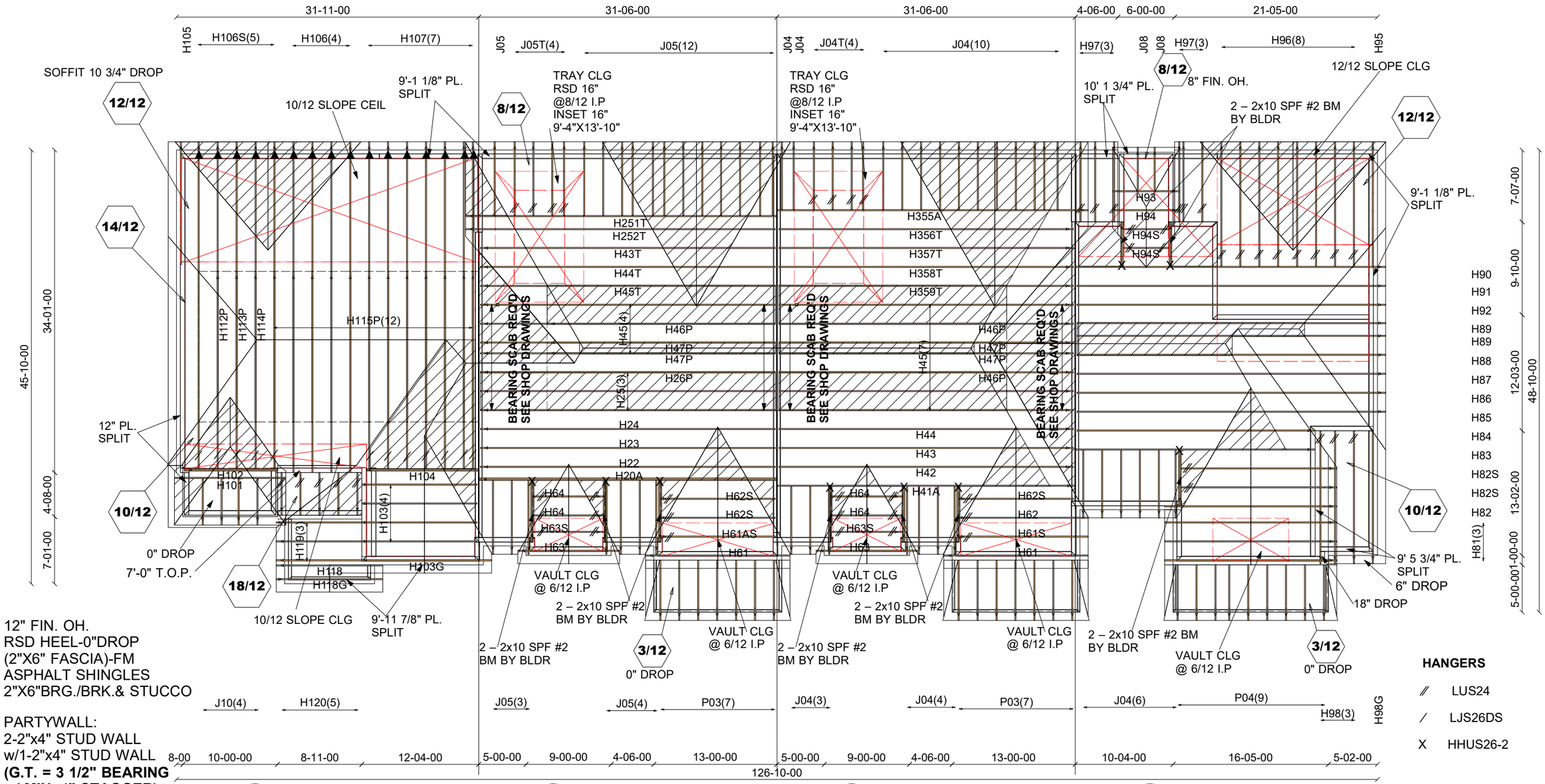
THESE DRAWINGS CONSTITUTE THE PROPERTY OF ALPA ROOF TRUSSES INC., SHALL NOT BE REPRODUCED, PUBLISHED, OR REDISTRIBUTED IN ANY MANNER OR UTILIZED FOR ANY PURPOSE OTHER THAN THE MANUFACTURE OF TRUSSES BY ALPA ROOF TRUSSES INC AND WILL BE RETRACTED IF UTLILZED FOR ANY OTHER PURPOSE.



12" FIN. OH.
RSD HEEL-0"DROP
(2"X6" FASCIA)-FM
ASPHALT SHINGLES
2"X6"BRG./BRK.& STUCCO

PARTYWALL:
2-2"x4" STUD WALL
w/1-2"x4" STUD WALL
(G.T. = 3 1/2" BEARING w/ MIN. 4" STAGGER)

PIGGYBACK TRS
PURLINS BY OTHERS

HANGERS

// LUS24
/ LJS26DS
X HHUS26-2

1	2	3	4
UNIT 3105 END	UNIT 3103	UNIT 3103	UNIT 3104 END
ELEV. 'A' (REV)	ELEV. 'A' (REV)	ELEV. 'A' (REV)	ELEV. 'A' (REV)
362624K	**362969K**	**362970K**	**362628K**

E24033345 - E24033421

PL# 118659 (TYP)

2024

Job Track: **45147**	336326	Builder / Location: **GOLD PARK HOMES / VAUGHAN**	ALL CONVENTIONAL FRAMING TO CONFORM WITH PART 9 O.B.C. LATEST EDITION. ROOF RAFTERS THAT CROSS OVER TRUSSES TO BE 2X4 SPF #2 @ 24" O.C WITH A VERT. POST TO THE TRUSS UNDERNEATH AT EACH CROSS POINT. VERT. POSTS LONGER THAN 6' TO HAVE LATERAL BRACING SO THAT THE DISTANCE BETWEEN END POINTS & BETWEEN ROWS OF BRACING DOES NOT EXCEED 6'
Layout ID: **359637K**	Project: **PINE VALLEY**	Model / Elevation: **BLOCK 6 REV1.1 / UNITS 1-4**	*REVISED FOR PRODUCTION*
Plan Log: **123367**	Date: **2/21/2024** Designer: AMANDA/GM 359636K		

CONVENTIONAL FRAMING BY OTHERS

Mitek V. 8.5.3.233

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.

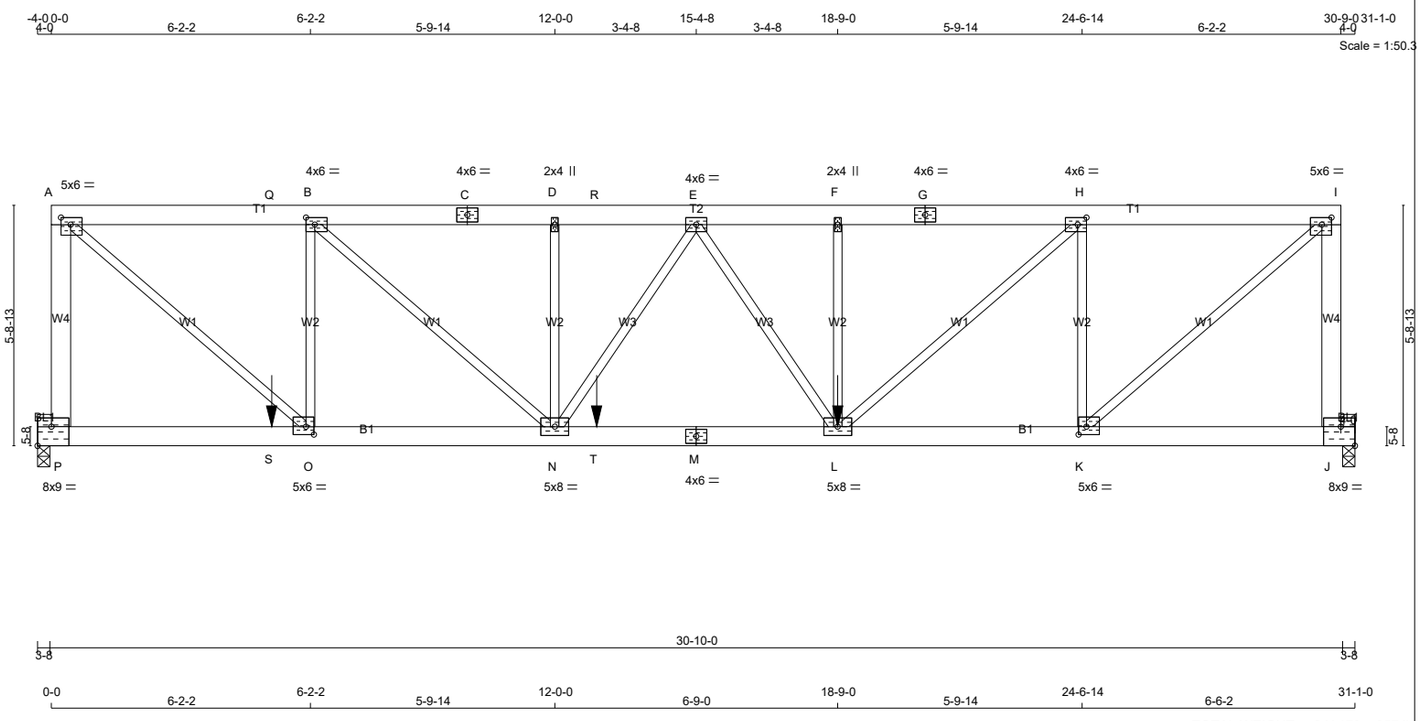
THESE DRAWINGS CONSTITUTE THE PROPERTY OF EWP DESIGN INC., SHALL NOT BE REPRODUCED, PUBLISHED, OR REDISTRIBUTED IN ANY MANNER OR UTILIZED FOR ANY PURPOSE OTHER THAN THE MANUFACTURE OF TRUSSES BY THE ALPA LUMBER GROUP, AND WILL BE RETRACTED BY EWP DESIGN INC. IF UTILIZED FOR ANY OTHER PURPOSE.

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.		DRWG NO.
359637K	H20A		2	TRUSS DESC.	JT 45147	E24033345

Alpha Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:33 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-2TpqtbCsC4CGstMdVCR4rKwkUTFVNJfZX5tnYZzgZyi



TOTAL WEIGHT = 2 X 179 = 357 lb [M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
P - A	2x6	DRY	No.2	SPF
A - C	2x6	DRY	No.2	SPF
C - G	2x6	DRY	No.2	SPF
G - I	2x6	DRY	No.2	SPF
J - I	2x6	DRY	No.2	SPF
P - M	2x6	DRY	No.2	SPF
M - J	2x6	DRY	No.2	SPF

BEARING BLOCKS

BL1	2 - 2x4	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			
P- A	2	12	TOP
A- C	2	12	SIDE(43.9)
C- G	2	12	SIDE(45.5)
G- I	2	12	TOP
I- J	2	12	TOP
BOTTOM CHORDS : (0.122"X3") SPIRAL NAILS			
P- M	2	12	SIDE(11.9)
M- J	2	12	SIDE(172.5)
WEBS : (0.122"X3") SPIRAL NAILS			
F- L	1	6	SIDE(114.7)
2x3	1	6	

NAILS TO BE DRIVEN FROM ONE SIDE ONLY.

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

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	2.00	2.75
B	TMWW-t	MT20	4.0	6.0	2.00	2.50
C	TS-t	MT20	4.0	6.0		
D	TMW+w	MT20	2.0	4.0		
E	TMWW-t	MT20	4.0	6.0		
F	TMW+w	MT20	2.0	4.0		
G	TS-t	MT20	4.0	6.0		
H	TMWW-t	MT20	4.0	6.0	2.00	2.50
I	TMVW-t	MT20	5.0	6.0	2.00	2.75
J	BMVK1-t	MT20	8.0	9.0	5.50	Edge
K	BMWW-t	MT20	5.0	6.0	2.25	2.25
L	BMWWW-t	MT20	5.0	8.0		
M	BS-t	MT20	4.0	6.0		
N	BMWWW-t	MT20	5.0	8.0		
O	BMWW-t	MT20	5.0	6.0	2.25	2.25
P	BMVK1-t	MT20	8.0	9.0	5.50	Edge

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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
P	3791	0	3791	0	0	3-8	3-8
J	2968	0	2968	0	0	3-8	3-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	SNOW	MAX./MIN. COMPONENT REACTIONS LIVE	PERM.LIVE	WIND	DEAD	SOIL
P	2702	1654 / 0	0 / 0	0 / 0	0 / 0	1048 / 0	0 / 0
J	2116	1294 / 0	0 / 0	0 / 0	0 / 0	822 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.91 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

MEMB. FR-TO	MAX. FORCE (LBS)	FACTORED VERT. LOAD (PLF)	FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH
P- A	-3604 / 0	0.0		0.0	0.60 (1)	7.39	
A- Q	-3551 / 0	-165.7		-165.7	0.24 (1)	5.68	
Q- B	-3551 / 0	-78.0		-78.0	0.24 (1)	5.68	
B- C	-5246 / 0	-78.0		-78.0	0.22 (1)	4.91	
C- D	-5246 / 0	-78.0		-78.0	0.22 (1)	4.91	
D- R	-5246 / 0	-78.0		-78.0	0.10 (1)	5.04	
R- E	-5246 / 0	-169.0		-169.0	0.10 (1)	5.04	
E- F	-5351 / 0	-169.0		-169.0	0.11 (1)	5.00	
F- G	-5351 / 0	-78.0		-78.0	0.16 (1)	4.95	
G- H	-5351 / 0	-78.0		-78.0	0.16 (1)	4.95	
H- I	-3053 / 0	-78.0		-78.0	0.12 (1)	6.17	
J- I	-2916 / 0	0.0		0.0	0.49 (1)	7.81	
P- S	-156 / 0	-39.3		-39.3	0.17 (1)	6.25	
S- O	-156 / 0	-18.5		-18.5	0.17 (1)	6.25	
O- N	0 / 3551	-18.5		-18.5	0.33 (1)	10.00	
N- T	0 / 5500	-18.5		-18.5	0.54 (1)	10.00	
T- M	0 / 5500	-39.8		-39.8	0.54 (1)	10.00	
M- L	0 / 5500	-39.8		-39.8	0.54 (1)	10.00	
L- K	0 / 3053	-18.5		-18.5	0.25 (1)	10.00	
K- J	-127 / 0	-18.5		-18.5	0.04 (4)	6.25	

WEBS

MEMB. FR-TO	MAX. FORCE (LBS)	MAX CSI (LC)
A- O	0 / 4876	0.60 (1)
B- N	-2346 / 0	0.53 (1)
N- D	0 / 2287	0.28 (1)
L- F	-317 / 0	0.07 (1)
L- H	-442 / 0	0.10 (1)
K- H	0 / 3101	0.38 (1)
K- I	-2632 / 0	0.59 (1)
N- E	0 / 4182	0.52 (1)
E- L	-471 / 0	0.16 (1)
	-278 / 0	0.09 (1)

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
L	18-9-0	-1101	-1101	---	FRONT	VERT	TOTAL	---	C1
S	5-3-0	-745	-745	---	FRONT	VERT	TOTAL	---	C1
T	13-0-0	-745	-745	---	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/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
- ADDT'L LOADS BASED ON 55 % OF GSL.
LOADS APPLIED TO FIRST 5-3-0 OF SPAN MEASURED FROM THE LEFT.

*** NON STANDARD GIRDER ***
ADDT'L 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 , 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 (1.01")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.12")
ALLOWABLE DEFL.(TL)= L/360 (1.01")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.25")

CSI: TC=0.60/1.00 (A-P:1) , BC=0.54/1.00 (L-N:1) , WB=0.60/1.00 (A-O:1) , SSI=0.26/1.00 (O-P: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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

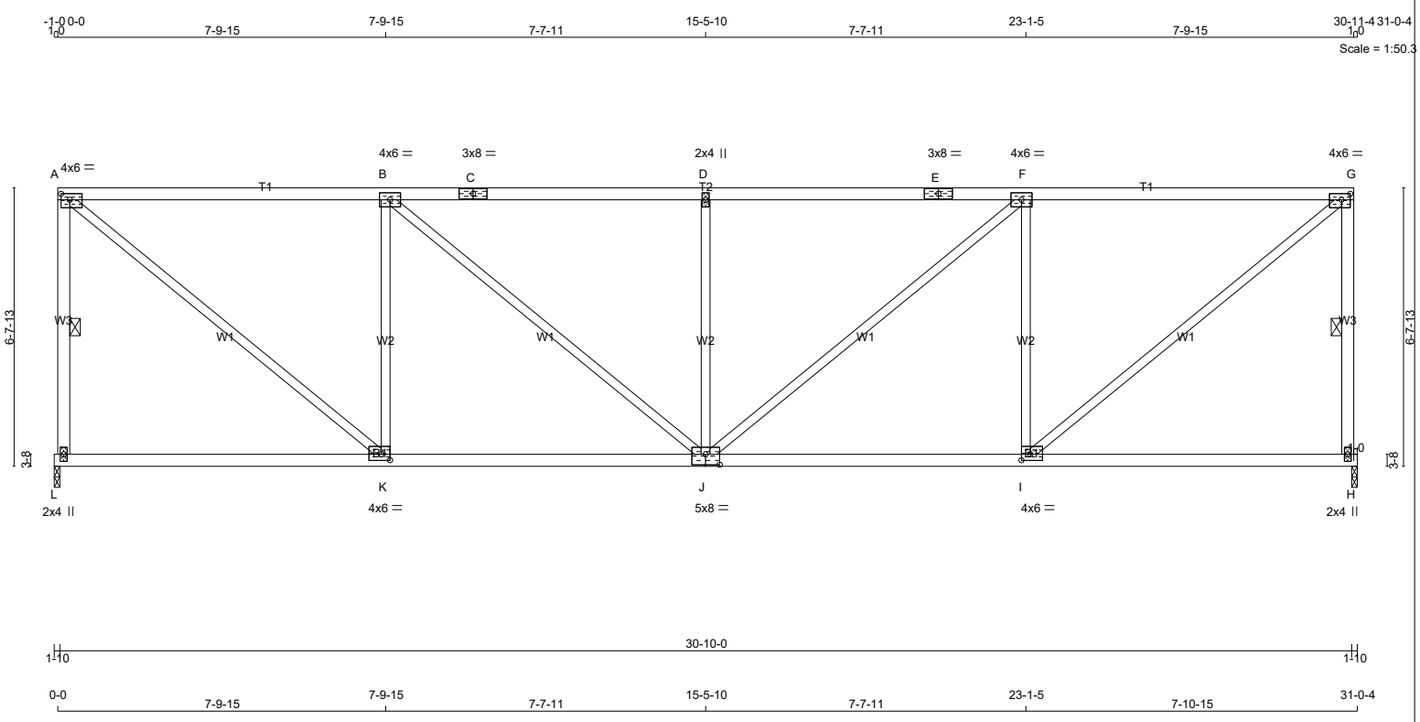
JSI GRIP= 0.89 (A) (INPUT = 0.90)
JSI METAL= 0.87 (M) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H22		1	TRUSS DESC. JT 45147	E24033346

Alpha Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:34 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-WfNC4xDUzOK7U1xp3wyJNXSqitc16kijmlcK4?zqZvh



TOTAL WEIGHT = 131 lb

[M]

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	4.0	6.0	1.75	2.50
B	TMWW-t	MT20	4.0	6.0		
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	6.0		
G	TMVW-t	MT20	4.0	6.0	1.75	2.50
H	BMV1+p	MT20	2.0	4.0		
I	BMWW-t	MT20	4.0	6.0	1.75	2.50
J	BSWWW-l	MT20	5.0	8.0	3.00	4.00
K	BMWW-t	MT20	4.0	6.0	1.75	2.50
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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
L	1492	0	1492	0	0	1-10	1-10
H	1492	0	1492	0	0	1-10	1-10

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
L	1064	649 / 0	0 / 0	0 / 0	0 / 0	415 / 0	0 / 0
H	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) L, H

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.67 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.

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 MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH	WEBS MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
L- A	-1436 / 0	0.0	0.0	0.29 (1)	5.45	A- K	0 / 1894	0.43 (1)
A- B	-1470 / 0	-78.0	-78.0	0.88 (1)	4.13	K- B	-1018 / 0	0.74 (1)
B- C	-1863 / 0	-78.0	-78.0	0.95 (1)	3.67	B- J	0 / 512	0.12 (1)
C- D	-1863 / 0	-78.0	-78.0	0.95 (1)	3.67	J- D	-547 / 0	0.40 (1)
D- E	-1863 / 0	-78.0	-78.0	0.95 (1)	3.67	J- F	0 / 512	0.12 (1)
E- F	-1863 / 0	-78.0	-78.0	0.95 (1)	3.67	I- F	-1018 / 0	0.74 (1)
F- G	-1470 / 0	-78.0	-78.0	0.88 (1)	4.13	I- G	0 / 1894	0.43 (1)
H- G	-1436 / 0	0.0	0.0	0.29 (1)	5.45			
L- K	0 / 0	-18.5	-18.5	0.32 (4)	10.00			
K- J	0 / 1470	-18.5	-18.5	0.46 (4)	10.00			
J- I	0 / 1470	-18.5	-18.5	0.46 (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 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 (1.03")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.10")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.24")

CSI: TC=0.95/1.00 (D-F:1) , BC=0.46/1.00 (J-K:4) , WB=0.74/1.00 (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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

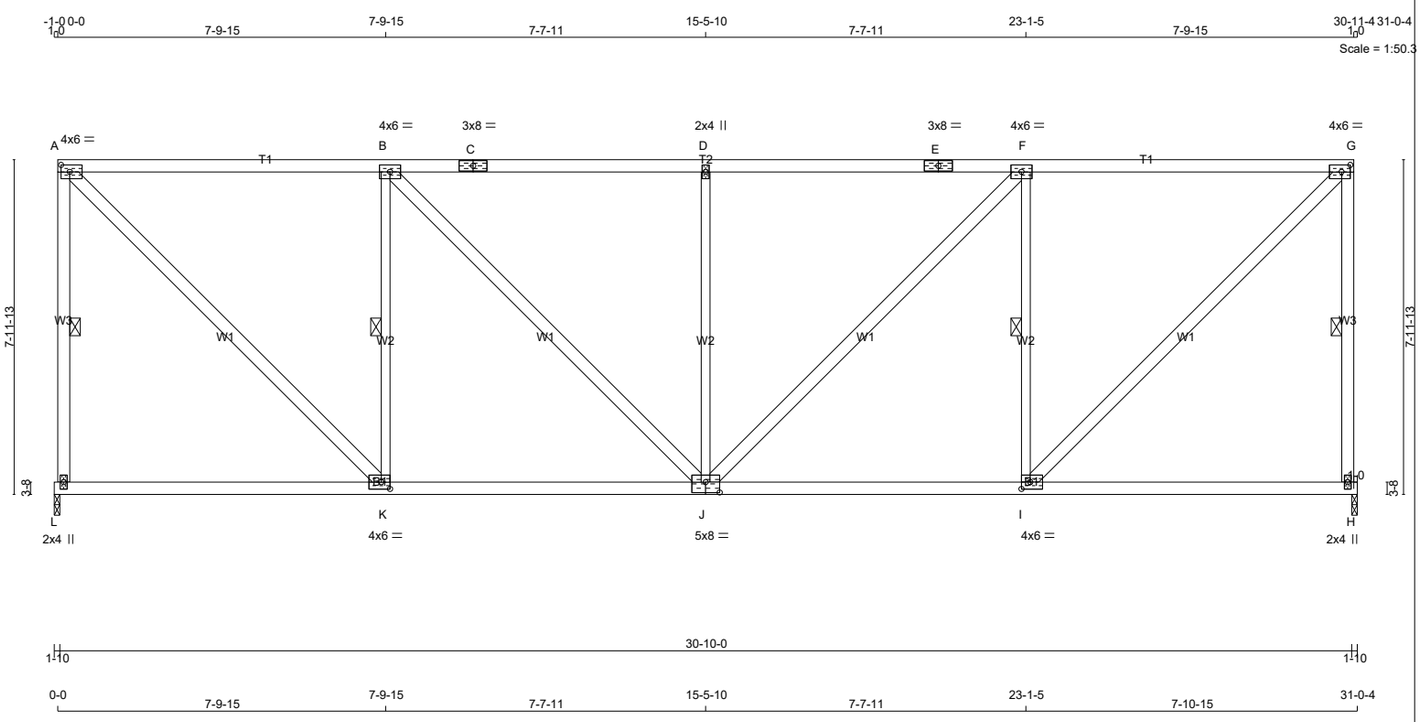
JSI GRIP= 0.87 (I) (INPUT = 0.90)
JSI METAL= 0.35 (G) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.		DRWG NO.
359637K	H23		1	TRUSS DESC.	JT 45147	E24033347

Alpha Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:34 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-WfNC4xDUzOK7U1xp3wyJNXSrjtdN6l jmlcK4?zqZvh



TOTAL WEIGHT = 154 lb

[M]

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	2x4	DRY	No.2	SPF
EXCEPT				
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	TMVW-t	MT20	4.0	6.0	2.00	2.50
B	TMWW-t	MT20	4.0	6.0		
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	6.0		
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	6.0	2.00	2.50
J	BSWWW-l	MT20	5.0	8.0	3.00	4.00
K	BMWW-t	MT20	4.0	6.0	2.00	2.50
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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
L	1492	0	1492	0	0	1-10	1-10
H	1492	0	1492	0	0	1-10	1-10

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
L	1064	649 / 0	0 / 0	0 / 0	0 / 0	415 / 0	0 / 0
H	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) L, H

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 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)

CHORDS MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX MAX. UNBRAC LENGTH	WEBS MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
L- A	-1437 / 0	0.0	0.0	0.41 (1)	5.45	A- K	0 / 1705	0.27 (1)
A- B	-1216 / 0	-78.0	-78.0	0.84 (1)	4.48	K- B	-1018 / 0	0.41 (1)
B- C	-1541 / 0	-78.0	-78.0	0.89 (1)	4.03	B- J	0 / 460	0.07 (1)
C- D	-1541 / 0	-78.0	-78.0	0.89 (1)	4.03	J- D	-546 / 0	0.66 (1)
D- E	-1541 / 0	-78.0	-78.0	0.89 (1)	4.03	J- F	0 / 460	0.07 (1)
E- F	-1541 / 0	-78.0	-78.0	0.89 (1)	4.03	I- F	-1018 / 0	0.41 (1)
F- G	-1216 / 0	-78.0	-78.0	0.84 (1)	4.48	I- G	0 / 1705	0.27 (1)
H- G	-1437 / 0	0.0	0.0	0.41 (1)	5.45			
L- K	0 / 0	-18.5	-18.5	0.32 (4)	10.00			
K- J	0 / 1216	-18.5	-18.5	0.44 (4)	10.00			
J- I	0 / 1216	-18.5	-18.5	0.44 (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 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 (1.03")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.07")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.19")

CSI: TC=0.89/1.00 (D-F:1) , BC=0.44/1.00 (J-K:4) , WB=0.66/1.00 (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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

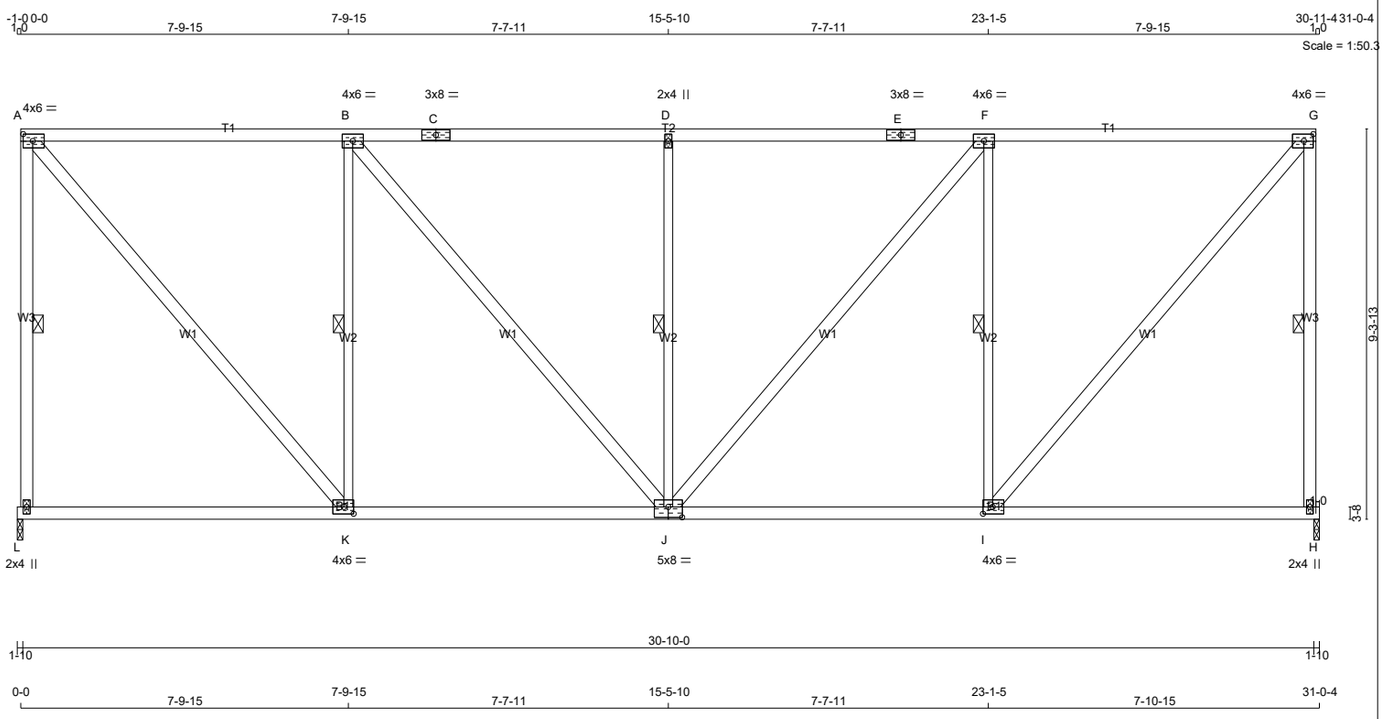
JSI GRIP= 0.86 (K) (INPUT = 0.90)
JSI METAL= 0.34 (A) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H24		1	TRUSS DESC. JT 45147	E24033348

Alpha Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:35 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-?swaHHE6kiS 5BW0ddTYwl?07HzsrCWs PMtcSzqZvg



TOTAL WEIGHT = 164 lb

[M]

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	2x4	DRY	No.2	SPF
EXCEPT				
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	TMVW-t	MT20	4.0	6.0	2.00	2.75
B	TMWW-t	MT20	4.0	6.0		
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	6.0		
G	TMVW-t	MT20	4.0	6.0	2.00	2.75
H	BMV1+p	MT20	2.0	4.0		
I	BMWW-t	MT20	4.0	6.0	2.00	2.75
J	BSWWW-l	MT20	5.0	8.0	3.00	4.00
K	BMWW-t	MT20	4.0	6.0	2.00	2.75
L	BMV1+p	MT20	2.0	4.0		

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

LICENSED PROFESSIONAL ENGINEER
Y. WIDYA
100225448
02/28/2024
PROVINCE OF ONTARIO

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
L	1492	0	1492	0	0	1-10	1-10
H	1492	0	1492	0	0	1-10	1-10

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
L	1064	649 / 0	0 / 0	0 / 0	0 / 0	415 / 0	0 / 0
H	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) L, H

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.32 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, 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

LOADING

TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX. UNBRAC LENGTH
L- A	-1437 / 0	0.0	0.0	0.59 (1)	5.45
A- B	-1037 / 0	-78.0	-78.0	0.81 (1)	4.80
B- C	-1313 / 0	-78.0	-78.0	0.85 (1)	4.32
C- D	-1313 / 0	-78.0	-78.0	0.85 (1)	4.32
D- E	-1313 / 0	-78.0	-78.0	0.85 (1)	4.32
E- F	-1313 / 0	-78.0	-78.0	0.85 (1)	4.32
F- G	-1037 / 0	-78.0	-78.0	0.81 (1)	4.80
H- G	-1437 / 0	0.0	0.0	0.59 (1)	5.45
L- K	0 / 0	-18.5	-18.5	0.32 (4)	10.00
K- J	0 / 1037	-18.5	-18.5	0.42 (4)	10.00
J- I	0 / 1037	-18.5	-18.5	0.42 (4)	10.00
I- H	0 / 0	-18.5	-18.5	0.32 (4)	10.00

WEBS

MEMB. FR-TO	FORCE (LBS)	MAX. FACTORED CSI (LC)
A- K	0 / 1582	0.25 (1)
K- B	-1018 / 0	0.58 (1)
B- J	0 / 428	0.07 (1)
J- D	-546 / 0	0.31 (1)
J- F	0 / 428	0.07 (1)
I- F	-1018 / 0	0.58 (1)
I- G	0 / 1582	0.25 (1)

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 , 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 (0.07")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.18")

CSI: TC=0.85/1.00 (B-D:1) , BC=0.42/1.00 (J-K:4) , WB=0.58/1.00 (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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

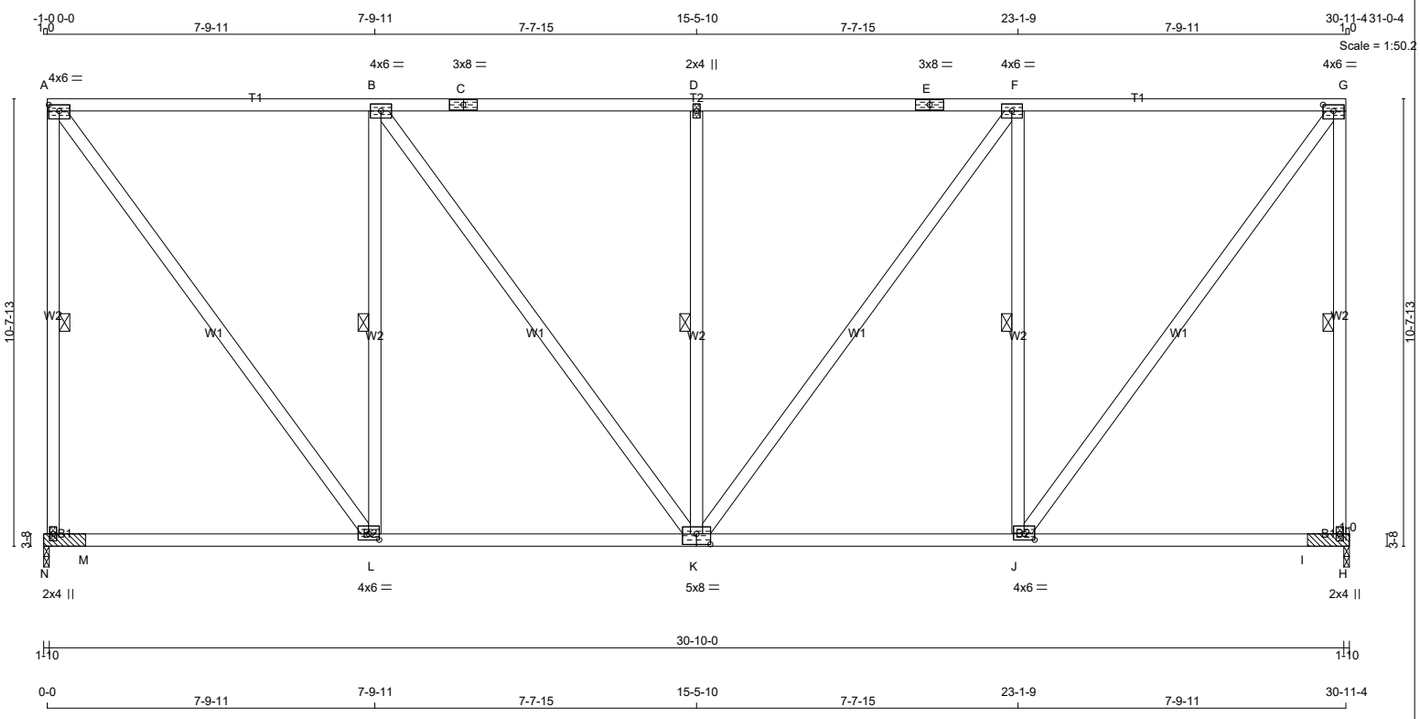
JSI GRIP= 0.90 (I) (INPUT = 0.90)
JSI METAL= 0.33 (A) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H25		1	TRUSS DESC. JT 45147	E24033349

Alpha Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:32 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-aHFSfFBERn4PEjnRyVwrI6NUx4x4eswQIR7D?7zgZyj



TOTAL WEIGHT = 3 X 187 = 562 lb

[M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
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
H - G	2x4	DRY	No.2	SPF
N - K	2x4	DRY	No.2	SPF
K - H	2x4	DRY	No.2	SPF
ALL WEBS	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	1.75	3.00
B	TMWW-t	MT20	4.0	6.0		
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	6.0		
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-l	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

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
N	1608	0	1608	0	0	1-10	1-10 & BLOCK
H	1608	0	1608	0	0	1-10	1-10 & BLOCK

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
N	1157	649 / 0	0 / 0	0 / 0	0 / 0	507 / 0	0 / 0
H	1157	649 / 0	0 / 0	0 / 0	0 / 0	507 / 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 2" C.C. 12 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 2" C.C. 12 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, D-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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH
N- A	-1553 / 0	0.0	0.0	0.89 (1)	5.29	
A- B	-972 / 0	-85.5	-85.5	0.87 (1)	2.00	
B- C	-1234 / 0	-85.5	-85.5	0.91 (1)	2.00	
C- D	-1234 / 0	-85.5	-85.5	0.91 (1)	2.00	
D- E	-1234 / 0	-85.5	-85.5	0.91 (1)	2.00	
E- F	-1234 / 0	-85.5	-85.5	0.91 (1)	2.00	
F- G	-972 / 0	-85.5	-85.5	0.87 (1)	2.00	
H- G	-1553 / 0	0.0	0.0	0.89 (1)	5.29	
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 / 972	-18.5	-18.5	0.42 (4)	10.00	
K- J	0 / 972	-18.5	-18.5	0.42 (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	

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
A- L	0 / 1615	0.26 (1)
L- B	-1112 / 0	0.64 (1)
B- K	0 / 441	0.07 (1)
K- D	-602 / 0	0.34 (1)
K- F	0 / 441	0.07 (1)
J- F	-1112 / 0	0.64 (1)
J- G	0 / 1615	0.26 (1)

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 , 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 (0.06")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.17")

CSI: TC=0.91/1.00 (B-D:1) , BC=0.42/1.00 (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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

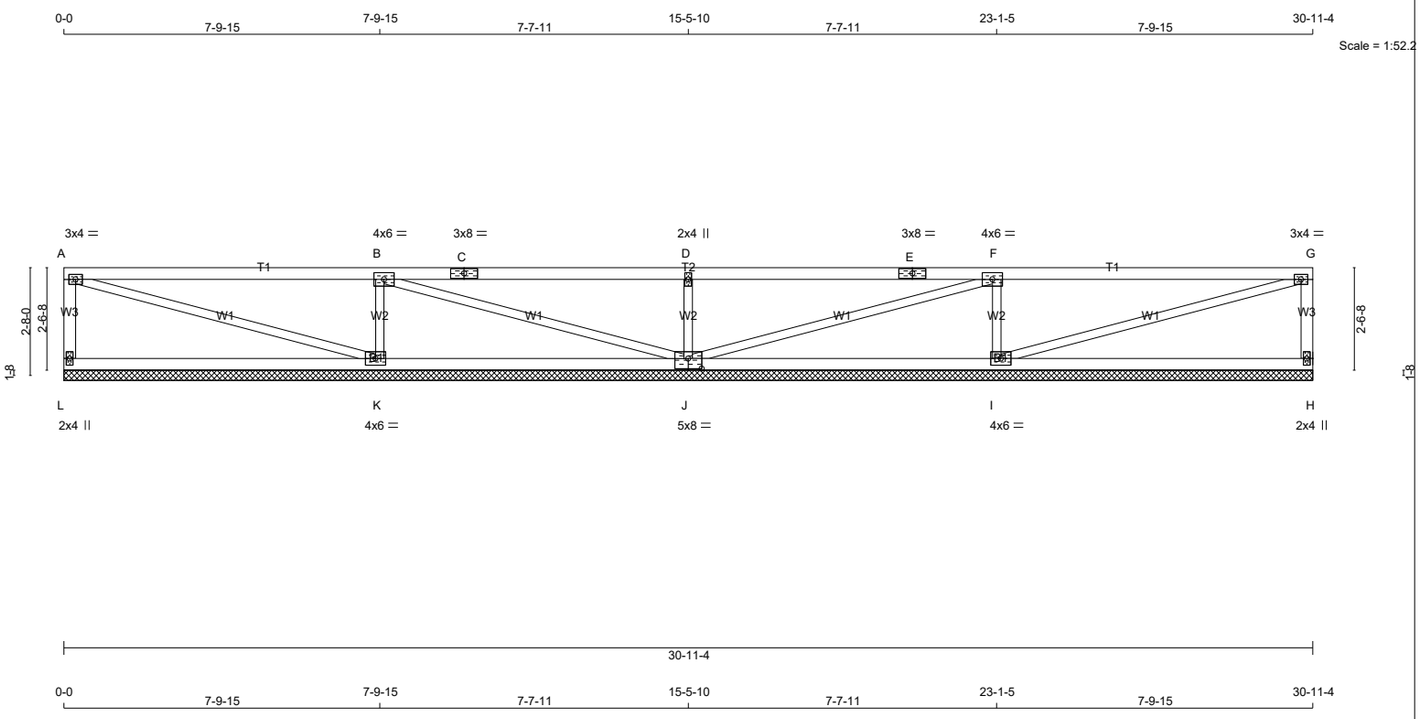
JSI GRIP= 0.85 (A) (INPUT = 0.90)
JSI METAL= 0.34 (L) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H26P		1	TRUSS DESC. JT 45147	E24033350

Alpha Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:35 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-?swaHHE6kiS 5BW0ddTYwl?3YH LrKus PMtcSzqZyg



TOTAL WEIGHT = 105 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	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	6.0		
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	6.0		
G	TMVW-t	MT20	3.0	4.0		
H	BMV1+p	MT20	2.0	4.0		
I	BMWW1-t	MT20	4.0	6.0		
J	BSWWW1-l	MT20	5.0	8.0	3.00	4.00
K	BMWW1-t	MT20	4.0	6.0		
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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
L	296	0	296	0	0	30-11-4 (15-5-10)	
H	296	0	296	0	0	30-11-4 (15-5-10)	
K	860	0	860	0	0	30-11-4 (15-5-10)	
J	671	0	671	0	0	30-11-4 (15-5-10)	
I	860	0	860	0	0	30-11-4 (15-5-10)	

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS 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	615	367 / 0	0 / 0	0 / 0	0 / 0	248 / 0	0 / 0
J	476	305 / 0	0 / 0	0 / 0	0 / 0	171 / 0	0 / 0
I	615	367 / 0	0 / 0	0 / 0	0 / 0	248 / 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 MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH	WEBS MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
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	-682 / 0	0.11 (1)
B- C	0 / 30	-78.0	-78.0	0.69 (1)	10.00	B- J	-34 / 0	0.05 (1)
C- D	0 / 30	-78.0	-78.0	0.69 (1)	10.00	J- D	-547 / 0	0.09 (1)
D- E	0 / 30	-78.0	-78.0	0.69 (1)	10.00	J- F	-34 / 0	0.05 (1)
E- F	0 / 30	-78.0	-78.0	0.69 (1)	10.00	I- F	-682 / 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	0.32 (4)	10.00			
K- J	0 / 3	-18.5	-18.5	0.32 (4)	10.00			
J- I	0 / 3	-18.5	-18.5	0.32 (4)	10.00			
I- H	0 / 0	-18.5	-18.5	0.32 (4)	10.00			

[M]

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 , 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

CSI: TC=0.69/1.00 (B-D:1) , BC=0.32/1.00 (J-K: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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

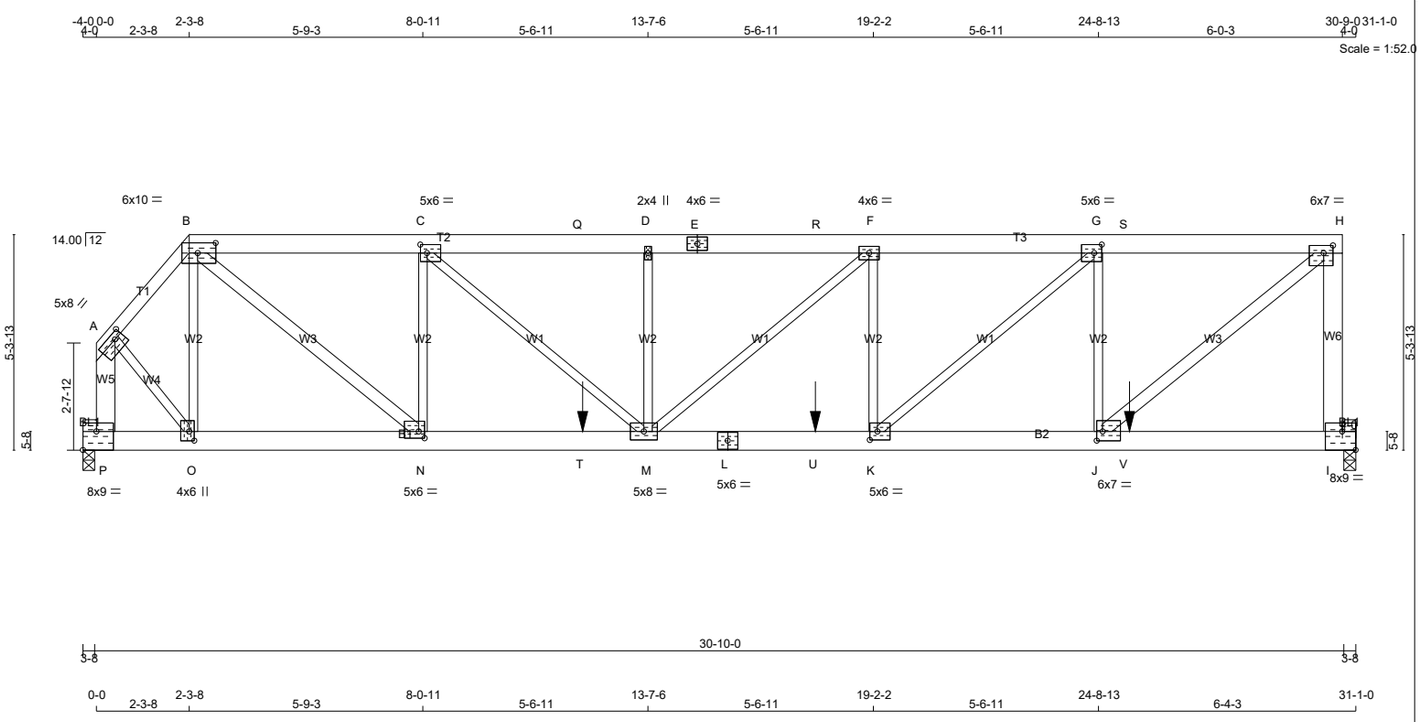
JSI GRIP= 0.84 (A) (INPUT = 0.90)
JSI METAL= 0.28 (J) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H41A		1	TRUSS DESC. JT 45147	E24033351

Alpha Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:36 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-T2UzVdElV?arjK5CBK nSyYAkhEJabe0D35R8uzgZyf



TOTAL WEIGHT = 178 lb

[M]

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	2x6	DRY	No.2	SPF
P - A	2x6	DRY	No.2	SPF
P - L	2x6	DRY	1650F 1.5E	SPF
L - I	2x6	DRY	1650F 1.5E	SPF
BEARING BLOCKS				
BL1	2 - 2x4	DRY	No.2	SPF
ALL WEBS EXCEPT	2x3	DRY	No.2	SPF
B - N	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	5.0	8.0	1.75	2.50
B	TTWW-l	MT20	6.0	10.0	3.00	5.25
C	TMWW-t	MT20	5.0	6.0	2.50	2.00
D	TMW+w	MT20	2.0	4.0		
E	TS-t	MT20	4.0	6.0		
F	TMWW-t	MT20	4.0	6.0		
G	TMWW-t	MT20	5.0	6.0	2.50	2.25
H	TMVW-t	MT20	6.0	7.0	2.25	2.75
I	BMVK1-t	MT20	8.0	9.0	5.50	Edge
J	BMWW-t	MT20	6.0	7.0	2.75	1.75
K	BMWW-t	MT20	5.0	6.0	2.50	2.25
L	BS-t	MT20	5.0	6.0		
M	BMWWW-t	MT20	5.0	8.0		
N	BMWW-t	MT20	5.0	6.0	2.00	1.75
O	BMWW+t	MT20	4.0	6.0	2.75	1.50
P	BMVK1-t	MT20	8.0	9.0	5.50	Edge

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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
I	3544	0	3544	0	0	3-8	3-8
P	2820	0	2820	0	0	3-8	3-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	SNOW	MAX./MIN. COMPONENT REACTIONS LIVE	PERM.LIVE	WIND	DEAD	SOIL
I	2526	1546 / 0	0 / 0	0 / 0	0 / 0	980 / 0	0 / 0
P	2010	1229 / 0	0 / 0	0 / 0	0 / 0	781 / 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. PURLIN SPACING = 3.22 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 MEMB. FR-TO	MAX. FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH	WEBS MEMB. FR-TO	MAX. FORCE (LBS)	FACTORED MAX CSI (LC)
A- B	-1806 / 0	-78.0	-78.0	0.12 (1)	4.85		O- B	-1311 / 0	0.50 (1)
B- C	-4003 / 0	-78.0	-78.0	0.29 (1)	4.06		A- O	0 / 1991	0.49 (1)
C- Q	-5745 / 0	-78.0	-78.0	0.43 (1)	3.34		B- N	0 / 3734	0.66 (1)
Q- D	-5745 / 0	-156.0	-156.0	0.43 (1)	3.34		N- C	-2022 / 0	0.77 (1)
D- E	-5745 / 0	-156.0	-156.0	0.53 (1)	3.22		C- M	0 / 2314	0.57 (1)
E- R	-5745 / 0	-156.0	-156.0	0.53 (1)	3.22		M- D	-762 / 0	0.29 (1)
R- F	-5745 / 0	-78.0	-78.0	0.53 (1)	3.22		M- F	0 / 663	0.16 (1)
F- G	-5246 / 0	-78.0	-78.0	0.51 (1)	3.38		K- F	-948 / 0	0.36 (1)
G- S	-3557 / 0	-78.0	-78.0	0.49 (1)	4.00		K- G	0 / 2244	0.56 (1)
S- H	-3557 / 0	-153.5	-153.5	0.49 (1)	4.00		J- G	-2207 / 0	0.84 (1)
I- H	-3401 / 0	0.0	0.0	0.92 (1)	5.72		J- H	0 / 4778	0.84 (1)
P- A	-2818 / 0	0.0	0.0	0.27 (1)	6.20				
P- O	-293 / 0	-18.5	-18.5	0.02 (4)	6.25				
O- N	0 / 1148	-18.5	-18.5	0.22 (1)	10.00				
N- T	0 / 4003	-18.5	-18.5	0.70 (1)	10.00				
T- M	0 / 4003	-37.3	-37.3	0.70 (1)	10.00				
M- L	0 / 5246	-37.3	-37.3	0.72 (1)	10.00				
L- U	0 / 5246	-37.3	-37.3	0.72 (1)	10.00				
U- K	0 / 5246	-18.5	-18.5	0.72 (1)	10.00				
K- J	0 / 3557	-18.5	-18.5	0.40 (1)	10.00				
J- V	-160 / 0	-18.5	-18.5	0.15 (1)	6.25				
V- I	-160 / 0	-36.4	-36.4	0.15 (1)	6.25				

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
T	12-1-0	-997	-997	---	FRONT	VERT	TOTAL	---	C1
U	17-10-0	-673	-673	---	FRONT	VERT	TOTAL	---	C1
V	25-7-0	-673	-673	---	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/C

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

GIRDER TYPE: CPrimeHip
LEFT SETBACK = 2-6-8
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
- ADDT'L LOADS BASED ON 55 % OF GSL.
LOADS APPLIED TO FIRST 5-10-15 OF SPAN MEASURED FROM THE RIGHT.

*** NON STANDARD GIRDER ***
ADDT'L 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 , 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 (1.01")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.20")
ALLOWABLE DEFL.(TL)= L/360 (1.01")
CALCULATED VERT. DEFL.(TL) = L/ 913 (0.40")

CSI: TC=0.92/1.00 (H-I:1) , BC=0.72/1.00 (K-M:1) , WB=0.84/1.00 (H-J:1) , SSI=0.56/1.00 (M-N: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 .

