19'-9" [3]	25'-10" [3]
#1	19'-9" [3]	25'-10" [3]	16'-10" [3]	24'-6" [3]
#2	19'-9" [3]	25'-10" [3]	16'-10" [3]	24'-6" [3]

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	19'-9" [3]	25'-10" [3]	19'-9" [3]	25'-10" [3]
#1	19'-9" [3]	25'-10" [3]	16'-10" [3]	24'-6" [3]
#2	19'-9" [3]	25'-10" [3]	16'-10" [3]	24'-6" [3]

HEM-FIR

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	20'-8" [3]	26'-8" [3]	20'-8" [3]	26'-8" [3]
#1	20'-8" [3]	26'-8" [3]	18'-1" [3]	25'-5" [3]
#2	20'-8" [3]	26'-8" [3]	16'-6" [3]	23'-8" [3]

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	20'-8" [3]	26'-8" [3]	20'-8" [3]	26'-8" [3]
#1	20'-8" [3]	26'-8" [3]	18'-1" [3]	25'-5" [3]
#2	20'-8" [3]	26'-8" [3]	16'-6" [3]	23'-8" [3]

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	20'-8" [3]	26'-8" [3]	20'-8" [3]	26'-8" [3]
#1	20'-8" [3]	26'-8" [3]	18'-1" [3]	25'-5" [3]
#2	20'-8" [3]	26'-8" [3]	16'-6" [3]	23'-8" [3]

GENERAL NOTES

Truss spans shown are examples of truss spans for the loadings and truss configurations shown. The tables are not intended to be used for design purposes or specific projects.

Spans have been determined in accordance with the *"National Design Standard for Metal Plate Connected Wood Truss Construction,"* (ANSI/TPI 1-1995) of the Truss Plate Institute (TPI), and the 1991 edition of the *"National Design Specification® for Wood Construction"* (NDS®) of the American Forest & Paper Association (AFPA).

Tables shown are not intended to limit trusses to these loads, lumber, shapes and configurations. See your WTCA member truss manufacturer for actual truss designs and solutions to custom profiles. Some representative spans for the configurations shown may vary with each manufacturer.

Spans are given for 3/12, 4/12, and 5/12 roof pitches (Y). For scissors trusses (sloped bottom chords), the bottom chord pitch is one half of the top chord (Y/2). Spruce-Pine-Fir spans are taken from Canadian SPF design values.

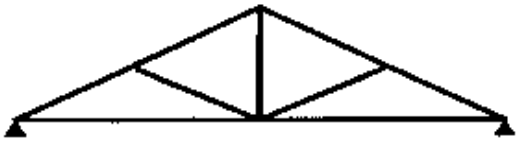
These representative spans have been reviewed by TPI and WTCA engineers. LDI = Load Duration Increase, also known as C_D in NDS®.

FOOTNOTES

1. Representative spans shown assume that the moisture content of the lumber does not exceed 19% at time of manufacture and during end use.
2. Representative span for this lumber species and grade has been limited to the representative truss span that can be achieved by the lumber grades provided in this table.
3. Representative span for this lumber grade has been limited by the maximum bottom chord panel length based on applying a 200 lb. concentrated load to represent a construction worker standing on the bottom chord.

WTCA REPRESENTATIVE ROOF TRUSS SPANS

DESIGN CRITERIA		
TOP CHORD LIVE	= 30	PSF
TOP CHORD DEAD	= 7	PSF
BTM CHORD LIVE	= 0	PSF
BTM CHORD DEAD	= 10	PSF



SPACING	
24" o.c.	47 PSF
L.D.I. 15%	

SOUTHERN PINE

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	21'-6" [3]	28'-2" [3]	21'-6" [3]	28'-2" [3]
#1	21'-6" [3]	28'-2" [3]	20'-8" [3]	27'-5" [3]
#2 DENSE	21'-6" [3]	28'-2" [3]	20'-1" [3]	27'-3" [3]
#2	21'-6" [3]	28'-2" [3]	18'-9" [3]	26'-3" [3]

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	21'-6" [3]	28'-2" [3]	21'-6" [3]	28'-2" [3]
#1	21'-6" [3]	28'-2" [3]	20'-8" [3]	27'-5" [3]
#2 DENSE	21'-6" [3]	28'-2" [3]	20'-1" [3]	27'-3" [3]
#2	21'-6" [3]	28'-2" [3]	18'-9" [3]	26'-3" [3]

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	21'-6" [3]	28'-2" [3]	21'-6" [3]	28'-2" [3]
#1	21'-6" [3]	28'-2" [3]	20'-8" [3]	27'-5" [3]
#2 DENSE	21'-6" [3]	28'-2" [3]	20'-1" [3]	27'-3" [3]
#2	21'-6" [3]	28'-2" [3]	18'-9" [3]	26'-3" [3]

DOUGLAS FIR-LARCH

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	22'-4" [3]	29'-0" [3]	22'-4" [3]	29'-0" [3]
#1 & BETTER	22'-4" [3]	29'-0" [3]	20'-7" [3]	28'-0" [3]
#1	22'-4" [3]	29'-0" [3]	19'-0" [3]	27'-0" [3]
#2	22'-4" [3]	29'-0" [3]	17'-3" [3]	26'-0" [3]

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	22'-4" [3]	29'-0" [3]	22'-4" [3]	29'-0" [3]
#1 & BETTER	22'-4" [3]	29'-0" [3]	20'-7" [3]	28'-0" [3]
#1	22'-4" [3]	29'-0" [3]	19'-0" [3]	27'-0" [3]
#2	22'-4" [3]	29'-0" [3]	17'-3" [3]	26'-0" [3]

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	22'-4" [3]	29'-0" [3]	22'-4" [3]	29'-0" [3]
#1 & BETTER	22'-4" [3]	29'-0" [3]	20'-7" [3]	28'-0" [3]
#1	22'-4" [3]	29'-0" [3]	19'-0" [3]	27'-0" [3]
#2	22'-4" [3]	29'-0" [3]	17'-3" [3]	26'-0" [3]

