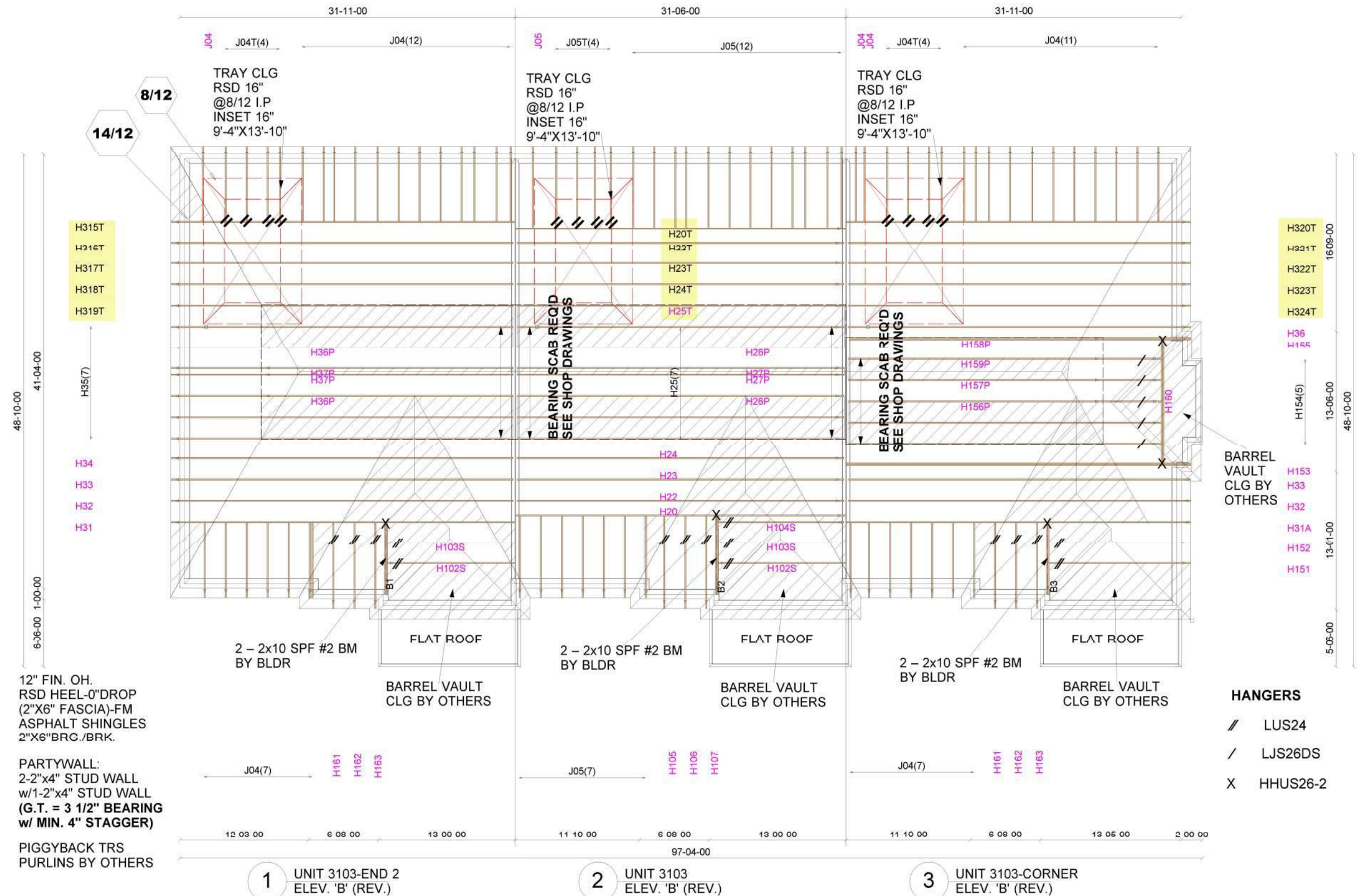




E21103962 - E21103964, E21103978, E21104028 - E21104031, E21104051 - E21104053, E21104139 - E21104140, E21104287 - E21104297,
E21104245 - E21104247, E21104253 - E21104258, E21104367, E21104369, E21104371 - E21104374, E21104390 - E21104391, E23092659 - E23092663
[E23090668 - E23090681](#)

EWP DESIGN INC.

(905) 832-2250

FAX (905) 832-0286

RESPONSIBILITIES AND SPECIFICATIONS

RESPONSIBILITIES

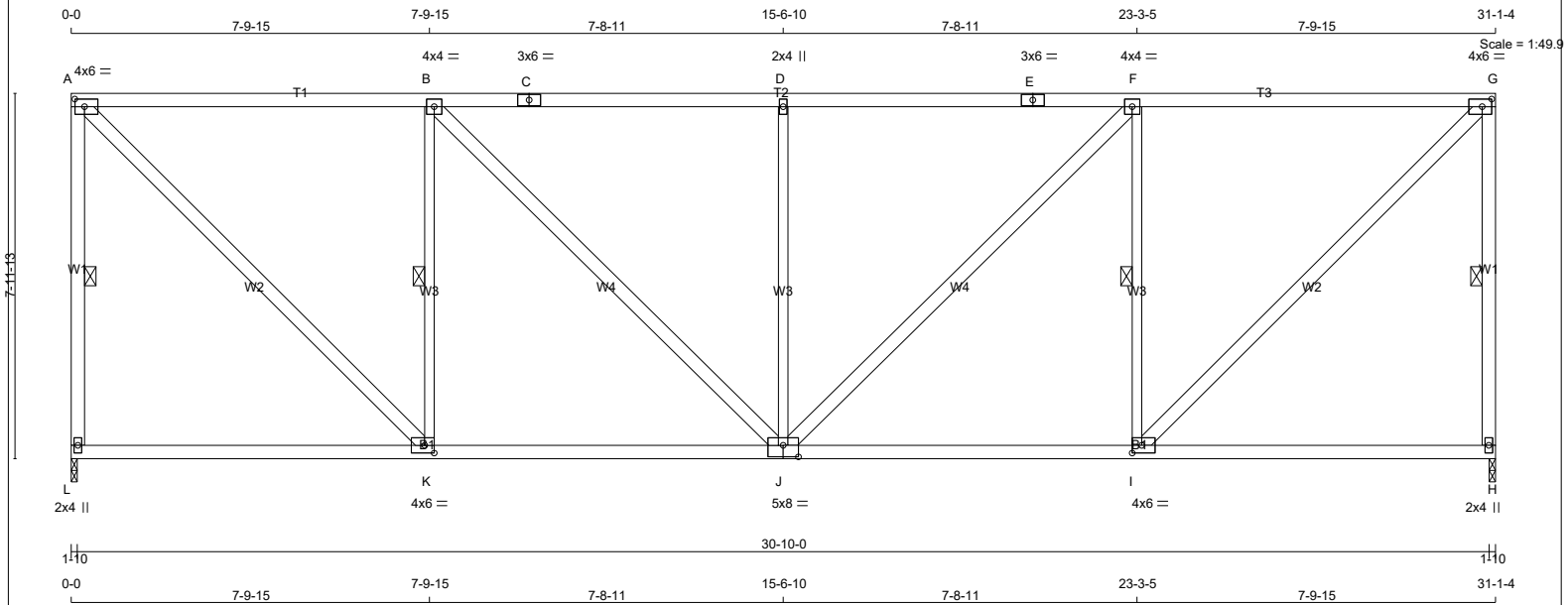
1. EWP DESIGN INC. is responsible for the design of trusses as individual components.
2. It is the responsibility of others to ascertain that the design loads utilized on each drawing meet or exceed the actual dead load imposed by the structure, the live load imposed by the intended use and the snow load imposed by local building code or authorities with jurisdictions.
3. All dimensions are to be verified by the owner, contractor, architect or other authorities with jurisdictions before truss fabrication.
4. EWP DESIGN INC. bears no responsibility for the erection of trusses. Persons erecting trusses are cautioned to seek professional advice regarding the temporary and permanent bracing for the system. Bracing shown on EWP DESIGN INC. drawing is specified for the truss as a component only and forms an integral part of the truss design.
5. It is the truss manufacturer's responsibility to ensure that trusses are manufactured in conformance with specifications of EWP DESIGN INC. as outlined below.

SPECIFICATIONS

1. Trusses designed by EWP DESIGN INC. conform to the relevant section of the Ontario Building Code of Canada (Part 9 or Part 4) or to the Canadian code for farm buildings, whichever applies to the building type, as indicated on the EWP DESIGN INC. drawings, and conform to the design procedures established by the Truss Plate Institute of Canada. Unit stresses used for truss designs are as per the edition of CSA-O86 shown on EWP DESIGN INC. drawings.
2. Lumber is to be the size, species and grade as specified on EWP DESIGN INC. drawings.
3. Moisture content of lumber shall not exceed 19% in service unless specified otherwise.
4. Metal connector plates shall be applied to both faces of truss at each joint and shall be positioned as specified.
5. Top chords of trusses are assumed to be continuously braced laterally by roof sheathing or by purlins at intervals not exceeding 12.5 times the thickness of top chord member.
6. Bottom chords shall be laterally braced at intervals not exceeding 3M (10') o.c., where rigid ceiling is not applied directly to the underside of chords.

THESE DRAWINGS CONSTITUTE THE PROPERTY OF EWP DESIGN INC., SHALL NOT BE REPRODUCED, PUBLISHED, OR REDISTRIBUTED IN ANY MANNER OR UTILIZED FOR ANY PURPOSE OTHER THAN THE MANUFACTURE OF TRUSSES BY THE ALPA LUMBER GROUP, AND WILL BE RETRACTED BY EWP DESIGN INC. IF UTILIZED FOR ANY OTHER PURPOSE.

JSI GRIP= 0.88 (G) (INPUT = 0.90)
JSI METAL= 0.36 (G) (INPUT = 1.00)



TOTAL WEIGHT = 154 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER		DESCR
L - A	2x4	DRY	No.2	SPF
A - C	2x4	DRY	No.2	SPF
C - E	2x4	DRY	No.2	SPF
E - G	2x4	DRY	No.2	SPF
H - G	2x4	DRY	No.2	SPF
L - J	2x4	DRY	No.2	SPF
J - H	2x4	DRY	No.2	SPF
ALL WEBS EXCEPT	2x4	DRY	No.2	SPF
K - B	2x3	DRY	No.2	SPF
J - D	2x3	DRY	No.2	SPF
I - F	2x3	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMWV-t	MT20	4.0	6.0	2.00	2.50
B	TMWV-t	MT20	4.0	4.0		
C	TS-t	MT20	3.0	6.0		
D	TMW+w	MT20	2.0	4.0		
E	TS-t	MT20	3.0	6.0		
F	TMWV-t	MT20	4.0	4.0		
G	TMVW-t	MT20	4.0	6.0	2.00	2.50
H	BMV1+p	MT20	2.0	4.0		
I	BMWV-t	MT20	4.0	6.0	2.00	2.50
J	BSWVVV-I	MT20	5.0	8.0	3.00	4.00
K	BMWV-t	MT20	4.0	6.0	2.00	2.50
L	BMV1+p	MT20	2.0	4.0		

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS

	FACTORED		MAXIMUM FACTORED			INPUT	REQRD
	GROSS REACTION		GROSS REACTION			BRG	BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
L	1500	0	1500	0	0	1-10	1-10
H	1500	0	1500	0	0	1-10	1-10

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
L	1070	653 / 0	0 / 0	0 / 0	0 / 0	417 / 0	0 / 0
H	1070	653 / 0	0 / 0	0 / 0	0 / 0	417 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) L, H

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.99 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.

1 LATERAL BRACE(S) AT 1/ 2 LENGTH OF A-L, G-H, B-K, F-I.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

C H O R D S				W E B S			
MAX. FACTORED		FACTORED		MAX. FACTORED			
MEMB.	FORCE	VERT. LOAD	LC1 MAX	MAX.	MEMB.	FORCE	MAX
	(LBS)	(PLF)	CSI (LC)	UNBRAC		(LBS)	CSI (LC)
FR-TO		FROM	TO	LENGTH	FR-TO		
L-A	-1445 / 0	0.0	0.0	0.41 (1)	5.44	A-K	0 / 1718
A-B	-1225 / 0	-78.0	-78.0	0.84 (1)	4.46	K-B	-1026 / 0
B-C	-1558 / 0	-78.0	-78.0	0.90 (1)	3.99	B-J	0 / 470
C-D	-1558 / 0	-78.0	-78.0	0.91 (1)	3.99	J-D	-556 / 0
D-E	-1558 / 0	-78.0	-78.0	0.90 (1)	3.99	J-F	0 / 470
E-F	-1558 / 0	-78.0	-78.0	0.90 (1)	3.99	I-F	-1026 / 0
F-G	-1225 / 0	-78.0	-78.0	0.84 (1)	4.46	I-G	0 / 1718
H-G	-1445 / 0	0.0	0.0	0.41 (1)	5.44		
L-K	0 / 0	-18.5	-18.5	0.32 (4)	10.00		
K-J	0 / 1225	-18.5	-18.5	0.44 (4)	10.00		
J-I	0 / 1225	-18.5	-18.5	0.44 (4)	10.00		
I-H	0 / 0	-18.5	-18.5	0.32 (4)	10.00		

LATERAL BRACE(S) SHOWN SHALL BE
2X4 SPF#2



DESIGN CRITERIA

SPECIFIED LOADS:

TOP	CH.	LL =	21.0	PSF
		DL =	6.0	PSF
BOT	CH.	LL =	0.0	PSF
		DL =	7.4	PSF

TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE
OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF PART
9, NBCC 2015

THIS DESIGN COMPLIES WITH:
 - PART 9 OF BCBC 2018 , ABC 2019
 - PART 9 OF OBC 2012 (2019 AMENDMENT)
 - CSA 086-14
 - TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.07")
ALLOWABLE DEFL.(TL)= L/360 (1.04")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.20")

CSI: TC=0.90/1.00 (B-D:1), BC=0.44/1.00 (J-K:4),
WB=0.67/1.00 (D-J:1), SSI=0.29/1.00 (A-B:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES						
PLATE	GRIP(DRY)		SHEAR		SECTION	
	(PSI)		(PLI)		(PLI)	
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

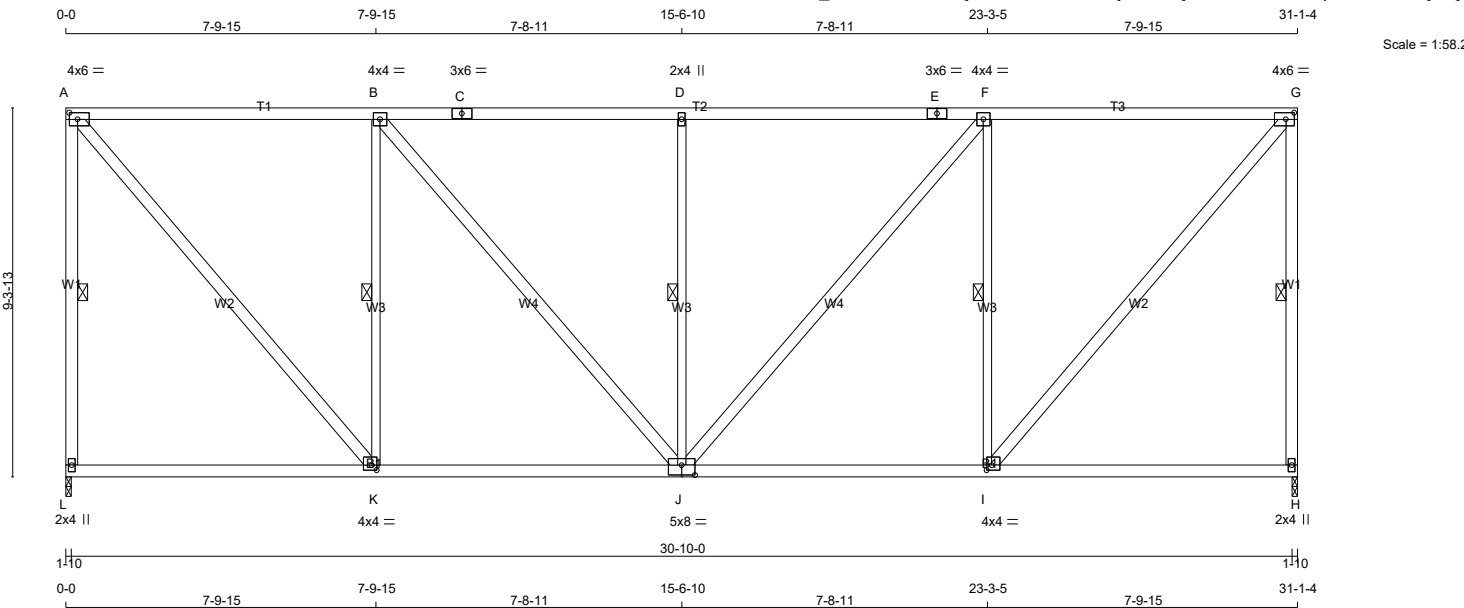
JSI GRIP= 0.87 (I) (INPUT = 0.90)
JSI METAL= 0.34 (A) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336321	H24		1	TRUSS DESC. JT 45147	E21103964

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Wed Oct 13 10:30:09 2021 Page 1

ID:hd511hZTz_bdeQoS817GKByhVxV-O??GUMunjUcDFHy3KdeTFaGaEFYqkt7c8d1Q2AyTsyC



LUMBER N. L. G. A. RULES CHORDS SIZE LUMBER DESCR.				DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER								DESIGN CRITERIA			
				BEARINGS											
				FACTORED		MAXIMUM FACTORED		INPUT		REQRD					
				GROSS REACTION		GROSS REACTION		BRG		BRG					
				JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX				
L - A 2x4 DRY No.2 SPF				L	1500	0	1500	0	0	1-10	1-10				
A - C 2x4 DRY No.2 SPF				H	1500	0	1500	0	0	1-10	1-10				
C - E 2x4 DRY No.2 SPF															
E - G 2x4 DRY No.2 SPF															
H - G 2x4 DRY No.2 SPF															
L - J 2x4 DRY No.2 SPF															
J - H 2x4 DRY No.2 SPF															

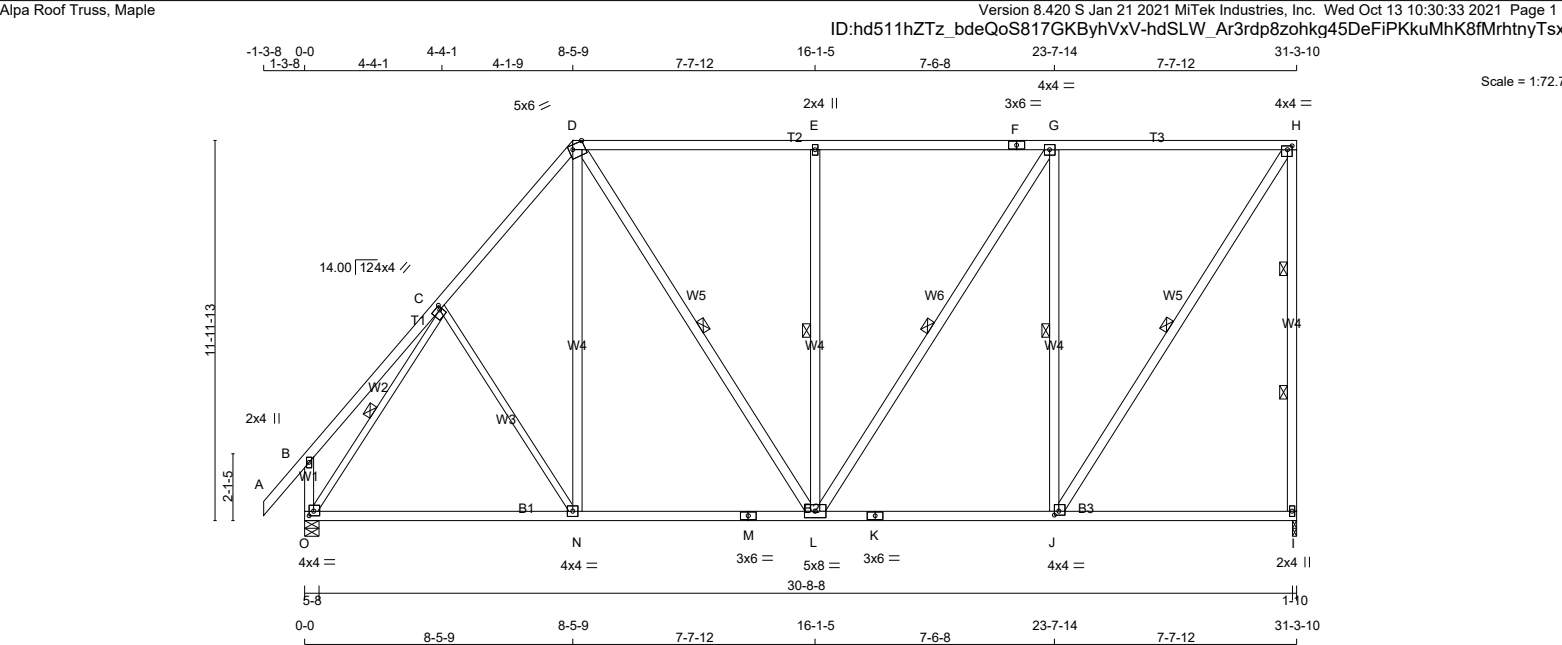
DRY: SEASONED LUMBER.

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
A	TMVW-t	MT20	4.0	6.0	2.00 2.50
B	TMWW-t	MT20	4.0	4.0	
C	TS-t	MT20	3.0	6.0	
D	TMW+w	MT20	2.0	4.0	
E	TS-t	MT20	3.0	6.0	
F	TMWW-t	MT20	4.0	4.0	
G	TMVW-t	MT20	4.0	6.0	2.00 2.50
H	BMV1+p	MT20	2.0	4.0	
I	BMWW-t	MT20	4.0	4.0	1.50 1.50
J	BSWWW-I	MT20	5.0	8.0	3.00 4.00
K	BMWW-t	MT20	4.0	4.0	1.50 1.50
L	BMV1+p	MT20	2.0	4.0	

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336321	H36		1	TRUSS DESC. JT 45147	E21103978



LUMBER N. L. G. A. RULES CHORDS SIZE LUMBER DESCR. ALL WEBS EXCEPT C - N O - C 2x4 DRY No.2 SPF 2x3 DRY No.2 SPF

CHORDS	SIZE	LUMBER	DESCR.
A - D	2x4	DRY No.2	SPF
D - F	2x4	DRY No.2	SPF
F - H	2x4	DRY No.2	SPF
I - H	2x4	DRY No.2	SPF
O - B	2x4	DRY No.2	SPF
O - M	2x4	DRY No.2	SPF
M - K	2x4	DRY No.2	SPF
K - I	2x4	DRY No.2	SPF
ALL WEBS EXCEPT	2x4	DRY No.2	SPF
C - N	2x3	DRY No.2	SPF
O - C	2x3	DRY No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	2.0	4.0		
C	TMWW-t	MT20	4.0	4.0	1.50	1.00
D	TTWW-m	MT20	5.0	6.0	Edge	4.50
E	TMW+w	MT20	2.0	4.0		
F	TS-t	MT20	3.0	6.0		
G	TMWW-t	MT20	4.0	4.0		
H	TMVW-t	MT20	4.0	4.0	1.50	1.75
I	BMV1+p	MT20	2.0	4.0		
J	BMWW-t	MT20	4.0	4.0	1.50	1.75
K	BS-t	MT20	3.0	6.0		
L	BMWWW-t	MT20	5.0	8.0		
M	BS-t	MT20	3.0	6.0		
N	BMWW-t	MT20	4.0	4.0		
O	BMVW1-t	MT20	4.0	4.0	1.75	1.75

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT	REQRD
JT	VERT	HORZ	DOWN	HORZ
I	1510	0	1510	0
O	1619	0	1619	0

UNFACTORED REACTIONS

	1ST LCASE	MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
I	1076	657 / 0	0 / 0	0 / 0	0 / 0	419 / 0	0 / 0
O	1152	716 / 0	0 / 0	0 / 0	0 / 0	436 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) I, O

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.99 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

2 LATERAL BRACE(S) AT 1 / 3 LENGTH OF H-I.
1 LATERAL BRACE(S) AT 1 / 2 LENGTH OF D-L, E-L, G-L, G-J, H-J, C-O.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX LC1 CSI (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
FR-TO		FROM	TO		FR-TO		
A - B	0 / 42	-78.0	-78.0 0.11 (1)	10.00	C - N	-45 / 26	0.06 (1)
B - C	0 / 29	-78.0	-78.0 0.22 (1)	10.00	N - D	0 / 211	0.04 (4)
C - D	-1279 / 0	-78.0	-78.0 0.28 (1)	5.40	D - L	0 / 438	0.07 (1)
D - E	-1053 / 0	-78.0	-78.0 0.71 (1)	5.00	L - E	-644 / 0	0.51 (1)
E - F	-1053 / 0	-78.0	-78.0 0.72 (1)	4.99	L - G	0 / 478	0.08 (1)
F - G	-1053 / 0	-78.0	-78.0 0.72 (1)	4.99	J - G	-1052 / 0	0.83 (1)
G - H	-794 / 0	-78.0	-78.0 0.68 (1)	5.59	J - H	0 / 1451	0.23 (1)
I - H	-1454 / 0	0.0	0.0 0.48 (1)	5.43	O - C	-1563 / 0	0.64 (1)
O - B	-234 / 0	0.0	0.0 0.03 (1)	7.81			
O - N	0 / 835	-18.5	-18.5 0.39 (4)	10.00			
N - M	0 / 812	-18.5	-18.5 0.40 (4)	10.00			
M - L	0 / 812	-18.5	-18.5 0.40 (4)	10.00			
L - K	0 / 794	-18.5	-18.5 0.35 (4)	10.00			
K - J	0 / 794	-18.5	-18.5 0.35 (4)	10.00			
J - I	0 / 0	-18.5	-18.5 0.27 (4)	10.00			

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	21.0	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD	=	34.4	PSF	

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.05")
ALLOWABLE DEFL.(TL)= L/360 (1.04")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.17")

CSI: TC=0.72/1.00 (E-G:1) , BC=0.40/1.00 (L-N:4) , WB=0.83/1.00 (G-J:1) , SSI=0.28/1.00 (G-H:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES
PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI)
MAX MIN MAX MIN MAX MIN
MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

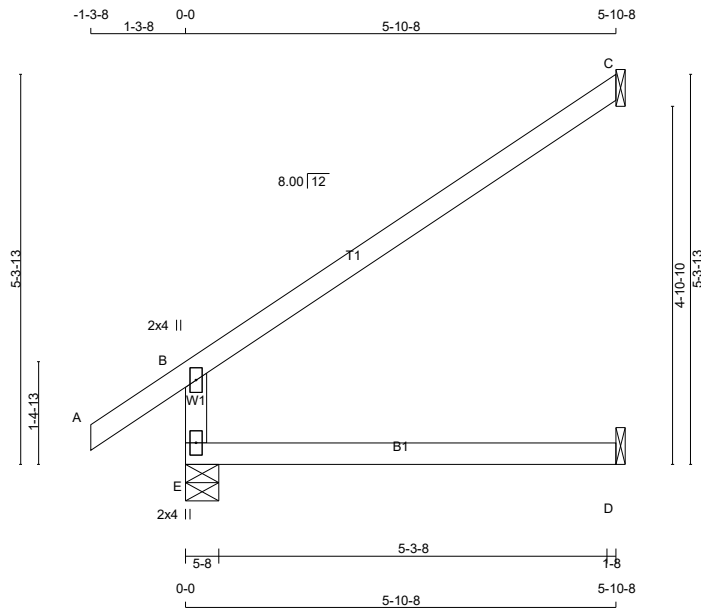
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (H) (INPUT = 0.90)
JSI METAL= 0.53 (C) (INPUT = 1.00)

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Wed Oct 13 10:32:03 2021 Page 1
ID:hd511hZTz bdeQoS817GKByhVxV-3xuNPIGIvZ2xog ?ZhCsc 8icW3SaVOMNeS1ayTswQ

Scale = 1:31.4



TOTAL WEIGHT = $83 \times 18 = 1480 \text{ lb}$

N. L. G. A. RULES			
CHORDS	SIZE	LUMBER	DESCR.
E - B	2x4	DRY No.2	SPF
A - C	2x4	DRY No.2	SPF
E - D	2x4	DRY No.2	SPF

DRY: SEASONED LUMBER.

JT	TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	2.0	4.0		
E	BMV1+p	MT20	2.0	4.0		

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ	IN-SX	IN-SX
E	456	0	456	0	0	1-8
C	172	0	172	0	0	1-8
D	46	0	51	0	0	1-8

SEE MITEK STANDARD DETAIL B97791H FOR CONNECTION TO JOINT(S) C , D

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS					
		SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	323	212 / 0	0 / 0	0 / 0	0 / 0	111 / 0	0 / 0
C	119	93 / 0	0 / 0	0 / 0	0 / 0	26 / 0	0 / 0
D	36	0 / 0	0 / 0	0 / 0	0 / 0	36 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) E

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED UNBRAC. CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED UNBRAC. CSI (LC)	
FR-TO		FROM TO		FR-TO			
E-B	-393 / 0	0.0 0.0	0.12 (4)			7.81	
A-B	0 / 30	-78.0 -78.0	0.10 (1)			10.00	
B-C	-32 / 0	-78.0 -78.0	0.46 (1)			6.25	
E-D	0 / 0	-18.5 -18.5	0.13 (4)			10.00	

LATERAL BRACE(S) SHOWN SHALL BE
2X4 SPF#2



SPECIFIED LOADS:

TOP	CH.	LL	=	21.0	PSF
		DL	=	6.0	PSF
BOT	CH.	LL	=	0.0	PSF
		DL	=	7.4	PSF
TOTAL LOAD				=	34.4 PSF

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF PART
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.20")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.20")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.03")

CSI: TC=0.46/1.00 (B-C:1) , BC=0.13/1.00 (D-E:4) ,
WB=0.00/1.00 (n/a:0) , SSI=0.19/1.00 (B-C:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE RIGHT HEEL ONLY

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

PLATE	GRIP(DRY) (PSI)		SHEAR (PLI)		SECTION (PLI)	
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

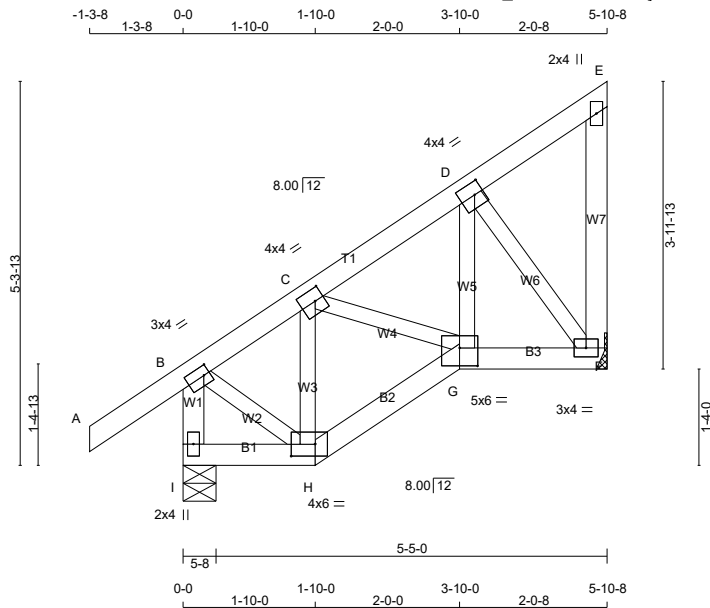
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.24 (B) (INPUT = 0.90)
JSI METAL= 0.20 (B) (INPUT = 1.00)

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Wed Oct 13 10:32:06 2021 Page 1
ID:hd511hZTz bdeQoS817GKByhVxV-TwaV2nIAAQldoFPYhiFUFclUpaDfxVq2Ks6euyTswN

Scale: $3/8"=1'$



TOTAL WEIGHT = 33 X 31 = 1017 lb

N. L. G. A. RULES			
CHORDS	SIZE	LUMBER	DESCR
I - B	2x4	No.2	SPF
A - E	2x4	No.2	SPF
F - E	2x4	No.2	SPF
I - H	2x4	No.2	SPF
H - G	2x4	No.2	SPF
G - F	2x4	No.2	SPF
ALL WEBS	2x3	No.2	SPF
DRY: SEASONED LUMBER.			

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-t	MT20	3.0	4.0	1.50	1.00
C	TMWW-t	MT20	4.0	4.0	2.00	1.50
D	TMVW-t	MT20	4.0	4.0	2.00	1.50
E	TMV+p	MT20	2.0	4.0		
F	BMVW1-t	MT20	3.0	4.0		
G	BBWW-I	MT20	5.0	6.0	3.00	3.00
H	BBWW-I	MT20	4.0	6.0	2.00	4.00
I	BMV1-p	MT20	2.0	4.0		

	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION			INPUT BRG	REQ'D BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
I	403	0	403	0	0	5-8	1-8
F	271	0	271	0	0	MECHANICAL	

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
I	285	188 / 0	0 / 0	0 / 0	0 / 0	97 / 0	0 / 0
F	193	117 / 0	0 / 0	0 / 0	0 / 0	77 / 0	0 / 0

TOTAL LOAD CASES: (4)

CHORDS					WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)	
FR-TO		FROM TO			FR-TO			
I-B	-386 / 0	0.0	0.0	0.04 (1)	7.81	B-H	0 / 161 0.04 (1)	
A-B	0 / 30	-78.0	-78.0	0.10 (1)	10.00	H-C	-134 / 0 0.02 (1)	
B-C	-188 / 0	-78.0	-78.0	0.10 (1)	6.25	C-G	0 / 35 0.01 (1)	
C-D	-192 / 0	-78.0	-78.0	0.05 (1)	6.25	G-D	0 / 114 0.03 (4)	
D-E	-10 / 0	-78.0	-78.0	0.05 (1)	6.25	D-F	-254 / 0 0.05 (1)	
F-E	-57 / 0	0.0	0.0	0.01 (1)	7.81			
I-H	0 / 0	-18.5	-18.5	0.02 (4)	10.00			
H-G	0 / 160	-18.5	-18.5	0.04 (1)	10.00			
G-F	0 / 160	-18.5	-18.5	0.04 (1)	10.00			

SPECIFIED LOADS:

TOP	CH.	LL	=	21.0	PSF
		DL	=	6.0	PSF
BOT	CH.	LL	=	0.0	PSF
		DL	=	7.4	PSF
TOTAL LOAD				=	34.4 PSF

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF PART
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.20")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.20")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.00")

CSI: TC=0.10/1.00 (A-B:1), BC=0.04/1.00 (F-G:1),
WB=0.05/1.00 (D-F:1), SSI=0.07/1.00 (A-B:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT.