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

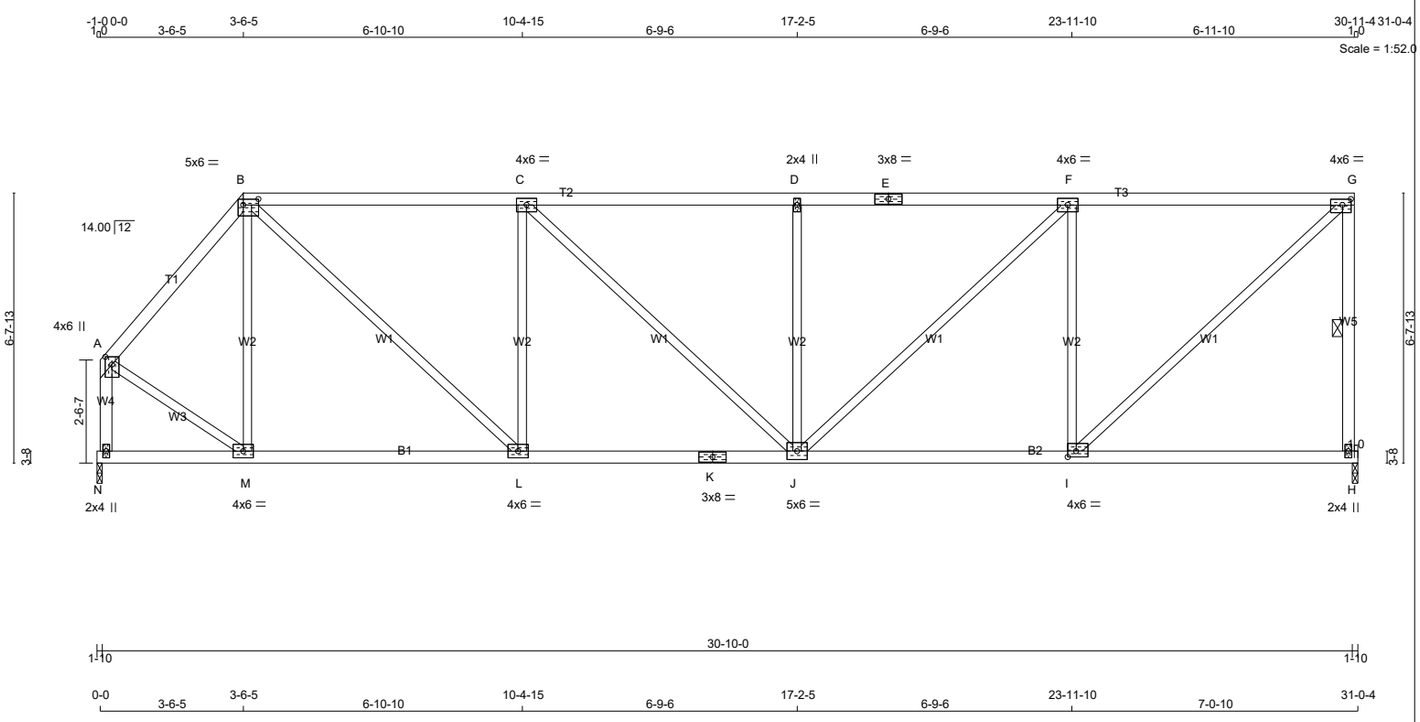
JSI GRIP= 0.90 (A) (INPUT = 0.90)
JSI METAL= 0.94 (L) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.		DRWG NO.
359637K	H42		1	TRUSS DESC.	JT 45147	E24033352

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:36 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-T2UzVdElV?arjK5CBK nSyYD hKwacV0D35R8uzgZyf



TOTAL WEIGHT = 135 lb

[M]

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-l	MT20	5.0	6.0	1.75	4.50
C	TMWW-t	MT20	4.0	6.0		
D	TMW+w	MT20	2.0	4.0		
E	TS-t	MT20	3.0	8.0		
F	TMWW-t	MT20	4.0	6.0		
G	TMVW-t	MT20	4.0	6.0	1.75	2.50
H	BMV1+p	MT20	2.0	4.0		
I	BMWW-t	MT20	4.0	6.0	1.75	2.50
J	BMWWW-t	MT20	5.0	6.0		
K	BS-t	MT20	3.0	8.0		
L	BMWW-t	MT20	4.0	6.0		
M	BMWW-t	MT20	4.0	6.0		
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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
H	1492	0	1492	0	0	1-10	1-10
N	1492	0	1492	0	0	1-10	1-10

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	SNOW	MAX./MIN. COMPONENT REACTIONS LIVE	PERM.LIVE	WIND	DEAD	SOIL
H	1064	649 / 0	0 / 0	0 / 0	0 / 0	415 / 0	0 / 0
N	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) H, N

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.10 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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	-1165 / 0	-78.0	-78.0	0.20 (1)		5.68
B- C	-1692 / 0	-78.0	-78.0	0.68 (1)		4.28
C- D	-1839 / 0	-78.0	-78.0	0.70 (1)		4.11
D- E	-1839 / 0	-78.0	-78.0	0.71 (1)		4.10
E- F	-1839 / 0	-78.0	-78.0	0.71 (1)		4.10
F- G	-1342 / 0	-78.0	-78.0	0.65 (1)		4.71
H- G	-1440 / 0	0.0	0.0	0.29 (1)		5.44
N- A	-1475 / 0	0.0	0.0	0.20 (1)		6.74
N- M	0 / 0	-18.5	-18.5	0.13 (4)		10.00
M- L	0 / 748	-18.5	-18.5	0.25 (4)		10.00
L- K	0 / 1692	-18.5	-18.5	0.37 (1)		10.00
K- J	0 / 1692	-18.5	-18.5	0.37 (1)		10.00
J- I	0 / 1342	-18.5	-18.5	0.34 (4)		10.00
I- H	0 / 0	-18.5	-18.5	0.21 (4)		10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
M- B	-338 / 0	0.25 (1)
B- L	0 / 1281	0.29 (1)
L- C	-737 / 0	0.54 (1)
C- J	0 / 201	0.05 (1)
J- D	-486 / 0	0.36 (1)
J- F	0 / 682	0.15 (1)
I- F	-1080 / 0	0.79 (1)
I- G	0 / 1817	0.41 (1)
A- M	0 / 878	0.20 (1)

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 , 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 (0.18")

CSI: TC=0.71/1.00 (D-F:1) , BC=0.37/1.00 (J-L:1) , WB=0.79/1.00 (F-I:1) , SSI=0.26/1.00 (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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

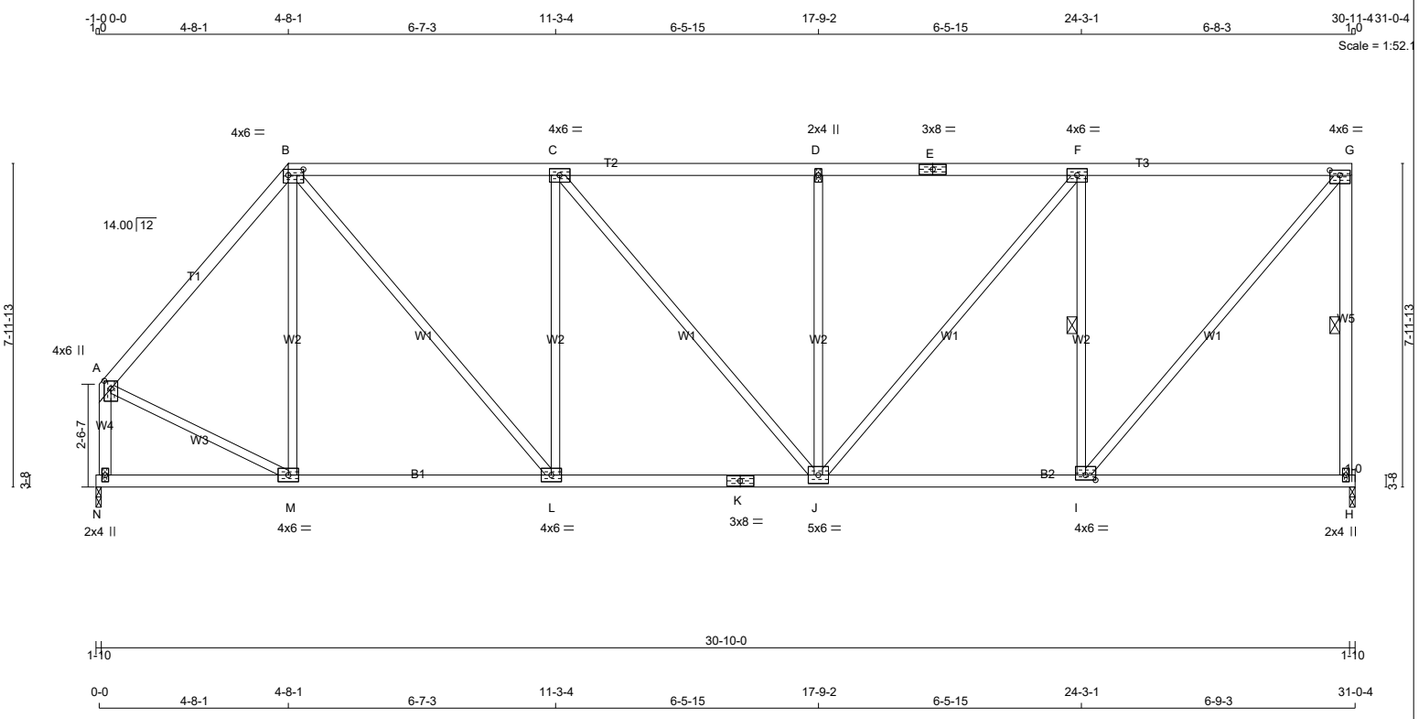
JSI GRIP= 0.90 (I) (INPUT = 0.90)
JSI METAL= 0.56 (K) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H43		1	TRUSS DESC. JT 45147	E24033353

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:37 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-xE2LizFNGJiiLUgOk2V0?A4QP5gvJ3s9Sjr hKzgZye



TOTAL WEIGHT = 145 lb

[M]

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-l	MT20	4.0	6.0	1.75	4.50
C	TMWW-t	MT20	4.0	6.0		
D	TMW+w	MT20	2.0	4.0		
E	TS-t	MT20	3.0	8.0		
F	TMWW-t	MT20	4.0	6.0		
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	8.0		
L	BMWW-t	MT20	4.0	6.0		
M	BMWW-t	MT20	4.0	6.0		
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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
H	1492	0	1492	0	0	1-10	1-10
N	1492	0	1492	0	0	1-10	1-10

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	SNOW	MAX./MIN. COMPONENT REACTIONS LIVE	PERM.LIVE	WIND	DEAD	SOIL
H	1064	649 / 0	0 / 0	0 / 0	0 / 0	415 / 0	0 / 0
N	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) H, N

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.58 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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX. UNBRAC LENGTH
A- B	-1211 / 0	-78.0	-78.0	0.36 (1)	5.40
B- C	-1444 / 0	-78.0	-78.0	0.59 (1)	4.68
C- D	-1503 / 0	-78.0	-78.0	0.60 (1)	4.60
D- E	-1503 / 0	-78.0	-78.0	0.60 (1)	4.58
E- F	-1503 / 0	-78.0	-78.0	0.60 (1)	4.58
F- G	-1073 / 0	-78.0	-78.0	0.56 (1)	5.27
H- G	-1443 / 0	0.0	0.0	0.41 (1)	5.44
N- A	-1461 / 0	0.0	0.0	0.20 (1)	6.77
N- M	0 / 0	-18.5	-18.5	0.14 (4)	10.00
M- L	0 / 782	-18.5	-18.5	0.23 (4)	10.00
L- K	0 / 1444	-18.5	-18.5	0.32 (1)	10.00
K- J	0 / 1444	-18.5	-18.5	0.32 (1)	10.00
J- I	0 / 1073	-18.5	-18.5	0.30 (4)	10.00
I- H	0 / 0	-18.5	-18.5	0.20 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
M- B	-240 / 0	0.29 (1)
B- L	0 / 1014	0.23 (1)
L- C	-645 / 0	0.78 (1)
C- J	0 / 91	0.02 (1)
J- D	-465 / 0	0.56 (1)
J- F	0 / 665	0.15 (1)
I- F	-1097 / 0	0.44 (1)
I- G	0 / 1637	0.37 (1)
A- M	0 / 862	0.19 (1)

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 , 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 (0.07")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.15")

CSI: TC=0.60/1.00 (D-F:1) , BC=0.32/1.00 (J-L:1) , WB=0.78/1.00 (C-L: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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

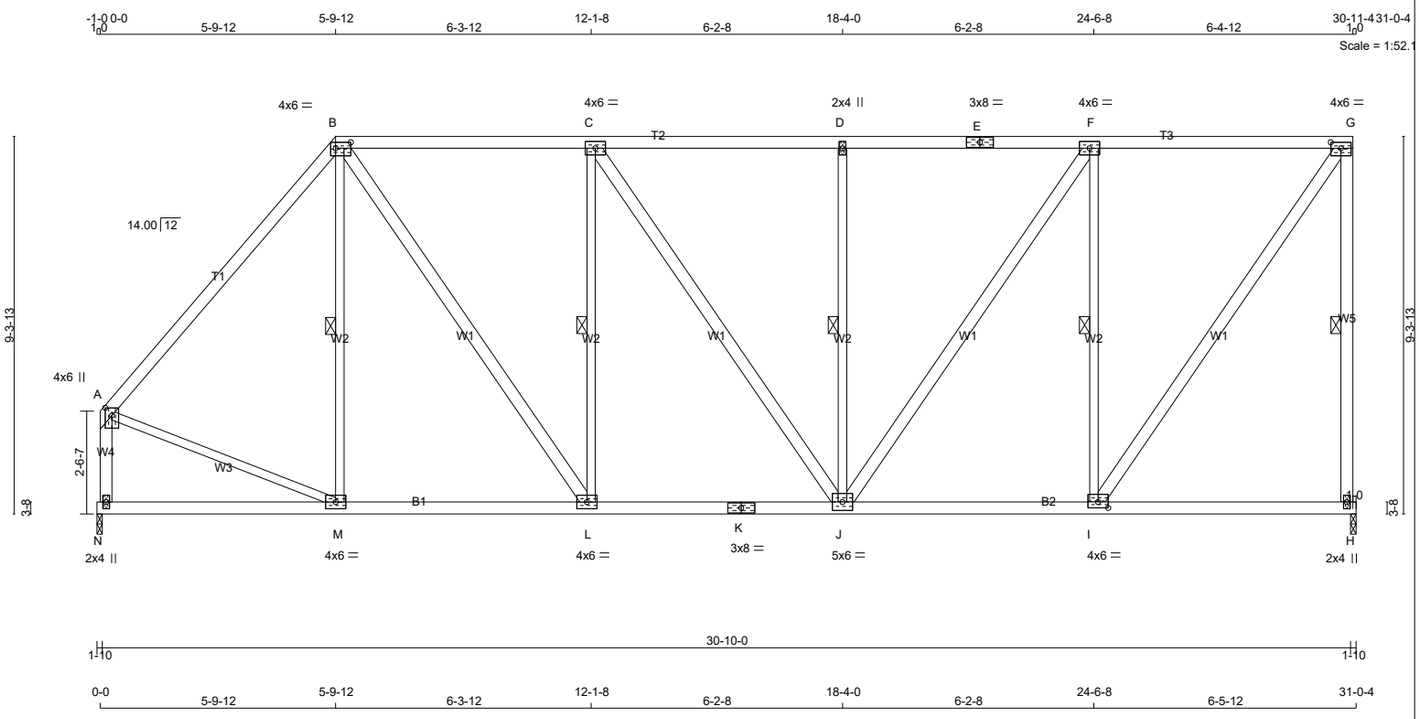
JSI GRIP= 0.85 (B) (INPUT = 0.90)
JSI METAL= 0.48 (K) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.		DRWG NO.
359637K	H44		1	TRUSS DESC.	JT 45147	E24033354

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:38 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-PRcjwJG?1dqZyeFbIl0FYNdb?U0k2ZPJgNbYDnzgZyd



TOTAL WEIGHT = 169 lb

[M]

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	2x3	DRY	No.2	SPF
EXCEPT				
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-l	MT20	4.0	6.0	1.75	4.50
C	TMWW-t	MT20	4.0	6.0		
D	TMW+w	MT20	2.0	4.0		
E	TS-t	MT20	3.0	8.0		
F	TMWW-t	MT20	4.0	6.0		
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	6.0	1.75	3.00
J	BMWWW-t	MT20	5.0	6.0		
K	BS-t	MT20	3.0	8.0		
L	BMWW-t	MT20	4.0	6.0		
M	BMWW-t	MT20	4.0	6.0		
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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
H	1492	0	1492	0	0	1-10	1-10
N	1492	0	1492	0	0	1-10	1-10

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
H	1064	649 / 0	0 / 0	0 / 0	0 / 0	415 / 0	0 / 0
N	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) H, N

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.02 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, 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

LOADING

TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	-1224 / 0	-78.0	-78.0	0.61 (1)	5.08	
B- C	-1261 / 0	-78.0	-78.0	0.52 (1)	5.04	
C- D	-1262 / 0	-78.0	-78.0	0.52 (1)	5.03	
D- E	-1262 / 0	-78.0	-78.0	0.53 (1)	5.02	
E- F	-1262 / 0	-78.0	-78.0	0.53 (1)	5.02	
F- G	-884 / 0	-78.0	-78.0	0.50 (1)	5.78	
H- G	-1445 / 0	0.0	0.0	0.59 (1)	5.44	
N- A	-1449 / 0	0.0	0.0	0.20 (1)	6.79	
N- M	0 / 0	-18.5	-18.5	0.16 (4)	10.00	
M- L	0 / 792	-18.5	-18.5	0.24 (4)	10.00	
L- K	0 / 1261	-18.5	-18.5	0.28 (1)	10.00	
K- J	0 / 1261	-18.5	-18.5	0.28 (1)	10.00	
J- I	0 / 884	-18.5	-18.5	0.27 (4)	10.00	
I- H	0 / 0	-18.5	-18.5	0.18 (4)	10.00	

WEBS

MEMB. FR-TO	FORCE (LBS)	MAX CSI (LC)
M- B	-165 / 26	0.09 (1)
B- L	0 / 816	0.13 (1)
L- C	-553 / 0	0.32 (1)
C- J	0 / 5	0.00 (4)
J- D	-444 / 0	0.25 (1)
J- F	0 / 668	0.11 (1)
I- F	-1114 / 0	0.64 (1)
I- G	0 / 1529	0.25 (1)
A- M	0 / 846	0.19 (1)

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 , 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 (0.06")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.12")

CSI: TC=0.61/1.00 (A-B:1) , BC=0.28/1.00 (J-L:1) , WB=0.64/1.00 (F-I:1) , SSI=0.23/1.00 (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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

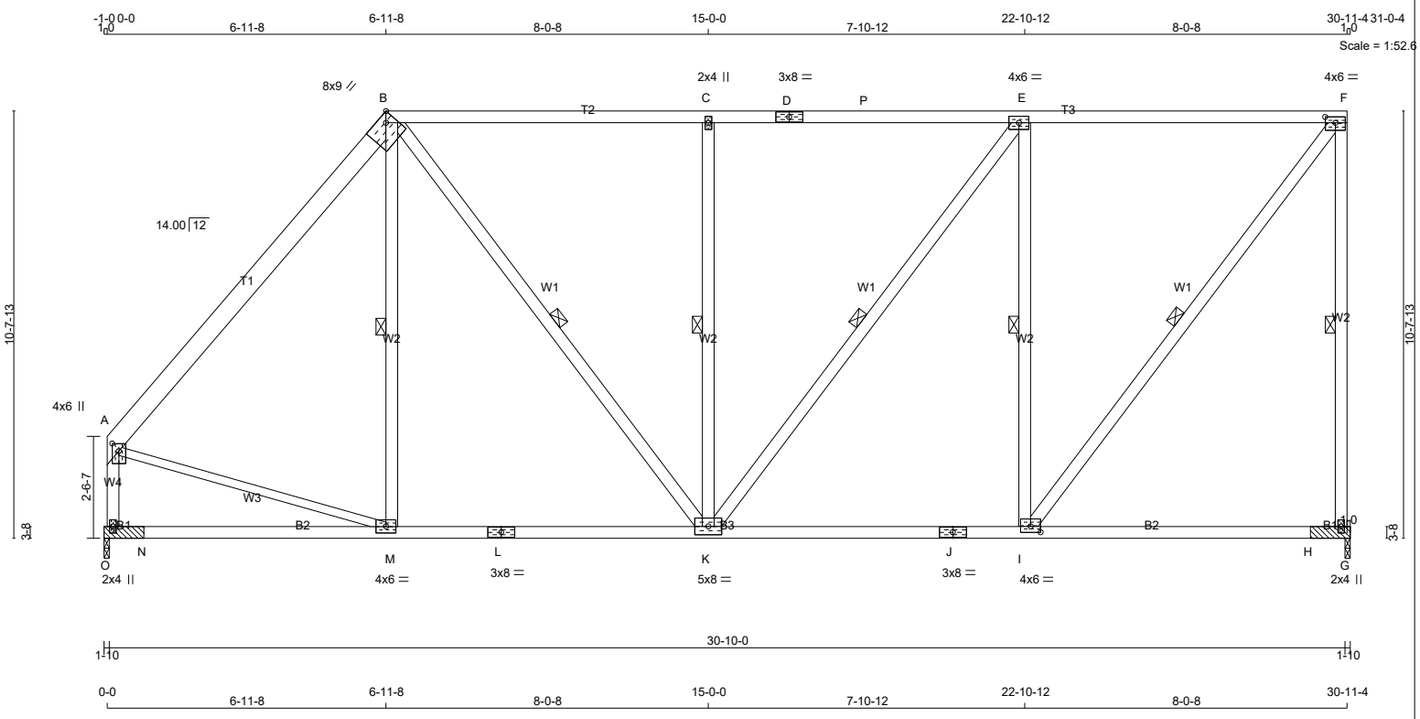
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.82 (I) (INPUT = 0.90)
JSI METAL= 0.47 (A) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H45		1	TRUSS DESC. JT 45147	E24033355

Alpa Roof Truss, Maple

ID:hd511hZTz bdeQoS817GKByhVxV-2TpqtbCsC4CGstMdVCR4rKwfcTHlNJHZX5tnYZzqZyi



TOTAL WEIGHT = 4 X 182 = 728 lb [M]

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
O - A	2x4	DRY	No.2	SPF
O - L	2x4	DRY	No.2	SPF
L - J	2x4	DRY	No.2	SPF
J - G	2x4	DRY	No.2	SPF
ALL WEBS	2x4	DRY	No.2	SPF
EXCEPT				
A - M	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-h	MT20	8.0	9.0	Edge	2.75
C	TMW+w	MT20	2.0	4.0		
D	TS-t	MT20	3.0	8.0		
E	TMWW-t	MT20	4.0	6.0		
F	TMVW-t	MT20	4.0	6.0	1.75	3.00
G	BMV1+p	MT20	2.0	4.0		
I	BMWW-t	MT20	4.0	6.0	1.75	3.00
J	BS-t	MT20	3.0	8.0		
K	BMWWW-t	MT20	5.0	8.0		
L	BS-t	MT20	3.0	8.0		
M	BMWW-t	MT20	4.0	6.0		
O	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

LICENSED PROFESSIONAL ENGINEER
Y. WIDYA
100225448
02/28/2024
PROVINCE OF ONTARIO

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
O	1562	0	1562	0	0	1-10	1-10 & BLOCK
G	1602	0	1602	0	0	1-10	1-10 & BLOCK

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
O	1120	649 / 0	0 / 0	0 / 0	0 / 0	470 / 0	0 / 0
G	1152	649 / 0	0 / 0	0 / 0	0 / 0	503 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) O, 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 2" C.C. 12 NAILS TOTAL.

2x4 DRY SPF No.2 BEARING BLOCK 12" LONG AT JT. O ATTACHED TO FRONT SIDE WITH 2 ROWS OF (0.122"X3") SPIRAL NAILS SPACED 2" C.C. 12 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 = 6.23 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-M, B-K, C-K, E-K, E-I, 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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	-1307 / 0	-78.0	-78.0	0.36 (1)	6.23
B- C	-1249 / 0	-85.5	-85.5	0.91 (1)	2.00
C- D	-1250 / 0	-85.5	-85.5	0.91 (1)	2.00
D- P	-1250 / 0	-85.5	-85.5	0.91 (1)	2.00
P- E	-1250 / 0	-85.5	-85.5	0.91 (1)	2.00
E- F	-983 / 0	-85.5	-85.5	0.87 (1)	2.00
G- F	-1543 / 0	0.0	0.0	0.88 (1)	5.30
O- A	-1511 / 0	0.0	0.0	0.19 (1)	6.68
O- N	0 / 0	-18.5	-18.5	0.25 (4)	10.00
N- M	0 / 0	-18.5	-18.5	0.25 (4)	10.00
M- L	0 / 843	-18.5	-18.5	0.34 (4)	10.00
L- K	0 / 843	-18.5	-18.5	0.34 (4)	10.00
K- J	0 / 983	-18.5	-18.5	0.40 (4)	10.00
J- I	0 / 983	-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

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
B- M	-85 / 70	0.05 (1)
B- K	0 / 659	0.11 (1)
K- C	-731 / 0	0.42 (1)
K- E	0 / 440	0.07 (1)
I- E	-1099 / 0	0.63 (1)
I- F	0 / 1603	0.26 (1)
A- M	0 / 879	0.20 (1)

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 , 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 (0.05")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.13")

CSI: TC=0.91/1.00 (B-C:1) , BC=0.40/1.00 (I-K:4) , WB=0.63/1.00 (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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

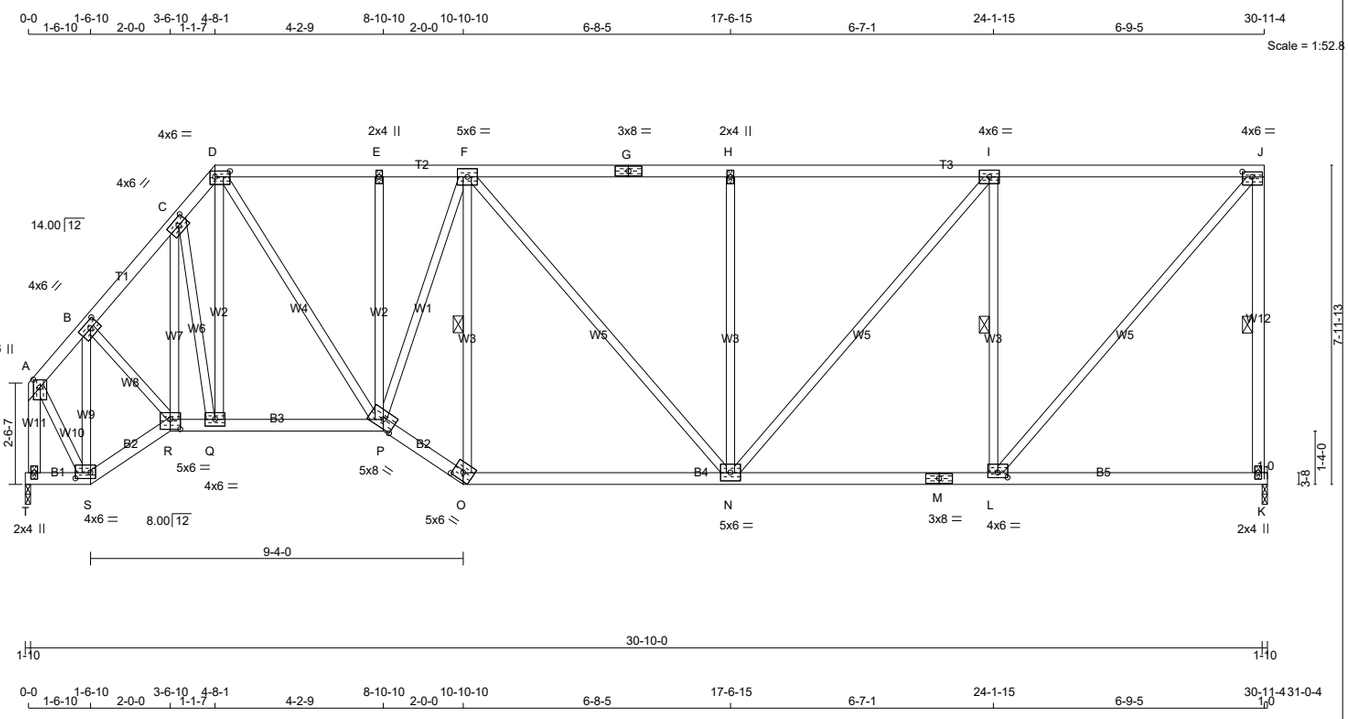
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.86 (A) (INPUT = 0.90)
JSI METAL= 0.51 (A) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H43T		1	TRUSS DESC. JT 45147	E24033356

Alpa Roof Truss, Maple

ID:hd511hZTz bdeQoS817GKByhVxV-PRcjwJG?1dqZyeFbII0FYNdb2U?22ZlJgNbYDnzgZvd



TOTAL WEIGHT = 165 lb

[M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - D	2x4	DRY	No.2	SPF
D - G	2x4	DRY	No.2	SPF
G - J	2x4	DRY	No.2	SPF
K - J	2x4	DRY	No.2	SPF
T - A	2x4	DRY	No.2	SPF
T - S	2x4	DRY	No.2	SPF
S - R	2x4	DRY	No.2	SPF
R - P	2x4	DRY	No.2	SPF
P - O	2x4	DRY	No.2	SPF
O - M	2x4	DRY	No.2	SPF
M - K	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	TMWW-t	MT20	4.0	6.0	2.00	2.75
C	TMWW-t	MT20	4.0	6.0	2.00	2.75
D	TTWW-l	MT20	4.0	6.0	1.75	4.50
E	TMW+w	MT20	2.0	4.0		
F	TMWWW-t	MT20	5.0	6.0		
G	TS-t	MT20	3.0	8.0		
H	TMW+w	MT20	2.0	4.0		
I	TMWW-t	MT20	4.0	6.0		
J	TMVW-t	MT20	4.0	6.0	1.50	3.00
K	BMV1+p	MT20	2.0	4.0		
L	BMWW-t	MT20	4.0	6.0	1.50	3.00
M	BS-t	MT20	3.0	8.0		
N	BMWWW-t	MT20	5.0	6.0		
O	BBW-h	MT20	5.0	6.0	2.25	3.00
P	BBWWW-h	MT20	5.0	8.0	2.50	3.75
Q	BMWW-t	MT20	4.0	6.0		
R	BBWW-l	MT20	5.0	6.0	3.00	3.00
S	BBWW-l	MT20	4.0	6.0	1.75	4.50
T	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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
K	1492	0	1492	0	0	1-10	1-10
T	1492	0	1492	0	0	1-10	1-10

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
K	1064	649 / 0	0 / 0	0 / 0	0 / 0	415 / 0	0 / 0
T	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) K, T

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 J-K, F-O, I-L.

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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX. UNBRAC LENGTH
A- B	-854 / 0	-78.0	-78.0	0.03 (1)	6.25
B- C	-1452 / 0	-78.0	-78.0	0.08 (1)	5.36
C- D	-1497 / 0	-78.0	-78.0	0.04 (1)	5.34
D- E	-1502 / 0	-78.0	-78.0	0.23 (1)	5.11
E- F	-1499 / 0	-78.0	-78.0	0.33 (1)	4.94
F- G	-1516 / 0	-78.0	-78.0	0.46 (1)	4.82
G- H	-1516 / 0	-78.0	-78.0	0.46 (1)	4.82
H- I	-1516 / 0	-78.0	-78.0	0.61 (1)	4.57
I- J	-1084 / 0	-78.0	-78.0	0.57 (1)	5.24
K- J	-1441 / 0	0.0	0.0	0.41 (1)	5.44
T- A	-1478 / 0	0.0	0.0	0.20 (1)	6.74
T- S	0 / 0	-18.5	-18.5	0.01 (4)	10.00
S- R	0 / 639	-18.5	-18.5	0.12 (1)	10.00
R- Q	0 / 951	-18.5	-18.5	0.20 (1)	10.00
Q- P	0 / 942	-18.5	-18.5	0.20 (1)	10.00
P- O	0 / 1675	-18.5	-18.5	0.28 (1)	10.00
O- N	0 / 1405	-18.5	-18.5	0.32 (1)	10.00
N- M	0 / 1084	-18.5	-18.5	0.30 (4)	10.00
M- L	0 / 1084	-18.5	-18.5	0.30 (4)	10.00
L- K	0 / 0	-18.5	-18.5	0.19 (4)	10.00

WEBS

MEMB. FR-TO	FORCE (LBS)	MAX CSI (LC)
S- B	-1100 / 0	0.29 (1)
B- R	0 / 642	0.14 (1)
R- C	-132 / 0	0.06 (1)
P- E	-174 / 0	0.13 (1)
P- F	0 / 334	0.08 (1)
O- F	-856 / 0	0.34 (1)
A- S	0 / 960	0.22 (1)
Q- D	0 / 132	0.03 (4)
C- Q	-55 / 7	0.03 (1)
D- P	0 / 1008	0.23 (1)
F- N	0 / 170	0.04 (1)
N- H	-506 / 0	0.61 (1)
N- I	0 / 665	0.15 (1)
L- I	-1094 / 0	0.44 (1)
L- J	0 / 1640	0.37 (1)

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 , 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 (0.07")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.18")

CSI: TC=0.61/1.00 (H-I:1) , BC=0.32/1.00 (N-O:1) , WB=0.61/1.00 (H-N:1) , SSI=0.25/1.00 (I-J: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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

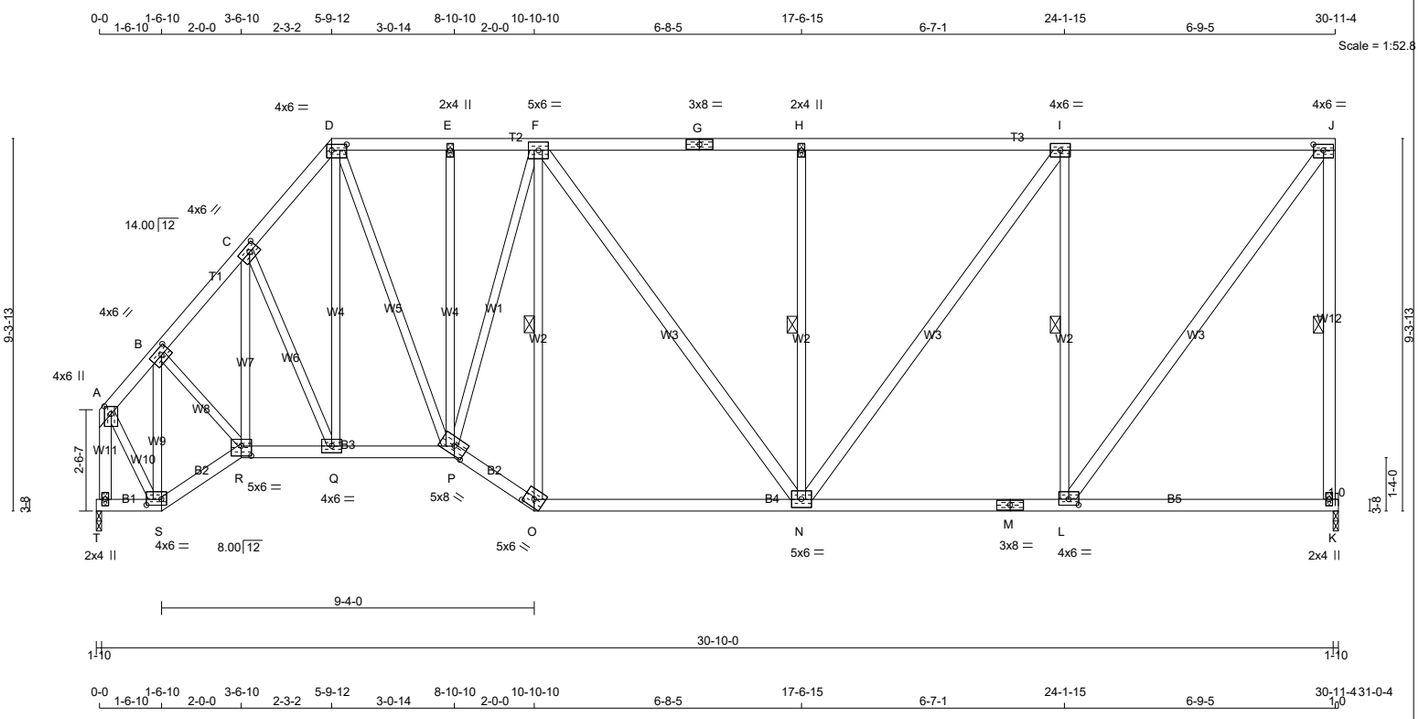
JSI GRIP= 0.89 (S) (INPUT = 0.90)
JSI METAL= 0.49 (D) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H44T		1	TRUSS DESC. JT 45147	E24033357

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:39 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-tdA57fHdowyQaoqnsTYU4b9m9uMhn0qSv1K5lDzqZyc



TOTAL WEIGHT = 187 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - D	2x4	DRY	No.2	SPF
D - G	2x4	DRY	No.2	SPF
G - J	2x4	DRY	No.2	SPF
K - J	2x4	DRY	No.2	SPF
T - A	2x4	DRY	No.2	SPF
T - S	2x4	DRY	No.2	SPF
S - R	2x4	DRY	No.2	SPF
R - P	2x4	DRY	No.2	SPF
P - O	2x4	DRY	No.2	SPF
O - M	2x4	DRY	No.2	SPF
M - K	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				
F - N	2x4	DRY	No.2	SPF
N - I	2x4	DRY	No.2	SPF
L - J	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	TMWW-t	MT20	4.0	6.0	2.00	2.75
C	TMWW-t	MT20	4.0	6.0	2.00	2.75
D	TTWW-l	MT20	4.0	6.0	1.75	4.50
E	TMW+w	MT20	2.0	4.0		
F	TMWWW-t	MT20	5.0	6.0		
G	TS-t	MT20	3.0	8.0		
H	TMW+w	MT20	2.0	4.0		
I	TMWW-t	MT20	4.0	6.0		
J	TMVW-t	MT20	4.0	6.0	1.75	3.00
K	BMV1+p	MT20	2.0	4.0		
L	BMWW-t	MT20	4.0	6.0	1.75	3.00
M	BS-t	MT20	3.0	8.0		
N	BMWWW-t	MT20	5.0	6.0		
O	BBW-h	MT20	5.0	6.0	2.25	3.00
P	BBWWW-h	MT20	5.0	8.0	2.50	3.75
Q	BMWW-t	MT20	4.0	6.0		
R	BBWW-l	MT20	5.0	6.0	3.00	3.00
S	BBWW-l	MT20	4.0	6.0	1.75	4.50
T	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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
K	1492	0	1492	0	0	1-10	1-10
T	1492	0	1492	0	0	1-10	1-10

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
K	1064	649 / 0	0 / 0	0 / 0	0 / 0	415 / 0	0 / 0
T	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) K, T

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 J-K, F-O, H-N, I-L.

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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	-855 / 0	-78.0	-78.0	0.03 (1)	6.25
B- C	-1451 / 0	-78.0	-78.0	0.07 (1)	5.38
C- D	-1441 / 0	-78.0	-78.0	0.07 (1)	5.39
D- E	-1232 / 0	-78.0	-78.0	0.14 (1)	5.63
E- F	-1231 / 0	-78.0	-78.0	0.34 (1)	5.33
F- G	-1292 / 0	-78.0	-78.0	0.44 (1)	5.15
G- H	-1292 / 0	-78.0	-78.0	0.44 (1)	5.15
H- I	-1292 / 0	-78.0	-78.0	0.59 (1)	4.88
I- J	-924 / 0	-78.0	-78.0	0.56 (1)	5.58
K- J	-1442 / 0	0.0	0.0	0.59 (1)	5.44
T- A	-1478 / 0	0.0	0.0	0.20 (1)	6.74
T- S	0 / 0	-18.5	-18.5	0.01 (4)	10.00
S- R	0 / 636	-18.5	-18.5	0.11 (1)	10.00
R- Q	0 / 953	-18.5	-18.5	0.18 (1)	10.00
Q- P	0 / 924	-18.5	-18.5	0.18 (1)	10.00
P- O	0 / 1430	-18.5	-18.5	0.24 (1)	10.00
O- N	0 / 1198	-18.5	-18.5	0.30 (4)	10.00
N- M	0 / 924	-18.5	-18.5	0.28 (4)	10.00
M- L	0 / 924	-18.5	-18.5	0.28 (4)	10.00
L- K	0 / 0	-18.5	-18.5	0.19 (4)	10.00

WEBS

MEMB. FR-TO	FORCE (LBS)	MAX CSI (LC)
S- B	-1094 / 0	0.29 (1)
B- R	0 / 655	0.15 (1)
R- C	-112 / 0	0.05 (1)
C- Q	-75 / 0	0.04 (1)
Q- D	0 / 125	0.03 (4)
D- P	0 / 826	0.19 (1)
P- E	-79 / 0	0.10 (1)
P- F	0 / 154	0.03 (1)
O- F	-721 / 0	0.41 (1)
A- S	0 / 955	0.21 (1)
F- N	0 / 159	0.03 (1)
N- H	-504 / 0	0.29 (1)
N- I	0 / 625	0.10 (1)
L- I	-1094 / 0	0.62 (1)
L- J	0 / 1539	0.25 (1)

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 , 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 (0.06")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.16")

CSI: TC=0.59/1.00 (H-I:1) , BC=0.30/1.00 (N-O:4) , WB=0.62/1.00 (I-L:1) , SSI=0.25/1.00 (I-J: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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

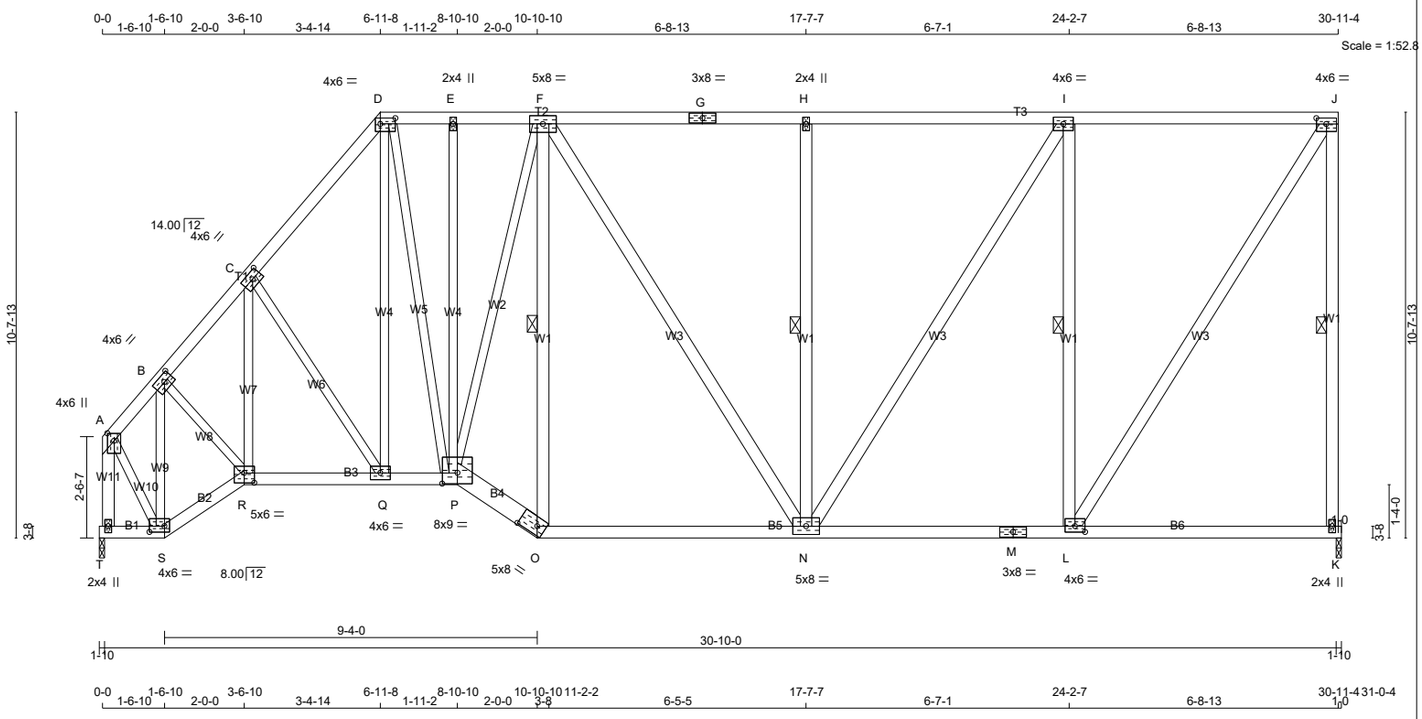
JSI GRIP= 0.88 (S) (INPUT = 0.90)
JSI METAL= 0.45 (D) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H45T		1	TRUSS DESC. JT 45147	E24033358

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:39 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-tdA57fHdowyQaoqnsTYU4b9jUuMsn0oSv1K5lDzqZyc



TOTAL WEIGHT = 212 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - D	2x4	DRY	No.2	SPF
D - G	2x4	DRY	No.2	SPF
G - J	2x4	DRY	No.2	SPF
K - J	2x4	DRY	No.2	SPF
T - A	2x4	DRY	No.2	SPF
T - S	2x4	DRY	No.2	SPF
S - R	2x4	DRY	No.2	SPF
R - P	2x4	DRY	No.2	SPF
P - O	2x6	DRY	No.2	SPF
O - M	2x4	DRY	No.2	SPF
M - K	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				
O - F	2x4	DRY	No.2	SPF
F - N	2x4	DRY	No.2	SPF
N - H	2x4	DRY	No.2	SPF
N - I	2x4	DRY	No.2	SPF
L - I	2x4	DRY	No.2	SPF
L - J	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	TMWW-t	MT20	4.0	6.0	2.00	2.75
C	TMWW-t	MT20	4.0	6.0	2.00	2.75
D	TTWW-l	MT20	4.0	6.0	1.75	4.50
E	TMW+w	MT20	2.0	4.0		
F	TMWWW-t	MT20	5.0	8.0		
G	TS-t	MT20	3.0	8.0		
H	TMW+w	MT20	2.0	4.0		
I	TMWW-t	MT20	4.0	6.0		
J	TMVW-t	MT20	4.0	6.0	1.75	3.00
K	BMV1+p	MT20	2.0	4.0		
L	BMWW-t	MT20	4.0	6.0	1.75	3.00
M	BS-t	MT20	3.0	8.0		
N	BMWWW-t	MT20	5.0	8.0		
O	BBW-h	MT20	5.0	8.0	2.50	5.50
P	BBWWW-p	MT20	8.0	9.0	3.25	4.50
Q	BMWW-t	MT20	4.0	6.0		
R	BBWW-l	MT20	5.0	6.0	3.00	3.00
S	BBWW-l	MT20	4.0	6.0	1.75	4.50
T	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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
K	1492	0	1492	0	0	1-10	1-10
T	1492	0	1492	0	0	1-10	1-10

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	SNOW	MAX./MIN. COMPONENT REACTIONS LIVE	PERM.LIVE	WIND	DEAD	SOIL
K	1064	649 / 0	0 / 0	0 / 0	0 / 0	415 / 0	0 / 0
T	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) K, T

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.16 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 J-K, F-O, H-N, I-L.

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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX. UNBRAC LENGTH
A- B	-856 / 0	-78.0	-78.0	0.04 (1)	6.25
B- C	-1445 / 0	-78.0	-78.0	0.13 (1)	5.31
C- D	-1404 / 0	-78.0	-78.0	0.14 (1)	5.37
D- E	-1050 / 0	-78.0	-78.0	0.10 (1)	6.02
E- F	-1049 / 0	-78.0	-78.0	0.34 (1)	5.66
F- G	-1125 / 0	-78.0	-78.0	0.43 (1)	5.43
G- H	-1125 / 0	-78.0	-78.0	0.43 (1)	5.43
H- I	-1125 / 0	-78.0	-78.0	0.57 (1)	5.16
I- J	-801 / 0	-78.0	-78.0	0.54 (1)	5.90
K- J	-1442 / 0	0.0	0.0	0.82 (1)	5.44
T- A	-1478 / 0	0.0	0.0	0.20 (1)	6.74
T- S	0 / 0	-18.5	-18.5	0.01 (4)	10.00
S- R	0 / 632	-18.5	-18.5	0.11 (1)	10.00
R- Q	0 / 961	-18.5	-18.5	0.20 (1)	10.00
Q- P	0 / 899	-18.5	-18.5	0.19 (1)	10.00
P- O	0 / 1252	-18.5	-18.5	0.15 (1)	10.00
O- N	0 / 1051	-18.5	-18.5	0.29 (4)	10.00
N- M	0 / 801	-18.5	-18.5	0.27 (4)	10.00
M- L	0 / 801	-18.5	-18.5	0.27 (4)	10.00
L- K	0 / 0	-18.5	-18.5	0.19 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
S- B	-1088 / 0	0.29 (1)
B- R	0 / 672	0.15 (1)
R- C	-118 / 0	0.05 (1)
C- Q	-114 / 0	0.08 (1)
Q- D	0 / 134	0.03 (4)
D- P	0 / 711	0.16 (1)
P- E	0 / 19	0.00 (4)
P- F	0 / 31	0.01 (4)
O- F	-615 / 0	0.35 (1)
A- S	0 / 949	0.21 (1)
F- N	0 / 139	0.02 (1)
N- H	-504 / 0	0.29 (1)
N- I	0 / 604	0.10 (1)
L- I	-1097 / 0	0.63 (1)
L- J	0 / 1470	0.24 (1)

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 , 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 (0.05")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.15")

CSI: TC=0.82/1.00 (J-K:1) , BC=0.29/1.00 (N-O:4) , WB=0.63/1.00 (I-L:1) , SSI=0.25/1.00 (I-J: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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

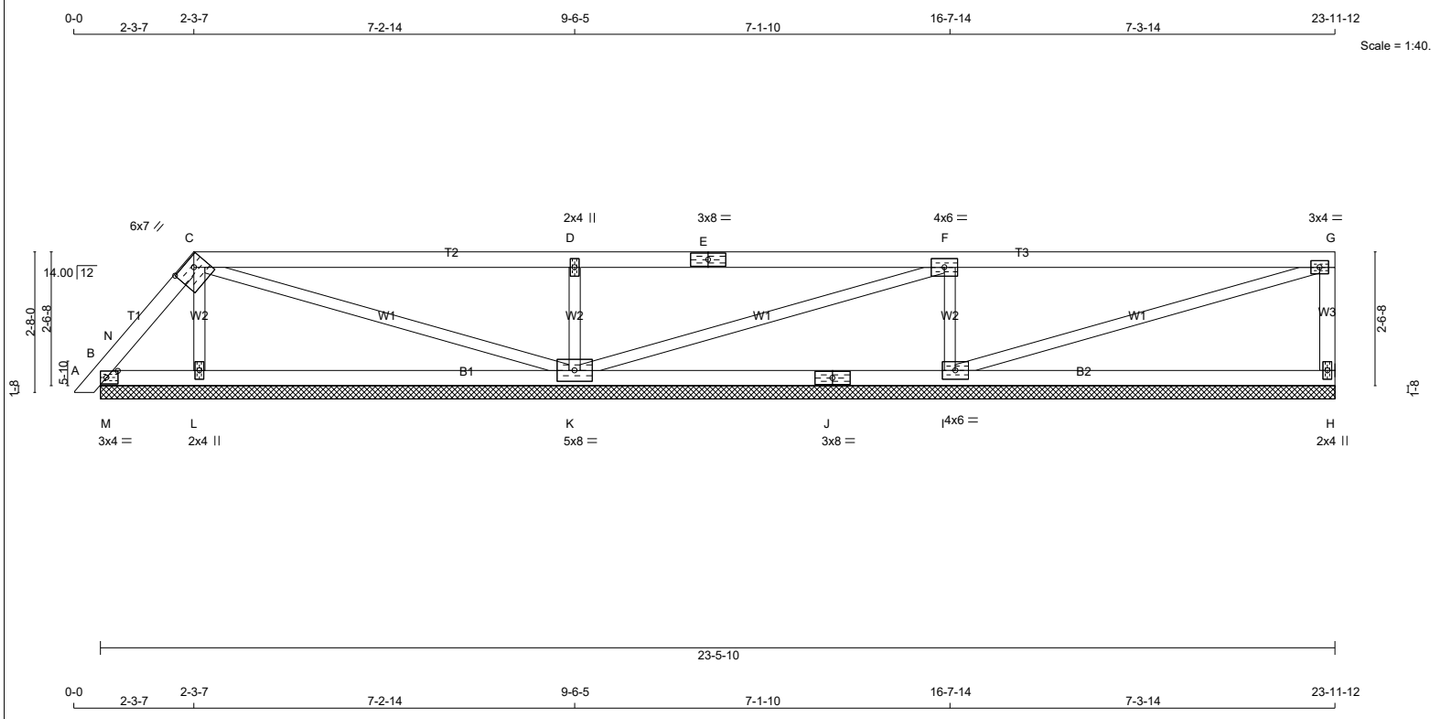
JSI GRIP= 0.88 (S) (INPUT = 0.90)
JSI METAL= 0.42 (D) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H46P		1	TRUSS DESC. JT 45147	E24033359

Alpha Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:40 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-LpkTL HFZE4HCyPzPA3jdoiyLIjpWbHb8h4eIfzqZyb



TOTAL WEIGHT = 80 lb

[M]

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-l	MT20	3.0	4.0	1.50	2.50
C	TTWW-h	MT20	6.0	7.0	2.00	4.25
D	TMW+w	MT20	2.0	4.0		
E	TS-t	MT20	3.0	8.0		
F	TMWW-t	MT20	4.0	6.0		
G	TMVW-t	MT20	3.0	4.0		
H	BMV1+p	MT20	2.0	4.0		
I	BMWW1-t	MT20	4.0	6.0		
J	BS-t	MT20	3.0	8.0		
K	BMWWW1-t	MT20	5.0	8.0		
L	BMW1+w	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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
H	286	0	286	0	0	23-5-10 (9-6-10)	1.00
B	132	0	132	0	0	23-5-10 (9-6-10)	1.00
L	352	0	352	0	0	23-5-10 (9-6-10)	1.00
K	761	0	761	0	0	23-5-10 (9-6-10)	1.00
I	764	0	764	0	0	23-5-10 (9-6-10)	1.00

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	204	125 / 0	0 / 0	0 / 0	0 / 0	79 / 0	0 / 0
B	89	83 / 0	0 / 0	0 / 0	0 / 0	6 / 0	0 / 0
L	257	123 / 0	0 / 0	0 / 0	0 / 0	134 / 0	0 / 0
K	541	340 / 0	0 / 0	0 / 0	0 / 0	201 / 0	0 / 0
I	545	330 / 0	0 / 0	0 / 0	0 / 0	215 / 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)

C H O R D S

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 10	-78.0	-78.0	0.01 (1)	10.00
B- N	0 / 57	-78.0	-78.0	0.04 (4)	10.00
N- C	-72 / 0	-78.0	-78.0	0.03 (1)	6.25
C- D	0 / 10	-78.0	-78.0	0.55 (1)	10.00
D- E	0 / 9	-78.0	-78.0	0.56 (1)	10.00
E- F	0 / 9	-78.0	-78.0	0.56 (1)	10.00
F- G	-9 / 0	-78.0	-78.0	0.56 (1)	10.00
H- G	-232 / 0	0.0	0.0	0.03 (1)	7.81
B- M	0 / 40	-18.5	-18.5	0.04 (1)	10.00
M- L	0 / 40	-18.5	-18.5	0.16 (4)	10.00
L- K	0 / 30	-18.5	-18.5	0.18 (4)	10.00
K- J	0 / 9	-18.5	-18.5	0.24 (4)	10.00
J- I	0 / 9	-18.5	-18.5	0.24 (4)	10.00
I- H	0 / 0	-18.5	-18.5	0.24 (4)	10.00

W E B S

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
L- C	-217 / 0	0.03 (1)
C- K	-41 / 0	0.05 (1)
K- D	-615 / 0	0.10 (1)
K- F	-19 / 0	0.02 (1)
I- F	-615 / 0	0.10 (1)
I- G	0 / 10	0.00 (1)
M- N	-183 / 0	0.00 (1)

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 , 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

CSI: TC=0.56/1.00 (D-F:1) , BC=0.24/1.00 (I-K:4) , WB=0.10/1.00 (F-I:1) , SSI=0.27/1.00 (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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

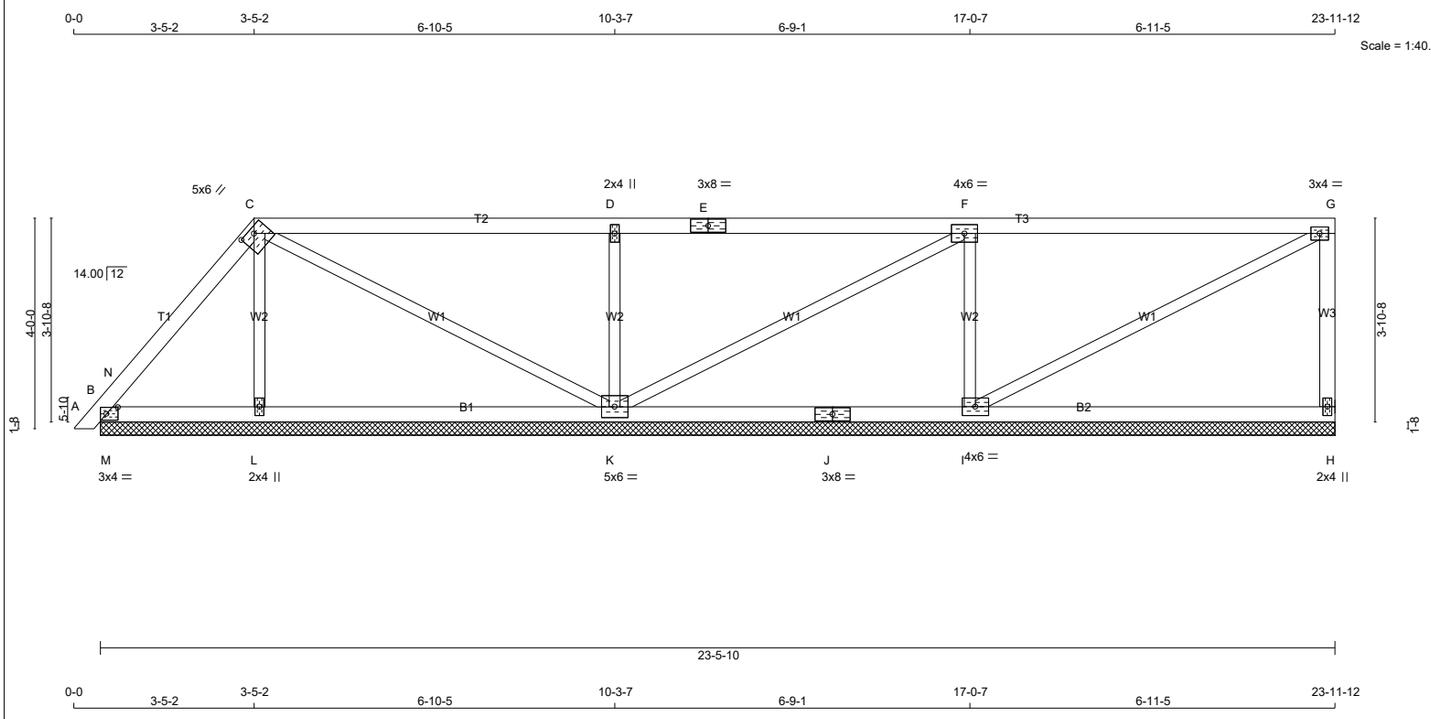
JSI GRIP= 0.84 (G) (INPUT = 0.90)
JSI METAL= 0.14 (E) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.		DRWG NO.
359637K	H47P		1	TRUSS DESC.	JT 45147	E24033360

Alpha Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:40 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-LpkTL HFZE4HCyPzPA3jdoizCljCWahb8h4eIfzqZyb



TOTAL WEIGHT = 2 X 86 = 172 lb

[M]

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-l	MT20	3.0	4.0	1.50	2.50
C	TTWW-h	MT20	5.0	6.0	1.25	3.00
D	TMW+w	MT20	2.0	4.0		
E	TS-t	MT20	3.0	8.0		
F	TMWW-t	MT20	4.0	6.0		
G	TMVW-t	MT20	3.0	4.0		
H	BMV1+p	MT20	2.0	4.0		
I	BMWW1-t	MT20	4.0	6.0		
J	BS-t	MT20	3.0	8.0		
K	BMWWW1-t	MT20	5.0	6.0		
L	BMW1+w	MT20	2.0	4.0		

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
H	278	0	278	0	0	23-5-10 (9-6-10)	1.00
B	222	0	222	0	0	23-5-10 (9-6-10)	1.00
L	329	0	329	0	0	23-5-10 (9-6-10)	1.00
K	766	0	766	0	0	23-5-10 (9-6-10)	1.00
I	700	0	700	0	0	23-5-10 (9-6-10)	1.00

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	198	122 / 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	239	118 / 0	0 / 0	0 / 0	0 / 0	121 / 0	0 / 0
K	544	346 / 0	0 / 0	0 / 0	0 / 0	197 / 0	0 / 0
I	500	300 / 0	0 / 0	0 / 0	0 / 0	200 / 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)

C H O R D S

MEMB. FR-TO	MAX. FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 10	-78.0	-78.0	0.01 (1)	10.00	
B- N	0 / 77	-78.0	-78.0	0.07 (1)	10.00	
N- C	-101 / 0	-78.0	-78.0	0.08 (1)	6.25	
C- D	0 / 25	-78.0	-78.0	0.49 (1)	10.00	
D- E	0 / 25	-78.0	-78.0	0.50 (1)	10.00	
E- F	0 / 25	-78.0	-78.0	0.50 (1)	10.00	
F- G	-18 / 0	-78.0	-78.0	0.50 (1)	6.25	
H- G	-227 / 0	0.0	0.0	0.05 (1)	7.81	
B- M	0 / 58	-18.5	-18.5	0.08 (1)	10.00	
M- L	0 / 58	-18.5	-18.5	0.14 (4)	10.00	
L- K	0 / 53	-18.5	-18.5	0.16 (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	0.21 (4)	10.00	

W E B S

MEMB. FR-TO	MAX. FORCE (LBS)	MAX CSI (LC)
L- C	-199 / 0	0.05 (1)
C- K	-87 / 0	0.10 (1)
K- D	-582 / 0	0.14 (1)
K- F	-49 / 0	0.06 (1)
I- F	-565 / 0	0.13 (1)
I- G	0 / 20	0.00 (1)
M- N	-320 / 0	0.00 (1)

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 , 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

CSI: TC=0.50/1.00 (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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) 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 (C) (INPUT = 0.90)
JSI METAL= 0.13 (E) (INPUT = 1.00)

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

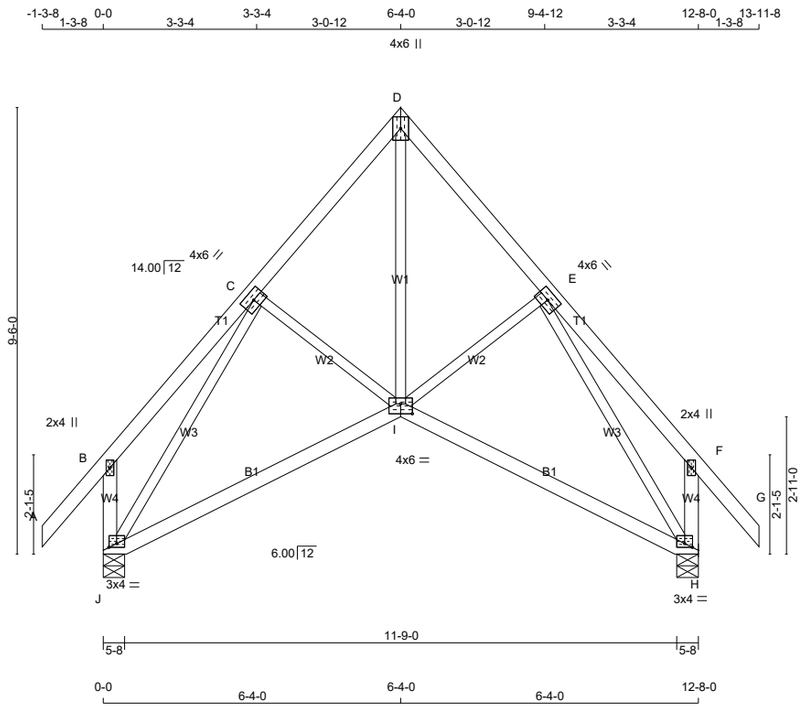
LICENSED PROFESSIONAL ENGINEER
Y. WIDYA
100225448
02/28/2024
PROVINCE OF ONTARIO

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H61		1	TRUSS DESC. JT 45147	E24033361

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:41 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-p0IsYKItKYC8p6zAzuay90FE i3vFyClNLpCq5zqZva



TOTAL WEIGHT = 69 lb

[M][F]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - D	2x4	DRY	No.2	SPF
D - G	2x4	DRY	No.2	SPF
J - B	2x4	DRY	No.2	SPF
H - F	2x4	DRY	No.2	SPF
J - I	2x4	DRY	No.2	SPF
I - 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
B	TMV+p	MT20	2.0	4.0		
C	TMWW-t	MT20	4.0	6.0		
D	TTW+p	MT20	4.0	6.0		
E	TMWW-t	MT20	4.0	6.0		
F	TMV+p	MT20	2.0	4.0		
H	BMVW1-p	MT20	3.0	4.0	Edge	
I	BBWWW-p	MT20	4.0	6.0	2.50	3.00
J	BMVW1-p	MT20	3.0	4.0	Edge	

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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
J	720	0	720	0	0	5-8	1-8
H	720	0	720	0	0	5-8	1-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
J	511	325 / 0	0 / 0	0 / 0	0 / 0	187 / 0	0 / 0
H	511	325 / 0	0 / 0	0 / 0	0 / 0	187 / 0	0 / 0

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

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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX UNBRAC LENGTH
A- B	0 / 42	-78.0	-78.0	0.11 (1)	10.00
B- C	0 / 20	-78.0	-78.0	0.12 (1)	10.00
C- D	-500 / 0	-78.0	-78.0	0.09 (1)	6.25
D- E	-500 / 0	-78.0	-78.0	0.09 (1)	6.25
E- F	0 / 20	-78.0	-78.0	0.12 (1)	10.00
F- G	0 / 42	-78.0	-78.0	0.11 (1)	10.00
J- B	-205 / 0	0.0	0.0	0.03 (1)	7.81
H- F	-205 / 0	0.0	0.0	0.03 (1)	7.81
J- I	0 / 394	-18.5	-18.5	0.25 (4)	10.00
I- H	0 / 394	-18.5	-18.5	0.25 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
I- D	0 / 532	0.12 (1)
I- E	-51 / 6	0.01 (1)
C- I	-51 / 6	0.01 (1)
J- C	-725 / 0	0.50 (1)
E- H	-725 / 0	0.50 (1)

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 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 (0.42")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.02")
ALLOWABLE DEFL.(TL)= L/360 (0.42")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.10")

CSI: TC=0.12/1.00 (E-F:1) , BC=0.25/1.00 (H-I:4) , WB=0.50/1.00 (C-J:1) , SSI=0.08/1.00 (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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

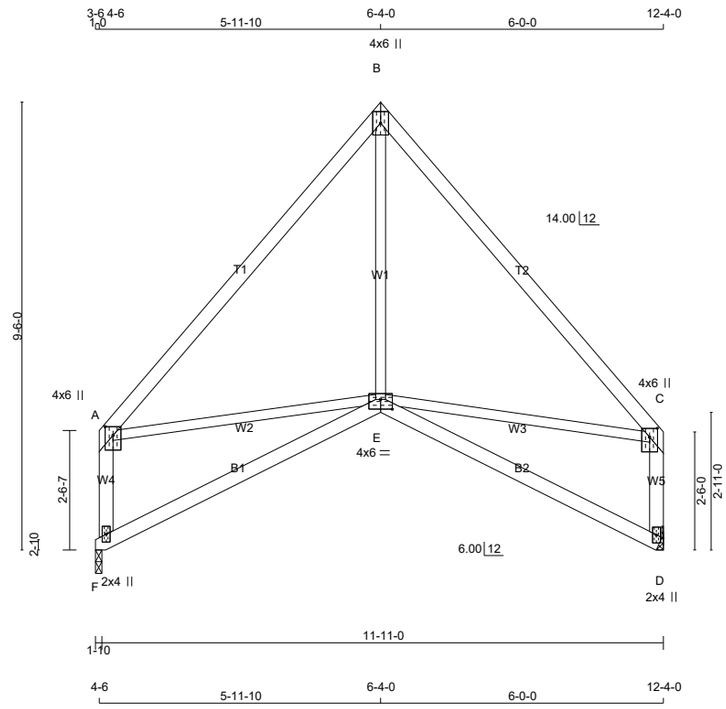
JSI GRIP= 0.89 (H) (INPUT = 0.90)
JSI METAL= 0.21 (J) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H61AS		1	TRUSS DESC. JT 45147	E24033362

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:41 2024 Page 1
ID:hd511hZTz bdeQoS817GKByhVxV-p0IsYKItKYC8p6zAzuay90FB4i3lF34lNLpCq5zqZya

Scale = 1:44.7



TOTAL WEIGHT = 56 lb

[M][F]

LUMBER
N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
B - C	2x4	DRY	1650F 1.5E	SPF
A - B	2x4	DRY	1650F 1.5E	SPF
D - C	2x4	DRY	No.2	SPF
F - A	2x4	DRY	No.2	SPF
E - D	2x4	DRY	No.2	SPF
F - 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
A	TMVW+p	MT20	4.0	6.0	2.25	2.00
B	TTW+p	MT20	4.0	6.0		
C	TMVW+p	MT20	4.0	6.0	2.25	2.00
D	BMV1+p	MT20	2.0	4.0		
E	BBWWW-p	MT20	4.0	6.0	2.50	3.00
F	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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG 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 = 1-12.

