



Job Track: 39002
Layout ID: 317090
Plan Log: 105446

Builder / Location:
GOLD PARK HOMES / BRAMPTON

Project: MCLAUGHLIN AND MAYFIELD/ENCORE 2
Date: 2020-02-06
Designer: AMANDA

Model / Elevator:

LOT 112 / A W/ MASTER TRAY

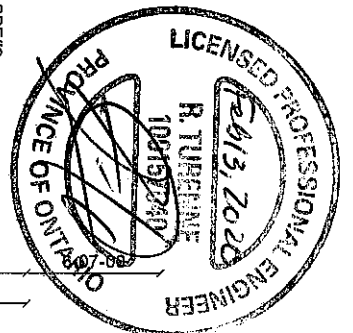
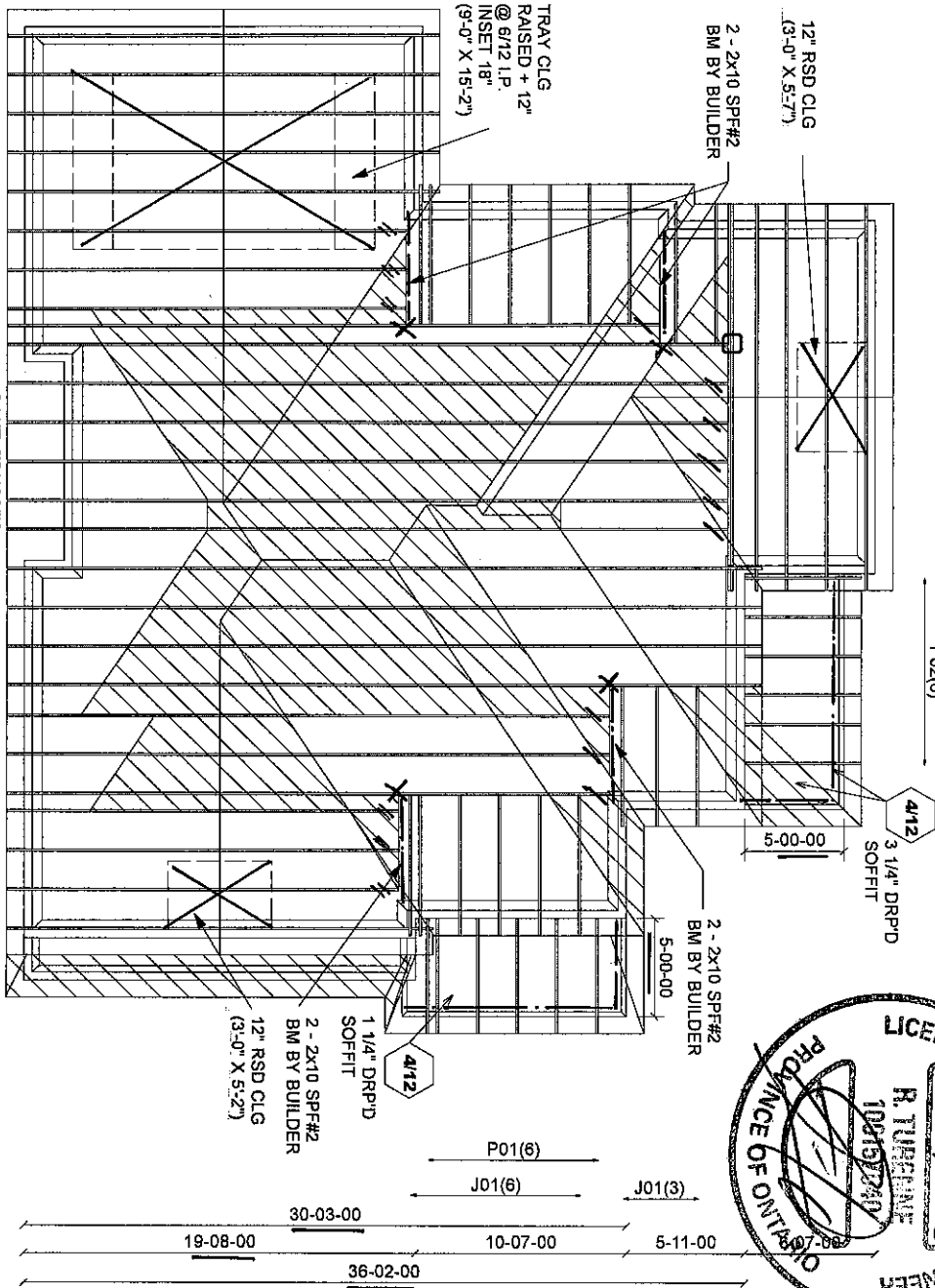
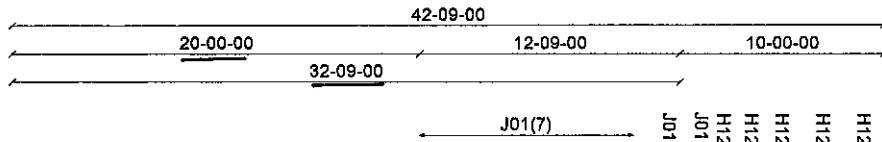
12" FIN. OH.
RSD. HEEL - 0" DROP
(2" x 6" FASCIA) - FM
ASPHALT SHINGLES
2" X 6" BRG/BRICK