PLATE	GRIP(DRY) (PSI)		SHEAR (PLI)		SECTION (PLI)	
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.50 (B) (INPUT = 0.90)
JSI METAL= 0.10 (B) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE
2X4 SPF#2

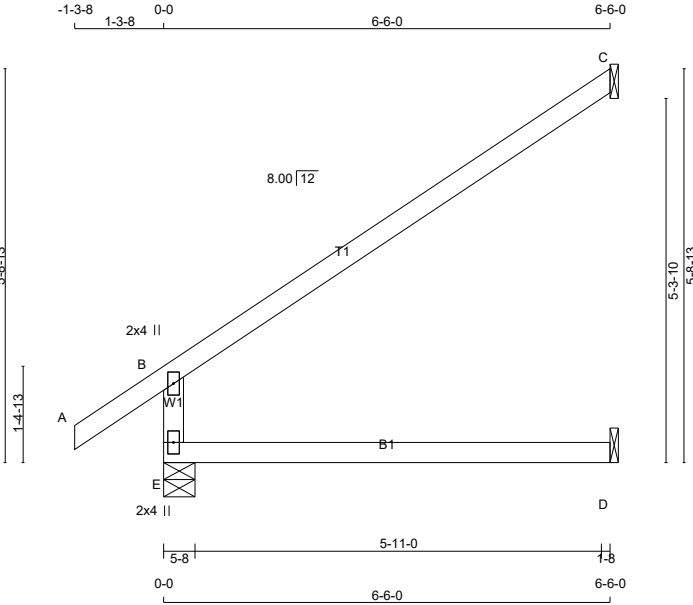


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336321	J05		1	TRUSS DESC. JT 45147	E21104030

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Wed Oct 13 10:32:07 2021 Page 1

ID:hd511hZTz_bdeQoS817GKByhVxV-xi8tF7JoxkTUPPzIEPm81S9r3DuZOOU_H_cfBlyTswM



TOTAL WEIGHT = 17 X 19 = 330 lb

[M][F]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
E - B	2x4	DRY No.2	SPF
A - C	2x4	DRY No.2	SPF
E - D	2x4	DRY No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	2.0	4.0		
E	BMV1+p	MT20	2.0	4.0		

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG UPLIFT	REQRD BRG IN-SX	
	VERT	HORZ	DOWN	HORZ		IN-SX	IN-SX
E	494	0	494	0	5-8	1-8	
C	190	0	190	0	1-8	1-8	
D	50	0	56	0	1-8	1-8	

SEE MITEK STANDARD DETAIL B97791H FOR CONNECTION TO JOINT(S) C , D

UNFACTORED REACTIONS

JT	1ST LCASE	MAX./MIN. COMPONENT REACTIONS					
	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	349	228 / 0	0 / 0	0 / 0	0 / 0	121 / 0	0 / 0
C	132	102 / 0	0 / 0	0 / 0	0 / 0	29 / 0	0 / 0
D	40	0 / 0	0 / 0	0 / 0	0 / 0	40 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) E

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

LOADING

TOTAL LOAD CASES: (4)

CHORDS					WEBS				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH	MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)	
FR-TO		FROM TO							
E- B	-424 / 0	0.0	0.0	0.13 (4)	7.81				
A- B	0 / 30	-78.0	-78.0	0.10 (1)	10.00				
B- C	-35 / 0	-78.0	-78.0	0.44 (1)	6.25				
E- D	0 / 0	-18.5	-18.5	0.16 (4)	10.00				

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH. LL = 21.0 PSF

DL = 6.0 PSF

BOT CH. LL = 0.0 PSF

DL = 7.4 PSF

TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN./C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF CBC 2018 , ABC 2019

- PART 9 OF OBC 2012 (2019 AMENDMENT)

- CSA 086-14

- TPIC 2014

DESIGN ASSUMPTIONS

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.22")

CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")

ALLOWABLE DEFL.(TL)= L/360 (0.22")

CALCULATED VERT. DEFL.(TL) = L/ 999 (0.05")

CSI: TC=0.44/1.00 (B-C:1) , BC=0.16/1.00 (D-E:4) , WB=0.00/1.00 (n/a:0) , SSI=0.21/1.00 (B-C:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10

COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE RIGHT HEEL ONLY

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

PLATE	GRIP(DRY) (PSI)	SHEAR (PLI)	SECTION (PLI)
	MAX MIN	MAX MIN	MAX MIN
MT20	650 371	1747 788	1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

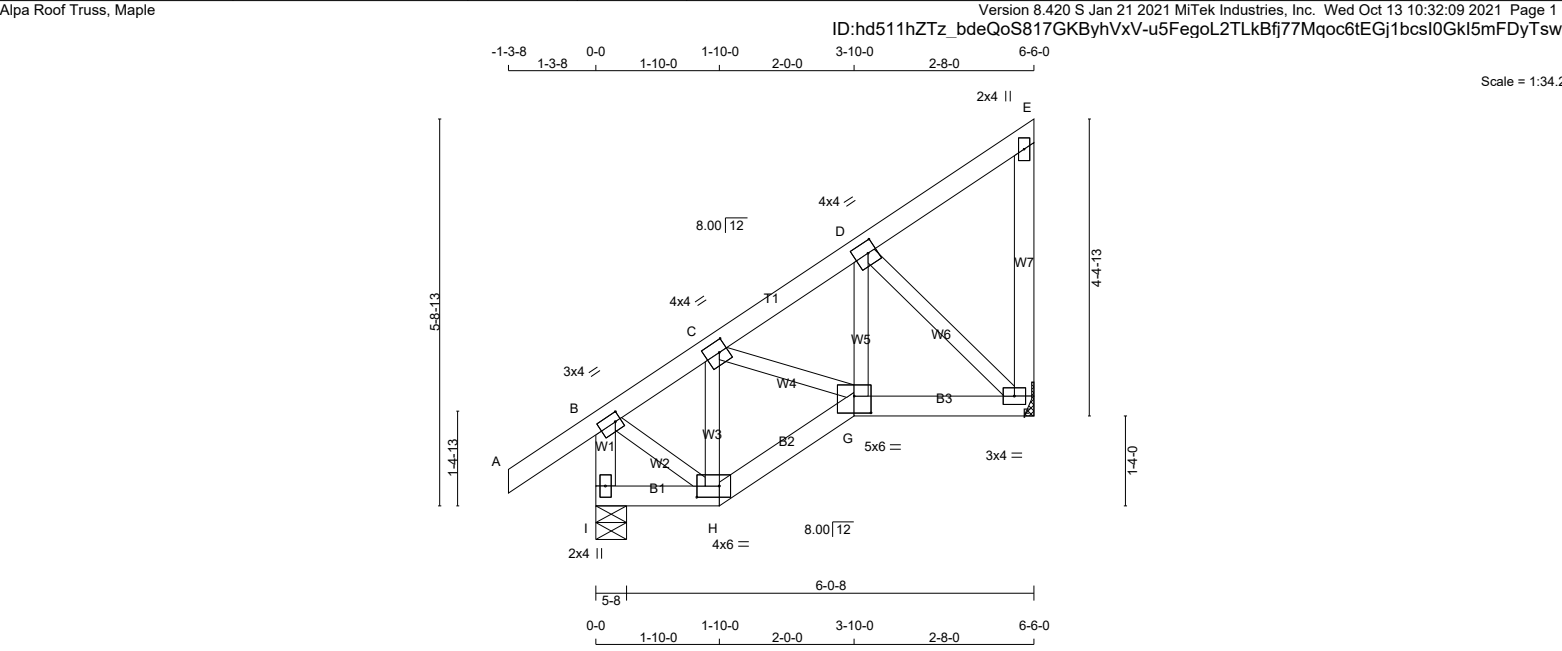
JSI GRIP= 0.26 (B) (INPUT = 0.90)

JSI METAL= 0.22 (B) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336321	J05T		1	TRUSS DESC. JT 45147	E21104031

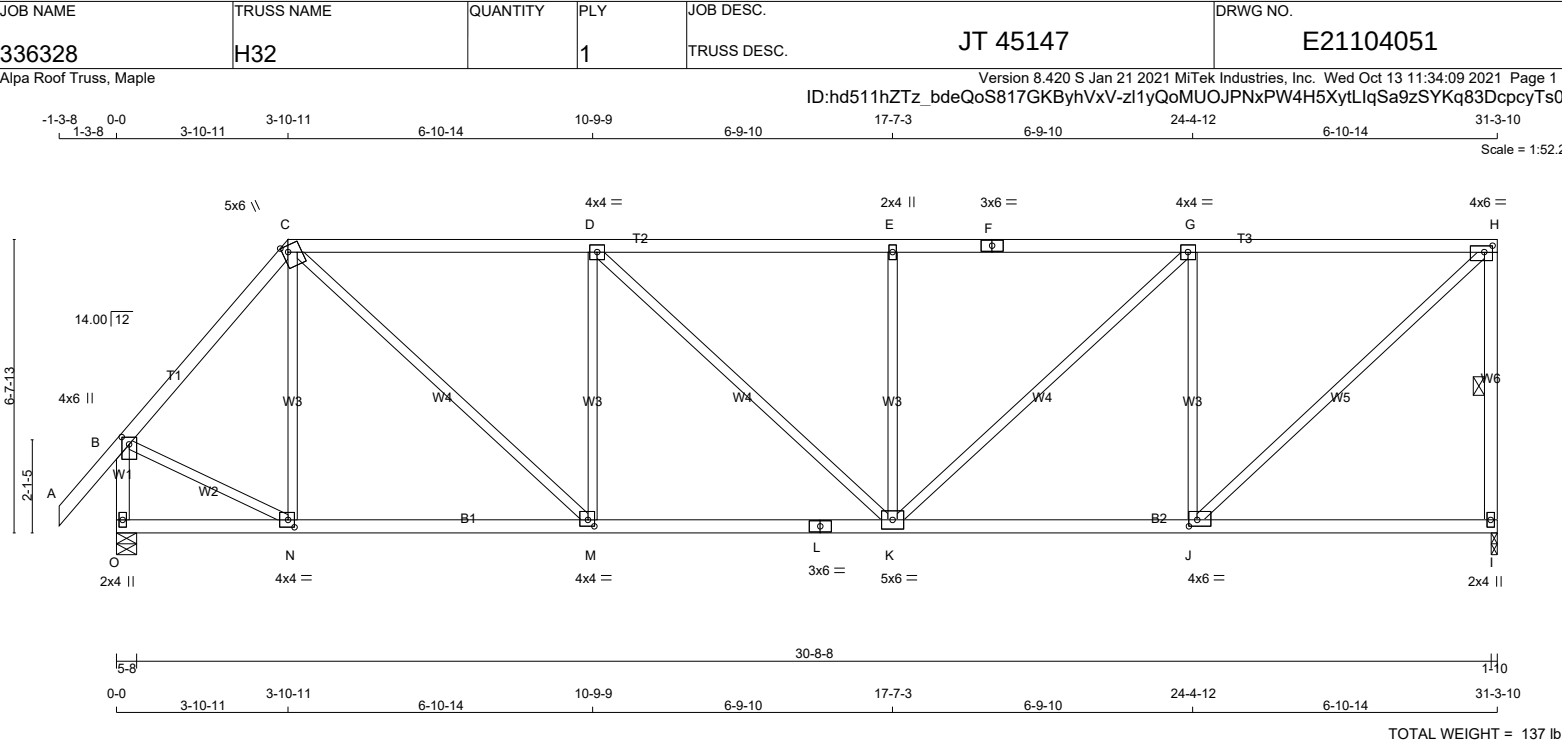


LUMBER N. L. G. A. RULES CHORDS SIZE LUMBER DESCR.				DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER BEARINGS						DESIGN CRITERIA				[M][F]
I - B	2x4	DRY	No.2	SPF	FACTORED	MAXIMUM FACTORED	INPUT	REQRD	SPECIFIED LOADS:					
A - E	2x4	DRY	No.2	SPF	GROSS REACTION	GROSS REACTION	BRG	BRG	TOP CH. LL = 21.0 PSF					
F - E	2x4	DRY	No.2	SPF	JT VERT HORZ	DOWN HORZ UPLIFT	IN-SX	IN-SX	DL = 6.0 PSF					
I - H	2x4	DRY	No.2	SPF	I 432 0	432 0 0	5-8	1-8	BOT CH. LL = 0.0 PSF					
H - G	2x4	DRY	No.2	SPF	F 302 0	302 0 0	MECHANICAL		DL = 7.4 PSF					
G - F	2x4	DRY	No.2	SPF	TOTAL LOAD = 34.4 PSF									
ALL WEBS 2x3 DRY: SEASONED LUMBER.				SPF	A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT F. MINIMUM BEARING LENGTH AT JOINT F = 1-8.									
					SPACING = 24.0 IN. C/C									

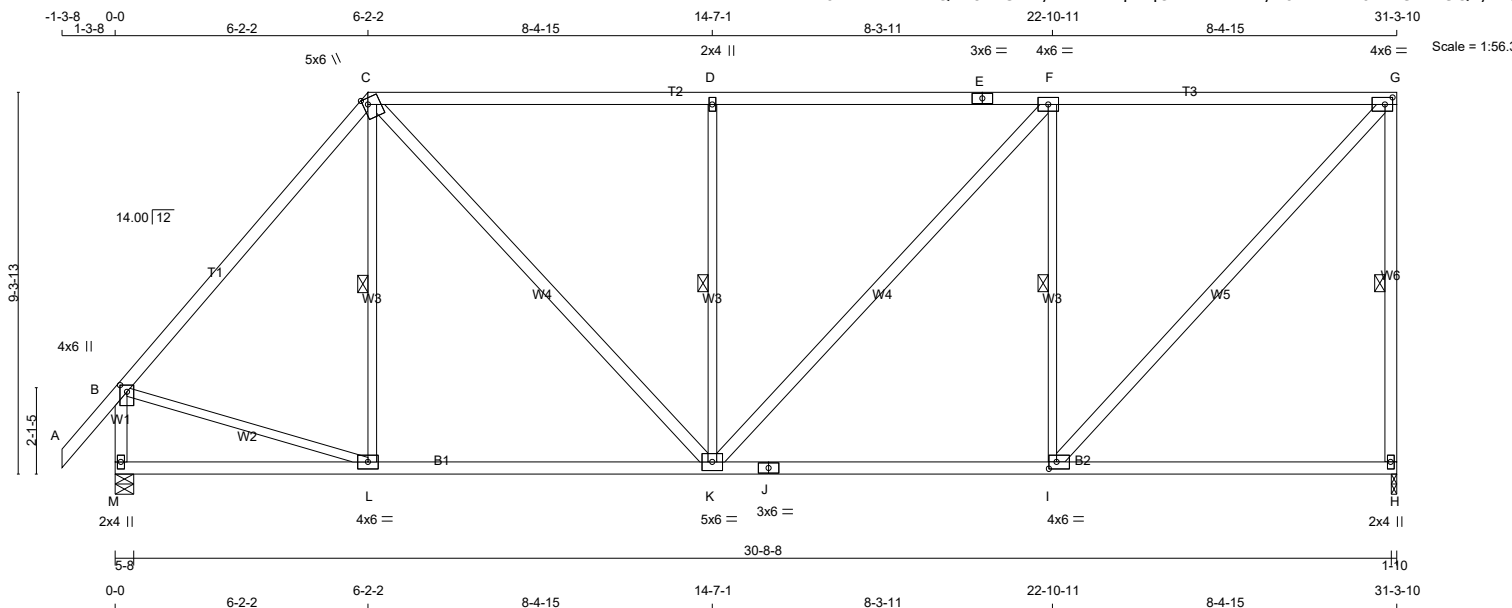
PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMVW-t	MT20	3.0	4.0	1.50 1.00
C	TMWW-t	MT20	4.0	4.0	2.00 1.50
D	TMWW-t	MT20	4.0	4.0	2.00 1.50
E	TMV+p	MT20	2.0	4.0	
F	BMVW1-t	MT20	3.0	4.0	
G	BBWW-I	MT20	5.0	6.0	3.00 3.00
H	BBWW-I	MT20	4.0	6.0	2.00 4.00
I	BMV1+p	MT20	2.0	4.0	

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2





JSI GRIP= 0.90 (B) (INPUT = 0.90)
JSI METAL= 0.51 (L) (INPUT = 1.00)



TOTAL WEIGHT = 157 lb

LUMBER

N. L. G. A. RULES				
CHORDS	SIZE		LUMBER	DESCR
A - C	2x4	DRY	2100F 1.8E	SPF
C - E	2x4	DRY	No.2	SPF
E - G	2x4	DRY	No.2	SPF
H - G	2x4	DRY	No.2	SPF
M - B	2x4	DRY	No.2	SPF
M - J	2x4	DRY	No.2	SPF
J - H	2x4	DRY	No.2	SPF
ALL WEBS EXCEPT	2x3	DRY	No.2	SPF
C - K	2x4	DRY	No.2	SPF
K - F	2x4	DRY	No.2	SPF
I - G	2x4	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

J	T	TYPE	PLATES	W	LEN	Y	X
B	TM	VMW+p	MT20	4.0	6.0	2.00	2.00
C	DT	TMW+m	MT20	5.0	6.0	1.75	1.50
D	BM	TMW+w	MT20	2.0	4.0		
E	TS	-t	MT20	3.0	6.0		
F	FM	TMWV-t	MT20	4.0	6.0		
G	TM	VMW-t	MT20	4.0	6.0	2.00	2.25
H	BM	VMV+p	MT20	2.0	4.0		
I	BM	VMW-t	MT20	4.0	6.0	2.00	2.25
J	BS	-t	MT20	3.0	6.0		
K	BM	VMWV-t	MT20	5.0	6.0		
L	BM	VMW-t	MT20	4.0	6.0		
M	BM	VMV+p	MT20	2.0	4.0		

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER
BEARINGS

	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION			INPUT BRG	REQD BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
H	1510	0	1510	0	0	1-10	1-10
M	1619	0	1619	0	0	5-8	1-12

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
H	1076	657 / 0	0 / 0	0 / 0	0 / 0	419 / 0	0 / 0
M	1152	716 / 0	0 / 0	0 / 0	0 / 0	436 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) H, M

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.03 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.

1 LATERAL BRACE(S) AT 1/ 2 LENGTH OF G-H, C-L, D-K, F-I.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

C H O R D S					W E B S				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1	MAX. CSI (LC)	MAX. UNBRAC	MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED CSI (LC)	
FR-TO		FROM	TO		LENGTH	FR-TO			
A-B	0 / 42	-78.0	-78.0	0.07 (1)	10.00	L-C	-82 / 76	0.05 (1)	
B-C	-1304 / 0	-78.0	-78.0	0.42 (1)	6.17	C-K	0 / 772	0.12 (1)	
C-D	-1373 / 0	-78.0	-78.0	0.96 (1)	4.05	K-D	-709 / 0	0.40 (1)	
D-E	-1373 / 0	-78.0	-78.0	0.96 (1)	4.03	F-K	0 / 398	0.06 (1)	
E-F	-1373 / 0	-78.0	-78.0	0.96 (1)	4.03	I-F	-1009 / 0	0.58 (1)	
F-G	-1103 / 0	-78.0	-78.0	0.91 (1)	4.46	I-G	0 / 1619	0.26 (1)	
H-G	-1448 / 0	0.0	0.0	0.59 (1)	5.43	B-L	0 / 878	0.20 (1)	
M-B	-1577 / 0	0.0	0.0	0.19 (1)	6.57				
M-L	0 / 0	-18.5	-18.5	0.24 (4)	10.00				
L-K	0 / 845	-18.5	-18.5	0.32 (4)	10.00				
K-J	0 / 1103	-18.5	-18.5	0.42 (4)	10.00				
J-I	0 / 1103	-18.5	-18.5	0.42 (4)	10.00				
I-H	0 / 0	-18.5	-18.5	0.32 (4)	10.00				

LATERAL BRACE(S) SHOWN SHALL BE
2X4 SPF#2



DESIGN CRITERIA

SPECIFIED LOADS:

TOP	CH.	LL =	21.0	PSF
		DL =	6.0	PSF
BOT	CH.	LL =	0.0	PSF
		DL =	7.4	PSF

TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE
OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF PART
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.06")
ALLOWABLE DEFL.(TL)= L/360 (1.04")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.16")

CSI: TC=0.96/1.00 (C-D:1), BC=0.42/1.00 (I-K:4)
WB=0.58/1.00 (F-I:1), SSI=0.31/1.00 (F-G:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

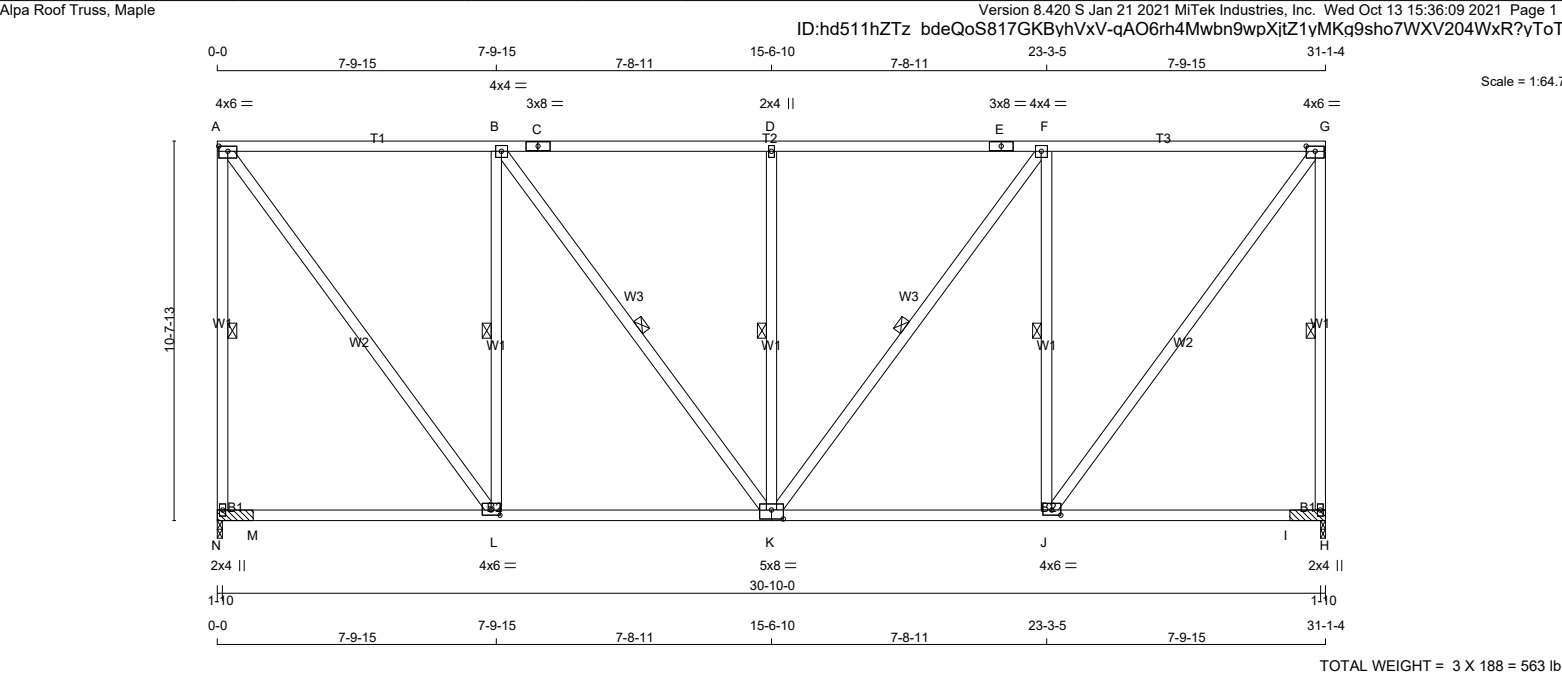
PLATE	GRIP(DRY) (PSI)		SHEAR (PLI)		SECTION (PLI)	
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.84 (G) (INPUT = 0.90)
JSI METAL= 0.52 (B) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336336	H25		1	TRUSS DESC. JT 45147	E21104139



TOTAL WEIGHT = 3 X 188 = 563 lb [M]

N. L. G. A. RULES				BUILDING DESIGNER										DESIGN CRITERIA			
CHORDS		SIZE		LUMBER		DESCR.		BEARINGS				SPECIFIED LOADS:					
								FACTORED		MAXIMUM FACTORED		INPUT		REQRD			
								GROSS REACTION		GROSS REACTION		BRG		BRG			
								DOWN		UP		IN-SX		IN-SX			
N - A	2x4	DRY	No.2	SPF													
A - C	2x4	DRY	No.2	SPF													
C - E	2x4	DRY	No.2	SPF													
E - G	2x4	DRY	No.2	SPF	N	1617	0	1617	0	0	1-10	1-10 & BLOCK					
H - G	2x4	DRY	No.2	SPF	H	1617	0	1617	0	0	1-10	1-10 & BLOCK					
N - K	2x4	DRY	No.2	SPF													
K - H	2x4	DRY	No.2	SPF													
														TOP CH.		LL = 21.0	PSF
														BOT CH.		LL = 0.0	PSF
																DL = 7.4	PSF
														TOTAL LOAD		= 34.4	PSF

ALL WEBS 2x4 DRY DRY: SEASONED LUMBER.	No.2	SPF	<u>UNFACTORED REACTIONS</u>							<u>SPACING</u> = <u>24.0</u>		<u>IN. C/C</u>
			1ST LCASE	<u>MAX./MIN. COMPONENT REACTIONS</u>								
			JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL		

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW-t	MT20	4.0	6.0	1.75	3.00
B	TMWW-t	MT20	4.0	4.0		
C	TS-t	MT20	3.0	8.0		
D	TMW+w	MT20	2.0	4.0		
E	TS-t	MT20	3.0	8.0		
F	TMWW-t	MT20	4.0	4.0		
G	TMVW-t	MT20	4.0	6.0	1.75	3.00
H	BMV1+p	MT20	2.0	4.0		
J	BMWW-t	MT20	4.0	6.0	1.75	3.00
K	BSWWW-t	MT20	5.0	8.0	3.00	4.00
L	BMWW-t	MT20	4.0	6.0	1.75	3.00
N	BMV1+p	MT20	2.0	4.0		

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



UNFACTORED REACTIONS

JT	1ST LCASE	MAX./MIN.	COMPONENT REACTIONS				
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
N	1163	653 / 0	0 / 0	0 / 0	0 / 0	510 / 0	0 / 0
H	1163	653 / 0	0 / 0	0 / 0	0 / 0	510 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) N, H

2x4 DRY SPF No.2 BEARING BLOCK 12" LONG AT JT. N ATTACHED TO FRONT SIDE WITH 2 ROWS OF (0.122"x3") SPIRAL NAILS SPACED 3" C.C. 8 NAILS TOTAL.

2x4 DRY SPF No.2 BEARING BLOCK 12" LONG AT JT. H ATTACHED TO FRONT SIDE WITH 2 ROWS OF (0.122"x3") SPIRAL NAILS SPACED 3" C.C. 8 NAILS TOTAL.

BRACING

FOR SECTION A-G, MAX. PURLIN SPACING = 2.00 FT.

FOR OTHER SECTIONS, TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 0.00 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF A-N, G-H, B-L, B-K, D-K, F-K, F-J.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX LC1 CSI (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX LC1 CSI (LC)
FR-TO		FROM	TO		FR-TO		
N-A	-1562 / 0	0.0	0.0	0.89 (1)	5.27	A-L	0 / 1626
A-B	-981 / 0	-85.5	-85.5	0.88 (1)	2.00	L-B	-1119 / 0
B-C	-1248 / 0	-85.5	-85.5	0.92 (1)	2.00	B-K	0 / 447
C-D	-1248 / 0	-85.5	-85.5	0.92 (1)	2.00	K-D	-609 / 0
D-E	-1248 / 0	-85.5	-85.5	0.92 (1)	2.00	K-F	0 / 447
E-F	-1248 / 0	-85.5	-85.5	0.92 (1)	2.00	J-F	-1119 / 0
F-G	-981 / 0	-85.5	-85.5	0.88 (1)	2.00	J-G	0 / 1626
H-G	-1562 / 0	0.0	0.0	0.89 (1)	5.27		
N-M	0 / 0	-18.5	-18.5	0.32 (4)	10.00		
M-L	0 / 0	-18.5	-18.5	0.32 (4)	10.00		
L-K	0 / 981	-18.5	-18.5	0.43 (4)	10.00		
K-J	0 / 981	-18.5	-18.5	0.43 (4)	10.00		
J-I	0 / 0	-18.5	-18.5	0.32 (4)	10.00		
I-H	0 / 0	-18.5	-18.5	0.32 (4)	10.00		

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH. LL = 21.0 PSF

DL = 6.0 PSF

BOT CH. LL = 0.0 PSF

DL = 7.4 PSF

TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON PIGGYBACK TRUSS WITH SLOPES OF 6.00/12 AND -6.00/12 AND RESPECTIVE HEEL HEIGHTS OF 0-0 AND 0-0 AND AN ADDITIONAL DEAD LOAD OF 3.0 P.S.F.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")

CALCULATED VERT. DEFL.(LL) = L/ 999 (0.06")

ALLOWABLE DEFL.(TL)= L/360 (1.04")

CALCULATED VERT. DEFL.(TL) = L/ 999 (0.18")

CSI= 0.92/1.00 (B-D:1) , BC=0.43/1.00 (J-K:4) , WB=0.64/1.00 (B-L:1) , SSI=0.32/1.00 (A-B:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

PLATE	GRIP(DRY)	SHEAR	SECTION
	(PSI)	(PLI)	(PLI)
	MAX	MIN	MAX
MIN	MAX	MIN	MAX

MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.86 (L) (INPUT = 0.90)

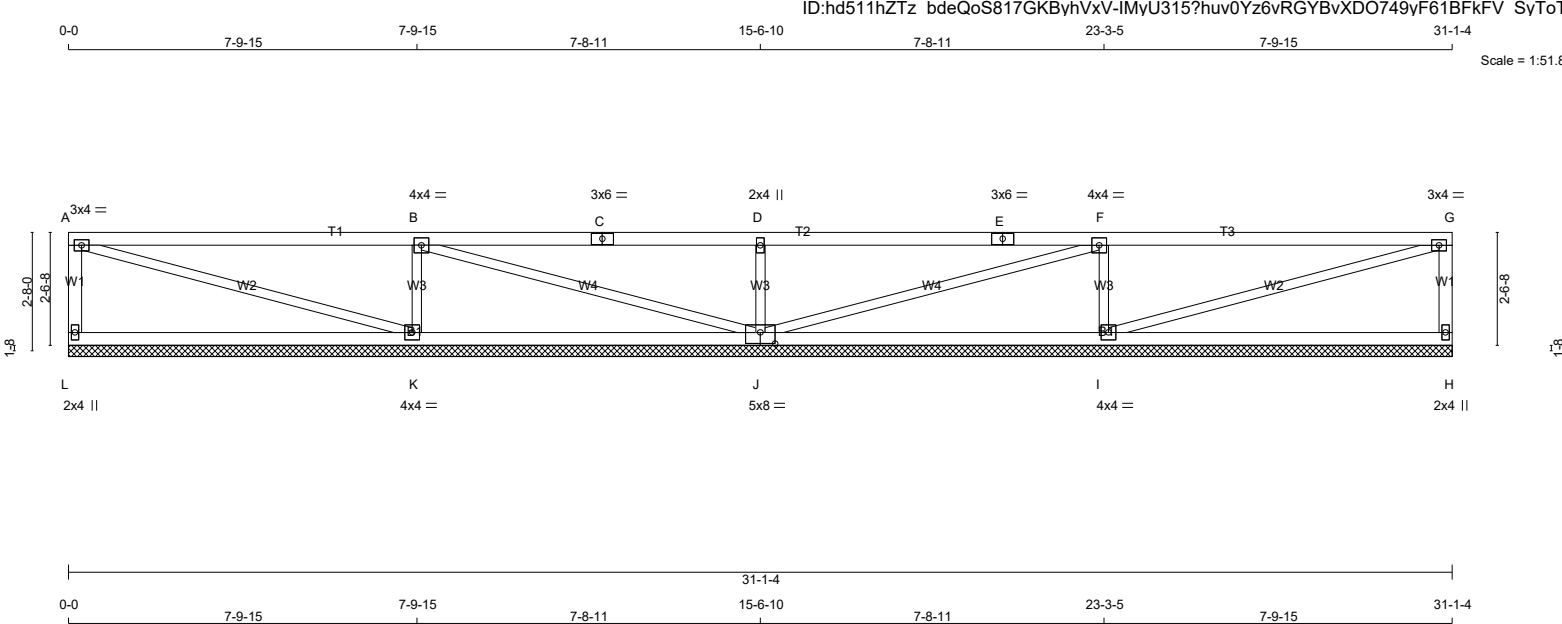
JSI METAL= 0.34 (A) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336336	H26P		1	TRUSS DESC. JT 45147	E21104140

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Wed Oct 13 15:36:10 2021 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-IMyU315?huv0Yz6vRGYBvXDO749yF61BFkFV SyToTJ



LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER	DESCR.	
L - A	2x4	DRY	No.2	SPF
A - C	2x4	DRY	No.2	SPF
C - E	2x4	DRY	No.2	SPF
E - G	2x4	DRY	No.2	SPF
H - G	2x4	DRY	No.2	SPF
L - J	2x4	DRY	No.2	SPF
J - H	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
DRY: SEASONED LUMBER.				

PLATES (table is in inches)						
JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW-t	MT20	3.0	4.0		
B	TMWW-t	MT20	4.0	4.0		
C	TS-t	MT20	3.0	6.0		
D	TMW+w	MT20	2.0	4.0		
E	TS-t	MT20	3.0	6.0		
F	TMWW-t	MT20	4.0	4.0		
G	TMVW-t	MT20	3.0	4.0		
H	BMV1+p	MT20	2.0	4.0		
I	BMWW1-t	MT20	4.0	4.0		
J	BSWWW1-I	MT20	5.0	8.0	3.00	4.00
K	BMWW1-t	MT20	4.0	4.0		
L	BMV1+p	MT20	2.0	4.0		

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS		FACTORED		MAXIMUM FACTORED		INPUT		REQRD	
		GROSS REACTION		GROSS REACTION		BRG		BRG	
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	IN-SX	IN-SX
L	296	0	296	0	0	31-1-4 (15-6-10)			
H	296	0	296	0	0	31-1-4 (15-6-10)			
K	864	0	864	0	0	31-1-4 (15-6-10)			
J	681	0	681	0	0	31-1-4 (15-6-10)			
I	864	0	864	0	0	31-1-4 (15-6-10)			

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
L	211	130 / 0	0 / 0	0 / 0	0 / 0	81 / 0	0 / 0
H	211	130 / 0	0 / 0	0 / 0	0 / 0	81 / 0	0 / 0
K	618	368 / 0	0 / 0	0 / 0	0 / 0	249 / 0	0 / 0
J	483	309 / 0	0 / 0	0 / 0	0 / 0	174 / 0	0 / 0
I	618	368 / 0	0 / 0	0 / 0	0 / 0	249 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) L, H, K, J, I

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 10.00 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

LOADING
TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MAX. FACTORED		FACTORED		MAX. FACTORED			
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRAC	MEMB.	FORCE (LBS)	MAX CSI (LC)
FR-TO		FROM	TO	LENGTH	FR-TO		
L-A	-241 / 0	0.0	0.0 0.03 (1)	7.81	A-K	0 / 3	0.00 (1)
A-B	-3 / 0	-78.0	-78.0 0.69 (1)	10.00	K-B	-685 / 0	0.11 (1)
B-C	0 / 30	-78.0	-78.0 0.70 (1)	10.00	B-J	-34 / 0	0.05 (1)
C-D	0 / 30	-78.0	-78.0 0.70 (1)	10.00	J-D	-556 / 0	0.09 (1)
D-E	0 / 30	-78.0	-78.0 0.70 (1)	10.00	J-F	-34 / 0	0.05 (1)
E-F	0 / 30	-78.0	-78.0 0.70 (1)	10.00	I-F	-685 / 0	0.11 (1)
F-G	-3 / 0	-78.0	-78.0 0.69 (1)	10.00	I-G	0 / 3	0.00 (1)
H-G	-241 / 0	0.0	0.0 0.03 (1)	7.81			
L-K	0 / 0	-18.5	-18.5 0.33 (4)	10.00			
K-J	0 / 3	-18.5	-18.5 0.33 (4)	10.00			
J-I	0 / 3	-18.5	-18.5 0.33 (4)	10.00			
I-H	0 / 0	-18.5	-18.5 0.33 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 21.0 PSF
DL = 6.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.4 PSF
TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

CSI: TC=0.70/1.00 (B-D:1) , BC=0.33/1.00 (K-L:4) , WB=0.11/1.00 (B-K:1) , SSI=0.29/1.00 (A-B:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

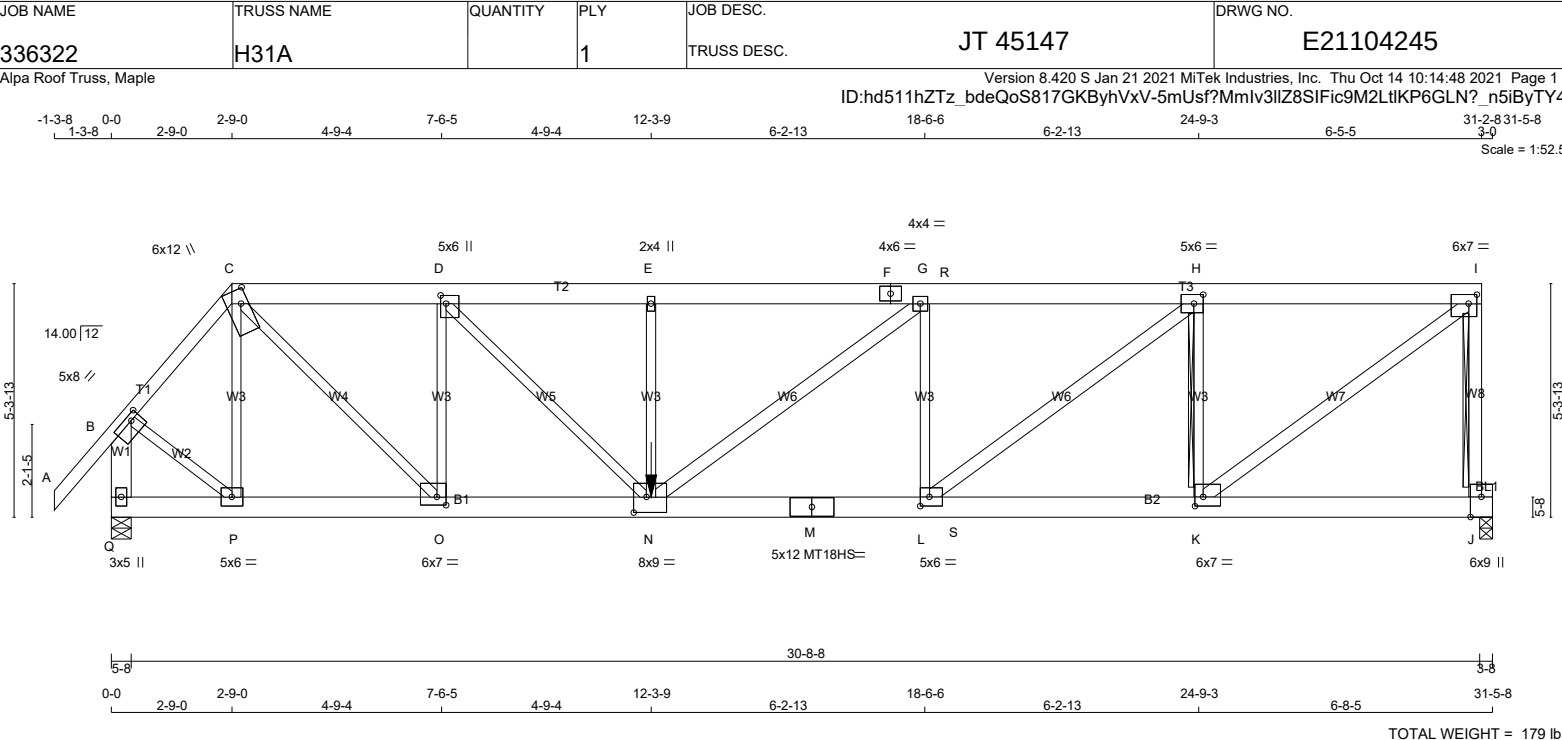
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES			
PLATE	GRIP(DRY)	SHEAR	SECTION
	(PSI)	(PLI)	(PLI)
	MAX MIN	MAX MIN	MAX MIN
MT20	650 371	1747 788	1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.85 (C) (INPUT = 0.90)
JSI METAL= 0.45 (C) (INPUT = 1.00)



LUMBER N. L. G. A. RULES CHORDS SIZE LUMBER DESCR. A - C 2x4 DRY No.2 SPF C - F 2x6 DRY No.2 SPF F - I 2x6 DRY No.2 SPF J - I 2x4 DRY No.2 SPF Q - B 2x6 DRY No.2 SPF Q - M 2x6 DRY 1650F 1.5E SPF M - J 2x6 DRY 1650F 1.5E SPF BEARING BLOCKS BL1 2x4 DRY No.2 SPF ALL WEBS EXCEPT N - G 2x4 DRY No.2 SPF L - H 2x4 DRY No.2 SPF K - I 2x4 DRY No.2 SPF DRY: SEASONED LUMBER.										DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER BEARINGS FACTORED MAXIMUM FACTORED INPUT REQRD GROSS REACTION GROSS REACTION BRG BRG VERT HORZ DOWN HORZ UPLIFT IN-SX IN-SX J 3464 0 3464 0 0 3-8 3-8 Q 3179 0 3179 0 0 5-8 4-13 UNFACTORED REACTIONS 1ST LCASE MAX./MIN. COMPONENT REACTIONS JT COMBINED SNOW LIVE PERM.LIVE WIND DEAD SOIL J 2469 1511 / 0 0 / 0 0 / 0 0 / 0 958 / 0 0 / 0 Q 2264 1395 / 0 0 / 0 0 / 0 0 / 0 869 / 0 0 / 0 BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) J, Q BEARING SIZE FACTOR = 1.15 AT JNT(S) J (BASED ON SUPPORT DEPTH = 1-8) BRACING TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 2.84 FT. MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED. ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED. 2x3 DRY SPF No.2 T-BRACE AT I-J, H-K FASTEN T AND I-BRACES TO NARROW EDGE OF WEB WITH ONE ROW PER PLY OF 3" COMMON WIRE NAILS @ 6" O.C. WITH 3" MINIMUM END DISTANCE. BRACE MUST COVER 90% OF WEB LENGTH. END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW LOADING TOTAL LOAD CASES: (4) CHORDS WEBS MAX. FACTORED MAX. FACTORED MEMB. FORCE (LBS) VERT. LOAD (PLF) MAX. FACTORED (LC1) UNBRACED LENGTH MEMB. FORCE (LBS) MAX. FACTORED (LC1) FR-TO FROM TO FR-TO A-B 0 / 42 -78.0 -78.0 0.12 (1) 10.00 P-C -842 / 0 0.32 (1) B-C -2619 / 0 -78.0 -78.0 0.22 (1) 4.06 C-O 0 / 3593 0.89 (1) C-D -4205 / 0 -78.0 -78.0 0.25 (1) 4.02 O-D -2556 / 0 0.97 (1) D-E -6308 / 0 -78.0 -78.0 0.39 (1) 3.25 D-N 0 / 3002 0.74 (1) E-F -6308 / 0 -78.0 -78.0 0.55 (1) 3.10 N-E -376 / 0 0.14 (1) F-G -6308 / 0 -78.0 -78.0 0.55 (1) 3.10 N-G 0 / 492 0.09 (1) G-R -5920 / 0 -78.0 -78.0 0.77 (1) 2.84 L-G -975 / 0 0.37 (1) R-H -5920 / 0 -153.5 -153.5 0.77 (1) 2.84 L-H 0 / 2663 0.47 (1) H-I -3820 / 0 -153.5 -153.5 0.60 (1) 3.73 K-H -2755 / 0 0.89 (1) J-I -3358 / 0 0.0 0.0 0.83 (1) 6.12 K-I 0 / 4911 0.87 (1) Q-B -3194 / 0 0.0 0.0 0.26 (1) 5.87 B-P 0 / 1972 0.49 (1) Q-P 0 / 0 -18.5 -18.5 0.06 (1) 10.00 P-O 0 / 1687 -18.5 -18.5 0.20 (1) 10.00 O-N 0 / 4205 -18.5 -18.5 0.42 (1) 10.00 N-M 0 / 5920 -136.1 -136.1 0.71 (1) 10.00 M-L 0 / 5920 -136.1 -136.1 0.71 (1) 10.00 L-S 0 / 3820 -136.1 -136.1 0.45 (1) 10.00 S-K 0 / 3820 -36.4 -36.4 0.45 (1) 10.00 K-J -101 / 0 -36.4 -36.4 0.11 (4) 6.25 FACTORED CONCENTRATED LOADS (LBS) JT LOC. LC1 MAX- MAX+ FACE DIR. TYPE HEEL CONN. N 12-3-9 -1578 -1578 --- FRONT VERT TOTAL --- C1 CONNECTION REQUIREMENTS 1) C1: A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED.										DESIGN CRITERIA *** SPECIAL LOADS ANALYSIS *** GEOMETRY AND/OR BASIC LOADS CHANGED BY USER. LOADS WERE DERIVED FROM USER INPUT NO FURTHER MODIFICATIONS WERE MADE SPECIFIED LOADS: TOP CH. LL = 21.0 PSF DL = 6.0 PSF BOT CH. LL = 0.0 PSF DL = 7.4 PSF TOTAL LOAD = 34.4 PSF SPACING = 24.0 IN./C LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM GIRDER TYPE: CStdGirder START DISTANCE = 12-3-9 START SPAN CARRIED = 6-10-8 END DISTANCE = 19-3-0 END SPAN CARRIED = 6-10-8 END WALL WIDTH = 0-0 APPLIED TO FRONT SIDE OF BOTTOM CHORD. - ADD'TL LOADS BASED ON 55 % OF GSL. GIRDER TYPE: CPrimeHip LEFT SETBACK = 2-9-0 RIGHT SETBACK = 0-0 END SETBACK = 5-10-8 END WALL WIDTH = 0-0 CORNER FRAMING TYPE: CONVENTIONAL END JACK TYPE: CONVENTIONAL APPLIED TO FRONT SIDE - ADD'TL LOADS BASED ON 55 % OF GSL. LOADS APPLIED TO FIRST 12-5-0 OF SPAN MEASURED FROM THE RIGHT. *** NON STANDARD GIRDER *** ADD'TL USER-DEFINED LOADS APPLIED TO ALL LOAD CASES. THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015 THIS DESIGN COMPLIES WITH: - PART 9 OF BCBC 2018 , ABC 2019 - PART 9 OF OBC 2012 (2019 AMENDMENT) - CSA 086-14 - TPIC 2014 (55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD ALLOWABLE DEFL.(LL)= L/360 (1.04") CALCULATED VERT. DEFL.(LL) = L/ 999 (0.25") ALLOWABLE DEFL.(TL)= L/360 (1.04") CALCULATED VERT. DEFL.(TL) = L/ 769 (0.48") CSI: TC=0.83/1.00 (I-J:1) , BC=0.71/1.00 (L-N:1) , WB=0.97/1.00 (D-O:1) , SSI=0.39/1.00 (H-I:1) DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00 COMP=1.00 SHEAR=1.00 TENS= 1.00 COMPANION LIVE LOAD FACTOR = 1.00									
---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--	--	--	--	--	--	--	--	--

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

LICENSED PROFESSIONAL ENGINEER

Y. WIDYA

100225448

10/14/2021

PROVINCE OF ONTARIO

CONTINUED ON PAGE



Timeline of the 2019-2020 season for the 2020-2021 season. The timeline shows dates from 1-3-8 to 31-3-10. Key dates include 1-3-8, 3-10-11, 6-10-14, 10-9-9, 6-9-10, 17-7-3, 6-9-10, 24-4-12, 6-10-14, and 31-3-10. A scale bar indicates 1:52.