SPRUCE - PINE - FIR

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	19'-9" [3]	25'-10" [3]	19'-9" [3]	25'-10" [3]
#1	19'-9" [3]	25'-10" [3]	16'-10" [3]	24'-6" [3]
#2	19'-9" [3]	25'-10" [3]	16'-10" [3]	24'-6" [3]

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	19'-9" [3]	25'-10" [3]	19'-9" [3]	25'-10" [3]
#1	19'-9" [3]	25'-10" [3]	16'-10" [3]	24'-6" [3]
#2	19'-9" [3]	25'-10" [3]	16'-10" [3]	24'-6" [3]

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	19'-9" [3]	25'-10" [3]	19'-9" [3]	25'-10" [3]
#1	19'-9" [3]	25'-10" [3]	16'-10" [3]	24'-6" [3]
#2	19'-9" [3]	25'-10" [3]	16'-10" [3]	24'-6" [3]

HEM-FIR

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	20'-8" [3]	26'-8" [3]	20'-8" [3]	26'-8" [3]
#1	20'-8" [3]	26'-8" [3]	18'-1" [3]	25'-5" [3]
#2	20'-8" [3]	26'-8" [3]	16'-6" [3]	23'-8" [3]

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	20'-8" [3]	26'-8" [3]	20'-8" [3]	26'-8" [3]
#1	20'-8" [3]	26'-8" [3]	18'-1" [3]	25'-5" [3]
#2	20'-8" [3]	26'-8" [3]	16'-6" [3]	23'-8" [3]

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	20'-8" [3]	26'-8" [3]	20'-8" [3]	26'-8" [3]
#1	20'-8" [3]	26'-8" [3]	18'-1" [3]	25'-5" [3]
#2	20'-8" [3]	26'-8" [3]	16'-6" [3]	23'-8" [3]

GENERAL NOTES

Truss spans shown are examples of truss spans for the loadings and truss configurations shown. The tables are not intended to be used for design purposes or specific projects.

Spans have been determined in accordance with the *"National Design Standard for Metal Plate Connected Wood Truss Construction,"* (ANSI/TPI 1-1995) of the Truss Plate Institute (TPI), and the 1991 edition of the *"National Design Specification® for Wood Construction"* (NDS®) of the American Forest & Paper Association (AFPA).

Tables shown are not intended to limit trusses to these loads, lumber, shapes and configurations. See your WTCA member truss manufacturer for actual truss designs and solutions to custom profiles. Some representative spans for the configurations shown may vary with each manufacturer.

Spans are given for 3/12, 4/12, and 5/12 roof pitches (Y). For scissors trusses (sloped bottom chords), the bottom chord pitch is one half of the top chord (Y/2). Spruce-Pine-Fir spans are taken from Canadian SPF design values.

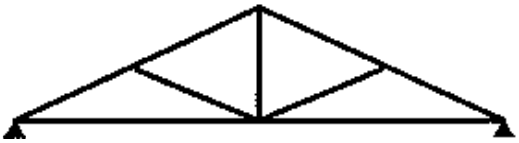
These representative spans have been reviewed by TPI and WTCA engineers. LDI = Load Duration Increase, also known as C_D in NDS®.

FOOTNOTES

1. Representative spans shown assume that the moisture content of the lumber does not exceed 19% at time of manufacture and during end use.
2. Representative span for this lumber species and grade has been limited to the representative truss span that can be achieved by the lumber grades provided in this table.
3. Representative span for this lumber grade has been limited by the maximum bottom chord panel length based on applying a 200 lb. concentrated load to represent a construction worker standing on the bottom chord.

WTCA REPRESENTATIVE ROOF TRUSS SPANS

DESIGN CRITERIA		
TOP CHORD LIVE	= 20	PSF
TOP CHORD DEAD	= 10	PSF
BTM CHORD LIVE	= 0	PSF
BTM CHORD DEAD	= 10	PSF



SPACING	
24" o.c.	40
L.D. 25%	PSF

SOUTHERN PINE

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	21'-6" [3]	28'-2" [3]	21'-6" [3]	28'-2" [3]
#1	21'-6" [3]	28'-2" [3]	20'-8" [3]	27'-5" [3]
#2 DENSE	21'-6" [3]	28'-2" [3]	20'-1" [3]	27'-3" [3]
#2	21'-5" [3]	28'-2" [3]	18'-9" [3]	26'-3" [3]

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	21'-6" [3]	28'-2" [3]	21'-6" [3]	28'-2" [3]
#1	21'-6" [3]	28'-2" [3]	20'-8" [3]	27'-5" [3]
#2 DENSE	21'-6" [3]	28'-2" [3]	20'-1" [3]	27'-3" [3]
#2	21'-6" [3]	28'-2" [3]	18'-9" [3]	26'-3" [3]

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	21'-6" [3]	28'-2" [3]	21'-6" [3]	28'-2" [3]
#1	21'-6" [3]	28'-2" [3]	20'-8" [3]	27'-5" [3]
#2 DENSE	21'-6" [3]	28'-2" [3]	20'-1" [3]	27'-3" [3]
#2	21'-6" [3]	28'-2" [3]	18'-9" [3]	26'-3" [3]

DOUGLAS FIR-LARCH

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	22'-4" [3]	29'-0" [3]	22'-4" [3]	29'-0" [3]
#1 & BETTER	22'-4" [3]	29'-0" [3]	20'-7" [3]	28'-0" [3]
#1	22'-4" [3]	29'-0" [3]	19'-0" [3]	27'-0" [3]
#2	22'-4" [3]	29'-0" [3]	17'-3" [3]	26'-0" [3]

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	22'-4" [3]	29'-0" [3]	22'-4" [3]	29'-0" [3]
#1 & BETTER	22'-4" [3]	29'-0" [3]	20'-7" [3]	28'-0" [3]
#1	22'-4" [3]	29'-0" [3]	19'-0" [3]	27'-0" [3]
#2	22'-4" [3]	29'-0" [3]	17'-3" [3]	26'-0" [3]