ALL CONVENTIONAL FRAMING TO CONFORM WITH PART 9 O.B.C. LATEST EDITION. ROOF RATES 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'

CONVENTIONAL FRAMING BY OTHERS

220023780-220023806

Wind V. 62.0



ALPA-BARRIE

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.

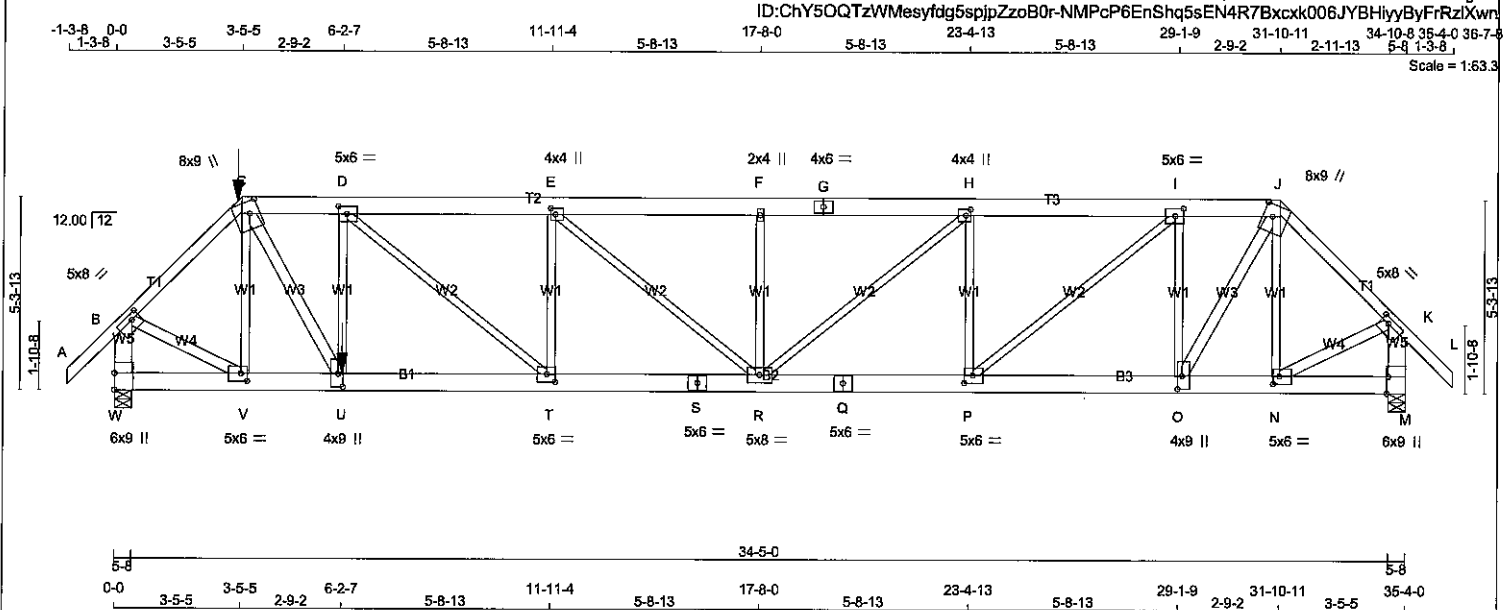
THESE DRAWINGS CONSTITUTE THE PROPERTY OF EWP DESIGN INC., SHALL NOT BE REPRODUCED, PUBLISHED, OR REDISTRIBUTED IN ANY MANNER OR UTILIZED FOR ANY PURPOSE OTHER THAN THE MANUFACTURE OF TRUSSES BY THE ALPA LUMBER GROUP, AND WILL BE RETRACTED BY EWP DESIGN INC. IF UTILIZED FOR ANY OTHER PURPOSE.