DRY: SEASONED LUMBER.

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) I, O

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.07 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF H-I.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

TOTAL LOAD CASES: (4)

LATERAL BRACE(S) SHOWN SHALL BE
2X4 SPF#2



SPECIFIED LOADS:

TOP	CH.	LL	=	21.0	PSF
		DL	=	6.0	PSF
BOT	CH.	LL	=	0.0	PSF
		DL	=	7.4	PSF
TOTAL		LOAD	=	34.4	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE
OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF PART
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.09")
ALLOWABLE DEFL.(TL)= L/360 (1.04")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.19")

CSI: TC=0.71/1.00 (E-G:1) , BC=0.38/1.00 (K-M:1) ,
WB=0.81/1.00 (G-J:1) , SSI=0.25/1.00 (G-H:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

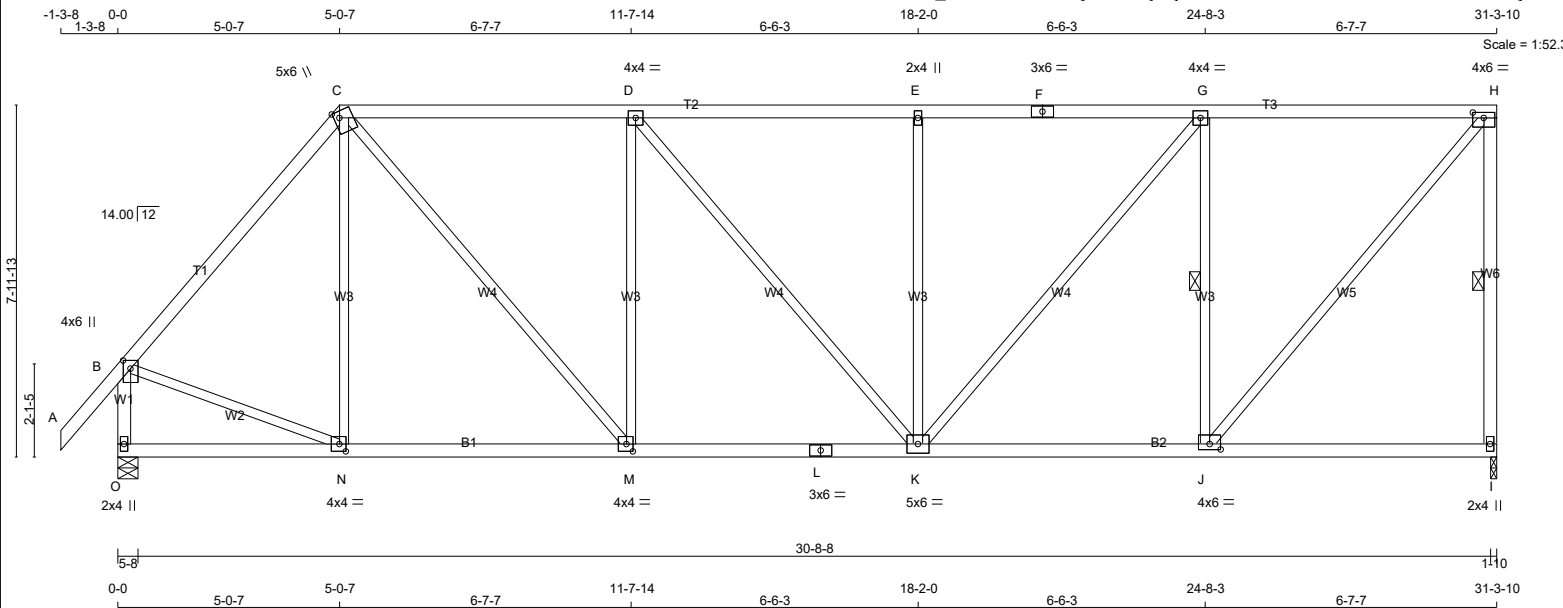
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES						
PLATE	GRIP(DRY)		SHEAR		SECTION	
	(PSI)		(PLI)		(PLI)	
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (H) (INPUT = 0.90)
JSI METAL= 0.54 (L) (INPUT = 1.00)



TOTAL WEIGHT = 147 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR
A - C	2x4	DRY	No.2
C - F	2x4	DRY	No.2
F - H	2x4	DRY	No.2
I - H	2x4	DRY	No.2
O - B	2x4	DRY	No.2
O - L	2x4	DRY	No.2
L - I	2x4	DRY	No.2

ALL WEBS EXCEPT	2x3	DRY	No.2	SPF
--------------------	-----	-----	------	-----

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW+p	MT20	4.0	6.0	2.25	2.00
C	TTWW+m	MT20	5.0	6.0	1.75	1.50
D	TMVW-t	MT20	4.0	4.0		
E	TMVW+w	MT20	2.0	4.0		
F	TS-t	MT20	3.0	6.0		
G	TMVW-t	MT20	4.0	4.0		
H	TMVW-t	MT20	4.0	6.0	1.50	3.00
I	BMV1+p	MT20	2.0	4.0		
J	BMVW-t	MT20	4.0	6.0	1.50	3.00
K	BMVWW-t	MT20	5.0	6.0		
L	BS-t	MT20	3.0	6.0		
M	BMVW-t	MT20	4.0	4.0	2.00	1.75
N	BMVW-t	MT20	4.0	4.0	2.00	1.75
O	BMV1+p	MT20	2.0	4.0		

LATERAL BRACE(S) SHOWN SHALL BE
2X4 SPF#2



DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS

	FACTORED		MAXIMUM FACTORED			INPUT	REQRD
	GROSS REACTION		GROSS REACTION			BRG	BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
I	1510	0	1510	0	0	1-10	1-10
O	1619	0	1619	0	0	5-8	1-12

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
I	1076	657 / 0	0 / 0	0 / 0	0 / 0	419 / 0	0 / 0
O	1152	716 / 0	0 / 0	0 / 0	0 / 0	436 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) I, O

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.55 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.

1 LATERAL BRACE(S) AT 1/ 2 LENGTH OF H-I, G-J.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

C H O R D S				W E B S			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED			MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)
		VERT. LOAD (PLF)	LC1	MAX. CXI (LC)			
FR-TO		FROM	TO		FR-TO		
A-B	0 / 42	-78.0	-78.0	0.11 (1)	10.00	N-C	-166 / 21 0.20 (1)
B-C	-1303 / 0	-78.0	-78.0	0.44 (1)	5.17	C-M	0 / 990 0.22 (1)
C-D	-1490 / 0	-78.0	-78.0	0.60 (1)	4.61	M-D	-626 / 0 0.76 (1)
D-E	-1532 / 0	-78.0	-78.0	0.60 (1)	4.55	D-K	0 / 65 0.01 (1)
E-F	-1532 / 0	-78.0	-78.0	0.60 (1)	4.56	K-E	-468 / 0 0.57 (1)
F-G	-1532 / 0	-78.0	-78.0	0.60 (1)	4.56	K-G	0 / 698 0.16 (1)
G-H	-1081 / 0	-78.0	-78.0	0.56 (1)	5.27	J-G	-1118 / 0 0.45 (1)
I-H	-1461 / 0	0.0	0.0	0.42 (1)	5.41	J-H	0 / 1657 0.37 (1)
O-B	-1584 / 0	0.0	0.0	0.19 (1)	6.56	B-N	0 / 892 0.20 (1)
O-N	0 / 0	-18.5	-18.5	0.15 (4)	10.00		
N-M	0 / 843	-18.5	-18.5	0.24 (4)	10.00		
M-L	0 / 1490	-18.5	-18.5	0.32 (1)	10.00		
L-K	0 / 1490	-18.5	-18.5	0.32 (1)	10.00		
K-J	0 / 1081	-18.5	-18.5	0.30 (4)	10.00		
J-I	0 / 0	-18.5	-18.5	0.19 (4)	10.00		

DESIGN CRITERIA

SPECIFIED LOADS:

TOP	CH.	LL =	21.0	PSF
		DL =	6.0	PSF
BOT	CH.	LL =	0.0	PSF
		DL =	7.4	PSF
TOTAL		LOAD =	34.4	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE
OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF PART
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.07")
ALLOWABLE DEFL.(TL)= L/360 (1.04")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.16")

CSI: TC=0.60/1.00 (D-E:1), BC=0.32/1.00 (K-M:1),
WB=0.76/1.00 (D-M:1), SSI=0.24/1.00 (C-D:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

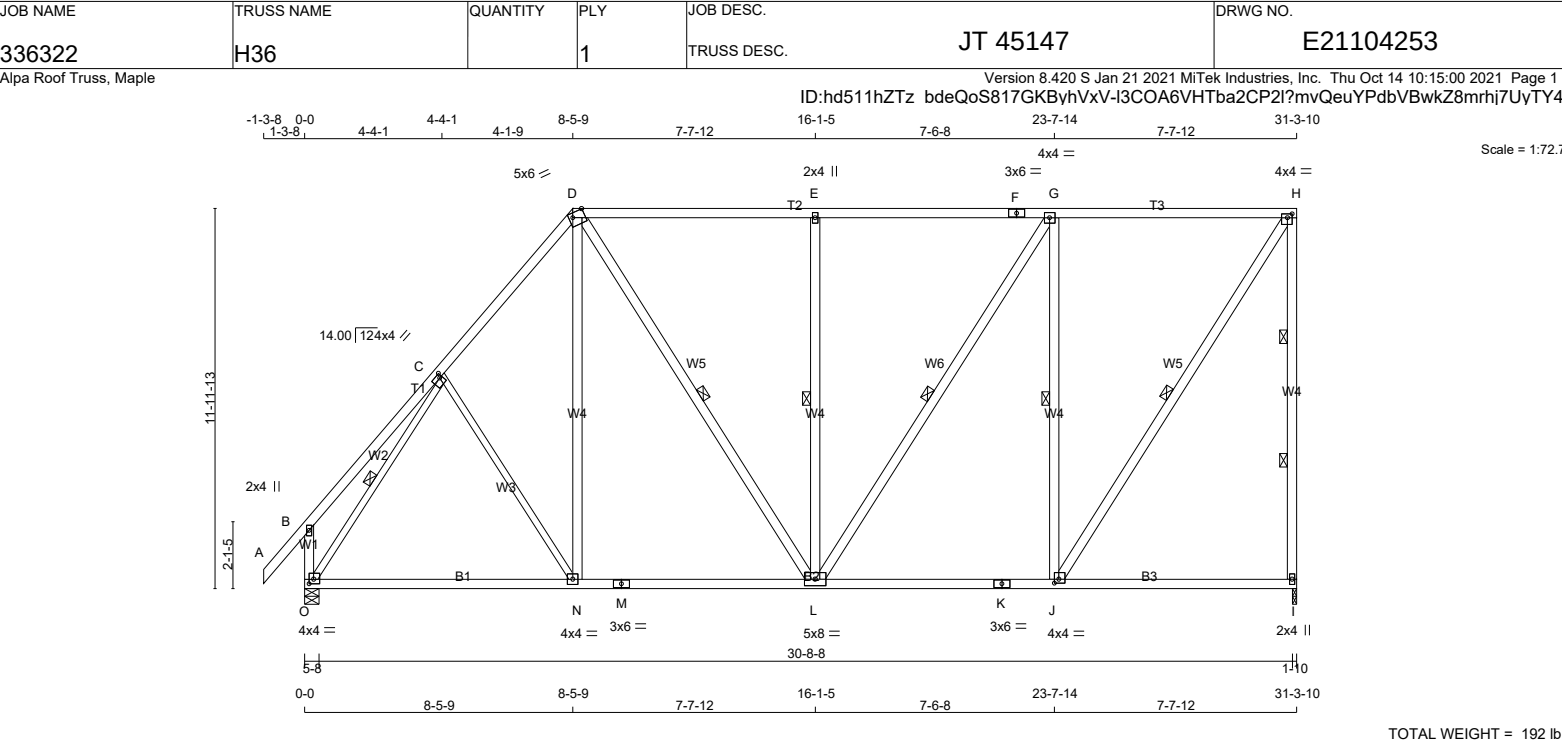
NAIL VALUES

PLATE	GRIP(DRY) (PSI)		SHEAR (PLI)		SECTION (PLI)	
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (B) (INPUT = 0.90)
JSI METAL= 0.51 (B) (INPUT = 1.00)



LUMBER				N. L. G. A. RULES	
CHORDS	SIZE	LUMBER	DESCR.	SPF	SPF
A - D	2x4	DRY	No.2	SPF	SPF
D - F	2x4	DRY	No.2	SPF	SPF
F - H	2x4	DRY	No.2	SPF	SPF
I - H	2x4	DRY	No.2	SPF	SPF
O - B	2x4	DRY	No.2	SPF	SPF
O - M	2x4	DRY	No.2	SPF	SPF
M - K	2x4	DRY	No.2	SPF	SPF
K - I	2x4	DRY	No.2	SPF	SPF
ALL WEBS	2x4	DRY	No.2	SPF	SPF
EXCEPT					
C - N	2x3	DRY	No.2	SPF	SPF
O - C	2x3	DRY	No.2	SPF	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMV+p	MT20	2.0	4.0	
C	TMWW-t	MT20	4.0	4.0	1.50 1.00
D	TTWW-m	MT20	5.0	6.0	Edge 4.50
E	TMW+w	MT20	2.0	4.0	
F	TS-t	MT20	3.0	6.0	
G	TMWW-t	MT20	4.0	4.0	
H	TMVW-t	MT20	4.0	4.0	1.50 1.75
I	BMV1+p	MT20	2.0	4.0	
J	BMWW-t	MT20	4.0	4.0	1.50 1.75
K	BS-t	MT20	3.0	6.0	
L	BMWWW-t	MT20	5.0	8.0	
M	BS-t	MT20	3.0	6.0	
N	BMWW-t	MT20	4.0	4.0	
O	BMVW1-t	MT20	4.0	4.0	1.75 1.75

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS		FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT		REQRD	
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	BRG	IN-SX
I	1510	0	1510	0	0	1-10	1-10		
O	1619	0	1619	0	0	5-8	1-12		

UNFACTORED REACTIONS		1ST LCASE		MAX./MIN. COMPONENT REACTIONS	
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND
I	1076	657 / 0	0 / 0	0 / 0	0 / 0
O	1152	716 / 0	0 / 0	0 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) I, O

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.99 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

2 LATERAL BRACE(S) AT 1 / 3 LENGTH OF H-I.
1 LATERAL BRACE(S) AT 1 / 2 LENGTH OF D-L, E-L, G-L, G-J, H-J, C-O.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING		TOTAL LOAD CASES: (4)	
CHORDS		WEBS	
MEMB.	MAX. FACTORED FORCE (LBS)	VERT. LOAD (PLF)	MAX. FACTORED FORCE (LBS)
FR-TO		FROM TO	FR-TO
A-B	0 / 42	-78.0 -78.0 0.11 (1)	10.00 C-N
B-C	0 / 29	-78.0 -78.0 0.22 (1)	10.00 N-D
C-D	-1279 / 0	-78.0 -78.0 0.28 (1)	5.40 D-L
D-E	-1053 / 0	-78.0 -78.0 0.71 (1)	5.00 L-E
E-F	-1053 / 0	-78.0 -78.0 0.72 (1)	4.99 L-G
F-G	-1053 / 0	-78.0 -78.0 0.72 (1)	4.99 J-G
G-H	-794 / 0	-78.0 -78.0 0.68 (1)	5.59 J-H
H-I	-1454 / 0	0.0 0.0 0.48 (1)	5.43 O-C
O-B	-234 / 0	0.0 0.0 0.03 (1)	7.81
O-N	0 / 835	-18.5 -18.5 0.39 (4)	10.00
N-M	0 / 812	-18.5 -18.5 0.40 (4)	10.00
M-L	0 / 812	-18.5 -18.5 0.40 (4)	10.00
L-K	0 / 794	-18.5 -18.5 0.35 (4)	10.00
K-J	0 / 794	-18.5 -18.5 0.35 (4)	10.00
J-I	0 / 0	-18.5 -18.5 0.27 (4)	10.00

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 21.0 PSF
DL = 6.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.4 PSF
TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN./C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.05")
ALLOWABLE DEFL.(TL)= L/360 (1.04")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.17")

CSI: TC=0.72/1.00 (E-G:1) , BC=0.40/1.00 (L-N:4) , WB=0.83/1.00 (G-J:1) , SSI=0.28/1.00 (G-H:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

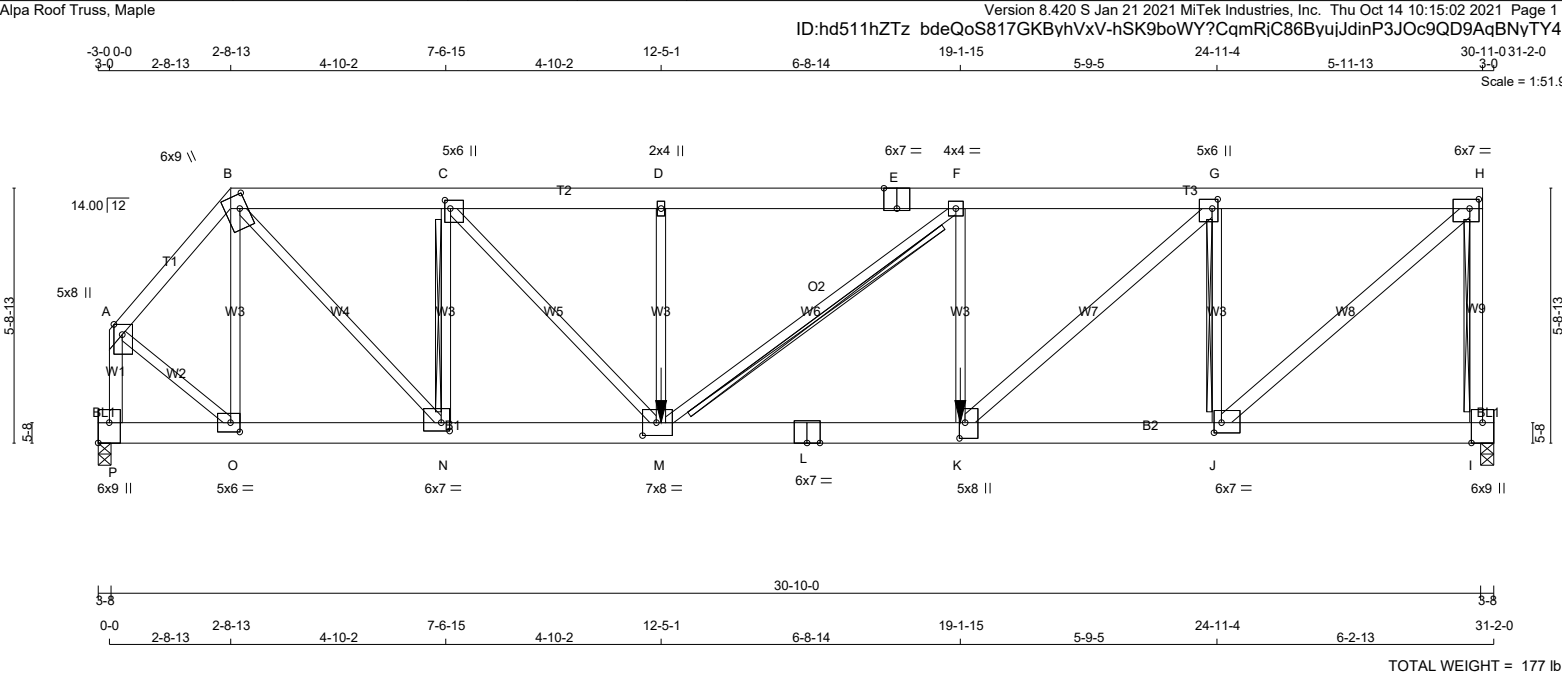
NAIL VALUES
PLATE GRIP(DRY) SHEAR SECTION
(PSI) (PLI) (PLI)
MAX MIN MAX MIN MAX MIN
MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (J) (INPUT = 0.90)
JSI METAL= 0.53 (C) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336322	H40		1	TRUSS DESC. JT 45147	E21104254



LUMBER			
N. L. G. A. RULES			
CHORDS	SIZE	LUMBER	DESCR.
A - B	2x4	DRY No.2	SPF
B - E	2x6	DRY No.2	SPF
E - H	2x6	DRY No.2	SPF
I - H	2x4	DRY No.2	SPF
P - A	2x4	DRY No.2	SPF
P - L	2x6	DRY No.2	SPF
L - I	2x6	DRY No.2	SPF

BEARING BLOCKS			
BL1	2 - 2x4	DRY No.2	SPF
ALL WEBS EXCEPT			
K - G	2x4	DRY No.2	SPF
J - H	2x4	DRY No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)				
JT	TYPE	PLATES	W	LEN Y X
A	TMVW+p	MT20	5.0	8.0 2.75 Edge
B	TTWW+m	MT20	6.0	9.0 3.75 2.00
C	TMWW+t	MT20	5.0	6.0 2.25 1.50
D	TMW+w	MT20	2.0	4.0
E	TS-t	MT20	6.0	7.0 Edge 3.50
F	TMWW-t	MT20	4.0	4.0
G	TMWW+t	MT20	5.0	6.0 2.50 1.50
H	TMVW-t	MT20	6.0	7.0 2.50 2.50
I	BMVK1+t	MT20	6.0	9.0 Edge 3.00
J	BMWW-t	MT20	6.0	7.0 2.75 2.00
K	BMWW+t	MT20	5.0	8.0 4.25 1.50
L	BS-t	MT20	6.0	7.0
M	BMWWW-t	MT20	7.0	8.0 3.50 3.75
N	BMWW-t	MT20	6.0	7.0 2.25 2.25
O	BMWW-t	MT20	5.0	6.0 2.50 2.50
P	BMVK1+t	MT20	6.0	9.0 5.50 Edge

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS		FACTORED		MAXIMUM FACTORED		INPUT		REQRD	
		GROSS REACTION		GROSS REACTION		BRG		BRG	
JT	VERT	HORZ		DOWN	HORZ	UPLIFT	IN-SX	IN-SX	
I	3255	0		3255	0	0	3-8	3-8	
P	3084	0		3084	0	0	3-8	3-8	

UNFACTORED REACTIONS		1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL		
I	2321	1417 / 0	0 / 0	0 / 0	0 / 0	903 / 0	0 / 0		
P	2198	1343 / 0	0 / 0	0 / 0	0 / 0	856 / 0	0 / 0		

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) I, P
BEARING SIZE FACTOR = 1.15 AT JNT(S) I, P (BASED ON SUPPORT DEPTH = 1-8)

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLINE SPACING = 3.01 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

2x3 DRY SPF No.2 T-BRACE AT H-I, C-N, F-M
2x4 DRY SPF No.2 T-BRACE AT G-J

FASTEN T AND I-BRACES TO NARROW EDGE OF WEB WITH ONE ROW PER PLY OF 3"
COMMON WIRE NAILS @ 6" O.C. WITH 3" MINIMUM END DISTANCE. BRACE MUST COVER 90% OF WEB LENGTH.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING
TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MAX. FACTORED		FACTORED		MAX. FACTORED		FACTORED	
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MEMB.	FORCE (LBS)	MAX CSI (LC)	
FR-TO		FROM	TO	FR-TO			
A-B	-2282 / 0	-78.0	-78.0 0.19 (1)	4.34	O-B	-1131 / 0	0.51 (1)
B-C	-3834 / 0	-78.0	-78.0 0.26 (1)	4.17	B-N	0 / 3505	0.87 (1)
C-D	-5838 / 0	-78.0	-78.0 0.52 (1)	3.19	N-C	-2515 / 0	0.95 (1)
D-E	-5838 / 0	-156.0	-156.0 0.70 (1)	3.01	C-M	0 / 2964	0.73 (1)
E-F	-5838 / 0	-156.0	-156.0 0.70 (1)	3.01	M-D	-772 / 0	0.35 (1)
F-G	-5979 / 0	-78.0	-78.0 0.57 (1)	3.12	M-F	-179 / 0	0.22 (1)
G-H	-3316 / 0	-78.0	-78.0 0.29 (1)	4.40	K-F	-678 / 0	0.30 (1)
I-H	-3208 / 0	0.0	0.0 0.93 (1)	6.27	K-G	0 / 3607	0.64 (1)
P-A	-3102 / 0	0.0	0.0 0.43 (1)	4.84	J-G	-2887 / 0	0.69 (1)
					J-H	0 / 4540	0.80 (1)
					A-O	0 / 2115	0.52 (1)
P-O	-216 / 0	-18.5	-18.5 0.07 (1)	6.25			
O-N	0 / 1463	-18.5	-18.5 0.26 (1)	10.00			
N-M	0 / 3834	-18.5	-18.5 0.54 (1)	10.00			
M-L	0 / 5979	-37.3	-37.3 0.93 (1)	10.00			
L-K	0 / 5979	-37.3	-37.3 0.93 (1)	10.00			
K-J	0 / 3316	-18.5	-18.5 0.47 (1)	10.00			
J-I	-89 / 0	-18.5	-18.5 0.07 (4)	6.25			

FACTORED CONCENTRATED LOADS (LBS)							
JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE
K	19-1-15	-1578	-1578	---	FRONT	VERT	TOTAL
M	12-5-1	-1132	-1132	---	FRONT	VERT	TOTAL

CONNECTION REQUIREMENTS

1) C1: A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED.

DESIGN CRITERIA

*** SPECIAL LOADS ANALYSIS ***
GEOMETRY AND/OR BASIC LOADS CHANGED BY USER.
LOADS WERE DERIVED FROM USER INPUT
NO FURTHER MODIFICATIONS WERE MADE

SPECIFIED LOADS:
TOP CH. LL = 21.0 PSF
DL = 6.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.4 PSF
TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN./C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

*** NON STANDARD GIRDER ***
ADDTL USER-DEFINED LOADS APPLIED TO ALL LOAD CASES.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF CBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.02")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.21")
ALLOWABLE DEFL.(TL)= L/360 (1.02")
CALCULATED VERT. DEFL.(TL) = L/ 856 (0.43")

CSI: TC=0.93/1.00 (H-I:1), BC=0.93/1.00 (K-M:1), WB=0.95/1.00 (C-N:1), SSI=0.35/1.00 (D-F:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00
COMP=1.00 SHEAR=1.00 TENS= 1.00

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES
PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI)
MAX MIN MAX MIN MAX MIN
MT20 650 371 1747 788 1987 1873

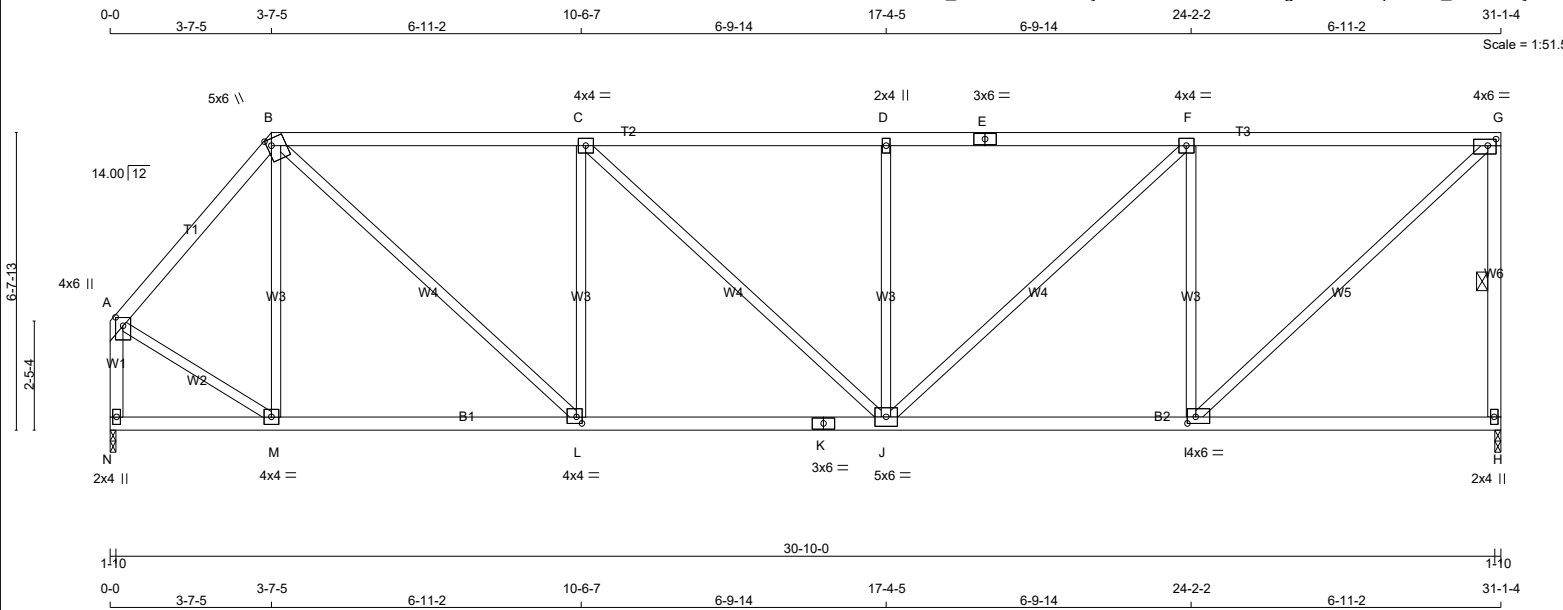
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (G) (INPUT = 0.90)
JSI METAL= 0.99 (L) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2





TOTAL WEIGHT = 135 lb

LUMBER

N. L. G. A. RULES			
CHORDS	SIZE	LUMBER	DESCR
A - B	2x4	DRY No.2	SPF
B - E	2x4	DRY No.2	SPF
E - G	2x4	DRY No.2	SPF
H - G	2x4	DRY No.2	SPF
N - A	2x4	DRY No.2	SPF
N - K	2x4	DRY No.2	SPF
K - H	2x4	DRY No.2	SPF

ALL WEBS EXCEPT	2x3	DRY	No.2	SPF
--------------------	-----	-----	------	-----

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW+p	MT20	4.0	6.0	2.25	2.00
B	TTVW+m	MT20	5.0	6.0	1.75	1.25
C	CTMW-t	MT20	4.0	4.0		
D	TMW+w	MT20	2.0	4.0		
E	TS-t	MT20	3.0	6.0		
F	CTMW-t	MT20	4.0	4.0		
G	TMVW-t	MT20	4.0	6.0	1.75	2.25
H	BMV1+p	MT20	2.0	4.0		
I	BMVW-t	MT20	4.0	6.0	1.75	2.25
J	BMVWV-t	MT20	5.0	6.0		
K	BS-t	MT20	3.0	6.0		
L	BMVW-t	MT20	4.0	4.0	1.75	1.50
M	BMVW-t	MT20	4.0	4.0		
N	BMV1+p	MT20	2.0	4.0		

LATERAL BRACE(S) SHOWN SHALL BE
2X4 SPF#2



DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS

	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION			INPUT BRG	REQD BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
H	1500	0	1500	0	0	1-10	1-10
N	1500	0	1500	0	0	1-10	1-10

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
H	1070	653 / 0	0 / 0	0 / 0	0 / 0	417 / 0	0 / 0
N	1070	653 / 0	0 / 0	0 / 0	0 / 0	417 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) H, N

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.08 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF G-H.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

CHORDS					WEBS			
MEMB.	MAX. FACTORED (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRAC	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)	
FR-TO		FROM	TO	LENGTH	FR-TO			
A-B	-1195 / 0	-78.0	-78.0	0.21 (1)	5.62	M-B	-318 / 0	0.23 (1)
B-C	-1715 / 0	-78.0	-78.0	0.70 (1)	4.24	B-L	0 / 1283	0.29 (1)
C-D	-1857 / 0	-78.0	-78.0	0.71 (1)	4.09	L-C	-735 / 0	0.54 (1)
D-E	-1857 / 0	-78.0	-78.0	0.71 (1)	4.08	C-J	0 / 194	0.04 (1)
E-F	-1857 / 0	-78.0	-78.0	0.71 (1)	4.08	J-D	-490 / 0	0.36 (1)
F-G	-1345 / 0	-78.0	-78.0	0.65 (1)	4.71	J-F	0 / 701	0.16 (1)
H-G	-1449 / 0	0.0	0.0	0.29 (1)	5.43	I-F	-1091 / 0	0.80 (1)
N-A	-1482 / 0	0.0	0.0	0.19 (1)	6.73	I-G	0 / 1826	0.41 (1)
						A-M	0 / 885	0.20 (1)
N-M	0 / 0	-18.5	-18.5	0.13 (4)	10.00			
M-L	0 / 768	-18.5	-18.5	0.25 (4)	10.00			
L-K	0 / 1716	-18.5	-18.5	0.37 (1)	10.00			
K-J	0 / 1716	-18.5	-18.5	0.37 (1)	10.00			
J-I	0 / 1345	-18.5	-18.5	0.34 (4)	10.00			
I-H	0 / 0	-18.5	-18.5	0.21 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP	CH.	LL =	21.0	PSF
		DL =	6.0	PSF
BOT	CH.	LL =	0.0	PSF
		DL =	7.4	PSF
TOTAL LOAD		=	34.4	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE
OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF PART
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")
 CALCULATED VERT. DEFL.(LL) = L/ 999 (0.09")
 ALLOWABLE DEFL.(TL)= L/360 (1.04")
 CALCULATED VERT. DEFL.(TL) = L/ 999 (0.19")

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

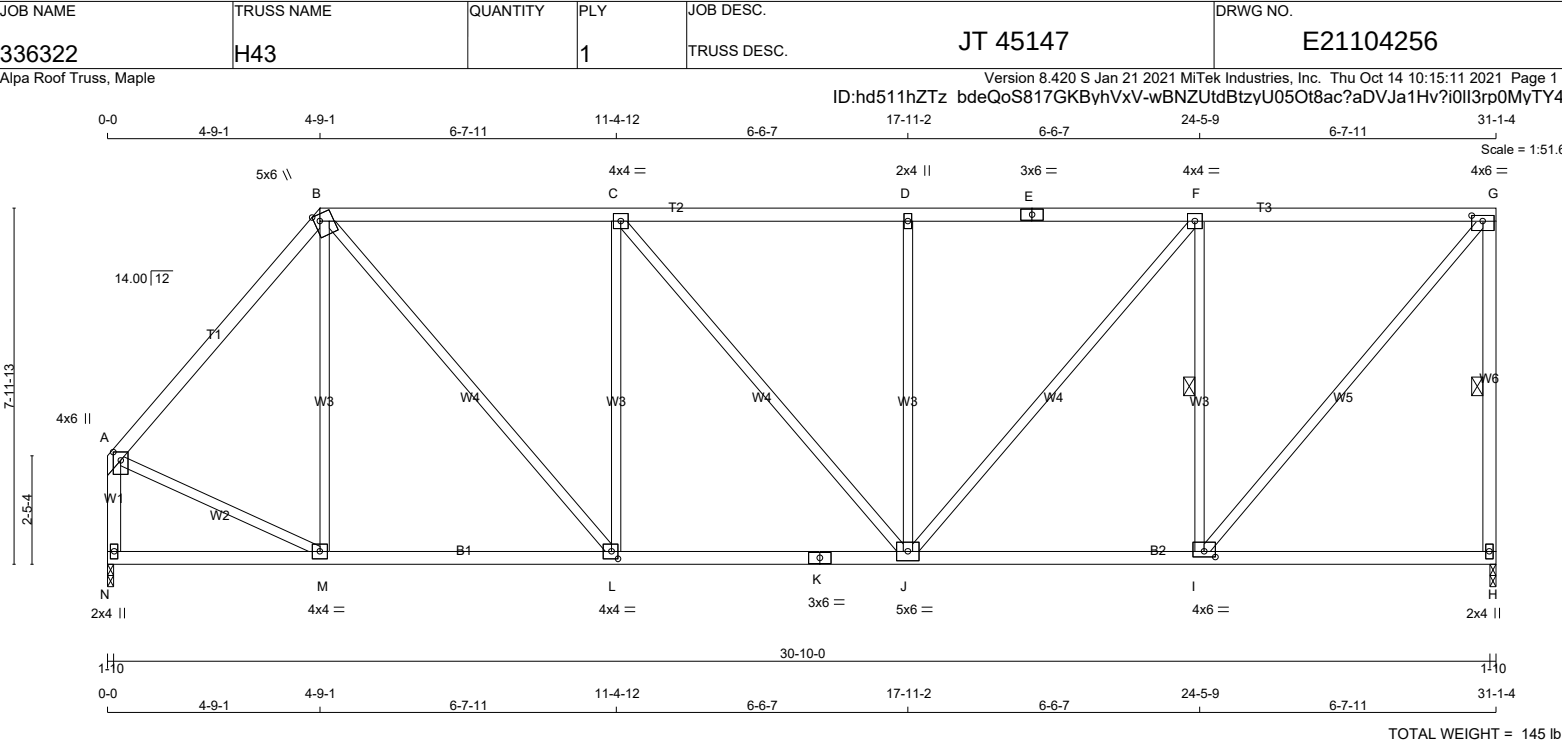
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES						
PLATE	GRIP(DRY)		SHEAR		SECTION	
	(PSI)		(PLI)		(PLI)	
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (G) (INPUT = 0.90)
JSI METAL= 0.51 (K) (INPUT = 1.00)



LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER	DESCR.	
A - B	2x4	DRY	No.2	SPF
B - E	2x4	DRY	No.2	SPF
E - G	2x4	DRY	No.2	SPF
H - G	2x4	DRY	No.2	SPF
N - A	2x4	DRY	No.2	SPF
N - K	2x4	DRY	No.2	SPF
K - H	2x4	DRY	No.2	SPF
ALL WEBS EXCEPT	2x3	DRY	No.2	SPF
DRY: SEASONED LUMBER.				