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.

LOADING
TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX UNBRAC LENGTH
B- C	-429 / 0	-78.0	-78.0	0.30 (1)	6.25
A- B	-428 / 0	-78.0	-78.0	0.30 (1)	6.25
D- C	-522 / 0	0.0	0.0	0.07 (1)	7.81
F- A	-522 / 0	0.0	0.0	0.07 (1)	7.81
E- D	0 / 0	-18.5	-18.5	0.20 (4)	10.00
F- E	0 / 0	-18.5	-18.5	0.19 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
E- B	0 / 184	0.05 (4)
E- C	0 / 281	0.06 (1)
A- E	0 / 281	0.06 (1)

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 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 (0.40")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.40")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.07")

CSI: TC=0.30/1.00 (B-C:1) , BC=0.20/1.00 (D-E:4) , WB=0.06/1.00 (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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

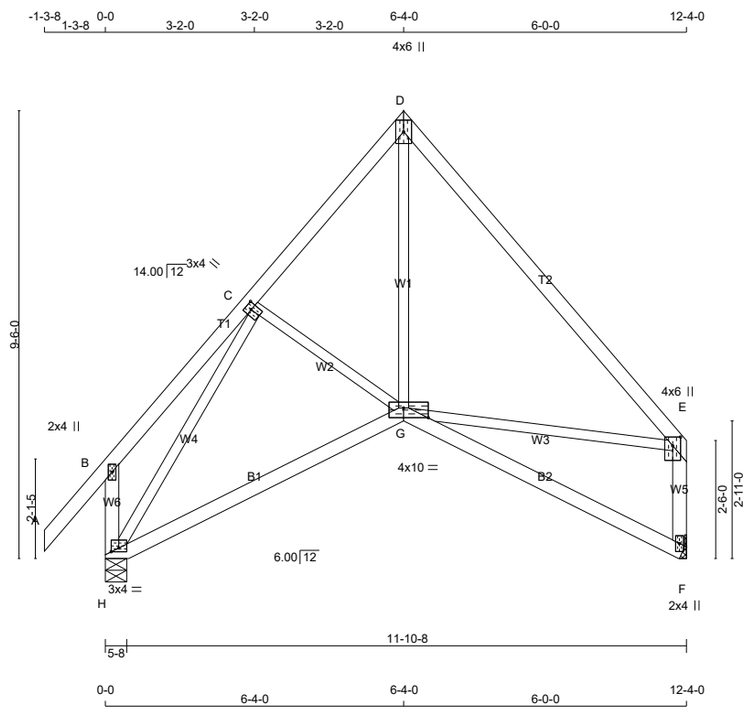
JSI GRIP= 0.45 (E) (INPUT = 0.90)
JSI METAL= 0.22 (F) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H61S		1	TRUSS DESC. JT 45147	E24033363

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:42 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-HCrElgJW5rK?RFYMXb5BiDnMp6P9 PAub?ZlMYzgZyZ



TOTAL WEIGHT = 62 lb

[M][F]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - D	2x4	DRY	No.2	SPF
D - E	2x4	DRY	1650F 1.5E	SPF
H - B	2x4	DRY	No.2	SPF
F - E	2x4	DRY	No.2	SPF
H - G	2x4	DRY	No.2	SPF
G - F	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	TMV+p	MT20	2.0	4.0		
C	TMWW+t	MT20	3.0	4.0	1.50	1.50
D	TTW+p	MT20	4.0	6.0		
E	TMVW+p	MT20	4.0	6.0	2.25	2.00
F	BMV1+p	MT20	2.0	4.0		
G	BBWWW-p	MT20	4.0	10.0	Edge	6.25
H	BMVW1-p	MT20	3.0	4.0	Edge	

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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG	REQRD BRG
F	595	0	595	0	0	MECHANICAL	
H	704	0	704	0	0	5-8	1-8

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT F. MINIMUM BEARING LENGTH AT JOINT F = 1-12.

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
F	424	259 / 0	0 / 0	0 / 0	0 / 0	165 / 0	0 / 0
H	500	318 / 0	0 / 0	0 / 0	0 / 0	182 / 0	0 / 0

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

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)

C H O R D S

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX UNBRAC LENGTH
A- B	0 / 42	-78.0	-78.0	0.11 (1)	10.00
B- C	0 / 22	-78.0	-78.0	0.12 (1)	10.00
C- D	-475 / 0	-78.0	-78.0	0.10 (1)	6.25
D- E	-455 / 0	-78.0	-78.0	0.31 (1)	6.25
H- B	-199 / 0	0.0	0.0	0.03 (1)	7.81
F- E	-539 / 0	0.0	0.0	0.07 (1)	7.81
H- G	0 / 379	-18.5	-18.5	0.25 (4)	10.00
G- F	0 / 0	-18.5	-18.5	0.20 (4)	10.00

W E B S

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
G- D	0 / 354	0.08 (1)
G- E	0 / 299	0.07 (1)
H- C	-703 / 0	0.46 (1)
C- G	-53 / 5	0.01 (1)

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 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 (0.41")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.41")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.09")

CSI: TC=0.31/1.00 (D-E:1) , BC=0.25/1.00 (G-H:4) , WB=0.46/1.00 (C-H:1) , SSI=0.12/1.00 (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

AUTOSOLVE RIGHT HEEL ONLY

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

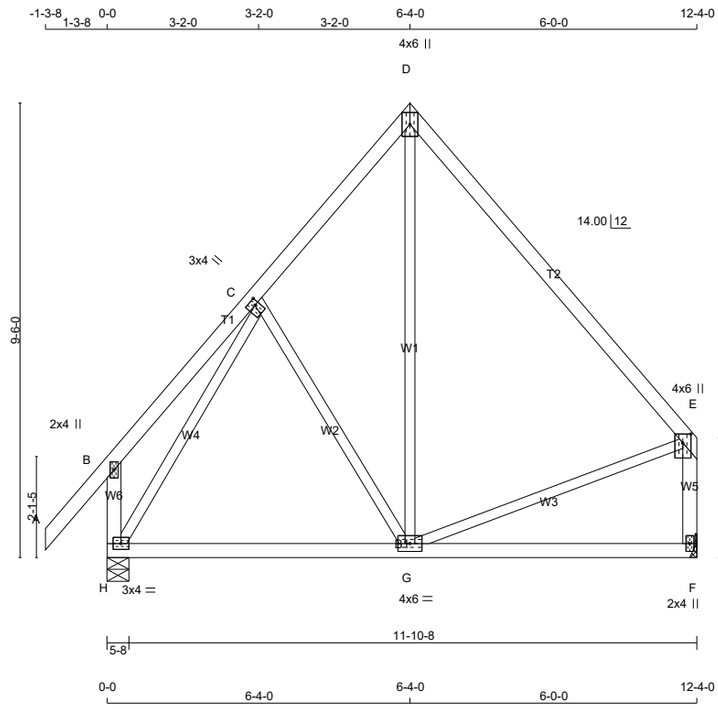
JSI GRIP= 0.88 (C) (INPUT = 0.90)
JSI METAL= 0.40 (C) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H62		1	TRUSS DESC. JT 45147	E24033364

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:42 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-HCrElgJW5rK?RFYMXb5BiDnMs6PW R1ub?ZlMYzqZvZ



Scale = 1:44.1

TOTAL WEIGHT = 65 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
D - E	2x4	DRY	1650F 1.5E	SPF
A - D	2x4	DRY	No.2	SPF
F - E	2x4	DRY	No.2	SPF
H - B	2x4	DRY	No.2	SPF
H - F	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	TMV+p	MT20	2.0	4.0		
C	TMWW+t	MT20	3.0	4.0	1.50	1.00
D	TTW+p	MT20	4.0	6.0		
E	TMVW+p	MT20	4.0	6.0	2.25	2.00
F	BMV1+p	MT20	2.0	4.0		
G	BMWWW-t	MT20	4.0	6.0		
H	BMVW1-t	MT20	3.0	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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG	REQRD BRG
F	595	0	595	0	0	MECHANICAL	
H	704	0	704	0	0	5-8	1-8

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
F	424	259 / 0	0 / 0	0 / 0	0 / 0	165 / 0	0 / 0
H	500	318 / 0	0 / 0	0 / 0	0 / 0	182 / 0	0 / 0

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

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)

C H O R D S

MEMB. FR-TO	MAX. FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
D- E	-323 / 0	-78.0	-78.0	0.30 (1)	6.25
A- B	0 / 42	-78.0	-78.0	0.11 (1)	10.00
B- C	0 / 23	-78.0	-78.0	0.13 (1)	10.00
C- D	-343 / 0	-78.0	-78.0	0.10 (1)	6.25
F- E	-553 / 0	0.0	0.0	0.07 (1)	7.81
H- B	-196 / 0	0.0	0.0	0.02 (1)	7.81
H- G	0 / 265	-18.5	-18.5	0.23 (4)	10.00
G- F	0 / 0	-18.5	-18.5	0.20 (4)	10.00

W E B S

MEMB. FR-TO	MAX. FORCE (LBS)	MAX CSI (LC)
G- D	0 / 154	0.05 (4)
G- E	0 / 223	0.05 (1)
H- C	-533 / 0	0.34 (1)
C- G	-103 / 0	0.07 (1)

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 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 (0.41")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.41")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.04")

CSI: TC=0.30/1.00 (D-E:1) , BC=0.23/1.00 (G-H:4) , WB=0.34/1.00 (C-H:1) , SSI=0.12/1.00 (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

AUTOSOLVE RIGHT HEEL ONLY

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

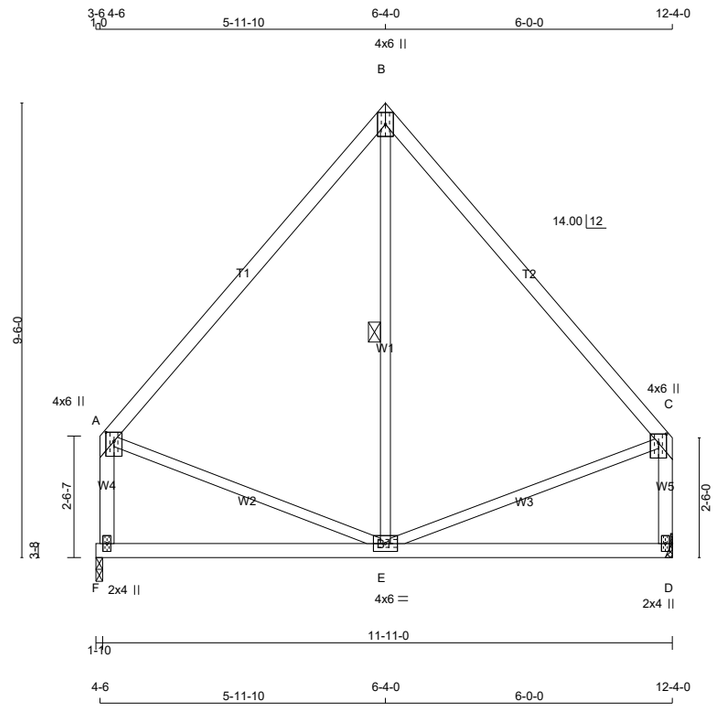
JSI GRIP= 0.74 (C) (INPUT = 0.90)
JSI METAL= 0.32 (C) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.		DRWG NO.
359637K	H62S		1	TRUSS DESC.	JT 45147	E24033365

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:42 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-HCrElgJW5rK?RFYMXb5BiDnMs6Q3 Waub?ZlMYzqZvZ



Scale = 1:44.1

TOTAL WEIGHT = 2 X 57 = 114 lb

[M][F]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
B - C	2x4	DRY	1650F 1.5E	SPF
A - B	2x4	DRY	1650F 1.5E	SPF
D - C	2x4	DRY	No.2	SPF
F - A	2x4	DRY	No.2	SPF
F - D	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	TTW+p	MT20	4.0	6.0		
C	TMVW+p	MT20	4.0	6.0	2.25	2.00
D	BMV1+p	MT20	2.0	4.0		
E	BMWWW-t	MT20	4.0	6.0		
F	BMV1+p	MT20	2.0	4.0		

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

LICENSED PROFESSIONAL ENGINEER
Y. WIDYA
100225448
02/28/2024
PROVINCE OF ONTARIO

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG 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 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)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
B- C	-304 / 0	-78.0	-78.0	0.30 (1)	6.25
A- B	-304 / 0	-78.0	-78.0	0.30 (1)	6.25
D- C	-535 / 0	0.0	0.0	0.07 (1)	7.81
F- A	-535 / 0	0.0	0.0	0.07 (1)	7.81
F- E	0 / 0	-18.5	-18.5	0.19 (4)	10.00
E- D	0 / 0	-18.5	-18.5	0.19 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
E- B	-5 / 94	0.03 (4)
E- C	0 / 210	0.05 (1)
A- E	0 / 211	0.05 (1)

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 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 (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=0.30/1.00 (B-C:1) , BC=0.19/1.00 (E-F:4) , WB=0.05/1.00 (A-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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

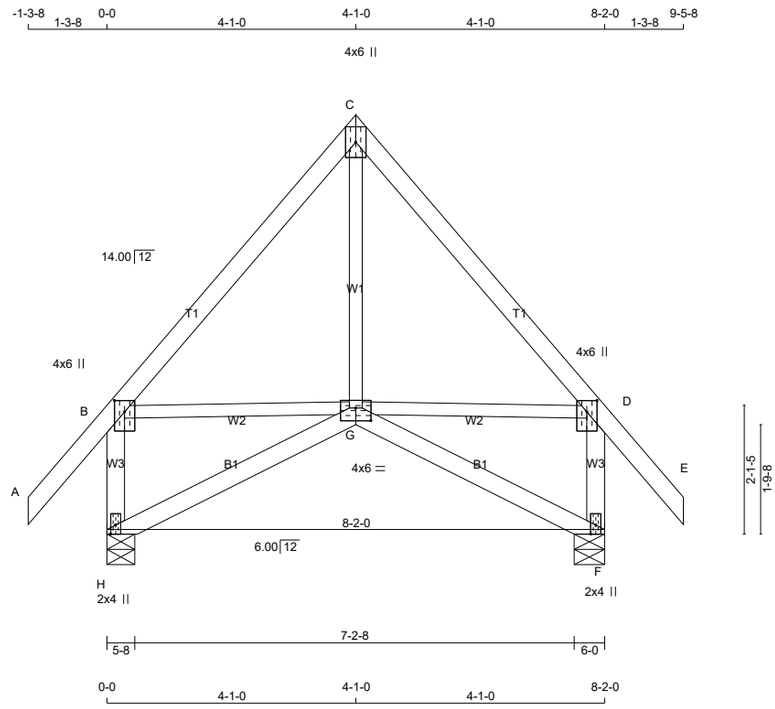
JSI GRIP= 0.31 (E) (INPUT = 0.90)
JSI METAL= 0.16 (C) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H63		1	TRUSS DESC. JT 45147	E24033366

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:43 2024 Page 1
ID:hd511hZTz bdeQoS817GKByhVxV-mOPcz0K8s9Sr3P7Y5JcQFRKYjVmsjzz2qfIJu zqZyY

Scale = 1:34.6



TOTAL WEIGHT = 44 lb

LUMBER
N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - C	2x4	DRY	No.2	SPF
C - E	2x4	DRY	No.2	SPF
H - B	2x4	DRY	No.2	SPF
F - D	2x4	DRY	No.2	SPF
H - G	2x4	DRY	No.2	SPF
G - F	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+p	MT20	4.0	6.0		
D	TMVW+p	MT20	4.0	6.0	2.25	2.00
F	BMV1+p	MT20	2.0	4.0	Edge	
G	BBWWW-p	MT20	4.0	6.0	2.50	3.00
H	BMV1+p	MT20	2.0	4.0	Edge	

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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
H	503	0	503	0	0	5-8	1-8
F	503	0	503	0	0	6-0	1-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
H	357	230 / 0	0 / 0	0 / 0	0 / 0	126 / 0	0 / 0
F	357	230 / 0	0 / 0	0 / 0	0 / 0	126 / 0	0 / 0

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

LOADING
TOTAL LOAD CASES: (4)

C H O R D S

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX UNBRAC LENGTH
A- B	0 / 42	-78.0	-78.0	0.11 (1)	10.00
B- C	-263 / 0	-78.0	-78.0	0.17 (1)	6.25
C- D	-263 / 0	-78.0	-78.0	0.17 (1)	6.25
D- E	0 / 42	-78.0	-78.0	0.11 (1)	10.00
H- B	-465 / 0	0.0	0.0	0.06 (1)	7.81
F- D	-465 / 0	0.0	0.0	0.06 (1)	7.81
H- G	0 / 0	-18.5	-18.5	0.09 (4)	10.00
G- F	0 / 0	-18.5	-18.5	0.09 (4)	10.00

W E B S

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
G- C	0 / 87	0.03 (4)
B- G	0 / 171	0.04 (1)
G- D	0 / 171	0.04 (1)

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 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 (0.27")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.27")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02")

CSI: TC=0.17/1.00 (C-D:1) , BC=0.09/1.00 (F-G:4) , WB=0.04/1.00 (B-G:1) , SSI=0.08/1.00 (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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.31 (H) (INPUT = 0.90)
JSI METAL= 0.19 (H) (INPUT = 1.00)

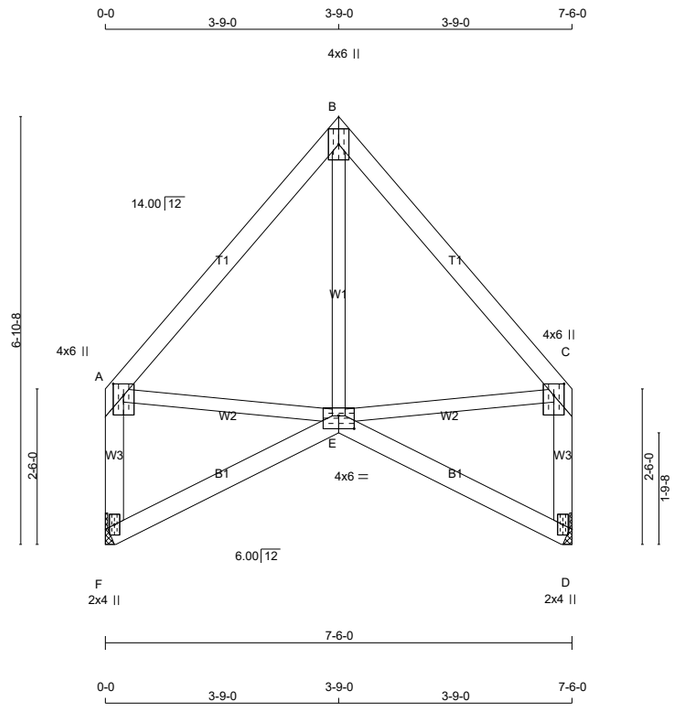
JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H63S		1	TRUSS DESC. JT 45147	E24033367

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:43 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-mOPcz0K8s9Sr3P7Y5JcQFRKY8Vm4jz32qfIJu zqZyY

Scale = 1:33.9



TOTAL WEIGHT = 38 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
F - A	2x4	DRY	No.2	SPF
D - C	2x4	DRY	No.2	SPF
F - E	2x4	DRY	No.2	SPF
E - D	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	TTW+p	MT20	4.0	6.0		
C	TMVW+p	MT20	4.0	6.0	2.25	2.00
D	BMV1+p	MT20	2.0	4.0		
E	BBWWW-p	MT20	4.0	6.0	2.50	3.00
F	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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG	REQRD BRG
F	362	0	362	0	0	MECHANICAL	
D	362	0	362	0	0	MECHANICAL	

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT F, D. MINIMUM BEARING LENGTH AT JOINT F = 1-12, JOINT D = 1-12.

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
F	258	157 / 0	0 / 0	0 / 0	0 / 0	101 / 0	0 / 0
D	258	157 / 0	0 / 0	0 / 0	0 / 0	101 / 0	0 / 0

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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	-222 / 0	-78.0	-78.0	0.14 (1)	6.25
B- C	-222 / 0	-78.0	-78.0	0.14 (1)	6.25
F- A	-327 / 0	0.0	0.0	0.04 (1)	7.81
D- C	-327 / 0	0.0	0.0	0.04 (1)	7.81
F- E	0 / 0	-18.5	-18.5	0.08 (4)	10.00
E- D	0 / 0	-18.5	-18.5	0.08 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
E- B	0 / 68	0.02 (4)
A- E	0 / 145	0.03 (1)
E- C	0 / 145	0.03 (1)

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 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 (0.25")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.25")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")

CSI: TC=0.14/1.00 (B-C:1) , BC=0.08/1.00 (D-E:4) , WB=0.03/1.00 (A-E:1) , SSI=0.07/1.00 (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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

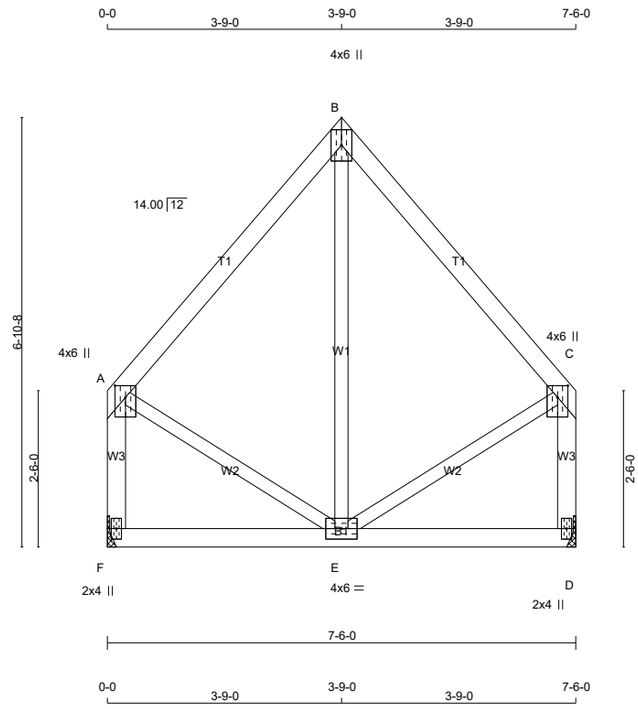
JSI GRIP= 0.19 (E) (INPUT = 0.90)
JSI METAL= 0.14 (F) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.		DRWG NO.
359637K	H64		1	TRUSS DESC.	JT 45147	E24033368

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:44 2024 Page 1
ID:hd511hZTz bdeQoS817GKByhVxV-Ebz AMLmdTaigZike07fnetjuv6NSQNB3J2sRQzqZyX

Scale = 1:33.7



TOTAL WEIGHT = 2 X 39 = 77 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
F - A	2x4	DRY	No.2	SPF
D - C	2x4	DRY	No.2	SPF
F - D	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	TTW+p	MT20	4.0	6.0		
C	TMVW+p	MT20	4.0	6.0	2.25	2.00
D	BMV1+p	MT20	2.0	4.0		
E	BMWWW-t	MT20	4.0	6.0		
F	BMV1+p	MT20	2.0	4.0		

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

LICENSED PROFESSIONAL ENGINEER
Y. WIDYA
100225448
02/28/2024
PROVINCE OF ONTARIO

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
F	362	0	362	0	0	MECHANICAL	
D	362	0	362	0	0	MECHANICAL	

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

UNFACTORED REACTIONS

	1ST LCASE	MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
F	258	157 / 0	0 / 0	0 / 0	0 / 0	100 / 0	0 / 0
D	258	157 / 0	0 / 0	0 / 0	0 / 0	100 / 0	0 / 0

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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	-167 / 0	-78.0	-78.0	0.14 (1)	6.25
B- C	-167 / 0	-78.0	-78.0	0.14 (1)	6.25
F- A	-335 / 0	0.0	0.0	0.04 (1)	7.81
D- C	-335 / 0	0.0	0.0	0.04 (1)	7.81
F- E	0 / 0	-18.5	-18.5	0.07 (4)	10.00
E- D	0 / 0	-18.5	-18.5	0.07 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
E- B	-38 / 44	0.03 (1)
A- E	0 / 125	0.03 (1)
E- C	0 / 125	0.03 (1)

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 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 (0.25")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.25")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")

CSI: TC=0.14/1.00 (B-C:1) , BC=0.07/1.00 (E-F:4) , WB=0.03/1.00 (B-E:1) , SSI=0.07/1.00 (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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

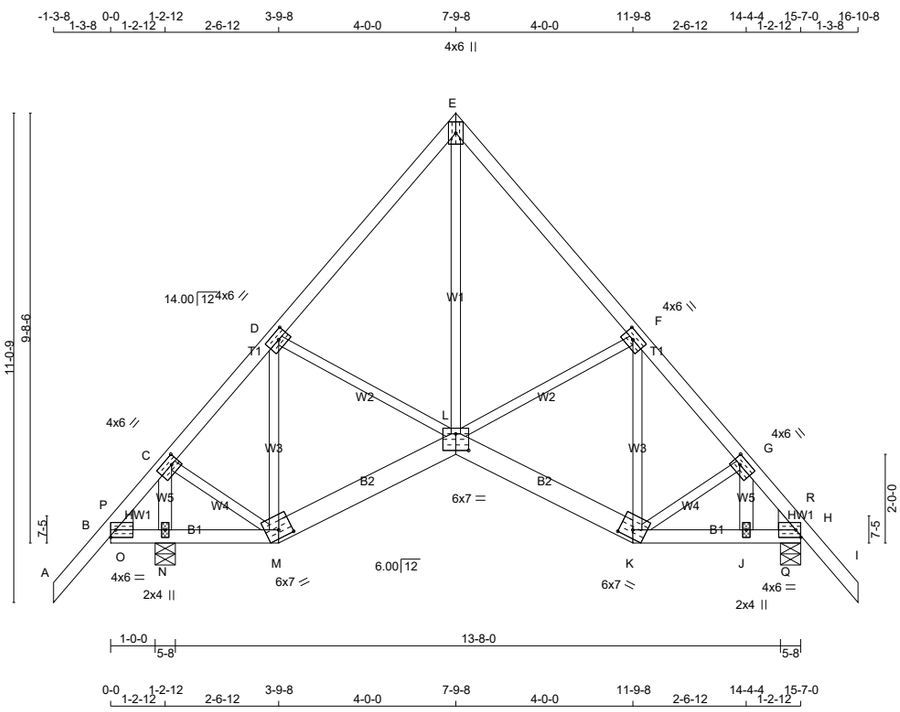
JSI GRIP= 0.19 (A) (INPUT = 0.90)
JSI METAL= 0.09 (C) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H81		1	TRUSS DESC. JT 45147	E24033369

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:44 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-Ebz AMLmdTaiqZike07fnetjqv5ISOmB3J2sRQzqZyX



TOTAL WEIGHT = 3 X 87 = 261 lb

[M][F]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - E	2x4	DRY	No.2	SPF
E - I	2x4	DRY	No.2	SPF
B - M	2x4	DRY	No.2	SPF
M - L	2x6	DRY	No.2	SPF
L - K	2x6	DRY	No.2	SPF
K - H	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				
J - G	2x4	DRY	No.2	SPF
N - C	2x4	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMBH-l	MT20	4.0	6.0		Edge
C	TMWW-t	MT20	4.0	6.0	2.00	2.00
D	TMWW-t	MT20	4.0	6.0	2.00	2.75
E	TTW+p	MT20	4.0	6.0		
F	TMWW-t	MT20	4.0	6.0	2.00	2.75
G	TMWW-t	MT20	4.0	6.0	2.00	2.00
H	TMBH1-l	MT20	4.0	6.0		Edge
J	BMW+w	MT20	2.0	4.0		
K	BBWW-h	MT20	6.0	7.0	2.25	3.50
L	BBWWW-p	MT20	6.0	7.0	4.50	3.50
M	BBWW-h	MT20	6.0	7.0	2.25	3.50
N	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

LICENSED PROFESSIONAL ENGINEER
Y. WIDYA
100225448
02/28/2024
PROVINCE OF ONTARIO

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX	HEEL WEDGE
H	787	0	787	0	0	5-8	1-8	2x6 R
N	935	0	935	0	0	5-8	1-8	2x6 L

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
H	559	353 / 0	0 / 0	0 / 0	0 / 0	206 / 0	0 / 0
N	664	419 / 0	0 / 0	0 / 0	0 / 0	245 / 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 = 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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 39	-78.0	-78.0	0.11 (1)	10.00
B- P	0 / 145	-78.0	-78.0	0.13 (1)	10.00
P- C	0 / 216	-78.0	-78.0	0.06 (1)	10.00
C- D	-414 / 0	-78.0	-78.0	0.12 (1)	6.25
D- E	-506 / 0	-78.0	-78.0	0.15 (1)	6.25
E- F	-507 / 0	-78.0	-78.0	0.15 (1)	6.25
F- G	-603 / 0	-78.0	-78.0	0.13 (1)	6.25
G- R	-652 / 0	-78.0	-78.0	0.06 (1)	6.25
R- H	-960 / 0	-78.0	-78.0	0.09 (1)	6.25
H- I	0 / 39	-78.0	-78.0	0.11 (1)	10.00
B- O	-147 / 0	-18.5	-18.5	0.01 (1)	6.25
O- N	-147 / 0	-18.5	-18.5	0.03 (1)	6.25
N- M	-147 / 0	-18.5	-18.5	0.03 (1)	6.25
M- L	0 / 318	-18.5	-18.5	0.07 (4)	10.00
L- K	0 / 469	-18.5	-18.5	0.08 (1)	10.00
K- J	0 / 387	-18.5	-18.5	0.10 (1)	10.00
J- Q	0 / 387	-18.5	-18.5	0.14 (1)	10.00
Q- H	0 / 387	-18.5	-18.5	0.14 (1)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
L- E	0 / 474	0.11 (1)
K- F	-118 / 0	0.04 (1)
J- G	-160 / 0	0.06 (1)
K- G	-2 / 40	0.01 (1)
D- L	0 / 38	0.01 (1)
M- D	-61 / 16	0.01 (1)
C- M	-377 / 0	0.13 (1)
N- C	0 / 518	0.12 (1)
O- P	-863 / 0	0.09 (1)
Q- R	-6 / 20	0.00 (1)
	0 / 304	0.00 (1)

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 BCBC 2018 , NBC-2019AE
- 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 (0.48")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.48")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.03")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= L/120 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/120 (0.19")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.00")

CSI: TC=0.15/1.00 (D-E:1) , BC=0.14/1.00 (J-Q:1) , WB=0.13/1.00 (D-M:1) , SSI=0.17/1.00 (H-Q: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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

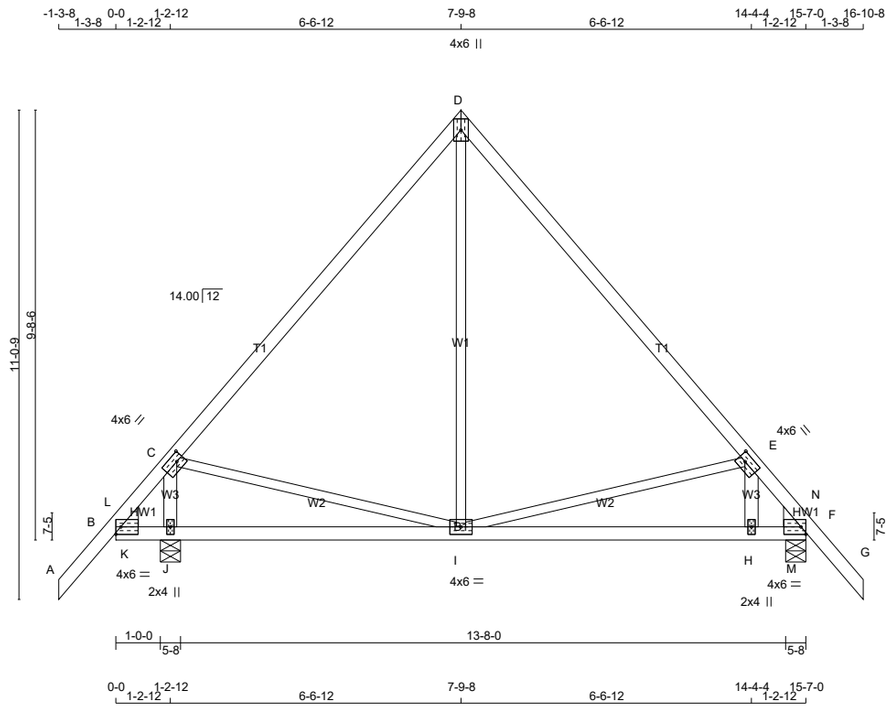
JSI GRIP= 0.67 (B) (INPUT = 0.90)
JSI METAL= 0.31 (B) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H82		1	TRUSS DESC. JT 45147	E24033370

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:45 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-inXMOiLONmiZIjHxCjeuKsPomJO?Bo0LHznPztzqZyW



TOTAL WEIGHT = 73 lb

[M][F]

LUMBER

N. L. G. A. RULES

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMBH-l	MT20	4.0	6.0		Edge
C	TMWW-t	MT20	4.0	6.0	2.00	2.00
D	TTW+p	MT20	4.0	6.0		
E	TMWW-t	MT20	4.0	6.0	2.00	2.00
F	TMBH1-l	MT20	4.0	6.0		Edge
H	BMW+w	MT20	2.0	4.0		
I	BMWWW-t	MT20	4.0	6.0		
J	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

LICENSED PROFESSIONAL ENGINEER
Y. WIDYA
100225448
02/28/2024
PROVINCE OF ONTARIO

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX	HEEL WEDGE
F	787	0	787	0	0	5-8	1-8	2x6 R
J	935	0	935	0	0	5-8	1-8	2x6 L

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
F	559	353 / 0	0 / 0	0 / 0	0 / 0	206 / 0	0 / 0
J	664	419 / 0	0 / 0	0 / 0	0 / 0	245 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.24 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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 39	-78.0	-78.0	0.11 (1)	10.00
B- L	-391 / 0	-78.0	-78.0	0.08 (1)	6.25
L- C	-4 / 177	-78.0	-78.0	0.52 (1)	10.00
C- D	-431 / 0	-78.0	-78.0	0.43 (1)	6.25
D- E	-429 / 0	-78.0	-78.0	0.43 (1)	6.25
E- N	-709 / 0	-78.0	-78.0	0.36 (1)	6.25
N- F	-1522 / 0	-78.0	-78.0	0.10 (1)	5.24
F- G	0 / 39	-78.0	-78.0	0.11 (1)	10.00
B- K	0 / 67	-18.5	-18.5	0.20 (1)	10.00
K- J	0 / 67	-18.5	-18.5	0.20 (1)	10.00
J- I	0 / 67	-18.5	-18.5	0.18 (4)	10.00
I- H	0 / 617	-18.5	-18.5	0.23 (4)	10.00
H- M	0 / 617	-18.5	-18.5	0.37 (1)	10.00
M- F	0 / 617	-18.5	-18.5	0.37 (1)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
I- D	0 / 186	0.06 (4)
I- E	-375 / 0	0.32 (1)
H- E	-143 / 66	0.02 (4)
C- I	0 / 192	0.04 (1)
J- C	-981 / 0	0.10 (1)
K- L	0 / 645	0.00 (1)
M- N	0 / 939	0.00 (1)

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 BCBC 2018 , NBC-2019AE
- 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 (0.48")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.02")
ALLOWABLE DEFL.(TL)= L/360 (0.48")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.06")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= L/120 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/120 (0.19")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.00")

CSI: TC=0.52/1.00 (C-L:1) , BC=0.37/1.00 (H-M:1) , WB=0.32/1.00 (E-I:1) , SSI=0.57/1.00 (F-M: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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

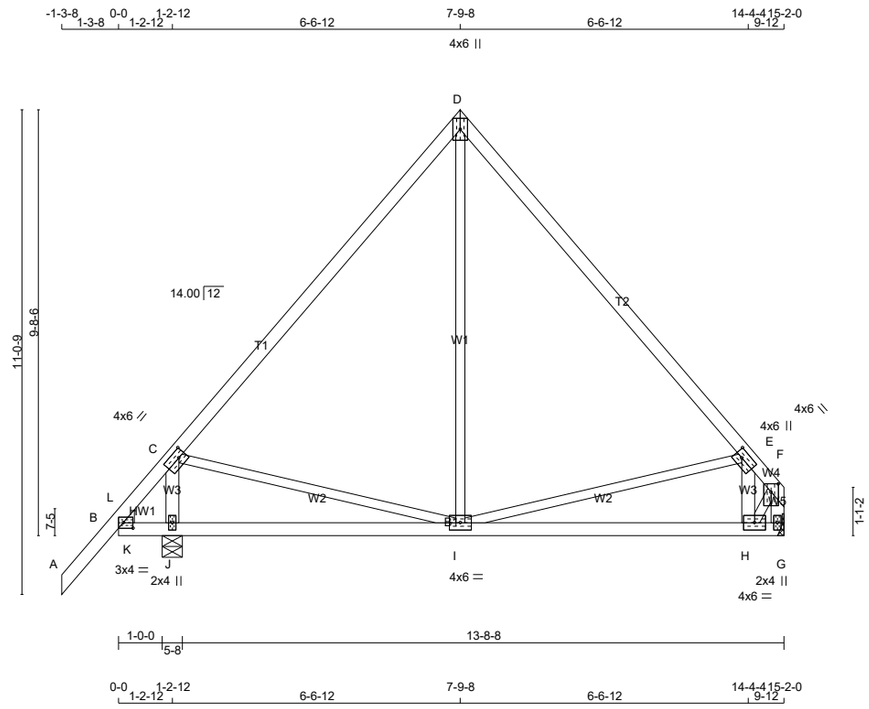
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.68 (B) (INPUT = 0.90)
JSI METAL= 0.33 (F) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H82S		1	TRUSS DESC. JT 45147	E24033371

Scale: 1/4"=1'



TOTAL WEIGHT = 2 X 70 = 140 lb

[M][F]

LUMBER

N. L. G. A. RULES

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMBH-I	MT20	3.0	4.0	1.50	2.75
C	TMWW-t	MT20	4.0	6.0	2.00	2.00
D	TTW+p	MT20	4.0	6.0		
E	TMWW-t	MT20	4.0	6.0	2.00	2.00
F	TMVW+p	MT20	4.0	6.0	2.25	2.00
G	BMV1+p	MT20	2.0	4.0		
H	BMWW-t	MT20	4.0	6.0		
I	BMWWW-t	MT20	4.0	6.0		
J	BMW1+w	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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX	HEEL WEDGE
G	652	0	652	0	0	MECHANICAL		
J	921	0	921	0	0	5-8	1-8	2x4 L

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
G	465	282 / 0	0 / 0	0 / 0	0 / 0	183 / 0	0 / 0
J	654	413 / 0	0 / 0	0 / 0	0 / 0	240 / 0	0 / 0

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

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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX UNBRAC LENGTH
A- B	0 / 39	-78.0	-78.0	0.11 (1)	10.00
B- L	-393 / 0	-78.0	-78.0	0.08 (1)	6.25
L- C	-5 / 173	-78.0	-78.0	0.52 (1)	10.00
C- D	-414 / 0	-78.0	-78.0	0.43 (1)	6.25
D- E	-414 / 0	-78.0	-78.0	0.43 (1)	6.25
E- F	-487 / 0	-78.0	-78.0	0.38 (1)	6.25
G- F	-693 / 0	0.0	0.0	0.07 (1)	7.81
B- K	0 / 69	-18.5	-18.5	0.21 (1)	10.00
K- J	0 / 69	-18.5	-18.5	0.21 (1)	10.00
J- I	0 / 69	-18.5	-18.5	0.18 (4)	10.00
I- H	0 / 538	-18.5	-18.5	0.22 (4)	10.00
H- G	0 / 0	-18.5	-18.5	0.12 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
I- D	0 / 164	0.05 (4)
I- E	-305 / 0	0.26 (1)
H- E	-369 / 0	0.04 (1)
C- I	0 / 178	0.04 (1)
J- C	-962 / 0	0.10 (1)
H- F	0 / 721	0.16 (1)
K- L	0 / 643	0.00 (1)

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 BCBC 2018 , NBC-2019AE
- 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 (0.46")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.46")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.04")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= L/120 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/120 (0.19")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.00")

CSI: TC=0.52/1.00 (C-L:1) , BC=0.22/1.00 (H-I:4) , WB=0.26/1.00 (E-I:1) , SSI=0.41/1.00 (B-K: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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

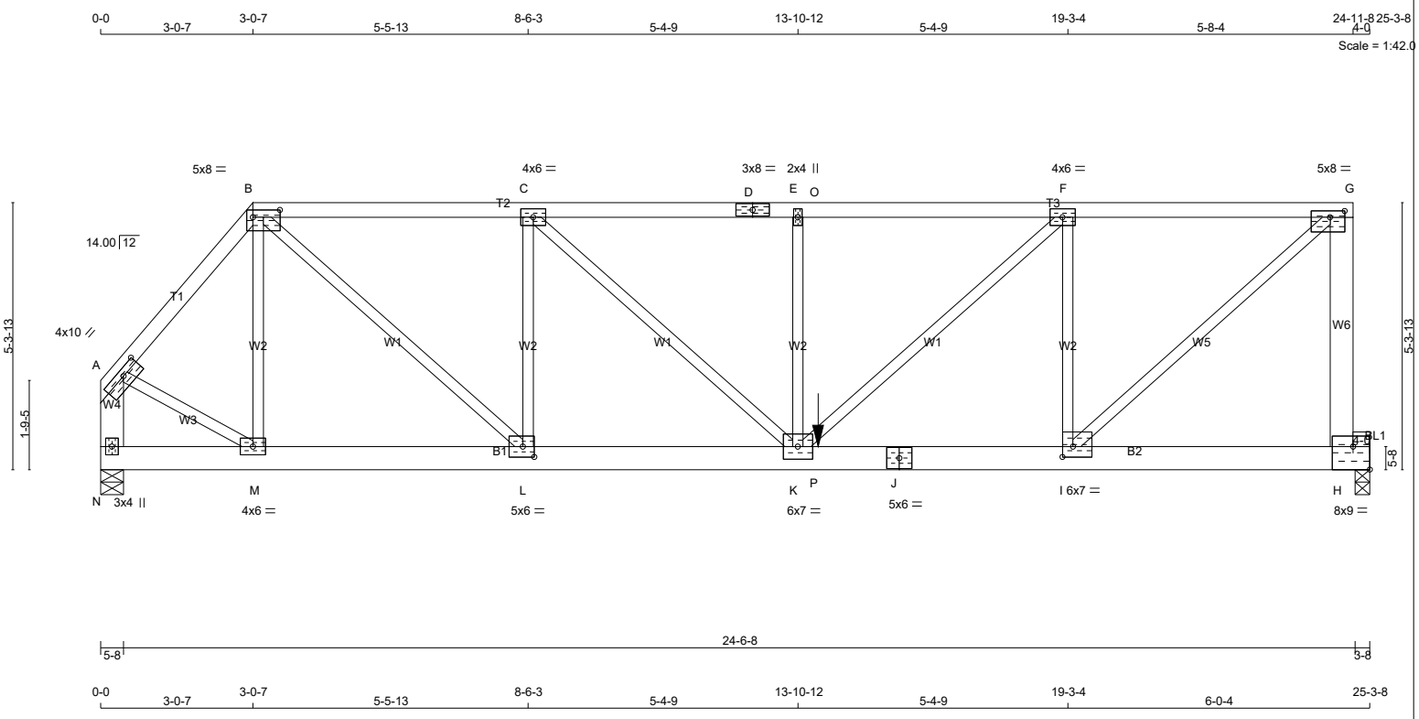
JSI GRIP= 0.74 (H) (INPUT = 0.90)
JSI METAL= 0.20 (J) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H83		1	TRUSS DESC. JT 45147	E24033372

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:46 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-Az5lb2M084qQwts7mRA7s3yu5jqww7rUWdXzVJzqZyV



TOTAL WEIGHT = 127 lb

[M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - B	2x4	DRY	No.2	SPF
B - D	2x4	DRY	1650F 1.5E	SPF
D - G	2x4	DRY	1650F 1.5E	SPF
H - G	2x6	DRY	No.2	SPF
N - A	2x6	DRY	No.2	SPF
N - J	2x6	DRY	No.2	SPF
J - H	2x6	DRY	No.2	SPF
BEARING BLOCKS				
BL1	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-t	MT20	4.0	10.0	1.50	4.50
B	TTWW-l	MT20	5.0	8.0	1.75	6.50
C	TMWW-t	MT20	4.0	6.0		
D	TS-t	MT20	3.0	8.0		
E	TMW+w	MT20	2.0	4.0		
F	TMWW-t	MT20	4.0	6.0		
G	TMVW-t	MT20	5.0	8.0	1.50	3.50
H	BMVK1-t	MT20	8.0	9.0	5.50	Edge
I	BMWW-t	MT20	6.0	7.0	2.50	2.50
J	BS-t	MT20	5.0	6.0		
K	BMWWW-t	MT20	6.0	7.0		
L	BMWW-t	MT20	5.0	6.0	2.50	2.75
M	BMWW-t	MT20	4.0	6.0		
N	BMV1+p	MT20	3.0	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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
H	2701	0	2701	0	0	3-8	3-8
N	1912	0	1912	0	0	5-8	2-1

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
H	1925	1179 / 0	0 / 0	0 / 0	0 / 0	746 / 0	0 / 0
N	1363	832 / 0	0 / 0	0 / 0	0 / 0	531 / 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 = 3.11 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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX UNBRAC LENGTH
A- B	-1728 / 0	-78.0	-78.0	0.19 (1)	4.86
B- C	-2625 / 0	-78.0	-78.0	0.37 (1)	4.43
C- D	-3559 / 0	-78.0	-78.0	0.43 (1)	3.86
D- E	-3559 / 0	-78.0	-78.0	0.43 (1)	3.86
E- O	-3559 / 0	-78.0	-78.0	0.86 (1)	3.11
O- F	-3559 / 0	-153.5	-153.5	0.86 (1)	3.11
F- G	-2504 / 0	-153.5	-153.5	0.79 (1)	3.76
H- G	-2631 / 0	0.0	0.0	0.77 (1)	6.37
N- A	-1908 / 0	0.0	0.0	0.15 (1)	7.23
N- M	0 / 0	-18.5	-18.5	0.06 (4)	10.00
M- L	0 / 1110	-18.5	-18.5	0.20 (1)	10.00
L- K	0 / 2626	-18.5	-18.5	0.45 (1)	10.00
K- P	0 / 2504	-18.5	-18.5	0.58 (1)	10.00
P- J	0 / 2504	-36.4	-36.4	0.58 (1)	10.00
J- I	0 / 2504	-36.4	-36.4	0.58 (1)	10.00
I- H	-122 / 0	-36.4	-36.4	0.16 (4)	6.25

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
M- B	-347 / 0	0.14 (1)
B- L	0 / 2033	0.50 (1)
L- C	-1308 / 0	0.53 (1)
C- K	0 / 1268	0.31 (1)
K- E	-529 / 0	0.21 (1)
K- F	0 / 1433	0.35 (1)
I- F	-1967 / 0	0.80 (1)
I- G	0 / 3479	0.86 (1)

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
P	14-3-9	-1217	-1217	---	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/C

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

GIRDER TYPE: CPrimeHip
LEFT SETBACK = 3-0-7
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
- ADDT'L LOADS BASED ON 55 % OF GSL.
LOADS APPLIED TO FIRST 10-11-15 OF SPAN MEASURED FROM THE RIGHT.

*** NON STANDARD GIRDER ***
ADDT'L 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 , 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 (0.82")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.12")
ALLOWABLE DEFL.(TL)= L/360 (0.82")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.25")

CSI: TC=0.86/1.00 (E-F:1) , BC=0.58/1.00 (I-K:1) , WB=0.86/1.00 (G-I:1) , SSI=0.81/1.00 (I-K: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 .

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

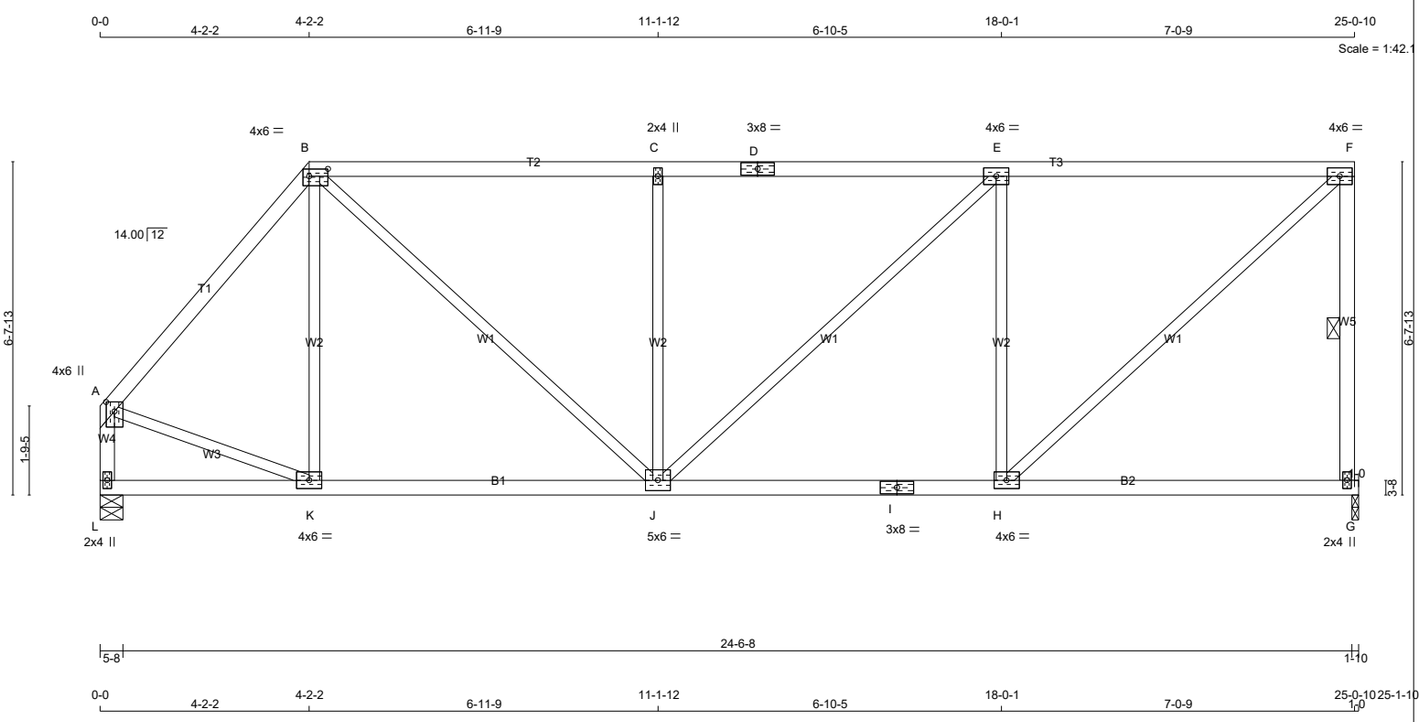
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (L) (INPUT = 0.90)
JSI METAL= 0.69 (J) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H84		1	TRUSS DESC. JT 45147	E24033373

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:46 2024 Page 1
ID:hd511hZTz bdeQoS817GKByhVxV-Az5lb2M084qQwts7mRA7s3yy6jl1wBIUWdXzVJzqZyV



0-0 4-2-2 4-2-2 6-11-9 11-1-12 6-10-5 18-0-1 7-0-9 25-0-10 25-1-10

TOTAL WEIGHT = 109 lb

[M]

LUMBER

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
L - A	2x4	DRY	No.2	SPF
L - I	2x4	DRY	No.2	SPF
I - G	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-l	MT20	4.0	6.0	1.75	4.50
C	TMW+w	MT20	2.0	4.0		
D	TS-t	MT20	3.0	8.0		
E	TMWW-t	MT20	4.0	6.0		
F	TMVW-t	MT20	4.0	6.0		
G	BMV1+p	MT20	2.0	4.0		
H	BMWW-t	MT20	4.0	6.0		
I	BS-t	MT20	3.0	8.0		
J	BMWWW-t	MT20	5.0	6.0		
K	BMWW-t	MT20	4.0	6.0		
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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
G	1208	0	1208	0	0	1-10	1-8
L	1208	0	1208	0	0	5-8	1-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
G	862	526 / 0	0 / 0	0 / 0	0 / 0	336 / 0	0 / 0
L	862	526 / 0	0 / 0	0 / 0	0 / 0	336 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.92 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.