February 1, 2019

JOB NAME 317090	TRUSS NAME H01	QUANTITY 1	PLY 1	JOB DESC. JT-39002	DRWG NO. E-20023780
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Alpa Roof Truss, Maple

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Scale = 1:63.3

TOTAL WEIGHT = 203 lb

LUMBER			
N. L. G. A. RULES	CHORDS	SIZE	DESCR.
A - C	2x4	DRY	No.2 SPF
C - G	2x6	DRY	No.2 SPF
G - J	2x6	DRY	No.2 SPF
J - L	2x4	DRY	No.2 SPF
W - B	2x6	DRY	No.2 SPF
M - K	2x6	DRY	No.2 SPF
W - S	2x6	DRY	1650F 1.5E SPF
S - Q	2x6	DRY	1650F 1.5E SPF
Q - M	2x6	DRY	1650F 1.5E SPF
ALL WEBS	2x3	DRY	No.2 SPF
EXCEPT			
C - U	2x4	DRY	No.2 SPF
O - J	2x4	DRY	No.2 SPF
B - V	2x4	DRY	No.2 SPF
N - K	2x4	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 2.75
C	TTVW+m	MT20	8.0	9.0	4.00 3.00
D	TMVW-t	MT20	5.0	6.0	2.50 2.75
E	TMVW-t	MT20	4.0	4.0	2.00 1.50
F	TMVW-w	MT20	2.0	4.0	
G	TS-t	MT20	4.0	6.0	
H	TMVW-t	MT20	4.0	4.0	2.00 1.50
I	TMVW-t	MT20	5.0	6.0	2.50 2.75
J	TTVW+m	MT20	8.0	9.0	4.00 3.00
K	TMVW-t	MT20	5.0	8.0	1.75 2.75
M	BMV1+t	MT20	6.0	9.0	Edge 0.50
N	BMVW-t	MT20	5.0	6.0	2.50 2.00
O	BMVW-t	MT20	4.0	9.0	4.25 1.50
P	BMVW-t	MT20	5.0	6.0	2.50 2.75
Q	BS-t	MT20	5.0	6.0	
R	BMVW-t	MT20	5.0	8.0	
S	BS-t	MT20	5.0	6.0	
T	BMVW-t	MT20	5.0	6.0	2.50 2.75
U	BMVW-t	MT20	4.0	9.0	4.25 1.50
V	BMVW-t	MT20	5.0	6.0	2.50 2.00
W	BMV1+t	MT20	6.0	9.0	5.50

NOTE: Lateral brace(s) shown shall be 2x4 SPF #2

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

BEARINGS			
FACTORED	MAXIMUM FACTORED	INPUT	REQRD
GROSS REACTION	GROSS REACTION	BRG	BRG
VERT	HORZ	UP/LIFT	IN-SX
JT 4323	0	4323	0
W 2408	0	2408	0
M 2408	0	2408	0

UNFACTORED REACTIONS			
1ST CASE	MAX/MIN	COMPONENT REACTIONS	
COMBINED	SNOW	LIVE	PERM.LIVE
W	3068	1952 / 0	0 / 0
M	1707	1087 / 0	0 / 0

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.10 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.

LOADING

TOTAL LOAD CASES: (4)

CHORDS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED HORZ. LOAD (LBS)
FR-TO			
A-B	0 / 42	-84.9	-84.9 0.13 (1)
B-C	-4051 / 0	-84.9	-84.9 0.49 (1)
C-D	-4698 / 0	-167.1	-167.1 0.24 (1)
D-E	-5251 / 0	-84.9	-84.9 0.37 (1)
E-F	-5035 / 0	-84.9	-84.9 0.36 (1)
F-G	-5035 / 0	-84.9	-84.9 0.35 (1)
G-H	-5035 / 0	-84.9	-84.9 0.35 (1)
H-I	-4150 / 0	-84.9	-84.9 0.29 (1)
I-J	-2552 / 0	-84.9	-84.9 0.15 (1)
J-K	-2137 / 0	-84.9	-84.9 0.28 (1)
K-L	0 / 42	-84.9	-84.9 0.13 (1)
W-B	-4288 / 0	0.0	0.0 0.33 (1)
M-K	-2387 / 0	0.0	0.0 0.18 (1)
W-V	0 / 0	-36.4	-36.4 0.05 (1)
V-U	0 / 2849	-36.4	-36.4 0.29 (1)
U-T	0 / 4698	-18.5	-18.5 0.45 (1)
T-S	0 / 5251	-18.5	-18.5 0.47 (1)
S-R	0 / 5251	-18.5	-18.5 0.47 (1)
R-Q	0 / 4150	-18.5	-18.5 0.38 (1)
Q-P	0 / 4150	-18.5	-18.5 0.38 (1)
P-O	0 / 2552	-18.5	-18.5 0.24 (1)
O-N	0 / 1502	-18.5	-18.5 0.14 (1)
N-M	0 / 0	-18.5	-18.5 0.02 (1)