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
A	TMVW+p	MT20	4.0	6.0	2.25 2.00
B	TTWW+m	MT20	5.0	6.0	1.75 1.50
C	TMWW-t	MT20	4.0	4.0	
D	TMW+w	MT20	2.0	4.0	
E	TS-t	MT20	3.0	6.0	
F	TMWW-t	MT20	4.0	4.0	
G	TMVW-t	MT20	4.0	6.0	1.50 3.00
H	BMV1+p	MT20	2.0	4.0	
I	BMWW-t	MT20	4.0	6.0	1.50 3.00
J	BMWWW-t	MT20	5.0	6.0	
K	BS-t	MT20	3.0	6.0	
L	BMWW-t	MT20	4.0	4.0	2.00 1.75
M	BMWW-t	MT20	4.0	4.0	
N	BMV1+p	MT20	2.0	4.0	

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS		FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG IN-SX		REQRD BRG IN-SX	
JT	VERT	HORZ		DOWN	HORZ	UPLIFT			
H	1500	0		1500	0	0	1-10	1-10	
N	1500	0		1500	0	0	1-10	1-10	

UNFACTORED REACTIONS		1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL		
H	1070	653 / 0	0 / 0	0 / 0	0 / 0	417 / 0	0 / 0		
N	1070	653 / 0	0 / 0	0 / 0	0 / 0	417 / 0	0 / 0		

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) H, N

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.57 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF G-H, F-I.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

CHORDS		MAX. FACTORED		FACTORED		WEBS		MAX. FACTORED	
MEMB.	FORCE (LBS)	VERT.	LOAD (PLF)	LC1	MAX	MEMB.	FORCE (LBS)	MAX	CSI (LC)
FR-TO		FROM	TO	CSI (LC)	UNBRAC LENGTH	FR-TO			
A- B	-1236 / 0	-78.0	-78.0	0.38 (1)	5.35	M- B	-224 / 0	0.27 (1)	
B- C	-1463 / 0	-78.0	-78.0	0.60 (1)	4.64	B- L	0 / 1014	0.23 (1)	
C- D	-1517 / 0	-78.0	-78.0	0.61 (1)	4.57	L- C	-643 / 0	0.78 (1)	
D- E	-1517 / 0	-78.0	-78.0	0.60 (1)	4.57	C- J	0 / 84	0.02 (1)	
E- F	-1517 / 0	-78.0	-78.0	0.60 (1)	4.57	J- D	-470 / 0	0.57 (1)	
F- G	-1075 / 0	-78.0	-78.0	0.56 (1)	5.27	J- F	0 / 682	0.15 (1)	
H- G	-1451 / 0	0.0	0.0	0.42 (1)	5.43	I- F	-1107 / 0	0.44 (1)	
N- A	-1468 / 0	0.0	0.0	0.19 (1)	6.76	I- G	0 / 1646	0.37 (1)	
						A- M	0 / 871	0.20 (1)	
N- M	0 / 0	-18.5	-18.5	0.14 (4)	10.00				
M- L	0 / 798	-18.5	-18.5	0.24 (4)	10.00				
L- K	0 / 1463	-18.5	-18.5	0.32 (1)	10.00				
K- J	0 / 1463	-18.5	-18.5	0.32 (1)	10.00				
J- I	0 / 1075	-18.5	-18.5	0.30 (4)	10.00				
I- H	0 / 0	-18.5	-18.5	0.20 (4)	10.00				

DESIGN CRITERIA

SPECIFIED LOADS:		
TOP CH.	LL = 21.0	PSF
	DL = 6.0	PSF
BOT CH.	LL = 0.0	PSF
	DL = 7.4	PSF
TOTAL LOAD =	34.4	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.07")
ALLOWABLE DEFL.(TL)= L/360 (1.04")
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.15")

CSI: TC=0.61/1.00 (C-D:1) , BC=0.32/1.00 (J-L:1) ,

WB=0.78/1.00 (C-L:1) , SSI=0.24/1.00 (B-C:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

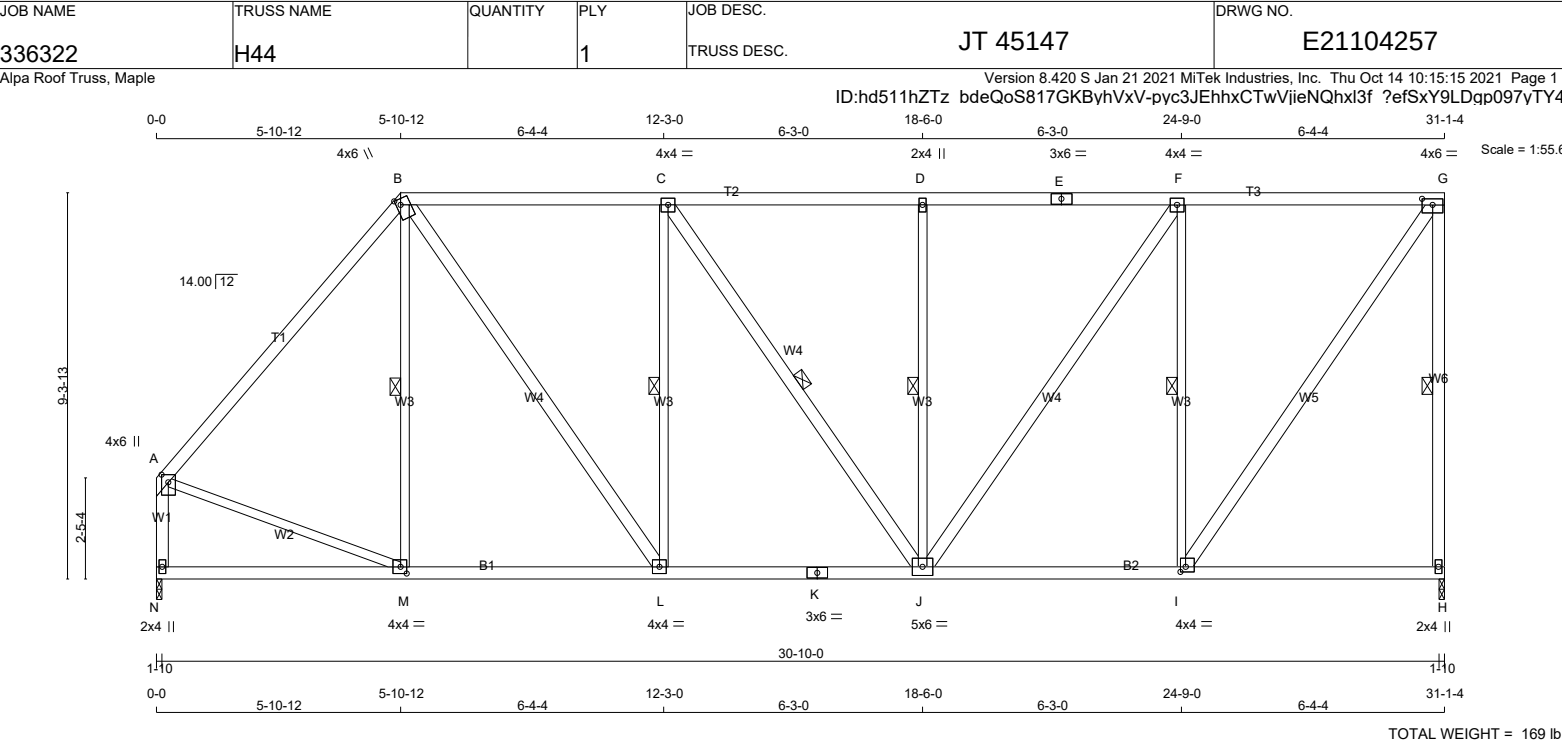
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES				
PLATE	GRIP(DRY)	SHEAR	SECTION	
(PSI)	(PLI)	(PLI)	(PLI)	
MAX	MIN	MAX	MIN	MAX
MT20	650	371	1747	788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (M) (INPUT = 0.90)
JSI METAL= 0.49 (K) (INPUT = 1.00)



LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER	DESCR.	
A - B	2x4	DRY	No.2	SPF
B - E	2x4	DRY	No.2	SPF
E - G	2x4	DRY	No.2	SPF
H - G	2x4	DRY	No.2	SPF
N - A	2x4	DRY	No.2	SPF
N - K	2x4	DRY	No.2	SPF
K - H	2x4	DRY	No.2	SPF
ALL WEBS EXCEPT	2x3	DRY	No.2	SPF
B - L	2x4	DRY	No.2	SPF
C - J	2x4	DRY	No.2	SPF
J - F	2x4	DRY	No.2	SPF
I - G	2x4	DRY	No.2	SPF
DRY: SEASONED LUMBER.				

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
A	TMVW+p	MT20	4.0	6.0	2.25 2.00
B	TTWW+m	MT20	4.0	6.0	1.75 1.25
C	TMWW-t	MT20	4.0	4.0	
D	TMW+w	MT20	2.0	4.0	
E	TS-t	MT20	3.0	6.0	
F	TMWW-t	MT20	4.0	4.0	
G	TMVW-t	MT20	4.0	6.0	1.75 3.00
H	BMV1+p	MT20	2.0	4.0	
I	BMWW-t	MT20	4.0	4.0	1.50 1.50
J	BMWW-t	MT20	5.0	6.0	
K	BS-t	MT20	3.0	6.0	
L	BMWW-t	MT20	4.0	4.0	
M	BMWW-t	MT20	4.0	4.0	2.00 1.75
N	BMV1+p	MT20	2.0	4.0	

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

		FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG IN-SX		REQRD BRG IN-SX	
JT	VERT	HORZ		DOWN	HORZ	UPLIFT	IN-SX	IN-SX	
H	1500	0		1500	0	0	1-10	1-10	
N	1500	0		1500	0	0	1-10	1-10	

		1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL		
H	1070	653 / 0	0 / 0	0 / 0	0 / 0	417 / 0	0 / 0		
N	1070	653 / 0	0 / 0	0 / 0	0 / 0	417 / 0	0 / 0		

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) H, N

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.00 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1 / 2 LENGTH OF G-H, B-M, C-L, C-J, D-J, F-I.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

		CHORDS			WEBS		
		MAX. FACTORED	FACTORED		MAX. FACTORED		
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	LC1 MAX	MAX. UNBRACED LENGTH	MEMB.	FORCE (LBS)	MAX CSI (LC)
FR-TO		FROM TO			FR-TO		
A- B	-1246 / 0	-78.0 -78.0	0.64 (1)	5.02	M- B	-151 / 32	0.09 (1)
B- C	-1277 / 0	-78.0 -78.0	0.53 (1)	5.00	B- L	0 / 815	0.13 (1)
C- D	-1274 / 0	-78.0 -78.0	0.53 (1)	5.00	L- C	-551 / 0	0.31 (1)
D- E	-1274 / 0	-78.0 -78.0	0.53 (1)	5.00	C- J	-5 / 2	0.00 (1)
E- F	-1274 / 0	-78.0 -78.0	0.53 (1)	5.00	J- D	-449 / 0	0.26 (1)
F- G	-885 / 0	-78.0 -78.0	0.49 (1)	5.78	J- F	0 / 683	0.11 (1)
H- G	-1453 / 0	0.0 0.0	0.59 (1)	5.43	I- F	-1124 / 0	0.64 (1)
N- A	-1456 / 0	0.0 0.0	0.19 (1)	6.77	I- G	0 / 1538	0.25 (1)
					A- M	0 / 855	0.19 (1)
N- M	0 / 0	-18.5 -18.5	0.17 (4)	10.00			
M- L	0 / 806	-18.5 -18.5	0.24 (4)	10.00			
L- K	0 / 1277	-18.5 -18.5	0.28 (1)	10.00			
K- J	0 / 1277	-18.5 -18.5	0.28 (1)	10.00			
J- I	0 / 885	-18.5 -18.5	0.27 (4)	10.00			
I- H	0 / 0	-18.5 -18.5	0.18 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 21.0 PSF
DL = 6.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.4 PSF
TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF CBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.06")
ALLOWABLE DEFL.(TL)= L/360 (1.04")
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.13")

CSI: TC=0.64/1.00 (A-B:1) , BC=0.28/1.00 (J-L:1) , WB=0.64/1.00 (F-I:1) , SSI=0.23/1.00 (B-C:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

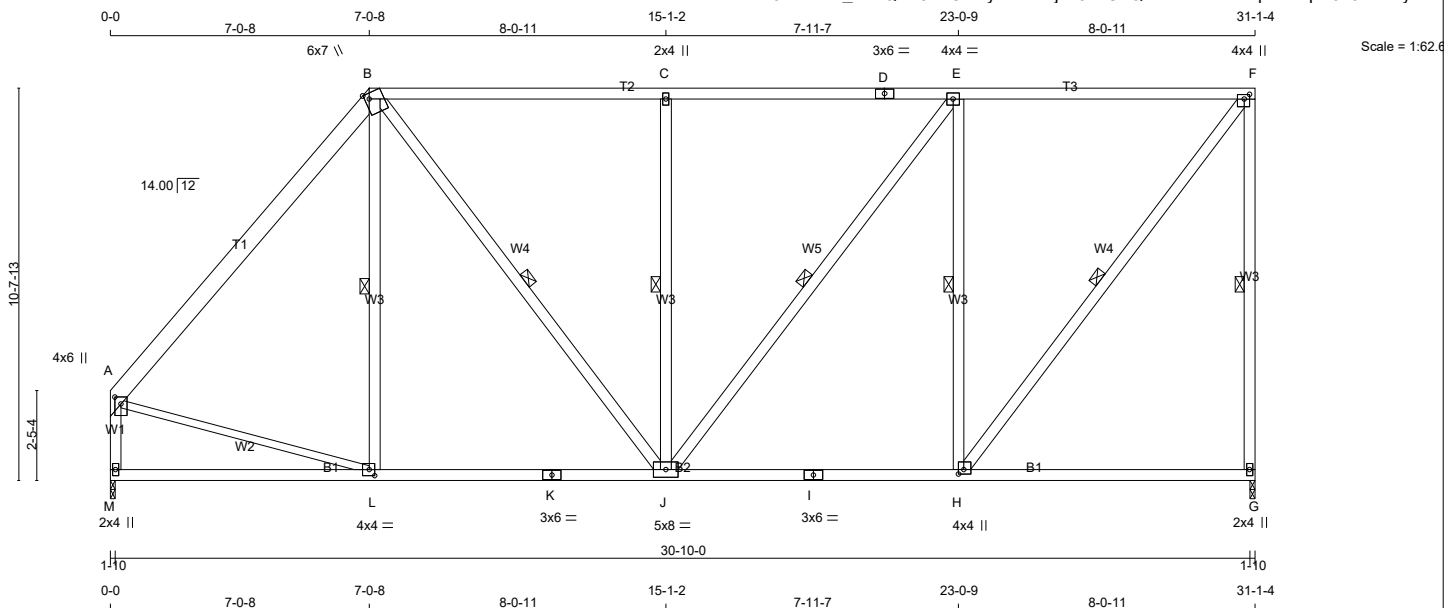
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES
PLATE GRIP(DRY) SHEAR SECTION
(PSI) (PLI) (PLI)
MAX MIN MAX MIN MAX MIN
MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.84 (B) (INPUT = 0.90)
JSI METAL= 0.47 (A) (INPUT = 1.00)



TOTAL WEIGHT = 180 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - B	2x6	DRY	No.2	SPF
B - D	2x4	DRY	No.2	SPF
D - F	2x4	DRY	No.2	SPF
G - F	2x4	DRY	No.2	SPF
M - A	2x4	DRY	No.2	SPF
M - K	2x4	DRY	No.2	SPF
K - I	2x4	DRY	No.2	SPF
I - G	2x4	DRY	No.2	SPF

ALL WEBS EXCEPT A - L	2x4	DRY	No.2	SPF
	2x3	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

J	TYPE	PLATES	W	LEN	Y	X
A	TMVw+p	MT20	4.0	6.0	2.25	2.00
B	TTWw+m	MT20	6.0	7.0	Edge	1.50
C	TMVw	MT20	2.0	4.0		
D	TS-t	MT20	3.0	6.0		
E	TMVw-t	MT20	4.0	4.0		
F	TMVw+p	MT20	4.0	4.0	1.50	1.75
G	BMV1+p	MT20	2.0	4.0		
H	BMVw+t	MT20	4.0	4.0	1.50	1.75
I	BS-t	MT20	3.0	6.0		
J	BMVwv-w	MT20	5.0	8.0		
K	BS-t	MT20	3.0	6.0		
L	BMVw-t	MT20	4.0	4.0	2.00	1.75
M	BMV1+p	MT20	2.0	4.0		

Edge - INDICATES REFERENCE CORNER OF PLATE
TOUCHES EDGE OF CHORD.

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS

	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION			INPUT BRG	REQRD BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
G	1500	0	1500	0	0	1-10	1-10
M	1500	0	1500	0	0	1-10	1-10

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
G	1070	653 / 0	0 / 0	0 / 0	0 / 0	417 / 0	0 / 0
M	1070	653 / 0	0 / 0	0 / 0	0 / 0	417 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) G, M

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.55 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF F-G, B-L, B-J, C-J, E-J, E-H, F-H.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

C H O R D S				W E B S			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX. CSI (LC)	MAX. UNBRAC	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)
FR-TO		FROM	TO	LENGTH	FR-TO		
A-B	-1253 / 0	-78.0	-78.0	0.36 (1)	6.25	L-B	-60 / 90 0.03 (1)
B-C	-1180 / 0	-78.0	-78.0	0.83 (1)	4.57	B-J	0 / 602 0.10 (1)
C-D	-1181 / 0	-78.0	-78.0	0.83 (1)	4.55	J-C	-670 / 0 0.38 (1)
D-E	-1181 / 0	-78.0	-78.0	0.83 (1)	4.55	E-C	0 / 421 0.07 (1)
E-F	-924 / 0	-78.0	-78.0	0.79 (1)	5.05	H-E	-1020 / 0 0.58 (1)
G-F	-1441 / 0	0.0	0.0	0.82 (1)	5.44	H-F	0 / 1506 0.24 (1)
M-A	-1449 / 0	0.0	0.0	0.17 (1)	6.79	A-L	0 / 838 0.19 (1)
M-L	0 / 0	-18.5	-18.5	0.26 (4)	10.00		
L-K	0 / 808	-18.5	-18.5	0.34 (4)	10.00		
K-J	0 / 808	-18.5	-18.5	0.34 (4)	10.00		
J-I	0 / 924	-18.5	-18.5	0.38 (4)	10.00		
I-H	0 / 924	-18.5	-18.5	0.38 (4)	10.00		
H-G	0 / 0	-18.5	-18.5	0.29 (4)	10.00		

LATERAL BRACE(S) SHOWN SHALL BE
2X4 SPF#2



DESIGN CRITERIA

SPECIFIED LOADS:

TOP	CH.	LL	=	21.0	PSF
		DL	=	6.0	PSF
BOT	CH.	LL	=	0.0	PSF
		DL	=	7.4	PSF
TOTAL LOAD				=	34.4 PSF

TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE
OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF PART
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.05")
ALLOWABLE DEFL.(TL)= L/360 (1.04")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.13")

CSI: TC=0.83/1.00 (B-C:1), BC=0.38/1.00 (H-J:4),
WB=0.58/1.00 (E-H:1), SSI=0.29/1.00 (E-F:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES					
PLATE	GRIP(DRY)		SHEAR		SECTION
	(PSI)		(PLI)		(PLI)
	MAX	MIN	MAX	MIN	MAX MIN
MT20	650	371	1747	788	1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (H) (INPUT = 0.90)
JSI METAL= 0.49 (A) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336322	H153		2	JT 45147	E21104287(2)

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-t	MT20	5.0	8.0	1.75	2.50
C	TMWW-t	MT20	4.0	6.0	2.00	2.75
D	TTWW+m	MT20	5.0	6.0	1.75	1.50
E	TMW+w	MT20	2.0	4.0		
F	TS-t	MT20	3.0	6.0		
G	TMWW-t	MT20	4.0	4.0		
H	TMVW-t	MT20	3.0	5.0	1.50	2.00
I	BMVK1+p	MT20	6.0	9.0	Edge	3.00
J	BMWW-t	MT20	4.0	4.0	2.00	1.75
K	BS-t	MT20	4.0	6.0		
L	BMWWW-t	MT20	5.0	6.0		
M	BMWW-t	MT20	4.0	4.0		
N	BMWW+t	MT20	4.0	9.0		
O	BMV1+p	MT20	3.0	5.0		

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

NAIL VALUES

PLATE	GRIP(DRY)	SHEAR	SECTION
	(PSI)	(PLI)	(PLI)
	MAX MIN	MAX MIN	MAX MIN
MT20	650 371	1747 788	1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (H) (INPUT = 0.90)

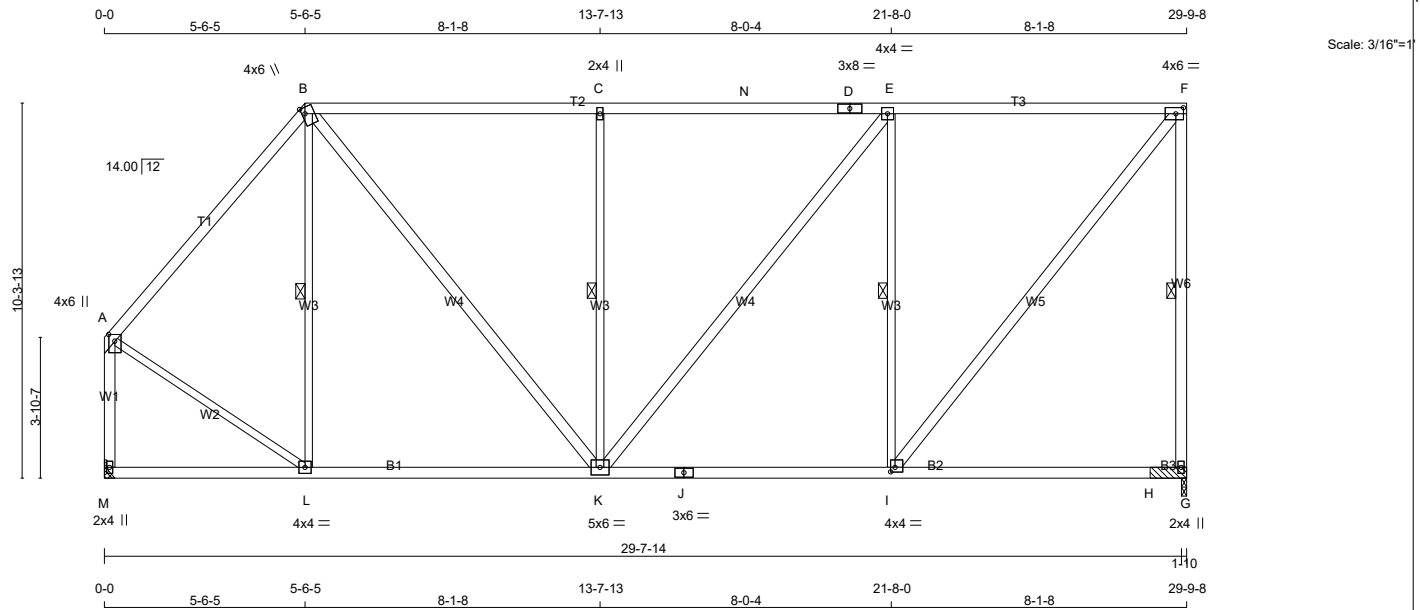
JSI METAL= 0.73 (N) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE
2X4 SPF#2



Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 10:14:34 2021 Page 1
ID:hd511hZTz bdeQoS817GKByhVxV-W3eZjDB bclK4Q3ITIRKaPTwt6d0q 5JnoNLC?yTY4



TOTAL WEIGHT = 5 X 159 = 797 lb

N. L. G. A. RULES				
CHORDS	SIZE		LUMBER	DESCR
A - B	2x4	DRY	No.2	SPF
B - D	2x4	DRY	No.2	SPF
D - F	2x4	DRY	No.2	SPF
G - F	2x4	DRY	No.2	SPF
M - A	2x4	DRY	No.2	SPF
M - J	2x4	DRY	No.2	SPF
J - G	2x4	DRY	No.2	SPF
ALL WEBS EXCEPT	2x3	DRY	No.2	SPF
B - K	2x4	DRY	No.2	SPF
K - E	2x4	DRY	No.2	SPF
I - F	2x4	DRY	No.2	SPF

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER
BEARINGS

	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION			INPUT BRG	REQRD BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
G	1545	0	1545	0	0	1-10	1-10 & BLOCK
M	1511	0	1511	0	0	MECHANICAL	

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT M. MINIMUM BEARING LENGTH AT JOINT M = 1-10.

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
G	1111	625 / 0	0 / 0	0 / 0	0 / 0	486 / 0	0 / 0
M	1084	625 / 0	0 / 0	0 / 0	0 / 0	459 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) G

2x4 DRY SPF No.2 BEARING BLOCK 12" LONG AT JT. G ATTACHED TO FRONT SIDE WITH 2 ROWS OF (0.122"x3") SPIRAL NAILS SPACED 3" C.C. 8 NAILS TOTAL.

BRACING

FOR SECTION B-F, MAX. PURLIN SPACING = 2.00 FT.
FOR OTHER SECTIONS, TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.43 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF F-G, B-L, C-K, E-I.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

C H O R D S					W E B S				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1	MAX. CSI (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)	
FR-TO		FROM	TO			FR-TO			
A-B	-1082 / 0	-78.0	-78.0	0.52 (1)	5.43	L-B	-294 / 0	0.22 (1)	
B-C	-1199 / 0	-85.5	-85.5	0.93 (1)	2.00	B-K	0 / 794	0.13 (1)	
C-N	-1200 / 0	-85.5	-85.5	0.93 (1)	2.00	K-C	-751 / 0	0.55 (1)	
N-D	-1200 / 0	-85.5	-85.5	0.93 (1)	2.00	K-E	0 / 356	0.06 (1)	
D-E	-1200 / 0	-85.5	-85.5	0.93 (1)	2.00	I-E	-1037 / 0	0.76 (1)	
E-F	-977 / 0	-85.5	-85.5	0.89 (1)	2.00	I-F	0 / 1552	0.25 (1)	
G-F	-1485 / 0	0.0	0.0	0.78 (1)	5.38	A-L	0 / 826	0.19 (1)	
M-A	-1475 / 0	0.0	0.0	0.38 (1)	6.74				
M-L	0 / 0	-18.5	-18.5	0.21 (4)	10.00				
L-K	0 / 698	-18.5	-18.5	0.29 (4)	10.00				
K-J	0 / 977	-18.5	-18.5	0.40 (4)	10.00				
J-I	0 / 977	-18.5	-18.5	0.40 (4)	10.00				
I-H	0 / 0	-18.5	-18.5	0.29 (4)	10.00				
H-G	0 / 0	-18.5	-18.5	0.29 (4)	10.00				

LATERAL BRACE(S) SHOWN SHALL BE
2X4 SPF#2



DESIGN CRITERIA

SPECIFIED LOADS:

TOP	CH.	LL	=	21.0	PSF
		DL	=	6.0	PSF
BOT	CH.	LL	=	0.0	PSF
		DL	=	7.4	PSF
TOTAL LOAD			=	34.4	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON
PIGGYBACK TRUSS WITH SLOPES OF 6.00/12
AND -6.00/12 AND RESPECTIVE HEEL HEIGHTS
OF 0-0 AND 0-0 AND AN ADDITIONAL DEAD
LOAD OF 3.0 P.S.F.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF PART
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.99")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.05")
ALLOWABLE DEFL.(TL)= L/360 (0.99")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.14")

CSI: TC=0.93/1.00 (C-E:1), BC=0.40/1.00 (I-K:4),
WB=0.76/1.00 (E-I:1), SSI=0.32/1.00 (E-F:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

PLATE	GRIP(DRY)		SHEAR		SECTION	
	(PSI)	(PSI)	(PLI)	(PLI)	(PLI)	(PLI)
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

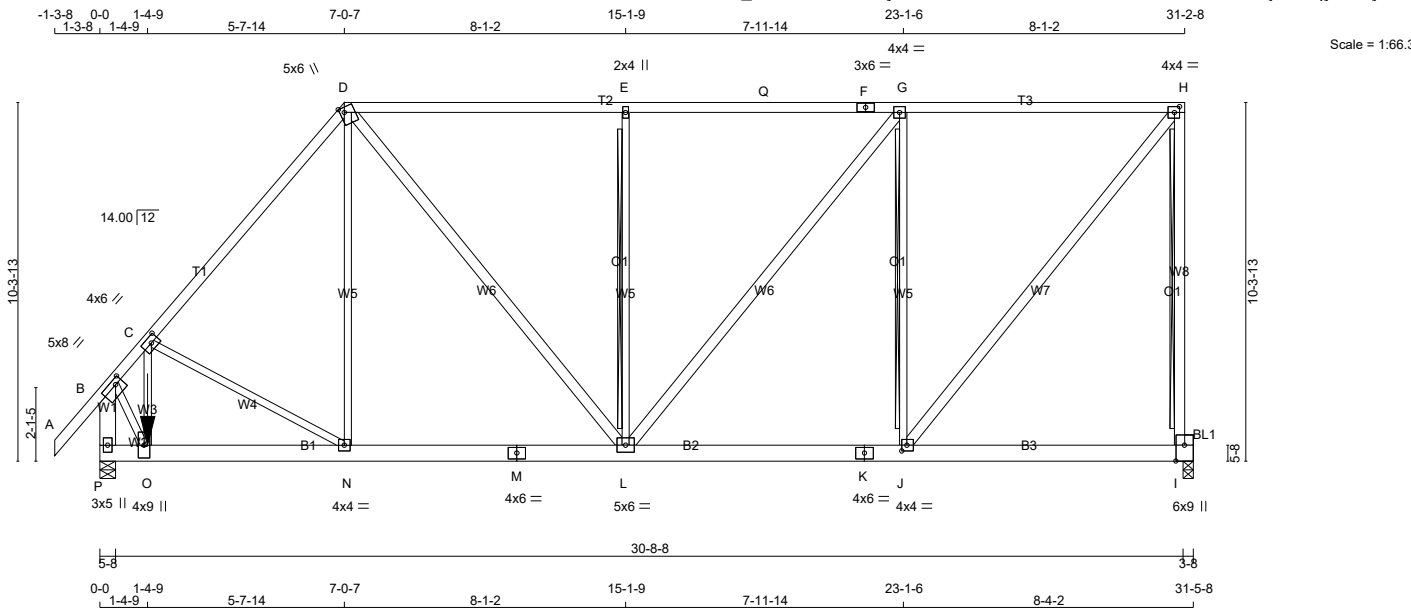
JSI GRIP= 0.90 (F) (INPUT = 0.90)
JSI METAL= 0.42 (A) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336322	H155		2	TRUSS DESC. JT 45147	E21104289

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 10:16:01 2021 Page 1

ID:hd511hZTz_bdeQoS817GKByhVxV-ToOSzzEY6KGO0nDU34VkcMzoOBMNjL46oqySmSYTY3S



LUMBER N. L. G. A. RULES			
CHORDS	SIZE	LUMBER	DESCR.
A - D	2x4	DRY No.2	SPF
D - F	2x4	DRY No.2	SPF
F - H	2x4	DRY No.2	SPF
I - H	2x4	DRY No.2	SPF
P - B	2x6	DRY No.2	SPF
P - M	2x6	DRY No.2	SPF
M - K	2x6	DRY No.2	SPF
K - I	2x6	DRY No.2	SPF

BEARING BLOCKS			
BL1	2x4	DRY No.2	SPF
ALL WEBS EXCEPT			
D - L	2x4	DRY No.2	SPF
L - G	2x4	DRY No.2	SPF
J - H	2x4	DRY No.2	SPF

DRY: SEASONED LUMBER.

DESIGN CONSISTS OF 2 TRUSSES BUILT SEPARATELY THEN FASTENED TOGETHER AS FOLLOWS:

CHORDS #ROWS	SURFACE SPACING (IN)	LOAD(PLF)
TOP CHORDS : (0.122"x3") SPIRAL NAILS		
A - D	1	12
D - F	1	12
F - H	1	12
H - I	1	12
P - B	2	12
BOTTOM CHORDS : (0.122"x3") SPIRAL NAILS		
P - M	2	5
M - K	2	12
K - I	2	12
WEBS : (0.122"x3") SPIRAL NAILS		
C - O	1	2
2x3	1	6
2x4	1	6

NAILS TO BE DRIVEN FROM ONE SIDE ONLY.

GIRDER NAILING ASSUMES NAILED HANGERS ARE FASTENED WITH MIN. 3-0 INCH NAILS.

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS		FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT	REQRD
JT	VERT	HORZ	DOWN	HORZ	UPLIFT
I	1837	0	1837	0	3-8
P	6539	0	6539	0	5-8

UNFACTORED REACTIONS		1ST LCASE	MAX./MIN. COMPONENT REACTIONS		
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND
I	1319	752 / 0	0 / 0	0 / 0	0 / 0
P	4666	2827 / 0	0 / 0	0 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) I, P

BRACING
FOR SECTION D-H, MAX. PURLIN SPACING = 2.00 FT.
FOR OTHER SECTIONS, TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.58 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

2x4 DRY SPF No.2 T-BRACE AT H-I, E-L, G-J

FASTEN T AND I-BRACES TO NARROW EDGE OF WEB WITH ONE ROW PER PLY OF 3" COMMON WIRE NAILS @ 6" O.C. WITH 3" MINIMUM END DISTANCE. BRACE MUST COVER 90% OF WEB LENGTH.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING
TOTAL LOAD CASES: (4)

CHORDS		WEBS	
MEMB.	FORCE (LBS)	MEMB.	FORCE (LBS)
FR-TO	FROM TO	FR-TO	FROM TO
A-B	0 / 42	O-C	0 / 1473
B-C	-3879 / 0	C-N	-1351 / 0
C-D	-2193 / 0	N-D	0 / 879
D-E	-1657 / 0	D-L	0 / 387
E-Q	-1657 / 0	L-E	-746 / 0
Q-F	-1657 / 0	L-G	0 / 738
F-G	-1657 / 0	J-G	-1331 / 0
G-H	-1195 / 0	J-H	0 / 1934
H-I	-1778 / 0	B-O	0 / 4027
P-B	-6288 / 0		

P-O	0 / 0	-64.0	-64.0	0.11 (1)	10.00
O-N	0 / 2578	-18.5	-18.5	0.27 (1)	10.00
N-M	0 / 1412	-18.5	-18.5	0.14 (1)	10.00
M-L	0 / 1412	-18.5	-18.5	0.14 (1)	10.00
L-K	0 / 1195	-18.5	-18.5	0.13 (4)	10.00
K-J	0 / 1195	-18.5	-18.5	0.13 (4)	10.00
J-I	-26 / 0	-18.5	-18.5	0.07 (4)	6.25

FACTORED CONCENTRATED LOADS (LBS)		JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
O	1-4-9	-4751	-4751	---	FRONT	VERT	TOTAL	---	C1		

CONNECTION REQUIREMENTS

1) C1: A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED.

DESIGN CRITERIA

*** SPECIAL LOADS ANALYSIS ***
GEOMETRY AND/OR BASIC LOADS CHANGED BY USER.
LOADS WERE DERIVED FROM USER INPUT
NO FURTHER MODIFICATIONS WERE MADE

SPECIFIED LOADS:		TOP CH.	LL =	21.0	PSF
			DL =	6.0	PSF
		BOT CH.	LL =	0.0	PSF
			DL =	7.4	PSF
		TOTAL LOAD	=	34.4	PSF

SPACING = 24.0 IN./C

LOADING IN FLAT SECTION BASED ON PIGGYBACK TRUSS WITH SLOPES OF 6.00/12 AND -6.00/12 AND RESPECTIVE HEEL HEIGHTS OF 0-0 AND 0-0 AND AN ADDITIONAL DEAD LOAD OF 3.0 P.S.F.

GIRDER TYPE: CPrimeHip
SIDE SETBACK = 0-0
END SETBACK = 11-10-0
END WALL WIDTH = 0-0
CORNER FRAMING TYPE: CONVENTIONAL
END JACK TYPE: CONVENTIONAL
APPLIED TO FRONT SIDE
- ADDTL LOADS BASED ON 55 % OF GSL.
LOADS APPLIED TO FIRST 1-4-9 OF SPAN MEASURED FROM THE LEFT.