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 MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH	WEBS MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
A- B	-1047 / 0	-78.0	-78.0	0.27 (1)	5.82	K- B	-105 / 42	0.08 (1)
B- C	-1242 / 0	-78.0	-78.0	0.59 (1)	4.96	A- K	0 / 714	0.16 (1)
C- D	-1242 / 0	-78.0	-78.0	0.61 (1)	4.92	B- J	0 / 763	0.17 (1)
D- E	-1242 / 0	-78.0	-78.0	0.61 (1)	4.92	J- C	-582 / 0	0.43 (1)
E- F	-1035 / 0	-78.0	-78.0	0.59 (1)	5.30	J- E	0 / 282	0.06 (1)
G- F	-1156 / 0	0.0	0.0	0.23 (1)	5.92	H- E	-789 / 0	0.58 (1)
L- A	-1183 / 0	0.0	0.0	0.13 (1)	7.34	H- F	0 / 1394	0.31 (1)
L- K	0 / 0	-18.5	-18.5	0.14 (4)	10.00			
K- J	0 / 677	-18.5	-18.5	0.22 (4)	10.00			
J- I	0 / 1035	-18.5	-18.5	0.32 (4)	10.00			
I- H	0 / 1035	-18.5	-18.5	0.32 (4)	10.00			
H- G	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 , 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 (0.84")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.05")
ALLOWABLE DEFL.(TL)= L/360 (0.84")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.10")

CSI: TC=0.61/1.00 (C-E:1) , BC=0.32/1.00 (H-J:4) , WB=0.58/1.00 (E-H:1) , SSI=0.26/1.00 (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

AUTOSOLVE RIGHT HEEL ONLY

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

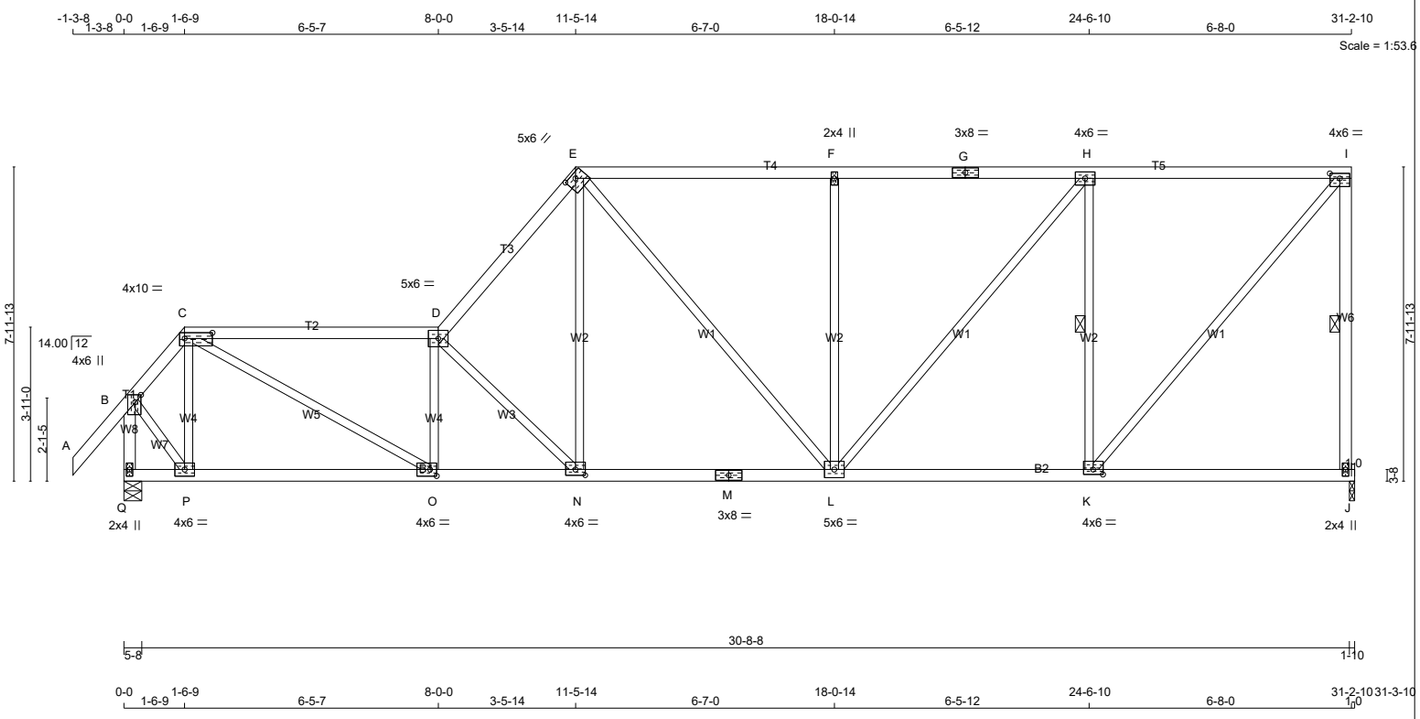
JSI GRIP= 0.88 (F) (INPUT = 0.90)
JSI METAL= 0.39 (A) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H85		1	TRUSS DESC. JT 45147	E24033374

Alpha Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:47 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-eAf7pONevOyHX1RJK8hMPHV4r725fdAdlHGW1IzqZyU



TOTAL WEIGHT = 146 lb

[M]

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
E - G	2x4	DRY	No.2	SPF
G - I	2x4	DRY	No.2	SPF
J - I	2x4	DRY	No.2	SPF
Q - B	2x4	DRY	No.2	SPF
Q - M	2x4	DRY	No.2	SPF
M - J	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	1.75
C	TTWW-l	MT20	4.0	10.0	1.75	8.50
D	TTWW-l	MT20	5.0	6.0		
E	TTWW-h	MT20	5.0	6.0	1.50	3.00
F	TMW+w	MT20	2.0	4.0		
G	TS-t	MT20	3.0	8.0		
H	TMWW-t	MT20	4.0	6.0		
I	TMVW-t	MT20	4.0	6.0	1.50	3.00
J	BMV1+p	MT20	2.0	4.0		
K	BMWW-t	MT20	4.0	6.0	1.50	3.00
L	BMWWW-t	MT20	5.0	6.0		
M	BS-t	MT20	3.0	8.0		
N	BMWW-t	MT20	4.0	6.0	1.75	3.00
O	BMWW-t	MT20	4.0	6.0	2.00	2.00
P	BMWW-t	MT20	4.0	6.0		
Q	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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
J	1503	0	1503	0	0	1-10	1-10
Q	1618	0	1618	0	0	5-8	1-12

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
J	1072	654 / 0	0 / 0	0 / 0	0 / 0	418 / 0	0 / 0
Q	1151	715 / 0	0 / 0	0 / 0	0 / 0	436 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.50 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 I-J, 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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 42	-78.0	-78.0	0.11 (1)	10.00
B- C	-1031 / 0	-78.0	-78.0	0.12 (1)	6.04
C- D	-2455 / 0	-78.0	-78.0	0.80 (1)	3.50
D- E	-2170 / 0	-78.0	-78.0	0.25 (1)	4.41
E- F	-1535 / 0	-78.0	-78.0	0.55 (1)	4.65
F- G	-1535 / 0	-78.0	-78.0	0.56 (1)	4.61
G- H	-1535 / 0	-78.0	-78.0	0.56 (1)	4.61
H- I	-1078 / 0	-78.0	-78.0	0.52 (1)	5.34
J- I	-1453 / 0	0.0	0.0	0.42 (1)	5.43
Q- B	-1652 / 0	0.0	0.0	0.20 (1)	6.45
Q- P	0 / 0	-18.5	-18.5	0.15 (4)	10.00
P- O	0 / 622	-18.5	-18.5	0.21 (4)	10.00
O- N	0 / 2483	-18.5	-18.5	0.46 (1)	10.00
N- M	0 / 1428	-18.5	-18.5	0.31 (1)	10.00
M- L	0 / 1428	-18.5	-18.5	0.31 (1)	10.00
L- K	0 / 1078	-18.5	-18.5	0.30 (4)	10.00
K- J	0 / 0	-18.5	-18.5	0.19 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
P- C	-536 / 0	0.13 (1)
C- O	0 / 2104	0.47 (1)
O- D	-968 / 0	0.23 (1)
D- N	-1512 / 0	0.63 (1)
N- E	0 / 1171	0.26 (1)
B- P	0 / 927	0.21 (1)
E- L	0 / 164	0.04 (1)
L- F	-547 / 0	0.66 (1)
L- H	0 / 710	0.16 (1)
K- H	-1107 / 0	0.44 (1)
K- I	0 / 1646	0.37 (1)

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 ALL FLAT SECTIONS 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

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 (0.12")
ALLOWABLE DEFL.(TL)= L/360 (1.04")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.25")

CSI: TC=0.80/1.00 (C-D:1) , BC=0.46/1.00 (N-O:1) , WB=0.66/1.00 (F-L:1) , SSI=0.24/1.00 (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

AUTOSOLVE RIGHT HEEL ONLY

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

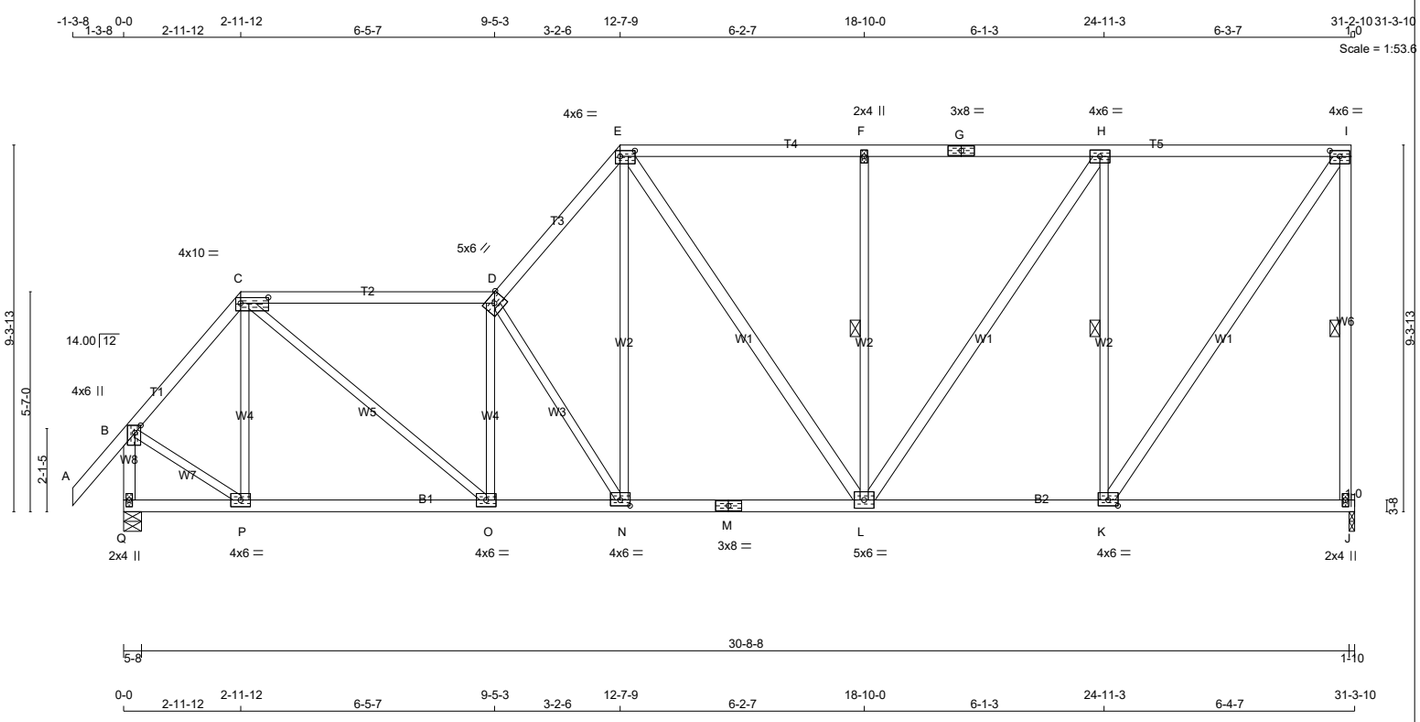
JSI GRIP= 0.87 (B) (INPUT = 0.90)
JSI METAL= 0.51 (M) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H86		1	TRUSS DESC. JT 45147	E24033375

Alpha Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:47 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-eAf7pONevOyHX1RJK8hMPHV5A74rfbvdlHGW1IzqZyU



TOTAL WEIGHT = 169 lb

[M]

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
E - G	2x4	DRY	No.2	SPF
G - I	2x4	DRY	No.2	SPF
J - I	2x4	DRY	No.2	SPF
Q - B	2x4	DRY	No.2	SPF
Q - M	2x4	DRY	No.2	SPF
M - J	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				
E - L	2x4	DRY	No.2	SPF
L - 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
B	TMVW+p	MT20	4.0	6.0	2.25	1.75
C	TTWW-l	MT20	4.0	10.0	1.75	8.50
D	TTWW-h	MT20	5.0	6.0	Edge	
E	TTWW-l	MT20	4.0	6.0	1.75	4.50
F	TMW+w	MT20	2.0	4.0		
G	TS-t	MT20	3.0	8.0		
H	TMWW-t	MT20	4.0	6.0		
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	BMWWW-t	MT20	5.0	6.0		
M	BS-t	MT20	3.0	8.0		
N	BMWW-t	MT20	4.0	6.0	1.75	3.00
O	BMWW-t	MT20	4.0	6.0		
P	BMWW-t	MT20	4.0	6.0		
Q	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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
J	1506	0	1506	0	0	1-10	1-10
Q	1615	0	1615	0	0	5-8	1-12

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
J	1074	655 / 0	0 / 0	0 / 0	0 / 0	418 / 0	0 / 0
Q	1149	714 / 0	0 / 0	0 / 0	0 / 0	435 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.02 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 I-J, F-L, 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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 42	-78.0	-78.0	0.11 (1)		10.00
B- C	-1225 / 0	-78.0	-78.0	0.14 (1)		5.64
C- D	-1874 / 0	-78.0	-78.0	0.71 (1)		4.02
D- E	-1923 / 0	-78.0	-78.0	0.20 (1)		4.69
E- F	-1284 / 0	-78.0	-78.0	0.46 (1)		5.10
F- G	-1284 / 0	-78.0	-78.0	0.47 (1)		5.08
G- H	-1284 / 0	-78.0	-78.0	0.47 (1)		5.08
H- I	-878 / 0	-78.0	-78.0	0.45 (1)		5.89
J- I	-1459 / 0	0.0	0.0	0.59 (1)		5.42
Q- B	-1607 / 0	0.0	0.0	0.19 (1)		6.52
Q- P	0 / 0	-18.5	-18.5	0.13 (4)		10.00
P- O	0 / 785	-18.5	-18.5	0.21 (1)		10.00
O- N	0 / 1890	-18.5	-18.5	0.34 (1)		10.00
N- M	0 / 1264	-18.5	-18.5	0.28 (1)		10.00
M- L	0 / 1264	-18.5	-18.5	0.28 (1)		10.00
L- K	0 / 878	-18.5	-18.5	0.26 (4)		10.00
K- J	0 / 0	-18.5	-18.5	0.17 (4)		10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
P- C	-334 / 0	0.16 (1)
C- O	0 / 1413	0.32 (1)
O- D	-821 / 0	0.39 (1)
D- N	-1200 / 0	0.81 (1)
N- E	0 / 1102	0.25 (1)
E- L	0 / 36	0.01 (1)
L- F	-516 / 0	0.29 (1)
L- H	0 / 725	0.12 (1)
K- H	-1133 / 0	0.65 (1)
K- I	0 / 1537	0.25 (1)
B- P	0 / 909	0.20 (1)

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

CSI: TC=0.71/1.00 (C-D:1) , BC=0.34/1.00 (N-O:1) , WB=0.81/1.00 (D-N:1) , SSI=0.23/1.00 (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

AUTOSOLVE RIGHT HEEL ONLY

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

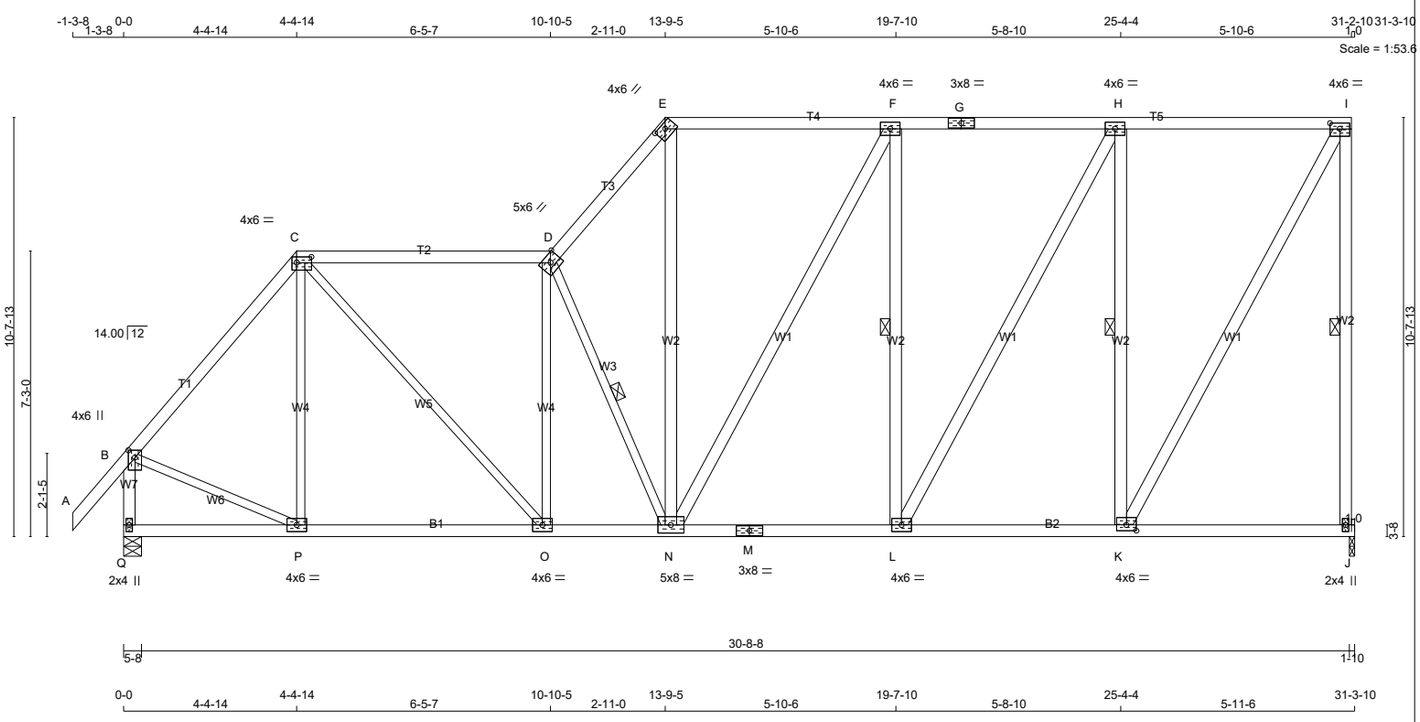
JSI GRIP= 0.86 (E) (INPUT = 0.90)
JSI METAL= 0.59 (E) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H87		1	TRUSS DESC. JT 45147	E24033376

Alpha Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:48 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-6MDV0kOGgh589A0WtsCbyU1E1WRyO4Un w03aBzqZyT



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
E - G	2x4	DRY	No.2	SPF
G - I	2x4	DRY	No.2	SPF
J - I	2x4	DRY	No.2	SPF
Q - B	2x4	DRY	No.2	SPF
Q - M	2x4	DRY	No.2	SPF
M - J	2x4	DRY	No.2	SPF
ALL WEBS	2x4	DRY	No.2	SPF
EXCEPT				
P - C	2x3	DRY	No.2	SPF
C - O	2x3	DRY	No.2	SPF
O - D	2x3	DRY	No.2	SPF
D - N	2x3	DRY	No.2	SPF
B - P	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-l	MT20	4.0	6.0	1.75	4.50
D	TTWW-h	MT20	5.0	6.0	Edge	
E	TTW-h	MT20	4.0	6.0	1.50	3.00
F	TMWW-t	MT20	4.0	6.0		
G	TS-t	MT20	3.0	8.0		
H	TMWW-t	MT20	4.0	6.0		
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, O, P						
L	BMWW-t	MT20	4.0	6.0		
M	BS-t	MT20	3.0	8.0		
N	BMWWW-t	MT20	5.0	8.0		
Q	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

LICENSED PROFESSIONAL ENGINEER
Y. WIDYA
100225448
02/28/2024
PROVINCE OF ONTARIO

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
J	1506	0	1506	0	0	1-10	1-10
Q	1615	0	1615	0	0	5-8	1-12

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
J	1074	655 / 0	0 / 0	0 / 0	0 / 0	418 / 0	0 / 0
Q	1149	714 / 0	0 / 0	0 / 0	0 / 0	435 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.39 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 I-J, D-N, F-L, 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

MEMB. FR-TO	MAX. FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 42	-78.0	-78.0	0.11 (1)		10.00
B- C	-1291 / 0	-78.0	-78.0	0.33 (1)		5.32
C- D	-1534 / 0	-78.0	-78.0	0.67 (1)		4.39
D- E	-1708 / 0	-78.0	-78.0	0.16 (1)		4.95
E- F	-1125 / 0	-78.0	-78.0	0.39 (1)		5.46
F- G	-1088 / 0	-78.0	-78.0	0.40 (1)		5.52
G- H	-1088 / 0	-78.0	-78.0	0.40 (1)		5.52
H- I	-723 / 0	-78.0	-78.0	0.38 (1)		6.25
J- I	-1462 / 0	0.0	0.0	0.83 (1)		5.41
Q- B	-1588 / 0	0.0	0.0	0.19 (1)		6.55
Q- P	0 / 0	-18.5	-18.5	0.14 (4)		10.00
P- O	0 / 834	-18.5	-18.5	0.22 (4)		10.00
O- N	0 / 1545	-18.5	-18.5	0.29 (1)		10.00
N- M	0 / 1088	-18.5	-18.5	0.24 (1)		10.00
M- L	0 / 1088	-18.5	-18.5	0.24 (1)		10.00
L- K	0 / 723	-18.5	-18.5	0.22 (4)		10.00
K- J	0 / 0	-18.5	-18.5	0.15 (4)		10.00

WEBS

MEMB. FR-TO	MAX. FORCE (LBS)	MAX CSI (LC)
P- C	-203 / 3	0.19 (1)
C- O	0 / 1036	0.23 (1)
O- D	-684 / 0	0.63 (1)
D- N	-1070 / 0	0.41 (1)
N- E	0 / 991	0.16 (1)
N- F	0 / 78	0.01 (1)
L- F	-555 / 0	0.32 (1)
L- H	0 / 755	0.12 (1)
K- H	-1157 / 0	0.66 (1)
K- I	0 / 1468	0.24 (1)
B- P	0 / 897	0.20 (1)

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

CSI: TC=0.83/1.00 (I-J:1) , BC=0.29/1.00 (N-O:1) , WB=0.66/1.00 (H-K:1) , SSI=0.21/1.00 (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

AUTOSOLVE RIGHT HEEL ONLY

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

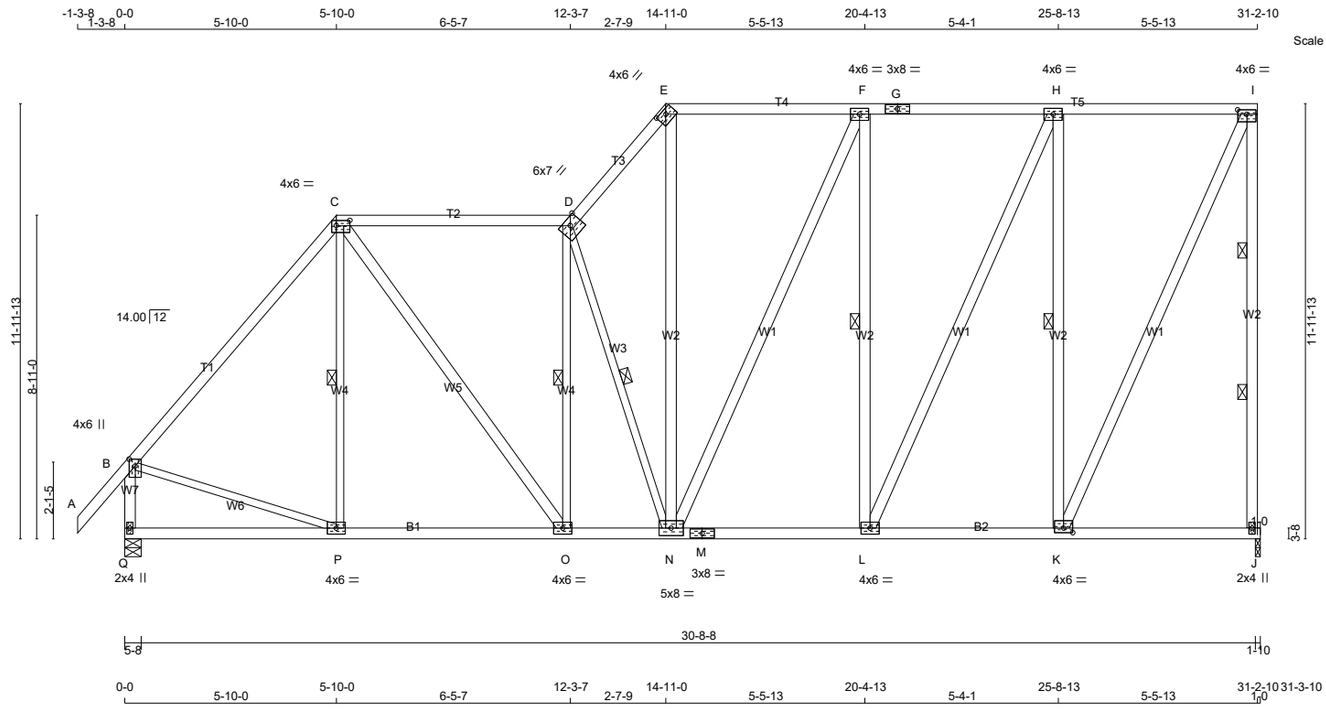
JSI GRIP= 0.90 (B) (INPUT = 0.90)
JSI METAL= 0.50 (B) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H88		1	TRUSS DESC. JT 45147	E24033377

Alpha Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:48 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-6MDV0kOGgh589A0WtsCbyU1HzWRNO0Ln w03aBzqZyT



TOTAL WEIGHT = 213 lb

[M]

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
E - G	2x4	DRY	No.2	SPF
G - I	2x4	DRY	No.2	SPF
J - I	2x4	DRY	No.2	SPF
Q - B	2x4	DRY	No.2	SPF
Q - M	2x4	DRY	No.2	SPF
M - J	2x4	DRY	No.2	SPF
ALL WEBS	2x4	DRY	No.2	SPF
EXCEPT				
P - C	2x3	DRY	No.2	SPF
O - D	2x3	DRY	No.2	SPF
D - N	2x3	DRY	No.2	SPF
B - P	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-l	MT20	4.0	6.0	1.75	4.50
D	TTWW-h	MT20	6.0	7.0	Edge	
E	TTW-h	MT20	4.0	6.0	1.50	3.00
F	TMWW-t	MT20	4.0	6.0		
G	TS-t	MT20	3.0	8.0		
H	TMWW-t	MT20	4.0	6.0		
I	TMVW-t	MT20	4.0	6.0	1.50	3.00
J	BMV1+p	MT20	2.0	4.0		
K	BMWW-t	MT20	4.0	6.0	1.50	3.00
L, O, P						
L	BMWW-t	MT20	4.0	6.0		
M	BS-t	MT20	3.0	8.0		
N	BMWWW-t	MT20	5.0	8.0		
Q	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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
J	1506	0	1506	0	0	1-10	1-10
Q	1615	0	1615	0	0	5-8	1-12

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
J	1074	655 / 0	0 / 0	0 / 0	0 / 0	418 / 0	0 / 0
Q	1149	714 / 0	0 / 0	0 / 0	0 / 0	435 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.72 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 I-J.
1 LATERAL BRACE(S) AT 1/ 2 LENGTH OF C-P, D-O, D-N, F-L, 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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX UNBRAC LENGTH
A- B	0 / 42	-78.0	-78.0	0.11 (1)	10.00
B- C	-1300 / 0	-78.0	-78.0	0.64 (1)	4.96
C- D	-1303 / 0	-78.0	-78.0	0.65 (1)	4.72
D- E	-1531 / 0	-78.0	-78.0	0.12 (1)	5.21
E- F	-1007 / 0	-78.0	-78.0	0.33 (1)	5.79
F- G	-933 / 0	-78.0	-78.0	0.34 (1)	5.94
G- H	-933 / 0	-78.0	-78.0	0.34 (1)	5.94
H- I	-606 / 0	-78.0	-78.0	0.32 (1)	6.25
J- I	-1465 / 0	0.0	0.0	0.48 (1)	5.41
Q- B	-1573 / 0	0.0	0.0	0.19 (1)	6.58
Q- P	0 / 0	-18.5	-18.5	0.18 (4)	10.00
P- O	0 / 842	-18.5	-18.5	0.26 (4)	10.00
O- N	0 / 1310	-18.5	-18.5	0.24 (1)	10.00
N- M	0 / 933	-18.5	-18.5	0.20 (1)	10.00
M- L	0 / 933	-18.5	-18.5	0.20 (1)	10.00
L- K	0 / 606	-18.5	-18.5	0.19 (4)	10.00
K- J	0 / 0	-18.5	-18.5	0.13 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
P- C	-113 / 50	0.06 (1)
C- O	0 / 776	0.12 (1)
O- D	-547 / 0	0.28 (1)
D- N	-1018 / 0	0.57 (1)
N- E	0 / 879	0.14 (1)
B- P	0 / 879	0.20 (1)
N- F	0 / 180	0.03 (1)
L- F	-617 / 0	0.48 (1)
L- H	0 / 787	0.13 (1)
K- H	-1180 / 0	0.93 (1)
K- I	0 / 1427	0.23 (1)

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 ALL FLAT SECTIONS 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 (0.07")
ALLOWABLE DEFL.(TL)= L/360 (1.04")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.14")

CSI: TC=0.65/1.00 (C-D:1) , BC=0.26/1.00 (O-P:4) , WB=0.93/1.00 (H-K:1) , SSI=0.20/1.00 (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

AUTOSOLVE RIGHT HEEL ONLY

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

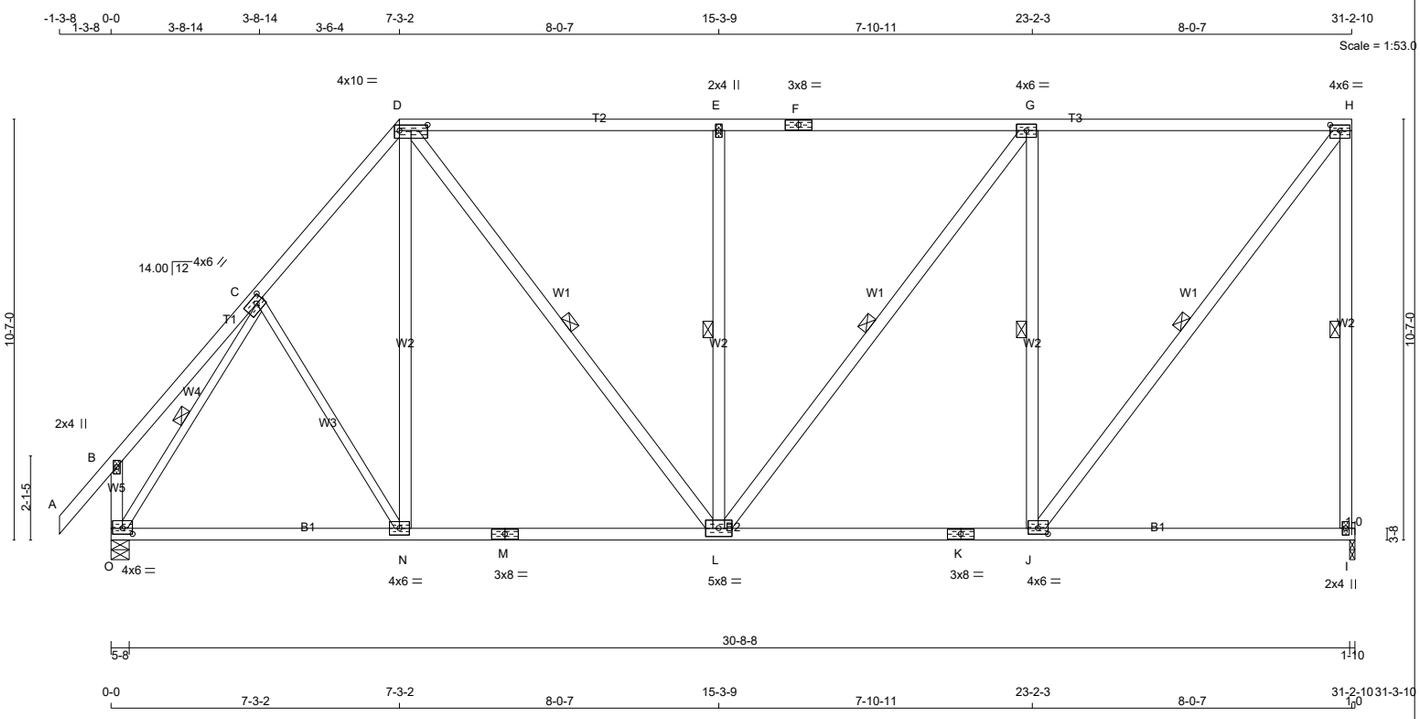
JSI GRIP= 0.89 (B) (INPUT = 0.90)
JSI METAL= 0.52 (B) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.		DRWG NO.
359637K	H89		1	TRUSS DESC.	JT 45147	E24033378

Alpha Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:49 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-aYntD3OvR?D?nKbiRZjqUiaQxwlk7Y2wCald6ezqZyS



TOTAL WEIGHT = 2 X 180 = 360 lb

[M]

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
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	2x4	DRY	No.2	SPF
EXCEPT				
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	6.0	2.00	2.25
D	TTWW-l	MT20	4.0	10.0	1.75	8.50
E	TMW+w	MT20	2.0	4.0		
F	TS-t	MT20	3.0	8.0		
G	TMWW-t	MT20	4.0	6.0		
H	TMVW-t	MT20	4.0	6.0	1.75	3.00
I	BMV1+p	MT20	2.0	4.0		
J	BMWW-t	MT20	4.0	6.0	1.75	3.00
K	BS-t	MT20	3.0	8.0		
L	BMWWW-t	MT20	5.0	8.0		
M	BS-t	MT20	3.0	8.0		
N	BMWW-t	MT20	4.0	6.0		
O	BMVW1-t	MT20	4.0	6.0	1.75	3.00

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

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
I	1506	0	1506	0	0	1-10	1-10
O	1615	0	1615	0	0	5-8	1-12

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
I	1074	655 / 0	0 / 0	0 / 0	0 / 0	418 / 0	0 / 0
O	1149	714 / 0	0 / 0	0 / 0	0 / 0	435 / 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, C-O, D-L, E-L, G-L, G-J, H-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 MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH	WEBS MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
A- B	0 / 42	-78.0	-78.0	0.11 (1)		10.00	C- N	0 / 48	0.02 (4)
B- C	0 / 24	-78.0	-78.0	0.16 (1)		10.00	N- D	0 / 139	0.03 (4)
C- D	-1304 / 0	-78.0	-78.0	0.20 (1)		5.46	O- C	-1571 / 0	0.51 (1)
D- E	-1196 / 0	-78.0	-78.0	0.82 (1)		4.57	D- L	0 / 594	0.10 (1)
E- F	-1197 / 0	-78.0	-78.0	0.82 (1)		4.55	L- E	-675 / 0	0.38 (1)
F- G	-1197 / 0	-78.0	-78.0	0.82 (1)		4.55	L- G	0 / 434	0.07 (1)
G- H	-933 / 0	-78.0	-78.0	0.78 (1)		5.05	J- G	-1027 / 0	0.58 (1)
I- H	-1447 / 0	0.0	0.0	0.81 (1)		5.43	J- H	0 / 1515	0.24 (1)
O- B	-217 / 0	0.0	0.0	0.03 (1)		7.81			
O- N	0 / 814	-18.5	-18.5	0.34 (4)		10.00			
N- M	0 / 830	-18.5	-18.5	0.35 (4)		10.00			
M- L	0 / 830	-18.5	-18.5	0.35 (4)		10.00			
L- K	0 / 933	-18.5	-18.5	0.38 (4)		10.00			
K- J	0 / 933	-18.5	-18.5	0.38 (4)		10.00			
J- I	0 / 0	-18.5	-18.5	0.29 (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 , 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 (0.05")
ALLOWABLE DEFL.(TL)= L/360 (1.04")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.13")

CSI: TC=0.82/1.00 (D-E:1) , BC=0.38/1.00 (J-L:4) , WB=0.58/1.00 (G-J:1) , SSI=0.29/1.00 (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

AUTOSOLVE RIGHT HEEL ONLY

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

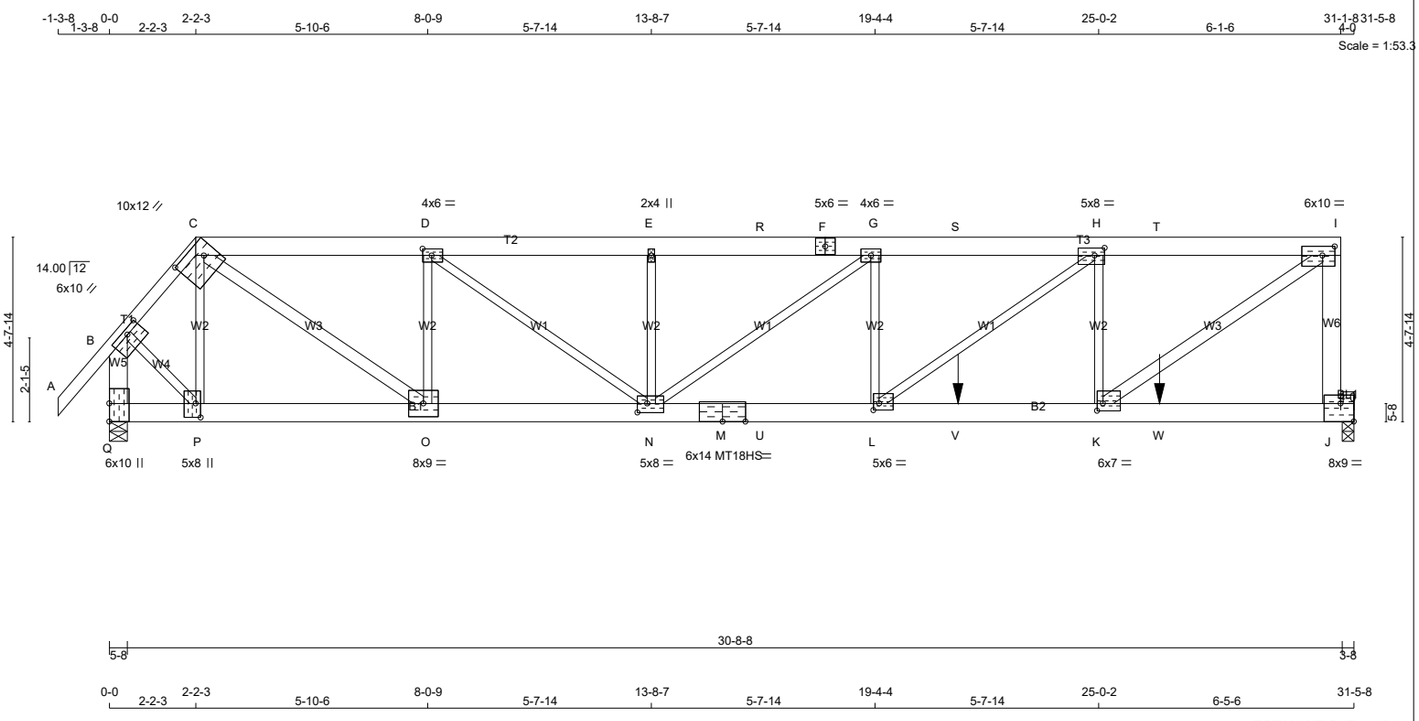
JSI GRIP= 0.88 (C) (INPUT = 0.90)
JSI METAL= 0.38 (D) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H90		1	TRUSS DESC. JT 45147	E24033379

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:50 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-2kKFRPPXCJLsOU9u?HE31v7cJKz8svf4REVAe4zqZyR



TOTAL WEIGHT = 174 lb

[M]

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	2x6	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	2x3	DRY	No.2	SPF
C - O	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
B	TMVW-t	MT20	6.0	10.0	1.50	4.50
C	TTWW-h	MT20	10.0	12.0	4.25	8.50
D	TMWW-t	MT20	4.0	6.0	2.00	2.75
E	TMW+w	MT20	2.0	4.0		
F	TS-t	MT20	5.0	6.0		
G	TMWW-t	MT20	4.0	6.0		
H	TMWW-t	MT20	5.0	8.0	2.25	3.00
I	TMVW-t	MT20	6.0	10.0	2.75	3.75
J	BMVK1-t	MT20	8.0	9.0	5.50	Edge
K	BMWW-t	MT20	6.0	7.0	2.25	1.75
L	BMWW-t	MT20	5.0	6.0	2.00	1.75
M	BS-t	MT18HS	6.0	14.0		
N	BMWWW-t	MT20	5.0	8.0	2.75	3.00
O	BMWW-t	MT20	8.0	9.0		
P	BMWW+t	MT20	5.0	8.0	4.25	1.50
Q	BMV1+t	MT20	6.0	10.0	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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
J	3670	0	3670	0	0	3-8	3-8
Q	4817	0	4817	0	0	5-8	5-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
		MAX./MIN. COMPONENT REACTIONS					
J	2616	1599 / 0	0 / 0	0 / 0	0 / 0	1017 / 0	0 / 0
Q	3432	2107 / 0	0 / 0	0 / 0	0 / 0	1325 / 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, Q (BASED ON SUPPORT DEPTH = 1-8)

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 2.58 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.

LOADING

TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 42	-78.0	-78.0	0.12 (1)	10.00	
B- C	-3723 / 0	-78.0	-78.0	0.26 (1)	3.43	
C- D	-6642 / 0	-78.0	-78.0	0.54 (1)	3.03	
D- E	-8008 / 0	-78.0	-78.0	0.62 (1)	2.71	
E- R	-8008 / 0	-78.0	-78.0	0.72 (1)	2.58	
R- F	-8008 / 0	-137.2	-137.2	0.72 (1)	2.58	
F- G	-8008 / 0	-137.2	-137.2	0.72 (1)	2.58	
G- S	-7017 / 0	-137.2	-137.2	0.65 (1)	2.82	
S- H	-7017 / 0	-78.0	-78.0	0.65 (1)	2.82	
H- T	-4476 / 0	-78.0	-78.0	0.49 (1)	3.65	
T- I	-4476 / 0	-130.8	-130.8	0.49 (1)	3.65	
J- I	-3544 / 0	0.0	0.0	0.68 (1)	5.62	
Q- B	-4775 / 0	0.0	0.0	0.39 (1)	4.88	
Q- P	0 / 0	-256.7	-256.7	0.29 (1)	10.00	
P- O	0 / 2412	-256.7	-256.7	0.54 (1)	10.00	
O- N	0 / 6642	-256.7	-256.7	0.88 (1)	10.00	
N- M	0 / 7017	-256.7	-256.7	0.78 (1)	10.00	
M- U	0 / 7017	-256.7	-256.7	0.78 (1)	10.00	
U- L	0 / 7017	-33.5	-33.5	0.78 (1)	10.00	
L- V	0 / 4476	-33.5	-33.5	0.55 (1)	10.00	
V- K	0 / 4476	-18.5	-18.5	0.55 (1)	10.00	
K- W	-193 / 0	-18.5	-18.5	0.18 (1)	6.25	
W- J	-193 / 0	-31.0	-31.0	0.18 (1)	6.25	

WEBS

MEMB. FR-TO	MAX. FORCE (LBS)	MAX CSI (LC)
B- C	-488 / 0	0.14 (1)
B- P	0 / 2993	0.74 (1)
C- O	0 / 5204	0.92 (1)
O- D	-1504 / 0	0.44 (1)
D- N	0 / 1701	0.42 (1)
N- E	-462 / 0	0.13 (1)
N- G	0 / 1233	0.31 (1)
L- G	-1385 / 0	0.40 (1)
L- H	0 / 3164	0.78 (1)
K- H	-2546 / 0	0.74 (1)
K- I	0 / 5665	1.00 (1)

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
V	21-5-7	-393	-393	---	FRONT	VERT	TOTAL	---	C1
W	26-6-9	-393	-393	---	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/C

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

GIRDER TYPE: CStdGirder
START DISTANCE = 0-0
START SPAN CARRIED = 11-10-8
END DISTANCE = 16-6-0
END SPAN CARRIED = 11-10-8
END WALL WIDTH = 0-0
APPLIED TO FRONT SIDE OF BOTTOM CHORD.
- ADDT'L LOADS BASED ON 55 % OF GSL.

GIRDER TYPE: CPrimeHip
LEFT SETBACK = 2-2-5
RIGHT SETBACK = 0-0
END SETBACK = 4-8-8
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.
LOADS APPLIED TO FIRST 4-10-15 OF SPAN MEASURED FROM THE RIGHT.

*** NON STANDARD GIRDER ***
ADDT'L 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 , 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 (0.28")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL) = L/ 660 (0.56")

CSI: TC=0.72/1.00 (E-G:1) , BC=0.88/1.00 (N-O:1) , WB=1.00/1.00 (I-K:1) , SSI=0.51/1.00 (N-O: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 .

NAIL VALUES

PLATE	GRIP(DRY) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873
MT18HS	586	403	2455	1382	3163	3004

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

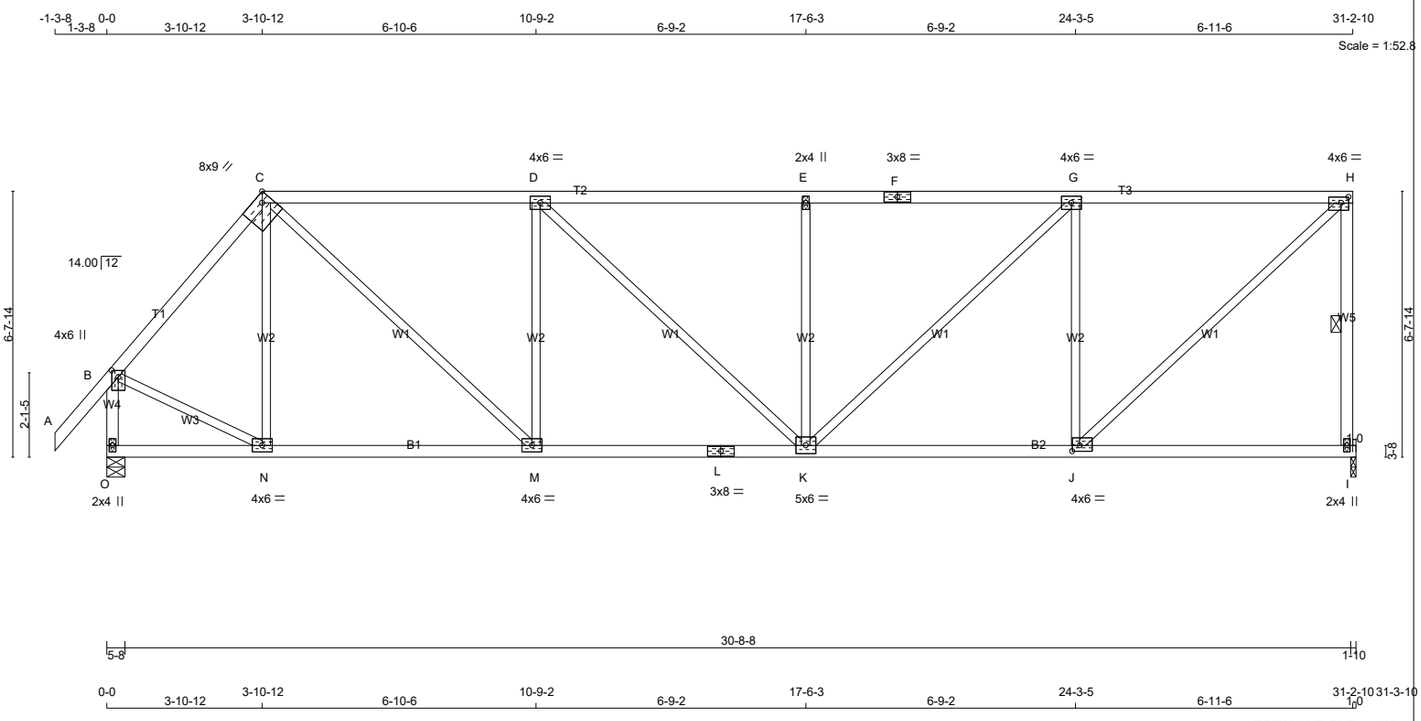
JSI GRIP= 0.89 (D) (INPUT = 0.90)
JSI METAL= 0.95 (K) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H91		1	TRUSS DESC. JT 45147	E24033380

Alpha Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:50 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-2kKFRPPXCJLsOU9u?HE31v7cUK55sym4REVAe4zqZyR



TOTAL WEIGHT = 137 lb

[M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - C	2x4	DRY	No.2	SPF
C - 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 - L	2x4	DRY	No.2	SPF
L - I	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	2.00	2.00
C	TTWW-h	MT20	8.0	9.0	Edge	2.75
D	TMWW-t	MT20	4.0	6.0		
E	TMW+w	MT20	2.0	4.0		
F	TS-t	MT20	3.0	8.0		
G	TMWW-t	MT20	4.0	6.0		
H	TMVW-t	MT20	4.0	6.0	1.75	2.25
I	BMV1+p	MT20	2.0	4.0		
J	BMWW-t	MT20	4.0	6.0	1.75	2.25
K	BMWWW-t	MT20	5.0	6.0		
L	BS-t	MT20	3.0	8.0		
M	BMWW-t	MT20	4.0	6.0		
N	BMWW-t	MT20	4.0	6.0		
O	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

LICENSED PROFESSIONAL ENGINEER
Y. WIDYA
100225448
02/28/2024
PROVINCE OF ONTARIO

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
I	1506	0	1506	0	0	1-10	1-10
O	1615	0	1615	0	0	5-8	1-12

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
I	1074	655 / 0	0 / 0	0 / 0	0 / 0	418 / 0	0 / 0
O	1149	714 / 0	0 / 0	0 / 0	0 / 0	435 / 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 = 4.08 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 H-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 MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 42	-78.0	-78.0	0.11 (1)	10.00	
B- C	-1276 / 0	-78.0	-78.0	0.25 (1)	5.43	
C- D	-1738 / 0	-78.0	-78.0	0.69 (1)	4.24	
D- E	-1865 / 0	-78.0	-78.0	0.70 (1)	4.10	
E- F	-1865 / 0	-78.0	-78.0	0.71 (1)	4.08	
F- G	-1865 / 0	-78.0	-78.0	0.71 (1)	4.08	
G- H	-1352 / 0	-78.0	-78.0	0.65 (1)	4.71	
I- H	-1454 / 0	0.0	0.0	0.30 (1)	5.43	
O- B	-1593 / 0	0.0	0.0	0.19 (1)	6.55	
O- N	0 / 0	-18.5	-18.5	0.13 (4)	10.00	
N- M	0 / 822	-18.5	-18.5	0.25 (4)	10.00	
M- L	0 / 1739	-18.5	-18.5	0.37 (1)	10.00	
L- K	0 / 1739	-18.5	-18.5	0.37 (1)	10.00	
K- J	0 / 1352	-18.5	-18.5	0.34 (4)	10.00	
J- I	0 / 0	-18.5	-18.5	0.21 (4)	10.00	

WEBS MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
N- C	-247 / 0	0.18 (1)
B- N	0 / 901	0.20 (1)
C- M	0 / 1247	0.28 (1)
M- D	-716 / 0	0.52 (1)
D- K	0 / 174	0.04 (1)
K- E	-484 / 0	0.35 (1)
K- G	0 / 705	0.16 (1)
J- G	-1095 / 0	0.80 (1)
J- H	0 / 1834	0.41 (1)

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 , 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 (0.09")
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=0.37/1.00 (K-M:1) , WB=0.80/1.00 (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

AUTOSOLVE RIGHT HEEL ONLY

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

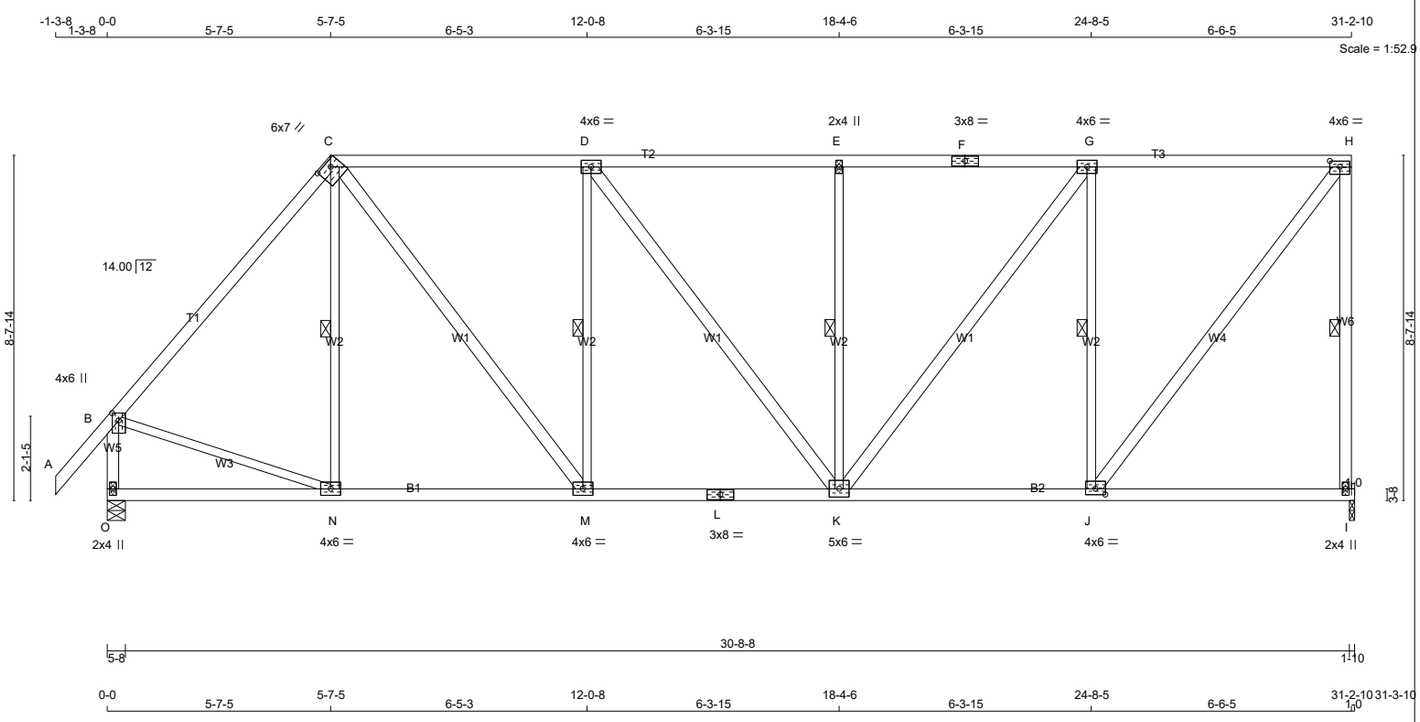
JSI GRIP= 0.89 (H) (INPUT = 0.90)
JSI METAL= 0.57 (L) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H92		1	TRUSS DESC. JT 45147	E24033381

Alpha Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:51 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-XxueelQ9zcTj0ek5Z IIZ7fqKkSQbT9DguEkAWzqZvQ



TOTAL WEIGHT = 166 lb

[M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - C	2x4	DRY	No.2	SPF
C - 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 - L	2x4	DRY	No.2	SPF
L - I	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				
C - M	2x4	DRY	No.2	SPF
D - K	2x4	DRY	No.2	SPF
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
B	TMVW+p	MT20	4.0	6.0	2.25	2.00
C	TTWW-h	MT20	6.0	7.0	1.75	4.00
D	TMWW-t	MT20	4.0	6.0		
E	TMW+w	MT20	2.0	4.0		
F	TS-t	MT20	3.0	8.0		
G	TMWW-t	MT20	4.0	6.0		
H	TMVW-t	MT20	4.0	6.0	1.75	3.00
I	BMV1+p	MT20	2.0	4.0		
J	BMWW-t	MT20	4.0	6.0	1.75	3.00
K	BMWWW-t	MT20	5.0	6.0		
L	BS-t	MT20	3.0	8.0		
M	BMWW-t	MT20	4.0	6.0		
N	BMWW-t	MT20	4.0	6.0		
O	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 VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
I	1506	0	1506	0	0	1-10	1-10
O	1615	0	1615	0	0	5-8	1-12

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
I	1074	655 / 0	0 / 0	0 / 0	0 / 0	418 / 0	0 / 0
O	1149	714 / 0	0 / 0	0 / 0	0 / 0	435 / 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 = 4.79 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, C-N, D-M, E-K, 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)

CHORDS MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH	WEBS MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
A- B	0 / 42	-78.0	-78.0	0.11 (1)	10.00		N- C	-133 / 38	0.06 (1)
B- C	-1300 / 0	-78.0	-78.0	0.58 (1)	5.02		B- N	0 / 881	0.20 (1)
C- D	-1379 / 0	-78.0	-78.0	0.55 (1)	4.82		C- M	0 / 880	0.14 (1)
D- E	-1392 / 0	-78.0	-78.0	0.55 (1)	4.80		M- D	-578 / 0	0.28 (1)
E- F	-1392 / 0	-78.0	-78.0	0.56 (1)	4.79		D- K	0 / 22	0.00 (1)
F- G	-1392 / 0	-78.0	-78.0	0.56 (1)	4.79		K- E	-452 / 0	0.22 (1)
G- H	-980 / 0	-78.0	-78.0	0.53 (1)	5.51		K- G	0 / 683	0.11 (1)
I- H	-1458 / 0	0.0	0.0	0.50 (1)	5.42		J- G	-1120 / 0	0.54 (1)
O- B	-1574 / 0	0.0	0.0	0.19 (1)	6.58		J- H	0 / 1593	0.26 (1)
O- N	0 / 0	-18.5	-18.5	0.16 (4)	10.00				
N- M	0 / 841	-18.5	-18.5	0.24 (4)	10.00				
M- L	0 / 1379	-18.5	-18.5	0.30 (1)	10.00				
L- K	0 / 1379	-18.5	-18.5	0.30 (1)	10.00				
K- J	0 / 980	-18.5	-18.5	0.28 (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 , 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 (0.06")
ALLOWABLE DEFL.(TL)= L/360 (1.04")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.13")

CSI: TC=0.58/1.00 (B-C:1) , BC=0.30/1.00 (K-M:1) , WB=0.54/1.00 (G-J:1) , SSI=0.24/1.00 (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

AUTOSOLVE RIGHT HEEL ONLY

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

NAIL VALUES

PLATE	GRIP(DRY) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) 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= 0.52 (B) (INPUT = 1.00)

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

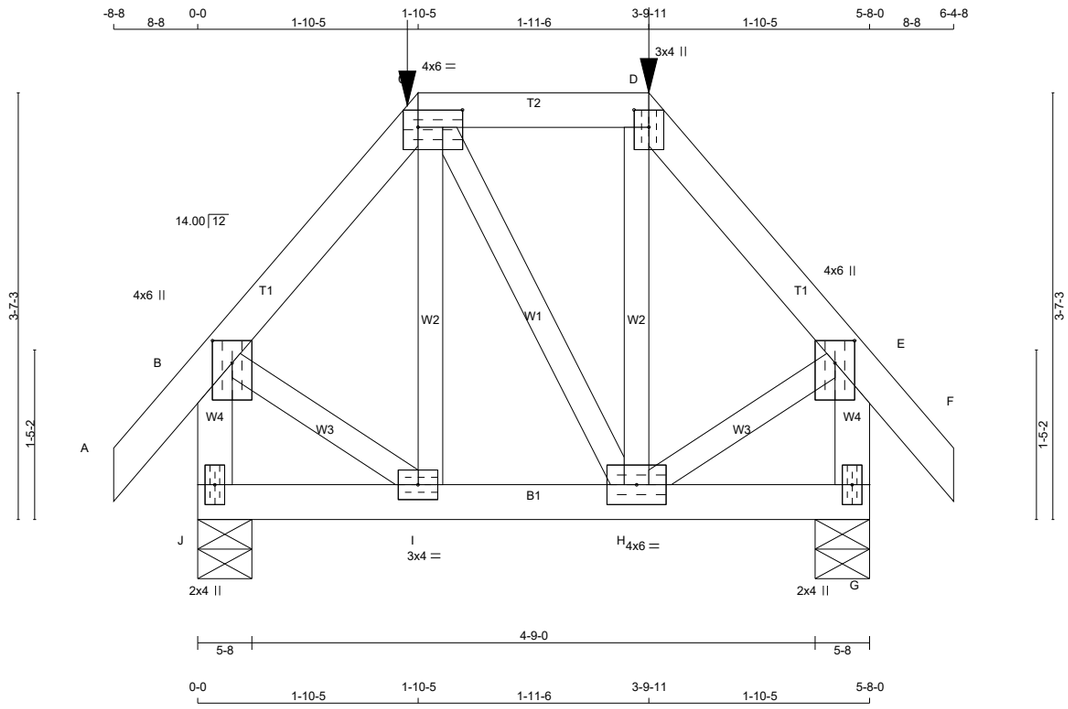
JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H93		1	TRUSS DESC. JT 45147	E24033382

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:51 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-XxueelQ9zcTj0ek5Z IlZ7fx2kWXbboDguEkAWzqZyQ

Scale = 1:17.8



TOTAL WEIGHT = 32 lb

[M]

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 - F	2x4	DRY	No.2	SPF
J - B	2x4	DRY	No.2	SPF
G - E	2x4	DRY	No.2	SPF
J - G	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	TTWW-I	MT20	4.0	6.0	1.75	4.50
D	TTW+p	MT20	3.0	4.0	1.75	1.50
E	TMVW+p	MT20	4.0	6.0	2.25	2.00
G	BMV1+p	MT20	2.0	4.0		
H	BMWWW-t	MT20	4.0	6.0		
I	BMWW-t	MT20	3.0	4.0		
J	BMV1+p	MT20	2.0	4.0		

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

LICENSED PROFESSIONAL ENGINEER
Y. WIDYA
100225448
02/28/2024
PROVINCE OF ONTARIO

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
J	455	0	455	0	0	5-8	1-8
G	455	0	455	0	0	5-8	1-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
J	323	203 / 0	0 / 0	0 / 0	0 / 0	120 / 0	0 / 0
G	323	203 / 0	0 / 0	0 / 0	0 / 0	120 / 0	0 / 0

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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 24	-78.0	-78.0	0.04 (1)	10.00
B- C	-265 / 0	-78.0	-78.0	0.05 (1)	6.25
C- D	-169 / 0	-114.5	-114.5	0.08 (1)	6.25
D- E	-265 / 0	-78.0	-78.0	0.05 (1)	6.25
E- F	0 / 24	-78.0	-78.0	0.04 (1)	10.00
J- B	-431 / 0	0.0	0.0	0.05 (1)	7.81
G- E	-431 / 0	0.0	0.0	0.05 (1)	7.81
J- I	0 / 0	-27.2	-27.2	0.02 (4)	10.00
I- H	0 / 170	-27.2	-27.2	0.04 (4)	10.00
H- G	0 / 0	-27.2	-27.2	0.02 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
I- C	-38 / 25	0.01 (4)
C- H	0 / 0	0.00 (1)
H- D	-39 / 26	0.01 (4)
B- I	0 / 194	0.05 (1)
H- E	0 / 194	0.05 (1)

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
C	1-10-5	-57	-57	---	FRONT	VERT	TOTAL	---	C1
D	3-9-11	-57	-57	---	FRONT	VERT	TOTAL	---	C1

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
SIDE SETBACK = 1-10-5
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 , 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 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.19")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.00")

CSI: TC=0.08/1.00 (C-D:1) , BC=0.04/1.00 (H-I:4) , WB=0.05/1.00 (B-I:1) , SSI=0.10/1.00 (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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.35 (D) (INPUT = 0.90)
JSI METAL= 0.12 (B) (INPUT = 1.00)

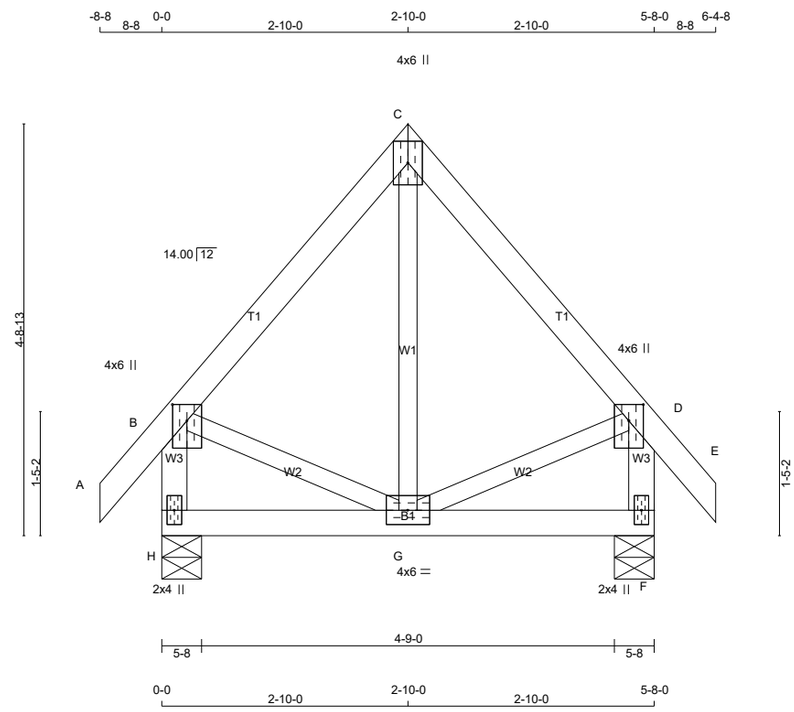
JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H94		1	TRUSS DESC. JT 45147	E24033383

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:52 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-?7S0s5RnkwbaeoJH6iHX6KC6p8smK2RMuY HjzzqZyP

Scale = 1:24.2



TOTAL WEIGHT = 30 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - C	2x4	DRY	No.2	SPF
C - E	2x4	DRY	No.2	SPF
H - B	2x4	DRY	No.2	SPF
F - D	2x4	DRY	No.2	SPF
H - F	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+p	MT20	4.0	6.0		
D	TMVW+p	MT20	4.0	6.0	2.25	2.00
F	BMV1+p	MT20	2.0	4.0		
G	BMWWW-t	MT20	4.0	6.0		
H	BMV1+p	MT20	2.0	4.0		

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

LICENSED PROFESSIONAL ENGINEER
Y. WIDYA
100225448
02/28/2024
PROVINCE OF ONTARIO

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
H	337	0	337	0	0	5-8	1-8
F	337	0	337	0	0	5-8	1-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
H	239	153 / 0	0 / 0	0 / 0	0 / 0	86 / 0	0 / 0
F	239	153 / 0	0 / 0	0 / 0	0 / 0	86 / 0	0 / 0

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX	MAX. UNBRAC LENGTH
A- B	0 / 24	-78.0	-78.0	0.04 (1)		10.00
B- C	-142 / 0	-78.0	-78.0	0.08 (1)		6.25
C- D	-142 / 0	-78.0	-78.0	0.08 (1)		6.25
D- E	0 / 24	-78.0	-78.0	0.04 (1)		10.00
H- B	-316 / 0	0.0	0.0	0.03 (1)		7.81
F- D	-316 / 0	0.0	0.0	0.03 (1)		7.81
H- G	0 / 0	-18.5	-18.5	0.04 (4)		10.00
G- F	0 / 0	-18.5	-18.5	0.04 (4)		10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
G- C	-6 / 43	0.01 (4)
B- G	0 / 98	0.02 (1)
G- D	0 / 98	0.02 (1)