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	22'-4" [3]	29'-0" [3]	22'-4" [3]	29'-0" [3]
#1 & BETTER	22'-4" [3]	29'-0" [3]	20'-7" [3]	28'-0" [3]
#1	22'-4" [3]	29'-0" [3]	19'-0" [3]	27'-0" [3]
#2	22'-4" [3]	29'-0" [3]	17'-3" [3]	26'-0" [3]

SPRUCE - PINE - FIR

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	19'-9" [3]	25'-10" [3]	19'-9" [3]	25'-10" [3]
#1	19'-9" [3]	25'-10" [3]	16'-10" [3]	24'-6" [3]
#2	19'-9" [3]	25'-10" [3]	16'-10" [3]	24'-6" [3]

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	19'-9" [3]	25'-10" [3]	19'-9" [3]	25'-10" [3]
#1	19'-9" [3]	25'-10" [3]	16'-10" [3]	24'-6" [3]
#2	19'-9" [3]	25'-10" [3]	16'-10" [3]	24'-6" [3]

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	19'-9" [3]	25'-10" [3]	19'-9" [3]	25'-10" [3]
#1	19'-9" [3]	25'-10" [3]	16'-10" [3]	24'-6" [3]
#2	19'-9" [3]	25'-10" [3]	16'-10" [3]	24'-6" [3]

HEM-FIR

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	20'-8" [3]	26'-8" [3]	20'-8" [3]	26'-8" [3]
#1	20'-8" [3]	26'-8" [3]	18'-1" [3]	25'-5" [3]
#2	20'-8" [3]	26'-8" [3]	16'-6" [3]	23'-8" [3]

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	20'-8" [3]	26'-8" [3]	20'-8" [3]	26'-8" [3]
#1	20'-8" [3]	26'-8" [3]	18'-1" [3]	25'-5" [3]
#2	20'-8" [3]	26'-8" [3]	16'-5" [3]	23'-8" [3]

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	20'-8" [3]	26'-8" [3]	20'-8" [3]	26'-8" [3]
#1	20'-8" [3]	26'-8" [3]	18'-1" [3]	25'-5" [3]
#2	20'-8" [3]	26'-8" [3]	16'-6" [3]	23'-8" [3]

GENERAL NOTES

Truss spans shown are examples of truss spans for the loadings and truss configurations shown. The tables are not intended to be used for design purposes or specific projects.

Spans have been determined in accordance with the *"National Design Standard for Metal Plate Connected Wood Truss Construction,"* (ANSI/TPI 1-1995) of the Truss Plate Institute (TPI), and the 1991 edition of the *"National Design Specification® for Wood Construction"* (NDS®) of the American Forest & Paper Association (AFPA).

Tables shown are not intended to limit trusses to these loads, lumber, shapes and configurations. See your WTCA member truss manufacturer for actual truss designs and solutions to custom profiles. Some representative spans for the configurations shown may vary with each manufacturer.

Spans are given for 3/12, 4/12, and 5/12 roof pitches (Y). For scissors trusses (sloped bottom chords), the bottom chord pitch is one half of the top chord (Y/2). Spruce-Pine-Fir spans are taken from Canadian SPF design values.

These representative spans have been reviewed by TPI and WTCA engineers. LDI = Load Duration Increase, also known as C_D in NDS®.

FOOTNOTES

1. Representative spans shown assume that the moisture content of the lumber does not exceed 19% at time of manufacture and during end use.
2. Representative span for this lumber species and grade has been limited to the representative truss span that can be achieved by the lumber grades provided in this table.
3. Representative span for this lumber grade has been limited by the maximum bottom chord panel length based on applying a 200 lb. concentrated load to represent a construction worker standing on the bottom chord.

WTCA REPRESENTATIVE ROOF TRUSS SPANS

DESIGN CRITERIA		
TOP CHORD LIVE	= 20	PSF
TOP CHORD DEAD	= 10	PSF
BTM CHORD LIVE	= 0	PSF
BTM CHORD DEAD	= 10	PSF

SPACING	
24" o.c.	40
L.D. 15%	PSF

SOUTHERN PINE

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	29'-9"	42'-0" [3]	31'-11" [3]	42'-0" [2]
#1	28'-11"	42'-0" [3]	30'-8" [3]	40'-9" [3]
#2 DENSE	28'-7"	42'-0" [3]	28'-8"	40'-7" [3]
#2	27'-6"	40'-6"	27'-1"	38'-4"

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	31'-11" [3]	42'-0" [3]	31'-11" [3]	42'-0" [3]
#1	31'-11" [3]	42'-0" [3]	30'-8" [3]	40'-9" [3]
#2 DENSE	31'-8"	42'-0" [3]	29'-10" [3]	40'-7" [3]
#2	30'-7"	42'-0" [3]	27'-10" [3]	39'-1" [3]

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	31'-11" [3]	42'-0" [3]	31'-11" [3]	42'-0" [3]
#1	31'-11" [3]	42'-0" [3]	30'-8" [3]	40'-9" [3]
#2 DENSE	31'-11" [3]	42'-0" [3]	29'-10" [3]	40'-7" [3]
#2	31'-10"	42'-0" [3]	27'-10" [3]	39'-1" [3]

DOUGLAS FIR-LARCH

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	30'-5"	43'-2" [3]	33'-2" [3]	43'-2" [3]
#1 & BETTER	28'-10"	42'-9"	30'-6" [3]	41'-9" [3]
#1	27'-10"	41'-3"	28'-3" [3]	40'-3" [3]
#2	26'-8"	39'-5"	25'-7" [3]	37'-9"

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	33'-2" [3]	43'-2" [3]	33'-2" [3]	43'-2" [3]
#1 & BETTER	32'-0"	43'-2" [3]	30'-6" [3]	41'-9" [3]
#1	30'-11"	43'-2" [3]	28'-3" [3]	40'-3" [3]
#2	29'-7"	43'-2" [3]	25'-7" [3]	38'-8" [3]