*** NON STANDARD GIRDER ***
ADDTL USER-DEFINED LOADS APPLIED TO ALL LOAD CASES.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.03")
ALLOWABLE DEFL.(TL)= L/360 (1.04")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.06")

CSI: TC=0.83/1.00 (H-I:1), BC=0.27/1.00 (N-O:1), WB=0.74/1.00 (G-J:1), SSI=0.18/1.00 (G-H:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00
COMP=1.00 SHEAR=1.00 TENS= 1.00

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE RIGHT HEEL ONLY

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336322	H155		2	JT 45147	E21104289(2)

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 10:16:01 2021 Page 2

ID:hd511hZTz_bdeQoS817GKByhVxV-ToOSzzEY6KGO0nDU34VkcmZoOBMNjL46oqySmSyTY3S

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-t	MT20	5.0	8.0	1.75	2.50
C	TMWW-t	MT20	4.0	6.0	2.00	2.75
D	TTWW+m	MT20	5.0	6.0	1.75	1.50
E	TMW+w	MT20	2.0	4.0		
F	TS-t	MT20	3.0	6.0		
G	TMWW-t	MT20	4.0	4.0		
H	TMVW-t	MT20	4.0	4.0	2.00	1.75
I	BMVK1+p	MT20	6.0	9.0	Edge	3.00
J	BMWW-t	MT20	4.0	4.0	2.00	1.75
K	BS-t	MT20	4.0	6.0		
L	BMWWW-t	MT20	5.0	6.0		
M	BS-t	MT20	4.0	6.0		
N	BMWW-t	MT20	4.0	4.0		
O	BMWW+t	MT20	4.0	9.0		
P	BMV1+p	MT20	3.0	5.0		

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

NAIL VALUES
PLATE GRIP(DRY) SHEAR SECTION
(PSI) (PLI) (PLI)
MAX MIN MAX MIN MAX MIN
MT20 650 371 1747 788 1987 1873

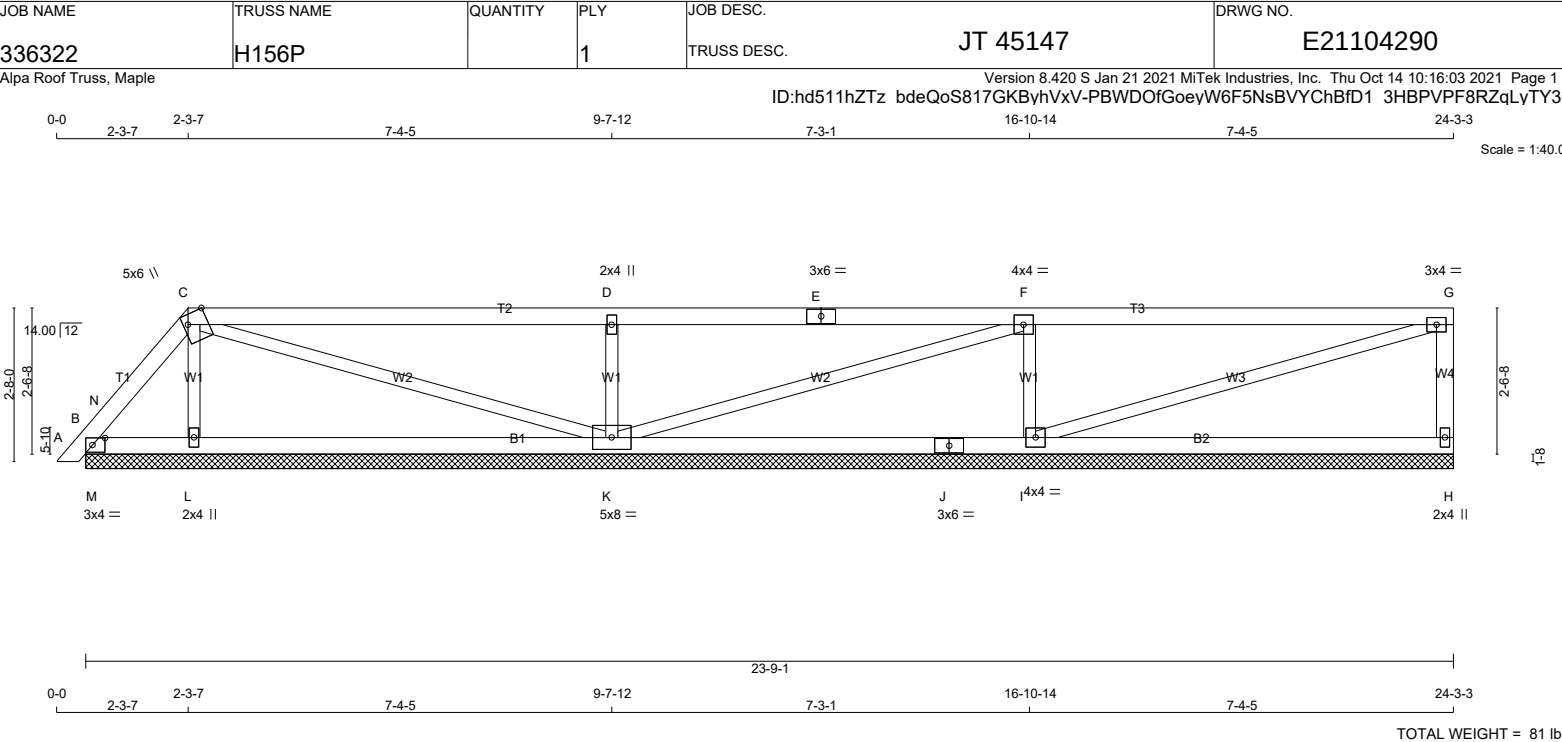
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

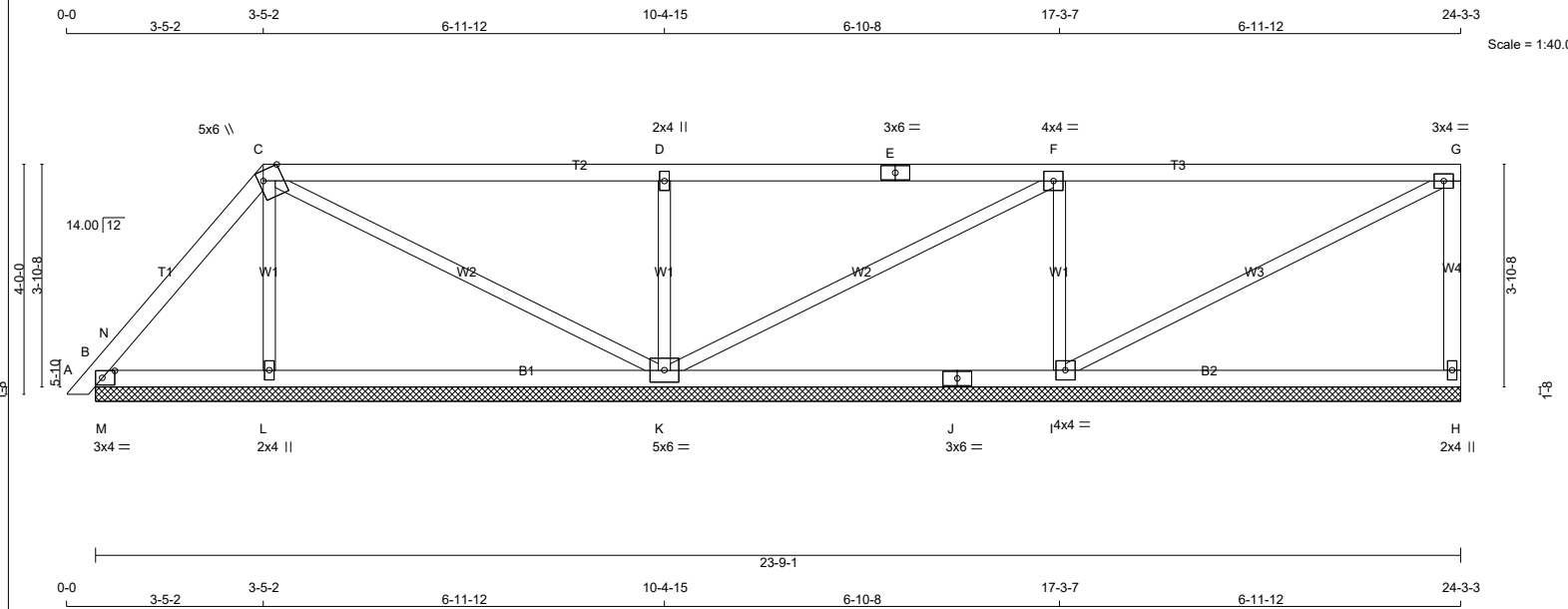
JSI GRIP= 0.86 (B) (INPUT = 0.90)
JSI METAL= 0.74 (O) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE
2X4 SPF#2





LUMBER				DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER								DESIGN CRITERIA				[M]
N. L. G. A. RULES				BEARINGS								SPECIFIED LOADS:				
CHORDS	SIZE	LUMBER	DESCR.	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG	TOP CH.	LL	PSF				
A - C	2x4	DRY	No.2	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	DL	PSF				
C - E	2x4	DRY	No.2	H	287	0	287	0	0	23-9-1 (8-9-1)	1-8					
E - G	2x4	DRY	No.2	B	131	0	131	0	0	23-9-1 (8-9-1)	1-8					
H - G	2x4	DRY	No.2	L	358	0	358	0	0	23-9-1 (8-9-1)	1-8					
B - J	2x4	DRY	No.2	K	776	0	776	0	0	23-9-1 (8-9-1)	1-8					
J - H	2x4	DRY	No.2	I	771	0	771	0	0	23-9-1 (8-9-1)	1-8					
ALL WEBS	2x3	DRY	No.2	VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH								LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM				
DRY: SEASONED LUMBER.				UNFACTORED REACTIONS								THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015				
PLATES (table is in inches)				TOTAL LOAD CASES: (4)								THIS DESIGN COMPLIES WITH:				
JT	TYPE	PLATES	W	LEN	Y	X	TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.									
B	TMB1-l	MT20	3.0	4.0	1.50	2.50	MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.									
C	TTWW+m	MT20	5.0	6.0	Edge	4.00	ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.									
D	TMW+w	MT20	2.0	4.0			LOADING									
E	TS-t	MT20	3.0	6.0			CHORDS									
F	TMWW-t	MT20	4.0	4.0			MAX. FACTORED									
G	TMVW-t	MT20	3.0	4.0			VERT. LOAD									
H	BMV1+p	MT20	2.0	4.0			LC1									
I	BMWWW1-t	MT20	5.0	8.0			MAX									
J	BS-t	MT20	3.0	6.0			MAX. FACTORED									
K	BMWWW1-t	MT20	5.0	8.0			MEMB.									
L	BMW1+w	MT20	2.0	4.0			FORCE									
Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.				TOTAL LOAD CASES: (4)				COMPANION LIVE LOAD FACTOR = 1.00								



LUMBER					
N. L. G. A. RULES					
CHORDS		SIZE	LUMBER	DESCR.	
A - C	2x4	DRY	No.2	SPF	
C - E	2x4	DRY	No.2	SPF	
E - G	2x4	DRY	No.2	SPF	
H - G	2x4	DRY	No.2	SPF	
B - J	2x4	DRY	No.2	SPF	
J - H	2x4	DRY	No.2	SPF	
ALL WEBS		2x3	DRY	No.2	SPF
DRY: SEASONED LUMBER.					

PLATES (table is in inches)						
JT	TYPE	PLATES	W	LEN	Y	X
B	TMB1-I	MT20	3.0	4.0	1.50	2.50
C	TTWW+tm	MT20	5.0	6.0	Edge	4.00
D	TMW+w	MT20	2.0	4.0		
E	TS-t	MT20	3.0	6.0		
F	TMWW-t	MT20	4.0	4.0		
G	TMW-t	MT20	3.0	4.0		
H	BMV1+p	MT20	2.0	4.0		
I	BMWW1-t	MT20	4.0	4.0		
J	BS-t	MT20	3.0	6.0		
K	BMWWWW1-t	MT20	5.0	6.0		
L	BMW1+w	MT20	2.0	4.0		

Edge - INDICATES REFERENCE CORNER OF PLATE
TOUCHES EDGE OF CHORD.

LATERAL BRACE(S) SHOWN SHALL BE
2X4 SPF#2



DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQ'D BRG
	VERT	HORZ	DOWN	HORZ	UPLIFT IN-SX	IN-SX
JT	279	0	279	0	23-9-1	(8-9-1)-8
B	222	0	222	0	23-9-1	(8-9-1)-8
L	334	0	334	0	23-9-1	(8-9-1)-8
K	779	0	779	0	23-9-1	(8-9-1)-8
I	708	0	708	0	23-9-1	(8-9-1)-8

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX/MIN. COMPONENT REACTIONS					
		SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
H	199	123 / 0	0 / 0	0 / 0	0 / 0	76 / 0	0 / 0
B	155	116 / 0	0 / 0	0 / 0	0 / 0	39 / 0	0 / 0
L	243	120 / 0	0 / 0	0 / 0	0 / 0	123 / 0	0 / 0
K	553	352 / 0	0 / 0	0 / 0	0 / 0	201 / 0	0 / 0
I	506	303 / 0	0 / 0	0 / 0	0 / 0	202 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) H, B, L, K, I

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX LOAD CSI (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
FR-TO		FROM TO			FR-TO		
A-B	0 / 10	-78.0	-78.0 0.01 (1)	10.00	L-C	-202 / 0	0.05 (1)
B-N	0 / 78	-78.0	-78.0 0.07 (1)	10.00	C-K	-86 / 0	0.11 (1)
N-C	-102 / 0	-78.0	-78.0 0.08 (1)	6.25	K-D	-594 / 0	0.14 (1)
C-D	0 / 24	-78.0	-78.0 0.51 (1)	10.00	K-F	-47 / 0	0.06 (1)
D-E	0 / 24	-78.0	-78.0 0.51 (1)	10.00	I-F	-572 / 0	0.13 (1)
E-F	0 / 24	-78.0	-78.0 0.51 (1)	10.00	I-G	0 / 20	0.00 (1)
F-G	-18 / 0	-78.0	-78.0 0.51 (1)	6.25	M-N	-322 / 0	0.00 (1)
H-G	-228 / 0	0.0	0.0 0.05 (1)	7.81			
B-M	0 / 59	-18.5	-18.5 0.08 (1)	10.00			
M-L	0 / 59	-18.5	-18.5 0.14 (4)	10.00			
L-K	0 / 53	-18.5	-18.5 0.17 (4)	10.00			
K-J	0 / 18	-18.5	-18.5 0.22 (4)	10.00			
J-I	0 / 18	-18.5	-18.5 0.22 (4)	10.00			
I-H	0 / 0	-18.5	-18.5 0.22 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP	CH.	LL =	21.0	PSF
		DL =	6.0	PSF
BOT	CH.	LL =	0.0	PSF
		DL =	7.4	PSF
TOTAL LOAD		=	34.4	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE
OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF PART
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

CSI: TC=0.51/1.00 (D-F:1), BC=0.22/1.00 (I-K:4),
WB=0.14/1.00 (D-K:1), SSI=0.25/1.00 (F-G:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

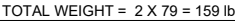
PLATE	GRIP(DRY) (PSI)		SHEAR (PLI)		SECTION (PLI)	
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.78 (G) (INPUT = 0.90)
JSI METAL= 0.20 (E) (INPUT = 1.00)

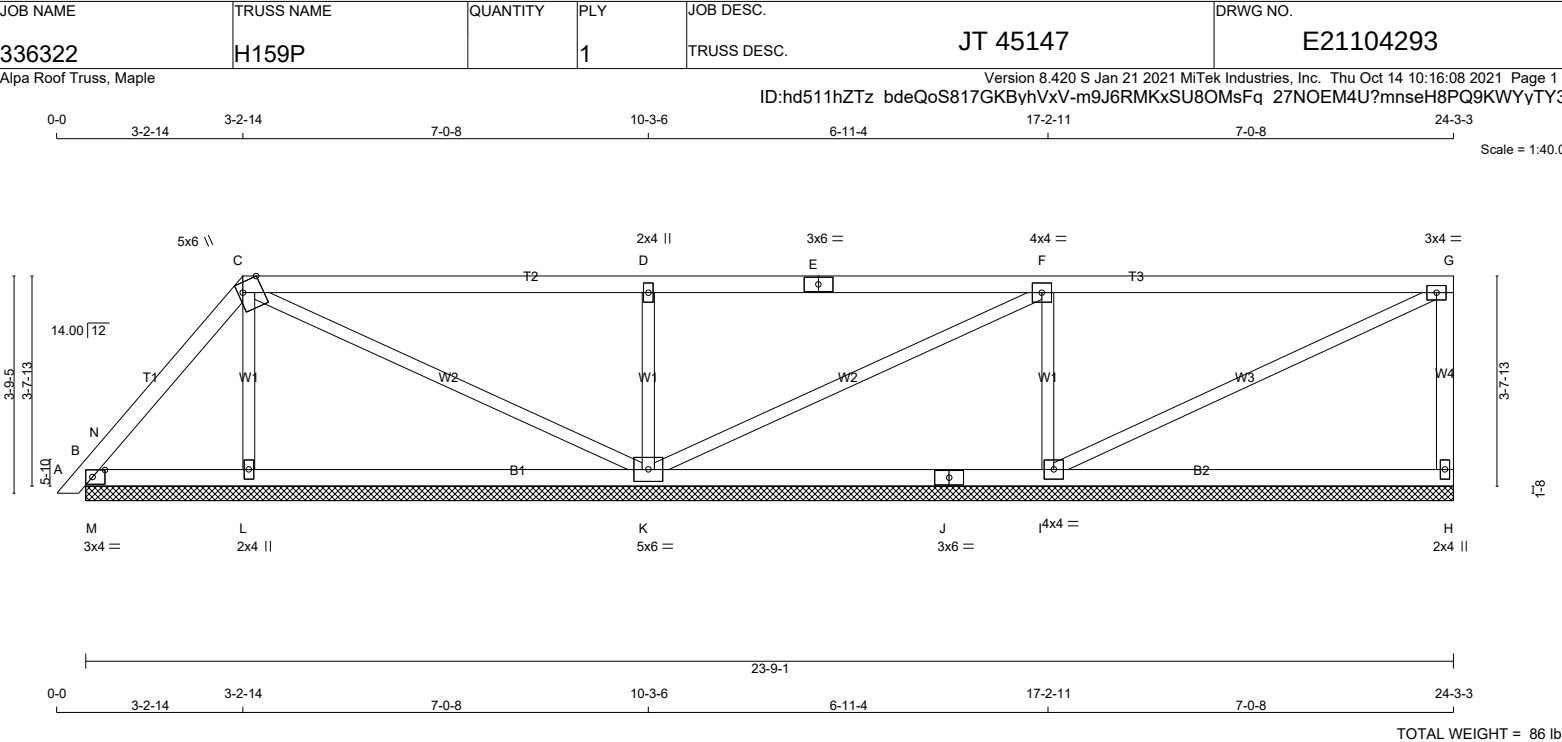
Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 10:16:06 2021 Page 1



J	TYPE	PLATES	W	LEN	Y	X
B	TMB1-l	MT20	3.0	4.0	1.50	2.50
C	TTWW+m	MT20	5.0	6.0	Edge 4.00	
D	TMW+v	MT20	2.0	4.0		
E	TS-t	MT20	3.0	6.0		
F	TMWW-t	MT20	4.0	4.0		
G	TMV-t	MT20	3.0	4.0		
H	BMV1+p	MT20	2.0	4.0		
I	BMWW1-t	MT20	4.0	4.0		
J	BS-t	MT20	3.0	6.0		
K	BMWWV1-t	MT20	5.0	8.0		
L	BMV1+w	MT20	2.0	4.0		

CHORDS				WEBBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. CS1 (LC)	MAX. UNBRAC	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CS1 (LC)
FR-TO		FROM TO		LENGTH	FR-TO		
A-B	0 / 10	-78.0	-78.0 0.00 (1)	10.00	L-C	-218 / 0	0.02 (1)
B-N	0 / 60	-78.0	-78.0 0.02 (4)	10.00	C-K	-32 / 0	0.02 (1)
N-C	-68 / 0	-78.0	-78.0 0.01 (4)	6.25	K-D	-632 / 0	0.05 (1)
C-D	0 / 6	-78.0	-78.0 0.29 (1)	10.00	K-F	-13 / 0	0.01 (1)
D-E	0 / 6	-78.0	-78.0 0.29 (1)	10.00	I-F	-628 / 0	0.05 (1)
E-F	0 / 6	-78.0	-78.0 0.29 (1)	10.00	I-G	0 / 7	0.00 (1)
F-G	-7 / 0	-78.0	-78.0 0.29 (1)	10.00	M-N	-158 / 0	0.00 (1)
H-G	-234 / 0	0.0	0.0 0.01 (1)	7.81			
B-M	0 / 37	-18.5	-18.5 0.02 (1)	10.00			
M-L	0 / 37	-18.5	-18.5 0.08 (4)	10.00			
L-K	0 / 25	-18.5	-18.5 0.09 (4)	10.00			
K-J	0 / 7	-18.5	-18.5 0.12 (4)	10.00			
J-I	0 / 7	-18.5	-18.5 0.12 (4)	10.00			
I-H	0 / 0	-18.5	-18.5 0.12 (4)	10.00			

JSI GRIP= 0.85 (G) (INPUT = 0.90)
JSI METAL= 0.13 (E) (INPUT = 1.00)



LUMBER				DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER				DESIGN CRITERIA			
N. L. G. A. RULES				BEARINGS				SPECIFIED LOADS:			
CHORDS	SIZE	LUMBER	DESCR.	FACTORED GROSS REACTION				TOP CH. LL = 21.0 PSF			
A - C	2x4	DRY	No.2	JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
C - E	2x4	DRY	No.2	H	280	0	280	0	0	23-9-1 (8-9-1)	1-8
E - G	2x4	DRY	No.2	B	208	0	208	0	0	23-9-1 (8-9-1)	1-8
H - G	2x4	DRY	No.2	L	338	0	338	0	0	23-9-1 (8-9-1)	1-8
B - J	2x4	DRY	No.2	K	777	0	777	0	0	23-9-1 (8-9-1)	1-8
J - H	2x4	DRY	No.2	I	720	0	720	0	0	23-9-1 (8-9-1)	1-8
ALL WEBS	2x3	DRY	No.2	VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH				LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM			
DRY: SEASONED LUMBER.				UNFACTORED REACTIONS				THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015			
				1ST LCASE MAX./MIN. COMPONENT REACTIONS				THIS DESIGN COMPLIES WITH:			
				JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
				H	199	123 / 0	0 / 0	0 / 0	0 / 0	76 / 0	0 / 0
				B	144	110 / 0	0 / 0	0 / 0	0 / 0	34 / 0	0 / 0
				L	246	122 / 0	0 / 0	0 / 0	0 / 0	125 / 0	0 / 0
				K	551	350 / 0	0 / 0	0 / 0	0 / 0	201 / 0	0 / 0
				I	514	309 / 0	0 / 0	0 / 0	0 / 0	205 / 0	0 / 0
				BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) H, B, L, K, I				DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS= 1.10			
				BRACING				(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD			
				TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.				CSI: TC=0.52/1.00 (C-D:1) , BC=0.22/1.00 (I-K:4) , WB=0.13/1.00 (D-K:1) , SSI=0.26/1.00 (F-G:1)			
				MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.				COMPANION LIVE LOAD FACTOR = 1.00			
				ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.				TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .			
				LOADING				NAIL VALUES			
				TOTAL LOAD CASES: (4)				PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI)			
				CHORDS				MAX MIN MAX MIN MAX MIN			
				MEMB. MAX. FACTORED FORCE (LBS)				MT20 650 371 1747 788 1987 1873			
				VERT. LOAD LC1 MAX. FACTORED (PLF) CSI (LC)				PLATE PLACEMENT TOL. = 0.250 inches			
				FROM TO				PLATE ROTATION TOL. = 5.0 Deg.			
				MAX. UNBRACED LENGTH				JSI GRIP= 0.79 (G) (INPUT = 0.90)			
				FR-TO				JSI METAL= 0.21 (E) (INPUT = 1.00)			
				A- B 0 / 10							
				B- N 0 / 65							
				N- C -97 / 0							
				C- D 0 / 22							
				D- E 0 / 22							
				E- F 0 / 22							
				F- G -16 / 0							
				H- G -228 / 0							
				B- M 0 / 56							
				M- L 0 / 56							
				L- K 0 / 49							
				K- J 0 / 16							
				J- I 0 / 16							
				I- H 0 / 0							

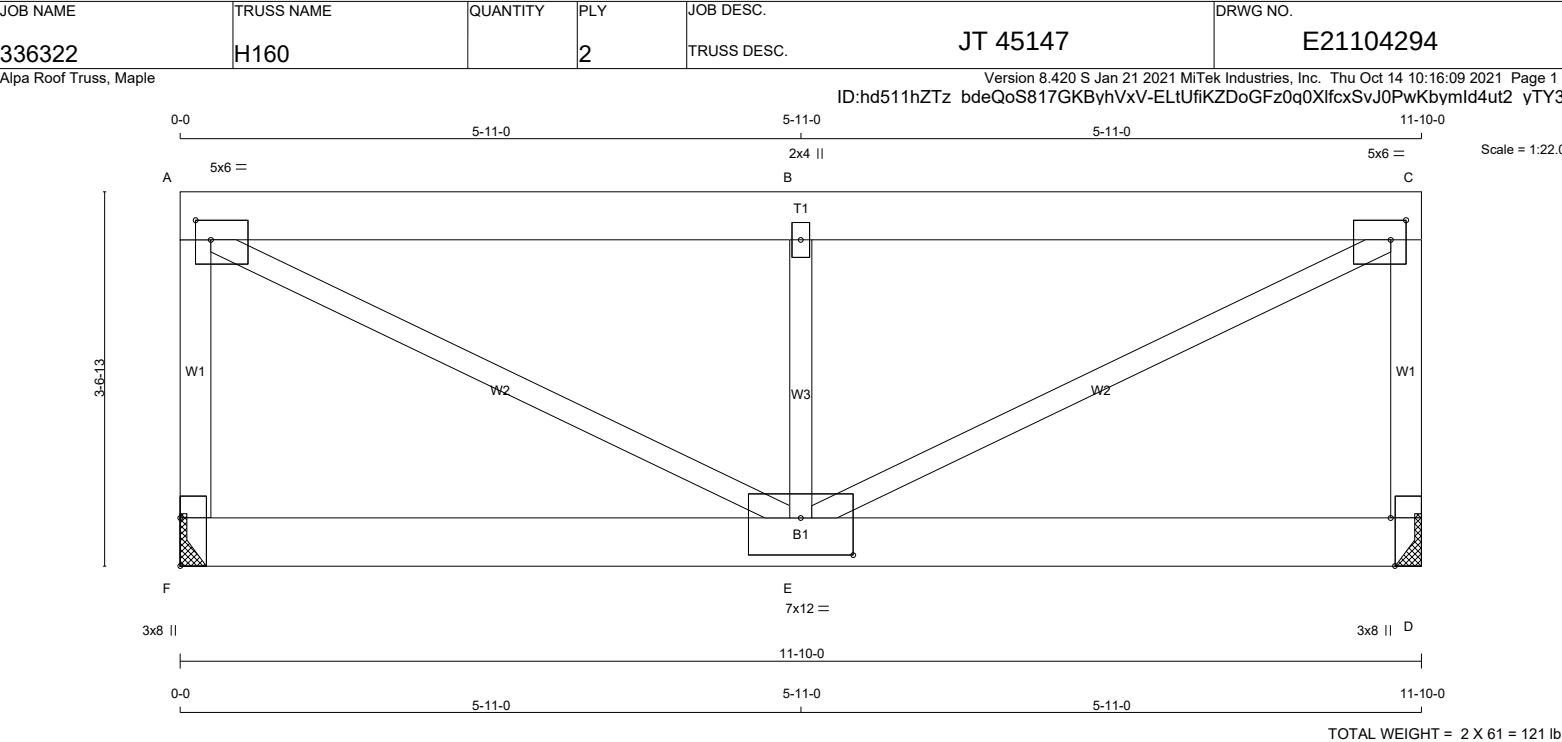
PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMB1-I	MT20	3.0	4.0	1.50	2.50
C	TTWW+m	MT20	5.0	6.0	Edge	4.00
D	TMW+w	MT20	2.0	4.0		
E	TS-t	MT20	3.0	6.0		
F	TMWW-t	MT20	4.0	4.0		
G	TMVW-t	MT20	3.0	4.0		
H	BMV1+p	MT20	2.0	4.0		
I	BMWW1-t	MT20	4.0	4.0		
J	BS-t	MT20	3.0	6.0		
K	BMWWW1-t	MT20	5.0	6.0		
L	BMW1+w	MT20	2.0	4.0		

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

LATERAL BRACE(S) SHOWN SHALL BE
 2X4 SPF#2





LUMBER			
N. L. G. A. RULES			
CHORDS	SIZE	LUMBER	DESCR.
F - A	2x4	DRY No.2	SPF
A - C	2x6	DRY No.2	SPF
D - C	2x4	DRY No.2	SPF
F - D	2x6	DRY No.2	SPF
ALL WEBS	2x3	DRY No.2	SPF
DRY: SEASONED LUMBER.			

DESIGN CONSISTS OF 2 TRUSSES BUILT SEPARATELY THEN FASTENED TOGETHER AS FOLLOWS:

CHORDS #ROWS	SURFACE SPACING (IN)	LOAD(PLF)
TOP CHORDS : (0.122"x3") SPIRAL NAILS		
F- A	12	TOP
C- D	12	TOP
A- C	12	SIDE(14.6)
BOTTOM CHORDS : (0.122"x3") SPIRAL NAILS		
F- D	8	SIDE(335.1)
WEBS : (0.122"x3") SPIRAL NAILS		
2x3	6	

NAILS TO BE DRIVEN FROM ONE SIDE ONLY.

TOP - COMPONENTS ARE LOADED FROM THE TOP AND MUST BE PLACED ON TOP EDGE OF ALL PLIES FOR THE LOAD TO BE TRANSFERRED TO EACH PLY.

SIDE - PLF SHOWN IS THE EQUIVALENT UDL APPLIED TO ONE SIDE THAT THE CORRESPONDING NAILING PATTERN SHALL BE CAPABLE OF TRANSFERING. REMAINING PLF MUST BE APPLIED ON THE OPPOSITE SIDE OR ON THE TOP.

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
A	TMVW-t	MT20	5.0	6.0	2.25 1.75
B	TMW+w	MT20	2.0	4.0	
C	TMVW-t	MT20	5.0	6.0	2.25 1.75
D	BMV1+t	MT20	3.0	8.0	Edge 0.50
E	BMWWW-t	MT20	7.0	12.0	4.25 6.00
F	BMV1+t	MT20	3.0	8.0	5.50

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS		FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG		REQRD BRG	
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	IN-SX	IN-SX
F	4750	0	4750	0	0	MECHANICAL			
D	4750	0	4750	0	0	MECHANICAL			

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT F, D. MINIMUM BEARING LENGTH AT JOINT F = 3-0, JOINT D = 3-0.

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS							
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL		
F	3387	2067 / 0	0 / 0	0 / 0	0 / 0	1320 / 0	0 / 0		
D	3387	2067 / 0	0 / 0	0 / 0	0 / 0	1320 / 0	0 / 0		

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.86 FT. MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
FR-TO		FROM	TO		FR-TO		
F- A	-3139 / 0	0.0	0.0 0.28 (1)	6.54	A- E	0 / 6095	0.75 (1)
A- B	-5396 / 0	-107.2	-107.2 0.21 (1)	4.86	E- B	-662 / 0	0.07 (1)
B- C	-5396 / 0	-107.2	-107.2 0.21 (1)	4.86	E- C	0 / 6095	0.75 (1)
D- C	-3139 / 0	0.0	0.0 0.28 (1)	6.54			
F- E	0 / 0	-695.7	-695.7 0.97 (1)	10.00			
E- D	0 / 0	-695.7	-695.7 0.97 (1)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:			
TOP CH.	LL	= 21.0 PSF	
	DL	= 6.0 PSF	
BOT CH.	LL	= 0.0 PSF	
	DL	= 7.4 PSF	
TOTAL LOAD	=	34.4 PSF	

SPACING = 24.0 IN./C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

GIRDER TYPE: CStdGirder
START DISTANCE = 0-0
START SPAN CARRIED = 29-9-8
END DISTANCE = 11-10-0
END SPAN CARRIED = 29-9-8
END WALL WIDTH = 0-0
APPLIED TO FRONT SIDE OF BOTTOM CHORD.
- ADDTL LOADS BASED ON 55 % OF GSL.

GIRDER TYPE: CPrimeHip
SIDE SETBACK = 0-0
END SETBACK = 3-6-0
END WALL WIDTH = 0-0
CORNER FRAMING TYPE: CONVENTIONAL
END JACK TYPE: CONVENTIONAL
APPLIED TO BACK SIDE
- ADDTL LOADS BASED ON 55 % OF GSL.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.39")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.10")
ALLOWABLE DEFL.(TL)= L/360 (0.39")
CALCULATED VERT. DEFL.(TL)= L/ 716 (0.20")

CSI: TC=0.28/1.00 (A-F:1) , BC=0.97/1.00 (E-F:1) , WB=0.75/1.00 (A-E:1) , SSI=0.83/1.00 (E-F:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00 COMP=1.00 SHEAR=1.00 TENS= 1.00

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES					
PLATE	GRIP(DRY)	SHEAR	SECTION		
(PSI)	(PLI)	(PLI)			
	MAX	MIN	MAX	MIN	MAX
MT20	650	371	1747	788	1987

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

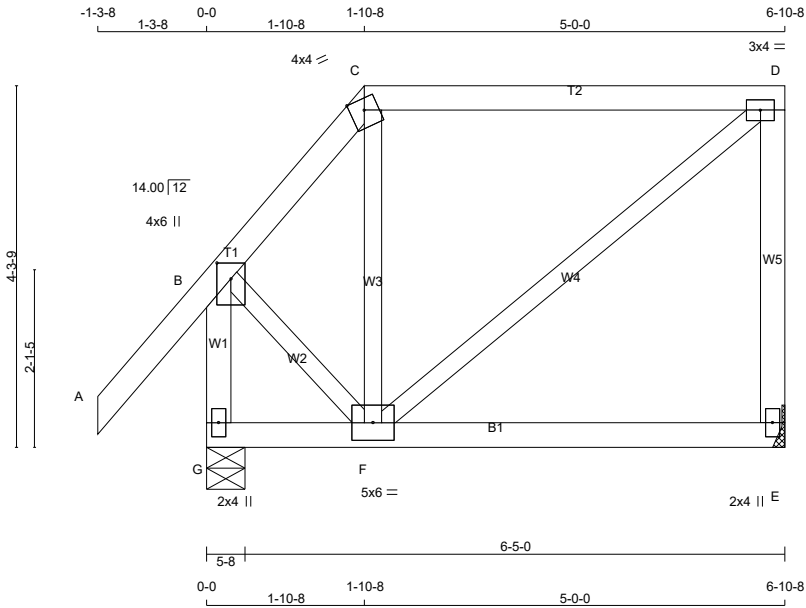
CONTINUED ON PAGE 2

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336322	H161		1	TRUSS DESC. JT 45147	E21104295

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 10:16:11 2021 Page 1

ID:hd511hZTz_bdeQoS817GKByhVxV-Ak?E4OMqIPWzDK_PfAh40t_ehDpV31Wa5ON_7tyTY8l



TOTAL WEIGHT = 35 lb [M]

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER	DESCR.	
A - C	2x4	DRY No.2	SPF	
A - D	2x4	DRY No.2	SPF	
E - D	2x4	DRY No.2	SPF	
G - B	2x4	DRY No.2	SPF	
G - E	2x4	DRY No.2	SPF	
ALL WEBS EXCEPT	2x3	DRY No.2	SPF	
DRY: SEASONED LUMBER.				

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMVW+p	MT20	4.0	6.0	2.25 2.00
C	TTW-m	MT20	4.0	4.0	Edge
D	TMVW-t	MT20	3.0	4.0	
E	BMV1+p	MT20	2.0	4.0	
F	BMWWW-t	MT20	5.0	6.0	
G	BMV1+p	MT20	2.0	4.0	
Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.					

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER							
<u>BEARINGS</u>							
	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG	
	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
JT	320	0	320	0		MECHANICAL	
E	320	0	320	0		MECHANICAL	
G	452	0	452	0	0	5-8	1-8
A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT E. MINIMUM BEARING LENGTH AT JOINT E = 1-8.							

UNFACTORED REACTIONS							
1ST LCASE	MAX./MIN. COMPONENT REACTIONS						
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	229	138 / 0	0 / 0	0 / 0	0 / 0	90 / 0	0 / 0
G	320	209 / 0	0 / 0	0 / 0	0 / 0	111 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) G

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

LOADING									
TOTAL LOAD CASES: (4)									
CHORDS					WEBS				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)	
FR-TO		FROM	TO			FR-TO			
A-B	0 / 42	-78.0	-78.0	0.11 (1)	10.00	F-C	-96 / 13	0.03 (1)	
B-C	-204 / 0	-78.0	-78.0	0.11 (1)	6.25	F-D	0 / 140	0.03 (1)	
C-D	-109 / 0	-78.0	-78.0	0.33 (1)	6.25	B-F	0 / 148	0.03 (1)	
E-D	-283 / 0	0.0	0.0	0.08 (1)	7.81				
G-B	-453 / 0	0.0	0.0	0.05 (1)	7.81				
G-F	0 / 0	-18.5	-18.5	0.09 (4)	10.00				
F-E	0 / 0	-18.5	-18.5	0.09 (4)	10.00				

DESIGN CRITERIA			
SPECIFIED LOADS:			
TOP CH.	LL =	21.0	PSF
	DL =	6.0	PSF
BOT CH.	LL =	0.0	PSF
	DL =	7.4	PSF
TOTAL LOAD = 34.4 PSF			
SPACING = 24.0 IN./C			

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.23")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.23")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02")

CSI: TC=0.33/1.00 (C-D:1) , BC=0.09/1.00 (F-G:4) , WB=0.03/1.00 (B-F:1) , SSI=0.15/1.00 (C-D:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES
PLATE GRIP(DRY) SHEAR SECTION
(PSI) (PLI) (PLI)
MAX MIN MAX MIN MAX MIN
MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.27 (D) (INPUT = 0.90)
JSI METAL= 0.11 (B) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

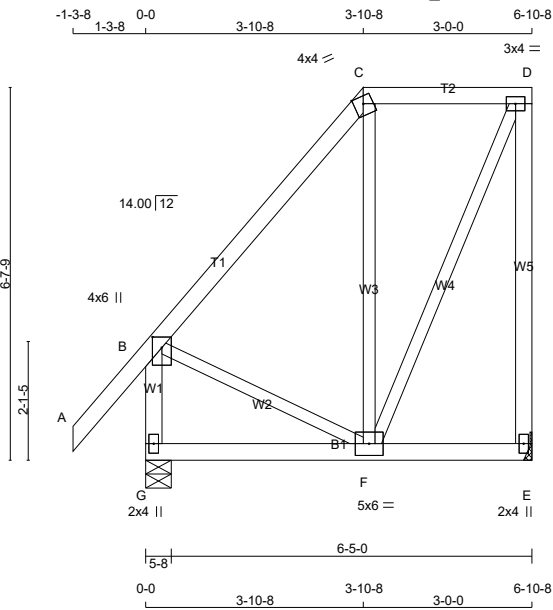


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336322	H162		1	TRUSS DESC. JT 45147	E21104296

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 10:16:12 2021 Page 1

ID:hd511hZTz_bdeQoS817GKByhVxV-ewZcHkNSWJeqqTZbDuCJZ4Wq9dADoTTkK27XfJyTy3H



Scale = 1:41.0

TOTAL WEIGHT = 43 lb

[M][F]

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER	DESCR.	
A - C	2x4	DRY No.2	SPF	
C - D	2x4	DRY No.2	SPF	
E - D	2x4	DRY No.2	SPF	
G - B	2x4	DRY No.2	SPF	
G - E	2x4	DRY No.2	SPF	
ALL WEBS EXCEPT	2x3	DRY No.2	SPF	
DRY: SEASONED LUMBER.				

PLATES (table is in inches)						
JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW+p	MT20	4.0	6.0	2.25	2.00
C	TTW-m	MT20	4.0	4.0	Edge	
D	TMVW-t	MT20	3.0	4.0		
E	BMV1+p	MT20	2.0	4.0		
F	BMVWW-t	MT20	5.0	6.0		
G	BMV1+p	MT20	2.0	4.0		

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG IN-SX MECHANICAL	REQD BRG IN-SX
	VERT	HORZ	DOWN	HORZ		
E	332	0	332	0	5-8	1-8
G	441	0	441	0		

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT E. MINIMUM BEARING LENGTH AT JOINT E = 1-8.

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS					
		SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	236	144 / 0	0 / 0	0 / 0	0 / 0	92 / 0	0 / 0
G	312	203 / 0	0 / 0	0 / 0	0 / 0	109 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) G

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

LOADING

TOTAL LOAD CASES: (4)

CHORDS					WEBS				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX	MAX CSI (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)	
FR-TO		FROM	TO			FR-TO			
A-B	0 / 42	-78.0	-78.0	0.11 (1)	10.00	F-C	-160 / 0	0.12 (1)	
B-C	-143 / 0	-78.0	-78.0	0.15 (1)	6.25	F-D	0 / 217	0.05 (1)	
C-D	-90 / 0	-78.0	-78.0	0.09 (1)	6.25	B-F	0 / 101	0.02 (1)	
E-D	-313 / 0	0.0	0.0	0.29 (1)	7.81				
G-B	-410 / 0	0.0	0.0	0.05 (1)	7.81				
G-F	0 / 0	-18.5	-18.5	0.06 (4)	10.00				
F-E	0 / 0	-18.5	-18.5	0.06 (4)	10.00				

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 21.0 PSF
DL = 6.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.4 PSF
TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF CBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.23")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.23")
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.01")

CSI: TC=0.29/1.00 (D-E:1) , BC=0.06/1.00 (F-G:4) , WB=0.12/1.00 (C-F:1) , SSI=0.09/1.00 (C-D:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES
PLATE GRIP(DRY) SHEAR SECTION
(PSI) (PLI) (PLI)
MAX MIN MAX MIN MAX MIN
MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.47 (D) (INPUT = 0.90)
JSI METAL= 0.11 (B) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

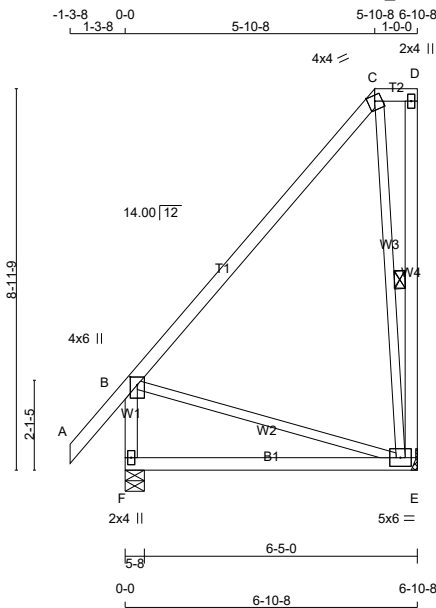


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336322	H163		1	TRUSS DESC. JT 45147	E21104297

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 10:16:13 2021 Page 1

ID:hd511hZTz_bdeQoS817GKByhVxV-666?U4N4H0mhSd8nmbjY5I3z00SRXwbYis5BmyTY3G



TOTAL WEIGHT = 45 lb

[M][F]

LUMBER					
N. L. G. A. RULES					
CHORDS	SIZE		LUMBER		DESCR.
A - C	2x4	DRY	No.2		SPF
C - D	2x4	DRY	No.2		SPF
E - D	2x4	DRY	No.2		SPF
F - B	2x4	DRY	No.2		SPF
F - E	2x4	DRY	No.2		SPF
ALL WEBS	2x3	DRY	No.2		SPF
EXCEPT					
DRY: SEASONED LUMBER.					

PLATES (table is in inches)						
JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW+p	MT20	4.0	6.0	2.25	2.00
C	TTW-m	MT20	4.0	4.0	Edge	
D	TMV+p	MT20	2.0	4.0		
E	BMVWW1-t	MT20	5.0	6.0		
F	BMV1+p	MT20	2.0	4.0		

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER									
BEARINGS									
			FACTORED						
			GROSS REACTION		MAXIMUM FACTORED		INPUT		REQRD
					GROSS REACTION		BRG		BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX		
E	332	0	332	0	0	MECHANICAL			
F	441	0	441	0	0	5-8	1-8		

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT E. MINIMUM BEARING LENGTH AT JOINT E = 1-8.