[M][F]

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 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 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.19")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.00")

CSI: TC=0.08/1.00 (B-C:1) , BC=0.04/1.00 (F-G:4) , WB=0.02/1.00 (D-G:1) , SSI=0.06/1.00 (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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.18 (D) (INPUT = 0.90)
JSI METAL= 0.09 (D) (INPUT = 1.00)

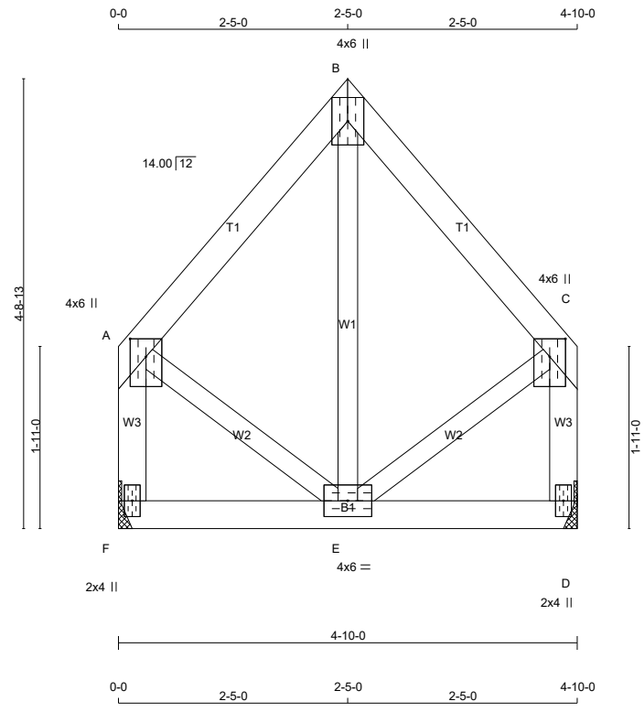
JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.		DRWG NO.
359637K	H94S		1	TRUSS DESC.	JT 45147	E24033384

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:52 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-?7S0s5RnkwbaeoJH6iHX6KC798sxK2WMuY HjzzqZyP

Scale = 1:22.2



TOTAL WEIGHT = 2 X 26 = 51 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
F - A	2x4	DRY	No.2	SPF
D - C	2x4	DRY	No.2	SPF
F - D	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	TTW+p	MT20	4.0	6.0		
C	TMVW+p	MT20	4.0	6.0	2.25	2.00
D	BMV1+p	MT20	2.0	4.0		
E	BMWWW-t	MT20	4.0	6.0		
F	BMV1+p	MT20	2.0	4.0		

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

LICENSED PROFESSIONAL ENGINEER
Y. WIDYA
100225448
02/28/2024
PROVINCE OF ONTARIO

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG	REQRD BRG
F	233	0	233	0	0	MECHANICAL	
D	233	0	233	0	0	MECHANICAL	

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
F	166	101 / 0	0 / 0	0 / 0	0 / 0	65 / 0	0 / 0
D	166	101 / 0	0 / 0	0 / 0	0 / 0	65 / 0	0 / 0

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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	-103 / 0	-78.0	-78.0	0.06 (1)	6.25
B- C	-103 / 0	-78.0	-78.0	0.06 (1)	6.25
F- A	-215 / 0	0.0	0.0	0.02 (1)	7.81
D- C	-215 / 0	0.0	0.0	0.02 (1)	7.81
F- E	0 / 0	-18.5	-18.5	0.03 (4)	10.00
E- D	0 / 0	-18.5	-18.5	0.03 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
E- B	-32 / 25	0.01 (1)
A- E	0 / 80	0.02 (1)
E- C	0 / 80	0.02 (1)

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 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 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.19")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.00")

CSI: TC=0.06/1.00 (A-B:1) , BC=0.03/1.00 (E-F:4) , WB=0.02/1.00 (C-E:1) , SSI=0.05/1.00 (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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.12 (C) (INPUT = 0.90)
JSI METAL= 0.06 (A) (INPUT = 1.00)

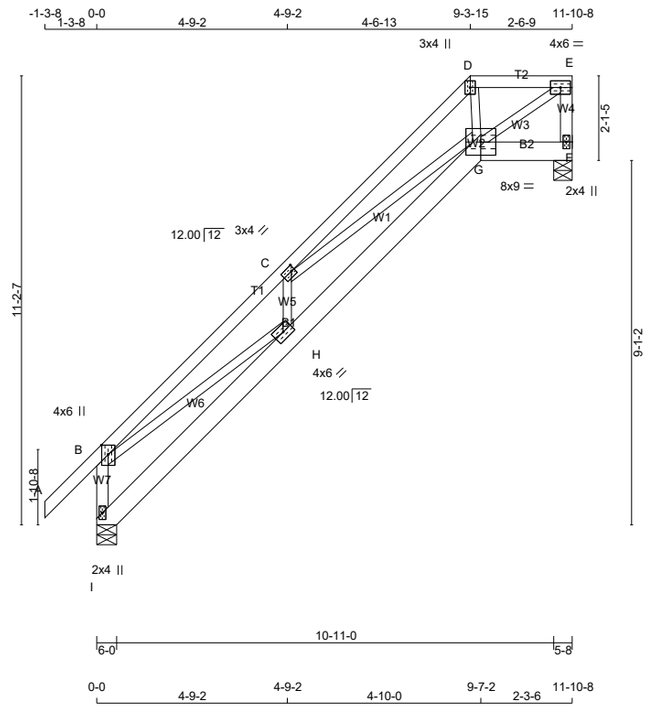
JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H95		1	TRUSS DESC. JT 45147	E24033385

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:52 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-?7S0s5RnkwbaeoJH6iHX6KC4P8p K 8MuY HjzzqZyP

Scale = 1:52.6



TOTAL WEIGHT = 66 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
I - B	2x4	DRY	No.2	SPF
A - D	2x4	DRY	No.2	SPF
D - E	2x4	DRY	No.2	SPF
F - E	2x4	DRY	No.2	SPF
I - G	2x6	DRY	No.2	SPF
G - F	2x6	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	TMVW+p	MT20	4.0	6.0	2.75	2.00
C	TMWW-t	MT20	3.0	4.0	1.50	1.00
D	TTW+p	MT20	3.0	4.0		
E	TMVW-t	MT20	4.0	6.0		
F	BMV1+p	MT20	2.0	4.0		
G	BBWWW-p	MT20	8.0	9.0		
H	BMWW-t	MT20	4.0	6.0		
I	BMV1+p	MT20	2.0	4.0		

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

LICENSED PROFESSIONAL ENGINEER
Y. WIDYA
100225448
02/28/2024
PROVINCE OF ONTARIO

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
I	682	0	682	0	0	6-0	1-8
F	573	0	573	0	0	5-8	1-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
I	484	308 / 0	0 / 0	0 / 0	0 / 0	176 / 0	0 / 0
F	408	249 / 0	0 / 0	0 / 0	0 / 0	159 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.31 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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
I- B	-623 / 0	0.0	0.0	0.07 (1)	7.81
A- B	0 / 38	-78.0	-78.0	0.11 (1)	10.00
B- C	-1380 / 0	-78.0	-78.0	0.23 (1)	5.31
C- D	-836 / 0	-78.0	-78.0	0.21 (1)	6.25
D- E	-622 / 0	-78.0	-78.0	0.07 (1)	6.25
F- E	-552 / 0	0.0	0.0	0.06 (1)	7.81
I- H	-9 / 2	-18.5	-18.5	0.07 (1)	10.00
H- G	0 / 1343	-18.5	-18.5	0.22 (1)	10.00
G- F	0 / 0	-18.5	-18.5	0.01 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
B- H	0 / 1174	0.26 (1)
H- C	-257 / 0	0.04 (1)
C- G	-443 / 0	0.30 (1)
D- G	0 / 327	0.07 (1)
G- E	0 / 774	0.17 (1)

[M][F]

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 , 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 (0.40")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.05")
ALLOWABLE DEFL.(TL)= L/360 (0.40")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.09")

CSI: TC=0.23/1.00 (B-C:1) , BC=0.22/1.00 (G-H:1) , WB=0.30/1.00 (C-G:1) , SSI=0.12/1.00 (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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

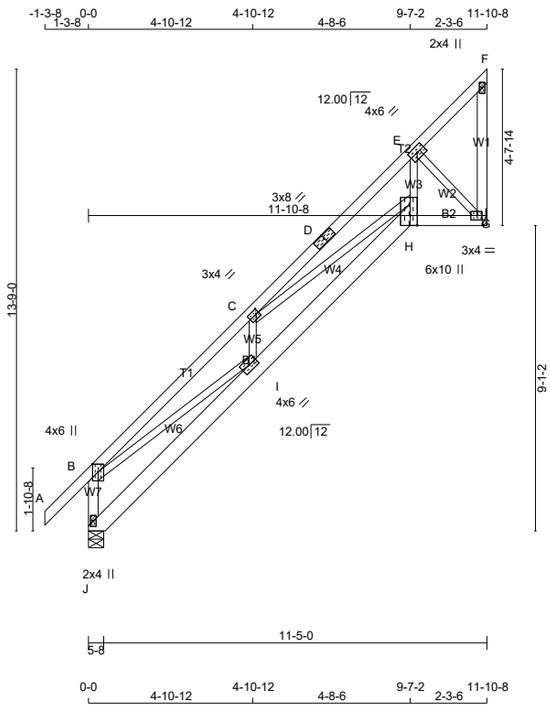
JSI GRIP= 0.67 (C) (INPUT = 0.90)
JSI METAL= 0.59 (B) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H96		1	TRUSS DESC. JT 45147	E24033386

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:53 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-TJ0O3RRPVEjRFyuTqPomfYlF X9F3RTW7CjqFPzqZyO



TOTAL WEIGHT = 8 X 69 = 556 lb

[M][F]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
J - B	2x4	DRY	No.2	SPF
A - D	2x4	DRY	No.2	SPF
D - F	2x4	DRY	No.2	SPF
G - F	2x4	DRY	No.2	SPF
J - H	2x6	DRY	No.2	SPF
H - G	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	TMVW+p	MT20	4.0	6.0	2.75	2.00
C	TMWW-t	MT20	3.0	4.0	1.50	1.00
D	TS-t	MT20	3.0	8.0		
E	TMWW-t	MT20	4.0	6.0		
F	TMV+p	MT20	2.0	4.0		
G	BMVW1-t	MT20	3.0	4.0	1.50	1.75
H	BBWW+p	MT20	6.0	10.0	Edge	2.50
I	BMWW-t	MT20	4.0	6.0		
J	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

LICENSED PROFESSIONAL ENGINEER
Y. WIDYA
100225448
02/28/2024
PROVINCE OF ONTARIO

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG	REQRD BRG
J	682	0	682	0	0	5-8	1-8
G	573	0	573	0	0	MECHANICAL	

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
J	484	308 / 0	0 / 0	0 / 0	0 / 0	176 / 0	0 / 0
G	408	249 / 0	0 / 0	0 / 0	0 / 0	159 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.29 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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX UNBRAC LENGTH
J- B	-622 / 0	0.0	0.0	0.07 (1)	7.81
A- B	0 / 38	-78.0	-78.0	0.11 (1)	10.00
B- C	-1384 / 0	-78.0	-78.0	0.24 (1)	5.29
C- D	-847 / 0	-78.0	-78.0	0.19 (1)	6.25
D- E	-847 / 0	-78.0	-78.0	0.19 (1)	6.25
E- F	-35 / 0	-78.0	-78.0	0.11 (1)	6.25
G- F	-35 / 0	0.0	0.0	0.01 (1)	7.81
J- I	-9 / 2	-18.5	-18.5	0.07 (1)	10.00
I- H	0 / 1342	-18.5	-18.5	0.22 (1)	10.00
H- G	0 / 551	-18.5	-18.5	0.11 (1)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
B- I	0 / 1181	0.27 (1)
I- C	-242 / 0	0.04 (1)
C- H	-418 / 0	0.29 (1)
H- E	0 / 818	0.18 (1)
E- G	-770 / 0	0.14 (1)

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 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 (0.40")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.05")
ALLOWABLE DEFL.(TL)= L/360 (0.40")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.09")

CSI: TC=0.24/1.00 (B-C:1) , BC=0.22/1.00 (H-I:1) , WB=0.29/1.00 (C-H: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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

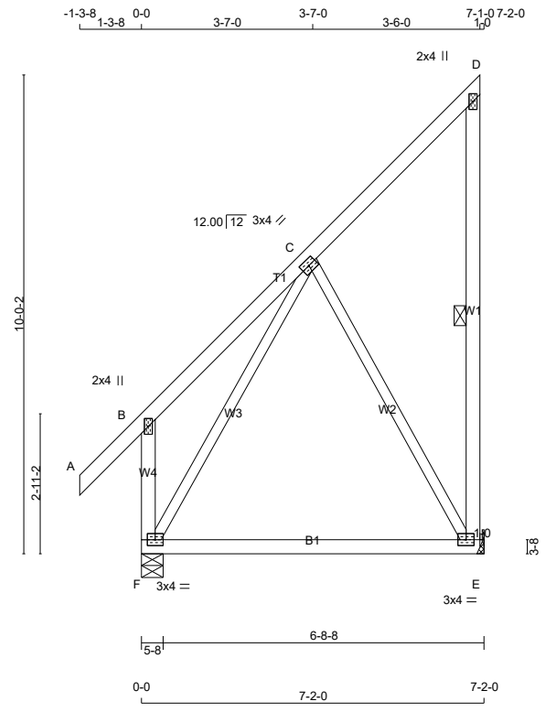
JSI GRIP= 0.83 (E) (INPUT = 0.90)
JSI METAL= 0.59 (B) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.		DRWG NO.
359637K	H97		1	TRUSS DESC.	JT 45147	E24033387

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:53 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-TJ0O3RRPVEjRFyuTqPomfYlGBX8H3TBW7CjqFPzqZyO



TOTAL WEIGHT = 6 X 46 = 278 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - 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 EXCEPT	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	3.0	4.0		
D	TMV+p	MT20	2.0	4.0		
E	BMVW1-t	MT20	3.0	4.0		
F	BMVW1-t	MT20	3.0	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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
E	342	0	342	0	0	MECHANICAL	
F	450	0	450	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

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	244	149 / 0	0 / 0	0 / 0	0 / 0	95 / 0	0 / 0
F	319	207 / 0	0 / 0	0 / 0	0 / 0	112 / 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.

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. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 38	-78.0	-78.0	0.11 (1)	10.00
B- C	0 / 24	-78.0	-78.0	0.17 (1)	10.00
C- D	-24 / 0	-78.0	-78.0	0.13 (1)	6.25
E- D	-106 / 0	0.0	0.0	0.05 (1)	6.25
F- B	-211 / 0	0.0	0.0	0.03 (1)	7.81
F- E	0 / 100	-18.5	-18.5	0.28 (4)	10.00

W E B S

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
C- E	-198 / 0	0.18 (1)
F- C	-200 / 0	0.18 (1)

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 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.(TL)= L/360 (0.24")
CALCULATED VERT. DEFL.(TL) = L/ 749 (0.11")

CSI: TC=0.17/1.00 (B-C:1) , BC=0.28/1.00 (E-F:4) , WB=0.18/1.00 (C-E:1) , SSI=0.10/1.00 (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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

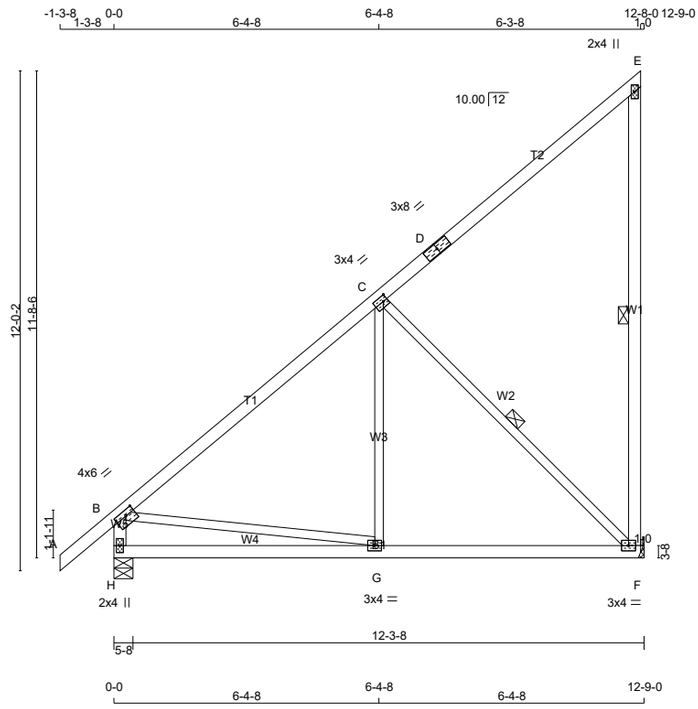
JSI GRIP= 0.31 (C) (INPUT = 0.90)
JSI METAL= 0.11 (B) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.		DRWG NO.
359637K	H98		1	TRUSS DESC.	JT 45147	E24033388

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:54 2024 Page 1
ID:hd511hZTz bdeQoS817GKByhVxV-xWamHnS1GXrIt5TfE6J?BlHNwxVyotufMsTOnrzqZyN

Scale = 1:50.7



TOTAL WEIGHT = 3 X 65 = 196 lb

[M][F]

LUMBER
N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - D	2x4	DRY	No.2	SPF
D - E	2x4	DRY	No.2	SPF
F - E	2x4	DRY	No.2	SPF
H - B	2x4	DRY	No.2	SPF
H - F	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-t	MT20	4.0	6.0	1.50	2.75
C	TMWW-t	MT20	3.0	4.0	1.50	1.25
D	TS-t	MT20	3.0	8.0		
E	TMV+p	MT20	2.0	4.0		
F	BMVW1-t	MT20	3.0	4.0		
G	BMWW-t	MT20	3.0	4.0		
H	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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG	REQRD BRG
F	611	0	611	0	0	MECHANICAL	
H	719	0	719	0	0	5-8	1-8

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
F	436	266 / 0	0 / 0	0 / 0	0 / 0	170 / 0	0 / 0
H	510	324 / 0	0 / 0	0 / 0	0 / 0	186 / 0	0 / 0

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

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 E-F, 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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX MAX. UNBRAC LENGTH
A- B	0 / 35	-78.0	-78.0	0.11 (1)	10.00
B- C	-474 / 0	-78.0	-78.0	0.42 (1)	6.25
C- D	-39 / 0	-78.0	-78.0	0.41 (1)	6.25
D- E	-39 / 0	-78.0	-78.0	0.41 (1)	6.25
F- E	-184 / 0	0.0	0.0	0.13 (1)	6.25
H- B	-674 / 0	0.0	0.0	0.07 (1)	7.81
H- G	0 / 0	-18.5	-18.5	0.21 (4)	10.00
G- F	0 / 394	-18.5	-18.5	0.25 (4)	10.00

W E B S

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
G- C	0 / 144	0.05 (4)
C- F	-549 / 0	0.28 (1)
B- G	0 / 397	0.09 (1)

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 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 (0.42")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.42")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.04")

CSI: TC=0.42/1.00 (B-C:1) , BC=0.25/1.00 (F-G:4) , WB=0.28/1.00 (C-F:1) , 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

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.67 (C) (INPUT = 0.90)
JSI METAL= 0.17 (B) (INPUT = 1.00)

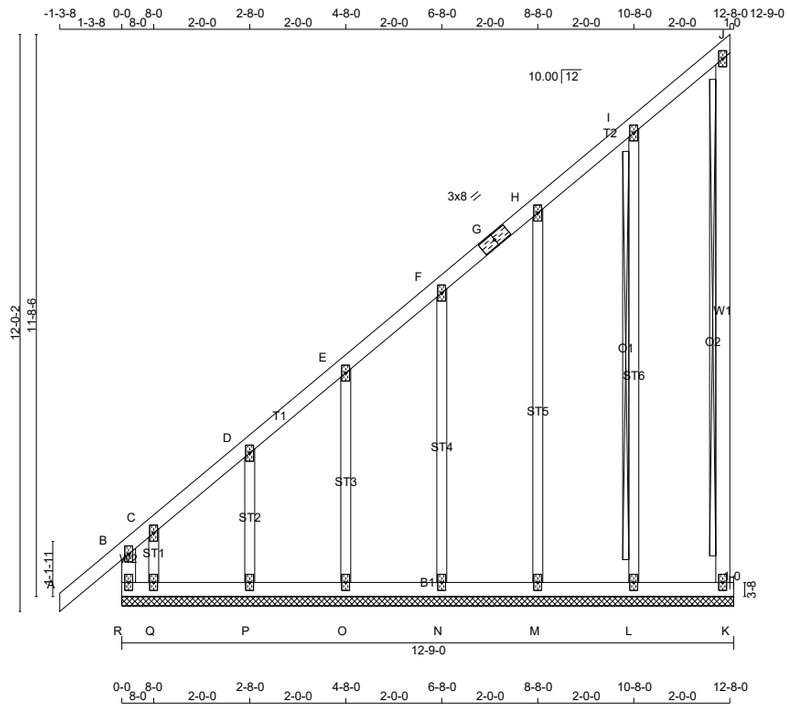
JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H98G		1	TRUSS DESC. JT 45147	E24033389

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:54 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-xWamHnS1GXrIt5TfE6J?BlHStxYKou fMsTOnrzqZyN

Scale = 1:43.9



TOTAL WEIGHT = 75 lb

[M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - G	2x4	DRY	No.2	SPF
G - J	2x4	DRY	No.2	SPF
K - J	2x4	DRY	No.2	SPF
R - B	2x4	DRY	No.2	SPF
R - K	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
ALL GABLE WEBS	2x3	DRY	No.2	SPF

DRY: SEASONED LUMBER.

GABLE STUDS SPACED AT 2-0-0 OC.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	2.0	4.0		
C, D, E, F, H, I						
C	TMW+w	MT20	2.0	4.0		
G	TS-t	MT20	3.0	8.0		
J	TMV+p	MT20	2.0	4.0		
K	BMV1+p	MT20	2.0	4.0		
L, M, N, O, P, Q						
L	BMW1+w	MT20	2.0	4.0		
R	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

THIS TRUSS DESIGNED FOR CONTINUOUS BEARINGS.

THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE.

PROVIDE ANCHORAGE AT BEARING JOINT Q FOR 150 LBS FACTORED UPLIFT
BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S)

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.

2x4 DRY SPF No.2 T-BRACE AT J-K, I-L

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 MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH	WEBS MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
A- B	0 / 35	-78.0	-78.0	0.11 (1)		10.00	L- I	-169 / 0	0.13 (1)
B- C	-75 / 0	-78.0	-78.0	0.09 (1)		6.25	M- H	-153 / 0	0.21 (1)
C- D	-15 / 0	-78.0	-78.0	0.04 (1)		6.25	N- F	-154 / 0	0.11 (1)
D- E	-14 / 0	-78.0	-78.0	0.04 (1)		6.25	O- E	-152 / 0	0.06 (1)
E- F	-9 / 0	-78.0	-78.0	0.04 (1)		10.00	P- D	-159 / 0	0.03 (1)
F- G	-6 / 0	-78.0	-78.0	0.04 (1)		10.00	Q- C	-8 / 0	0.00 (1)
G- H	-6 / 0	-78.0	-78.0	0.04 (1)		10.00			
H- I	-3 / 0	-78.0	-78.0	0.04 (1)		10.00			
I- J	-8 / 0	-78.0	-78.0	0.04 (1)		10.00			
K- J	-71 / 0	0.0	0.0	0.02 (1)		7.81			
R- B	-229 / 0	0.0	0.0	0.03 (1)		7.81			
R- Q	0 / 16	-18.5	-18.5	0.03 (1)		10.00			
Q- P	0 / 15	-18.5	-18.5	0.02 (4)		10.00			
P- O	0 / 10	-18.5	-18.5	0.02 (4)		10.00			
O- N	0 / 7	-18.5	-18.5	0.02 (4)		10.00			
N- M	0 / 5	-18.5	-18.5	0.02 (4)		10.00			
M- L	0 / 3	-18.5	-18.5	0.02 (4)		10.00			
L- K	0 / 1	-18.5	-18.5	0.02 (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 BCBC 2018 , NBC-2019AE
- 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

CSI: TC=0.11/1.00 (A-B:1) , BC=0.03/1.00 (Q-R:1) , WB=0.21/1.00 (H-M:1) , SSI=0.06/1.00 (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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

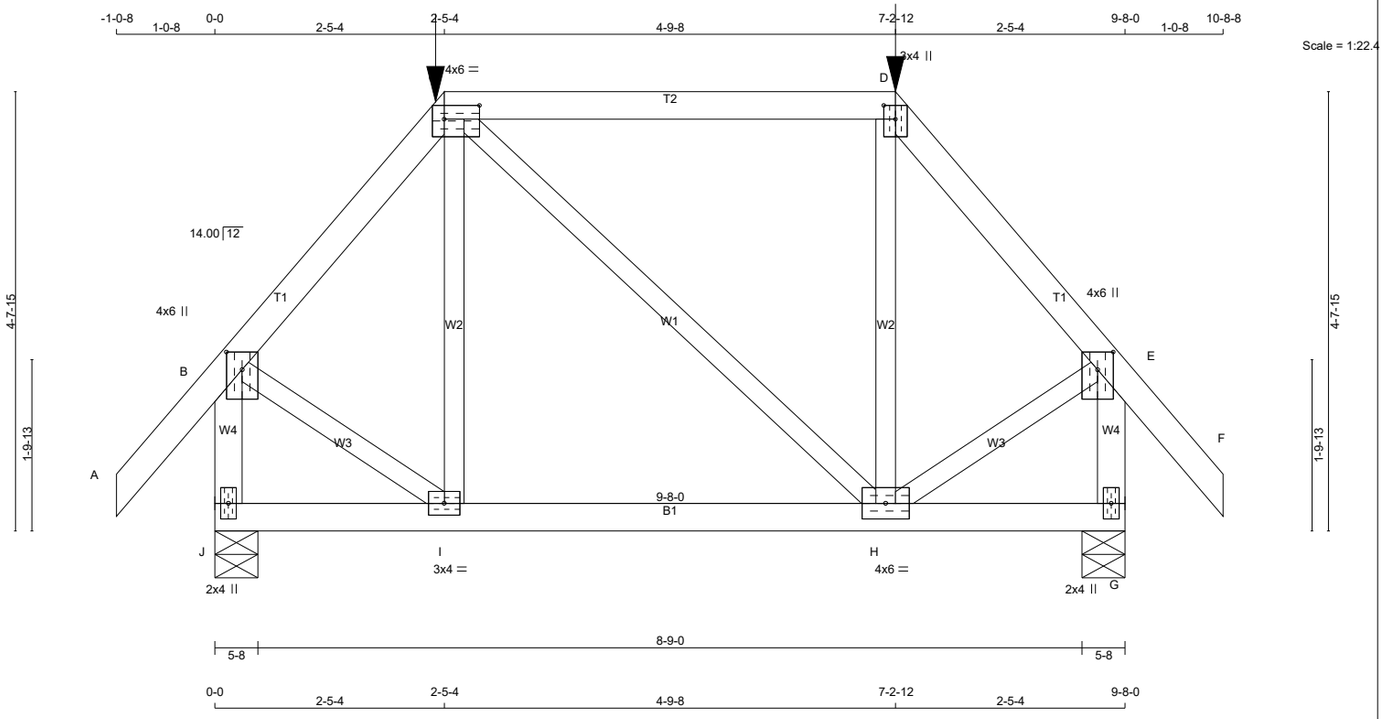
JSI GRIP= 0.17 (B) (INPUT = 0.90)
JSI METAL= 0.13 (B) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.		DRWG NO.
359637K	H101		1	TRUSS DESC.	JT 45147	E24033390

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:55 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-Pi88U7Tf1rz9VF2soqqEkzqXULsyXN7pbWCxJHzqZyM



TOTAL WEIGHT = 48 lb

[M]

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 - F	2x4	DRY	No.2	SPF
J - B	2x4	DRY	No.2	SPF
G - E	2x4	DRY	No.2	SPF
J - G	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	TTWW-l	MT20	4.0	6.0	1.75	4.50
D	TTW+p	MT20	3.0	4.0	1.75	1.50
E	TMVW+p	MT20	4.0	6.0	2.25	2.00
G	BMV1+p	MT20	2.0	4.0		
H	BMWWW-t	MT20	4.0	6.0		
I	BMWW-t	MT20	3.0	4.0		
J	BMV1+p	MT20	2.0	4.0		

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

LICENSED PROFESSIONAL ENGINEER
Y. WIDYA
100225448
02/28/2024
PROVINCE OF ONTARIO

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM GROSS REACTION DOWN	HORZ	FACTORED UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
J	761	0	761	0	0	5-8	1-8
G	761	0	761	0	0	5-8	1-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
J	541	339 / 0	0 / 0	0 / 0	0 / 0	202 / 0	0 / 0
G	541	339 / 0	0 / 0	0 / 0	0 / 0	202 / 0	0 / 0

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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 34	-78.0	-78.0	0.08 (1)	10.00
B- C	-491 / 0	-78.0	-78.0	0.09 (1)	6.25
C- D	-315 / 0	-114.5	-114.5	0.50 (1)	6.25
D- E	-491 / 0	-78.0	-78.0	0.09 (1)	6.25
E- F	0 / 34	-78.0	-78.0	0.08 (1)	10.00
J- B	-741 / 0	0.0	0.0	0.09 (1)	7.81
G- E	-741 / 0	0.0	0.0	0.09 (1)	7.81
J- I	0 / 0	-27.2	-27.2	0.10 (4)	10.00
I- H	0 / 316	-27.2	-27.2	0.14 (4)	10.00
H- G	0 / 0	-27.2	-27.2	0.10 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
I- C	-69 / 53	0.02 (1)
C- H	0 / 0	0.00 (1)
H- D	-70 / 54	0.02 (1)
B- I	0 / 365	0.09 (1)
H- E	0 / 365	0.09 (1)

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
C	2-5-4	-75	-75	---	FRONT	VERT	TOTAL	---	C1
D	7-2-12	-75	-75	---	FRONT	VERT	TOTAL	---	C1

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
SIDE SETBACK = 2-5-4
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 , 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 (0.32")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.32")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02")

CSI: TC=0.50/1.00 (C-D:1) , BC=0.14/1.00 (H-I:4) , WB=0.09/1.00 (B-I: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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

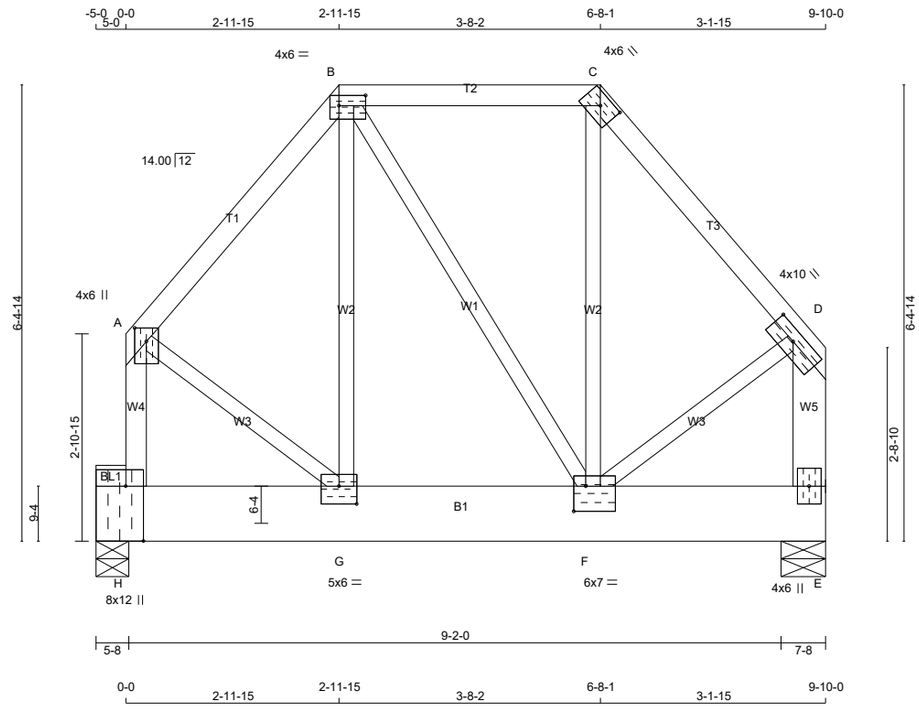
JSI GRIP= 0.81 (D) (INPUT = 0.90)
JSI METAL= 0.21 (B) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H102		2	TRUSS DESC. JT 45147	E24033391

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:55 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-Pi88U7Tf1rz9VF2soqqEkzqbzLrxXLnpbWCxJHzqZyM



TOTAL WEIGHT = 2 X 72 = 145 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	2x6	DRY	No.2	SPF
H - E	2x10	DRY	No.2	SPF

BEARING BLOCKS

BL1	2x4	DRY	No.2	SPF

ALL WEBS EXCEPT	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			
A- B	1	12	TOP
B- C	1	12	TOP
C- D	1	12	TOP
H- A	1	12	TOP
E- D	2	12	TOP
BOTTOM CHORDS : (0.122"X3") SPIRAL NAILS			
H- E	3	10	SIDE(376.8)
WEBS : (0.122"X3") SPIRAL NAILS			
2x3	1	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+p	MT20	4.0	6.0	2.25	2.00
B	TTWW-l	MT20	4.0	6.0	1.75	4.50
C	TTW-h	MT20	4.0	6.0	1.75	3.00
D	TMVW-t	MT20	4.0	10.0	1.75	4.50
E	BMV1+p	MT20	4.0	6.0		
F	BMWWW-t	MT20	6.0	7.0	4.25	2.00
G	BMWW-t	MT20	5.0	6.0	3.00	3.00
H	BMVK1+p	MT20	8.0	12.0	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
02/28/2024
PROVINCE OF ONTARIO

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
E	4180	0	4180	0	0	7-8	2-4
H	4180	0	4180	0	0	5-8	4-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	SNOW	MAX./MIN. COMPONENT REACTIONS LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	2980	1819 / 0	0 / 0	0 / 0	0 / 0	1161 / 0	0 / 0
H	2980	1819 / 0	0 / 0	0 / 0	0 / 0	1161 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.61 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 MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX UNBRAC LENGTH	WEBS MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
A- B	-2349 / 0	-78.0	-78.0	0.09 (1)	5.78	G- B	0 / 1338	0.17 (1)
B- C	-1662 / 0	-78.0	-78.0	0.11 (1)	6.25	B- F	0 / 228	0.03 (1)
C- D	-2523 / 0	-78.0	-78.0	0.10 (1)	5.61	F- C	0 / 1658	0.21 (1)
H- A	-3037 / 0	0.0	0.0	0.21 (1)	6.62	A- G	0 / 1892	0.23 (1)
E- D	-3101 / 0	0.0	0.0	0.14 (1)	7.81	F- D	0 / 1942	0.24 (1)
H- G	0 / 0	-772.2	-772.2	0.14 (1)	10.00			
G- F	0 / 1543	-772.2	-772.2	0.20 (1)	10.00			
F- E	0 / 0	-772.2	-772.2	0.12 (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/C

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

GIRDER TYPE: CStdGirder
START DISTANCE = 5-0
START SPAN CARRIED = 33-3-0
END DISTANCE = 9-10-0
END SPAN CARRIED = 33-3-0
END WALL WIDTH = 0-0
APPLIED TO FRONT SIDE OF BOTTOM CHORD.
- 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 , 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 (0.33")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.33")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.03")

CSI: TC=0.21/1.00 (A-H:1) , BC=0.20/1.00 (F-G:1) , WB=0.24/1.00 (D-F:1) , SSI=0.37/1.00 (F-G: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 LEFT HEEL ONLY

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

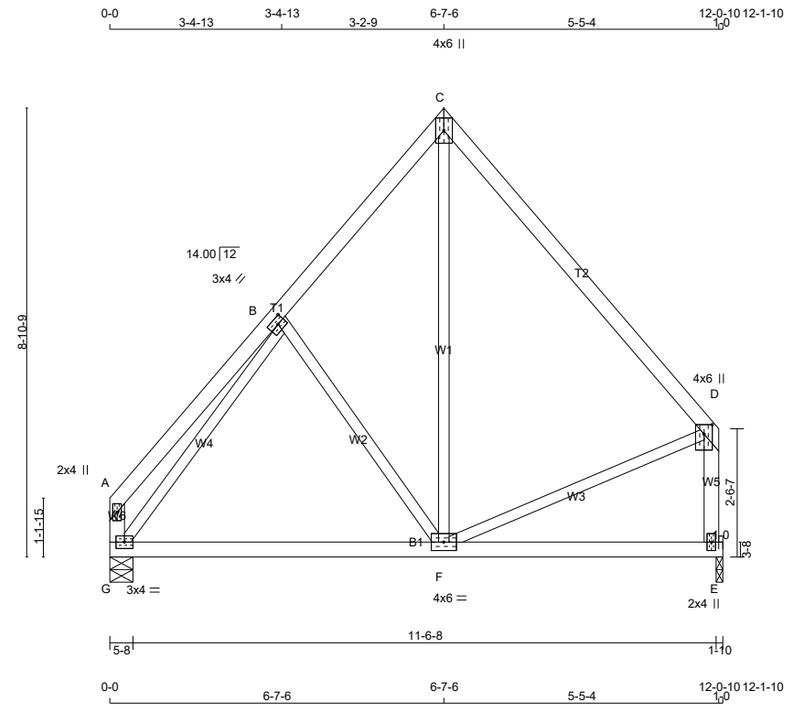
JSI GRIP= 0.88 (F) (INPUT = 0.90)
JSI METAL= 0.41 (A) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.		DRWG NO.
359637K	H103		1	TRUSS DESC.	JT 45147	E24033392

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:55 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-Pi88U7Tf1rz9VF2soqqEkzqafLraXK7pbWCxJHzqZyM



TOTAL WEIGHT = 4 X 59 = 235 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - C	2x4	DRY	No.2	SPF
C - D	2x4	DRY	No.2	SPF
G - A	2x4	DRY	No.2	SPF
E - D	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
A	TMV+p	MT20	2.0	4.0		
B	TMWW-t	MT20	3.0	4.0	1.50	1.75
C	TTW+p	MT20	4.0	6.0		
D	TMVW+p	MT20	4.0	6.0	2.25	2.00
E	BMV1+p	MT20	2.0	4.0		
F	BMWWW-t	MT20	4.0	6.0		
G	BMVW1-t	MT20	3.0	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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
E	581	0	581	0	0	1-10	1-8
G	581	0	581	0	0	5-8	1-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	414	253 / 0	0 / 0	0 / 0	0 / 0	161 / 0	0 / 0
G	414	253 / 0	0 / 0	0 / 0	0 / 0	161 / 0	0 / 0

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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 23	-78.0	-78.0	0.14 (1)	10.00
B- C	-350 / 0	-78.0	-78.0	0.11 (1)	6.25
C- D	-328 / 0	-78.0	-78.0	0.30 (1)	6.25
G- A	-96 / 0	0.0	0.0	0.01 (1)	7.81
E- D	-546 / 0	0.0	0.0	0.07 (1)	7.81
G- F	0 / 309	-18.5	-18.5	0.22 (4)	10.00
F- E	0 / 0	-18.5	-18.5	0.20 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
B- F	-162 / 0	0.09 (1)
F- C	0 / 184	0.05 (4)
F- D	0 / 230	0.05 (1)
G- B	-535 / 0	0.28 (1)

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 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 (0.40")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.40")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.05")

CSI: TC=0.30/1.00 (C-D:1) , BC=0.22/1.00 (F-G:4) , WB=0.28/1.00 (B-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

AUTOSOLVE RIGHT HEEL ONLY

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

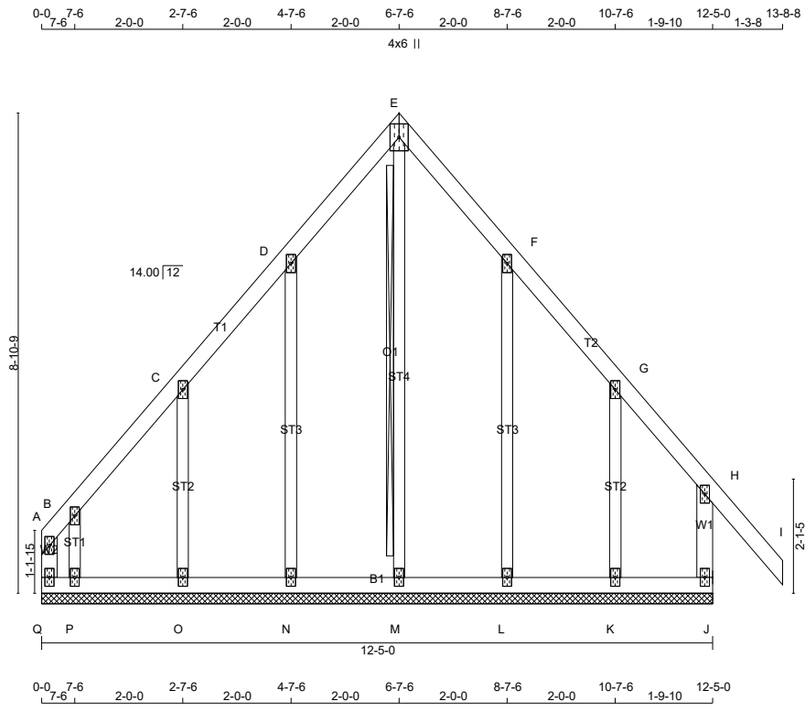
JSI GRIP= 0.78 (B) (INPUT = 0.90)
JSI METAL= 0.19 (B) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H103G		1	TRUSS DESC. JT 45147	E24033393

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:56 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-tuiXhTUIo95?6Pd2LXLTGANoKlD?GoQypAyVskzqZyL



TOTAL WEIGHT = 65 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
Q - A	2x4	DRY	No.2	SPF
A - E	2x4	DRY	No.2	SPF
E - I	2x4	DRY	No.2	SPF
J - H	2x4	DRY	No.2	SPF
Q - J	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
ALL GABLE WEBS	2x3	DRY	No.2	SPF

DRY: SEASONED LUMBER.

GABLE STUDS SPACED AT 2-0-0 OC.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMV+p	MT20	2.0	4.0		
B, C, D, F, G						
B	TMW+w	MT20	2.0	4.0		
E	TTW+p	MT20	4.0	6.0		
H	TMV+p	MT20	2.0	4.0		
J	BMV1+p	MT20	2.0	4.0		
K, L, M, N, O, P						
K	BMW1+w	MT20	2.0	4.0		
Q	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

THIS TRUSS DESIGNED FOR CONTINUOUS BEARINGS.

THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE.

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

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.

2x3 DRY SPF No.2 T-BRACE AT E-M

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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
Q- A	-2 / 0	0.0	0.0	0.01 (1)	10.00
A- B	0 / 8	-78.0	-78.0	0.03 (1)	10.00
B- C	0 / 2	-78.0	-78.0	0.04 (1)	10.00
C- D	0 / 7	-78.0	-78.0	0.04 (1)	10.00
D- E	0 / 10	-78.0	-78.0	0.04 (1)	10.00
E- F	0 / 9	-78.0	-78.0	0.04 (1)	10.00
F- G	0 / 13	-78.0	-78.0	0.04 (1)	10.00
G- H	-20 / 0	-78.0	-78.0	0.08 (1)	6.25
H- I	0 / 42	-78.0	-78.0	0.11 (1)	10.00
J- H	-202 / 0	0.0	0.0	0.02 (1)	7.81
Q- P	0 / 10	-18.5	-18.5	0.01 (4)	10.00
P- O	0 / 0	-18.5	-18.5	0.02 (4)	10.00
O- N	-4 / 0	-18.5	-18.5	0.02 (4)	10.00
N- M	-7 / 0	-18.5	-18.5	0.01 (4)	10.00
M- L	-7 / 0	-18.5	-18.5	0.01 (4)	10.00
L- K	-4 / 0	-18.5	-18.5	0.01 (4)	10.00
K- J	0 / 0	-18.5	-18.5	0.02 (1)	10.00

W E B S

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
M- E	-178 / 0	0.22 (1)
N- D	-159 / 0	0.11 (1)
O- C	-154 / 0	0.04 (1)
P- B	-113 / 0	0.02 (1)
L- F	-168 / 0	0.12 (1)
K- G	-103 / 0	0.03 (1)

[M]

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 BCBC 2018 , NBC-2019AE
- 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

CSI: TC=0.11/1.00 (H-I:1) , BC=0.02/1.00 (J-K:1) , WB=0.22/1.00 (E-M:1) , SSI=0.06/1.00 (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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

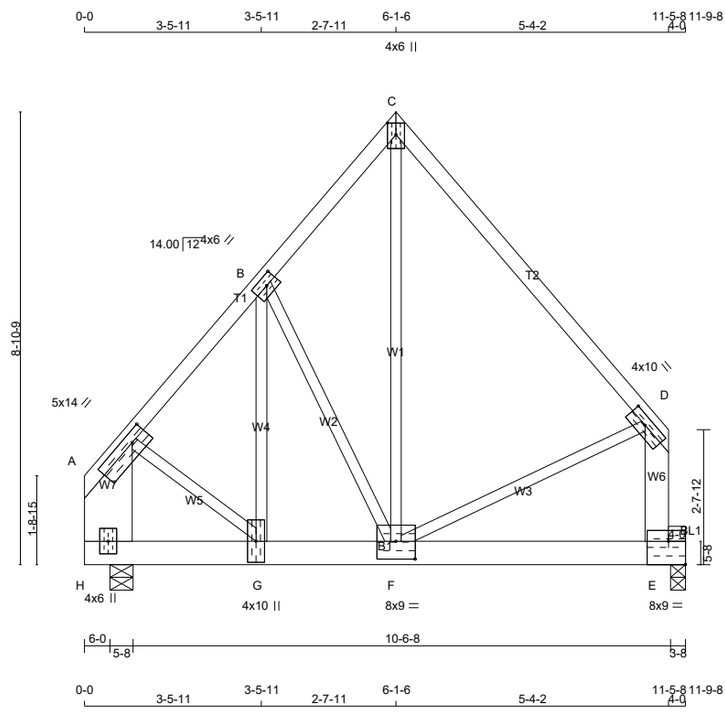
JSI GRIP= 0.16 (H) (INPUT = 0.90)
JSI METAL= 0.10 (H) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H104		2	TRUSS DESC. JT 45147	E24033394

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:56 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-tuiXhTUIo95?6Pd2LXLTGANk1I2ZGkMypAyVskzqZyL



TOTAL WEIGHT = 2 X 76 = 151 lb [M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - C	2x4	DRY	No.2	SPF
C - D	2x4	DRY	No.2	SPF
H - A	2x12	DRY	No.2	SPF
E - D	2x6	DRY	No.2	SPF
H - E	2x6	DRY	No.2	SPF

BEARING BLOCKS

BL1	2x4	DRY	No.2	SPF

ALL WEBS EXCEPT	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			
A- C	1	12	TOP
C- D	1	12	TOP
H- A	3	12	TOP
E- D	2	12	TOP
BOTTOM CHORDS : (0.122"X3") SPIRAL NAILS			
H- E	2	6	SIDE(376.8)
WEBS : (0.122"X3") SPIRAL NAILS			
2x3	1	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	14.0	2.00	4.00
B	TMWW-t	MT20	4.0	6.0	2.00	2.75
C	TTW+p	MT20	4.0	6.0	2.75	2.00
D	TMVW-t	MT20	4.0	10.0	1.75	4.50
E	BMVK1-t	MT20	8.0	9.0	5.50	Edge
F	BMWWW-t	MT20	8.0	9.0	4.25	4.50
G	BMWW+t	MT20	4.0	10.0		
H	BMV1+p	MT20	4.0	6.0		

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
H	4773	0	4773	0	0	5-8	2-8
E	4791	0	4791	0	0	3-8	3-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	SNOW	MAX./MIN. COMPONENT REACTIONS LIVE	PERM.LIVE	WIND	DEAD	SOIL
H	3403	2077 / 0	0 / 0	0 / 0	0 / 0	1326 / 0	0 / 0
E	3416	2087 / 0	0 / 0	0 / 0	0 / 0	1329 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.97 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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX UNBRAC LENGTH
A- B	-3398 / 0	-78.0	-78.0	0.13 (1)	4.97
B- C	-2736 / 0	-78.0	-78.0	0.07 (1)	5.47
C- D	-2726 / 0	-78.0	-78.0	0.32 (1)	5.26
H- A	-3535 / 0	0.0	0.0	0.08 (1)	7.81
E- D	-3157 / 0	0.0	0.0	0.15 (1)	7.77
H- G	0 / 0	-772.2	-772.2	0.36 (1)	10.00
G- F	0 / 2216	-772.2	-772.2	0.75 (1)	10.00
F- E	-328 / 0	-772.2	-772.2	0.65 (1)	6.25

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
G- B	0 / 1150	0.14 (1)
F- C	0 / 3841	0.48 (1)
A- G	0 / 2364	0.29 (1)
F- D	0 / 2272	0.28 (1)
B- F	-998 / 0	0.31 (1)

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

GIRDER TYPE: CStdGirder
START DISTANCE = 0-0
START SPAN CARRIED = 33-3-0
END DISTANCE = 11-9-8
END SPAN CARRIED = 33-3-0
END WALL WIDTH = 0-0
APPLIED TO FRONT SIDE OF BOTTOM CHORD.
- 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 , 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 (0.37")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.07")
ALLOWABLE DEFL.(TL)= L/360 (0.37")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.13")

CSI: TC=0.32/1.00 (C-D:1) , BC=0.75/1.00 (F-G:1) , WB=0.48/1.00 (C-F:1) , SSI=0.76/1.00 (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

AUTOSOLVE HEELS OFF

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

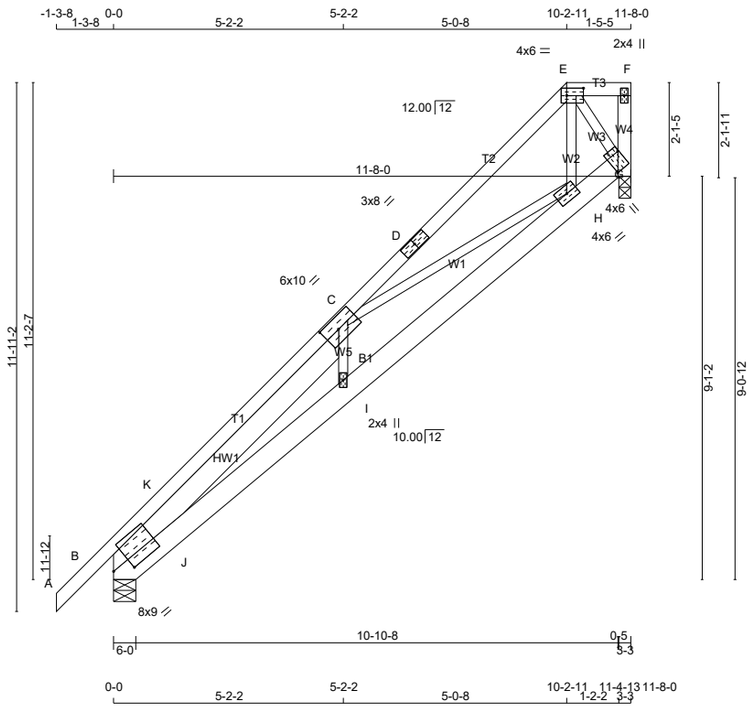
JSI GRIP= 0.86 (C) (INPUT = 0.90)
JSI METAL= 0.50 (G) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H105		1	TRUSS DESC. JT 45147	E24033395

Alpa Roof Truss, Maple

ID:hd511hZTz bdeQoS817GKByhVxV-L5FvvoVwZSDskZCEvFsipOvxN9WL?AV62qh2OAzqZyK

Scale: 1/4"=1'



TOTAL WEIGHT = 72 lb

[M][F]

LUMBER

N. L. G. A. RULES

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

REINFORCING MEMBERS

HW1	2x6	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	TMBMW1-I	MT20	8.0	9.0	2.75	5.00
C	TMWWW-t	MT20	6.0	10.0	3.00	4.25
D	TS-t	MT20	3.0	8.0		
E	TTWW-I	MT20	4.0	6.0	2.00	4.50
F	TMV+p	MT20	2.0	4.0		
G	BVMW1+I	MT20	4.0	6.0	4.50	Edge
H	BMWW-t	MT20	4.0	6.0		
I	BMW+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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
B	671	0	671	0	0	6-0	1-8
G	563	0	563	0	0	3-3	3-3

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
B	477	303 / 0	0 / 0	0 / 0	0 / 0	173 / 0	0 / 0
G	401	245 / 0	0 / 0	0 / 0	0 / 0	156 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.98 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

MEMB. FR-TO	MAX. FORCE (LBS)	FACTORED VERT. LOAD LC1 FROM (PLF)	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 18	-78.0	-78.0	0.11 (1)	10.00
B- K	-1099 / 0	-78.0	-78.0	0.06 (1)	5.98
K- C	-772 / 0	-78.0	-78.0	0.19 (1)	6.25
C- D	-395 / 0	-78.0	-78.0	0.22 (1)	6.25
D- E	-395 / 0	-78.0	-78.0	0.22 (1)	6.25
E- F	0 / 0	-78.0	-78.0	0.03 (1)	10.00
G- F	-56 / 0	0.0	0.0	0.01 (1)	7.81
B- J	0 / 712	-18.5	-18.5	0.11 (1)	10.00
J- I	0 / 1276	-18.5	-18.5	0.21 (1)	10.00
I- H	0 / 1292	-18.5	-18.5	0.20 (1)	10.00
H- G	0 / 358	-18.5	-18.5	0.08 (1)	10.00

WEBS

MEMB. FR-TO	MAX. FORCE (LBS)	MAX CSI (LC)
I- C	0 / 92	0.03 (4)
C- H	-803 / 0	0.55 (1)
H- E	0 / 348	0.08 (1)
E- G	-421 / 0	0.06 (1)
J- K	0 / 206	0.00 (1)
J- C	-679 / 0	0.29 (1)

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 , 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 (0.39")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.03")
ALLOWABLE DEFL.(TL)= L/360 (0.39")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.06")

CSI: TC=0.22/1.00 (C-E:1) , BC=0.21/1.00 (I-J:1) , WB=0.55/1.00 (C-H:1) , SSI=0.13/1.00 (C-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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

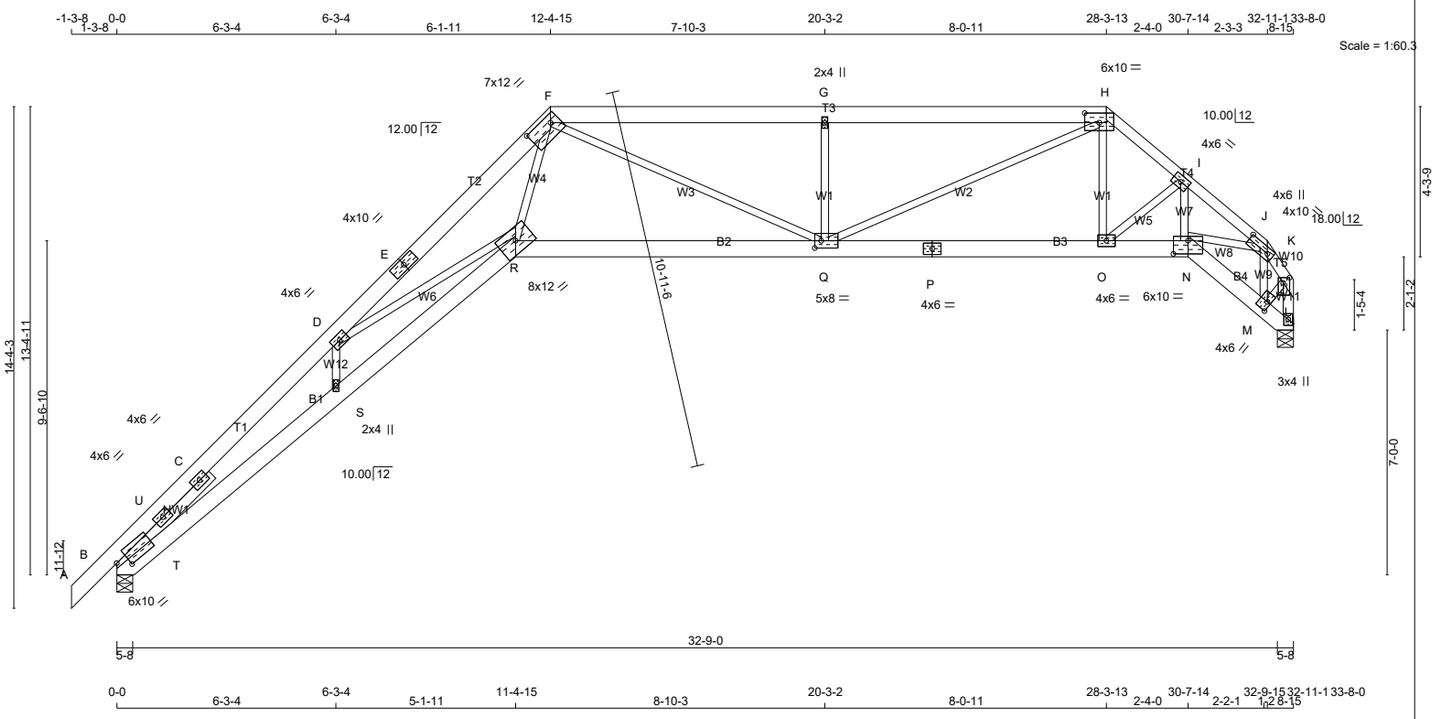
JSI GRIP= 0.55 (C) (INPUT = 0.90)
JSI METAL= 0.22 (H) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H106		1	TRUSS DESC. JT 45147	E24033396

Alpha Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:57 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-L5FvvoVwZSDskZCEvFsipOvte9RY?4v62qh2OAzqZyK



LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - E	2x6	DRY	1650F 1.5E	SPF
E - F	2x6	DRY	1650F 1.5E	SPF
F - H	2x6	DRY	1650F 1.5E	SPF
H - J	2x4	DRY	1650F 1.5E	SPF
J - K	2x4	DRY	1650F 1.5E	SPF
L - K	2x4	DRY	No.2	SPF
B - R	2x6	DRY	2100F 1.8E	SPF
R - P	2x6	DRY	1650F 1.5E	SPF
P - N	2x6	DRY	1650F 1.5E	SPF
N - L	2x6	DRY	1650F 1.5E	SPF
REINFORCING MEMBERS				
HW1	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	TMBMR1-I	MT20	6.0	10.0	3.75	3.75
B	RT-t	MT20	4.0	6.0		
B	RT-t	MT20	4.0	6.0		
D	TMWW-t	MT20	4.0	6.0		
E	TS-t	MT20	4.0	10.0		
F	TTWW-h	MT20	7.0	12.0	2.50	9.00
G	TMW+w	MT20	2.0	4.0		
H	TTWW-I	MT20	6.0	10.0	3.25	5.00
I	TMWW-t	MT20	4.0	6.0		
J	TTWW-I	MT20	4.0	10.0	2.00	8.00
K	TMVW+p	MT20	4.0	6.0	1.75	2.25
L	BMV1+p	MT20	3.0	4.0		
M	BMWW+t	MT20	4.0	6.0	3.00	1.25
N	BBWW-I	MT20	6.0	10.0	4.50	5.00
O	BMWW-t	MT20	4.0	6.0		
P	BS-t	MT20	4.0	6.0		
Q	BMWWW-t	MT20	5.0	8.0	2.50	2.25
R	BBWW-h	MT20	8.0	12.0		
S	BMW+w	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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
B	1784	0	1784	0	0	5-8	1-11
L	1696	0	1696	0	0	5-8	1-10

ALLOW FOR 1.0" OF HORIZONTAL MOVEMENT DUE TO TOTAL LOAD

UNFACTORED REACTIONS

	1ST LCASE	MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
B	1274	768 / 0	0 / 0	0 / 0	0 / 0	506 / 0	0 / 0
L	1216	707 / 0	0 / 0	0 / 0	0 / 0	509 / 0	0 / 0

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

BRACING

FOR SECTION F-H, MAX. PURLIN SPACING = 2.00 FT.
FOR OTHER SECTIONS, TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.65 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)

C H O R D S

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX UNBRAC LENGTH
A- B	0 / 24	-78.0	-78.0	0.04 (1)	10.00
B- U	-5075 / 0	-78.0	-78.0	0.09 (1)	4.39
U- C	-4534 / 0	-78.0	-78.0	0.42 (1)	4.22
C- D	-4534 / 0	-78.0	-78.0	0.42 (1)	4.22
D- E	-6421 / 0	-78.0	-78.0	0.46 (1)	3.65
E- F	-6421 / 0	-78.0	-78.0	0.46 (1)	3.65
F- G	-3766 / 0	-85.5	-85.5	0.24 (1)	2.00
G- H	-3767 / 0	-85.5	-85.5	0.25 (1)	2.00
H- I	-2610 / 0	-78.0	-78.0	0.08 (1)	4.79
I- J	-3227 / 0	-78.0	-78.0	0.10 (1)	4.38
J- K	-1365 / 0	-78.0	-78.0	0.01 (1)	6.18
L- K	-1687 / 0	0.0	0.0	0.18 (1)	6.39
B- T	0 / 3745	-18.5	-18.5	0.44 (1)	10.00
T- S	0 / 5249	-18.5	-18.5	0.51 (1)	10.00
S- R	0 / 5454	-18.5	-18.5	0.50 (1)	10.00
R- Q	0 / 3522	-18.5	-18.5	0.33 (1)	10.00
Q- P	0 / 2026	-18.5	-18.5	0.20 (1)	10.00
P- O	0 / 2026	-18.5	-18.5	0.20 (1)	10.00
O- N	0 / 2429	-18.5	-18.5	0.23 (1)	10.00
N- M	0 / 876	-18.5	-18.5	0.07 (1)	10.00
M- L	0 / 3	-18.5	-18.5	0.00 (4)	10.00

W E B S

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
S- D	-254 / 0	0.04 (1)
D- R	0 / 459	0.10 (1)
R- F	0 / 4019	0.90 (1)
O- H	0 / 477	0.11 (1)
O- I	-550 / 0	0.11 (1)
N- I	0 / 608	0.14 (1)
N- J	0 / 1783	0.40 (1)
M- J	-1041 / 0	0.16 (1)
M- K	0 / 899	0.20 (1)
F- Q	0 / 272	0.06 (1)
Q- G	-811 / 0	0.20 (1)
Q- H	0 / 1930	0.43 (1)
T- U	0 / 2558	0.00 (1)
T- C	-3345 / 0	0.42 (1)

[M][F]

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 , 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 (1.12")
CALCULATED VERT. DEFL.(LL) = L/ 994 (0.41")
ALLOWABLE DEFL.(TL)= L/360 (1.12")
CALCULATED VERT. DEFL.(TL) = L/ 484 (0.84")

CSI: TC=0.46/1.00 (D-F:1) , BC=0.51/1.00 (S-T:1) , WB=0.90/1.00 (F-R:1) , SSI=0.38/1.00 (D-U: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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

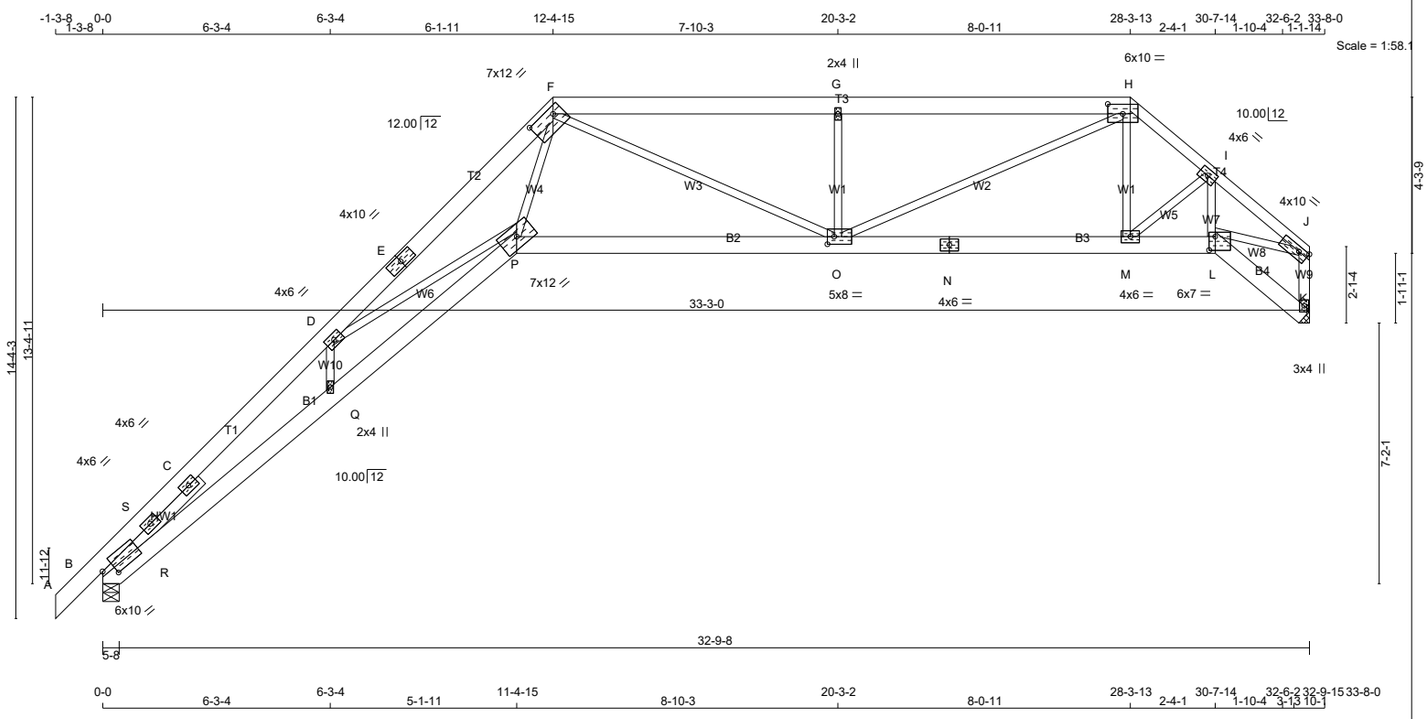
JSI GRIP= 0.87 (F) (INPUT = 0.90)
JSI METAL= 0.83 (J) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H106S		1	TRUSS DESC. JT 45147	E24033397

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:58 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-pHpH68VYKmLjMjnRTyNxMbSzUYI kYQFHURbwczqZyJ



TOTAL WEIGHT = 5 X 179 = 896 lb

[M][F]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - E	2x6	DRY	No.2	SPF
E - F	2x6	DRY	No.2	SPF
F - H	2x6	DRY	No.2	SPF
H - J	2x4	DRY	No.2	SPF
K - J	2x4	DRY	No.2	SPF
B - P	2x6	DRY	1650F 1.5E	SPF
P - N	2x6	DRY	No.2	SPF
N - L	2x6	DRY	No.2	SPF
L - K	2x6	DRY	No.2	SPF

REINFORCING MEMBERS

HW1	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	TMBMR1-I	MT20	6.0	10.0	3.75	3.75
B	RT-t	MT20	4.0	6.0		
B	RT-t	MT20	4.0	6.0		
D	TMWW-t	MT20	4.0	6.0		
E	TS-t	MT20	4.0	10.0		
F	TTWW-h	MT20	7.0	12.0	2.25	8.75
G	TMW+w	MT20	2.0	4.0		
H	TTWW-I	MT20	6.0	10.0	3.25	5.00
I	TMWW-t	MT20	4.0	6.0		
J	TMVW-t	MT20	4.0	10.0	1.50	3.25
K	BMV1+p	MT20	3.0	4.0		
L	BBWW-I	MT20	6.0	7.0	4.50	2.00
M	BMWW-t	MT20	4.0	6.0		
N	BS-t	MT20	4.0	6.0		
O	BMWWW-t	MT20	5.0	8.0	2.50	2.25
P	BBWW-h	MT20	7.0	12.0		
Q	BMW+w	MT20	2.0	4.0		

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

LICENSED PROFESSIONAL ENGINEER
Y. WIDYA
100225448
02/28/2024
PROVINCE OF ONTARIO

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG	REQRD BRG
B	1763	0	1763	0	0	5-8	1-11
K	1677	0	1677	0	0	MECHANICAL	

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT K. MINIMUM BEARING LENGTH AT JOINT K = 3-8.