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	33'-2" [2]	43'-2" [3]	33'-2" [3]	43'-2" [3]
#1 & BETTER	33'-2" [3]	43'-2" [3]	30'-6" [3]	41'-9" [3]
#1	32'-3"	43'-2" [3]	28'-3" [3]	40'-3" [3]
#2	30'-10"	43'-2" [3]	25'-7" [3]	38'-8" [3]

SPRUCE - PINE - FIR

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	28'-2"	38'-5" [2]	29'-4" [3]	38'-5" [3]
#1	25'-9"	38'-0"	23'-4"	32'-7"
#2	25'-9"	38'-0"	23'-4"	32'-7"

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	29'-4" [3]	38'-5" [3]	29'-4" [3]	38'-5" [3]
#1	28'-9"	38'-5" [3]	25'-0" [3]	36'-5" [3]
#2	28'-9"	38'-5" [3]	25'-0" [3]	36'-5" [3]

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	29'-4" [3]	38'-5" [3]	29'-4" [3]	38'-5" [3]
#1	29'-4" [3]	38'-5" [3]	25'-0" [3]	36'-5" [3]
#2	29'-4" [3]	38'-5" [3]	25'-0" [3]	36'-5" [3]

HEM-FIR

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	29'-1"	39'-9" [3]	30'-9" [3]	39'-9" [3]
#1	26'-10"	39'-7"	26'-10" [3]	37'-11" [3]
#2	25'-8"	37'-9"	24'-5" [3]	35'-2" [3]

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	30'-9" [3]	39'-9" [3]	30'-9" [3]	39'-9" [3]
#1	29'-10"	39'-9" [3]	26'-10" [3]	37'-11" [3]
#2	28'-6"	39'-9" [3]	24'-5" [3]	35'-2" [3]

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	30'-9" [3]	39'-9" [3]	30'-9" [3]	39'-9" [3]
#1	30'-9" [3]	39'-9" [3]	26'-10" [3]	37'-11" [3]
#2	29'-8"	39'-9" [3]	24'-5" [3]	35'-2" [3]

GENERAL NOTES

Truss spans shown are examples of truss spans for the loadings and truss configurations shown. The tables are not intended to be used for design purposes or specific projects.

Spans have been determined in accordance with the *"National Design Standard for Metal Plate Connected Wood Truss Construction,"* (ANSI/TPI 1-1995) of the Truss Plate Institute (TPI), and the 1991 edition of the *"National Design Specification® for Wood Construction"* (NDS®) of the American Forest & Paper Association (AFPA).

Tables shown are not intended to limit trusses to these loads, lumber, shapes and configurations. See your WTCA member truss manufacturer for actual truss designs and solutions to custom profiles. Some representative spans for the configurations shown may vary with each manufacturer.

Spans are given for 3/12, 4/12, and 5/12 roof pitches (Y). For scissors trusses (sloped bottom chords), the bottom chord pitch is one half of the top chord (Y/2). Spruce-Pine-Fir spans are taken from Canadian SPF design values.

These representative spans have been reviewed by TPI and WTCA engineers. LDI = Load Duration Increase, also known as C_D in NDS®.

FOOTNOTES

1. Representative spans shown assume that the moisture content of the lumber does not exceed 19% at time of manufacture and during end use.
2. Representative span for this lumber species and grade has been limited to the representative truss span that can be achieved by the lumber grades provided in this table.
3. Representative span for this lumber grade has been limited by the maximum bottom chord panel length based on applying a 200 lb. concentrated load to represent a construction worker standing on the bottom chord.

WTCA REPRESENTATIVE ROOF TRUSS SPANS

DESIGN CRITERIA		
TOP CHORD LIVE	= 30	PSF
TOP CHORD DEAD	= 7	PSF
BTM CHORD LIVE	= 0	PSF
BTM CHORD DEAD	= 10	PSF

SPACING	
24" o.c.	47
L.D.I.	
15%	PSF

SOUTHERN PINE

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	27'-7"	40'-11"	30'-10"	40'-11" [2]
#1	26'-10"	39'-11"	29'-7"	40'-9" [3]
#2 DENSE	25'-5"	39'-1"	26'-6"	37'-10"
#2	25'-5"	37'-5"	25'-0"	35'-4"

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	30'-7"	42'-0" [3]	31'-11" [3]	42'-0" [3]
#1	29'-9"	42'-0" [3]	30'-8" [3]	40'-9" [3]
#2 DENSE	29'-4"	42'-0" [3]	29'-10" [3]	40'-7" [3]
#2	28'-2"	41'-5"	27'-10" [3]	39'-1" [3]

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	31'-11" [3]	42'-0" [3]	31'-11" [3]	42'-0" [3]
#1	31'-1"	42'-0" [3]	30'-8" [3]	40'-9" [3]
#2 DENSE	30'-7"	42'-0" [3]	29'-10" [3]	40'-7" [3]
#2	29'-5"	42'-0" [3]	27'-10" [3]	39'-1" [3]

DOUGLAS FIR-LARCH

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	28'-2"	41'-10"	33'-2" [3]	41'-10" [2]
#1 & BETTER	26'-8"	39'-7"	30'-2"	41'-9" [3]
#1	25'-6"	38'-1"	27'-5"	39'-1"
#2	24'-6"	36'-4"	24'-10"	35'-1"

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	31'-4"	43'-2" [3]	33'-2" [3]	43'-2" [3]
#1 & BETTER	29'-7"	43'-2" [3]	30'-6" [3]	41'-9" [3]
#1	28'-6"	42'-2"	28'-3" [3]	40'-3" [3]
#2	27'-3"	40'-3"	25'-7" [3]	36'-8" [3]