UNFACTORED REACTIONS							
	1ST LCASE	MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	236	144 / 0	0 / 0	0 / 0	0 / 0	92 / 0	0 / 0
F	312	203 / 0	0 / 0	0 / 0	0 / 0	109 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) F

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF D-E, C-E.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING									
TOTAL LOAD CASES: (4)									
C H O R D S									
MEMB. MAX. FACTORED FORCE (LBS)									
FACTORED VERT. LOAD (PLF)									
CSI (LC)									
UNBRAC LENGTH FR-TO									
MEMB. MAX. FACTORED FORCE (LBS)									
MAX CSI (LC)									
FR-TO		FROM	TO						
A-B	0 / 42	-78.0	-78.0	0.11 (1)	10.00	C-E	-238 / 0	0.12 (1)	
B-C	-42 / 0	-78.0	-78.0	0.34 (1)	6.25	B-E	0 / 28	0.01 (1)	
C-D	0 / 0	-78.0	-78.0	0.01 (1)	10.00				
E-D	-39 / 0	0.0	0.0	0.01 (1)	6.25				
F-B	-377 / 0	0.0	0.0	0.04 (1)	7.81				
F-E	0 / 0	-18.5	-18.5	0.26 (4)	10.00				

DESIGN CRITERIA			
SPECIFIED LOADS:			
TOP CH.	LL	=	21.0 PSF
	DL	=	6.0 PSF
BOT CH.	LL	=	0.0 PSF
	DL	=	7.4 PSF
TOTAL LOAD = 34.4 PSF			

SPACING = 24.0 IN./C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(TL)= L/360 (0.23")

CALCULATED VERT. DEFL.(TL)= L/ 819 (0.10")

CSI: TC=0.34/1.00 (B-C:1) , BC=0.26/1.00 (E-F:4) , WB=0.12/1.00 (C-E:1) , SSI=0.12/1.00 (B-C:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS=1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

PLATE	GRIP(DRY)	SHEAR	SECTION
	(PSI)	(PLI)	(PLI)
	MAX MIN	MAX MIN	MAX MIN
MT20	650	371	1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.21 (B) (INPUT = 0.90)

JSI METAL= 0.13 (C) (INPUT = 1.00)

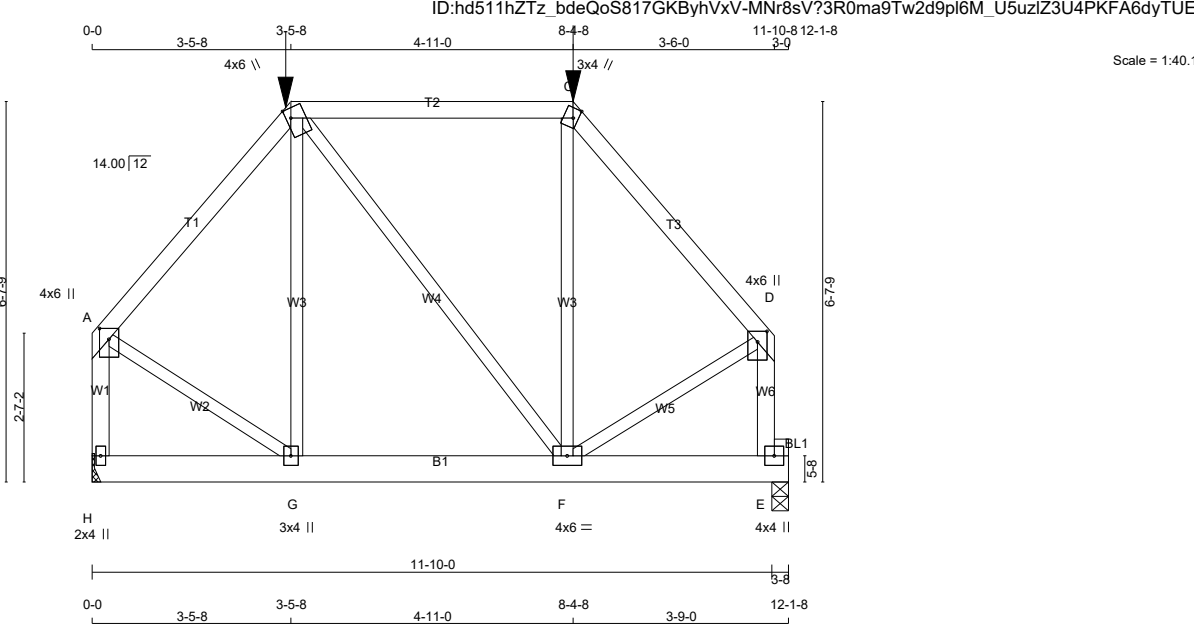
LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336323	H102S		1	TRUSS DESC. JT 45147	E21104367

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 14:37:21 2021 Page 1



TOTAL WEIGHT = 3 X 67 = 201 lb [M]

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER		DESCR.
A - B	2x4	DRY	No.2	SPF
B - C	2x4	DRY	No.2	SPF
C - D	2x4	DRY	No.2	SPF
H - A	2x4	DRY	No.2	SPF
E - D	2x4	DRY	No.2	SPF
H - E	2x6	DRY	No.2	SPF
BEARING BLOCKS				
BL1	2x4	DRY	No.2	SPF
ALL WEBS 2x3 DRY No.2 SPF				
EXCEPT				
DRY: SEASONED LUMBER.				

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
A	TMVW+p	MT20	4.0	6.0	2.25 2.00
B	TTWW+m	MT20	4.0	6.0	2.00 1.00
C	TTW+m	MT20	3.0	4.0	2.00 1.00
D	TMVW+p	MT20	4.0	6.0	2.25 2.00
E	BMVK1+p	MT20	4.0	4.0	
F	BMWWW-t	MT20	4.0	6.0	
G	BMWWW-t	MT20	3.0	4.0	
H	BMV1+p	MT20	2.0	4.0	

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS		FACTORED		MAXIMUM FACTORED		INPUT		REQRD	
		GROSS REACTION		GROSS REACTION		BRG		BRG	
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX		
H	814	0	814	0	0	MECHANICAL			
E	833	0	833	0	0	3-8	2-8		

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT H. MINIMUM BEARING LENGTH AT JOINT H = 1-8.

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS						
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL	
H	581	352 / 0	0 / 0	0 / 0	0 / 0	228 / 0	0 / 0	
E	594	363 / 0	0 / 0	0 / 0	0 / 0	231 / 0	0 / 0	

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) E

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT. OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.		MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED VERT. LOAD LC1 MAX CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED VERT. LOAD LC1 MAX CSI (LC)
FR-TO			FROM TO	LENGTH	FR-TO		
A - B	-557 / 0	-78.0	-78.0	0.19 (1)	6.25	G - B	-92 / 55
B - C	-354 / 0	-114.5	-114.5	0.53 (1)	6.25	B - F	-8 / 0
C - D	-550 / 0	-78.0	-78.0	0.19 (1)	6.25	F - C	-115 / 48
H - A	-776 / 0	0.0	0.0	0.11 (1)	7.81	A - G	0 / 421
E - D	-796 / 0	0.0	0.0	0.11 (1)	7.81	F - D	0 / 475
H - G		0 / 0	-27.2	-27.2	0.05 (4)	10.00	
G - F		0 / 359	-27.2	-27.2	0.08 (4)	10.00	
F - E		-55 / 0	-27.2	-27.2	0.05 (4)	6.25	

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
B	3-5-8	-107	-107	---	FRONT	VERT	TOTAL	---	C1
C	8-4-8	-116	-116	---	FRONT	VERT	TOTAL	---	C1

DESIGN CRITERIA

SPECIFIED LOADS:
LEFT CH. LL = 21.0 PSF
DL = 6.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.4 PSF
TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN./C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

GIRDER TYPE: CPrimeHip
LEFT SETBACK = 3-5-8
RIGHT SETBACK = 3-9-0
END SETBACK = 3-10-8
END WALL WIDTH = 0-0
CORNER FRAMING TYPE: CONVENTIONAL
END JACK TYPE: CONVENTIONAL
APPLIED TO FRONT SIDE
- ADDT'L LOADS BASED ON 55 % OF GSL.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.39")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.39")
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.01")

CSI: TC=0.53/1.00 (B-C:1) , BC=0.08/1.00 (F-G:4) , WB=0.12/1.00 (D-F:1) , SSI=0.24/1.00 (B-C:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00
COMP=1.00 SHEAR=1.00 TENS= 1.00

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES			
PLATE	GRIP(DRY)	SHEAR	SECTION
(PSI)	(PLI)	(PLI)	(PLI)
MAX MIN	MAX MIN	MAX MIN	MAX MIN
MT20	650 371	1747 788	1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.68 (G) (INPUT = 0.90)
JSI METAL= 0.22 (A) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

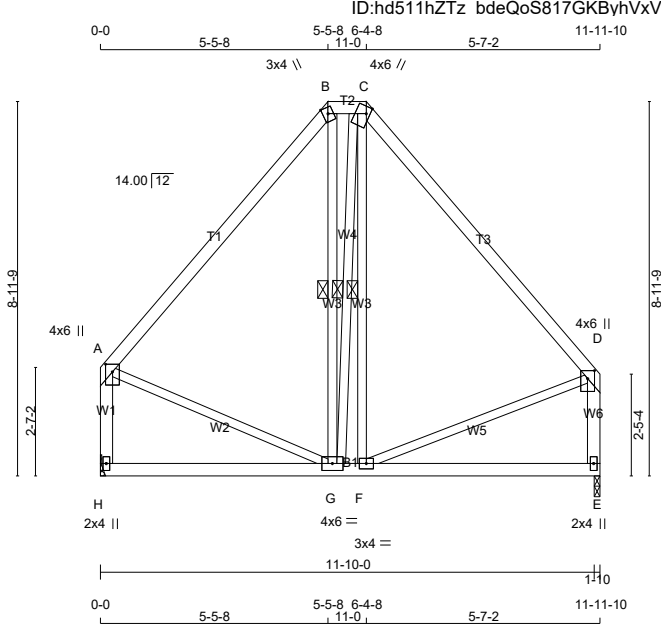


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336323	H103S		1	TRUSS DESC. JT 45147	E21104369

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 14:37:24 2021 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-myWHUX1xkx990wedIHNSk c2f5z9mRHW5ITqixyTUEP



TOTAL WEIGHT = 3 X 69 = 208 lb

[M][F]

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER	DESCR.	
A - B	2x4	DRY	No.2	SPF
B - C	2x4	DRY	No.2	SPF
C - D	2x4	DRY	No.2	SPF
H - A	2x4	DRY	No.2	SPF
E - D	2x4	DRY	No.2	SPF
H - E	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				

DRY: SEASONED LUMBER.

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
A	TMVW+p	MT20	4.0	6.0	2.25 2.00
B	TTW+m	MT20	3.0	4.0	Edge
C	TTWW+m	MT20	4.0	6.0	2.00 1.00
D	TMVW+p	MT20	4.0	6.0	2.25 2.00
E	BMV1+p	MT20	2.0	4.0	
F	BMWW-t	MT20	3.0	4.0	
G	BMWWW-t	MT20	4.0	6.0	
H	BMV1+p	MT20	2.0	4.0	

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS		FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT		REQRD	
JT	VERT	HORZ		DOWN	HORZ	UPLIFT	IN-SX	IN-SX	
H	577	0		577	0	0	MECHANICAL		
E	577	0		577	0	0	1-10	1-8	

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT H. MINIMUM BEARING LENGTH AT JOINT H = 1-8.

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS						
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL	
H	412	251 / 0	0 / 0	0 / 0	0 / 0	160 / 0	0 / 0	
E	412	251 / 0	0 / 0	0 / 0	0 / 0	160 / 0	0 / 0	

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) E

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT. MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF B-G, C-G, C-F.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MAX. FACTORED		FACTORED		MAX. FACTORED		FACTORED	
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	MAX CSI (LC)	MAX. UNBRAC LENGTH	MEMB.	FORCE (LBS)	MAX CSI (LC)
FR-TO		FROM TO			FR-TO		
A-B	-317 / 0	-78.0 -78.0	0.30 (1)	6.25	G-B	-7 / 46	0.02 (4)
B-C	-205 / 0	-78.0 -78.0	0.01 (1)	6.25	G-C	-10 / 0	0.01 (1)
C-D	-318 / 0	-78.0 -78.0	0.32 (1)	6.25	F-C	-1 / 45	0.02 (4)
H-A	-536 / 0	0.0 0.0	0.07 (1)	7.81	A-G	0 / 221	0.05 (1)
E-D	-535 / 0	0.0 0.0	0.07 (1)	7.81	F-D	0 / 220	0.05 (1)
H-G	0 / 0	-18.5 -18.5	0.14 (4)	10.00			
G-F	0 / 206	-18.5 -18.5	0.16 (4)	10.00			
F-E	0 / 0	-18.5 -18.5	0.14 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	21.0	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD	=	34.4	PSF	

SPACING = 24.0 IN./C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.40")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.40")
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.03")

CSI: TC=0.32/1.00 (C-D:1) , BC=0.16/1.00 (F-G:4) , WB=0.05/1.00 (A-G:1) , SSI=0.11/1.00 (C-D:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

PLATE GRIP(DRY)	SHEAR (PSI)	SECTION (PLI)
	MAX MIN	MAX MIN
MT20	650 371	1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.36 (B) (INPUT = 0.90)
JSI METAL= 0.16 (D) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

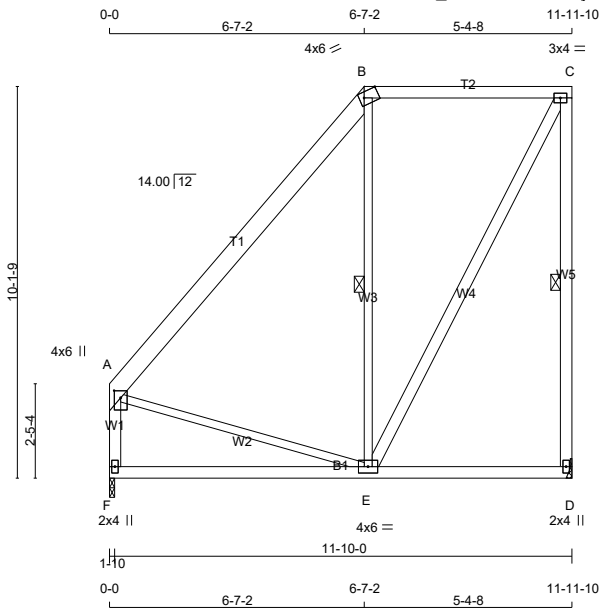


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336323	H104S		1	TRUSS DESC. JT 45147	E21104371

Alpa Roof Truss, Maple

ID:hd511hZTz_bdeQoS817GKByhVxV-BXCP7Z3q1sXktONCzQw9MdEZLJ_Kzm1ynGiUJGyTUEM

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 14:37:27 2021 Page 1



Scale = 1:59.6

TOTAL WEIGHT = 77 lb
[M][F]

LUMBER					
N. L. G. A. RULES					
CHORDS	SIZE		LUMBER		DESCR.
A - B	2x6	DRY	No.2		SPF
B - C	2x4	DRY	No.2		SPF
D - C	2x4	DRY	No.2		SPF
F - A	2x4	DRY	No.2		SPF
F - D	2x4	DRY	No.2		SPF
ALL WEBS	2x3	DRY	No.2		SPF
EXCEPT					
E - C	2x4	DRY	No.2		SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)						
JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW+p	MT20	4.0	6.0	2.25	2.00
B	TTW-m	MT20	4.0	6.0	Edge 4.50	
C	TMVW-t	MT20	3.0	4.0		
D	BMV1+p	MT20	2.0	4.0		
E	BMVWW-t	MT20	4.0	6.0		
F	BMV1+p	MT20	2.0	4.0		

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG	
	VERT	HORZ	DOWN	HORZ		IN-SX	IN-SX
D	577	0	577	0	0	MECHANICAL	
F	577	0	577	0	0	1-10	1-8

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT D. MINIMUM BEARING LENGTH AT JOINT D = 1-8.

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS					
		SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
D	412	251 / 0	0 / 0	0 / 0	0 / 0	160 / 0	0 / 0
F	412	251 / 0	0 / 0	0 / 0	0 / 0	160 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) F

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF C-D, B-E.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

MEMB.	CHORDS MAX. FACTORED FORCE (LBS)		FACTORED VERT. LOAD (PLF)			WEBS MAX. FACTORED FORCE (LBS)	
			VERT.	LC1	MAX		
FR-TO			FROM	TO	CS1 (LC)	MEMB.	FR-TO
A-B	-285 / 0	-78.0	-78.0	0.21 (1)	6.25	E-B	-253 / 0
B-C	-181 / 0	-78.0	-78.0	0.29 (1)	6.25	E-C	0 / 384
D-C	-544 / 0	0.0	0.0	0.27 (1)	6.25	A-E	0 / 191
F-A	-528 / 0	0.0	0.0	0.06 (1)	7.81		
F-E	0 / 0	-18.5	-18.5	0.20 (4)	10.00		
E-D	0 / 0	-18.5	-18.5	0.20 (4)	10.00		

DESIGN CRITERIA

SPECIFIED LOADS:

TOP	CH.	LL	=	21.0	PSF
		DL	=	6.0	PSF
BOT	CH.	LL	=	0.0	PSF
		DL	=	7.4	PSF
TOTAL LOAD =					34.4 PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.40")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.40")
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.05")

CSI: TC=0.29/1.00 (B-C:1) , BC=0.20/1.00 (E-F:4) , WB=0.18/1.00 (B-E:1) , SSI=0.16/1.00 (B-C:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES					
PLATE	GRIP(DRY) (PSI)	SHEAR (PLI)	SECTION (PLI)		
MT20	650	371	1747	788	1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.63 (C) (INPUT = 0.90)
JSI METAL= 0.16 (A) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

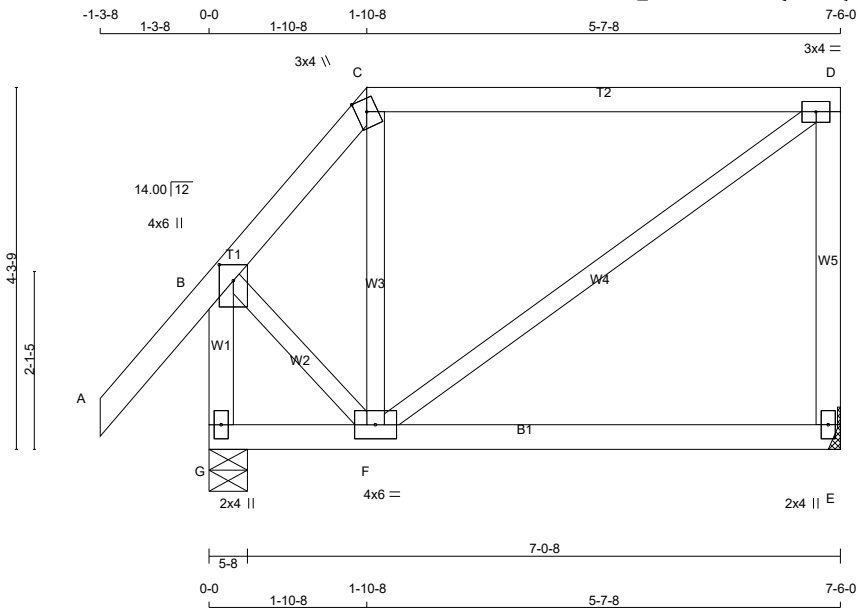


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336323	H105		1	TRUSS DESC. JT 45147	E21104372

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 14:37:28 2021 Page 1

ID:hd511hZTz_bdeQoS817GKByhVxV-fjmoKu4So9fbVYyOX7ROuqni_iMliFS60wR1sjyTUEL



TOTAL WEIGHT = 2 X 37 = 74 lb [M]

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER	DESCR.	
A - C	2x4	DRY	No.2	SPF
A - D	2x4	DRY	No.2	SPF
E - D	2x4	DRY	No.2	SPF
G - B	2x4	DRY	No.2	SPF
G - E	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				
DRY: SEASONED LUMBER.				

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMVW+p	MT20	4.0	6.0	2.25 2.00
C	TTW+m	MT20	3.0	4.0	Edge
D	TMVW-t	MT20	3.0	4.0	
E	BMV1+p	MT20	2.0	4.0	
F	BMWWW-t	MT20	4.0	6.0	
G	BMV1+p	MT20	2.0	4.0	

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
JT	352	0	352	0	0	0
E	352	0	352	0	0	0
G	481	0	481	0	5-8	1-8

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT E. MINIMUM BEARING LENGTH AT JOINT E = 1-8.

UNFACTORED REACTIONS

	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS				
		SNOW	LIVE	PERM.LIVE	WIND	DEAD
JT	251	152 / 0	0 / 0	0 / 0	0 / 0	99 / 0
E	251	152 / 0	0 / 0	0 / 0	0 / 0	99 / 0
G	341	222 / 0	0 / 0	0 / 0	0 / 0	119 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) G

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
FR-TO		FROM	TO		FR-TO		
A-B	0 / 41	-78.0	-78.0 0.11 (1)	10.00	F-C	-100 / 19	0.03 (1)
B-C	-230 / 0	-78.0	-78.0 0.11 (1)	6.25	F-D	0 / 155	0.03 (1)
C-D	-126 / 0	-78.0	-78.0 0.42 (1)	6.25	B-F	0 / 171	0.04 (1)
E-D	-309 / 0	0.0	0.0 0.09 (1)	7.81			
G-B	-488 / 0	0.0	0.0 0.06 (1)	7.81			
G-F	0 / 0	-18.5	-18.5 0.12 (4)	10.00			
F-E	0 / 0	-18.5	-18.5 0.12 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	21.0	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD	=	34.4	PSF	

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF CBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.25")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.25")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.03")

CSI: TC=0.42/1.00 (C-D:1) , BC=0.12/1.00 (F-G:4) , WB=0.04/1.00 (B-F:1) , SSI=0.17/1.00 (C-D:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

PLATE	GRIP(DRY)	SHEAR	SECTION
	(PSI)	(PLI)	(PLI)
	MAX	MIN	MAX MIN
MT20	650	371	1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

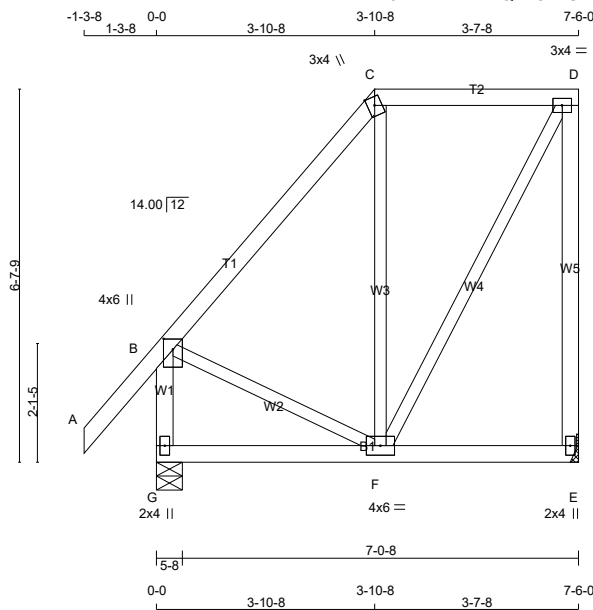
JSI GRIP= 0.58 (C) (INPUT = 0.90)
JSI METAL= 0.12 (B) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 14:37:29 2021 Page 1



Scale = 1:41.0

TOTAL WEIGHT = 2 X 45 = 89 lb

N. L. G. A. RULES				
CHORDS	SIZE		LUMBER	DESCR
A - C	2x4	DRY	No.2	SPF
C - D	2x4	DRY	No.2	SPF
E - D	2x4	DRY	No.2	SPF
G - B	2x4	DRY	No.2	SPF
G - E	2x4	DRY	No.2	SPF

DRY: SEASONED LUMBER.

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW+p	MT20	4.0	6.0	2.25	2.00
C	TTW+m	MT20	3.0	4.0	Edge	
D	TMVW-t	MT20	3.0	4.0		
E	BMV1+p	MT20	2.0	4.0		
F	BMWWW-t	MT20	4.0	6.0		
G	BMV1+p	MT20	2.0	4.0		

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION			INPUT BRG	REQD BRG
	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
E	362	0	362	0	0	MECHANICAL	
G	471	0	471	0	0	5-8	1-8

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	258	157 / 0	0 / 0	0 / 0	0 / 0	101 / 0	0 / 0
G	334	216 / 0	0 / 0	0 / 0	0 / 0	117 / 0	0 / 0

C H O R D S				W E B S				
MAX. FACTORED		FACTORED		MAX. FACTORED				
MEMB.	FORCE	VERT. LOAD	LC1	MAX.	UNBRAC.	MEMB.	FORCE	MAX.
	(LBS)	(PLF)		CSI (LC)			(LBS)	CSI (LC)
FR-TO		FROM	TO		LENGTH	FR-TO		
A-B	0 / 41	-78.0	-78.0	0.11 (1)	10.00	F-C	-162 / 0	0.12 (1)
B-C	-173 / 0	-78.0	-78.0	0.15 (1)	6.25	F-D	0 / 225	0.05 (1)
C-D	-109 / 0	-78.0	-78.0	0.13 (1)	6.25	B-F	0 / 122	0.03 (1)
E-D	-337 / 0	0.0	0.0	0.31 (1)	7.81			
G-B	-441 / 0	0.0	0.0	0.05 (1)	7.81			
G-F	0 / 0	-18.5	-18.5	0.07 (4)	10.00			
F-E	0 / 0	-18.5	-18.5	0.07 (4)	10.00			

SPECIFIED LOADS:

TOP	CH.	LL	=	21.0	PSF
		DL	=	6.0	PSF
BOT	CH.	LL	=	0.0	PSF
		DL	=	7.4	PSF
TOTAL LOAD				=	34.4 PSF

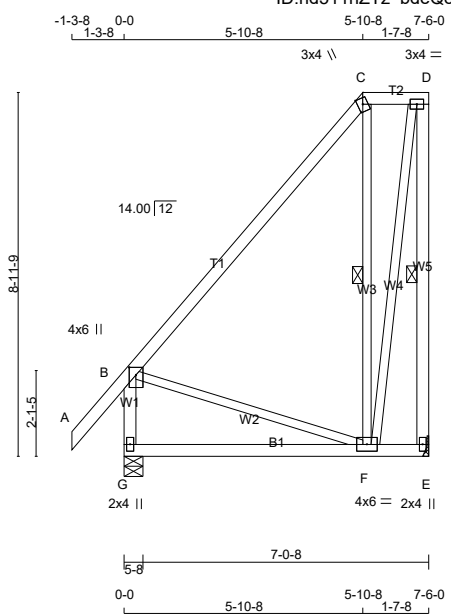
JSI GRIP= 0.43 (D) (INPUT = 0.90)
JSI METAL= 0.12 (B) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336323	H107		1	TRUSS DESC. JT 45147	E21104374

Alpa Roof Truss, Maple

ID:hd511hZTz bdeQoS817GKByhVxV-3IRwyw6K5419M?hzCF?5WTPESwM8vzbzYiugiS2yTUEI

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 14:37:31 2021 Page 1



TOTAL WEIGHT = 2 X 53 = 107 lb

[M][F]

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER		DESCR.
A - C	2x4	DRY	No.2	SPF
C - D	2x4	DRY	No.2	SPF
E - D	2x4	DRY	No.2	SPF
G - B	2x4	DRY	No.2	SPF
G - E	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				
DRY: SEASONED LUMBER.				

PLATES (table is in inches)						
JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW+p	MT20	4.0	6.0	2.25	2.00
C	TTW+m	MT20	3.0	4.0	Edge	
D	TMVW-t	MT20	3.0	4.0		
E	BMV1+p	MT20	2.0	4.0		
F	BMVWW-t	MT20	4.0	6.0		
G	BMV1+p	MT20	2.0	4.0		

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER									
BEARINGS									
	FACTORED		MAXIMUM FACTORED		INPUT		REQRD		
	GROSS REACTION		GROSS REACTION		BRG		BRG		
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX		
E	362	0	362	0	0	MECHANICAL			
G	471	0	471	0	0	5-8	1-8		
A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT E. MINIMUM BEARING LENGTH AT JOINT E = 1-8.									

UNFACTORED REACTIONS							
	1ST LCASE	MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	258	157 / 0	0 / 0	0 / 0	0 / 0	101 / 0	0 / 0
G	334	216 / 0	0 / 0	0 / 0	0 / 0	117 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) G

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF D-E, C-F.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING									
TOTAL LOAD CASES: (4)									
C H O R D S									
MAX. FACTORED									
MEMB.	FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. CSI (LC)	MAX. UNBRAC LENGTH	MEMB.	FORCE (LBS)	MAX. CSI (LC)		
FR-TO		FROM TO			FR-TO				
A-B	0 / 42	-78.0 -78.0	0.11 (1)	10.00	F-C	-225 / 0	0.12 (1)		
B-C	-91 / 0	-78.0 -78.0	0.34 (1)	6.25	F-D	0 / 326	0.07 (1)		
C-D	-56 / 0	-78.0 -78.0	0.03 (1)	6.25	B-F	0 / 61	0.01 (1)		
E-D	-383 / 0	0.0 0.0	0.14 (1)	6.25					
G-B	-425 / 0	0.0 0.0	0.05 (1)	7.81					
G-F	0 / 0	-18.5 -18.5	0.14 (4)	10.00					
F-E	0 / 0	-18.5 -18.5	0.14 (4)	10.00					

DESIGN CRITERIA			
SPECIFIED LOADS:			
TOP CH.	LL	=	21.0 PSF
	DL	=	6.0 PSF
BOT CH.	LL	=	0.0 PSF
	DL	=	7.4 PSF
TOTAL LOAD = 34.4 PSF			

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.25")

CALCULATED VERT. DEFL.(LL)= L/ 999 (0.01")

ALLOWABLE DEFL.(TL)= L/360 (0.25")

CALCULATED VERT. DEFL.(TL)= L/ 999 (0.04")

CSI: TC=0.34/1.00 (B-C:1) , BC=0.14/1.00 (F-G:4) , WB=0.12/1.00 (C-F:1) , SSI=0.12/1.00 (B-C:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

PLATE	GRIP(DRY)	SHEAR	SECTION
	(PSI)	(PLI)	(PLI)
	MAX	MIN	MAX
MT20	650	371	1747
	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.64 (D) (INPUT = 0.90)

JSI METAL= 0.12 (B) (INPUT = 1.00)

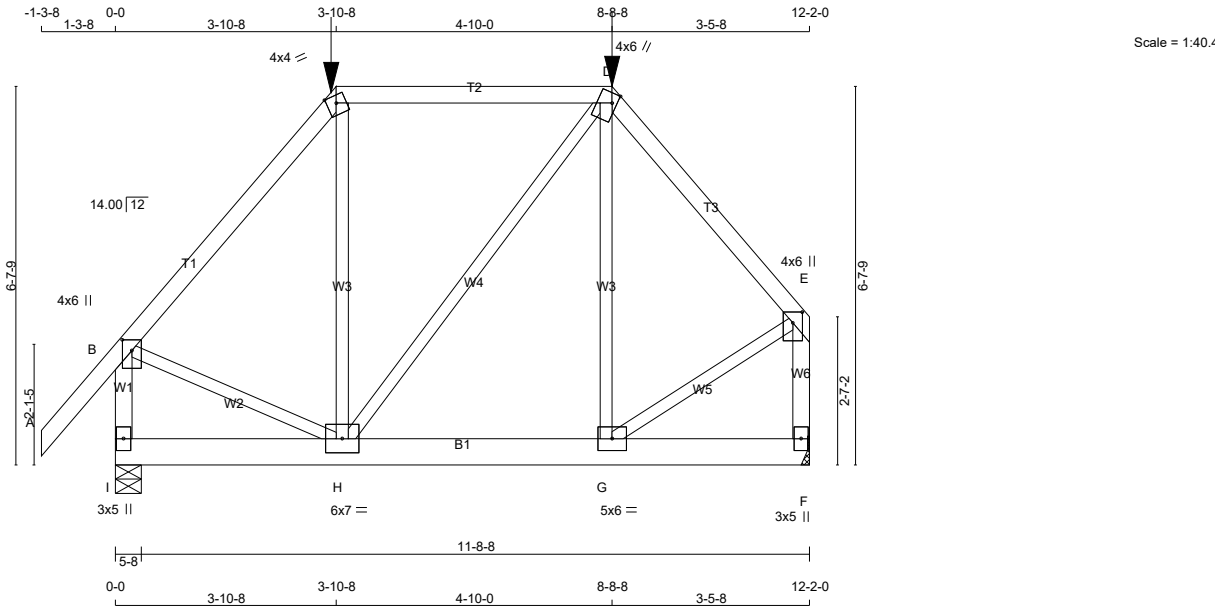
LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336323	H151		1	TRUSS DESC. JT 45147	E21104390

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 14:37:59 2021 Page 1
ID:hd511hZTz bdeQoS817GKBvhVxV-Fh8WrVsvVhZBjQMr8VffNZ mCxYTF0q8FSARQyTUDS



TOTAL WEIGHT = 69 lb [M]

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER	DESCR.	
A - C	2x4	DRY	No.2	SPF
A - D	2x4	DRY	No.2	SPF
C - E	2x4	DRY	No.2	SPF
I - B	2x4	DRY	No.2	SPF
F - E	2x4	DRY	No.2	SPF
I - F	2x6	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				

DRY: SEASONED LUMBER.

PLATES (table is in inches)						
JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW+p	MT20	4.0	6.0	2.25	2.00
C	TTW-m	MT20	4.0	4.0	Edge	
D	TTWW+m	MT20	4.0	6.0	2.00	1.00
E	TMVW+p	MT20	4.0	6.0	2.25	2.00
F	BMV1+p	MT20	3.0	5.0		
G	BMWW-t	MT20	5.0	6.0		
H	BMWWW-t	MT20	6.0	7.0		
I	BMV1+p	MT20	3.0	5.0		

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS		FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG		REQRD BRG	
JT	VERT	HORZ		DOWN	HORZ	UPLIFT	IN-SX	IN-SX	
I	946	0		946	0	0	5-8	1-8	
F	845	0		845	0	0	MECHANICAL		

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT F. MINIMUM BEARING LENGTH AT JOINT F = 1-8.

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS						
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL	
I	673	420 / 0	0 / 0	0 / 0	0 / 0	252 / 0	0 / 0	
F	603	366 / 0	0 / 0	0 / 0	0 / 0	237 / 0	0 / 0	

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) I

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
FR-TO		FROM	TO		FR-TO		
A-B	0 / 42	-78.0	-78.0 0.12 (1)	10.00	H-C	-75 / 67	0.05 (1)
B-C	-620 / 0	-78.0	-78.0 0.24 (1)	6.25	H-D	0 / 40	0.01 (1)
C-D	-400 / 0	-114.5	-114.5 0.51 (1)	6.25	G-D	-105 / 47	0.07 (1)
D-E	-584 / 0	-78.0	-78.0 0.19 (1)	6.25	B-H	0 / 435	0.11 (1)
I-B	-900 / 0	0.0	0.0 0.11 (1)	7.81	G-E	0 / 441	0.11 (1)
F-E	-807 / 0	0.0	0.0 0.11 (1)	7.81			
I-H	0 / 0	-27.2	-27.2 0.06 (4)	10.00			
H-G	0 / 376	-27.2	-27.2 0.09 (4)	10.00			
G-F	0 / 0	-27.2	-27.2 0.05 (4)	10.00			

FACTORED CONCENTRATED LOADS (LBS)							
JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE
C	3-10-8	-120	-120	---	FRONT	VERT	TOTAL
D	8-8-8	-107	-107	---	FRONT	VERT	TOTAL

CONNECTION REQUIREMENTS

1) C1: A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED.

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 21.0 PSF
DL = 6.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.4 PSF
TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN./C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

GIRDER TYPE: CPrimeHip
LEFT SETBACK = 3-10-8
RIGHT SETBACK = 3-5-8
END SETBACK = 3-10-8
END WALL WIDTH = 0-0
CORNER FRAMING TYPE: CONVENTIONAL
END JACK TYPE: CONVENTIONAL
APPLIED TO FRONT SIDE
- ADDTL LOADS BASED ON 55 % OF GSL.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF CBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.41")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.41")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")

CSI: TC=0.51/1.00 (C-D:1) , BC=0.09/1.00 (G-H:4) , WB=0.11/1.00 (E-G:1) , SSI=0.24/1.00 (C-D:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00
COMP=1.00 SHEAR=1.00 TENS= 1.00

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES				
PLATE	GRIP(DRY)	SHEAR	SECTION	
(PSI)	(PLI)	(PLI)		
MAX MIN	MAX MIN	MAX MIN		
MT20	650	371	1747	788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.56 (C) (INPUT = 0.90)
JSI METAL= 0.27 (B) (INPUT = 1.00)

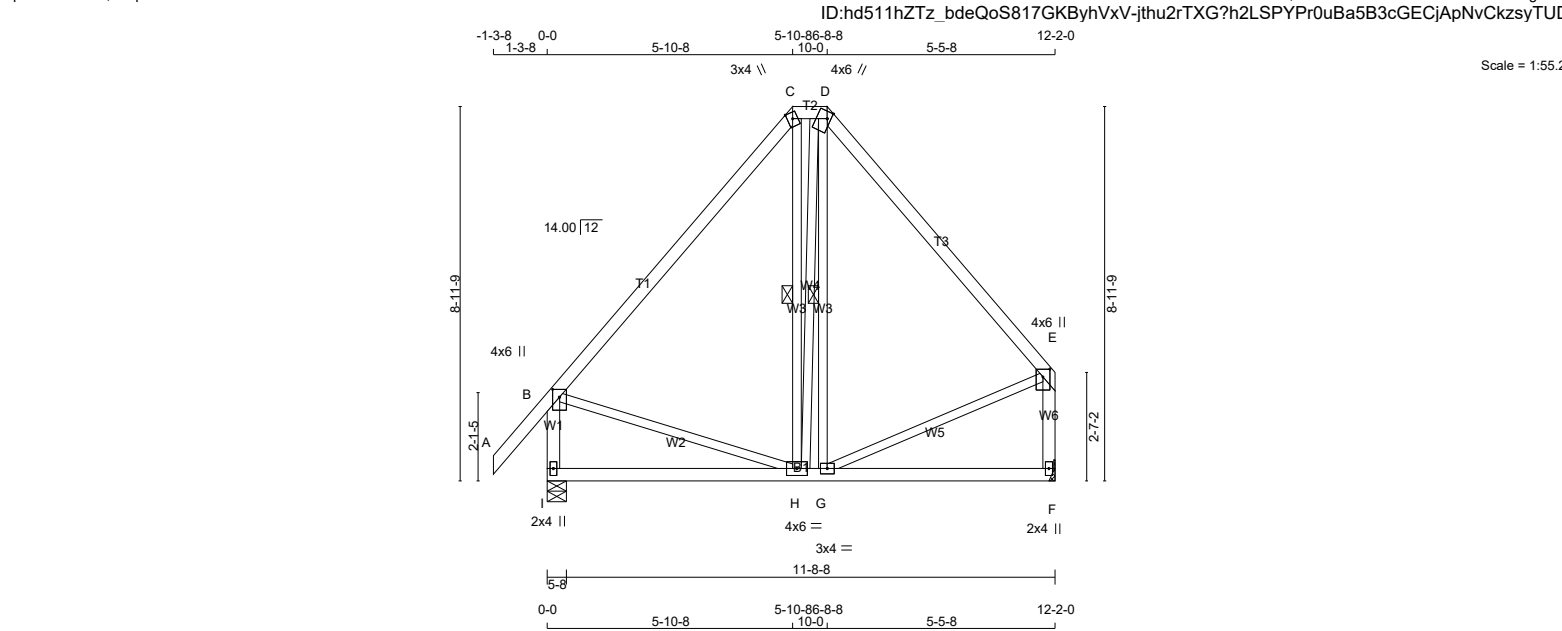
LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
336323	H152		1	TRUSS DESC. JT 45147	E21104391

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 14:38:00 2021 Page 1



LUMBER

N. L. G. A. RULES

CHORDS SIZE LUMBER DESCR.

A - C 2x4 DRY No.2 SPF

C - D 2x4 DRY No.2 SPF

D - E 2x4 DRY No.2 SPF

I - B 2x4 DRY No.2 SPF

F - E 2x4 DRY No.2 SPF

I - F 2x4 DRY No.2 SPF

ALL WEBS 2x3 DRY No.2 SPF

EXCEPT

DRY: SEASONED LUMBER.

CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY No.2	SPF
C - D	2x4	DRY No.2	SPF
D - E	2x4	DRY No.2	SPF
I - B	2x4	DRY No.2	SPF
F - E	2x4	DRY No.2	SPF
I - F	2x4	DRY No.2	SPF
ALL WEBS	2x3	DRY No.2	SPF
EXCEPT			

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW+p	MT20	4.0	6.0	2.25	2.00
C	TTW+m	MT20	3.0	4.0	Edge	
D	TTWW+m	MT20	4.0	6.0	2.00	1.00
E	TMVW+p	MT20	4.0	6.0	2.25	2.00
F	BMV1+p	MT20	2.0	4.0		
G	BMWW-t	MT20	3.0	4.0		
H	BMWWW-t	MT20	4.0	6.0		
I	BMV1+p	MT20	2.0	4.0		

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

FACTORED			MAXIMUM FACTORED			INPUT	REQD
GROSS REACTION			GROSS REACTION			BRG	BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
I	696	0	696	0	0	5-8	1-8
F	587	0	587	0	0	MECHANICAL	

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT F. MINIMUM BEARING LENGTH AT JOINT F = 1-8.