FACTORED CONCENTRATED LOADS (LBS)			
LOC.	LC1	MAX-	MAX+
C	3-5-5	-213	-
U	6-2-7	-2291	-2291

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	=	23.3 PSF
	DL	=	6.0 PSF
BOT CH.	LL	=	0.0 PSF
	DL	=	7.4 PSF
TOTAL LOAD	=	36.7	PSF

SPACING = 24.0 IN./C

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

GIRDER TYPE: CPrimeHip
SIDE SETBACK = 3-5-5
END SETBACK = 5-10-8
END WALL WIDTH = 0-0
CORNER FRAMING TYPE: CONVENTIONAL
END JACK TYPE: CONVENTIONAL
APPLIED TO FRONT SIDE
- ADDTL. LOADS BASED ON 55 % OF GSL.
LOADS APPLIED TO FIRST 6-2-7 OF SPAN
MEASURED FROM THE LEFT.

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

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

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

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (1.18")
CALCULATED VERT. DEFL.(LL) = L/999 (0.20")
ALLOWABLE DEFL.(TL) = L/360 (1.18")
CALCULATED VERT. DEFL.(TL) = L/999 (0.38")

CSI: TC=0.49/1.00 (B-C:1), BC=0.47/1.00 (R-T:1), WB=0.67/1.00 (I-O:1), SSI=0.18/1.00 (D-E: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.

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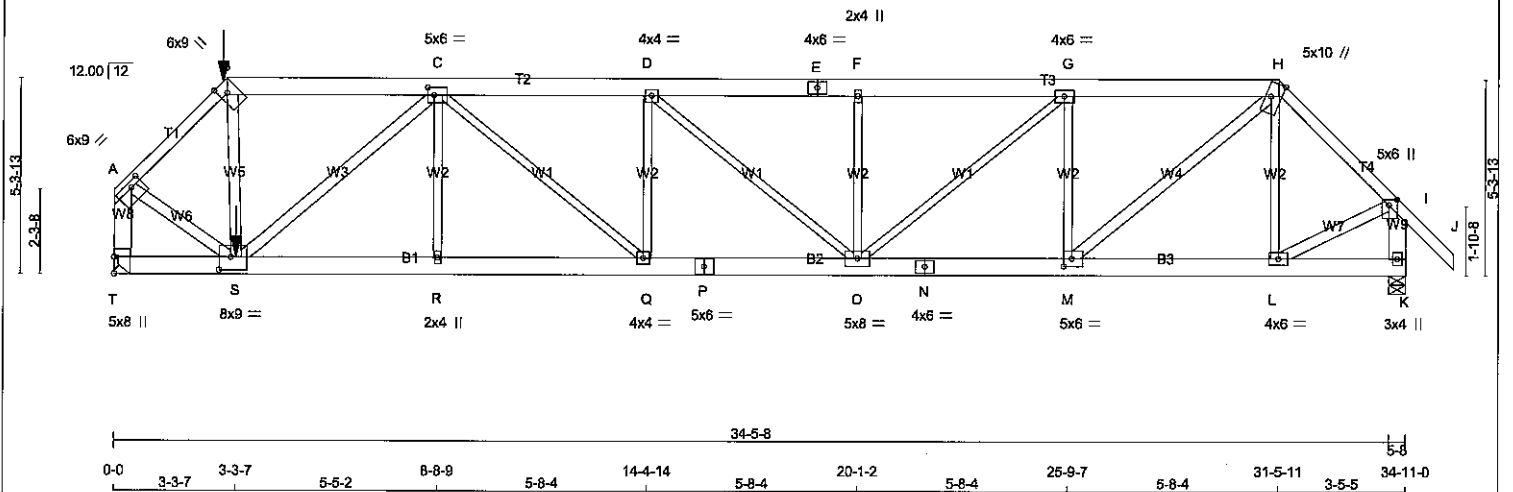
JOB NAME 317090	TRUSS NAME H01S	QUANTITY 1	PLY 1	JOB DESC. TRUSS DESC.	JT-39002	DRWG NO. E-20023781
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Alpa Roof Truss, Maple

Version 8.310 S Oct 29 2019 MITek Industries, Inc. Thu Feb 13 14:51:04 2020 Page 1

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0-0 3-0-5 3-0-5 5-8-4 8-8-9 5-8-4 14-4-14 5-8-4 20-1-2 5-8-4 25-9-7 5-8-4 31-5-11 34-5-8 34-11-0 36-2-8 5-8 1-3-8
Scale = 1:62.5