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	32'-8"	43'-2" [3]	33'-2" [3]	43'-2" [3]
#1 & BETTER	30'-10"	43'-2" [3]	30'-6" [3]	41'-9" [3]
#1	29'-8"	43'-2" [3]	28'-3" [3]	40'-3" [3]
#2	28'-5"	41'-10"	25'-7" [3]	36'-8" [3]

SPRUCE - PINE - FIR

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	26'-0"	38'-5" [3]	29'-0"	38'-5" [3]
#1	23'-8"	34'-11"	21'-4"	29'-8"
#2	23'-8"	34'-11"	21'-4"	29'-8"

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	29'-0"	38'-5" [3]	29'-4" [3]	38'-5" [3]
#1	26'-5"	38'-5" [3]	24'-7"	34'-5"
#2	26'-5"	38'-5" [3]	24'-7"	34'-5"

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	29'-4" [3]	38'-5" [3]	29'-4" [3]	38'-5" [3]
#1	27'-7"	38'-5" [3]	25'-0" [3]	36'-5" [3]
#2	27'-7"	38'-5" [3]	25'-0" [3]	36'-5" [3]

HEM-FIR

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	26'-11"	39'-9" [3]	30'-9" [3]	39'-9" [3]
#1	24'-9"	36'-7"	25'-10"	36'-5"
#2	23'-8"	34'-10"	23'-0"	32'-5"

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	30'-0"	39'-9" [3]	30'-9" [3]	39'-9" [3]
#1	27'-5"	39'-9" [3]	26'-10" [3]	37'-11" [3]
#2	26'-3"	36'-7"	24'-5" [3]	35'-2" [3]

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	30'-9" [2]	39'-9" [3]	30'-9" [3]	39'-9" [3]
#1	28'-9"	39'-9" [3]	26'-10" [3]	37'-11" [3]
#2	27'-5"	39'-9" [3]	24'-5" [3]	35'-2" [3]

GENERAL NOTES

Truss spans shown are examples of truss spans for the loadings and truss configurations shown. The tables are not intended to be used for design purposes or specific projects.

Spans have been determined in accordance with the *"National Design Standard for Metal Plate Connected Wood Truss Construction,"* (ANSI/TPI 1-1995) of the Truss Plate Institute (TPI), and the 1991 edition of the *"National Design Specification® for Wood Construction"* (NDS®) of the American Forest & Paper Association (AFPA).

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Spans are given for 3/12, 4/12, and 5/12 roof pitches (Y). For scissors trusses (sloped bottom chords), the bottom chord pitch is one half of the top chord (Y/2). Spruce-Pine-Fir spans are taken from Canadian SPF design values.

These representative spans have been reviewed by TPI and WTCA engineers. LDI = Load Duration Increase, also known as C_D in NDS®.

FOOTNOTES

1. Representative spans shown assume that the moisture content of the lumber does not exceed 19% at time of manufacture and during end use.
2. Representative span for this lumber species and grade has been limited to the representative truss span that can be achieved by the lumber grades provided in this table.
3. Representative span for this lumber grade has been limited by the maximum bottom chord panel length based on applying a 200 lb. concentrated load to represent a construction worker standing on the bottom chord.

WTCA REPRESENTATIVE ROOF TRUSS SPANS

DESIGN CRITERIA		
TOP CHORD LIVE	= 20	PSF
TOP CHORD DEAD	= 10	PSF
BTM CHORD LIVE	= 0	PSF
BTM CHORD DEAD	= 10	PSF

SPACING	
24" o.c.	40
L.D.I.	
25%	PSF

SOUTHERN PINE

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	30'-2"	42'-0" [3]	31'-11" [2]	42'-0" [3]
#1	29'-5"	42'-0" [3]	30'-8" [3]	40'-9" [3]
#2 DENSE	29'-0"	42'-0" [3]	29'-10" [3]	40'-7" [3]
#2	26'-0"	41'-3"	27'-10" [3]	39'-1" [3]

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	31'-11" [3]	42'-0" [3]	31'-11" [3]	42'-0" [3]
#1	31'-11" [3]	42'-0" [3]	30'-8" [2]	40'-9" [3]
#2 DENSE	31'-11" [3]	42'-0" [3]	29'-10" [3]	40'-7" [3]
#2	31'-1"	42'-0" [3]	27'-10" [3]	39'-1" [3]

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	31'-11" [3]	42'-0" [3]	31'-11" [3]	42'-0" [3]
#1	31'-11" [3]	42'-0" [3]	30'-8" [3]	40'-9" [3]
#2 DENSE	31'-11" [3]	42'-0" [3]	29'-10" [3]	40'-7" [3]
#2	31'-11" [3]	42'-0" [3]	27'-10" [3]	39'-1" [3]

DOUGLAS FIR-LARCH

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	30'-10"	43'-2" [3]	33'-2" [3]	43'-2" [3]
#1 & BETTER	29'-4"	43'-2" [3]	30'-6" [3]	41'-9" [3]
#1	28'-4"	42'-0"	28'-3" [3]	40'-3" [3]
#2	27'-3"	40'-3"	25'-7" [3]	36'-8" [3]

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	33'-2" [3]	43'-2" [3]	33'-2" [3]	43'-2" [3]
#1 & BETTER	32'-7"	43'-2" [3]	30'-6" [3]	41'-9" [3]
#1	31'-6"	43'-2" [3]	28'-3" [3]	40'-3" [3]
#2	30'-2"	43'-2" [3]	25'-7" [3]	36'-8" [3]

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	33'-2" [3]	43'-2" [3]	33'-2" [3]	43'-2" [3]
#1 & BETTER	33'-2" [3]	43'-2" [3]	30'-6" [3]	41'-9" [3]
#1	32'-9"	43'-2" [3]	28'-3" [3]	40'-3" [3]
#2	31'-6"	43'-2" [3]	25'-7" [3]	36'-8" [3]

SPRUCE - PINE - FIR

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	28'-7"	38'-5" [5]	29'-4" [2]	38'-5" [5]
#1	26'-4"	38'-5" [3]	24'-10"	34'-8"
#2	26'-4"	38'-5" [3]	24'-10"	34'-8"