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
I	494	314 / 0	0 / 0	0 / 0	0 / 0	180 / 0	0 / 0
F	418	255 / 0	0 / 0	0 / 0	0 / 0	163 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) I

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT. MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF C-H, D-G.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. LC1 (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. LC1 (LC)
FR-TO		FROM	TO		FR-TO		
A-B	0 / 42	-78.0	-78.0 0.11 (1)	10.00	H-C	-10 / 48	0.02 (4)
B-C	-330 / 0	-78.0	-78.0 0.35 (1)	6.25	H-D	0 / 27	0.01 (4)
C-D	-214 / 0	-78.0	-78.0 0.01 (1)	6.25	G-D	-24 / 22	0.01 (1)
D-E	-327 / 0	-78.0	-78.0 0.30 (1)	6.25	B-H	0 / 223	0.05 (1)
I-B	-652 / 0	0.0	0.0 0.08 (1)	7.81	G-E	0 / 228	0.05 (1)
F-E	-546 / 0	0.0	0.0 0.08 (1)	7.81			
I-H	0 / 0	-18.5	-18.5 0.17 (4)	10.00			
H-G	0 / 212	-18.5	-18.5 0.19 (4)	10.00			
G-F	0 / 0	-18.5	-18.5 0.14 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH. LL = 21.0 PSF

DL = 6.0 PSF

BOT CH. LL = 0.0 PSF

DL = 7.4 PSF

TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF CBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.41")

CALCULATED VERT. DEFL.(LL)= L/ 999 (0.00")

ALLOWABLE DEFL.(TL)= L/360 (0.41")

CALCULATED VERT. DEFL.(TL)= L/ 999 (0.03")

CSI: TC=0.35/1.00 (B-C:1) , BC=0.19/1.00 (G-H:4) , WB=0.05/1.00 (E-G:1) , SSI=0.12/1.00 (B-C:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI)

MAX MIN MAX MIN MAX MIN

MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.37 (B) (INPUT = 0.90)

JSI METAL= 0.20 (B) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
358897K	H20T	1		9543(BV-1)C GOLD PARK, VAUGHAN, 3103 (4BED), B	E23092659

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Thu Sep 28 10:59:21 2023 Page 1
ID:hd511hZTz bdeQoS817GKByhVxV-I?tNkJGmGKW5XGSZltvOVp?dT3Joaw7Id uf8dyZ80

Scale = 1:50.4

TOTAL WEIGHT = 164 lb

N. L. G. A. RULES

CHORDS SIZE

T - A 2x4 DRY No.2 SPF

A - F 2x4 DRY 1650F 1.5E SPF

F - J 2x4 DRY 1650F 1.5E SPF

K - J 2x4 DRY No.2 SPF

T - S 2x4 DRY No.2 SPF

S - R 2x4 DRY No.2 SPF

R - Q 2x4 DRY 2100F 1.8E SPF

Q - P 2x6 DRY No.2 SPF

P - M 2x6 DRY No.2 SPF

M - K 2x6 DRY No.2 SPF

BEARING BLOCKS
BL1 2 - 2x4 DRY No.2 SPF

ALL WEBS 2x3 DRY No.2 SPF

Dry: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW+p	MT20	4.0	10.0	Edge	
B	TMWW+t	MT20	5.0	6.0	1.50	1.50
C	TMWW-t	MT20	5.0	6.0	2.00	2.00
D	TMW+w	MT20	2.0	4.0		
E	TMWW+t	MT20	4.0	6.0	3.00	1.75
F	TS-t	MT20	3.0	8.0		
G	TMWW-t	MT20	4.0	6.0		
H	TMWW-t	MT20	4.0	6.0		
I	TMWW+t	MT20	4.0	6.0	2.25	1.50
J	TMVW-t	MT20	6.0	7.0	2.00	2.50
K	BMVK1-t	MT20	8.0	9.0	5.50	Edge
L	BMWW-t	MT20	6.0	7.0	2.00	2.50
M	BS-t	MT20	4.0	6.0		
N	BMWW+t	MT20	4.0	6.0	2.25	1.50
O	BMWW-t	MT20	4.0	6.0		
P	BBWW-h	MT20	8.0	9.0	3.50	4.50
Q	BBWWW-p	MT20	10.0	12.0	Edge	
R	BBWW-I	MT20	10.0	12.0	Edge	
S	BBWW-I	MT20	8.0	9.0	2.50	7.50
T	BMVK1-t	MT20	6.0	7.0	Edge	3.00

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

LICENSED PROFESSIONAL ENGINEER
Y. WIDYA
100225448
09/28/2023
PROVINCE OF ONTARIO

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED

BUILDING DESIGNER

BEARINGS

	FACTORED	MAXIMUM FACTORED	INPUT	REQRD
	GROSS REACTION	GROSS REACTION	BRG	BRG
JT	VERT HORZ	DOWN HORZ	UPLIFT	IN-SX
T	3129 0	3129 0	0	3-8
K	3136 0	3136 0	0	3-8

UNFACTORED REACTIONS

JT	1ST LCASE	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
T	2230	1365 / 0	0 / 0	0 / 0	0 / 0	865 / 0	0 / 0
K	2236	1367 / 0	0 / 0	0 / 0	0 / 0	868 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) T, K
BEARING SIZE FACTOR = 1.15 AT JNT(S) T, K (BASED ON SUPPORT DEPTH = 1-8)

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.20 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

2x4 DRY SPF No.2 T-BRACE AT A-T, B-S, I-L
2x3 DRY SPF No.2 T-BRACE AT J-K, E-P

FASTEN T AND I-BRACES TO NARROW EDGE OF WEB WITH ONE ROW PER PLY OF 3"
COMMON WIRE NAILS @ 6" O.C. WITH 3" MINIMUM END DISTANCE. BRACE MUST COVER 90% OF WEB LENGTH.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

C H O R D S				W E B S			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. UNBRACED LENGTH (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. UNBRACED LENGTH (LC)	
FR-TO		FROM TO		FR-TO			
T- A	-3096 / 0	0.0 0.0	0.61 (1)	7.81	A- S	0 / 3070	
A- B	-899 / 0	-165.7 -165.7	0.14 (1)	6.25	S- B	-3393 / 0	
B- C	-2488 / 0	-165.7 -165.7	0.25 (1)	4.63	B- R	0 / 3619	
C- D	-4865 / 0	-78.0 -78.0	0.46 (1)	3.39	R- C	-2309 / 0	
D- U	-4859 / 0	-78.0 -78.0	0.44 (1)	3.29	C- Q	0 / 2931	
U- E	-4859 / 0	-165.7 -165.7	0.44 (1)	3.29	Q- D	-243 / 0	
E- F	-4128 / 0	-165.7 -165.7	0.63 (1)	3.34	Q- E	0 / 1674	
F- G	-4128 / 0	-165.7 -165.7	0.63 (1)	3.34	P- E	-2121 / 0	
G- H	-4466 / 0	-165.7 -165.7	0.66 (1)	3.20	P- G	-498 / 0	
H- I	-3882 / 0	-165.7 -165.7	0.72 (1)	3.28	O- G	-473 / 0	
I- J	-2458 / 0	-165.7 -165.7	0.62 (1)	4.12	O- H	0 / 873	
K- J	-3052 / 0	0.0 0.0	0.94 (1)	6.42	N- H	-1403 / 0	
					N- I	0 / 2128	
T- S	-83 / 0	-39.3 -39.3	0.04 (4)	6.25	L- I	-2509 / 0	
S- R	0 / 1003	-39.3 -39.3	0.21 (1)	10.00	L- J	0 / 3721	
R- Q	0 / 2547	-127.0 -127.0	0.66 (1)	10.00			
Q- V	0 / 4863	-18.5 -18.5	0.65 (1)	10.00			
V- P	0 / 4863	-39.3 -39.3	0.65 (1)	10.00			
P- O	0 / 4466	-39.3 -39.3	0.66 (1)	10.00			
O- N	0 / 3882	-39.3 -39.3	0.58 (1)	10.00			
N- M	0 / 2458	-39.3 -39.3	0.38 (1)	10.00			
M- L	0 / 2458	-39.3 -39.3	0.38 (1)	10.00			
L- K	-83 / 0	-39.3 -39.3	0.10 (4)	6.25			

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 21.0 PSF
 DL = 6.0 PSF
BOT CH. LL = 0.0 PSF
 DL = 7.4 PSF
TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

GIRDER TYPE: CPrimeHip
SIDE SETBACK = 0-0
END SETBACK = 6-6-0
END WALL WIDTH = 0-0
CORNER FRAMING TYPE: CONVENTIONAL
END JACK TYPE: CONVENTIONAL
APPLIED TO FRONT SIDE
- ADDTL LOADS BASED ON 55 % OF GSL
LOADS APPLIED TO FIRST 21-11-0 OF SPAN MEASURED FROM THE RIGHT.

GIRDER TYPE: CStdGirder
START DISTANCE = 3-10-0
START SPAN CARRIED = 6-6-0
END DISTANCE = 9-2-0
END SPAN CARRIED = 6-6-0
END WALL WIDTH = 0-0
APPLIED TO FRONT SIDE OF BOTTOM CHORD.
- ADDTL LOADS BASED ON 55 % OF GSL.

GIRDER TYPE: CPrimeHip
SIDE SETBACK = 0-0
END SETBACK = 6-6-0
END WALL WIDTH = 0-0
CORNER FRAMING TYPE: CONVENTIONAL
END JACK TYPE: CONVENTIONAL
APPLIED TO FRONT SIDE
- ADDTL LOADS BASED ON 55 % OF GSL
LOADS APPLIED TO FIRST 3-10-0 OF SPAN MEASURED FROM THE LEFT.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF CBC2018 , NBC-2019AE
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F.
RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.02")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.28")
ALLOWABLE DEFL.(TL)= L/360 (1.02")
CALCULATED VERT. DEFL.(TL) = L/ 640 (0.57")

CSI: TC=0.94/1.00 (J-K:1) , BC=0.66/1.00 (O-P:1) ,
WB=0.92/1.00 (J-L:1) , SSI=0.43/1.00 (I-J:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00
COMP=1.00 SHEAR=1.00 TENS= 1.00

COMPANION LIVE LOAD FACTOR = 1.00

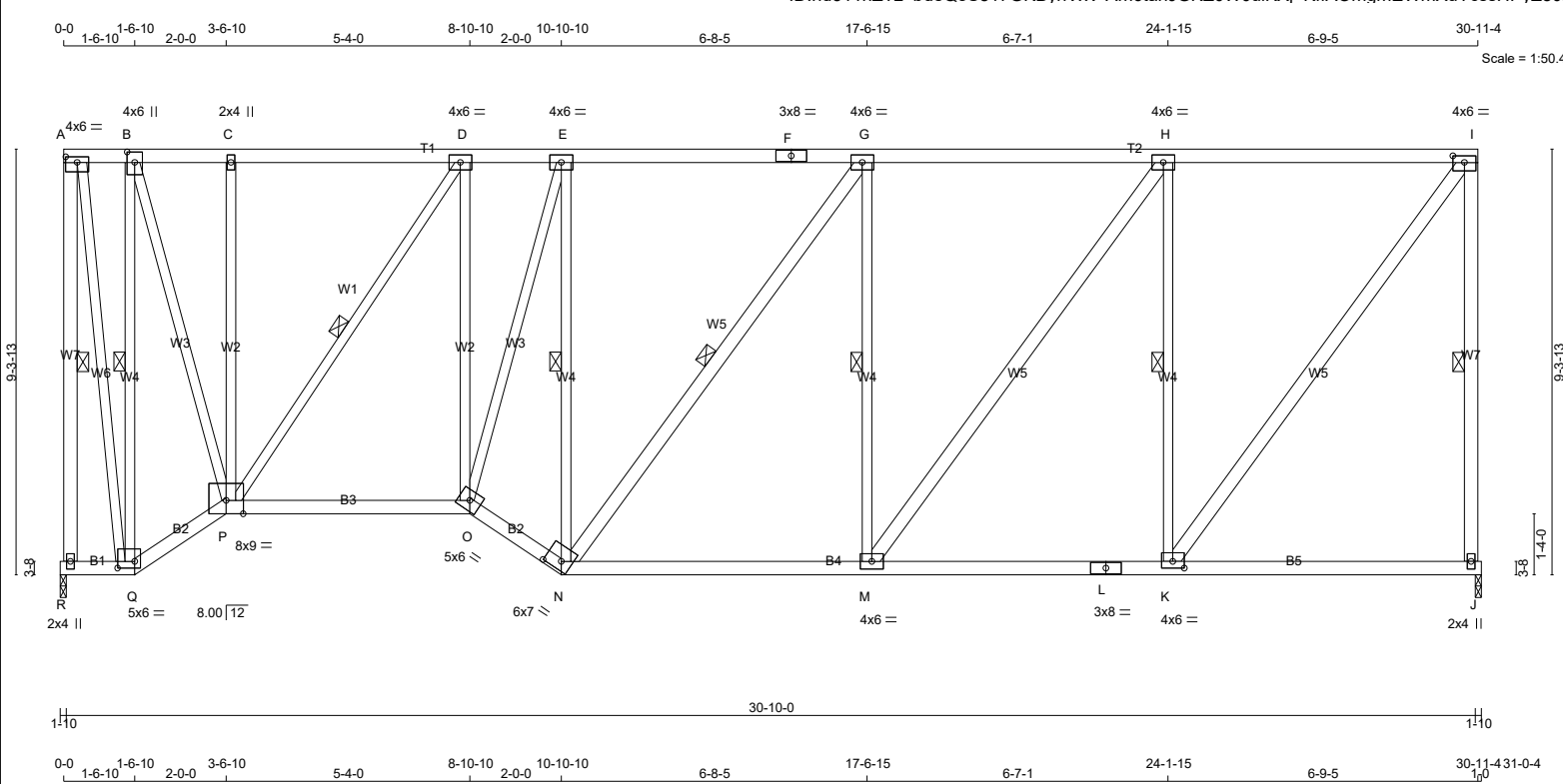
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES
PLATE GRIP(DRY) SHEAR SECTION
 (PSI) (PLI) (PLI)
 MAX MIN MAX MIN MAX MIN
MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (B) (INPUT = 0.90)
JSI METAL= 0.86 (Q) (INPUT = 1.00)



LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER	DESCR.	
R - A	2x4	DRY	No.2	SPF
A - F	2x4	DRY	No.2	SPF
F - I	2x4	DRY	No.2	SPF
J - I	2x4	DRY	No.2	SPF
R - Q	2x4	DRY	No.2	SPF
Q - P	2x4	DRY	No.2	SPF
P - O	2x4	DRY	No.2	SPF
O - N	2x4	DRY	No.2	SPF
N - L	2x4	DRY	No.2	SPF
L - J	2x4	DRY	No.2	SPF
ALL WEBS EXCEPT	2x3	DRY	No.2	SPF
N - G	2x4	DRY	No.2	SPF
M - H	2x4	DRY	No.2	SPF
K - I	2x4	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
A	TMVW-t	MT20	4.0	6.0	1.50 3.00
B	TMWW+t	MT20	4.0	6.0	2.75 2.00
C	TMW+w	MT20	2.0	4.0	
D, E, G, H					
D	TMWW-t	MT20	4.0	6.0	
F	TS-t	MT20	3.0	8.0	
I	TMVW-t	MT20	4.0	6.0	1.75 3.00
J	BMV1+p	MT20	2.0	4.0	
K	BMWW-t	MT20	4.0	6.0	1.75 3.00
L	BS-t	MT20	3.0	8.0	
M	BMWW-t	MT20	4.0	6.0	
N	BBWW-h	MT20	6.0	7.0	2.25 4.25
O	BBWW-h	MT20	5.0	6.0	
P	BBWWW-p	MT20	8.0	9.0	Edge
Q	BBWW-l	MT20	5.0	6.0	1.75 4.50
R	BMV1+p	MT20	2.0	4.0	

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS		FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG
JT	VERT	HORZ	DOWN	HORZ	IN-SX
R	1492	0	1492	0	1-10
J	1492	0	1492	0	1-10

UNFACTORED REACTIONS		1ST LCASE	MAX/MIN. COMPONENT REACTIONS				
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
R	1064	649 / 0	0 / 0	0 / 0	0 / 0	415 / 0	0 / 0
J	1064	649 / 0	0 / 0	0 / 0	0 / 0	415 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) R, J

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.88 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF A-R, I-J, B-Q, D-P, E-N, G-N, G-M, H-K.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING				TOTAL LOAD CASES: (4)			
CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX LC1 CSI (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX LC1 CSI (LC)
FR-TO		FROM	TO		FR-TO		
R- A	-1478 / 0	0.0	0.0	0.60 (1)	A- Q	0 / 1365	0.31 (1)
A- B	-232 / 0	-78.0	-78.0	0.15 (1)	Q- B	-1456 / 0	0.83 (1)
B- C	-628 / 0	-78.0	-78.0	0.21 (1)	B- P	0 / 1562	0.35 (1)
C- D	-633 / 0	-78.0	-78.0	0.21 (1)	P- C	-411 / 0	0.50 (1)
D- E	-1244 / 0	-78.0	-78.0	0.29 (1)	P- D	-1070 / 0	0.63 (1)
E- F	-1193 / 0	-78.0	-78.0	0.45 (1)	O- D	0 / 648	0.15 (1)
F- G	-1193 / 0	-78.0	-78.0	0.45 (1)	O- E	0 / 218	0.05 (1)
G- H	-1294 / 0	-78.0	-78.0	0.59 (1)	N- E	-583 / 0	0.33 (1)
H- I	-923 / 0	-78.0	-78.0	0.55 (1)	N- G	-169 / 0	0.12 (1)
J- I	-1441 / 0	0.0	0.0	0.59 (1)	M- G	-378 / 0	0.22 (1)
					M- H	0 / 629	0.10 (1)
R- Q	0 / 0	-18.5	-18.5	0.01 (4)	K- H	-1094 / 0	0.62 (1)
Q- P	0 / 258	-18.5	-18.5	0.05 (1)	K- I	0 / 1538	0.25 (1)
P- O	0 / 1236	-18.5	-18.5	0.29 (1)			
O- N	0 / 1426	-18.5	-18.5	0.24 (1)			
N- M	0 / 1294	-18.5	-18.5	0.31 (4)			
M- L	0 / 923	-18.5	-18.5	0.28 (4)			
L- K	0 / 923	-18.5	-18.5	0.28 (4)			
K- J	0 / 0	-18.5	-18.5	0.19 (4)			

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 21.0 PSF
DL = 6.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.4 PSF
TOTAL LOAD = 34.4 PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 9 OF CBC 2018 , NBC-2019AE
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL(LL)= L/360 (1.03")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.09")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.21")

CSI: TC=0.60/1.00 (A-R:1) , BC=0.31/1.00 (M-N:4) ,
VWB=0.83/1.00 (B-Q:1) , SSI=0.25/1.00 (H-I:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES
PLATE GRIP(DRY) SHEAR SECTION
(PSI) (PLI) (PLI)
MAX MIN MAX MIN MAX MIN
MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.87 (B) (INPUT = 0.90)
JSI METAL= 0.33 (Q) (INPUT = 1.00)

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

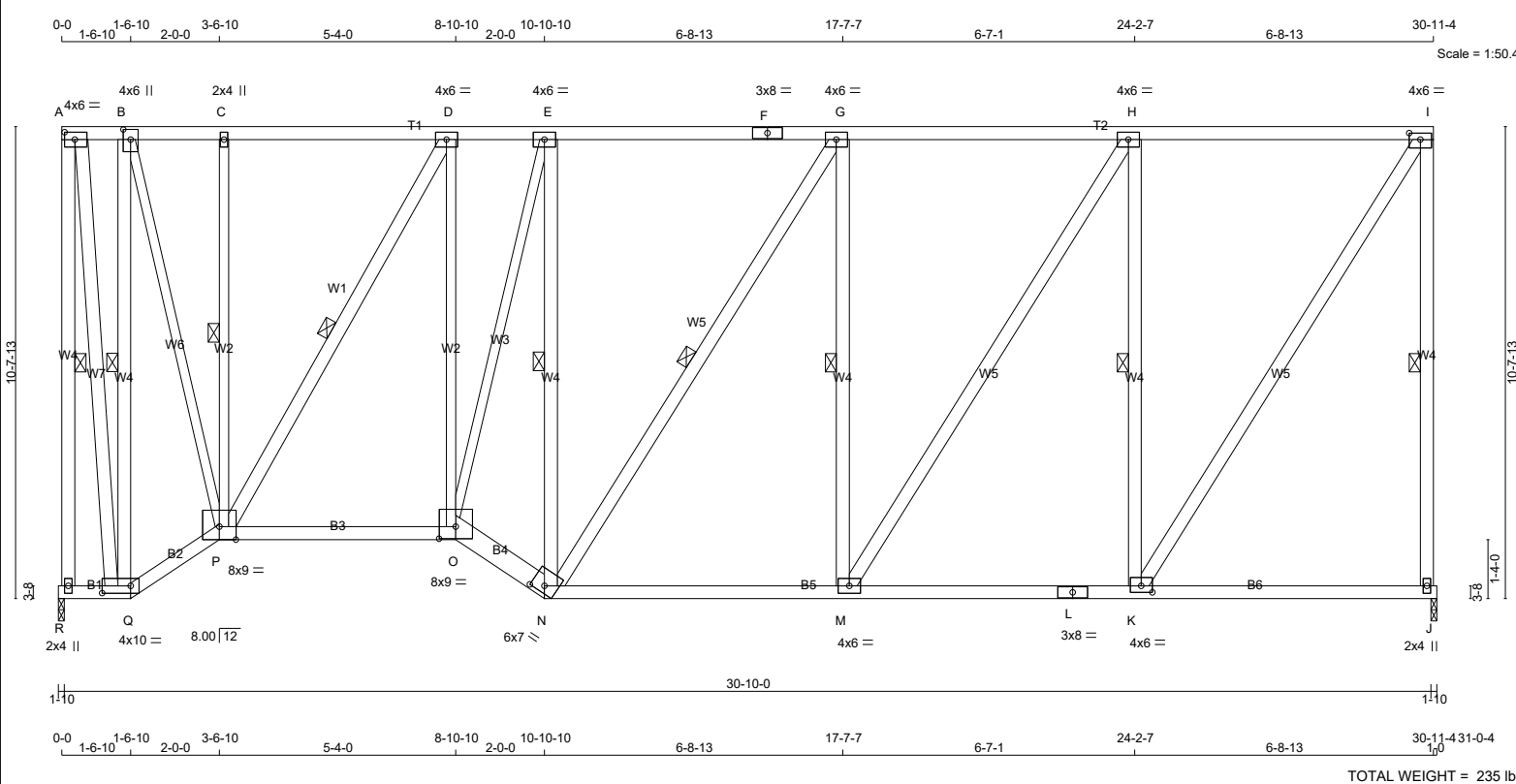


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	9543(BV-1)C GOLD PARK, VAUGHAN, 3103 (4BED), B	DRWG NO.
358897K	H25T		1	TRUSS DESC.		E23092663

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Thu Sep 28 10:59:27 2023 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-69Ee?MLWsaGEFBvjie80ok4FgVTSv fzB?wLzMHyZ80k



LUMBER										DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER										DESIGN CRITERIA									
N. L. G. A. RULES					CHORDS SIZE					LUMBER					DESCR.														
R - A	2x4	DRY	No.2	SPF																SPECIFIED LOADS:									
A - F	2x4	DRY	No.2	SPF																TOP CH. LL = 21.0 PSF									
F - I	2x4	DRY	No.2	SPF																DL = 6.0 PSF									
J - L	2x4	DRY	No.2	SPF																BOT CH. LL = 0.0 PSF									
R - Q	2x4	DRY	No.2	SPF																DL = 7.4 PSF									
Q - P	2x4	DRY	No.2	SPF																TOTAL LOAD = 34.4 PSF									
P - O	2x4	DRY	No.2	SPF																									
O - N	2x6	DRY	No.2	SPF																									
N - L	2x4	DRY	No.2	SPF																									
L - J	2x4	DRY	No.2	SPF																									
ALL WEBS EXCEPT					2x4 DRY No.2 SPF																								
B - P	2x3	DRY	No.2	SPF																LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM									
P - C	2x3	DRY	No.2	SPF																THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015									
O - D	2x3	DRY	No.2	SPF																THIS DESIGN COMPLIES WITH:									
O - E	2x3	DRY	No.2	SPF																- PART 9 OF BCBC 2018 , NBC-2019AE									
DRY: SEASONED LUMBER.																				- PART 9 OF OBC 2012 (2019 AMENDMENT)									
																				- CSA 086-14									
																				- TPIC 2014									
																				(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD									
																				ALLOWABLE DEFL.(LL)= L/ 360 (1.03")									
																				CALCULATED VERT. DEFL.(LL) = L/ 999 (0.08")									
																				ALLOWABLE DEFL.(TL)= L/360 (1.03")									
																				CALCULATED VERT. DEFL.(TL) = L/ 999 (0.19")									
																				CSI: TC=0.84/1.00 (A-R:1) , BC=0.30/1.00 (M-N:4) , WB=0.83/1.00 (B-Q:1) , SSI=0.25/1.00 (H-I:1)									
																				DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS= 1.10									
																				COMPANION LIVE LOAD FACTOR = 1.00									
																				TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .									
																				NAIL VALUES									
																				PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI)									
																				MAX MIN MAX MIN MAX MIN									
																				MT20 650 371 1747 788 1987 1873									
																				PLATE PLACEMENT TOL. = 0.250 inches									
																				PLATE ROTATION TOL. = 5.0 Deg.									
																				JSI GRIP= 0.89 (B) (INPUT = 0.90)									
																				JSI METAL= 0.31 (R) (INPUT = 1.00)									
</																													

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

[illegible][illegible]

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359638	H321T		1	TRUSS DESC.	E23090674

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Tue Oct 10 16:07:21 2023 Page 1
ID:hd511hZTz bdeQoS817GKBvhVxV-IUdWlKuY0Y9?10NKI4Pa12xluC7h751cXs8hF7yUn

Scale = 1:53.0

TOTAL WEIGHT = 161 lb

[illegible]

LATERAL BRACE(S) SHOWN SHALL BE
2X4 SPF#2



[illegible]

LUMBER		N. L. G. A. RULES		LUMBER	
CHORDS	SIZE				DESCR.
A - D	2x4	DRY	No.2		SPF
D - H	2x4	DRY	No.2		SPF
H - K	2x4	DRY	No.2		SPF
L - K	2x4	DRY	No.2		SPF
T - B	2x4	DRY	No.2		SPF
T - R	2x6	DRY	No.2		SPF
R - P	2x6	DRY	No.2		SPF
P - O	2x6	DRY	No.2		SPF
O - N	2x6	DRY	No.2		SPF
N - M	2x6	DRY	No.2		SPF
M - L	2x6	DRY	No.2		SPF
ALL WEBS EXCEPT	2x3	DRY	No.2		SPF
S - D	2x4	DRY	No.2		SPF
D - Q	2x4	DRY	No.2		SPF
Q - E	2x4	DRY	No.2		SPF
Q - F	2x4	DRY	No.2		SPF
P - F	2x4	DRY	No.2		SPF
M - J	2x4	DRY	No.2		SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMV+p	MT20	2.0	4.0	
C	TMWWW-t	MT20	4.0	6.0	2.00 2.25
D	TTWW-I	MT20	4.0	10.0	1.75 8.50
E	TMW+w	MT20	2.0	4.0	
F	TMWWW-t	MT20	5.0	8.0	
G	TMW+w	MT20	2.0	4.0	
H	TS-t	MT20	3.0	8.0	
I	TMWWW-t	MT20	4.0	6.0	1.75 3.00
J	TMWWW-t	MT20	4.0	6.0	2.50 2.00
K	TMW-t	MT20	4.0	6.0	1.50 3.00
L	BMV1+p	MT20	2.0	4.0	
M	BBWWW-I	MT20	6.0	10.0	3.00 6.25
N	BBWWW-I	MT20	8.0	9.0	4.50 4.50
O	BBWWW-p	MT20	8.0	9.0	4.50 4.50
P	BBW-h	MT20	6.0	7.0	3.50 3.50
Q	BMWWW-t	MT20	5.0	8.0	
R	BS-t	MT20	4.0	6.0	
S	BMWWW-t	MT20	4.0	6.0	
T	BMVW1+p	MT20	4.0	6.0	

LATERAL BRACE(S) SHOWN SHALL BE
2X4 SPF#2



The seal is circular with a thick black border. Inside the border, the words "LICENSED PROFESSIONAL ENGINEER" are written in a semi-circle at the top, and "PROVINCE OF ONTARIO" is written in a semi-circle at the bottom. In the center of the seal, the name "Y. WIDYA" is printed above the license number "100225448", which is above the date "10/10/2023". A large, stylized signature is written across the seal, overlapping the text and the border.

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER						
<u>BEARINGS</u>						
	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ	IN-SX	IN-SX
JT	1510	0	1510	0	1-10	1-10
L	1619	0	1619	0	5-8	1-12
T						

UNFACTORED REACTIONS							
1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
L	1076	657 / 0	0 / 0	0 / 0	0 / 0	419 / 0	0 / 0
T	1152	716 / 0	0 / 0	0 / 0	0 / 0	436 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) L, T

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.10 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF K-L, E-Q, F-P, G-O, I-N, J-M, C-T.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

TOTAL LOAD CASES: (4)									
CHORDS					WEBS				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1	MAX. CSI (LC)	MAX. UNBRAC	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)	
FR-TO		FROM TO		LENGTH		FR-TO			
A-B	0 / 42	-78.0	-78.0	0.11 (1)	10.00	C-S	0 / 43	0.01 (4)	
B-C	0 / 25	-78.0	-78.0	0.16 (1)	10.00	S-D	0 / 132	0.03 (4)	
C-D	-1313 / 0	-78.0	-78.0	0.20 (1)	5.43	D-Q	0 / 629	0.10 (1)	
D-E	-1173 / 0	-78.0	-78.0	0.56 (1)	5.10	Q-E	-578 / 0	0.32 (1)	
E-F	-1173 / 0	-78.0	-78.0	0.56 (1)	5.10	Q-F	0 / 195	0.03 (1)	
F-G	-1094 / 0	-78.0	-78.0	0.24 (1)	5.73	P-F	-633 / 0	0.35 (1)	
G-H	-1097 / 0	-78.0	-78.0	0.22 (1)	5.78	F-O	0 / 136	0.03 (1)	
H-I	-1097 / 0	-78.0	-78.0	0.22 (1)	5.78	O-G	-253 / 0	0.14 (1)	
I-J	-557 / 0	-78.0	-78.0	0.18 (1)	6.25	O-I	0 / 1039	0.23 (1)	
J-K	-223 / 0	-78.0	-78.0	0.09 (1)	6.25	N-I	-1275 / 0	0.70 (1)	
L-K	-1495 / 0	0.0	0.0	0.82 (1)	5.37	N-J	0 / 1519	0.34 (1)	
T-B	-218 / 0	0.0	0.0	0.02 (1)	7.81	M-J	-1496 / 0	0.82 (1)	
						M-K	0 / 1413	0.32 (1)	
						T-C	-1577 / 0	0.50 (1)	
T-S	0 / 826	-18.5	-18.5	0.16 (4)	10.00				
S-R	0 / 836	-18.5	-18.5	0.16 (4)	10.00				
R-Q	0 / 836	-18.5	-18.5	0.16 (4)	10.00				
Q-P	0 / 1071	-18.5	-18.5	0.18 (1)	10.00				
P-O	0 / 1276	-18.5	-18.5	0.16 (1)	10.00				
O-N	0 / 572	-18.5	-18.5	0.12 (4)	10.00				
N-M	0 / 242	-18.5	-18.5	0.03 (1)	10.00				
M-L	0 / 0	-18.5	-18.5	0.01 (4)	10.00				

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	21.0	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD	=	34.4	PSF	

LOADING IN FLAT SECTION BASED ON A SLOPE
OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF PART
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , NBC-2019AE
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= $L/360$ (1.04")
 CALCULATED VERT. DEFL.(LL) = $L/999$ (0.08")
 ALLOWABLE DEFL.(TL)= $L/360$ (1.04")
 CALCULATED VERT. DEFL.(TL) = $L/999$ (0.15")

CSI: TC=0.82/1.00 (K-L:1), BC=0.18/1.00 (P-Q:1),
WB=0.82/1.00 (J-M:1), SSI=0.24/1.00 (D-E:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

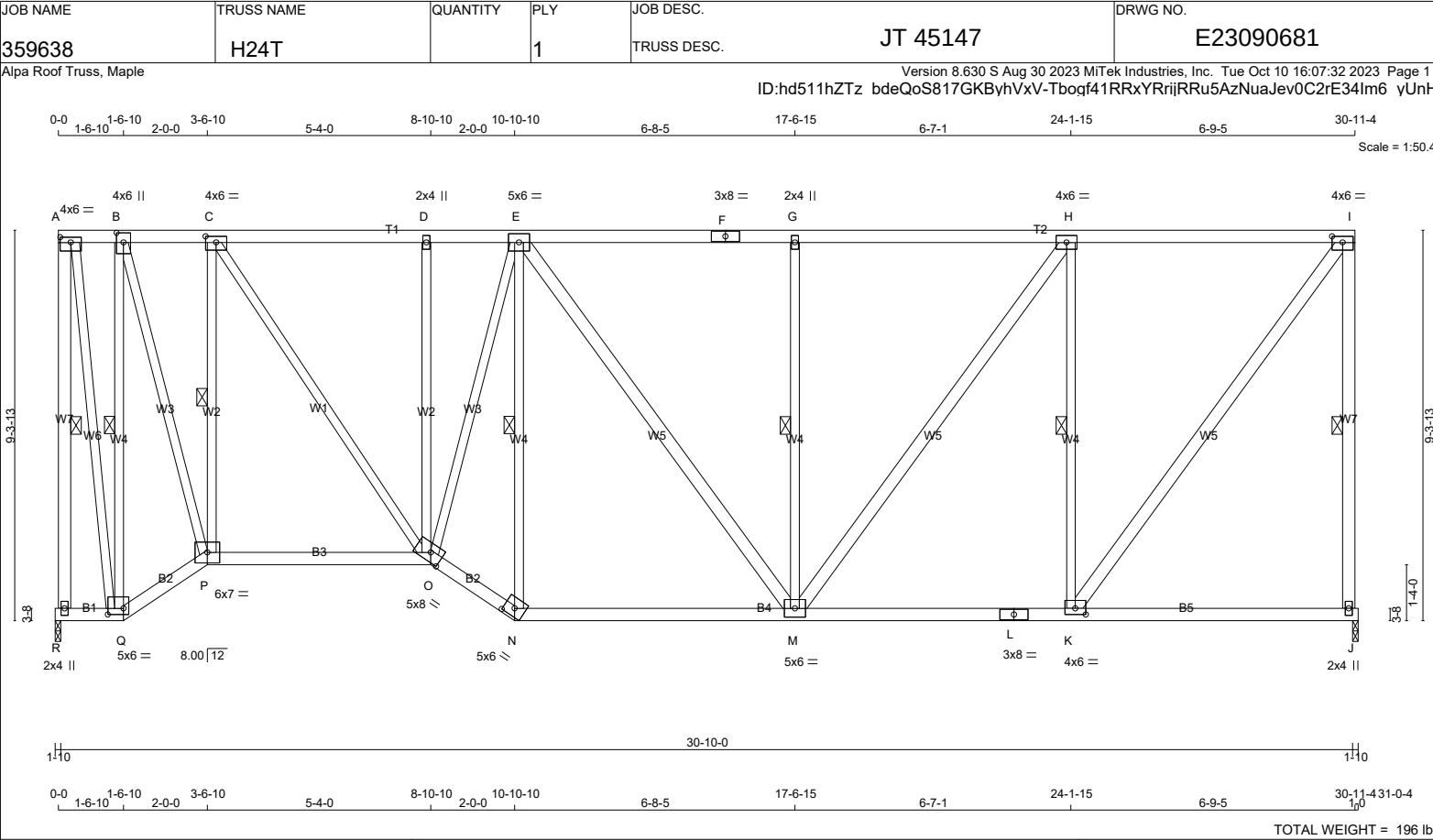
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES						
PLATE	GRIP(DRY)		SHEAR		SECTION	
	(PSI)		(PLI)		(PLI)	
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.85 (C) (INPUT = 0.90)
JSI METAL= 0.38 (D) (INPUT = 1.00)



LUS — Double-Shear Joist Hangers

All LUS hangers have double-shear nailing. This patented innovation distributes the load through two points on each joist nail for greater strength. It also allows the use of fewer nails, faster installation and the use of common nails for all connections.

Material: 18 gauge

Finish: G90 galvanized

Design:

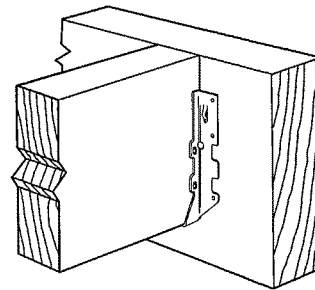
- Factored resistances are in accordance with CSA O86-14 and CSA O86:19.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these loads.

Installation:

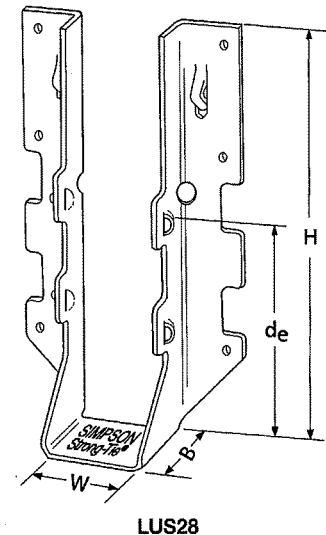
- Use all specified fasteners
- Nails: 16d = 0.162" dia. x 3½" long common wire,
10d = 0.148" x 3" long common wire
- Double-shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads
- Not designed for welded or nailer applications

Options:

- These hangers cannot be modified



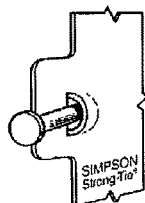
Typical LUS
Installation



LUS28

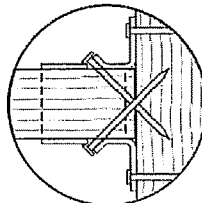
Model No.	Ga.	Dimensions (in.)				Fasteners		Factored Resistance (lb.)			
								D.Fir-L		S-P-F	
		W	H	B	d ₁ ¹	Face	Joist	Uplift (K ₀ =1.15)	Normal (K ₀ =1.00)	Uplift (K ₀ =1.15)	Normal (K ₀ =1.00)
LUS24	18	1⅞	3⅞	1¼	1⅞	(4) 10d	(2) 10d	710	1630	645	1155
LUS24-2	18	3⅞	3⅞	2	1⅞	(4) 16d	(2) 16d	835	2020	590	1435
LUS26	18	1⅞	4¾	1¼	3⅞	(4) 10d	(4) 10d	1420	2170	1290	1630
LUS26-2	18	3⅞	4¾	2	4	(4) 16d	(4) 16d	1720	2595	1545	1920
LUS26-3	18	4⅞	4¾	2	3¼	(4) 16d	(4) 16d	1720	2595	1545	2340
LUS28	18	1⅞	6⅞	1¼	3¾	(6) 10d	(6) 10d	1420	2520	1290	1790
LUS28-2	18	3⅞	7	2	4	(6) 16d	(4) 16d	1720	3325	1545	2575
LUS28-3	18	4⅞	6¼	2	3¼	(6) 16d	(4) 16d	1720	3325	1545	2375
LUS210	18	1⅞	7⅞	1¼	3⅞	(8) 10d	(4) 10d	1420	2785	1290	2210
LUS210-2	18	3⅞	9	2	6	(8) 16d	(6) 16d	2580	4500	2320	3195
LUS210-3	18	4⅞	8⅞	2	5¼	(8) 16d	(6) 16d	2580	3345	2320	2375

1. d₁ is the distance from the seat of the hanger to the highest joist nail.

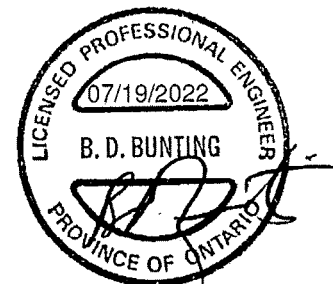


Dome double-shear nailing prevents tabs breaking off (available on some models).

US Patent
5,603,580



Double-shear nailing top view.



This technical bulletin is effective until December 31, 2024, and reflects information available as of July 1, 2022. This information is updated periodically and should not be relied upon after December 31, 2024. Contact Simpson Strong-Tie for current information and limited warranty or see strongtie.com.

© 2022 Simpson Strong-Tie Company Inc. • P.O. Box 10789, Pleasanton, CA 94588

T-SPECLUS22 7/22 exp. 12/24

(800) 999-5099
strongtie.com

HUS/LJS — Double-Shear Joist Hangers

All hangers have double-shear nailing. This patented innovation distributes the load through two points on each joist nail for greater strength. It also allows the use of fewer nails, faster installation and the use of common nails for all connections. Do not bend or remove tabs.