ALLOW FOR 1.0" OF HORIZONTAL MOVEMENT DUE TO TOTAL LOAD

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
B	1259	759 / 0	0 / 0	0 / 0	0 / 0	500 / 0	0 / 0
K	1202	698 / 0	0 / 0	0 / 0	0 / 0	504 / 0	0 / 0

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

BRACING

FOR SECTION F-H, MAX. PURLIN SPACING = 2.00 FT.
FOR OTHER SECTIONS, TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 2.81 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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX UNBRAC LENGTH
A- B	0 / 24	-78.0	-78.0	0.06 (1)	10.00
B- S	-4889 / 0	-78.0	-78.0	0.19 (1)	3.85
S- C	-4413 / 0	-78.0	-78.0	0.67 (1)	3.38
C- D	-4413 / 0	-78.0	-78.0	0.67 (1)	3.38
D- E	-6294 / 0	-78.0	-78.0	0.77 (1)	2.81
E- F	-6294 / 0	-78.0	-78.0	0.77 (1)	2.81
F- G	-3658 / 0	-85.5	-85.5	0.38 (1)	2.00
G- H	-3658 / 0	-85.5	-85.5	0.39 (1)	2.00
H- I	-2417 / 0	-78.0	-78.0	0.11 (1)	4.35
I- J	-2765 / 0	-78.0	-78.0	0.16 (1)	4.06
K- J	-1653 / 0	0.0	0.0	0.19 (1)	6.45
B- R	0 / 3580	-18.5	-18.5	0.57 (1)	10.00
R- Q	0 / 5190	-18.5	-18.5	0.69 (1)	10.00
Q- P	0 / 5379	-18.5	-18.5	0.68 (1)	10.00
P- O	0 / 3453	-18.5	-18.5	0.51 (1)	10.00
O- N	0 / 1871	-18.5	-18.5	0.30 (1)	10.00
N- M	0 / 1871	-18.5	-18.5	0.30 (1)	10.00
M- L	0 / 2114	-18.5	-18.5	0.32 (1)	10.00
L- K	0 / 0	-18.5	-18.5	0.02 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
Q- D	-226 / 0	0.03 (1)
P- F	0 / 3946	0.89 (1)
M- H	0 / 336	0.08 (1)
M- I	-333 / 0	0.06 (1)
L- I	0 / 250	0.06 (1)
L- J	0 / 2138	0.48 (1)
F- O	0 / 228	0.05 (1)
O- G	-812 / 0	0.20 (1)
O- H	0 / 1982	0.45 (1)
R- S	0 / 2539	0.00 (1)
R- C	-3445 / 0	0.43 (1)

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 , 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 (1.11")
CALCULATED VERT. DEFL.(LL) = L/ 914 (0.44")
ALLOWABLE DEFL.(TL)= L/360 (1.11")
CALCULATED VERT. DEFL.(TL) = L/ 445 (0.90")

CSI: TC=0.77/1.00 (D-F:1) , BC=0.69/1.00 (Q-R:1) , WB=0.89/1.00 (F-P:1) , SSI=0.40/1.00 (D-S: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 LEFT HEEL ONLY

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

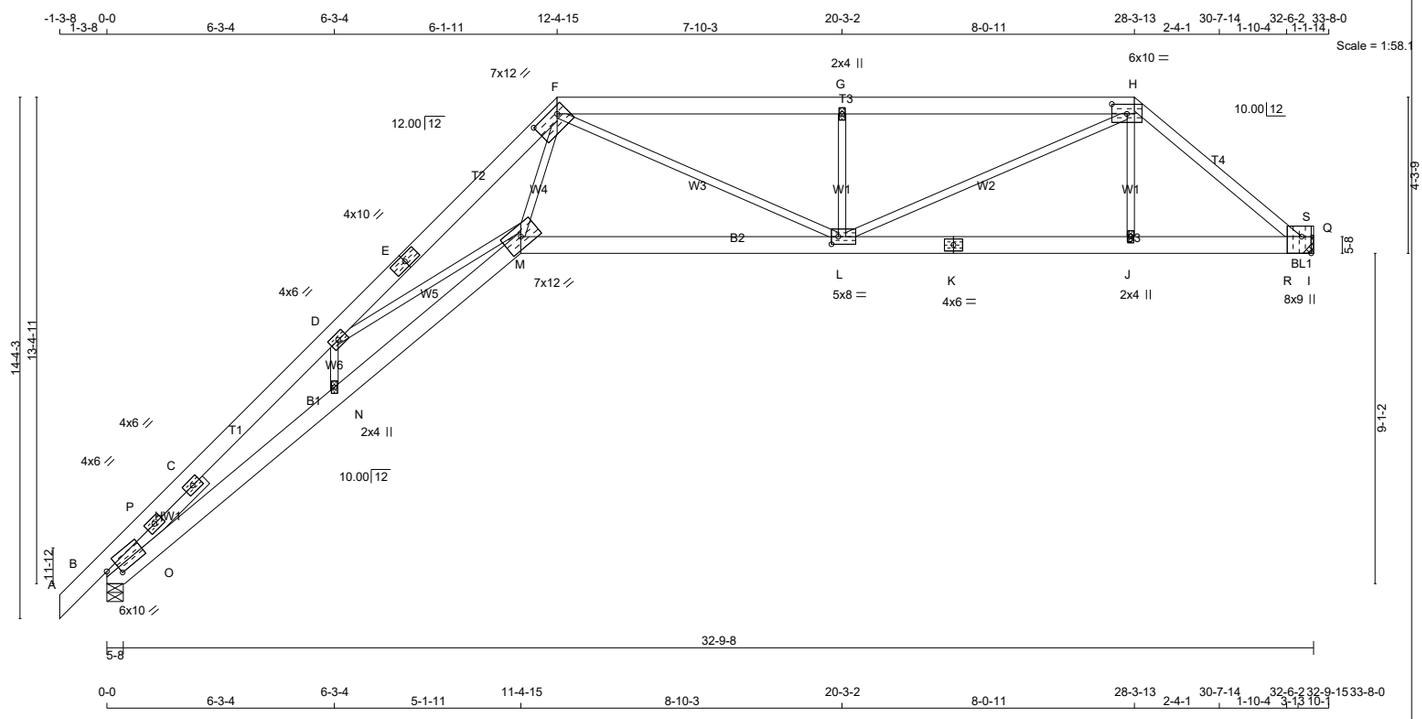
JSI GRIP= 0.90 (F) (INPUT = 0.90)
JSI METAL= 0.74 (B) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H107		1	TRUSS DESC. JT 45147	E24033398

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:59 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-ITNfKUWA44TaztLd1qvAup 7Ey5DT?eOV8A9S3zqZyI



TOTAL WEIGHT = 7 X 170 = 1190 lb

[M][F]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - E	2x6	DRY	No.2	SPF
E - F	2x6	DRY	No.2	SPF
F - H	2x6	DRY	No.2	SPF
H - Q	2x4	DRY	No.2	SPF
B - M	2x6	DRY	1650F 1.5E	SPF
M - K	2x6	DRY	No.2	SPF
K - I	2x6	DRY	No.2	SPF
REINFORCING MEMBERS				
HW1	2x4	DRY	No.2	SPF
BEARING BLOCKS				
BL1	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	TMBMR1-I	MT20	6.0	10.0	3.75	3.75
B	RT-t	MT20	4.0	6.0		
B	RT-t	MT20	4.0	6.0		
D	TMWW-t	MT20	4.0	6.0		
E	TS-t	MT20	4.0	10.0		
F	TTWW-h	MT20	7.0	12.0	2.25	8.75
G	TMW+w	MT20	2.0	4.0		
H	TTWW-I	MT20	6.0	10.0	3.25	5.00
I	TBMK1*+p	MT20	8.0	9.0	Edge	3.25
J	BMW+w	MT20	2.0	4.0		
K	BS-t	MT20	4.0	6.0		
L	BMWWW-t	MT20	5.0	8.0	2.50	2.25
M	BBWW-h	MT20	7.0	12.0		
N	BMW+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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG	REQRD BRG
B	1763	0	1763	0	0	5-8	1-11
I	1652	0	1652	0	0	MECHANICAL	

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT I. MINIMUM BEARING LENGTH AT JOINT I = 1-13.

ALLOW FOR 0.9" OF HORIZONTAL MOVEMENT DUE TO TOTAL LOAD

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
B	1259	759 / 0	0 / 0	0 / 0	0 / 0	500 / 0	0 / 0
I	1184	684 / 0	0 / 0	0 / 0	0 / 0	500 / 0	0 / 0

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

BRACING

FOR SECTION F-H, MAX. PURLIN SPACING = 2.00 FT.
FOR OTHER SECTIONS, TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 2.81 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

MEMB. FR-TO	FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 24	-78.0	-78.0	0.06 (1)	10.00	
B- P	-4889 / 0	-78.0	-78.0	0.19 (1)	3.85	
P- C	-4413 / 0	-78.0	-78.0	0.67 (1)	3.38	
C- D	-4413 / 0	-78.0	-78.0	0.67 (1)	3.38	
D- E	-6293 / 0	-78.0	-78.0	0.77 (1)	2.81	
E- F	-6293 / 0	-78.0	-78.0	0.77 (1)	2.81	
F- G	-3652 / 0	-85.5	-85.5	0.38 (1)	2.00	
G- H	-3653 / 0	-85.5	-85.5	0.39 (1)	2.00	
H- S	-2455 / 0	-78.0	-78.0	0.29 (1)	4.16	
S- Q	-2476 / 0	-78.0	-78.0	0.12 (1)	4.30	
B- O	0 / 3580	-18.5	-18.5	0.57 (1)	10.00	
O- N	0 / 5189	-18.5	-18.5	0.69 (1)	10.00	
N- M	0 / 5379	-18.5	-18.5	0.68 (1)	10.00	
M- L	0 / 3452	-18.5	-18.5	0.51 (1)	10.00	
L- K	0 / 1891	-18.5	-18.5	0.35 (1)	10.00	
K- J	0 / 1891	-18.5	-18.5	0.35 (1)	10.00	
J- R	0 / 1883	-18.5	-18.5	0.59 (1)	10.00	
R- Q	0 / 1883	-18.5	-18.5	0.59 (1)	10.00	
Q- I	0 / 0	-18.5	-18.5	0.36 (1)	10.00	

WEBS

MEMB. FR-TO	FORCE (LBS)	MAX CSI (LC)
N- D	-226 / 0	0.03 (1)
D- M	0 / 420	0.09 (1)
M- F	0 / 3948	0.89 (1)
J- H	0 / 302	0.07 (4)
F- L	0 / 223	0.05 (1)
L- G	-812 / 0	0.20 (1)
L- H	0 / 1953	0.44 (1)
O- P	0 / 2539	0.00 (1)
O- C	-3445 / 0	0.43 (1)
R- S	-141 / 71	0.00 (1)

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 , 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 (1.11")
CALCULATED VERT. DEFL.(LL) = L/ 917 (0.43")
ALLOWABLE DEFL.(TL)= L/360 (1.11")
CALCULATED VERT. DEFL.(TL) = L/ 446 (0.89")

CSI: TC=0.77/1.00 (D-F:1) , BC=0.69/1.00 (N-O:1) , WB=0.89/1.00 (F-M:1) , SSI=1.00/1.00 (I-Q: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 LEFT HEEL ONLY

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

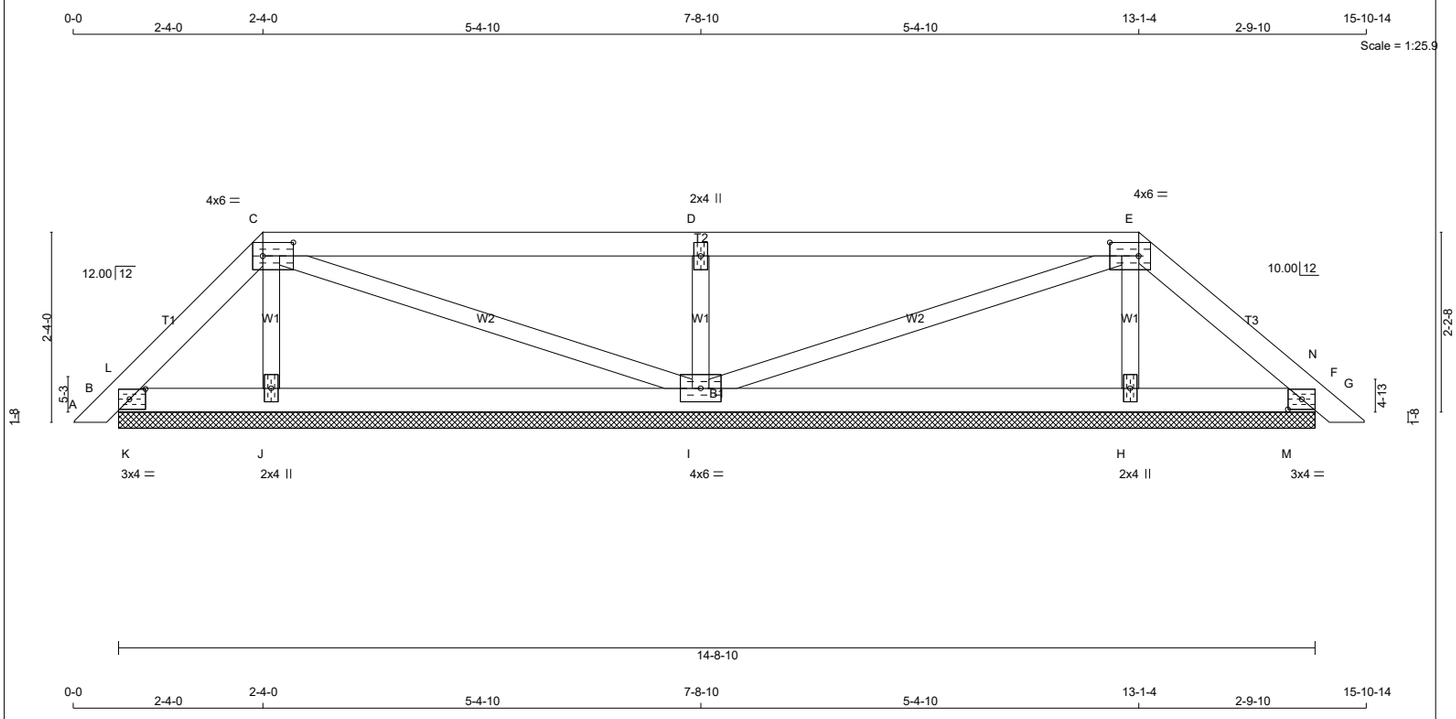
JSI GRIP= 0.90 (F) (INPUT = 0.90)
JSI METAL= 0.74 (B) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H112P		1	TRUSS DESC. JT 45147	E24033399

Alpha Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:08:59 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-ITNfKUWA44TaztLd1gvAup EJyEFTBHOV8A9S3zgZyI



0-0 2-4-0 2-4-0 5-4-10 7-8-10 5-4-10 13-1-4 2-9-10 15-10-14

TOTAL WEIGHT = 50 lb

[M]

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
B - F	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-I	MT20	4.0	6.0	2.00	4.50
D	TMW+w	MT20	2.0	4.0		
E	TTWW-I	MT20	4.0	6.0	2.00	4.25
F	TMB1-I	MT20	3.0	4.0	1.50	2.00
H	BMW1+w	MT20	2.0	4.0		
I	BMWWW1-t	MT20	4.0	6.0		
J	BMW1+w	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

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
B	146	0	146	0	0	14-8-10	1-8
F	168	0	168	0	0	14-8-10	1-8
J	259	0	259	0	0	14-8-10	1-8
I	642	0	642	0	0	14-8-10	1-8
H	280	0	280	0	0	14-8-10	1-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
B	101	79 / 0	0 / 0	0 / 0	0 / 0	22 / 0	0 / 0
F	117	87 / 0	0 / 0	0 / 0	0 / 0	30 / 0	0 / 0
J	188	95 / 0	0 / 0	0 / 0	0 / 0	93 / 0	0 / 0
I	455	290 / 0	0 / 0	0 / 0	0 / 0	166 / 0	0 / 0
H	203	107 / 0	0 / 0	0 / 0	0 / 0	96 / 0	0 / 0

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

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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX UNBRAC LENGTH
A- B	0 / 11	-78.0	-78.0	0.01 (1)	10.00
B- L	-19 / 11	-78.0	-78.0	0.02 (1)	6.25
L- C	-64 / 0	-78.0	-78.0	0.02 (1)	6.25
C- D	-10 / 0	-78.0	-78.0	0.38 (1)	10.00
D- E	-10 / 0	-78.0	-78.0	0.38 (1)	10.00
E- N	-62 / 0	-78.0	-78.0	0.04 (1)	6.25
N- F	-22 / 2	-78.0	-78.0	0.02 (1)	6.25
F- G	0 / 12	-78.0	-78.0	0.02 (1)	10.00
B- K	0 / 41	-18.5	-18.5	0.04 (1)	10.00
K- J	0 / 41	-18.5	-18.5	0.08 (4)	10.00
J- I	0 / 32	-18.5	-18.5	0.11 (4)	10.00
I- H	0 / 34	-18.5	-18.5	0.11 (4)	10.00
H- M	0 / 43	-18.5	-18.5	0.08 (4)	10.00
M- F	0 / 43	-18.5	-18.5	0.05 (1)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
J- C	-162 / 0	0.02 (1)
C- I	-23 / 0	0.01 (1)
I- D	-525 / 0	0.08 (1)
I- E	-25 / 0	0.01 (1)
H- E	-181 / 0	0.03 (1)
K- L	-124 / 0	0.00 (1)
M- N	-139 / 0	0.00 (1)

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 , 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

CSI: TC=0.38/1.00 (D-E:1) , BC=0.11/1.00 (H-I:4) , WB=0.08/1.00 (D-I:1) , SSI=0.20/1.00 (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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

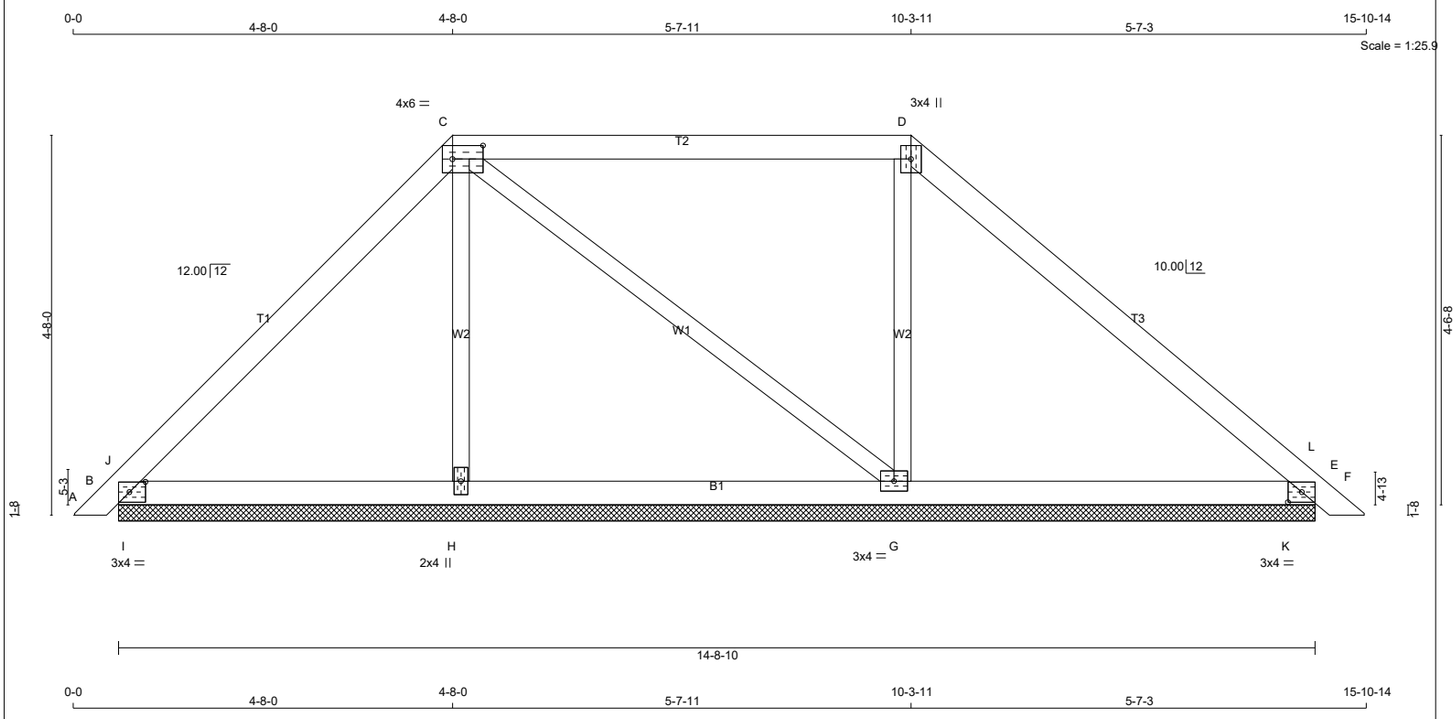
JSI GRIP= 0.26 (D) (INPUT = 0.90)
JSI METAL= 0.11 (D) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H113P		1	TRUSS DESC. JT 45147	E24033400

Alpha Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:09:00 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-mgx1XqXorNbRb0wpaNQPR0XOOMY3CeUYkowi?VzgZyH



0-0 4-8-0 4-8-0 5-7-11 10-3-11 5-7-3 15-10-14

TOTAL WEIGHT = 51 lb

[M]

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 - F	2x4	DRY	No.2	SPF
B - E	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-l	MT20	3.0	4.0	1.50	2.50
C	TTWW-l	MT20	4.0	6.0	2.00	4.50
D	TTW+p	MT20	3.0	4.0		
E	TMB1-l	MT20	3.0	4.0	1.50	2.00
G	BMWW1-t	MT20	3.0	4.0		
H	BMW1+w	MT20	2.0	4.0		

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
B	378	0	378	0	0	14-8-10	1-8
E	381	0	381	0	0	14-8-10	1-8
H	306	0	306	0	0	14-8-10	1-8
G	430	0	430	0	0	14-8-10	1-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
B	266	183 / 0	0 / 0	0 / 0	0 / 0	82 / 0	0 / 0
E	269	181 / 0	0 / 0	0 / 0	0 / 0	88 / 0	0 / 0
H	221	116 / 0	0 / 0	0 / 0	0 / 0	106 / 0	0 / 0
G	308	179 / 0	0 / 0	0 / 0	0 / 0	129 / 0	0 / 0

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

C H O R D S

MEMB. FR-TO	MAX. FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX UNBRAC LENGTH
A- B	0 / 11	-78.0	-78.0	0.01 (1)	10.00
B- J	-43 / 1	-78.0	-78.0	0.09 (1)	6.25
J- C	-228 / 0	-78.0	-78.0	0.16 (1)	6.25
C- D	-129 / 0	-78.0	-78.0	0.43 (1)	6.25
D- L	-190 / 0	-78.0	-78.0	0.24 (1)	6.25
L- E	-41 / 72	-78.0	-78.0	0.13 (1)	6.25
E- F	0 / 12	-78.0	-78.0	0.02 (1)	10.00
B- I	0 / 152	-18.5	-18.5	0.15 (1)	10.00
I- H	0 / 152	-18.5	-18.5	0.15 (1)	10.00
H- G	0 / 148	-18.5	-18.5	0.14 (4)	10.00
G- K	0 / 136	-18.5	-18.5	0.20 (1)	10.00
K- E	0 / 136	-18.5	-18.5	0.20 (1)	10.00

W E B S

MEMB. FR-TO	MAX. FORCE (LBS)	MAX CSI (LC)
H- C	-188 / 0	0.06 (1)
C- G	-23 / 0	0.02 (1)
G- D	-271 / 0	0.08 (1)
I- J	-441 / 0	0.00 (1)
K- L	-548 / 0	0.00 (1)

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 , 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

CSI: TC=0.43/1.00 (C-D:1) , BC=0.20/1.00 (G-K:1) , WB=0.08/1.00 (D-G:1) , SSI=0.43/1.00 (E-K: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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) 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= 0.09 (B) (INPUT = 1.00)

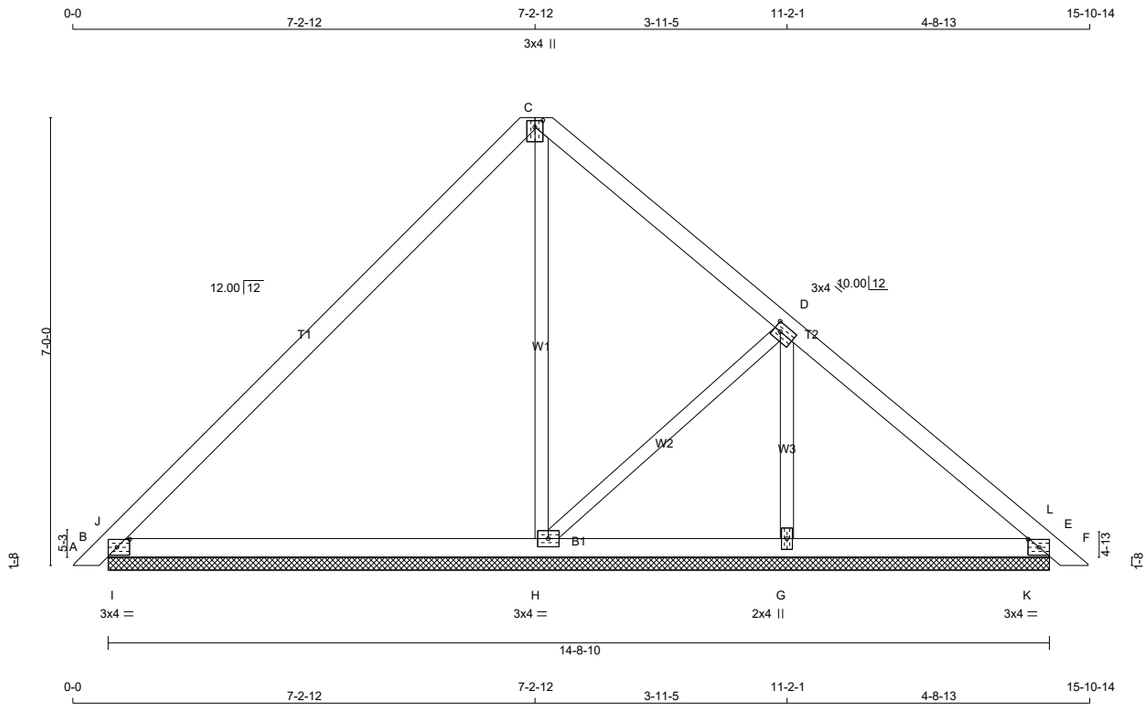
LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

LICENSED PROFESSIONAL ENGINEER
Y. WIDYA
100225448
02/28/2024
PROVINCE OF ONTARIO

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H114P		1	TRUSS DESC. JT 45147	E24033401

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:09:00 2024 Page 1
ID:hd511hZTz bdeQoS817GKByhVxV-mgx1XqXorNbRb0wpaNQPR0XN1MWgCeeYkowi?VzqZyH



TOTAL WEIGHT = 53 lb

LUMBER
N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - C	2x4	DRY	No.2	SPF
C - F	2x4	DRY	No.2	SPF
B - E	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-l	MT20	3.0	4.0	1.50	2.50
C	TMTW+p	MT20	3.0	4.0	1.25	1.50
D	TMWW-t	MT20	3.0	4.0	1.50	1.25
E	TMB1-l	MT20	3.0	4.0	1.50	2.00
G	BMW1+w	MT20	2.0	4.0		
H	BMWW1-t	MT20	3.0	4.0		

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
B	493	0	493	0	0	14-8-10	1-8
E	361	0	361	0	0	14-8-10	1-8
H	280	0	280	0	0	14-8-10	1-8
G	361	0	361	0	0	14-8-10	1-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
B	348	229 / 0	0 / 0	0 / 0	0 / 0	120 / 0	0 / 0
E	255	170 / 0	0 / 0	0 / 0	0 / 0	85 / 0	0 / 0
H	204	102 / 0	0 / 0	0 / 0	0 / 0	102 / 0	0 / 0
G	257	158 / 0	0 / 0	0 / 0	0 / 0	99 / 0	0 / 0

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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 11	-78.0	-78.0	0.01 (1)	10.00
B- J	-20 / 524	-78.0	-78.0	0.35 (1)	6.25
J- C	-242 / 0	-78.0	-78.0	0.45 (1)	6.25
C- D	-225 / 0	-78.0	-78.0	0.20 (1)	6.25
D- L	-223 / 0	-78.0	-78.0	0.20 (1)	6.25
L- E	-231 / 0	-78.0	-78.0	0.02 (1)	6.25
E- F	0 / 12	-78.0	-78.0	0.02 (1)	10.00
B- I	0 / 156	-18.5	-18.5	0.36 (1)	10.00
I- H	0 / 156	-18.5	-18.5	0.36 (1)	10.00
H- G	0 / 188	-18.5	-18.5	0.24 (1)	10.00
G- K	0 / 188	-18.5	-18.5	0.11 (1)	10.00
K- E	0 / 188	-18.5	-18.5	0.09 (1)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
H- C	-54 / 11	0.05 (1)
H- D	-45 / 0	0.02 (1)
G- D	-316 / 0	0.07 (1)
I- J	-1201 / 0	0.00 (1)
K- L	-143 / 30	0.00 (1)

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 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

CSI: TC=0.45/1.00 (C-J:1) , BC=0.36/1.00 (B-I:1) , WB=0.07/1.00 (D-G:1) , SSI=0.94/1.00 (B-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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.49 (B) (INPUT = 0.90)
JSI METAL= 0.11 (B) (INPUT = 1.00)

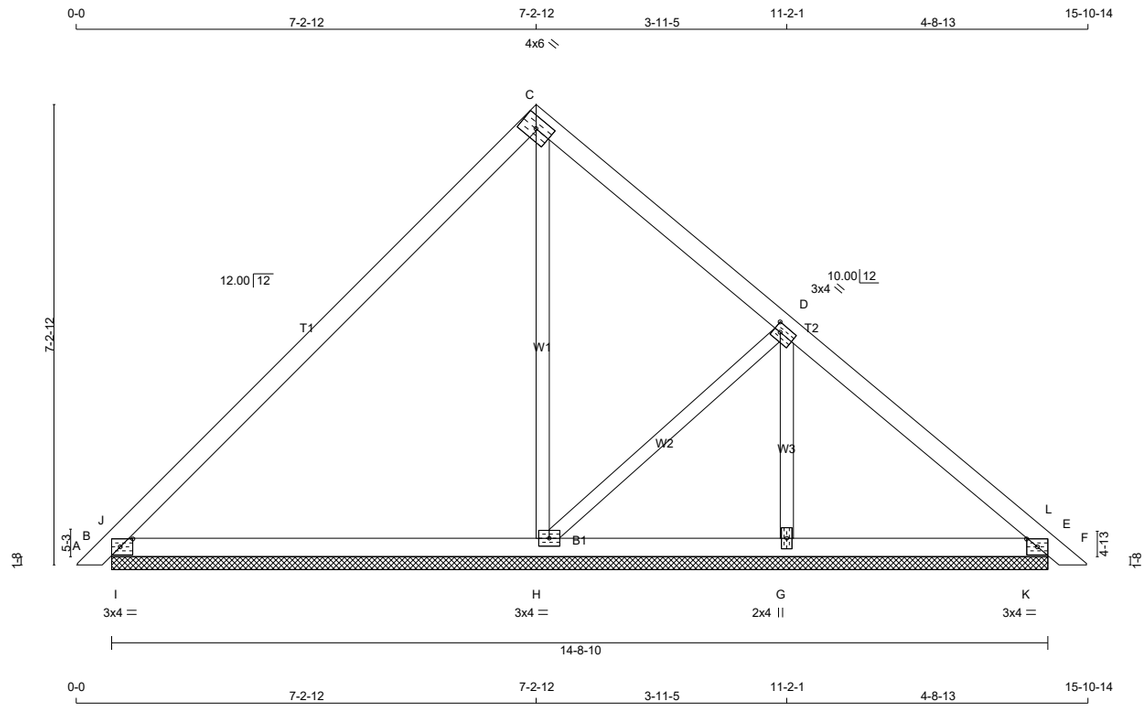
LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

LICENSED PROFESSIONAL ENGINEER
Y. WIDYA
100225448
02/28/2024
PROVINCE OF ONTARIO

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H115P		1	TRUSS DESC. JT 45147	E24033402

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:09:00 2024 Page 1
ID:hd511hZTz bdeQoS817GKByhVxV-mgx1XqXorNbRb0wpaNQPR0XN1MWgCeeYkowi?VzqZyH



TOTAL WEIGHT = 12 X 53 = 637 lb [M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - C	2x4	DRY	No.2	SPF
C - F	2x4	DRY	No.2	SPF
B - E	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-l	MT20	3.0	4.0	1.50	2.50
C	TTW-l	MT20	4.0	6.0		
D	TMWW-t	MT20	3.0	4.0	1.50	1.25
E	TMB1-l	MT20	3.0	4.0	1.50	2.00
G	BMW1+w	MT20	2.0	4.0		
H	BMWW1-t	MT20	3.0	4.0		

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
B	493	0	493	0	0	14-8-10	1-8
E	361	0	361	0	0	14-8-10	1-8
H	280	0	280	0	0	14-8-10	1-8
G	361	0	361	0	0	14-8-10	1-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
B	348	229 / 0	0 / 0	0 / 0	0 / 0	120 / 0	0 / 0
E	255	170 / 0	0 / 0	0 / 0	0 / 0	85 / 0	0 / 0
H	204	102 / 0	0 / 0	0 / 0	0 / 0	102 / 0	0 / 0
G	257	158 / 0	0 / 0	0 / 0	0 / 0	99 / 0	0 / 0

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

C H O R D S

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 11	-78.0	-78.0	0.01 (1)	10.00
B- J	-20 / 524	-78.0	-78.0	0.35 (1)	6.25
J- C	-242 / 0	-78.0	-78.0	0.45 (1)	6.25
C- D	-225 / 0	-78.0	-78.0	0.20 (1)	6.25
D- L	-223 / 0	-78.0	-78.0	0.20 (1)	6.25
L- E	-231 / 0	-78.0	-78.0	0.02 (1)	6.25
E- F	0 / 12	-78.0	-78.0	0.02 (1)	10.00
B- I	0 / 156	-18.5	-18.5	0.36 (1)	10.00
I- H	0 / 156	-18.5	-18.5	0.36 (1)	10.00
H- G	0 / 188	-18.5	-18.5	0.24 (1)	10.00
G- K	0 / 188	-18.5	-18.5	0.11 (1)	10.00
K- E	0 / 188	-18.5	-18.5	0.09 (1)	10.00

W E B S

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
H- C	-54 / 11	0.05 (1)
H- D	-45 / 0	0.02 (1)
G- D	-316 / 0	0.07 (1)
I- J	-1201 / 0	0.00 (1)
K- L	-143 / 30	0.00 (1)

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 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

CSI: TC=0.45/1.00 (C-J:1) , BC=0.36/1.00 (B-I:1) , WB=0.07/1.00 (D-G:1) , SSI=0.94/1.00 (B-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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.49 (B) (INPUT = 0.90)
JSI METAL= 0.11 (B) (INPUT = 1.00)

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

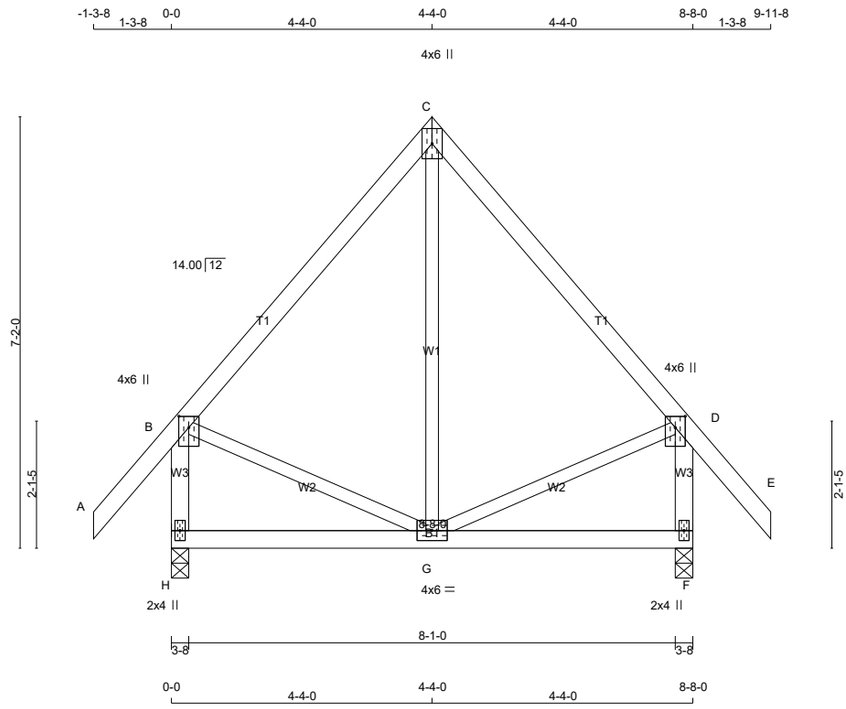
JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.		DRWG NO.
359637K	H118		1	TRUSS DESC.	JT 45147	E24033403

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:09:01 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-EsVQlAYQchjIDAV084xezE4dsmwyx6VhzSfFXxzqZyG

Scale = 1:35.0



TOTAL WEIGHT = 46 lb

[M][F]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - C	2x4	DRY	No.2	SPF
C - E	2x4	DRY	No.2	SPF
H - B	2x4	DRY	No.2	SPF
F - D	2x4	DRY	No.2	SPF
H - F	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+p	MT20	4.0	6.0		
D	TMVW+p	MT20	4.0	6.0	2.25	2.00
F	BMV1+p	MT20	2.0	4.0		
G	BMWWW-t	MT20	4.0	6.0		
H	BMV1+p	MT20	2.0	4.0		

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

LICENSED PROFESSIONAL ENGINEER
Y. WIDYA
100225448
02/28/2024
PROVINCE OF ONTARIO

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
H	527	0	527	0	0	3-8	1-8
F	527	0	527	0	0	3-8	1-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
H	374	241 / 0	0 / 0	0 / 0	0 / 0	133 / 0	0 / 0
F	374	241 / 0	0 / 0	0 / 0	0 / 0	133 / 0	0 / 0

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX UNBRAC LENGTH
A- B	0 / 42	-78.0	-78.0	0.11 (1)	10.00
B- C	-214 / 0	-78.0	-78.0	0.19 (1)	6.25
C- D	-214 / 0	-78.0	-78.0	0.19 (1)	6.25
D- E	0 / 42	-78.0	-78.0	0.11 (1)	10.00
H- B	-497 / 0	0.0	0.0	0.06 (1)	7.81
F- D	-497 / 0	0.0	0.0	0.06 (1)	7.81
H- G	0 / 0	-18.5	-18.5	0.10 (4)	10.00
G- F	0 / 0	-18.5	-18.5	0.10 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
G- C	-13 / 64	0.02 (4)
B- G	0 / 150	0.03 (1)
G- D	0 / 150	0.03 (1)

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 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 (0.29")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.29")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")

CSI: TC=0.19/1.00 (B-C:1) , BC=0.10/1.00 (G-H:4) , WB=0.03/1.00 (B-G:1) , SSI=0.09/1.00 (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

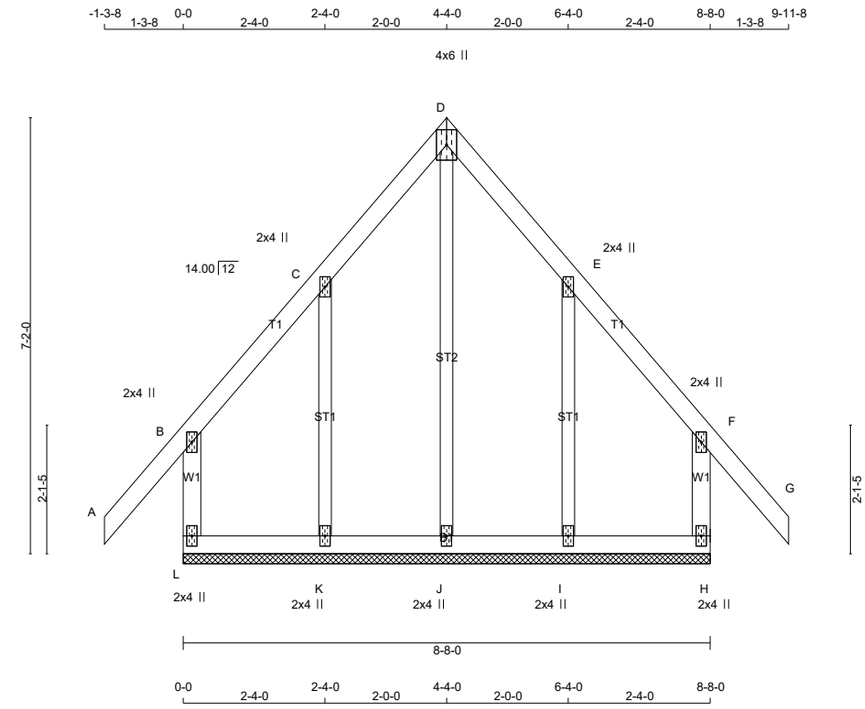
PLATE	GRIP(DRY) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.28 (D) (INPUT = 0.90)
JSI METAL= 0.14 (D) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.		DRWG NO.
359637K	H118G		1	TRUSS DESC.	JT 45147	E24033404



TOTAL WEIGHT = 46 lb

LUMBER
N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - D	2x4	DRY	No.2	SPF
D - G	2x4	DRY	No.2	SPF
L - B	2x4	DRY	No.2	SPF
H - F	2x4	DRY	No.2	SPF
L - H	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
ALL GABLE WEBS	2x3	DRY	No.2	SPF

DRY: SEASONED LUMBER.

GABLE STUDS SPACED AT 2-0-0 OC.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	2.0	4.0		
C	TMW+w	MT20	2.0	4.0		
D	TTW+p	MT20	4.0	6.0		
E	TMW+w	MT20	2.0	4.0		
F	TMV+p	MT20	2.0	4.0		
H	BMV1+p	MT20	2.0	4.0		
I, J, K						
I	BMW1+w	MT20	2.0	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

THIS TRUSS DESIGNED FOR CONTINUOUS BEARINGS.

THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE.

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

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

MEMB. FR-TO	MAX. FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 42	-78.0	-78.0	0.11 (1)	10.00
B- C	-21 / 0	-78.0	-78.0	0.05 (1)	6.25
C- D	-14 / 0	-78.0	-78.0	0.04 (1)	6.25
D- E	-14 / 0	-78.0	-78.0	0.04 (1)	6.25
E- F	-21 / 0	-78.0	-78.0	0.05 (1)	6.25
F- G	0 / 42	-78.0	-78.0	0.11 (1)	10.00
L- B	-213 / 0	0.0	0.0	0.02 (1)	7.81
H- F	-213 / 0	0.0	0.0	0.02 (1)	7.81
L- K	0 / 13	-18.5	-18.5	0.02 (4)	10.00
K- J	0 / 9	-18.5	-18.5	0.02 (4)	10.00
J- I	0 / 9	-18.5	-18.5	0.02 (4)	10.00
I- H	0 / 13	-18.5	-18.5	0.02 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FORCE (LBS)	MAX CSI (LC)
J- D	-142 / 0	0.12 (1)
K- C	-163 / 0	0.06 (1)
I- E	-163 / 0	0.06 (1)

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 BCBC 2018 , NBC-2019AE
- 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

CSI: TC=0.11/1.00 (A-B:1) , BC=0.02/1.00 (K-L:4) , WB=0.12/1.00 (D-J:1) , SSI=0.06/1.00 (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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

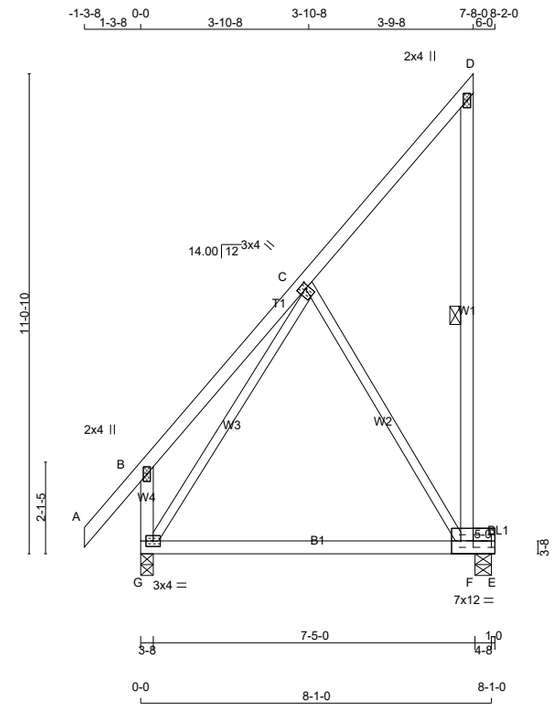
JSI GRIP= 0.18 (F) (INPUT = 0.90)
JSI METAL= 0.11 (B) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.		DRWG NO.
359637K	H119		1	TRUSS DESC.	JT 45147	E24033405

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:09:02 2024 Page 1
ID:hd511hZTz bdeQoS817GKByhVxV-i23oyWY2N?r9rK4CioStWRcnSABffWtrC6Pp3OzqZyF

Scale = 1:48.6



TOTAL WEIGHT = 3 X 51 = 152 lb

LUMBER
N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - D	2x4	DRY	No.2	SPF
F - D	2x4	DRY	No.2	SPF
G - B	2x4	DRY	No.2	SPF
G - E	2x4	DRY	No.2	SPF
BEARING BLOCKS				
BL1	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	TMV+p	MT20	2.0	4.0		
C	TMWW+t	MT20	3.0	4.0	1.50	1.00
D	TMV+p	MT20	2.0	4.0		
F	BMVWK1-t	MT20	7.0	12.0	Edge	2.50
G	BMVW1-t	MT20	3.0	4.0		

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
02/28/2024
PROVINCE OF ONTARIO

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
F	379	0	379	0	0	4-8	4-8
G	479	0	479	0	0	3-8	1-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
F	271	161 / 0	0 / 0	0 / 0	0 / 0	110 / 0	0 / 0
G	339	220 / 0	0 / 0	0 / 0	0 / 0	120 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) F, 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-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 MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH	WEBS MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
A- B	0 / 42	-78.0	-78.0	0.11 (1)		10.00	C- F	-215 / 0	0.22 (1)
B- C	0 / 29	-78.0	-78.0	0.20 (1)		10.00	G- C	-225 / 0	0.22 (1)
C- D	-27 / 0	-78.0	-78.0	0.15 (1)		6.25			
F- D	-118 / 0	0.0	0.0	0.07 (1)		6.25			
G- B	-216 / 0	0.0	0.0	0.03 (1)		7.81			
G- F	0 / 118	-18.5	-18.5	0.32 (4)		10.00			
F- E	0 / 0	-18.5	-18.5	0.01 (4)		10.00			

[M][F]

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 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.(TL)= L/360 (0.26")
CALCULATED VERT. DEFL.(TL) = L/ 591 (0.16")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(TL)= L/120 (0.19")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.00")

CSI: TC=0.20/1.00 (B-C:1) , BC=0.32/1.00 (F-G:4) , WB=0.22/1.00 (C-G:1) , SSI=0.10/1.00 (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

AUTOSOLVE HEELS OFF

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.31 (C) (INPUT = 0.90)
JSI METAL= 0.17 (C) (INPUT = 1.00)

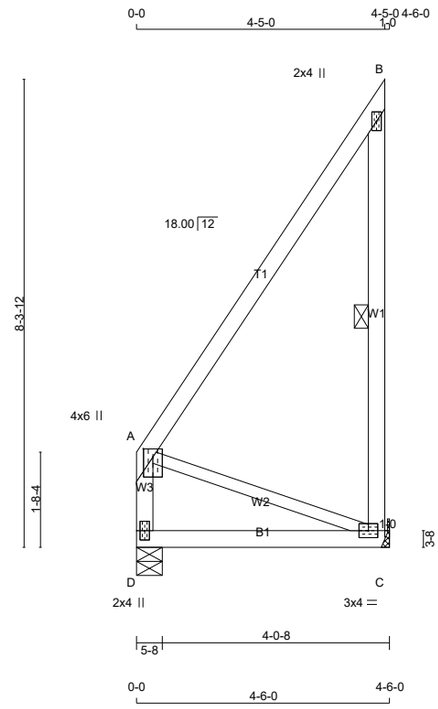
JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H120		1	TRUSS DESC. JT 45147	E24033406

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:09:02 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-i23oyWY2N?r9rK4CioStWRcmVAF4fZGrC6Pp3OzqZyF

Scale = 1:37.5



TOTAL WEIGHT = 5 X 28 = 140 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - B	2x4	DRY	No.2	SPF
C - B	2x4	DRY	No.2	SPF
D - A	2x4	DRY	No.2	SPF
D - C	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	6.0	1.75	2.00
B	TMV+p	MT20	2.0	4.0		
C	BMVW1-t	MT20	3.0	4.0		
D	BMV1+p	MT20	2.0	4.0		

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

LICENSED PROFESSIONAL ENGINEER
Y. WIDYA
100225448
02/28/2024
PROVINCE OF ONTARIO

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG	REQRD BRG
C	213	0	213	0	0	MECHANICAL	
D	213	0	213	0	0	5-8	1-8

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
C	152	93 / 0	0 / 0	0 / 0	0 / 0	59 / 0	0 / 0
D	152	93 / 0	0 / 0	0 / 0	0 / 0	59 / 0	0 / 0

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

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.

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

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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX MAX. UNBRAC LENGTH
A- B	0 / 0	-78.0	-78.0	0.26 (1)	10.00
C- B	-172 / 0	0.0	0.0	0.05 (1)	6.25
D- A	-172 / 0	0.0	0.0	0.02 (1)	7.81
D- C	0 / 0	-18.5	-18.5	0.11 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
A- C	0 / 0	0.00 (1)

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 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.(TL)= L/360 (0.19")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02")

CSI: TC=0.26/1.00 (A-B:1) , BC=0.11/1.00 (C-D:4) , WB=0.00/1.00 (A-C: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 .