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	29'-4" [3]	38'-5" [3]	29'-4" [3]	38'-5" [3]
#1	29'-4" [3]	38'-5" [3]	25'-0" [3]	36'-5" [3]
#2	29'-4" [3]	38'-5" [3]	25'-0" [3]	36'-5" [3]

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	29'-4" [3]	38'-5" [3]	29'-4" [3]	38'-5" [3]
#1	29'-4" [3]	38'-5" [3]	25'-0" [3]	36'-5" [3]
#2	29'-4" [3]	38'-5" [3]	25'-0" [3]	36'-5" [3]

HEM-FIR

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	29'-6"	39'-9" [3]	30'-9" [3]	39'-9" [3]
#1	27'-4"	39'-9" [3]	26'-10" [3]	37'-11" [3]
#2	26'-2"	38'-5"	24'-5" [3]	35'-2" [3]

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	30'-9" [3]	39'-9" [3]	30'-9" [3]	39'-9" [3]
#1	30'-5"	39'-9" [2]	26'-10" [3]	37'-11" [3]
#2	29'-0"	39'-9" [3]	24'-5" [3]	35'-2" [3]

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	30'-9" [3]	39'-9" [3]	30'-9" [3]	39'-9" [3]
#1	30'-9" [3]	39'-9" [3]	26'-10" [3]	37'-11" [3]
#2	30'-3"	39'-9" [3]	24'-5" [3]	35'-2" [3]

GENERAL NOTES

Truss spans shown are examples of truss spans for the loadings and truss configurations shown. The tables are not intended to be used for design purposes or specific projects.

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Spans are given for 3/12, 4/12, and 5/12 roof pitches (Y). For scissors trusses (sloped bottom chords), the bottom chord pitch is one half of the top chord (Y/2). Spruce-Pine-Fir spans are taken from Canadian SPF design values.

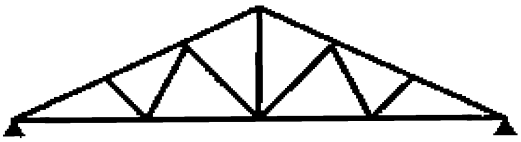
These representative spans have been reviewed by TPI and WTCA engineers. LDI = Load Duration Increase, also known as C_D in NDS®.

FOOTNOTES

1. Representative spans shown assume that the moisture content of the lumber does not exceed 19% at time of manufacture and during end use.
2. Representative span for this lumber species and grade has been limited to the representative truss span that can be achieved by the lumber grades provided in this table.
3. Representative span for this lumber grade has been limited by the maximum bottom chord panel length based on applying a 200 lb. concentrated load to represent a construction worker standing on the bottom chord.

WTCA REPRESENTATIVE ROOF TRUSS SPANS

DESIGN CRITERIA		
TOP CHORD LIVE	= 20	PSF
TOP CHORD DEAD	= 10	PSF
BTM CHORD LIVE	= 0	PSF
BTM CHORD DEAD	= 10	PSF



SPACING	
24" o.c.	40
L.D.L. 15%	PSF

SOUTHERN PINE

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	36'-1"	51'-2" [2]	36'-5"	51'-2"
#1	35'-1"	51'-2" [2]	34'-10"	49'-1"
#2 DENSE	34'-8"	51'-2" [2]	30'-11"	43'-11"
#2	33'-5"	49'-6"	29'-2"	41'-0"

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	41'-5"	55'-10" [3]	41'-9"	55'-10" [3]
#1	40'-4"	55'-10" [3]	40'-0"	54'-2" [3]
#2 DENSE	39'-10"	55'-10" [3]	35'-11"	51'-2"
#2	38'-5"	55'-10" [3]	33'-11"	47'-10"

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	42'-5" [3]	55'-10" [3]	42'-5" [3]	55'-10" [3]
#1	42'-5" [3]	55'-10" [3]	40'-9" [3]	54'-2" [3]
#2 DENSE	42'-5" [3]	55'-10" [3]	39'-8" [3]	53'-10" [3]
#2	41'-10"	55'-10" [3]	36'-11" [3]	51'-11" [3]

DOUGLAS FIR-LARCH

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	36'-9"	54'-10"	43'-2"	54'-10" [2]
#1 & BETTER	34'-11"	52'-1"	35'-11"	50'-11"
#1	33'-10"	50'-4"	32'-5"	45'-11"
#2	32'-4"	48'-1"	29'-3"	40'-11"

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	42'-3"	57'-5" [3]	44'-0" [3]	57'-5" [3]
#1 & BETTER	40'-2"	57'-5" [3]	40'-6" [3]	55'-5" [3]
#1	38'-10"	57'-5" [3]	36'-11"	52'-8"
#2	37'-3"	55'-3"	33'-7"	47'-3"

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	44'-0" [3]	57'-5" [3]	44'-0" [3]	57'-5" [3]
#1 & BETTER	43'-10"	57'-5" [3]	40'-6" [3]	55'-5" [3]
#1	42'-4"	57'-5" [3]	37'-5" [3]	53'-6" [3]
#2	40'-8"	57'-5" [3]	33'-10" [3]	51'-4" [3]

SPRUCE - PINE - FIR

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	33'-10"	48'-2" [2]	34'-1"	48'-2"
#1	30'-11"	45'-10"	24'-6"	33'-9"
#2	30'-11"	45'-10"	24'-6"	33'-9"

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	38'-11" [3]	51'-0" [3]	38'-11" [3]	51'-0" [3]
#1	35'-9"	51'-0" [3]	29'-0"	40'-3"
#2	35'-9"	51'-0" [3]	29'-0"	40'-3"

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	38'-11" [3]	51'-0" [3]	38'-11" [3]	51'-0" [3]
#1	38'-11" [3]	51'-0" [3]	32'-5"	45'-3"
#2	38'-11" [3]	51'-0" [3]	32'-5"	45'-3"

HEM-FIR

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	35'-0"	52'-1"	40'-10" [3]	52'-1" [2]
#1	32'-5"	48'-2"	30'-4"	42'-6"
#2	31'-0"	45'-11"	26'-9"	37'-6"

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	40'-4"	52'-10" [3]	40'-10" [3]	52'-10" [3]
#1	37'-5"	52'-10" [3]	34'-10"	49'-2"
#2	35'-8"	52'-9"	31'-1"	43'-10"

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	40'-10" [3]	52'-10" [3]	40'-10" [3]	52'-10" [3]
#1	40'-10" [3]	52'-10" [3]	35'-6" [3]	50'-4" [3]
#2	39'-0"	52'-10" [3]	32'-5" [3]	46'-9" [3]

GENERAL NOTES

Truss spans shown are examples of truss spans for the loadings and truss configurations shown. The tables are not intended to be used for design purposes or specific projects.