Material: See table

Finish: G90 galvanized

Design:

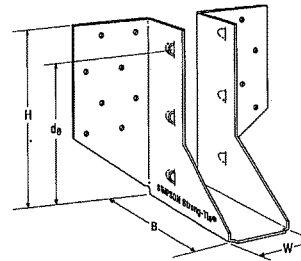
- Factored resistances are in accordance with CSA O86-14 and CSA O86:19.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these loads.

Installation:

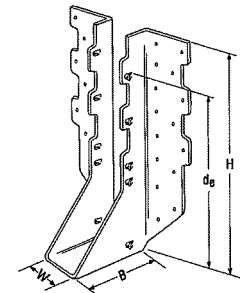
- Use all specified fasteners
- Nails: 16d = 0.162" dia. x 3½" long common wire
- Double-shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads
- Not designed for welded or nailer applications

Options:

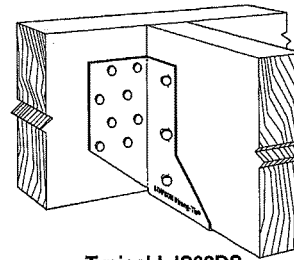
- See current catalogue for options



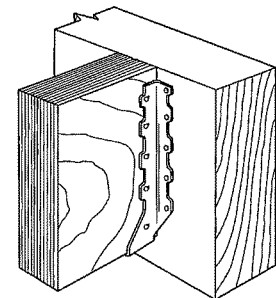
LJS26DS



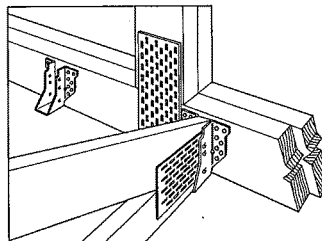
HUS210
(HUS26, HUS28, similar)



Typical LJS26DS
Installation



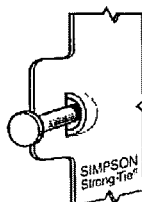
Typical HUS
Installation



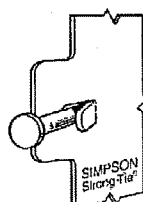
Typical HUS Installation
(Truss designer to provide fastener quantity for connecting multiple members together)

Model No.	Ga.	Dimensions (in.)				Fasteners		Factored Resistance (lb.)			
		W	H	B	d _e ¹	Face	Joist	D.Fir-L		S-P-F	
								Uplift (K ₀ =1.15) lb.	Normal (K ₀ =1.00) lb.	Uplift (K ₀ =1.15) lb.	Normal (K ₀ =1.00) lb.
LJS26DS	18	1⅞	5	3½	4⅝	(16) 16d	(6) 16d	2055	4265	1460	4115
HUS26	16	1⅞	5⅝	3	3⅞	(14) 16d	(6) 16d	2705	4940	2065	3875
HUS28	16	1⅞	7⅝	3	6⅝	(22) 16d	(8) 16d	3605	5365	2675	4345
HUS210	16	1⅞	9⅝	3	7⅝	(30) 16d	(10) 16d	4505	5795	4010	4740
HUS1.81/10	16	1⅞	9	3	8	(30) 16d	(10) 16d	4505	6450	4010	5200

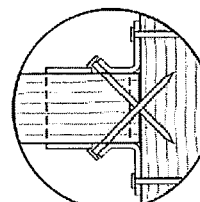
1. d_e is the distance from the seat of the hanger to the highest joist nail.



Dome double-shear nailing prevents tabs breaking off (available on some models).
US Patent 5,603,580



Double-shear nailing side view. Do not bend tab back.



Double-shear nailing top view.



This technical bulletin is effective until December 31, 2024, and reflects information available as of July 1, 2022. This information is updated periodically and should not be relied upon after December 31, 2024. Contact Simpson Strong-Tie for current information and limited warranty or see strongtie.com.

© 2022 Simpson Strong-Tie Company Inc. • P.O. Box 10789, Pleasanton, CA 94588

T-SPECHUS22 7/22 exp. 12/24

(800) 999-5099
strongtie.com

HHUS — Double-Shear Joist Hangers

SIMPSON
Strong-Tie

All HHUS hangers have double-shear nailing. This patented innovation distributes the load through two points on each joist nail for greater strength. It also allows the use of fewer nails, faster installation and the use of common nails for all connections. Do not bend or remove tabs.

Material: 14 gauge

Finish: G90 galvanized

Design:

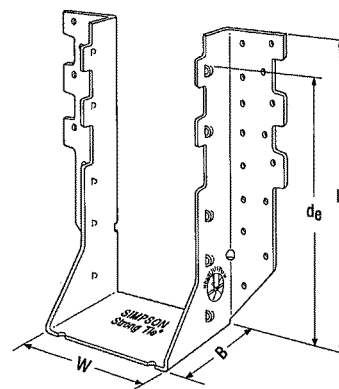
- Factored resistances are in accordance with CSA O86-14 and CSA O86:19.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these loads.

Installation:

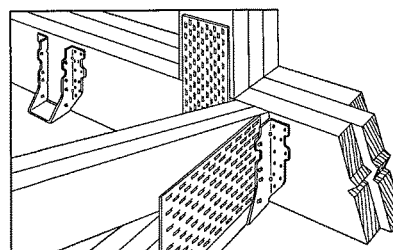
- Use all specified fasteners
- Nails: 16d = 0.162" dia. x 3½" long common wire
- Double-shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads
- Not designed for welded or nailer applications

Options:

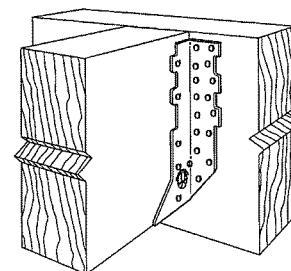
- See current catalogue for options



HHUS410



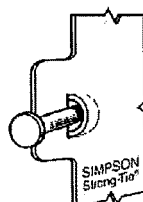
Typical HHUS Installation
(Truss designer to provide fastener quantity for connecting multiple members together)



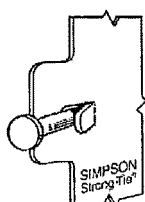
Typical HHUS Installation

Model No.	Ga.	Dimensions (in.)				Fasteners		Factored Resistance (lb.)			
		W	H	B	d _e ¹	Face	Joist	D.Fir-L		S-P-F	
								Uplift (K _b =1.15)	Normal (K _b =1.00)	Uplift (K _b =1.15)	Normal (K _b =1.00)
HHUS26-2	14	3 1/16	5 1/16	3	3 1/16	(14) 16d	(6) 16d	2850	7335	2065	5205
HHUS28-2	14	3 1/16	7 1/32	3	6 3/32	(22) 16d	(8) 16d	3765	8940	2675	6345
HHUS210-2	14	3 1/16	9 3/32	3	8	(30) 16d	(10) 16d	4670	9660	4235	7000
HHUS210-3	14	4 1/16	9	3	7 1/16	(30) 16d	(10) 16d	4670	9670	4235	6865
HHUS210-4	14	6 1/8	8 29/32	3	7 27/32	(30) 16d	(10) 16d	4670	10155	4235	7210
HHUS46	14	3 5/8	5 19/32	3	3 1/16	(14) 16d	(6) 16d	2540	7335	2065	5205
HHUS48	14	3 5/8	7 1/8	3	6 1/8	(22) 16d	(8) 16d	3765	8945	2267	6345
HHUS410	14	3 5/8	9	3	8	(30) 16d	(10) 16d	4670	9855	4235	7000
HHUS5.50/10	14	5 1/2	9	3	8	(30) 16d	(10) 16d	4670	10155	4235	7210
HHUS7.25/10	14	7 1/4	9	3 3/16	7 29/32	(30) 16d	(10) 16d	4670	10155	3370	7210

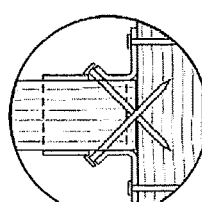
1. d_e is the distance from the seat of the hanger to the highest joist nail.



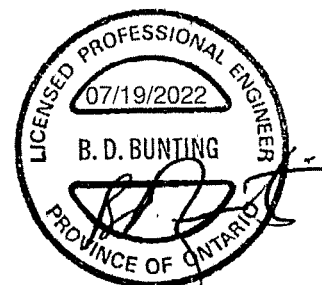
Double-shear nailing prevents tabs breaking off (available on some models).
US Patent 5,603,580



Double-shear nailing side view. Do not bend tab back.



Double-shear nailing top view.

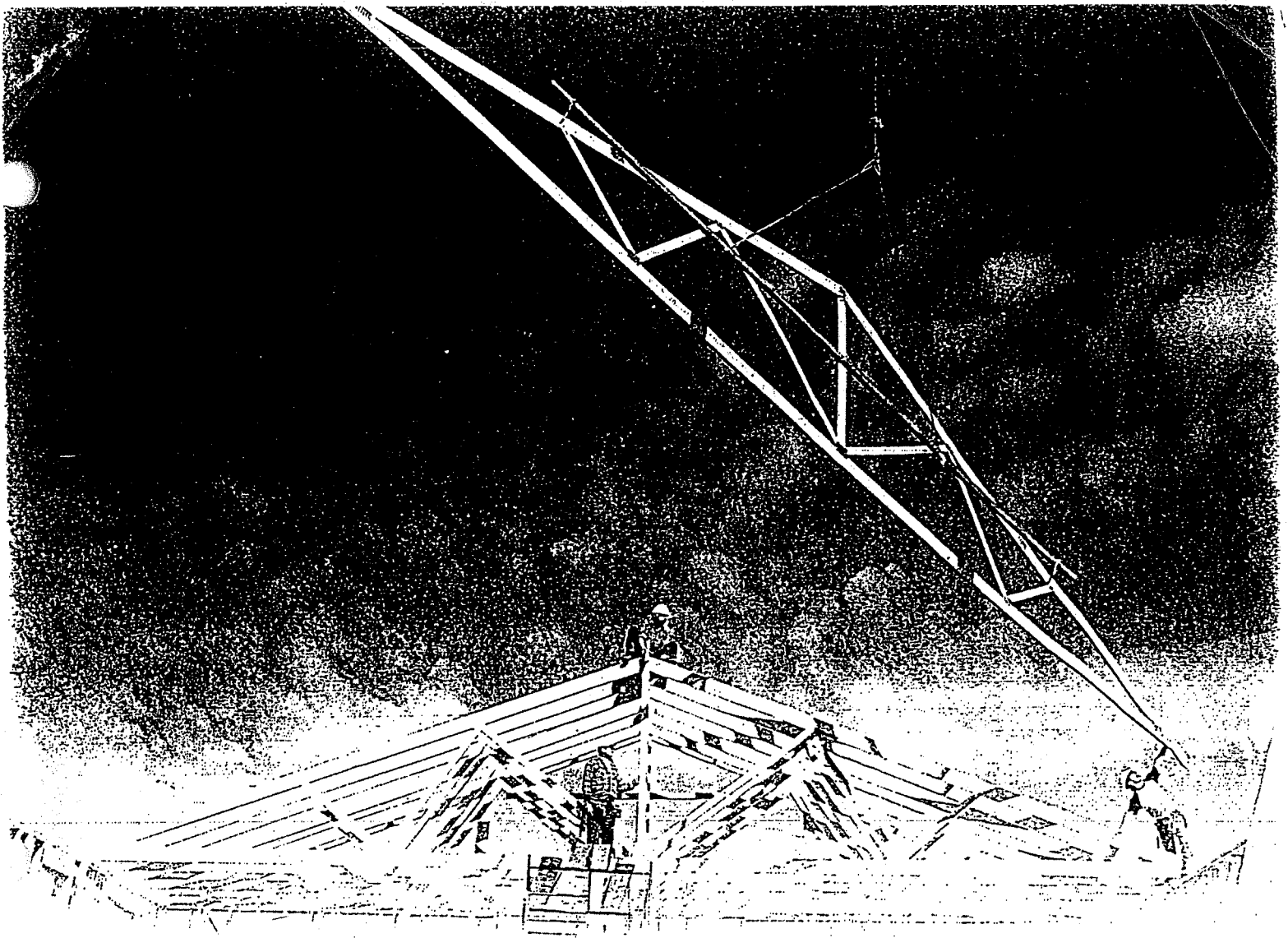


This technical bulletin is effective until December 31, 2024, and reflects information available as of July 1, 2022. This information is updated periodically and should not be relied upon after December 31, 2024. Contact Simpson Strong-Tie for current information and limited warranty or see strongtie.com.

© 2022 Simpson Strong-Tie Company Inc. • P.O. Box 10789, Pleasanton, CA 94588

T-SPECHUS22 7/22 exp. 12/24

(800) 999-5099
strongtie.com



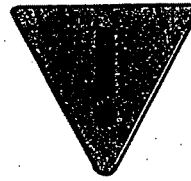
Wood Truss Installation

**A Guide to proper handling, erecting and bracing
metal plate connected wood trusses**

Table of Content

Warning.....	4
1 Unloading & Lifting.....	5
2 Job Site Handling.....	5
3 Hoisting.....	6
4 Beginning the Erection Process.....	7
5 Erection Tolerance.....	8
6 Bracing.....	8
7 Bracing Requirements for 3 Planes of Roof.....	9
8 Stacking Materials.....	10
Caution Notes.....	11

Warning



General

Familiarity with the Construction Design Documents, the Truss Design Drawings, and Truss Placement Plans (if required by the Construction Design Documents) is required to properly erect, brace, and connect the trusses to the building system.

All of the care and quality involved in the design and manufacture of wood trusses can be jeopardized if the trusses are not properly handled, erected, and braced.

The consequences of improper handling, erecting, and bracing may be a collapse of the structure, which at best is a substantial loss of time and materials, and at worst is a loss of life. The majority of truss accidents occur during truss installation and not as a result of improper design or manufacture.

Prior to truss erection, the builder/erector shall meet with the erection crew for a safety and planning meeting, making sure each crew member understands his or her roles and responsibilities during the erection process.

Temporary Erection Bracing

Trusses are not marked in any way to identify the frequency, or location of temporary erection bracing.

All temporary bracing shall comply with the latest edition of *Commentary and Recommendations for Handling, Installing & Bracing Metal Plate Connected Wood Trusses* (HIB), published by the Truss Plate Institute, and/or as specified in the Construction Design Documents prepared by the building designer.

Permanent Truss Bracing

Permanent bracing for the roof or floor trusses is the responsibility of the building designer and should be shown on the Construction Design Documents. Permanent bracing locations for individual compression members of a wood truss are shown on the Truss Design Drawings, and shall be installed by the building or erection contractor. This bracing is needed for the proper performance of individual trusses within the roof or floor system. The design and connection of the bracing to the truss and then to the overall building system is the responsibility of the building designer, and is in addition to the permanent bracing plan, which is also specified by the building designer.

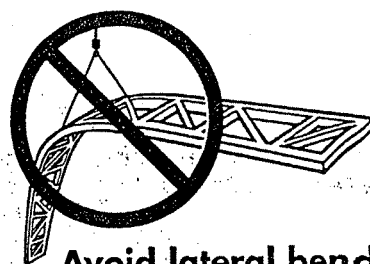
Special Design Requirements

Special design requirements, such as wind bracing, portal bracing, seismic bracing, diaphragms, shear walls, or other load transfer elements and their connections to wood trusses must be considered separately by the building designer, who shall determine size, location, and method of connections for all bracing as needed to resist these forces.

1 Unloading & Lifting

Never handle trusses flat

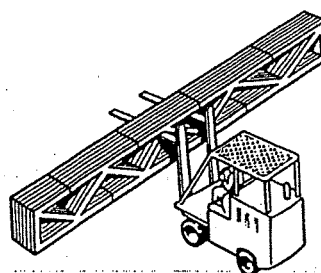
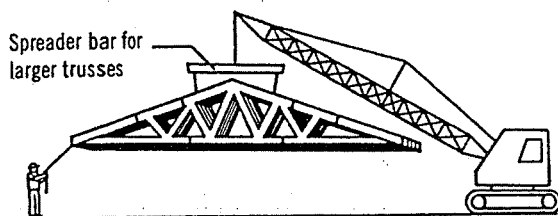
Beginning with the unloading process, and throughout all phases of construction, care must be taken to avoid lateral bending of trusses, which can cause damage to the lumber and metal connector plates at the joints.



Avoid lateral bending

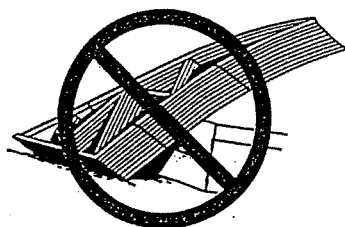
- Use special care in windy weather.
- If using a crane within 10 feet of an electric line, contact the local power company.
- If using a crane within 5 miles of an airport, contact the airport 30 days prior to erection to learn about any safety regulations that must be followed.

2 Job Site Handling



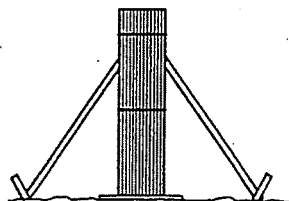
All trusses should be picked up at the top chords in a vertical position only

Proper banding and smooth ground allow for unloading of trusses without damage. This should be done as close to the building site as possible to minimize handling. Do not break banding until installation begins. Hand erection of trusses is allowed, provided excessive lateral bending is prevented.



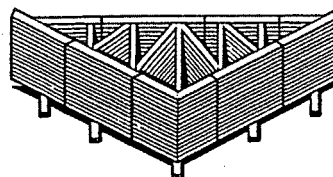
Do not store unbraced bundles upright

If trusses are stored vertically they shall be braced in a manner that will prevent tipping or topping. Generally cutting of the banding is done just prior to installation.



Do not store on uneven ground

If trusses are stored horizontally, blocking should be used on eight to ten foot centers, or as required, to minimize lateral bending and moisture gain.

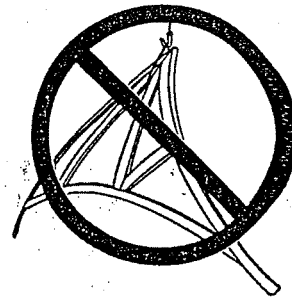


Care should be exercised when removing banding to avoid damaging trusses.

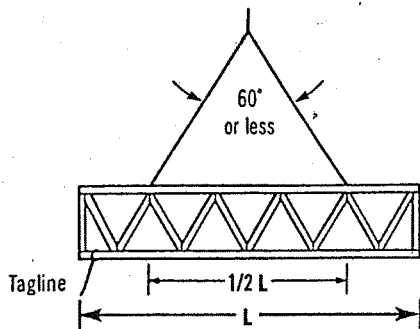
During long term storage, trusses shall be protected from the environment in a manner that provides for adequate ventilation of the trusses. If tarpaulins or other material is used, the ends shall be left open for ventilation. Plastic is not recommended, since it can trap moisture.

3 Hoisting

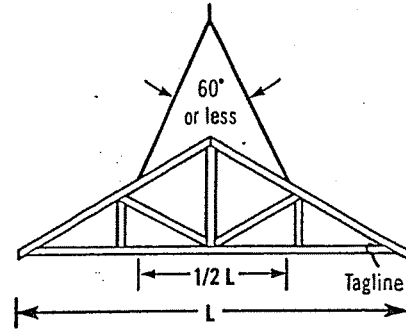
All trusses that are erected one at a time shall be held safely in position by the erection equipment until such time as all necessary bracing has been installed and the ends of the trusses are securely fastened to the building.



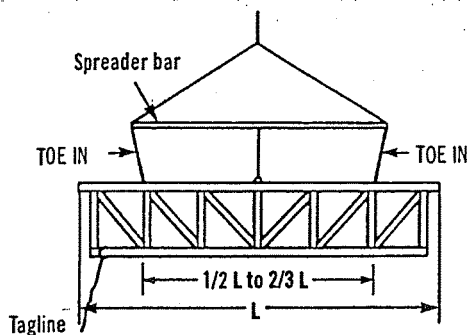
Avoid lateral bending



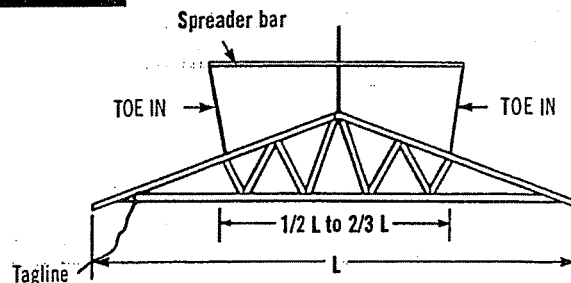
$L \leq 30'$



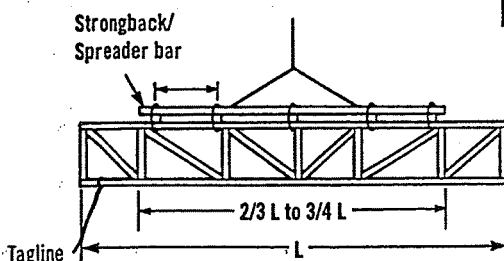
Truss sling is acceptable where these criteria are met.



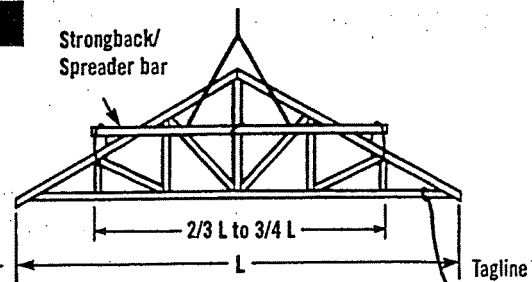
$30' < L \leq 60'$



Use spreader bar in all other cases. It should be noted that the lines from the ends of the spreader bar "TOE IN"; if these lines should "TOE OUT" the truss may fold in half.



$L > 60'$



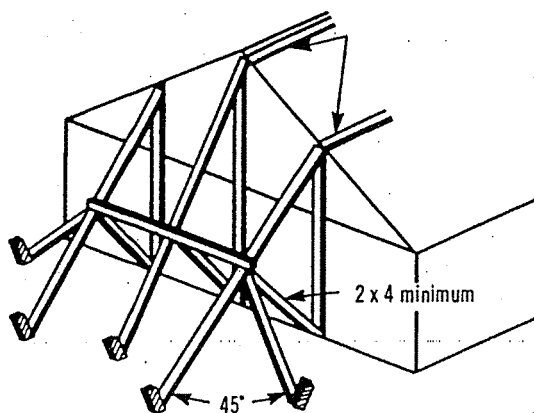
For lifting trusses with spans in excess of 60 feet, it is recommended that a strongback/spreader bar be used as illustrated. The strongback/spreader bar should be attached to the top chord and web members at intervals of approximately 10 feet. Further, the strongback/spreader bar should be at or above the mid-height of the truss to prevent overturning. The strongback/spreader bar can be of any material with sufficient strength to safely carry the weight of the truss and sufficient rigidity to adequately resist bending of the truss.

4 Beginning the Erection Process

It is important for the builder or erection contractor to provide substantial bracing for the first truss erected. The two or more trusses making up the rest of the first set are tied to and rely upon the first truss for stability. Likewise, after this first set of trusses is adequately cross-braced, the remaining trusses installed rely upon this first set for stability. Thus, the performance of the truss bracing system depends to a great extent on how well the first group of trusses is braced.

Ground Brace - Exterior

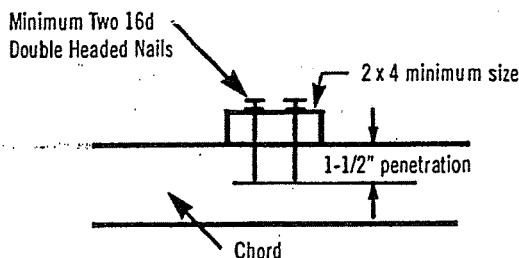
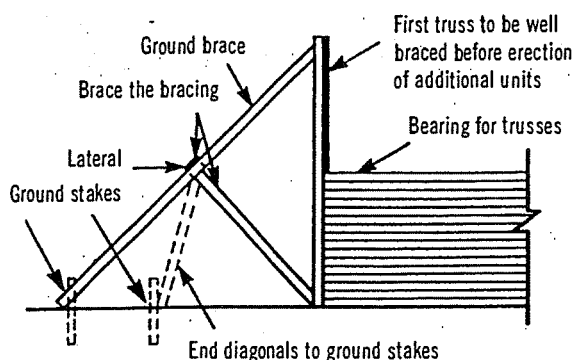
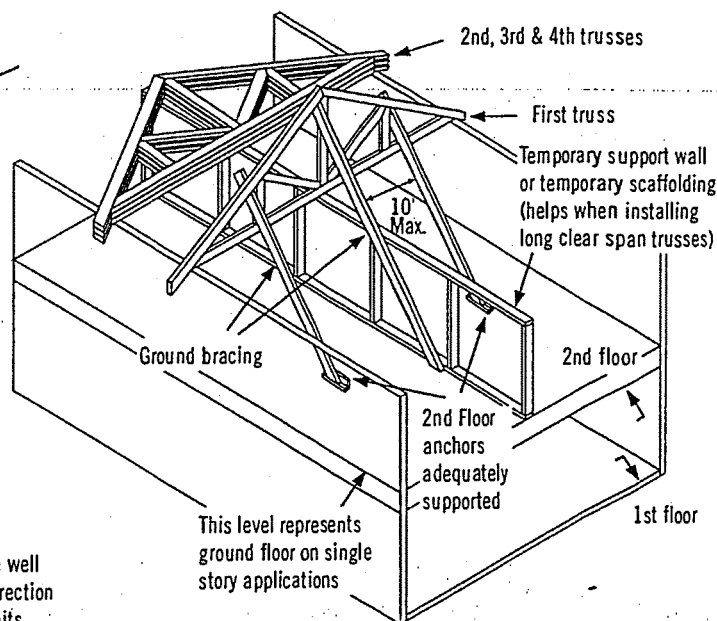
One satisfactory method ties the first unit of trusses off to a series of braces that are attached to a stake driven into the ground and securely anchored. The ground brace itself should be supported as shown below or it is apt to buckle. Additional ground braces in the opposite direction, inside the building, are also recommended.



Note: Locate ground braces for first truss directly in line with all rows of top chord continuous lateral bracing (either temporary or permanent).

Ground Brace - Interior

Another satisfactory method where height of building or ground conditions prohibit bracing from the exterior is to tie the first truss rigidly in place from the interior at the floor level, provided the floor is substantially completed and capable of supporting the ground bracing forces. Securely fasten the first truss to the middle of the building. Brace the bracing similar to exterior ground bracing shown at left. Set trusses from the middle toward the end of the building. Properly cross-brace the first set of trusses before removing floor braces and setting remaining trusses.

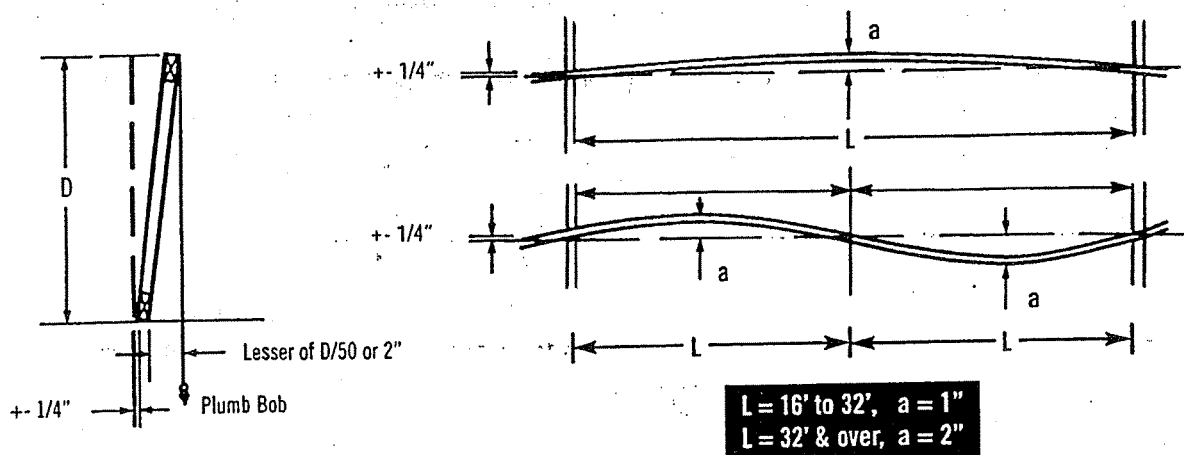


Inadequate size of bracing material or inadequate fastening is a major cause of erection dominoing.

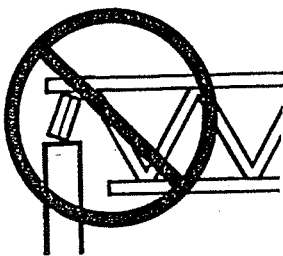
5 Erection Tolerance

Complying with erection tolerances is critical to achieving an acceptable roof or floor line, and to accomplishing effective bracing. Setting trusses within tolerance the first time will prevent the need for the hazardous practice of respacing or adjusting trusses when roof sheathing or roof purlins are installed. Trusses leaning or bowing can cause nails to miss the top chords when sheathing is applied, and create cumulative stresses on the bracing, which is a frequent cause of dominoing.

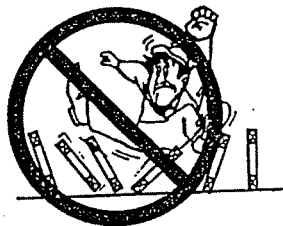
When sheathing, make sure nails are driven into the top chord of the trusses.



6 Bracing



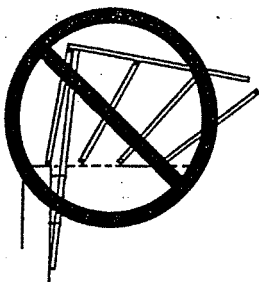
Do not install trusses on temporarily connected supports



Do not walk on unbraced trusses



Do not walk on trusses or gable ends lying flat

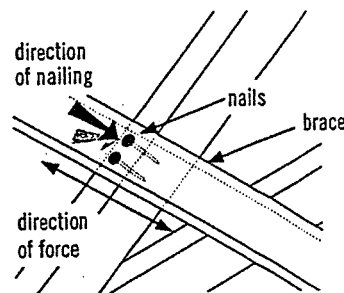


Nails in withdrawal (parallel to force)

All anchors, hangers, tie-downs, seats, bearing ledgers, etc., that are part of the supporting structure shall be accurately and properly placed and permanently attached before truss installation begins. No trusses shall ever be installed on anchors or ties that have temporary connections to the supporting structure.

Nailing scabs to the end of the building to brace the first truss is not recommended.

All nailing of bracing should be done so that nails are driven perpendicular to the direction of force, as shown at right.



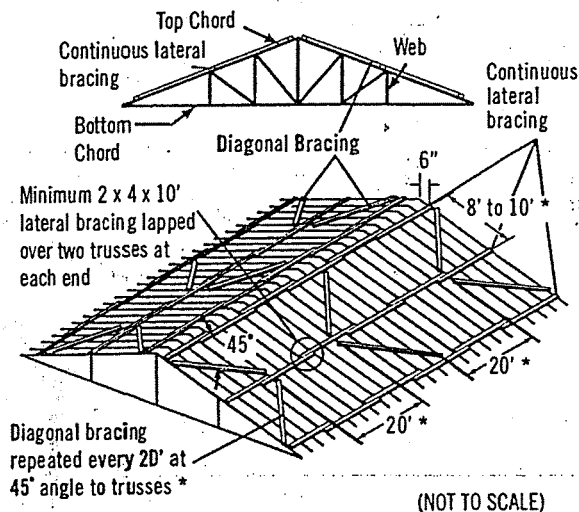
Well nailed (perpendicular to force)

7 Bracing Requirements for 3 Planes of Roof

Temporary erection bracing must be applied to three planes of the roof system to ensure stability: Plane 1) Top Chord (sheathing), Plane 2) Bottom Chord (ceiling plane), and Plane 3) Web Member plane or vertical plane perpendicular to trusses.

1) Top Chord Plane

Most important to the builder or erection contractor is bracing in the plane of the top chord. Truss top chords are susceptible to lateral buckling before they are braced or sheathed.

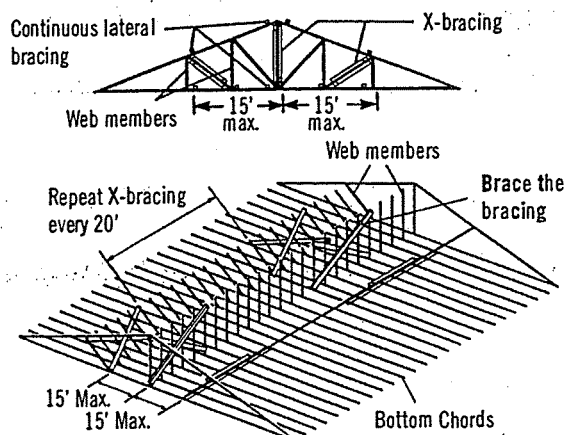


Exact spacing between trusses should be maintained as bracing is installed to avoid the hazardous practice of removing bracing to adjust spacing. This act of "adjusting spacing" can cause trusses to topple if connections are removed at the wrong time.

3) Web Member Plane

"X" bracing, as shown, is critical in preventing trusses from leaning or dominoing. Repeat as shown to create a succession of rigid units.

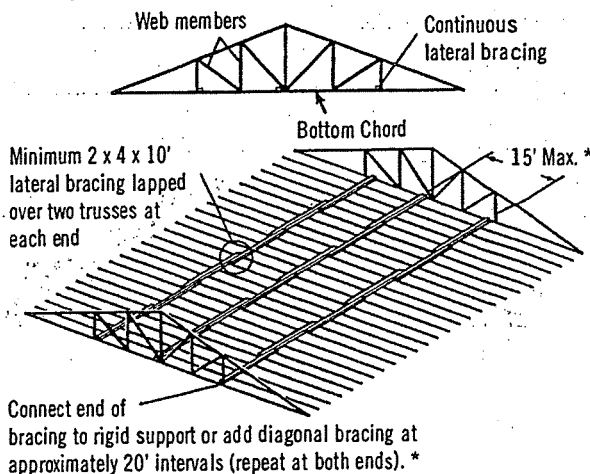
X-bracing should be installed on vertical web members wherever possible, at or near lateral bracing. Plywood or OSB may be substituted for X-bracing.



Note: Top chords and some web members are not shown, in order to make drawings more readable.

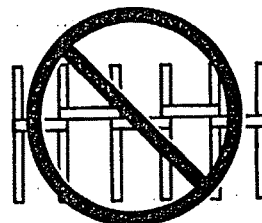
2) Bottom Chord Plane

In order to hold proper spacing on the bottom chord, temporary bracing is recommended on the top of the bottom chord.

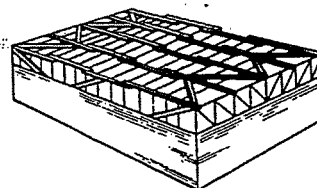


* Long spans, heavy loads or other spacing configurations may require closer spacing between lateral bracing and closer intervals between diagonals. Consult the building designer or HIB and DSB (Recommended Design Specification for Temporary Bracing of Metal-Plate Connected Wood Trusses) for details.

Diagonal or cross-bracing is very important!



Do not use short blocks to brace individual trusses without a specific bracing plan detailing their use

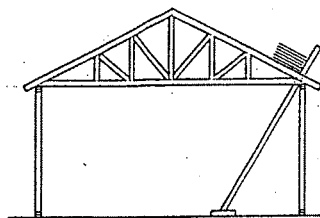
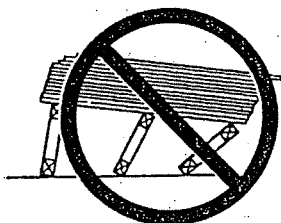


Bracing requirements using the same principles apply to parallel chord trusses

8 Stacking Materials

Do not proceed with building completion until all bracing is securely and properly in place

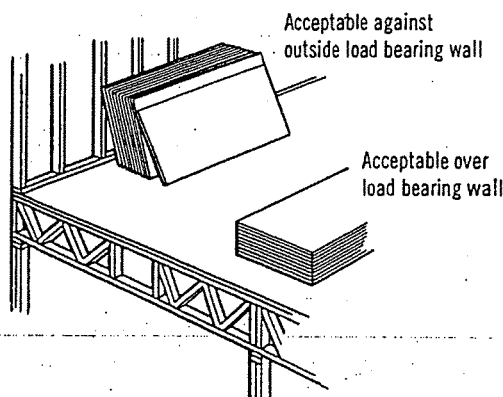
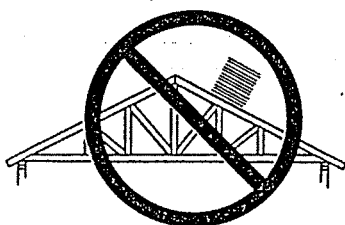
Never stack materials on unbraced or inadequately braced trusses



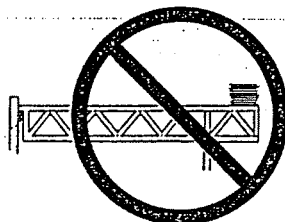
Platform must be rigidly braced

Proper distribution of construction materials is a must during construction.

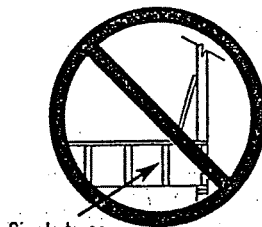
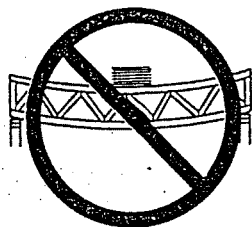
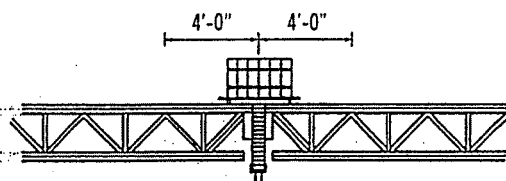
Never stack materials near a peak



Never stack materials on the cantilever of a truss



Always stack materials over two or more trusses.

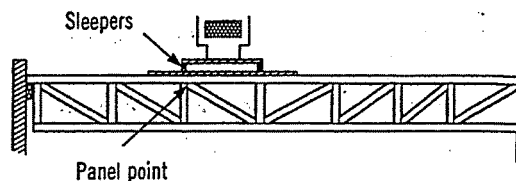
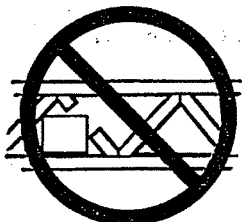


Single truss

Never overload small groups or single trusses. Position load over as many trusses as possible.

Roofing and mechanical contractors are cautioned to stack materials only along outside supporting members or directly over inside supporting members. Trusses are not designed for dynamic loads (i.e., moving vehicles). Extreme care should be taken when loading and stacking construction materials (rolled roofing, mechanical equipment, etc.) on the roof or floor system.

Never cut any structural member of a truss.



Sleepers for mechanical equipment should be located at panel points (joints) or over main supporting members, and only on trusses that have been designed for such loads.

Caution Notes

Errors in building lines and/or dimensions, or errors by others shall be corrected by the contractor or responsible construction trade subcontractor or supplier **before** erection of trusses begins.

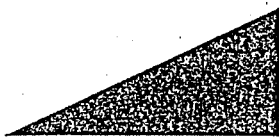
Cutting of nonstructural overhangs is considered a part of normal erection and shall be done by the builder or erection contractor.

Any field modification that involves the cutting, drilling, or relocation of any structural truss member or connector plate shall not be done without the approval of the truss manufacturer or a licensed design professional.

The methods and procedures outlined are intended to ensure that the overall construction techniques employed will put floor and roof trusses safely in place in a completed structure. These recommendations for bracing wood trusses originate from the collective experience of leading technical personnel in the wood truss industry, but must, due to the nature of responsibilities involved, be presented only as a guide for use by a qualified building designer, builder, or erection contractor. Thus, the Wood Truss Council of America expressly disclaims any responsibility for damages arising from the use, application, or reliance on the recommendations and information contained herein.

[Selected text and figures referenced or reproduced from HIB and DSB by permission of the Truss Plate Institute, Madison, WI.]

THE CANADIAN WOOD TRUSS ASSOCIATION



L'ASSOCIATION CANADIENNE DES FABRICANTS DE FERMES DE BOIS

1400 Blair Place, Suite 210, Ottawa, ON K1J 9B8
Tel.: 613-747-5544 Fax: 613-747-6264



**Wood Truss Council
of America**

One WTCA Center
6300 Enterprise Lane, Madison, WI 53719-1140
Tel.: 608-274-4849 Fax: 608-274-3329
wtca@woodtruss.com www.woodtruss.com