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

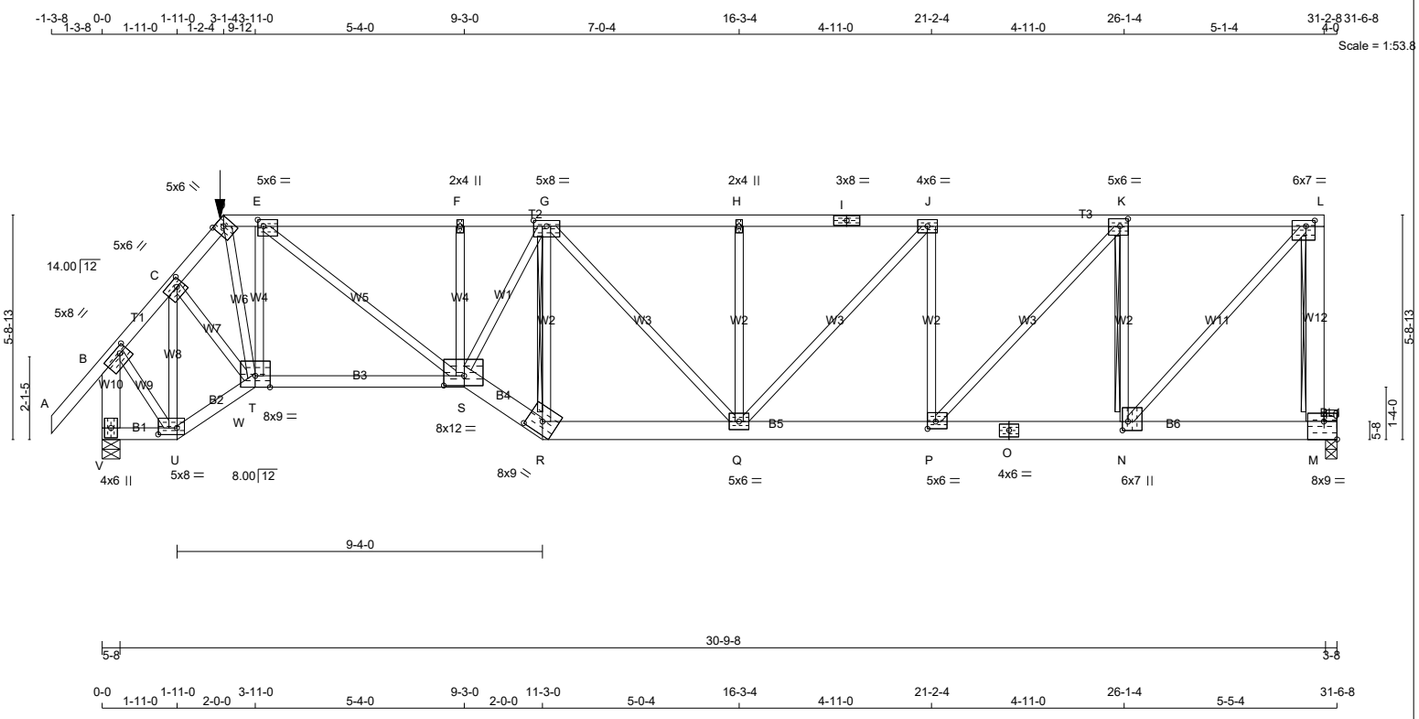
JSI GRIP= 0.16 (C) (INPUT = 0.90)
JSI METAL= 0.08 (B) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.		DRWG NO.
359637K	H251T		1	TRUSS DESC.	JT 45147	E24033407

Alpha Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:09:03 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-AFdAAsZh8Iz0SUfOGVz62f9qTZOYOoa Qm8McqzqZyE



LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - D	2x4	DRY	No.2	SPF
D - I	2x4	DRY	1650F 1.5E	SPF
I - L	2x4	DRY	1650F 1.5E	SPF
M - L	2x6	DRY	No.2	SPF
V - B	2x6	DRY	No.2	SPF
V - U	2x4	DRY	No.2	SPF
U - T	2x4	DRY	No.2	SPF
T - S	2x4	DRY	1650F 1.5E	SPF
S - R	2x6	DRY	No.2	SPF
R - O	2x6	DRY	No.2	SPF
O - M	2x6	DRY	No.2	SPF
BEARING BLOCKS				
BL1	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-t	MT20	5.0	8.0	1.75	2.50
C	TMWW-t	MT20	5.0	6.0	2.25	2.00
D	TTW+h	MT20	5.0	6.0	Edge	
E	TMWW-t	MT20	5.0	6.0	2.00	1.75
F	TMW+w	MT20	2.0	4.0		
G	TMWWW-t	MT20	5.0	8.0	1.75	4.00
H	TMW+w	MT20	2.0	4.0		
I	TS-t	MT20	3.0	8.0		
J	TMWW-t	MT20	4.0	6.0		
K	TMWW-t	MT20	5.0	6.0	2.25	2.50
L	TMVW-t	MT20	6.0	7.0	1.75	2.75
M	BMVK1-t	MT20	8.0	9.0	5.50	Edge
N	BMWW+t	MT20	6.0	7.0	2.75	1.75
O	BS-t	MT20	4.0	6.0		
P	BMWW-t	MT20	5.0	6.0	2.25	2.50
Q	BMWWW-t	MT20	5.0	6.0		
R	BBW-h	MT20	8.0	9.0	3.50	4.50
S	BBWWW-p	MT20	8.0	12.0	3.00	6.25
T	BBWWW-p	MT20	8.0	9.0	Edge	
U	BBWW-l	MT20	5.0	8.0	2.00	5.75
V	BMV1+p	MT20	4.0	6.0		

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
02/28/2024
PROVINCE OF ONTARIO

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
M	3221	0	3221	0	0	3-8	3-8
V	3224	0	3224	0	0	5-8	5-0

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	SNOW	MAX./MIN. COMPONENT REACTIONS LIVE	PERM.LIVE	WIND	DEAD	SOIL
M	2296	1407 / 0	0 / 0	0 / 0	0 / 0	889 / 0	0 / 0
V	2298	1408 / 0	0 / 0	0 / 0	0 / 0	890 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.12 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 L-M
2x4 DRY SPF No.2 T-BRACE AT G-R, K-N

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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD LC1 (PLF) FROM	TO	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 42	-78.0	-78.0	0.12 (1)	10.00
B- C	-2236 / 0	-78.0	-78.0	0.18 (1)	4.37
C- D	-3477 / 0	-78.0	-78.0	0.25 (1)	3.52
D- E	-2716 / 0	-165.7	-165.7	0.18 (1)	4.56
E- F	-5155 / 0	-78.0	-78.0	0.50 (1)	3.27
F- G	-5148 / 0	-165.7	-165.7	0.49 (1)	3.12
G- H	-4654 / 0	-165.7	-165.7	0.67 (1)	3.15
H- I	-4654 / 0	-165.7	-165.7	0.67 (1)	3.15
I- J	-4654 / 0	-165.7	-165.7	0.67 (1)	3.15
J- K	-4039 / 0	-165.7	-165.7	0.76 (1)	3.16
K- L	-2530 / 0	-165.7	-165.7	0.65 (1)	4.02
M- L	-3139 / 0	0.0	0.0	0.69 (1)	7.39
V- B	-3187 / 0	0.0	0.0	0.27 (1)	5.88
V- U	0 / 0	-39.3	-39.3	0.05 (4)	10.00
U- W	0 / 1633	-39.3	-39.3	0.32 (1)	10.00
W- T	0 / 1633	-39.3	-39.3	0.32 (1)	10.00
T- S	0 / 2773	-127.0	-127.0	0.92 (1)	10.00
S- R	0 / 5123	-39.3	-39.3	0.68 (1)	10.00
R- Q	0 / 4355	-39.3	-39.3	0.67 (1)	10.00
Q- P	0 / 4039	-39.3	-39.3	0.62 (1)	10.00
P- O	0 / 2530	-39.3	-39.3	0.39 (1)	10.00
O- N	0 / 2530	-39.3	-39.3	0.39 (1)	10.00
N- M	-134 / 0	-39.3	-39.3	0.11 (4)	6.25

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
U- C	-2105 / 0	0.58 (1)
C- T	0 / 1392	0.34 (1)
D- T	0 / 2365	0.59 (1)
T- E	-2128 / 0	0.64 (1)
E- S	0 / 3011	0.75 (1)
S- F	-281 / 0	0.08 (1)
S- G	0 / 1829	0.45 (1)
R- G	-2616 / 0	0.65 (1)
B- U	0 / 1905	0.47 (1)
G- Q	0 / 443	0.11 (1)
Q- H	-839 / 0	0.40 (1)
Q- J	0 / 911	0.23 (1)
P- J	-1448 / 0	0.70 (1)
P- K	0 / 2231	0.55 (1)
N- K	-2587 / 0	0.64 (1)
N- L	0 / 3863	0.96 (1)

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
D	3-1-4	-202	-202	---	FRONT	VERT	TOTAL	---	C1

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 = 3-1-4
RIGHT 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
- ADDT'L LOADS BASED ON 55 % OF GSL.
LOADS APPLIED TO FIRST 3-11-0 OF SPAN MEASURED FROM THE LEFT.

GIRDER TYPE: CStdGirder
START DISTANCE = 3-11-0
START SPAN CARRIED = 6-6-0
END DISTANCE = 9-3-0
END SPAN CARRIED = 6-6-0
END WALL WIDTH = 0-0
APPLIED TO FRONT SIDE OF BOTTOM CHORD.
- ADDT'L LOADS BASED ON 55 % OF GSL. (DEFINED BY USER)

GIRDER TYPE: CPrimeHip
LEFT SETBACK = 3-1-4
RIGHT 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
- ADDT'L LOADS BASED ON 55 % OF GSL.
LOADS APPLIED TO FIRST 22-3-8 OF SPAN MEASURED FROM THE RIGHT.

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

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 (1.03")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.27")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL) = L/ 667 (0.56")

CSI: TC=0.76/1.00 (J-K:1) , BC=0.92/1.00 (S-T:1) , WB=0.96/1.00 (L-N:1) , SSI=0.43/1.00 (K-L: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 .

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

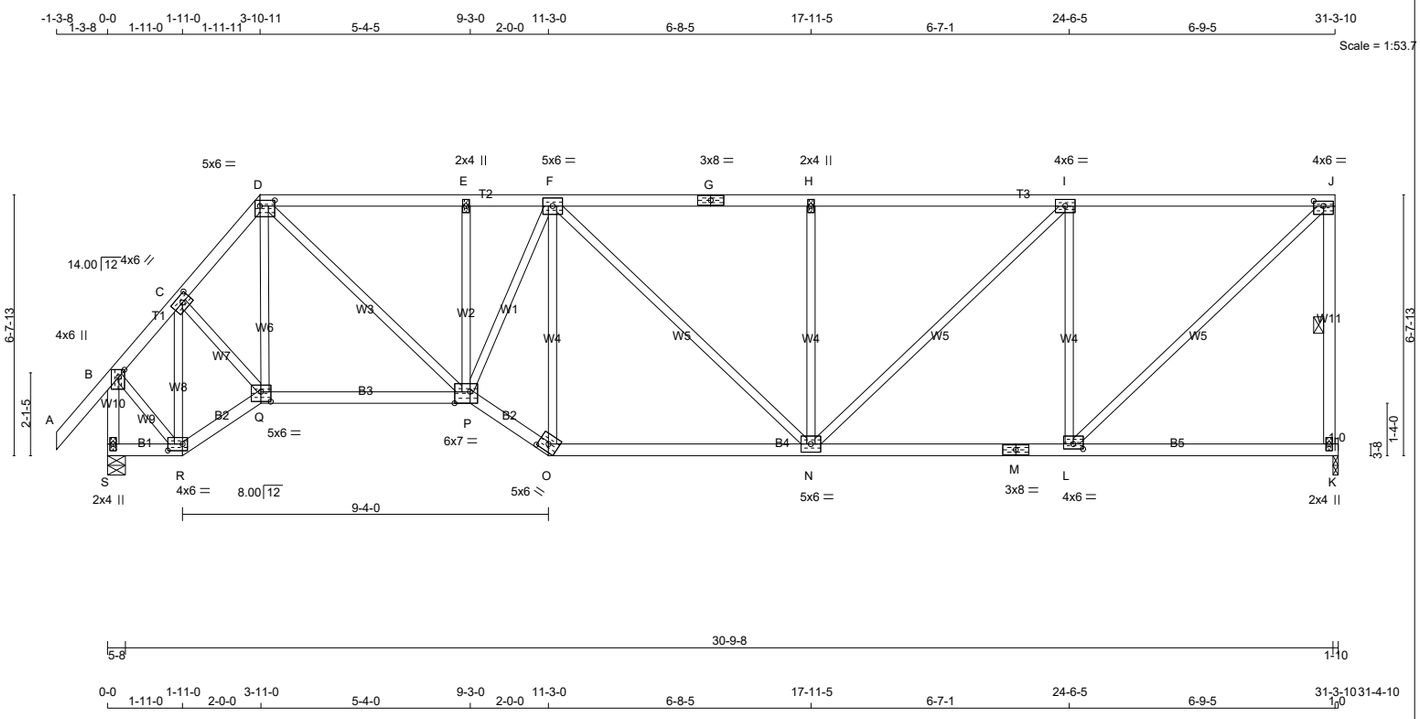
JSI GRIP= 0.89 (K) (INPUT = 0.90)
JSI METAL= 0.95 (S) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.		DRWG NO.
359637K	H252T		1	TRUSS DESC.	JT 45147	E24033408

Alpha Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:09:04 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-eRBYNCaJvc6t4eEapDULbsi0pztG7H67fQuw8GzqZyD



TOTAL WEIGHT = 148 lb

[M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - D	2x4	DRY	No.2	SPF
D - G	2x4	DRY	No.2	SPF
G - J	2x4	DRY	No.2	SPF
K - J	2x4	DRY	No.2	SPF
S - B	2x4	DRY	No.2	SPF
S - R	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 - M	2x4	DRY	No.2	SPF
M - K	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	1.75
C	TMWW-t	MT20	4.0	6.0	2.00	2.75
D	TTWW-l	MT20	5.0	6.0	1.75	4.50
E	TMW+w	MT20	2.0	4.0		
F	TMWWW-t	MT20	5.0	6.0		
G	TS-t	MT20	3.0	8.0		
H	TMW+w	MT20	2.0	4.0		
I	TMWW-t	MT20	4.0	6.0		
J	TMVW-t	MT20	4.0	6.0	1.50	3.00
K	BMV1+p	MT20	2.0	4.0		
L	BMWW-t	MT20	4.0	6.0	1.50	3.00
M	BS-t	MT20	3.0	8.0		
N	BMWWW-t	MT20	5.0	6.0		
O	BBW-h	MT20	5.0	6.0	2.25	3.00
P	BBWWW-p	MT20	6.0	7.0	Edge	4.75
Q	BBWW-l	MT20	5.0	6.0	3.00	3.00
R	BBWW-l	MT20	4.0	6.0	2.00	4.50
S	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

LICENSED PROFESSIONAL ENGINEER
Y. WIDYA
100225448
02/28/2024
PROVINCE OF ONTARIO

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
K	1507	0	1507	0	0	1-10	1-10
S	1622	0	1622	0	0	5-8	1-12

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
K	1075	656 / 0	0 / 0	0 / 0	0 / 0	419 / 0	0 / 0
S	1154	717 / 0	0 / 0	0 / 0	0 / 0	437 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.16 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 J-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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 42	-78.0	-78.0	0.11 (1)	10.00
B- C	-1059 / 0	-78.0	-78.0	0.12 (1)	5.98
C- D	-1585 / 0	-78.0	-78.0	0.08 (1)	5.18
D- E	-1986 / 0	-78.0	-78.0	0.37 (1)	4.43
E- F	-1980 / 0	-78.0	-78.0	0.34 (1)	4.41
F- G	-1866 / 0	-78.0	-78.0	0.51 (1)	4.40
G- H	-1866 / 0	-78.0	-78.0	0.51 (1)	4.40
H- I	-1866 / 0	-78.0	-78.0	0.65 (1)	4.16
I- J	-1326 / 0	-78.0	-78.0	0.59 (1)	4.83
K- J	-1456 / 0	0.0	0.0	0.30 (1)	5.42
S- B	-1604 / 0	0.0	0.0	0.19 (1)	6.52
S- R	0 / 0	-18.5	-18.5	0.02 (4)	10.00
R- Q	0 / 772	-18.5	-18.5	0.14 (1)	10.00
Q- P	0 / 1022	-18.5	-18.5	0.25 (1)	10.00
P- O	0 / 2078	-18.5	-18.5	0.35 (1)	10.00
O- N	0 / 1746	-18.5	-18.5	0.38 (1)	10.00
N- M	0 / 1326	-18.5	-18.5	0.32 (1)	10.00
M- L	0 / 1326	-18.5	-18.5	0.32 (1)	10.00
L- K	0 / 0	-18.5	-18.5	0.19 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
R- C	-995 / 0	0.26 (1)
C- Q	0 / 590	0.13 (1)
D- P	0 / 1315	0.30 (1)
P- E	-273 / 0	0.11 (1)
P- F	0 / 649	0.15 (1)
O- F	-1079 / 0	0.79 (1)
B- R	0 / 900	0.20 (1)
F- N	0 / 166	0.04 (1)
N- H	-508 / 0	0.37 (1)
N- I	0 / 750	0.17 (1)
L- I	-1108 / 0	0.81 (1)
L- J	0 / 1819	0.41 (1)
D- Q	0 / 69	0.02 (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 BCBC 2018 , NBC-2019AE
- 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 (0.09")
ALLOWABLE DEFL.(TL)= L/360 (1.04")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.23")

CSI: TC=0.65/1.00 (H-I:1) , BC=0.38/1.00 (N-O:1) , WB=0.81/1.00 (I-L:1) , SSI=0.25/1.00 (I-J: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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

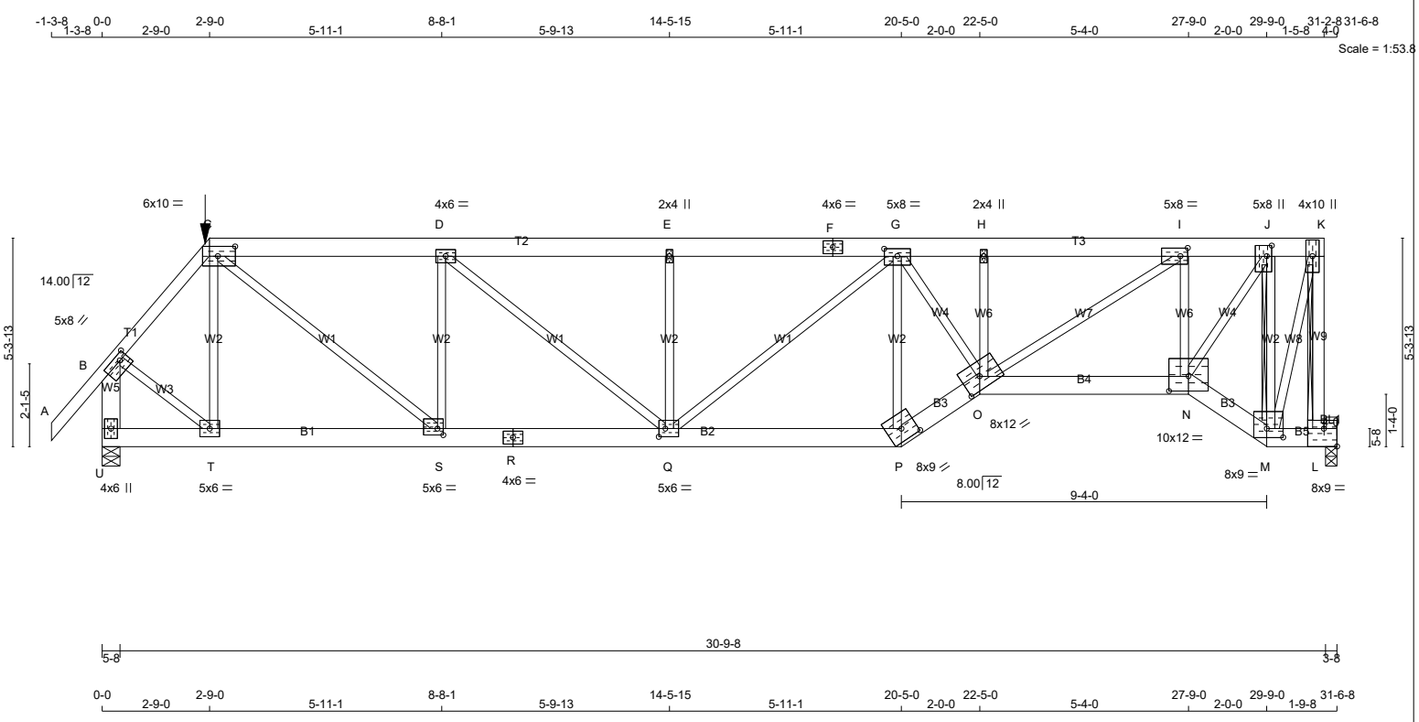
JSI GRIP= 0.89 (R) (INPUT = 0.90)
JSI METAL= 0.52 (P) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.		DRWG NO.
359637K	H355A		1	TRUSS DESC.	JT 45147	E24033409

Alpha Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:09:04 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-eRBYNCaJvc6t4eEapDULbsi?izn37E87fQuw8GzqZyD



TOTAL WEIGHT = 183 lb

[M]

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 - K	2x6	DRY	No.2	SPF
L - K	2x4	DRY	No.2	SPF
U - B	2x6	DRY	No.2	SPF
U - 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
BEARING BLOCKS				
BL1	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-t	MT20	5.0	8.0	1.75	2.50
C	TTWW-l	MT20	6.0	10.0	3.00	5.25
D	TMWW-t	MT20	4.0	6.0		
E	TMW+w	MT20	2.0	4.0		
F	TS-t	MT20	4.0	6.0		
G	TMWWW-t	MT20	5.0	8.0	2.25	4.00
H	TMW+w	MT20	2.0	4.0		
I	TMWW-t	MT20	5.0	8.0	2.50	2.25
J	TMWW+t	MT20	5.0	8.0	3.25	1.50
K	TMVW+p	MT20	4.0	10.0		
L	BMVK1-t	MT20	8.0	9.0	5.50	Edge
M	BBWW-l	MT20	8.0	9.0	2.75	5.00
N	BBWW-l	MT20	10.0	12.0	4.50	6.00
O	BBWWW-h	MT20	8.0	12.0	3.75	5.50
P	BBW-h	MT20	8.0	9.0	3.50	4.50
Q	BMWWW-t	MT20	5.0	6.0	2.50	2.00
R	BS-t	MT20	4.0	6.0		
S	BMWW-t	MT20	5.0	6.0	2.00	1.75
T	BMWW-t	MT20	5.0	6.0		
U	BMV1+p	MT20	4.0	6.0		

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
L	2964	0	2964	0	0	3-8	3-8
U	3000	0	3000	0	0	5-8	4-4

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
L	2113	1291 / 0	0 / 0	0 / 0	0 / 0	822 / 0	0 / 0
U	2138	1311 / 0	0 / 0	0 / 0	0 / 0	827 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.41 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 K-L, J-M

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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FROM (PLF)	TO (PLF)	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 42	-78.0	-78.0	0.12 (1)	10.00	
B- C	-2443 / 0	-78.0	-78.0	0.21 (1)	4.20	
C- D	-3920 / 0	-153.5	-153.5	0.50 (1)	3.83	
D- E	-4774 / 0	-153.5	-153.5	0.56 (1)	3.45	
E- F	-4774 / 0	-153.5	-153.5	0.46 (1)	3.58	
F- G	-4774 / 0	-153.5	-153.5	0.46 (1)	3.58	
G- H	-5204 / 0	-78.0	-78.0	0.46 (1)	3.41	
H- I	-5203 / 0	-78.0	-78.0	0.41 (1)	3.50	
I- J	-2536 / 0	-78.0	-78.0	0.37 (1)	4.75	
J- K	-669 / 0	-153.5	-153.5	0.33 (1)	6.25	
L- K	-2940 / 0	0.0	0.0	0.73 (1)	6.55	
U- B	-2995 / 0	0.0	0.0	0.25 (1)	6.04	
U- T	0 / 0	-36.4	-36.4	0.12 (4)	10.00	
T- S	0 / 1576	-36.4	-36.4	0.30 (1)	10.00	
S- R	0 / 3920	-36.4	-36.4	0.60 (1)	10.00	
R- Q	0 / 3920	-36.4	-36.4	0.60 (1)	10.00	
Q- P	0 / 4359	-36.4	-36.4	0.67 (1)	10.00	
P- O	0 / 5171	-112.0	-112.0	0.71 (1)	10.00	
O- N	0 / 2607	-112.0	-112.0	0.63 (1)	10.00	
N- M	0 / 732	-112.0	-112.0	0.14 (1)	10.00	
M- L	-88 / 0	-36.4	-36.4	0.01 (4)	6.25	

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
C- T	-703 / 0	0.27 (1)
C- S	0 / 3032	0.75 (1)
S- D	-1726 / 0	0.65 (1)
D- Q	0 / 1113	0.28 (1)
Q- E	-861 / 0	0.33 (1)
Q- G	0 / 541	0.13 (1)
P- G	-2637 / 0	1.00 (1)
G- O	0 / 1752	0.43 (1)
O- H	0 / 44	0.02 (4)
O- I	0 / 3125	0.77 (1)
N- I	-2392 / 0	0.55 (1)
N- J	0 / 3742	0.93 (1)
M- J	-2784 / 0	0.90 (1)
M- K	0 / 2623	0.65 (1)
B- T	0 / 1840	0.46 (1)

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
C	2-9-0	-156	-156	---	FRONT	VERT	TOTAL	---	C1

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 = 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
- ADDT'L LOADS BASED ON 55 % OF GSL.
LOADS APPLIED TO FIRST 20-5-0 OF SPAN MEASURED FROM THE LEFT.

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
- ADDT'L LOADS BASED ON 55 % OF GSL.
LOADS APPLIED TO FIRST 1-9-8 OF SPAN MEASURED FROM THE RIGHT.

GIRDER TYPE: CStdGirder
START DISTANCE = 20-5-0
START SPAN CARRIED = 5-10-8
END DISTANCE = 29-9-0
END SPAN CARRIED = 5-10-8
END WALL WIDTH = 0-0
APPLIED TO FRONT SIDE OF BOTTOM CHORD.
- 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 , 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 (0.21")
ALLOWABLE DEFL.(TL)= L/360 (1.04")
CALCULATED VERT. DEFL.(TL) = L/ 879 (0.42")

CSI: TC=0.73/1.00 (K-L:1) , BC=0.71/1.00 (O-P:1) , WB=1.00/1.00 (G-P:1) , SSI=0.36/1.00 (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

AUTOSOLVE RIGHT HEEL ONLY

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

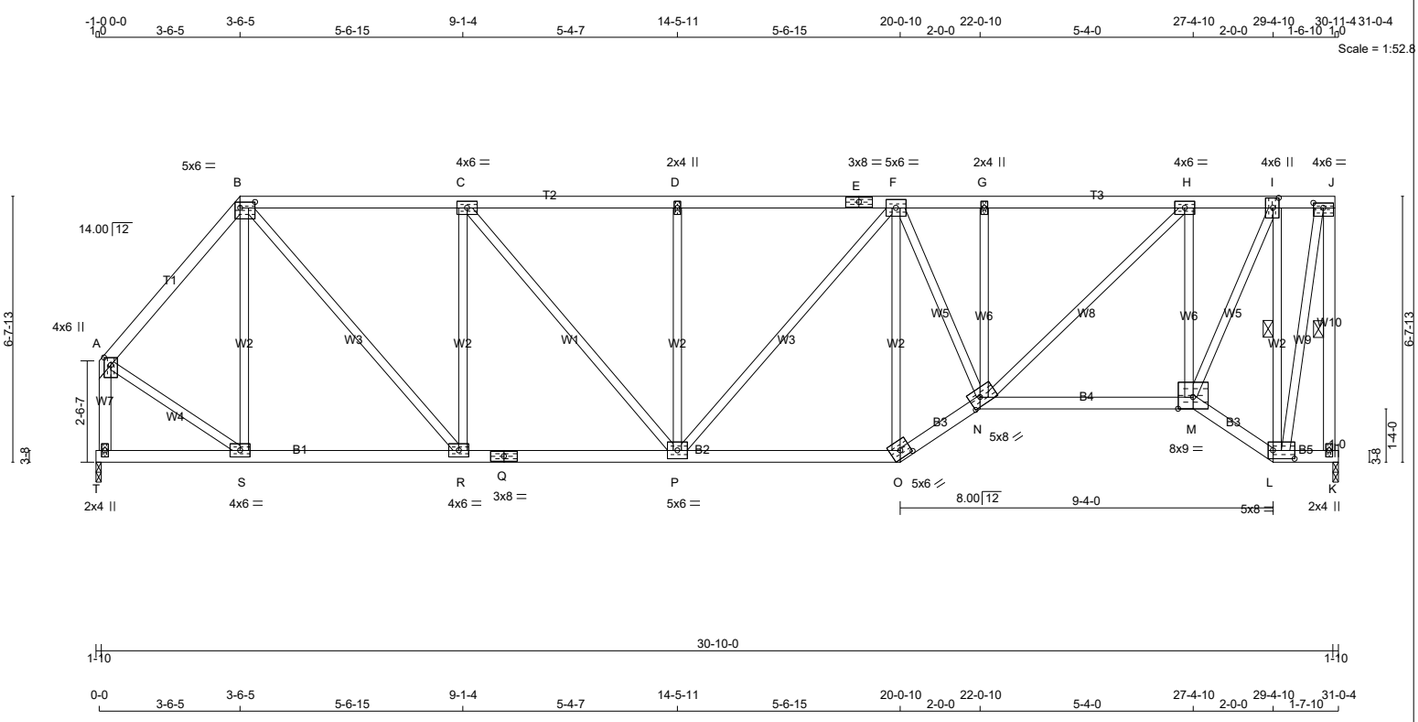
JSI GRIP= 0.90 (I) (INPUT = 0.90)
JSI METAL= 0.97 (R) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	H356T		1	TRUSS DESC. JT 45147	E24033410

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:09:05 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-6dkwaYbxgwEkiopnNw?a84EFFND5sl1Hu4dTgizqZyC



TOTAL WEIGHT = 158 lb

[M]

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 - J	2x4	DRY	No.2	SPF
K - J	2x4	DRY	No.2	SPF
T - A	2x4	DRY	No.2	SPF
T - Q	2x4	DRY	No.2	SPF
Q - O	2x4	DRY	No.2	SPF
O - N	2x4	DRY	No.2	SPF
N - M	2x4	DRY	No.2	SPF
M - L	2x4	DRY	No.2	SPF
L - K	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-l	MT20	5.0	6.0	1.75	4.50
C	TMWW-t	MT20	4.0	6.0		
D	TMW+w	MT20	2.0	4.0		
E	TS-t	MT20	3.0	8.0		
F	TMWWW-t	MT20	5.0	6.0		
G	TMW+w	MT20	2.0	4.0		
H	TMWW-t	MT20	4.0	6.0		
I	TMWW+t	MT20	4.0	6.0	3.00	1.75
J	TMVW-t	MT20	4.0	6.0	1.50	3.00
K	BMV1+p	MT20	2.0	4.0		
L	BBWW-l	MT20	5.0	8.0	2.50	6.50
M	BBWW-l	MT20	8.0	9.0	Edge	
N	BBWWW-h	MT20	5.0	8.0	2.50	3.25
O	BBW-h	MT20	5.0	6.0	2.25	3.00
P	BMWWW-t	MT20	5.0	6.0		
Q	BS-t	MT20	3.0	8.0		
R	BMWW-t	MT20	4.0	6.0		
S	BMWW-t	MT20	4.0	6.0		
T	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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
K	1492	0	1492	0	0	1-10	1-10
T	1492	0	1492	0	0	1-10	1-10

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
K	1064	649 / 0	0 / 0	0 / 0	0 / 0	415 / 0	0 / 0
T	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) K, T

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.50 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 J-K, I-L.

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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX. UNBRAC LENGTH
A- B	-1161 / 0	-78.0	-78.0	0.20 (1)	5.69
B- C	-1551 / 0	-78.0	-78.0	0.40 (1)	4.83
C- D	-1842 / 0	-78.0	-78.0	0.42 (1)	4.50
D- E	-1842 / 0	-78.0	-78.0	0.33 (1)	4.62
E- F	-1842 / 0	-78.0	-78.0	0.33 (1)	4.62
F- G	-1903 / 0	-78.0	-78.0	0.25 (1)	4.62
G- H	-1908 / 0	-78.0	-78.0	0.29 (1)	4.61
H- I	-962 / 0	-78.0	-78.0	0.22 (1)	6.05
I- J	-335 / 0	-78.0	-78.0	0.10 (1)	6.25
K- J	-1478 / 0	0.0	0.0	0.30 (1)	5.39
T- A	-1471 / 0	0.0	0.0	0.20 (1)	6.75
T- S	0 / 0	-18.5	-18.5	0.10 (4)	10.00
S- R	0 / 746	-18.5	-18.5	0.18 (1)	10.00
R- Q	0 / 1551	-18.5	-18.5	0.31 (1)	10.00
Q- P	0 / 1551	-18.5	-18.5	0.31 (1)	10.00
P- O	0 / 1689	-18.5	-18.5	0.34 (1)	10.00
O- N	0 / 2009	-18.5	-18.5	0.34 (1)	10.00
N- M	0 / 989	-18.5	-18.5	0.25 (1)	10.00
M- L	0 / 372	-18.5	-18.5	0.07 (1)	10.00
L- K	0 / 0	-18.5	-18.5	0.01 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
S- B	-351 / 0	0.26 (1)
O- F	-1048 / 0	0.77 (1)
F- N	0 / 597	0.13 (1)
N- G	-249 / 0	0.10 (1)
N- H	0 / 1273	0.29 (1)
M- H	-1281 / 0	0.54 (1)
M- I	0 / 1686	0.38 (1)
L- I	-1544 / 0	0.44 (1)
L- J	0 / 1410	0.32 (1)
A- S	0 / 875	0.20 (1)
B- R	0 / 1217	0.27 (1)
R- C	-815 / 0	0.60 (1)
C- P	0 / 451	0.10 (1)
P- D	-417 / 0	0.31 (1)
P- F	0 / 235	0.05 (1)

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 , 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 (0.10")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.22")

CSI: TC=0.42/1.00 (C-D:1) , BC=0.34/1.00 (O-P:1) , WB=0.77/1.00 (F-O:1) , SSI=0.20/1.00 (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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

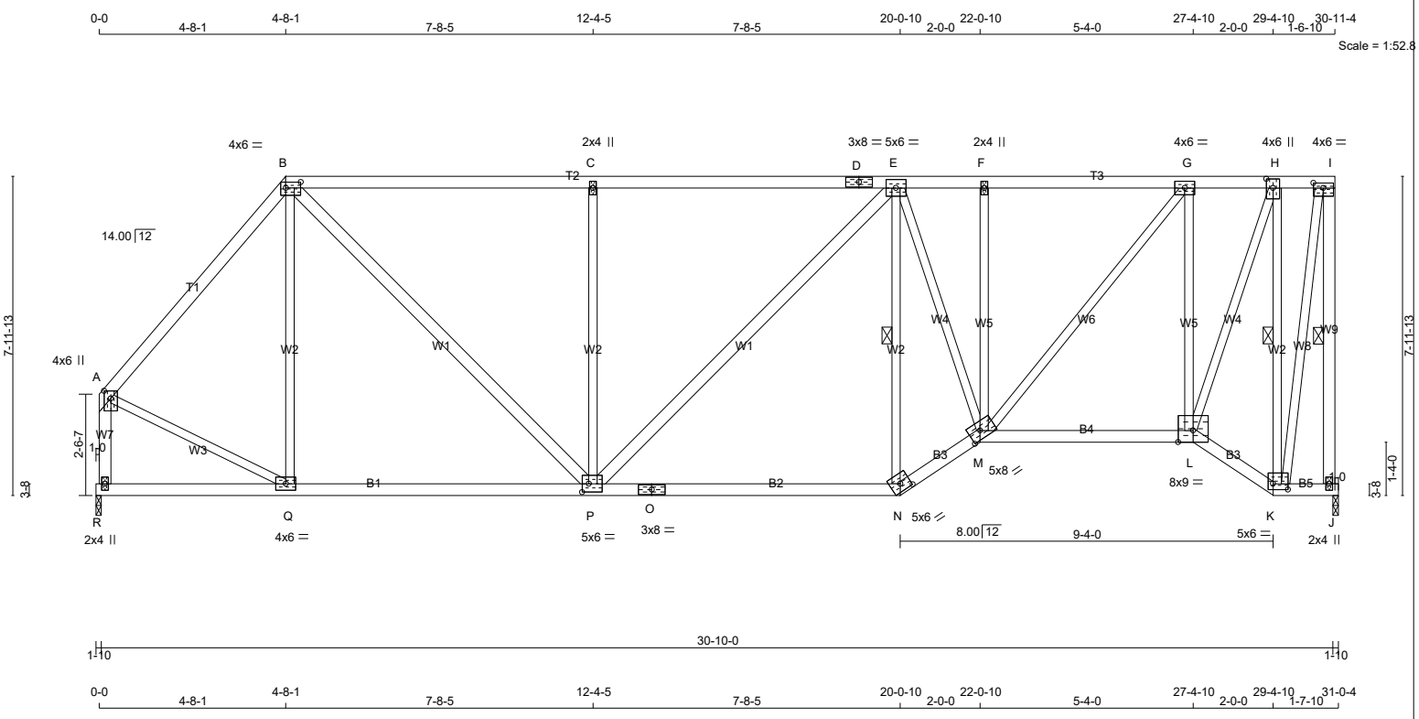
JSI GRIP= 0.89 (I) (INPUT = 0.90)
JSI METAL= 0.44 (Q) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.		DRWG NO.
359637K	H357T		1	TRUSS DESC.	JT 45147	E24033411

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:09:06 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-apIJotcZRDMbJyOzxeXpqHnJjnYMb9bQ6kN0C9zqZyB



TOTAL WEIGHT = 171 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - B	2x4	DRY	No.2	SPF
B - D	2x4	DRY	No.2	SPF
D - I	2x4	DRY	No.2	SPF
J - I	2x4	DRY	No.2	SPF
R - A	2x4	DRY	No.2	SPF
R - O	2x4	DRY	No.2	SPF
O - N	2x4	DRY	No.2	SPF
N - M	2x4	DRY	No.2	SPF
M - L	2x4	DRY	No.2	SPF
L - K	2x4	DRY	No.2	SPF
K - J	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				
B - P	2x4	DRY	No.2	SPF
P - E	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-I	MT20	4.0	6.0	1.75	4.50
C	TMW+w	MT20	2.0	4.0		
D	TS-t	MT20	3.0	8.0		
E	TMWWW-t	MT20	5.0	6.0		
F	TMW+w	MT20	2.0	4.0		
G	TMWW-t	MT20	4.0	6.0		
H	TMWW+t	MT20	4.0	6.0	2.75	2.00
I	TMVW-t	MT20	4.0	6.0	1.50	3.00
J	BMV1+p	MT20	2.0	4.0		
K	BBWW-I	MT20	5.0	6.0	1.75	4.50
L	BBWW-I	MT20	8.0	9.0	Edge	
M	BBWWW-h	MT20	5.0	8.0	2.50	3.50
N	BBW-h	MT20	5.0	6.0	2.25	3.00
O	BS-t	MT20	3.0	8.0		
P	BMWWW-t	MT20	5.0	6.0	2.50	2.00
Q	BMWW-t	MT20	4.0	6.0		
R	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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
J	1492	0	1492	0	0	1-10	1-10
R	1492	0	1492	0	0	1-10	1-10

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
J	1064	649 / 0	0 / 0	0 / 0	0 / 0	415 / 0	0 / 0
R	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) J, R

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.05 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 I-J, E-N, 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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX MAX. UNBRAC LENGTH
A- B	-1213 / 0	-78.0	-78.0	0.36 (1)	5.40
B- C	-1518 / 0	-78.0	-78.0	0.88 (1)	4.05
C- D	-1518 / 0	-78.0	-78.0	0.88 (1)	4.05
D- E	-1518 / 0	-78.0	-78.0	0.88 (1)	4.05
E- F	-1502 / 0	-78.0	-78.0	0.36 (1)	4.89
F- G	-1506 / 0	-78.0	-78.0	0.26 (1)	5.08
G- H	-760 / 0	-78.0	-78.0	0.21 (1)	6.25
H- I	-276 / 0	-78.0	-78.0	0.11 (1)	6.25
J- I	-1478 / 0	0.0	0.0	0.42 (1)	5.39
R- A	-1462 / 0	0.0	0.0	0.20 (1)	6.77
R- Q	0 / 0	-18.5	-18.5	0.15 (4)	10.00
Q- P	0 / 783	-18.5	-18.5	0.35 (4)	10.00
P- O	0 / 1408	-18.5	-18.5	0.40 (4)	10.00
O- N	0 / 1408	-18.5	-18.5	0.40 (4)	10.00
N- M	0 / 1679	-18.5	-18.5	0.28 (1)	10.00
M- L	0 / 781	-18.5	-18.5	0.23 (4)	10.00
L- K	0 / 307	-18.5	-18.5	0.06 (1)	10.00
K- J	0 / 0	-18.5	-18.5	0.01 (4)	10.00

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
Q- B	-233 / 0	0.28 (1)
B- P	0 / 1038	0.17 (1)
P- C	-686 / 0	0.83 (1)
P- E	0 / 157	0.03 (1)
N- E	-853 / 0	0.34 (1)
E- M	0 / 336	0.08 (1)
M- F	-199 / 0	0.15 (1)
M- G	0 / 1139	0.26 (1)
L- G	-1283 / 0	0.94 (1)
L- H	0 / 1602	0.36 (1)
K- H	-1503 / 0	0.60 (1)
K- I	0 / 1393	0.31 (1)
A- Q	0 / 863	0.19 (1)

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 , 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 (0.23")

CSI: TC=0.88/1.00 (B-C:1) , BC=0.40/1.00 (N-P:4) , WB=0.94/1.00 (G-L:1) , SSI=0.28/1.00 (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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

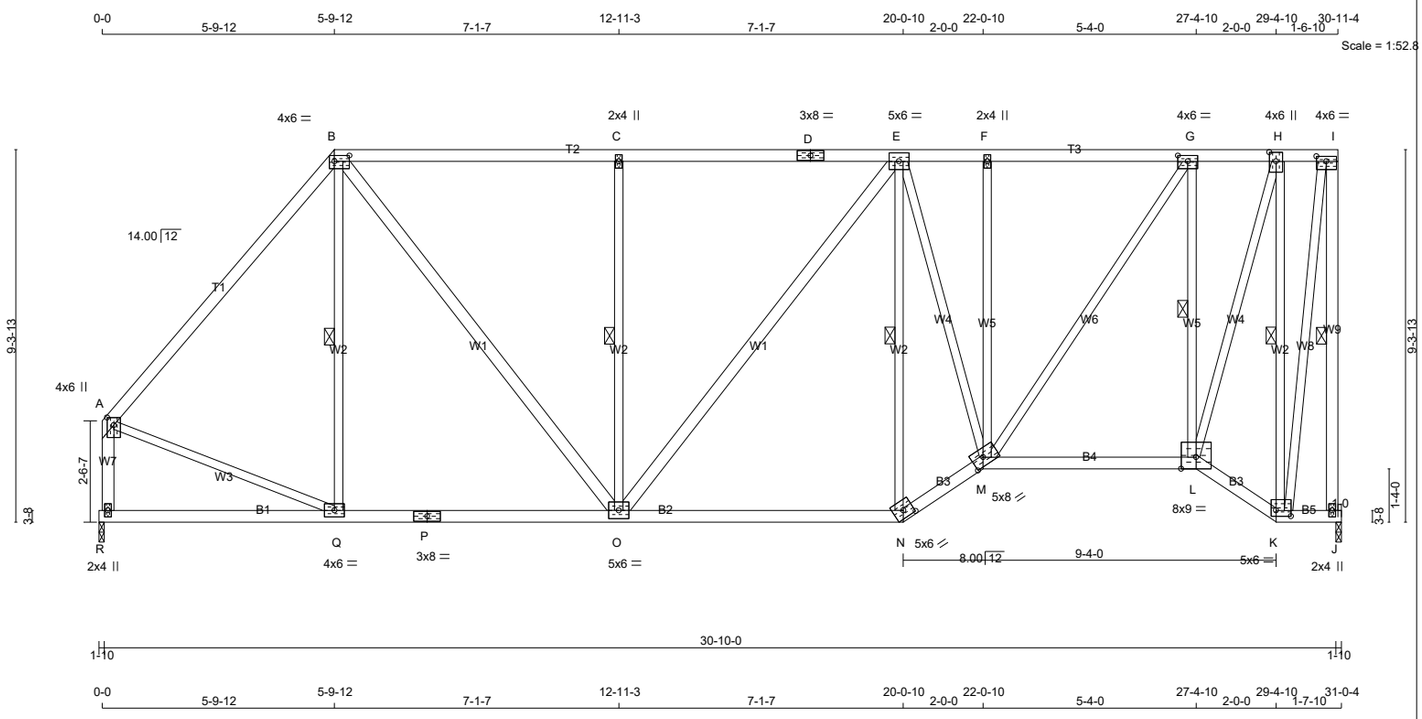
JSI GRIP= 0.90 (K) (INPUT = 0.90)
JSI METAL= 0.45 (A) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.		DRWG NO.
359637K	H358T		1	TRUSS DESC.	JT 45147	E24033412

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:09:06 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-apIJotcZRDMbJyOzxeXpqHnLWnZObA6Q6kN0C9zqZyB



TOTAL WEIGHT = 186 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
A - B	2x4	DRY	No.2	SPF
B - D	2x4	DRY	No.2	SPF
D - I	2x4	DRY	No.2	SPF
J - I	2x4	DRY	No.2	SPF
R - A	2x4	DRY	No.2	SPF
R - P	2x4	DRY	No.2	SPF
P - N	2x4	DRY	No.2	SPF
N - M	2x4	DRY	No.2	SPF
M - L	2x4	DRY	No.2	SPF
L - K	2x4	DRY	No.2	SPF
K - J	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				
B - O	2x4	DRY	No.2	SPF
O - E	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-I	MT20	4.0	6.0	1.75	4.50
C	TMW+w	MT20	2.0	4.0		
D	TS-t	MT20	3.0	8.0		
E	TMWWW-t	MT20	5.0	6.0		
F	TMW+w	MT20	2.0	4.0		
G	TMWW-t	MT20	4.0	6.0	1.75	3.00
H	TMWW+t	MT20	4.0	6.0	2.75	2.00
I	TMVW-t	MT20	4.0	6.0	1.50	3.00
J	BMV1+p	MT20	2.0	4.0		
K	BBWW-I	MT20	5.0	6.0	1.75	4.50
L	BBWW-I	MT20	8.0	9.0	Edge	
M	BBWWW-h	MT20	5.0	8.0	2.50	3.50
N	BBW-h	MT20	5.0	6.0	2.25	3.00
O	BMWWW-t	MT20	5.0	6.0		
P	BS-t	MT20	3.0	8.0		
Q	BMWW-t	MT20	4.0	6.0		
R	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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
J	1492	0	1492	0	0	1-10	1-10
R	1492	0	1492	0	0	1-10	1-10

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
J	1064	649 / 0	0 / 0	0 / 0	0 / 0	415 / 0	0 / 0
R	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) J, R

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.65 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 I-J, B-Q, C-O, E-N, G-L, 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

MEMB. FR-TO	FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	-1225 / 0	-78.0	-78.0	0.61 (1)	5.08	
B- C	-1301 / 0	-78.0	-78.0	0.70 (1)	4.65	
C- D	-1301 / 0	-78.0	-78.0	0.70 (1)	4.65	
D- E	-1301 / 0	-78.0	-78.0	0.70 (1)	4.65	
E- F	-1243 / 0	-78.0	-78.0	0.30 (1)	5.36	
F- G	-1246 / 0	-78.0	-78.0	0.23 (1)	5.50	
G- H	-627 / 0	-78.0	-78.0	0.20 (1)	6.25	
H- I	-235 / 0	-78.0	-78.0	0.12 (1)	6.25	
J- I	-1478 / 0	0.0	0.0	0.60 (1)	5.39	
R- A	-1450 / 0	0.0	0.0	0.20 (1)	6.79	
R- Q	0 / 0	-18.5	-18.5	0.17 (4)	10.00	
Q- P	0 / 793	-18.5	-18.5	0.30 (4)	10.00	
P- O	0 / 793	-18.5	-18.5	0.30 (4)	10.00	
O- N	0 / 1196	-18.5	-18.5	0.34 (4)	10.00	
N- M	0 / 1427	-18.5	-18.5	0.24 (1)	10.00	
M- L	0 / 644	-18.5	-18.5	0.22 (4)	10.00	
L- K	0 / 262	-18.5	-18.5	0.05 (1)	10.00	
K- J	0 / 0	-18.5	-18.5	0.01 (4)	10.00	

WEBS

MEMB. FR-TO	FORCE (LBS)	MAX CSI (LC)
Q- B	-161 / 29	0.09 (1)
B- O	0 / 819	0.13 (1)
O- C	-635 / 0	0.36 (1)
O- E	0 / 172	0.03 (1)
N- E	-717 / 0	0.41 (1)
E- M	0 / 209	0.05 (1)
M- F	-224 / 0	0.27 (1)
M- G	0 / 1068	0.24 (1)
L- G	-1281 / 0	0.51 (1)
L- H	0 / 1549	0.35 (1)
K- H	-1475 / 0	0.84 (1)
K- I	0 / 1382	0.31 (1)
A- Q	0 / 846	0.19 (1)

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 , 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 (0.08")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.20")

CSI: TC=0.70/1.00 (B-C:1) , BC=0.34/1.00 (N-O:4) , WB=0.84/1.00 (H-K:1) , SSI=0.26/1.00 (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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

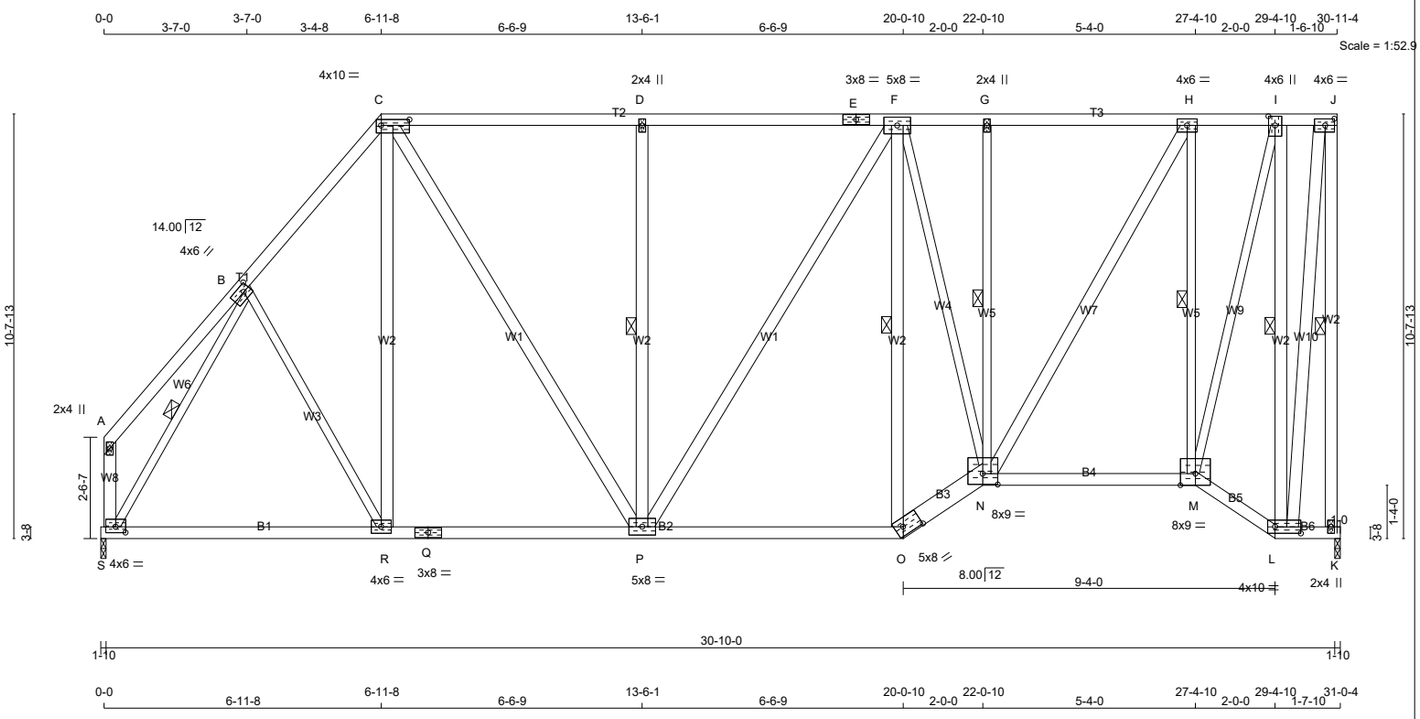
JSI GRIP= 0.87 (K) (INPUT = 0.90)
JSI METAL= 0.47 (A) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.		DRWG NO.
359637K	H359T		1	TRUSS DESC.	JT 45147	E24033413

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:09:07 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-30sh?DcBCXUSx5z9VL22DVKU5BwVKdHaLO6albzqZyA



TOTAL WEIGHT = 228 lb [M]

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 - J	2x4	DRY	No.2	SPF
K - J	2x4	DRY	No.2	SPF
S - A	2x4	DRY	No.2	SPF
S - Q	2x4	DRY	No.2	SPF
Q - O	2x4	DRY	No.2	SPF
O - N	2x6	DRY	No.2	SPF
N - M	2x4	DRY	No.2	SPF
M - L	2x4	DRY	No.2	SPF
L - K	2x4	DRY	No.2	SPF
ALL WEBS	2x4	DRY	No.2	SPF
EXCEPT				
F - N	2x3	DRY	No.2	SPF
N - G	2x3	DRY	No.2	SPF
M - H	2x3	DRY	No.2	SPF
M - I	2x3	DRY	No.2	SPF
S - B	2x3	DRY	No.2	SPF
B - R	2x3	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMV+p	MT20	2.0	4.0		
B	TMWW-t	MT20	4.0	6.0	2.00	2.00
C	TTWW-l	MT20	4.0	10.0	1.75	8.50
D	TMW+w	MT20	2.0	4.0		
E	TS-t	MT20	3.0	8.0		
F	TMWWW-t	MT20	5.0	8.0		
G	TMW+w	MT20	2.0	4.0		
H	TMWW-t	MT20	4.0	6.0		
I	TMWW+t	MT20	4.0	6.0	2.75	2.00
J	TMVW-t	MT20	4.0	6.0	2.00	2.75
K	BMV1+p	MT20	2.0	4.0		
L	BBWW-l	MT20	4.0	10.0	2.00	7.75
M	BBWW-l	MT20	8.0	9.0	Edge	
N	BBWWW-p	MT20	8.0	9.0	3.25	4.50
O	BBW-h	MT20	5.0	8.0	2.50	5.50
P	BMWWW-t	MT20	5.0	8.0		
Q	BS-t	MT20	3.0	8.0		
R	BMWW-t	MT20	4.0	6.0		
S	BMVW1-t	MT20	4.0	6.0	1.75	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
02/28/2024
PROVINCE OF ONTARIO

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
K	1492	0	1492	0	0	1-10	1-10
S	1492	0	1492	0	0	1-10	1-10

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
K	1064	649 / 0	0 / 0	0 / 0	0 / 0	415 / 0	0 / 0
S	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) K, S

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.15 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 J-K, D-P, F-O, G-N, H-M, I-L, B-S.

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

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1	MAX CSI (LC)	MAX. UNBRAC LENGTH
A- B	0 / 23	-78.0	-78.0	0.14 (1)	10.00	
B- C	-1240 / 0	-78.0	-78.0	0.18 (1)	5.58	
C- D	-1137 / 0	-78.0	-78.0	0.57 (1)	5.15	
D- E	-1138 / 0	-78.0	-78.0	0.56 (1)	5.15	
E- F	-1138 / 0	-78.0	-78.0	0.56 (1)	5.15	
F- G	-1066 / 0	-78.0	-78.0	0.24 (1)	5.79	
G- H	-1069 / 0	-78.0	-78.0	0.22 (1)	5.83	
H- I	-533 / 0	-78.0	-78.0	0.17 (1)	6.25	
I- J	-209 / 0	-78.0	-78.0	0.07 (1)	6.25	
K- J	-1478 / 0	0.0	0.0	0.84 (1)	5.39	
S- A	-103 / 0	0.0	0.0	0.01 (1)	7.81	
S- R	0 / 742	-18.5	-18.5	0.27 (4)	10.00	
R- Q	0 / 789	-18.5	-18.5	0.28 (4)	10.00	
Q- P	0 / 789	-18.5	-18.5	0.28 (4)	10.00	
P- O	0 / 1044	-18.5	-18.5	0.27 (4)	10.00	
O- N	0 / 1245	-18.5	-18.5	0.15 (1)	10.00	
N- M	0 / 547	-18.5	-18.5	0.21 (4)	10.00	
M- L	0 / 226	-18.5	-18.5	0.05 (1)	10.00	
L- K	0 / 0	-18.5	-18.5	0.01 (4)	10.00	

WEBS

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
R- C	0 / 96	0.02 (4)
C- P	0 / 651	0.10 (1)
P- D	-583 / 0	0.33 (1)
P- F	0 / 177	0.03 (1)
O- F	-612 / 0	0.35 (1)
F- N	0 / 130	0.03 (1)
N- G	-257 / 0	0.15 (1)
N- H	0 / 1035	0.17 (1)
M- H	-1261 / 0	0.72 (1)
M- I	0 / 1489	0.34 (1)
L- I	-1482 / 0	0.85 (1)
L- J	0 / 1405	0.23 (1)
S- B	-1528 / 0	0.51 (1)
B- R	0 / 89	0.02 (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 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 (1.03")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.07")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.18")

CSI: TC=0.84/1.00 (J-K:1) , BC=0.28/1.00 (P-R:4) , WB=0.85/1.00 (I-L: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

AUTOSOLVE RIGHT HEEL ONLY

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

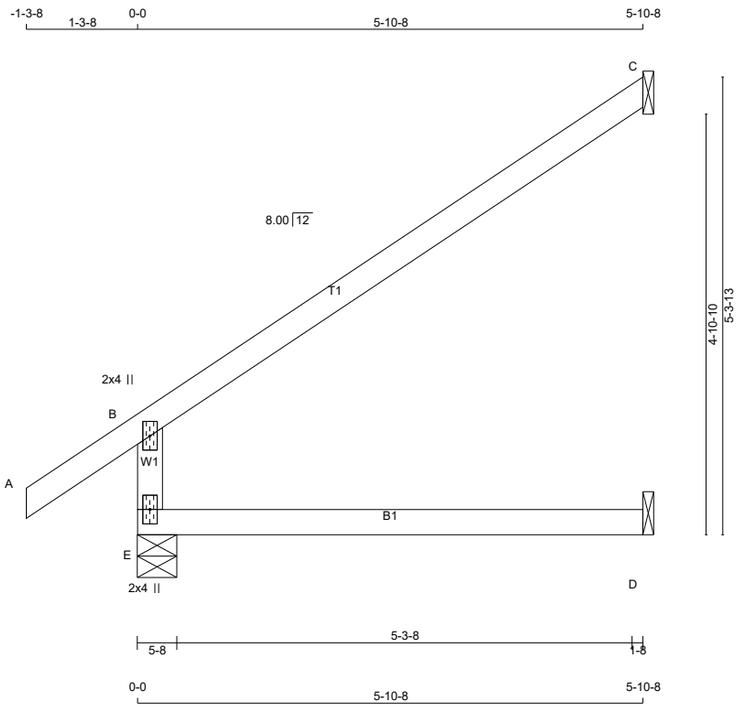
JSI GRIP= 0.89 (I) (INPUT = 0.90)
JSI METAL= 0.36 (C) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	J04		1	TRUSS DESC. JT 45147	E24033414

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:09:07 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-30sh?DcBCXUSx5z9VL22DVKa6ByrKqVaLO6albzqZyA



TOTAL WEIGHT = 6 X 18 = 107 lb [M]

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		

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

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
E	456	0	456	0	0	5-8	1-8
C	172	0	172	0	0	1-8	1-8
D	46	0	51	0	0	1-8	1-8

SEE MITEK STANDARD DETAIL MSD2015-H FOR CONNECTION TO JOINT(S) C , D

UNFACTORED REACTIONS

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

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)

C H O R D S

MEMB. FR-TO	MAX. FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 FROM	MAX TO	CSI (LC)	MAX. UNBRAC LENGTH
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

W E B S

MEMB. FR-TO	MAX. FORCE (LBS)	MAX CSI (LC)

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 BCBC 2018 , NBC-2019AE
- 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 (0.20")
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 .

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

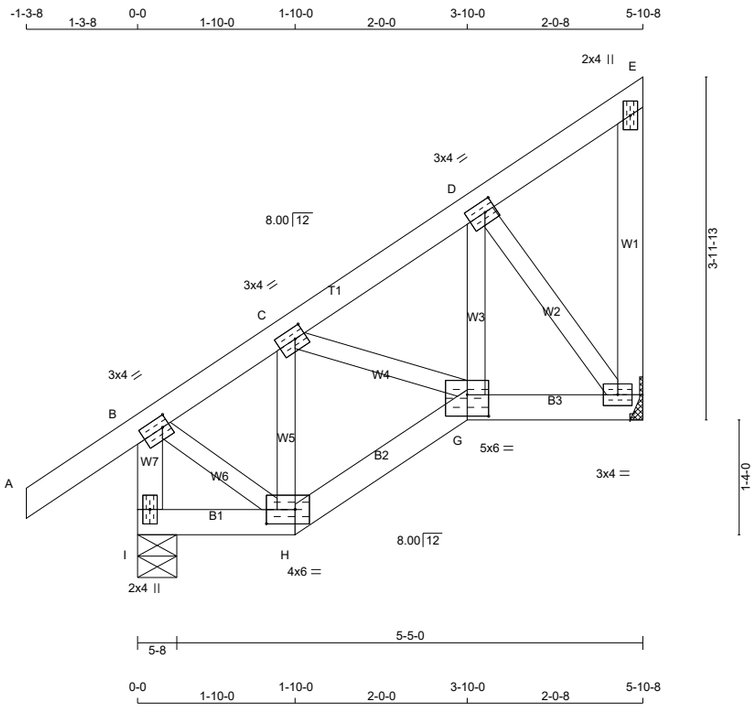
JSI GRIP= 0.24 (B) (INPUT = 0.90)
JSI METAL= 0.20 (B) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.		DRWG NO.
359637K	J04T		1	TRUSS DESC.	JT 45147	E24033415

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:09:08 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-XCQ3DZdpzrclZFYM23ZHlisrOaJX3H0ja2s7H1zqZy9



TOTAL WEIGHT = 4 X 31 = 123 lb

[M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
I - B	2x4	DRY	No.2	SPF
A - E	2x4	DRY	No.2	SPF
F - E	2x4	DRY	No.2	SPF
I - H	2x4	DRY	No.2	SPF
H - G	2x4	DRY	No.2	SPF
G - F	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	TMVW-t	MT20	3.0	4.0	1.50	1.00
C	TMWW-t	MT20	3.0	4.0	1.50	1.50
D	TMWW-t	MT20	3.0	4.0	1.50	1.50
E	TMV+p	MT20	2.0	4.0		
F	BMVW1-t	MT20	3.0	4.0		
G	BBWW-l	MT20	5.0	6.0	3.00	3.00
H	BBWW-l	MT20	4.0	6.0	2.00	4.00
I	BMV1+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	REQRD 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	

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	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

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)

C H O R D S

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX UNBRAC LENGTH
I- B	-386 / 0	0.0	0.0	0.04 (1)	7.81
A- B	0 / 30	-78.0	-78.0	0.10 (1)	10.00
B- C	-188 / 0	-78.0	-78.0	0.10 (1)	6.25
C- D	-192 / 0	-78.0	-78.0	0.05 (1)	6.25
D- E	-10 / 0	-78.0	-78.0	0.05 (1)	6.25
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

W E B S

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
B- H	0 / 161	0.04 (1)
C- G	-134 / 0	0.02 (1)
G- D	0 / 35	0.01 (1)
D- F	0 / 114	0.03 (4)
	-254 / 0	0.05 (1)

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 BCBC 2018 , NBC-2019AE
- 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 (0.20")
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 .