Spans have been determined in accordance with the *"National Design Standard for Metal Plate Connected Wood Truss Construction,"* (ANSI/TPI 1-1995) of the Truss Plate Institute (TPI), and the 1991 edition of the *"National Design Specification® for Wood Construction"* (NDS®) of the American Forest & Paper Association (AFPA).

Tables shown are not intended to limit trusses to these loads, lumber, shapes and configurations. See your WTCA member truss manufacturer for actual truss designs and solutions to custom profiles. Some representative spans for the configurations shown may vary with each manufacturer.

Spans are given for 3/12, 4/12, and 5/12 roof pitches (Y). For scissors trusses (sloped bottom chords), the bottom chord pitch is one half of the top chord (Y/2). Spruce-Pine-Fir spans are taken from Canadian SPF design values.

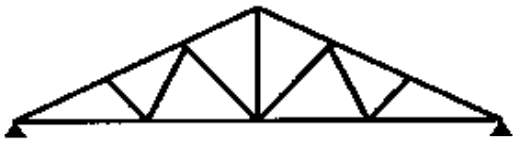
These representative spans have been reviewed by TPI and WTCA engineers. LDI = Load Duration Increase, also known as C_D in NDS®.

FOOTNOTES

1. Representative spans shown assume that the moisture content of the lumber does not exceed 19% at time of manufacture and during end use.
2. Representative span for this lumber species and grade has been limited to the representative truss span that can be achieved by the lumber grades provided in this table.
3. Representative span for this lumber grade has been limited by the maximum bottom chord panel length based on applying a 200 lb. concentrated load to represent a construction worker standing on the bottom chord.

WTCA REPRESENTATIVE ROOF TRUSS SPANS

DESIGN CRITERIA		
TOP CHORD LIVE	=	30 PSF
TOP CHORD DEAD	=	7 PSF
BTM CHORD LIVE	=	0 PSF
BTM CHORD DEAD	=	10 PSF



SPACING	
24" o.c.	47
L.D.I.	
15%	PSF

SOUTHERN PINE

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	33'-2" [2]	46'-5" [2]	33'-2"	46'-5"
#1	32'-5"	46'-5" [2]	31'-9"	44'-8"
#2 DENSE	32'-1"	46'-5" [2]	27'-11"	39'-7"
#2	30'-9"	45'-7"	26'-4"	37'-0"

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	36'-4"	54'-6" [2]	38'-8"	54'-6"
#1	37'-4"	54'-6" [2]	37'-0"	52'-4"
#2 DENSE	36'-10"	54'-6" [2]	33'-0"	46'-11"
#2	35'-5"	52'-6"	31'-1"	43'-10"

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	41'-10"	55'-10" [3]	42'-5" [3]	55'-10" [3]
#1	40'-9"	55'-10" [3]	40'-9" [3]	54'-2" [3]
#2 DENSE	40'-2"	55'-10" [3]	38'-11"	52'-7"
#2	38'-8"	55'-10" [3]	34'-9"	49'-1"

DOUGLAS FIR-LARCH

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	34'-0"	50'-10"	40'-0"	50'-10" [2]
#1 & BETTER	32'-2"	48'-1"	33'-0"	46'-6"
#1	31'-1"	46'-4"	29'-7"	41'-10"
#2	29'-8"	44'-1"	26'-8"	37'-2"

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	39'-2"	57'-5" [3]	44'-0" [3]	57'-5" [3]
#1 & BETTER	37'-1"	55'-4"	37'-11"	53'-10"
#1	35'-10"	53'-4"	34'-4"	48'-9"
#2	34'-2"	50'-9"	31'-1"	43'-7"

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	42'-9"	57'-5" [3]	44'-0" [3]	57'-5" [3]
#1 & BETTER	40'-6"	57'-5" [3]	40'-6" [3]	55'-5" [3]
#1	39'-1"	57'-5" [3]	37'-5" [3]	53'-8" [3]
#2	37'-5"	55'-5"	33'-10" [3]	48'-5"

SPRUCE - PINE - FIR

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	30'-11" [2]	43'-7" [2]	30'-11"	43'-7"
#1	28'-3"	41'-10"	21'-11"	30'-1"
#2	28'-3"	41'-10"	21'-11"	30'-1"

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	36'-1"	51'-0" [3]	36'-3"	51'-0" [3]
#1	32'-9"	48'-6"	26'-4"	36'-5"
#2	32'-9"	48'-6"	26'-4"	36'-5"

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	38'-11" [3]	51'-0" [3]	38'-11" [3]	51'-0" [3]
#1	36'-0"	51'-0" [3]	29'-10"	41'-5"
#2	36'-0"	51'-0" [3]	29'-10"	41'-5"

HEM-FIR

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	32'-5"	48'-3"	37'-7"	48'-3" [2]
#1	29'-10"	44'-3"	27'-7"	38'-6"
#2	28'-6"	42'-3"	24'-1"	33'-9"

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	37'-4"	52'-10" [3]	40'-10" [3]	52'-10" [3]
#1	34'-5"	51'-0"	32'-3"	45'-3"
#2	32'-10"	48'-7"	28'-6"	40'-1"

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	40'-10" [3]	52'-10" [3]	40'-10" [3]	52'-10" [3]
#1	37'-8"	52'-10" [3]	35'-6" [3]	50'-4" [3]
#2	35'-11"	52'-10"	31'-11"	45'-1"

GENERAL NOTES

Truss spans shown are examples of truss spans for the loadings and truss configurations shown. The tables are not intended to be used for design purposes or specific projects.