TOTAL WEIGHT = 196 lb

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT TYPE	PLATES	W	LEN	Y	X
A TMVW-t	MT20	6.0	9.0	1.75	3.50
B TTW+h	MT20	6.0	9.0	Edge	2.50
C TMVWW-t	MT20	5.0	6.0	2.50	2.00
D TMVW-t	MT20	4.0	4.0		
E TS-t	MT20	4.0	6.0		
F TMVW-t	MT20	2.0	4.0		
G TMVW-t	MT20	4.0	6.0		
H TTVWW+m	MT20	5.0	10.0	Edge	3.25
I TMVW+p	MT20	5.0	6.0	1.75	2.75
K BMV1+p	MT20	3.0	4.0		
L BMVW-t	MT20	4.0	6.0		
M BMVW-t	MT20	5.0	6.0	2.50	2.50
N BS-t	MT20	4.0	6.0		
O BMVWW-t	MT20	5.0	8.0		
P BS-t	MT20	5.0	6.0		
Q BMVW-t	MT20	4.0	4.0		
R BMVW-t	MT20	2.0	4.0		
S BMVWW-t	MT20	8.0	9.0	4.25	3.75
T BMV1+t	MT20	5.0	8.0	5.50	

NOTE: Lateral brace(s) shown shall be 2x4 SPF #2

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

BEARINGS

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG
JT	VERT	HORZ	DOWN	UPLIFT
T	5653	0	5653	0
K	2319	0	2319	0

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT T. MINIMUM BEARING LENGTH AT JOINT T = 5-0.

UNFACTORED REACTIONS

	1ST LCASE	MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
T	4014	2539 / 0	0 / 0	0 / 0	0 / 0	1476 / 0	0 / 0
K	1644	1057 / 0	0 / 0	0 / 0	0 / 0	587 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 2.75 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. LC1 MAX. CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. UNBRACED LENGTH	MAX. FACTORED FORCE (LBS)
FR-TO		FROM TO		FR-TO			
A-B	-4923 / 0	-84.9 -84.9	0.53 (1)	2.75	B-S	0 / 2967	0.52 (1)
B-C	-3650 / 0	-84.9 -84.9	0.29 (1)	4.23	S-C	-1295 / 0	0.91 (1)
C-D	-4852 / 0	-84.9 -84.9	0.35 (1)	3.69	R-C	0 / 126	0.05 (4)
D-E	-4406 / 0	-84.9 -84.9	0.29 (1)	3.92	C-Q	0 / 312	0.08 (1)
E-F	-4406 / 0	-84.9 -84.9	0.29 (1)	3.92	Q-D	-99 / 41	0.04 (1)
F-G	-4406 / 0	-84.9 -84.9	0.34 (1)	3.85	D-O	-586 / 0	0.63 (1)
G-H	-3306 / 0	-84.9 -84.9	0.28 (1)	4.42	O-F	-464 / 0	0.18 (1)
H-I	-2050 / 0	-84.9 -84.9	0.27 (1)	4.44	O-G	0 / 1446	0.36 (1)
I-J	0 / 42	-84.9 -84.9	0.13 (1)	10.00	M-G	-1489 / 0	0.56 (1)
T-A	-5569 / 0	0.0 0.0	0.48 (1)	4.51	M-H	0 / 2455	0.43 (1)
K-I	-2300 / 0	0.0 0.0	0.18 (1)	6.73	L-H	-487 / 0	0.18 (1)
					A-S	0 / 4003	0.71 (1)
					L-I	0 / 1567	0.28 (1)
T-S	0 / 0	-36.4 -36.4	0.07 (1)	10.00			
S-R	0 / 4614	-18.5 -18.5	0.68 (1)	10.00			
R-Q	0 / 4614	-18.5 -18.5	0.64 (1)	10.00			
Q-P	0 / 4852	-18.5 -18.5	0.69 (1)	10.00			
P-O	0 / 4852	-18.5 -18.5	0.69 (1)	10.00			
O-N	0 / 3306	-18.5 -18.5	0.48 (1)	10.00			
N-M	0 / 3306	-18.5 -18.5	0.48 (1)	10.00			
M-L	0 / 1441	-18.5 -18.5	0.22 (1)	10.00			
L-K	0 / 0	-18.5 -18.5	0.05 (4)	10.00			

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
B	3-0-5	-187	-187	—	FRONT	VERT	TOTAL	—	C1
S	3-3-7	-3998	-3998	—	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	=	23.3	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.4	PSF
TOTAL LOAD	=	36.7	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 = 3-0-5

RIGHT SETBACK = 3-5-5

END SETBACK = 5-10-8

END WALL WIDTH = 0-0

CORNER FRAMING TYPE: CONVENTIONAL

END JACK TYPE: CONVENTIONAL

APPLIED TO FRONT SIDE

- ADDTL LOADS BASED ON 55 % OF GSL
LOADS APPLIED TO FIRST 3-3-7 OF SPAN
MEASURED FROM THE LEFT.