NAIL VALUES

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

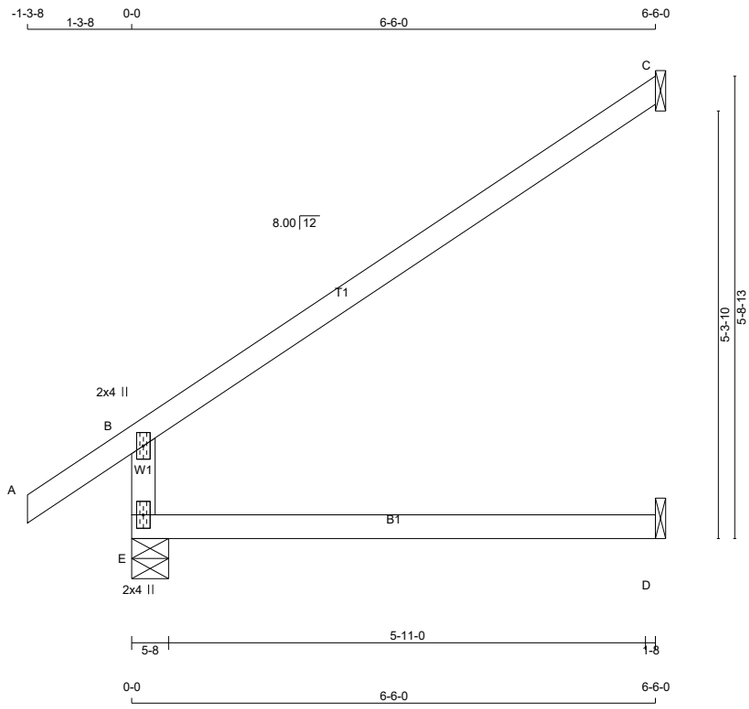
LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	J05		1	TRUSS DESC. JT 45147	E24033416

Alpha Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:09:08 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-XCQ3DZdpzrclZFYM23ZHlismDaHf3Hlja2s7H1zqZv9



TOTAL WEIGHT = 20 X 19 = 388 lb

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		

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

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

BEARINGS

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

SEE MITEK STANDARD DETAIL MSD2015-H FOR CONNECTION TO JOINT(S) C , D

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS 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)

C H O R D S

MEMB. FR-TO	MAX. FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 FROM	MAX TO	CSI (LC)	MAX. UNBRAC LENGTH
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

W E B S

MEMB. FR-TO	MAX. FORCE (LBS)	MAX CSI (LC)

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 BCBC 2018 , NBC-2019AE
- 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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

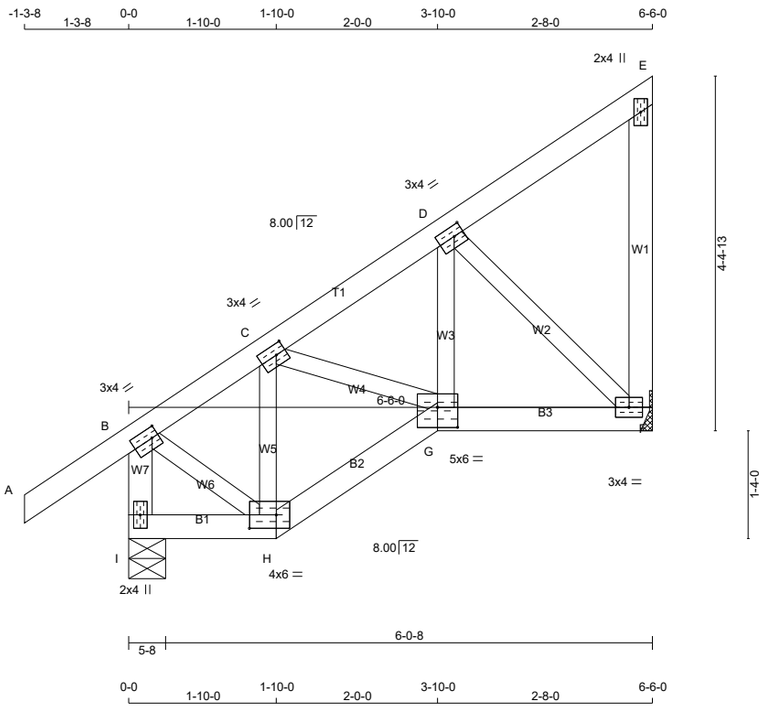
JSI GRIP= 0.26 (B) (INPUT = 0.90)
JSI METAL= 0.22 (B) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	J05T		1	TRUSS DESC. JT 45147	E24033417

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:09:09 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-?O RQveRk8k9AP6Ycm4XIwP08 fSok1tpibhpUzqZy8



TOTAL WEIGHT = 4 X 33 = 133 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
I - B	2x4	DRY	No.2	SPF
A - E	2x4	DRY	No.2	SPF
F - E	2x4	DRY	No.2	SPF
I - H	2x4	DRY	No.2	SPF
H - G	2x4	DRY	No.2	SPF
G - F	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	TMVW-t	MT20	3.0	4.0	1.50	1.00
C	TMWW-t	MT20	3.0	4.0	1.50	1.50
D	TMWW-t	MT20	3.0	4.0	1.50	1.50
E	TMV+p	MT20	2.0	4.0		
F	BMVW1-t	MT20	3.0	4.0		
G	BBWW-l	MT20	5.0	6.0	3.00	3.00
H	BBWW-l	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

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG	REQRD BRG
I	432	0	432	0	0	5-8	1-8
F	302	0	302	0	0	MECHANICAL	

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
I	305	200 / 0	0 / 0	0 / 0	0 / 0	105 / 0	0 / 0
F	216	130 / 0	0 / 0	0 / 0	0 / 0	85 / 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)

C H O R D S

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH
I- B	-415 / 0	0.0	0.0	0.04 (1)	7.81
A- B	0 / 30	-78.0	-78.0	0.10 (1)	10.00
B- C	-215 / 0	-78.0	-78.0	0.08 (1)	6.25
C- D	-253 / 0	-78.0	-78.0	0.05 (1)	6.25
D- E	-11 / 0	-78.0	-78.0	0.05 (1)	6.25
F- E	-80 / 0	0.0	0.0	0.02 (1)	7.81
I- H	0 / 0	-18.5	-18.5	0.02 (4)	10.00
H- G	0 / 184	-18.5	-18.5	0.04 (1)	10.00
G- F	0 / 215	-18.5	-18.5	0.06 (4)	10.00

W E B S

MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
B- H	0 / 185	0.04 (1)
H- C	-160 / 0	0.03 (1)
C- G	0 / 73	0.02 (1)
G- D	0 / 118	0.03 (4)
D- F	-293 / 0	0.06 (1)

[M][F]

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 BCBC 2018 , NBC-2019AE
- 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 (0.01")

CSI: TC=0.10/1.00 (A-B:1) , BC=0.06/1.00 (F-G:4) , WB=0.06/1.00 (D-F:1) , SSI=0.08/1.00 (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) (PSI) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

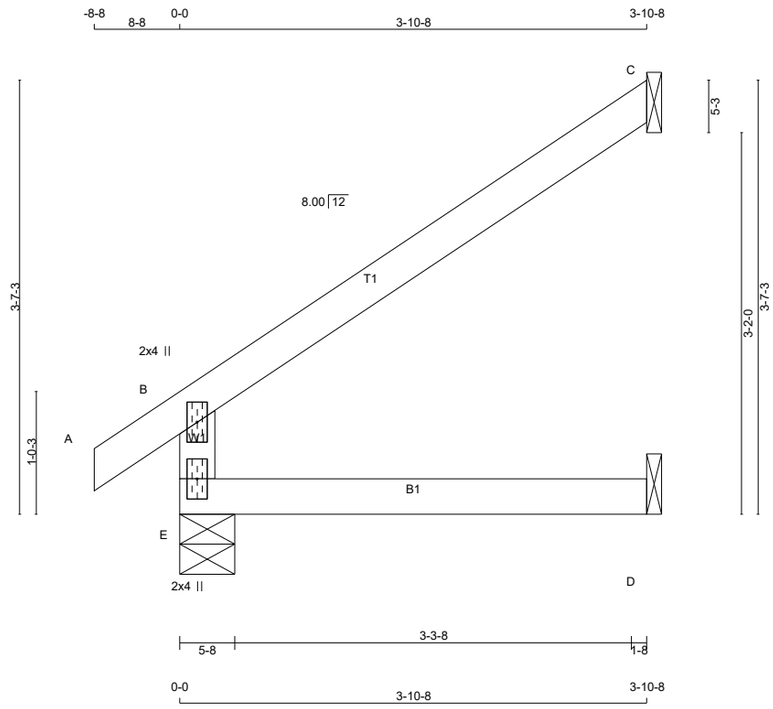
JSI GRIP= 0.57 (B) (INPUT = 0.90)
JSI METAL= 0.11 (B) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	J08		1	TRUSS DESC. JT 45147	E24033418

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:09:09 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-?O RQveRk8k9AP6Ycm4XlwP?O fTok?tpibhpUzqZv8



TOTAL WEIGHT = 2 X 12 = 23 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		

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

LICENSED PROFESSIONAL ENGINEER
Y. WIDYA
100225448
02/28/2024
PROVINCE OF ONTARIO

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
E	292	0	292	0	0	5-8	1-8
C	113	0	113	0	0	1-8	1-8
D	30	0	34	0	0	1-8	1-8

SEE MITEK STANDARD DETAIL MSD2015-H FOR CONNECTION TO JOINT(S) C , D

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	207	135 / 0	0 / 0	0 / 0	0 / 0	72 / 0	0 / 0
C	78	61 / 0	0 / 0	0 / 0	0 / 0	17 / 0	0 / 0
D	24	0 / 0	0 / 0	0 / 0	0 / 0	24 / 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)

C H O R D S

MEMB. FR-TO	MAX. FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 FROM	MAX TO	CSI (LC)	MAX. UNBRAC LENGTH
E- B	-250 / 0	0.0	0.0		0.04 (4)	7.81
A- B	0 / 17	-78.0	-78.0		0.04 (1)	10.00
B- C	-21 / 0	-78.0	-78.0		0.15 (1)	6.25
E- D	0 / 0	-18.5	-18.5		0.06 (4)	10.00

W E B S

MEMB. FR-TO	MAX. FORCE (LBS)	MAX CSI (LC)

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 BCBC 2018 , NBC-2019AE
- 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 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.19")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")

CSI: TC=0.15/1.00 (B-C:1) , BC=0.06/1.00 (D-E:4) , WB=0.00/1.00 (n/a:0) , 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

AUTOSOLVE RIGHT HEEL ONLY

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

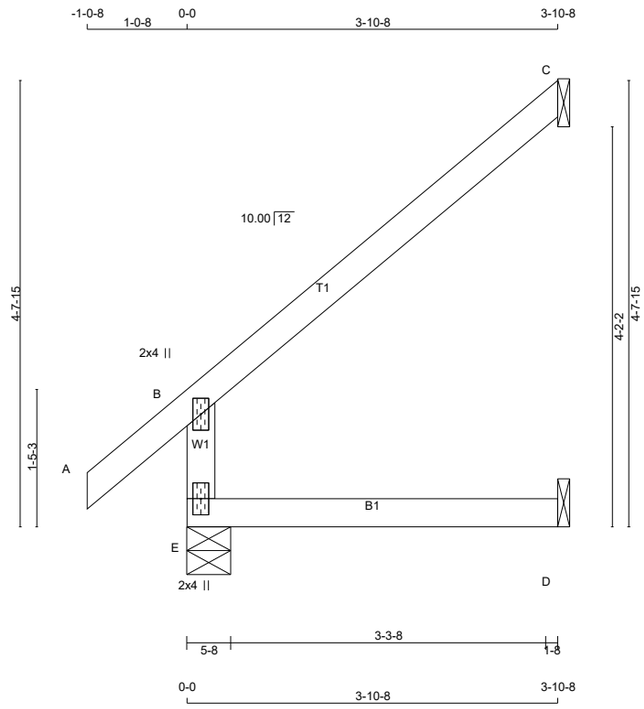
JSI GRIP= 0.15 (B) (INPUT = 0.90)
JSI METAL= 0.13 (B) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	J10		1	TRUSS DESC. JT 45147	E24033419

Alpa Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:09:09 2024 Page 1

ID:hd511hZTz_bdeQoS817GKByhVxV-?O_RQveRk8k9AP6Ycm4XlwP_g_fQok?tpibhpUzqZy8



TOTAL WEIGHT = 4 X 13 = 53 lb [M]

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 VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
E	318	0	318	0	0	5-8	1-8
C	113	0	113	0	0	1-8	1-8
D	31	0	35	0	0	1-8	1-8

SEE MITEK STANDARD DETAIL MSD2015-H FOR CONNECTION TO JOINT(S) C , D

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	224	149 / 0	0 / 0	0 / 0	0 / 0	75 / 0	0 / 0
C	79	61 / 0	0 / 0	0 / 0	0 / 0	17 / 0	0 / 0
D	25	0 / 0	0 / 0	0 / 0	0 / 0	25 / 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 MEMB. FR-TO	MAX. FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 MAX CSI (LC)	WEBS MAX. UNBRAC LENGTH	MEMB. FR-TO	MAX. FORCE (LBS)	MAX CSI (LC)
E- B	-277 / 0	0.0	0.0	0.04 (4)	7.81			
A- B	0 / 28	-78.0	-78.0	0.07 (1)	10.00			
B- C	-24 / 0	-78.0	-78.0	0.20 (1)	6.25			
E- D	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

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

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 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.19")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")

CSI: TC=0.20/1.00 (B-C:1) , BC=0.06/1.00 (D-E:4) , WB=0.00/1.00 (n/a:0) , SSI=0.11/1.00 (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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.19 (B) (INPUT = 0.90)
JSI METAL= 0.15 (B) (INPUT = 1.00)

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

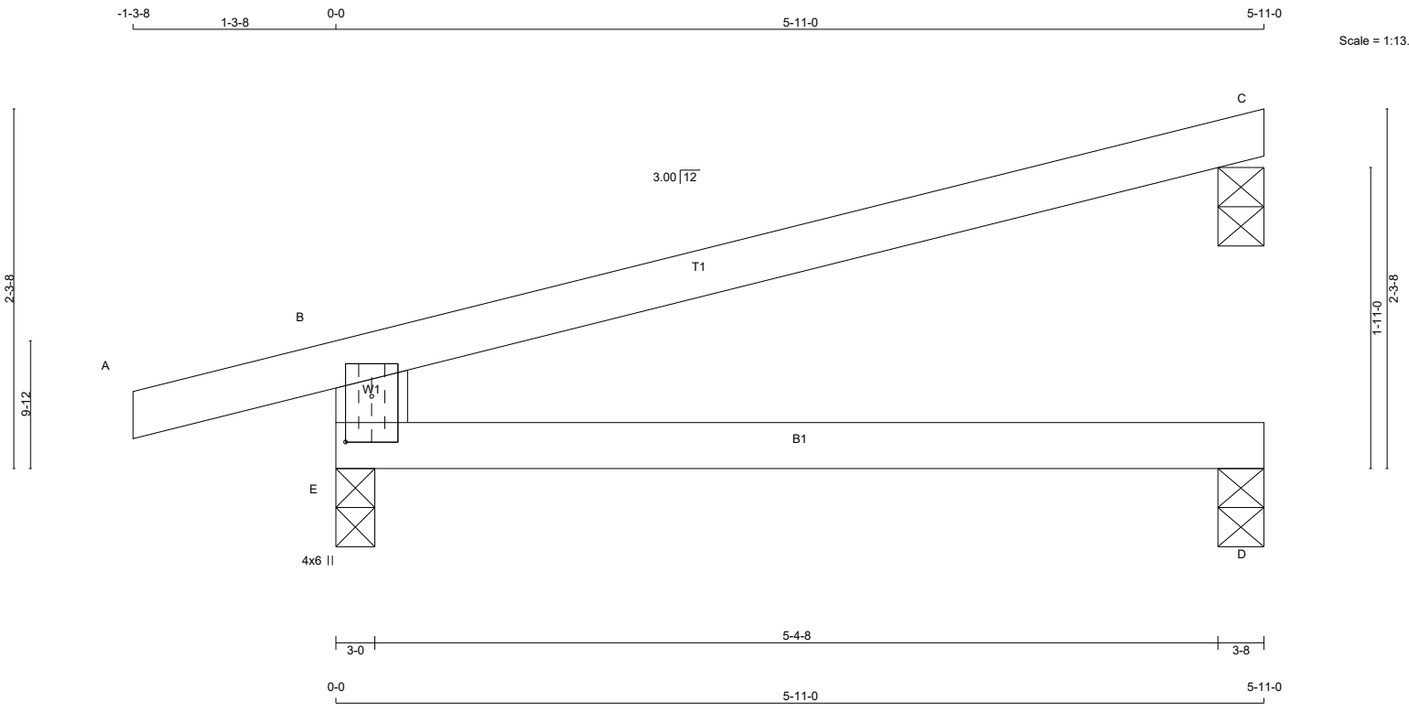
LICENSED PROFESSIONAL ENGINEER
Y. WIDYA
100225448
02/28/2024
PROVINCE OF ONTARIO

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	P03		1	TRUSS DESC. JT 45147	E24033420

Alpha Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:09:10 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-TbYpeFf4VSs0oZhkATbmr7y7yOzqXBF01MLELwzqZy7



TOTAL WEIGHT = 7 X 16 = 111 lb

[M][F]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
E - B	2x6	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						
E						
E	TMBMV1+p	MT20	4.0	6.0	3.50	2.00

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
E	459	0	459	0	0	3-0	1-8
C	173	0	173	0	0	3-8	3-8
D	42	0	47	0	0	3-8	1-8

BEVELED PLATE OR SHIM REQUIRED TO PROVIDE FULL BEARING SURFACE WITH TRUSS CHORD AT JT(S): C

UNFACTORED REACTIONS

	1ST LCASE	MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	325	211 / 0	0 / 0	0 / 0	0 / 0	114 / 0	0 / 0
C	120	93 / 0	0 / 0	0 / 0	0 / 0	27 / 0	0 / 0
D	34	0 / 0	0 / 0	0 / 0	0 / 0	34 / 0	0 / 0

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

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 MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 CSI (LC)	MAX UNBRAC LENGTH	WEBS MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
E- B	-392 / 0	0.0	0.0	0.07 (4)	7.81			
A- B	0 / 13	-78.0	-78.0	0.10 (1)	10.00			
B- C	-14 / 0	-78.0	-78.0	0.36 (1)	6.25			
E- D	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

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

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 (0.20")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.20")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02")

CSI: TC=0.36/1.00 (B-C:1) , BC=0.18/1.00 (D-E:4) , WB=0.00/1.00 (n/a:0) , SSI=0.22/1.00 (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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) 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 (E) (INPUT = 0.90)
JSI METAL= 0.04 (E) (INPUT = 1.00)

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

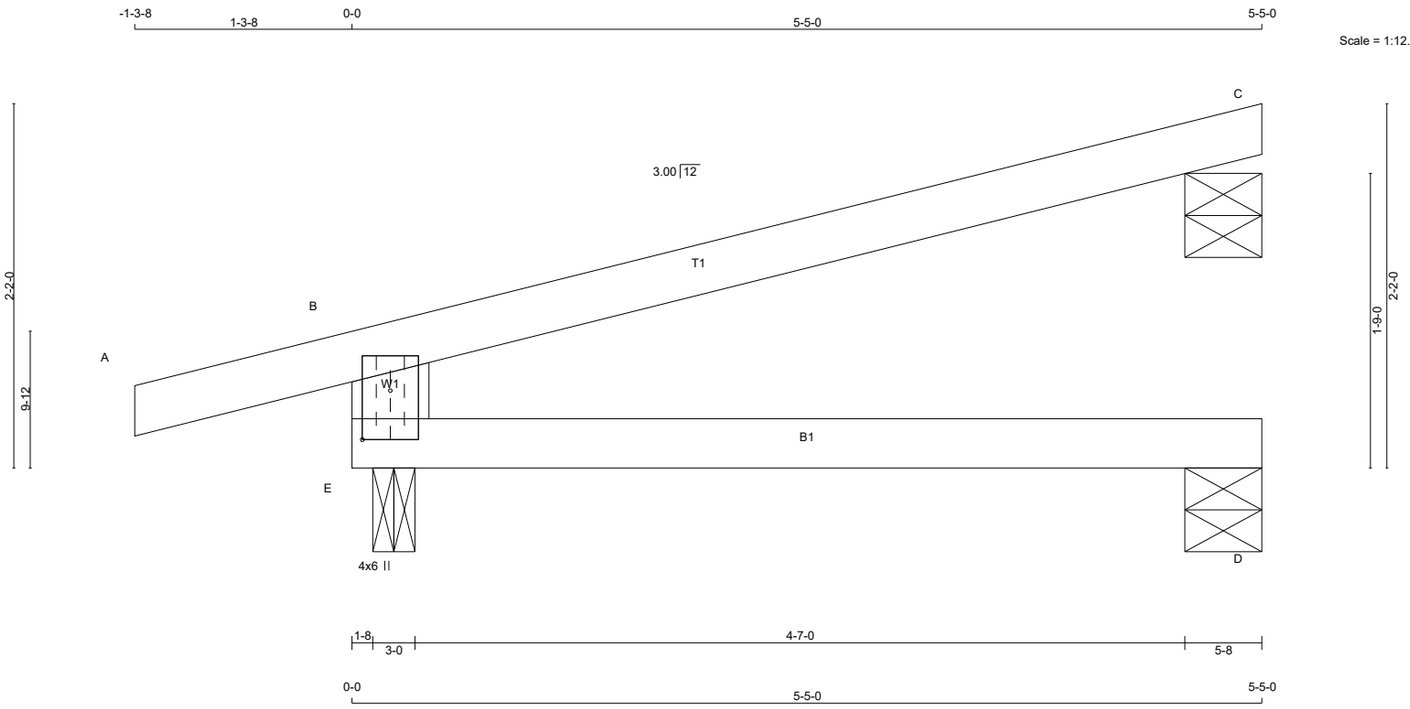
LICENSED PROFESSIONAL ENGINEER
Y. WIDYA
100225448
02/28/2024
PROVINCE OF ONTARIO

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
359637K	P04		1	TRUSS DESC. JT 45147	E24033421

Alpha Roof Truss, Maple

Version 8.630 S Aug 30 2023 MiTek Industries, Inc. Wed Feb 28 16:09:10 2024 Page 1

ID:hd511hZTz bdeQoS817GKByhVxV-TbYpeFf4VSs0oZhkATbmr7y6ROzHXBF01MLELwzqZy7



TOTAL WEIGHT = 9 X 15 = 133 lb

[M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE		LUMBER	DESCR.
E - B	2x6	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						
E						
E	TMBMV1+p	MT20	4.0	6.0	3.50	2.00

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

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

BEARINGS

JT	FACTORED GROSS REACTION VERT	HORZ	MAXIMUM FACTORED GROSS REACTION DOWN	HORZ	UPLIFT	INPUT BRG IN-SX	REQRD BRG IN-SX
E	429	0	429	0	0	3-0	1-8
C	158	0	158	0	0	5-8	5-8
D	38	0	43	0	0	5-8	1-8

BEVELED PLATE OR SHIM REQUIRED TO PROVIDE FULL BEARING SURFACE WITH TRUSS CHORD AT JT(S): C

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	304	198 / 0	0 / 0	0 / 0	0 / 0	106 / 0	0 / 0
C	110	85 / 0	0 / 0	0 / 0	0 / 0	24 / 0	0 / 0
D	31	0 / 0	0 / 0	0 / 0	0 / 0	31 / 0	0 / 0

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

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 MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF) FROM	TO	LC1 MAX CSI (LC)	MAX. UNBRAC LENGTH	WEBS MEMB. FR-TO	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
E- B	-367 / 0	0.0	0.0	0.07 (4)	7.81			
A- B	0 / 13	-78.0	-78.0	0.10 (1)	10.00			
B- C	-13 / 0	-78.0	-78.0	0.39 (1)	6.25			
E- D	0 / 0	-18.5	-18.5	0.15 (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 BCBC 2018 , NBC-2019AE
- 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 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.19")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02")

CSI: TC=0.39/1.00 (B-C:1) , BC=0.15/1.00 (D-E:4) , WB=0.00/1.00 (n/a:0) , SSI=0.20/1.00 (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) MAX	MIN	SHEAR (PLI) MAX	MIN	SECTION (PLI) MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.22 (E) (INPUT = 0.90)
JSI METAL= 0.04 (E) (INPUT = 1.00)

TECHNICAL BULLETIN

LUS — Double-Shear Joist Hangers

SIMPSON Strong-Tie

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:

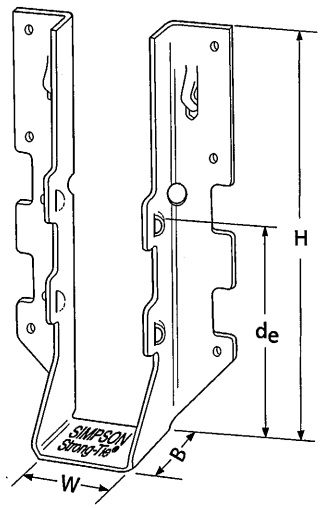
- Factored resistances are in accordance with CSA O86-14 and CSA O86:19.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these loads.

Installation:

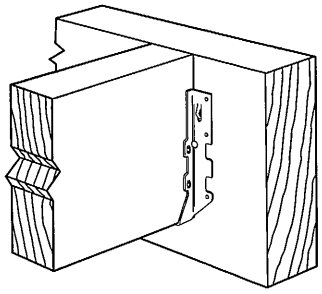
- Use all specified fasteners
- Nails: 16d = 0.162" dia. x 3½" long common wire, 10d = 0.148" x 3" long common wire
- Double-shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads
- Not designed for welded or nailer applications

Options:

- These hangers cannot be modified



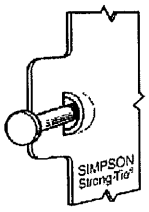
LUS28



Typical LUS Installation

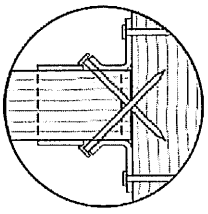
Model No.	Ga.	Dimensions (in.)				Fasteners		Factored Resistance (lb.)			
								D.Fir–L		S-P-F	
		W	H	B	d_e[1]	Face	Joist	Uplift (K_D=1.15)	Normal (K_D=1.00)	Uplift (K_D=1.15)	Normal (K_D=1.00)
LUS24	18	1 9/16	3 1/8	1 3/4	1 15/16	(4) 10d	(2) 10d	710	1630	645	1155
LUS24-2	18	3 1/8	3 1/8	2	1 13/16	(4) 16d	(2) 16d	835	2020	590	1435
LUS26	18	1 9/16	4 3/4	1 3/4	3 5/8	(4) 10d	(4) 10d	1420	2170	1290	1630
LUS26-2	18	3 1/8	4 7/8	2	4	(4) 16d	(4) 16d	1720	2595	1545	1920
LUS26-3	18	4 5/8	4 3/16	2	3 1/4	(4) 16d	(4) 16d	1720	2595	1545	2340
LUS28	18	1 9/16	6 5/8	1 3/4	3 3/4	(6) 10d	(6) 10d	1420	2520	1290	1790
LUS28-2	18	3 1/8	7	2	4	(6) 16d	(4) 16d	1720	3325	1545	2575
LUS28-3	18	4 5/8	6 1/4	2	3 1/4	(6) 16d	(4) 16d	1720	3325	1545	2375
LUS210	18	1 9/16	7 13/16	1 3/4	3 7/8	(8) 10d	(4) 10d	1420	2785	1290	2210
LUS210-2	18	3 1/8	9	2	6	(8) 16d	(6) 16d	2580	4500	2320	3195
LUS210-3	18	4 5/8	8 3/16	2	5 1/4	(8) 16d	(6) 16d	2580	3345	2320	2375

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 top view.

LICENSED PROFESSIONAL ENGINEER
07/19/2022
B. D. BUNTING
PROVINCE OF ONTARIO

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

(800) 999-5099
strongtie.com

TECHNICAL BULLETIN

HUS/LJS — Double-Shear Joist Hangers

SIMPSON Strong-Tie

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:

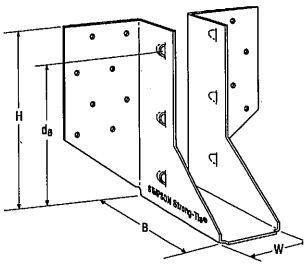
- Factored resistances are in accordance with CSA O86-14 and CSA O86:19.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these loads.

Installation:

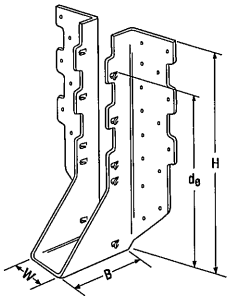
- Use all specified fasteners
- Nails: 16d = 0.162" dia. x 3½" long common wire
- Double-shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads
- Not designed for welded or nailer applications

Options:

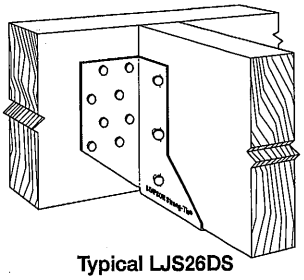
- See current catalogue for options



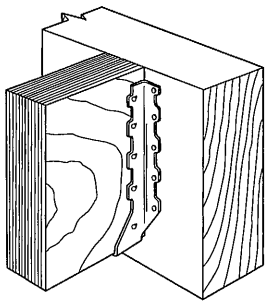
LJS26DS



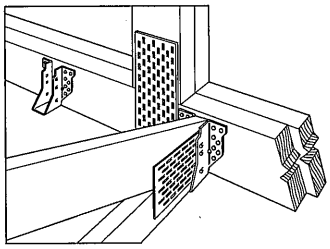
HUS210
(HUS26, HUS28, similar)



Typical LJS26DS Installation



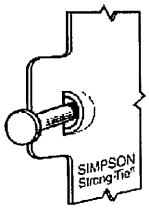
Typical HUS Installation



Typical HUS Installation
(Truss designer to provide fastener quantity for connecting multiple members together)

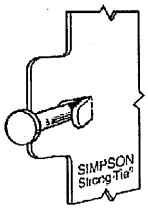
Model No.	Ga.	Dimensions (in.)				Fasteners		Factored Resistance (lb.)			
								D.Fir–L		S-P-F	
		W	H	B	d_e[1]	Face	Joist	Uplift (K_D=1.15) lb.	Normal (K_D=1.00) lb.	Uplift (K_D=1.15) lb.	Normal (K_D=1.00) lb.
LJS26DS	18	1 9/16	5	3½	4⅝	(16) 16d	(6) 16d	2055	4265	1460	4115
HUS26	16	1⅝	5⅜	3	3 15/16	(14) 16d	(6) 16d	2705	4940	2065	3875
HUS28	16	1⅝	7 3/32	3	6 3/32	(22) 16d	(8) 16d	3605	5365	2675	4345
HUS210	16	1⅝	9 3/32	3	7 31/32	(30) 16d	(10) 16d	4505	5795	4010	4740
HUS1.81/10	16	1 13/16	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.

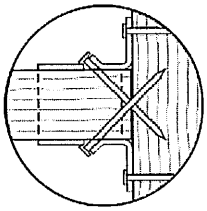


Dome double-shear nailing prevents tabs breaking off (available on some models).

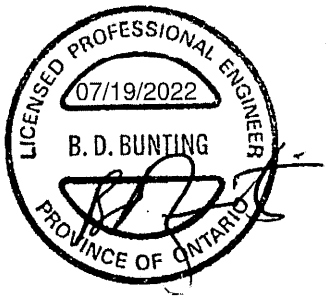
US Patent 5,603,580



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

(800) 999-5099
strongtie.com

TECHNICAL BULLETIN

HHUS — Double-Shear Joist Hangers

SIMPSON Strong-Tie

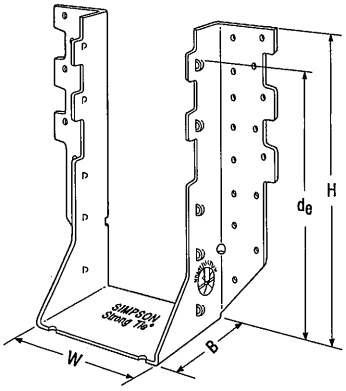
All HHUS hangers have double-shear nailing. This patented innovation distributes the load through two points on each joist nail for greater strength. It also allows the use of fewer nails, faster installation and the use of common nails for all connections. Do not bend or remove tabs.

Material: 14 gauge

Finish: G90 galvanized

Design:

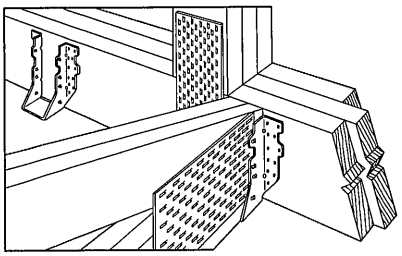
- Factored resistances are in accordance with CSA O86-14 and CSA O86:19.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these loads.



HHUS410

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



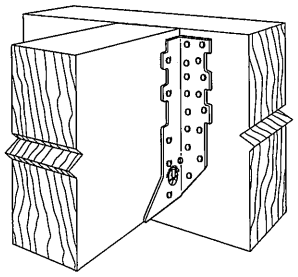
Typical HHUS Installation (Truss designer to provide fastener quantity for connecting multiple members together)

Options:

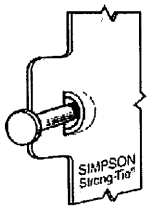
- See current catalogue for options

Model No.	Ga.	Dimensions (in.)				Fasteners		Factored Resistance (lb.)			
								D.Fir–L		S-P-F	
		W	H	B	d_e[1]	Face	Joist	Uplift (K_D=1.15)	Normal (K_D=1.00)	Uplift (K_D=1.15)	Normal (K_D=1.00)
HHUS26-2	14	3 5/16	5 13/16	3	3 15/16	(14) 16d	(6) 16d	2850	7335	2065	5205
HHUS28-2	14	3 5/16	7 7/32	3	6 5/32	(22) 16d	(8) 16d	3765	8940	2675	6345
HHUS210-2	14	3 5/16	9 3/32	3	8	(30) 16d	(10) 16d	4670	9660	4235	7000
HHUS210-3	14	4 11/16	9	3	7 15/16	(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 13/32	3	3 15/16	(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 5/16	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.

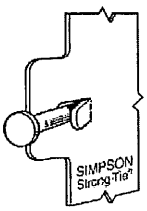


Typical HHUS Installation

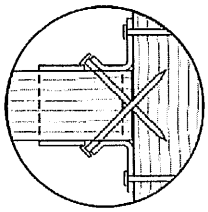


Dome double-shear nailing prevents tabs breaking off (available on some models).

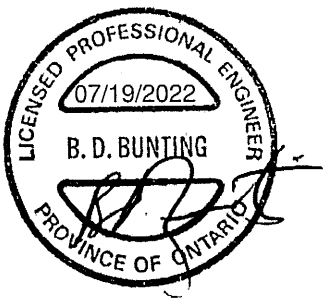
US Patent 5,603,580



Double-shear nailing side view. Do not bend tab back.



Double-shear nailing top view.

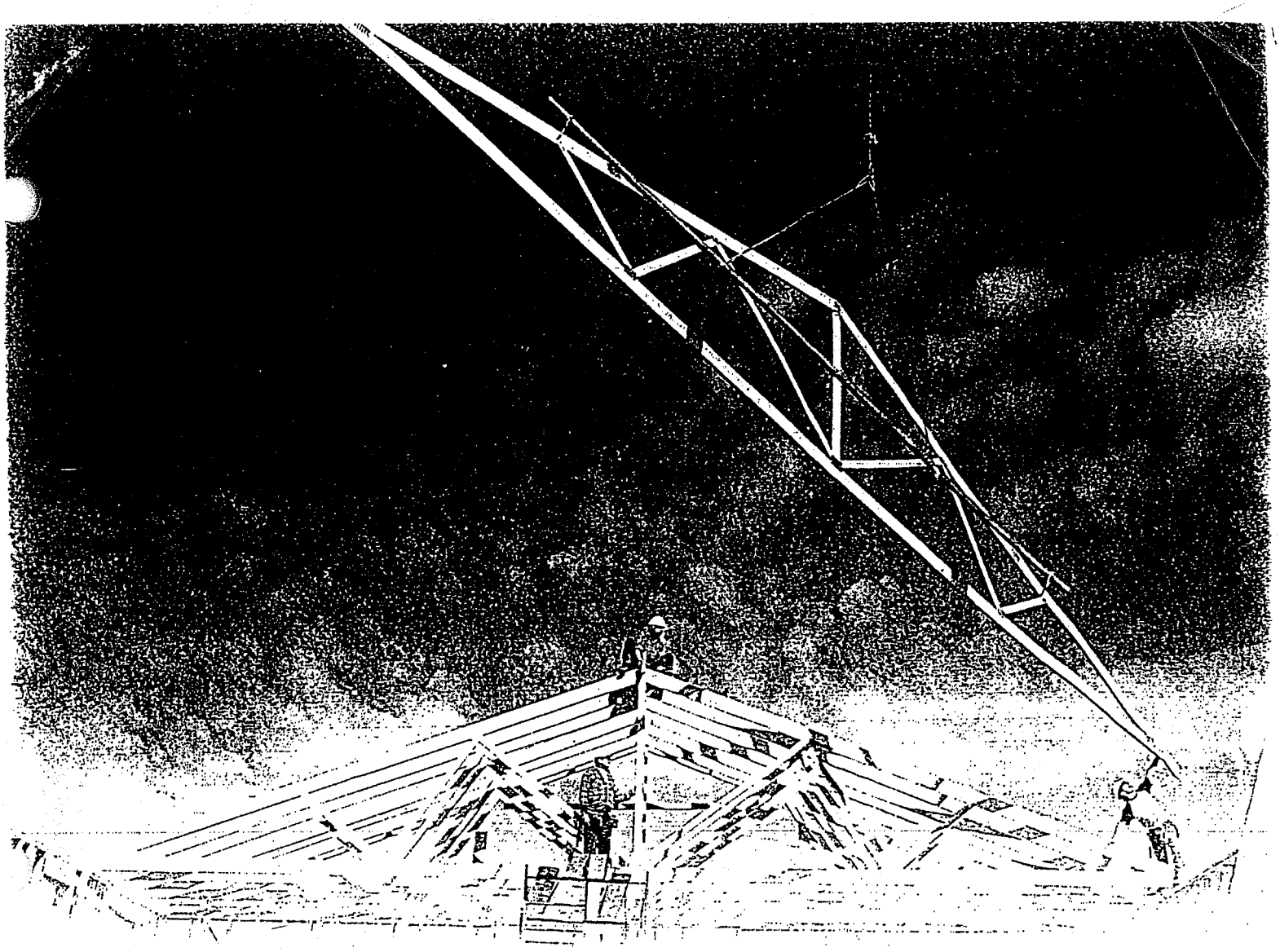


This technical bulletin is effective until December 31, 2024, and reflects information available as of July 1, 2022.
This information is updated periodically and should not be relied upon after December 31, 2024.
Contact Simpson Strong-Tie for current information and limited warranty or see strongtie.com.

© 2022 Simpson Strong-Tie Company Inc. • P.O. Box 10789, Pleasanton, CA 94588

T-SPECHHUS22 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.

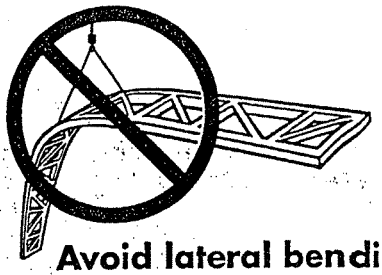
Special Design Requirements

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

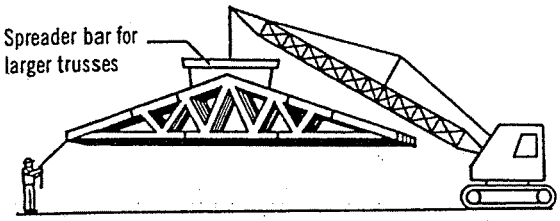
Beginning with the unloading process, and throughout all phases of construction, care must be taken to avoid lateral bending of trusses, which can cause damage to the lumber and metal connector plates at the joints.

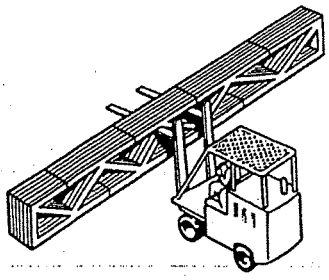


Avoid lateral bending

- **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.**

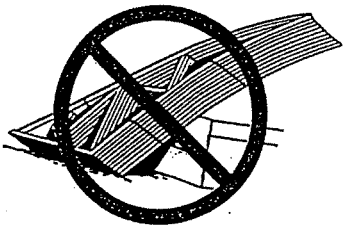
2 Job Site Handling





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.

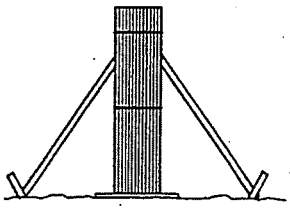


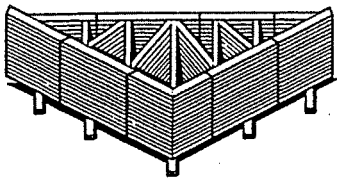
Do not store unbraced bundles upright

If trusses are stored vertically they shall be braced in a manner that will prevent tipping or topping. Generally cuting 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.



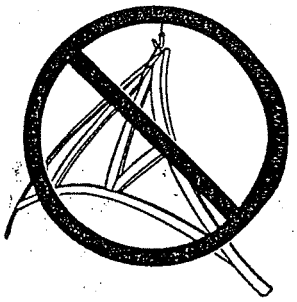


Care should be exercised when removing banding to avoid damaging trusses.

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.

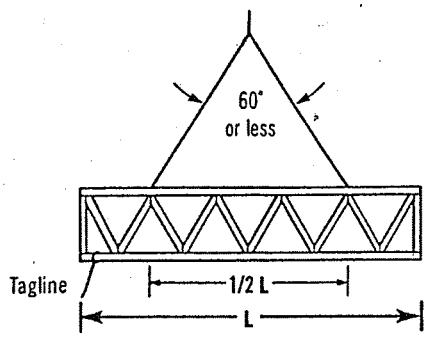
3 Hoisting

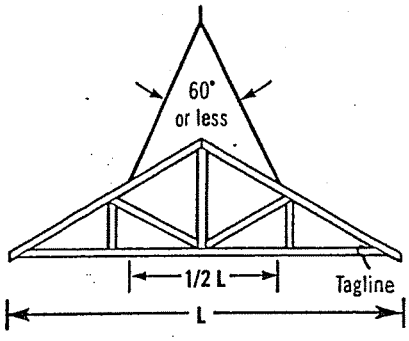
All trusses that are erected one at a time shall be held safely in position by the erection equipment until such time as all necessary bracing has been installed and the ends of the trusses are securely fastened to the building.



Avoid lateral bending

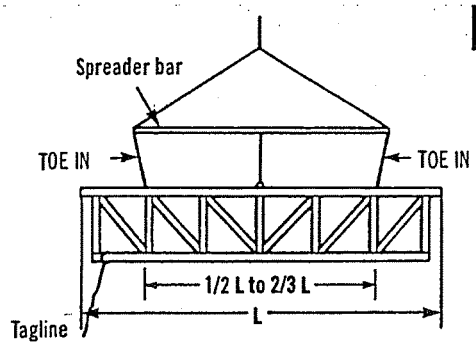
L ≤ 30'

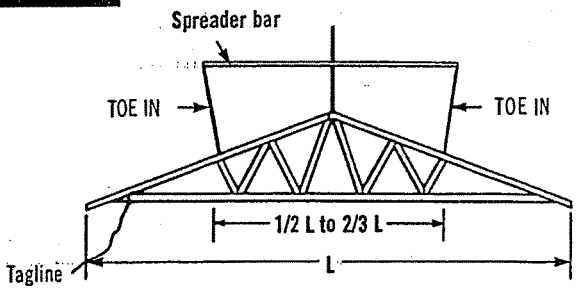




Truss sling is acceptable where these criteria are met.

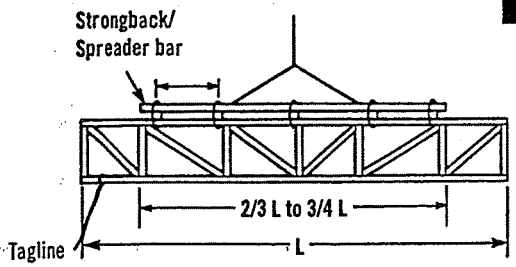
30' < L ≤ 60'

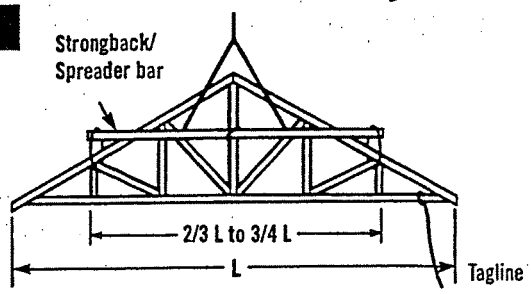




Use spreader bar in all other cases. It should be noted that the lines from the ends of the spreader bar "**TOE IN**"; if these lines should "**TOE OUT**" the truss may fold in half.

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

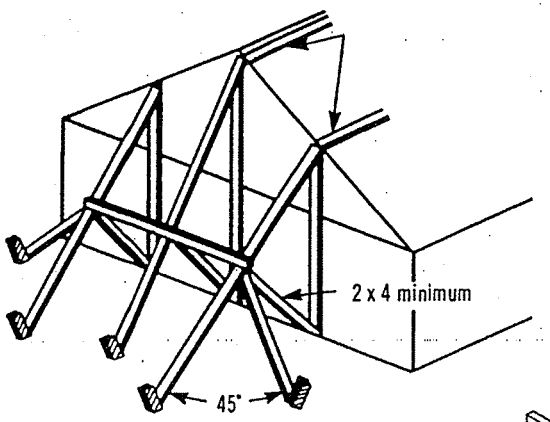
It is important for the builder or erection contractor to provide substantial bracing for the first truss erected. The two or more trusses making up the rest of the first set are tied to and rely upon the first truss for stability. Likewise, after this first set of trusses is adequately cross-braced, 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

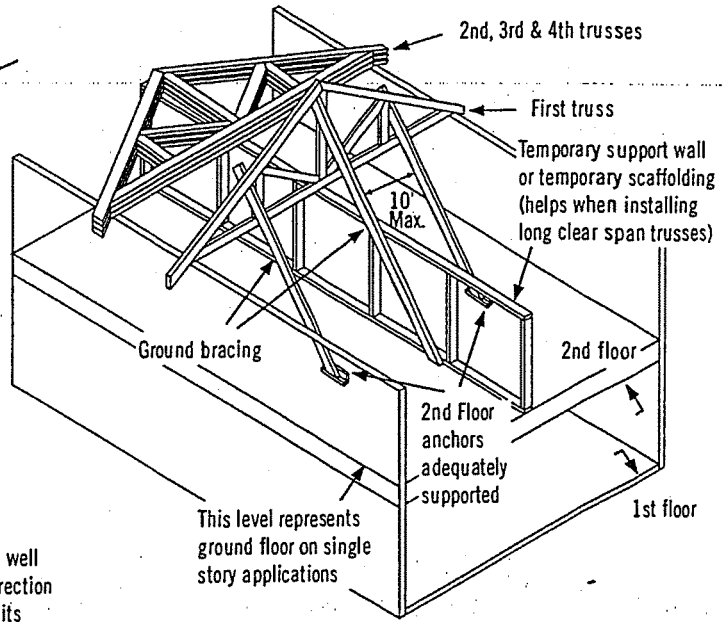
One satisfactory method ties the first unit of trusses off to a series of braces that are attached to a stake driven into the ground and securely anchored. The ground brace itself should be supported as shown below or it is apt to buckle. Additional ground braces in the opposite direction, inside the building, are also recommended.

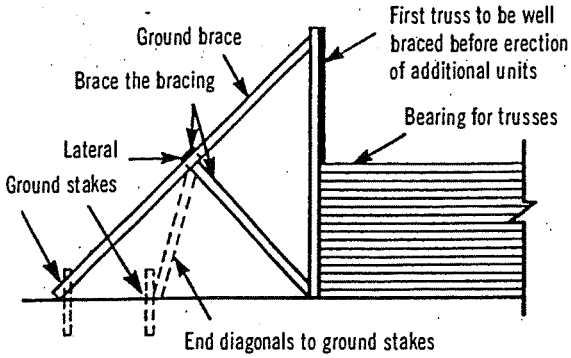
Ground Brace – Interior

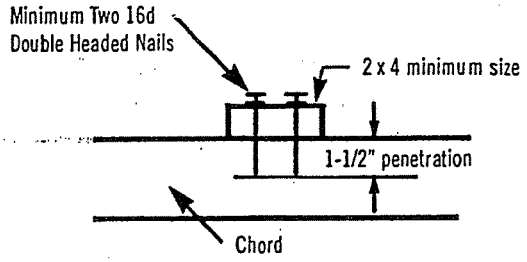
Another satisfactory method where height of building or ground conditions prohibit bracing from the exterior is to tie the first truss rigidly in place from the interior at the floor level, provided the floor is substantially completed and capable of supporting the ground bracing forces. Securely fasten 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.



Note: Locate ground braces for first truss directly in line with all rows of top chord continuous lateral bracing (either temporary or permanent).





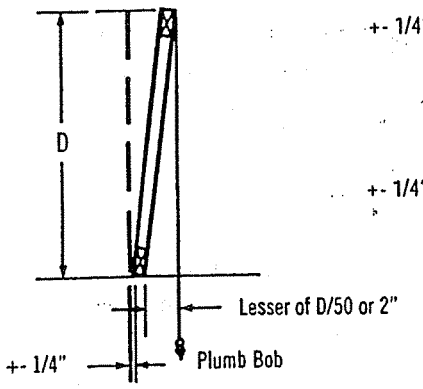


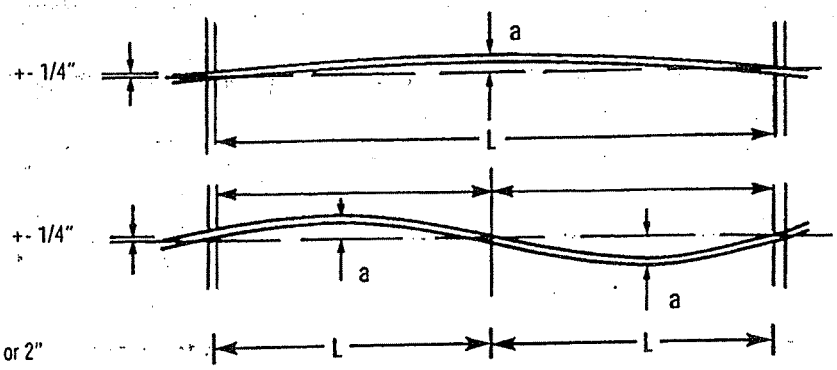
Inadequate size of bracing material or inadequate fastening is a major cause of erection dominoing.

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.

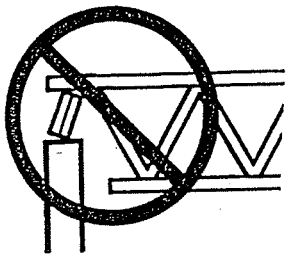
When sheathing, make sure nails are driven into the top chord of the trusses.



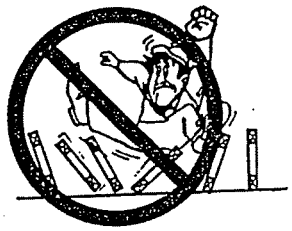


L = 16' to 32', a = 1"
L = 32' & over, a = 2"

6 Bracing

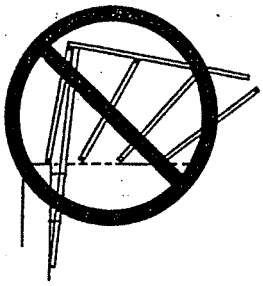


Do not install trusses on temporarily connected supports



Do not walk on unbraced trusses

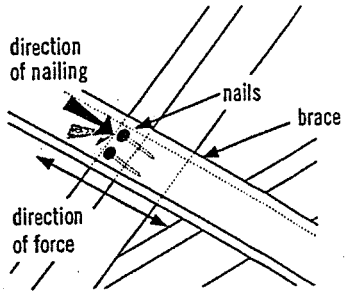
Do not walk on trusses or gable ends lying flat



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.



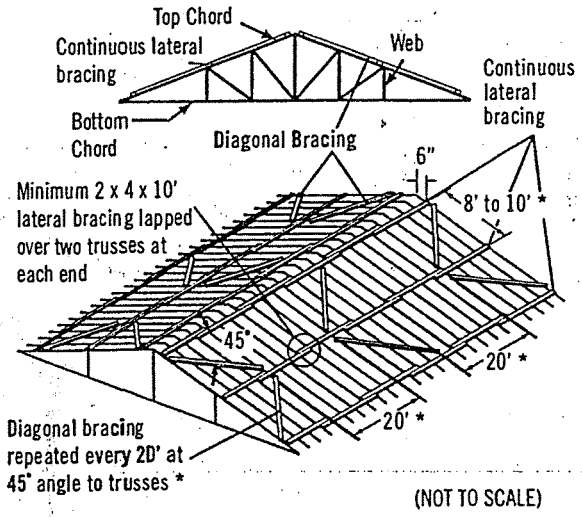
Well nailed (perpendicular to force)

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.

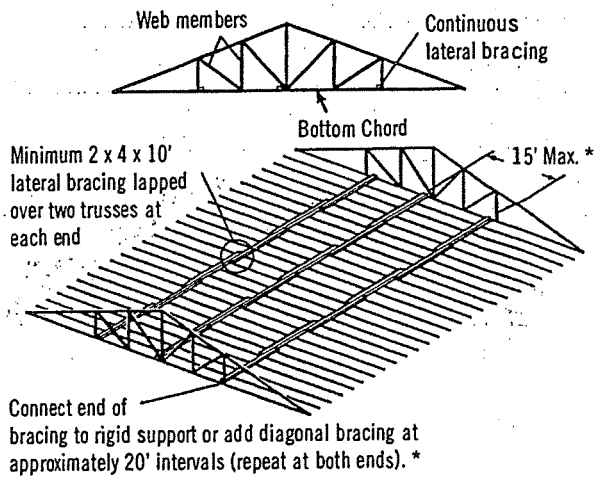


(NOT TO SCALE)

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.

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.



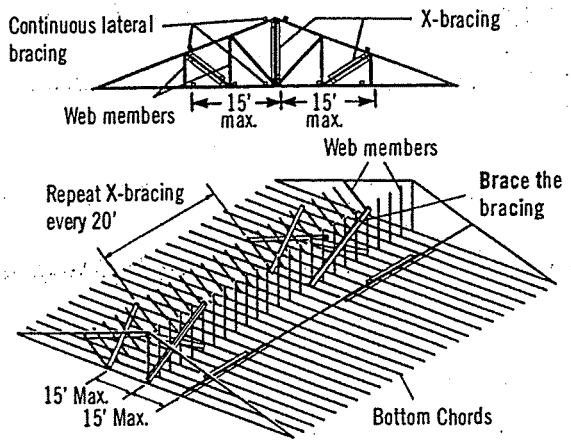
* Long spans, heavy loads or other spacing configurations may require closer spacing between lateral bracing and closer intervals between diagonals. Consult the building designer or HIB and DSB (*Recommended Design Specification for Temporary Bracing of Metal-Plate Connected Wood Trusses*) for details.

Diagonal or cross-bracing is very important!

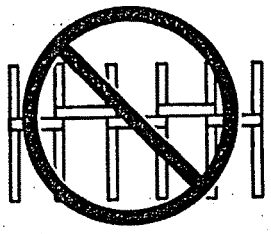
3) Web Member Plane

"X" bracing, as shown, is critical in preventing trusses from leaning or dominoing. Repeat as shown to create a succession of rigid units.

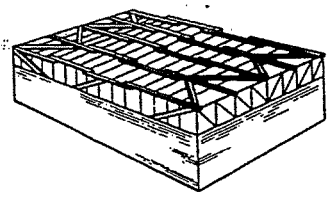
X-bracing should be installed on vertical web members wherever possible, at or near lateral bracing. Plywood or OSB may be substituted for X-bracing.



Note: Top chords and some web members are not shown, in order to make drawings more readable.



Do not use short blocks to brace individual trusses without a specific bracing plan detailing their use

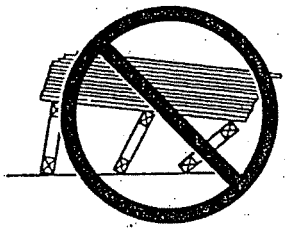


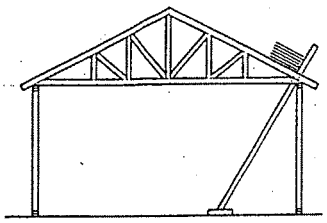
Bracing requirements using the same principles apply to parallel chord trusses

8 Stacking Materials

Do not proceed with building completion until all bracing is securely and properly in place

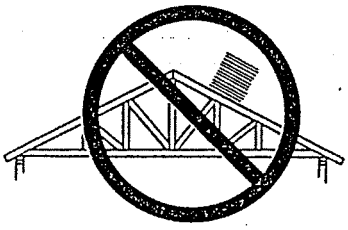
Never stack materials on unbraced or inadequately braced trusses

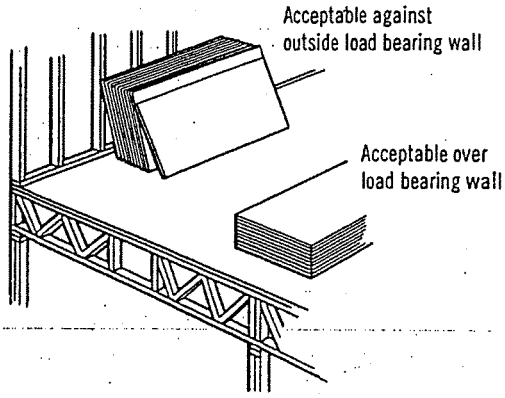




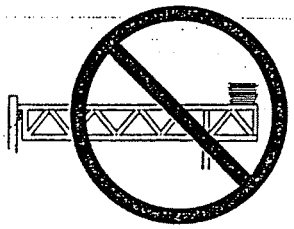
Proper distribution of construction materials is a must during construction.

Never stack materials near a peak

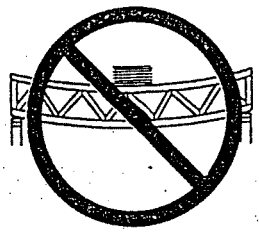


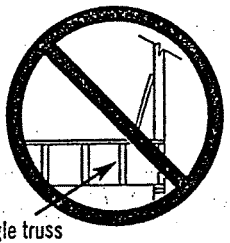


Never stack materials on the cantilever of a truss

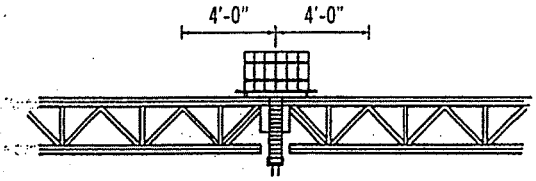


Always stack materials over two or more trusses.



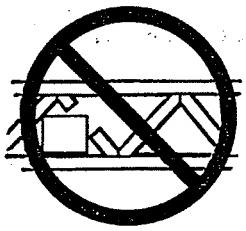


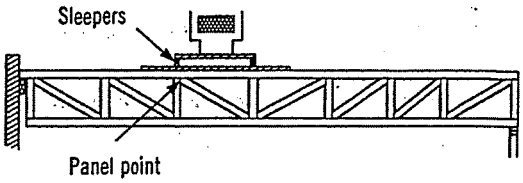
Never overload small groups or single trusses. Position load over as many trusses as possible.



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