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Tables shown are not intended to limit trusses to these loads, lumber, shapes and configurations. See your WTCA member truss manufacturer for actual truss designs and solutions to custom profiles. Some representative spans for the configurations shown may vary with each manufacturer.

Spans are given for 3/12, 4/12, and 5/12 roof pitches (Y). For scissors trusses (sloped bottom chords), the bottom chord pitch is one half of the top chord (Y/2). Spruce-Pine-Fir spans are taken from Canadian SPF design values.

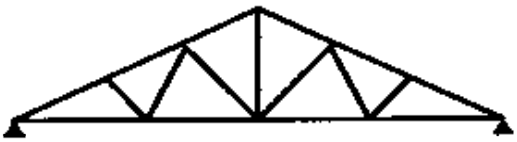
These representative spans have been reviewed by TPI and WTCA engineers. LDI = Load Duration Increase, also known as C_D in NDS®.

FOOTNOTES

1. Representative spans shown assume that the moisture content of the lumber does not exceed 19% at time of manufacture and during end use.
2. Representative span for this lumber species and grade has been limited to the representative truss span that can be achieved by the lumber grades provided in this table.
3. Representative span for this lumber grade has been limited by the maximum bottom chord panel length based on applying a 200 lb. concentrated load to represent a construction worker standing on the bottom chord.

WTCA REPRESENTATIVE ROOF TRUSS SPANS

DESIGN CRITERIA		
TOP CHORD LIVE	= 20	PSF
TOP CHORD DEAD	= 10	PSF
BTM CHORD LIVE	= 0	PSF
BTM CHORD DEAD	= 10	PSF



SPACING	
24" o.c.	40
L.D.I. 25%	PSF

SOUTHERN PINE

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	36'-7"	54'-7"	38'-9"	54'-7" [2]
#1	35'-8"	53'-3"	37'-2"	52'-5"
#2 DENSE	35'-3"	52'-5"	33'-0"	46'-10"
#2	34'-0"	50'-5"	31'-1"	43'-10"

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	42'-0"	55'-10" [3]	42'-5" [3]	55'-10" [3]
#1	40'-11"	55'-10" [3]	40'-9" [3]	54'-2" [3]
#2 DENSE	40'-6"	55'-10" [3]	38'-3"	53'-10" [3]
#2	39'-1"	55'-10" [3]	36'-0"	50'-10"

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
#1 DENSE	42'-5" [3]	55'-10" [3]	42'-5" [3]	55'-10" [3]
#1	42'-5" [3]	55'-10" [3]	40'-9" [3]	54'-2" [3]
#2 DENSE	42'-5" [3]	55'-10" [3]	39'-8" [3]	53'-10" [3]
#2	42'-5" [3]	55'-10" [3]	36'-11" [3]	51'-11" [3]

DOUGLAS FIR-LARCH

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	37'-4"	55'-8"	44'-0" [3]	55'-8" [2]
#1 & BETTER	35'-7"	53'-1"	38'-2"	54'-2"
#1	34'-6"	51'-4"	34'-6"	48'-11"
#2	33'-1"	49'-2"	31'-2"	43'-8"

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	42'-11"	57'-5" [3]	44'-0" [3]	57'-5" [3]
#1 & BETTER	40'-10"	57'-5" [3]	40'-6" [3]	55'-5" [3]
#1	39'-7"	57'-5" [3]	37'-5" [3]	53'-6" [3]
#2	38'-0"	56'-5"	33'-10" [3]	50'-2"

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	44'-0" [3]	57'-5" [3]	44'-0" [3]	57'-5" [3]
#1 & BETTER	44'-0" [3]	57'-5" [3]	40'-6" [3]	55'-5" [3]
#1	43'-1"	57'-5" [3]	37'-5" [3]	53'-6" [3]
#2	41'-5"	57'-5" [3]	33'-10" [3]	51'-4" [3]

SPRUCE - PINE - FIR

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	34'-5"	51'-0" [3]	36'-3"	51'-0" [3]
#1	31'-8"	46'-11"	26'-3"	36'-2"
#2	31'-8"	46'-11"	26'-3"	36'-2"

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	38'-11" [3]	51'-0" [3]	38'-11" [3]	51'-0" [3]
#1	36'-7"	51'-0" [3]	30'-11"	42'-11"
#2	36'-7"	51'-0" [3]	30'-11"	42'-11"

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	38'-11" [3]	51'-0" [3]	38'-11" [3]	51'-0" [3]
#1	36'-11" [3]	51'-0" [3]	33'-2" [3]	48'-1"
#2	38'-11" [3]	51'-0" [3]	33'-2" [3]	48'-1"

HEM-FIR

3/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	35'-7"	52'-10" [3]	40'-10" [3]	52'-10" [3]
#1	33'-2"	49'-2"	32'-4"	45'-4"
#2	31'-8"	46'-10"	28'-6"	40'-1"

4/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	40'-10" [3]	52'-10" [3]	40'-10" [3]	52'-10" [3]
#1	38'-1"	52'-10" [3]	35'-6" [3]	50'-4" [3]
#2	36'-5"	52'-10" [3]	32'-5" [3]	46'-8"

5/12	TOP CHORD		BOTTOM CHORD	
	2x4	2x6	2x4	2x6
SEL. STR.	40'-10" [3]	52'-10" [3]	40'-10" [3]	52'-10" [3]
#1	40'-10" [3]	52'-10" [3]	35'-6" [3]	50'-4" [3]
#2	39'-9"	52'-10" [3]	32'-5" [3]	46'-9" [3]

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