*** NON STANDARD GIRDER ***

ADDTL USER-DEFINED LOADS APPLIED TO ALL LOAD CASES.

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (1.16")
CALCULATED VERT. DEFL.(LL) = L/999 (0.18")
ALLOWABLE DEFL.(TL) = L/360 (1.16")
CALCULATED VERT. DEFL.(TL) = L/999 (0.34")

CSI: TC=0.53/1.00 (A-B:1), BC=0.69/1.00 (O-Q:1), WB=0.91/1.00 (C-S:1), SSI=0.19/1.00 (G-H:1)

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

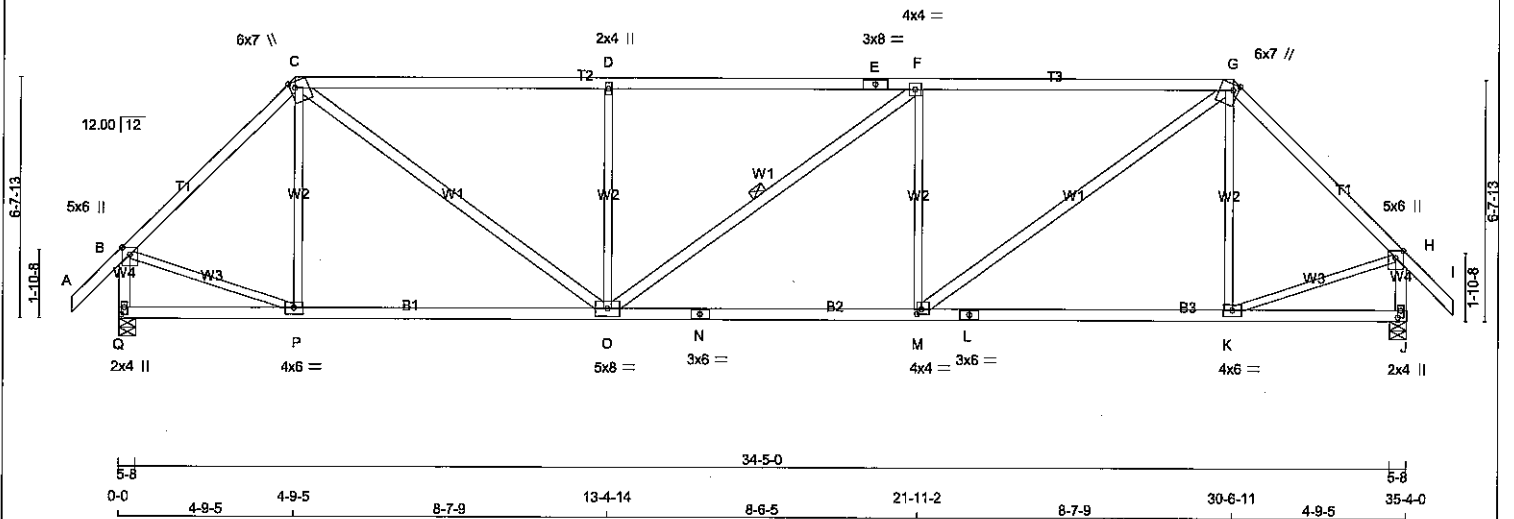
COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE HEELS OFF

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

CONTINUED ON PAGE 2





LUMBER
N. L. G. A. RULES

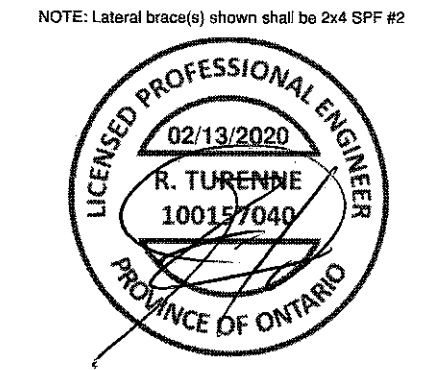
CHORDS	SIZE	DRY	LUMBER	DESCR.
A - C	2x4	DRY	No.2	SPF
C - E	2x4	DRY	2100F 1.8E	SPF
E - G	2x4	DRY	2100F 1.8E	SPF
G - I	2x4	DRY	No.2	SPF
I - J	2x4	DRY	No.2	SPF
J - H	2x4	DRY	No.2	SPF
Q - N	2x4	DRY	No.2	SPF
N - L	2x4	DRY	No.2	SPF
L - J	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				
C - D	2x4	DRY	No.2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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT TYPE	PLATES	W	LEN	Y	X
B TMVW+p	MT20	5.0	6.0	2.25	2.50
C TTWW+m	MT20	6.0	7.0	Edge	1.75
D TMVW-w	MT20	2.0	4.0		
E TS-t	MT20	3.0	8.0		
F TMVW-t	MT20	4.0	4.0		
G TTWW+m	MT20	6.0	7.0	Edge	1.75
H TMVW+p	MT20	5.0	6.0	2.25	2.50
J BMV1+p	MT20	2.0	4.0	2.25	1.00
K BMVW-t	MT20	4.0	6.0		
L BS-t	MT20	3.0	6.0		
M BMVW-t	MT20	4.0	4.0	1.50	1.50
N BS-t	MT20	3.0	6.0		
O BMVW-t	MT20	5.0	8.0		
P BMVW-t	MT20	4.0	6.0		
Q BMV1+p	MT20	2.0	4.0	2.25	1.00

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



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

BEARINGS

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPLT BRG	REQRD BRG
JT	VERT	DOWN	UP	IN-SX
Q	1944	0	1944	0
J	1944	0	1944	0

UNFACTORED REACTIONS

	1ST LCASE	MAX/MIN	COMPONENT REACTIONS
JT	COMBINED	SNOW	LIVE
Q	1378	888 / 0	0 / 0
J	1378	888 / 0	0 / 0

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.36 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-O.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRAC	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
FR-TO		FROM TO		LENGTH	FR-TO		
A-B	0 / 42	-84.9	-84.9 0.12 (1)	10.00	P-C	-238 / 16	0.17 (1)
B-C	-1718 / 0	-84.9	-84.9 0.45 (1)	4.63	C-O	0 / 1606	0.26 (1)
C-D	-2501 / 0	-84.9	-84.9 0.80 (1)	4.37	O-D	-790 / 0	0.58 (1)
D-E	-2502 / 0	-84.9	-84.9 0.79 (1)	4.36	O-F	0 / 0	0.00 (1)
E-F	-2502 / 0	-84.9	-84.9 0.79 (1)	4.36	M-F	-790 / 0	0.58 (1)
F-G	-2502 / 0	-84.9	-84.9 0.80 (1)	4.36	M-G	0 / 1606	0.26 (1)
G-H	-1718 / 0	-84.9	-84.9 0.45 (1)	4.63	K-G	-238 / 16	0.17 (1)
H-I	0 / 42	-84.9	-84.9 0.12 (1)	10.00	B-P	0 / 1269	0.29 (1)
Q-B	-1918 / 0	0.0	0.0 0.21 (1)	6.07	K-H	0 / 1269	0.29 (1)
J-H	-1917 / 0	0.0	0.0 0.21 (1)	6.07			
Q-P	0 / 0	-18.5	-18.5 0.21 (4)	10.00			
P-O	0 / 1207	-18.5	-18.5 0.38 (4)	10.00			
O-N	0 / 2502	-18.5	-18.5 0.55 (1)	10.00			
N-M	0 / 2502	-18.5	-18.5 0.55 (1)	10.00			
M-L	0 / 1207	-18.5	-18.5 0.38 (4)	10.00			
L-K	0 / 1207	-18.5	-18.5 0.38 (4)	10.00			
K-J	0 / 0	-18.5	-18.5 0.21 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 23.3 PSF
DL = 6.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.4 PSF
TOTAL LOAD = 36.7 PSF

SPACING = 24.0 IN. C/C

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

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

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

(55 % OF 27.2 P.S.F. G.S.I. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.18")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.11")
ALLOWABLE DEFL.(TL)= L/360 (1.18")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.25")

CSI: TC=0.80/1.00 (F-G:1), BC=0.55/1.00 (M-O:1), WB=0.58/1.00 (F-M:1), SSI=0.34/1.00 (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) SHEAR SECTION (PSI) (PLI) (PLI)
MAX MIN MAX MIN MAX MIN
MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL = 0.250 inches

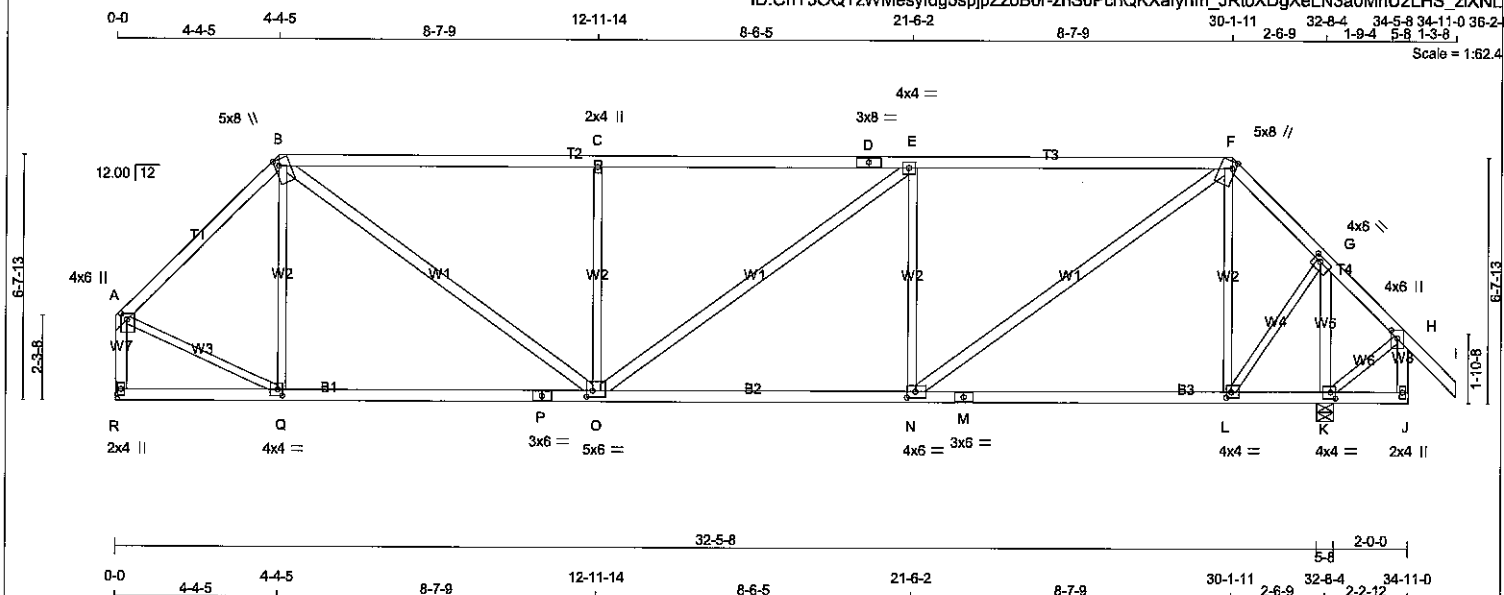
PLATE ROTATION TOL = 5.0 Deg.

JSI GRIP= 0.86 (E) (INPUT = 0.90)
JSI METAL= 0.79 (N) (INPUT = 1.00)

JOB NAME 317090	TRUSS NAME H02S	QUANTITY 1	PLY 1	JOB DESC. JT-39002	DRWG NO. E-20023783
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Alpa Roof Truss, Maple

Version 8.310 S Oct 29 2019 MITek Industries, Inc. Thu Feb 13 14:59:36 2020 Page 1
ID:ChY5OQTzWMesyfdg5spjpZzoB0r-zhS0PchQKXalnm_JRtoXDgXeLN3a0MnU2LHS_zIXNL



TOTAL WEIGHT = 159 lb

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER	DESCR.	
A - B	2x4	DRY	No.2	SPF
B - D	2x4	DRY	2100F 1.8E	SPF
D - F	2x4	DRY	2100F 1.8E	SPF
F - I	2x4	DRY	No.2	SPF
R - A	2x4	DRY	No.2	SPF
J - H	2x4	DRY	No.2	SPF
R - P	2x4	DRY	No.2	SPF
P - M	2x4	DRY	No.2	SPF
M - 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
N - F	2x4	DRY	No.2	SPF
K - G	2x4	DRY	No.2	SPF

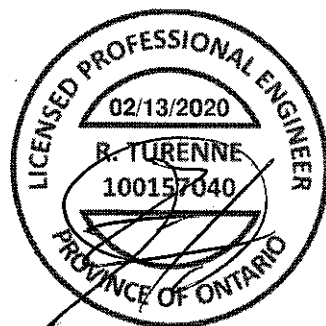
DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMWW+p	MT20	4.0	6.0	2.00	1.75
B	TTWW+m	MT20	5.0	8.0	2.00	1.50
C	TMW+w	MT20	2.0	4.0		
D	TS-t	MT20	3.0	8.0		
E	TMWW-t	MT20	4.0	4.0		
F	TTWW+m	MT20	5.0	8.0	Edge	1.25
G	TMWW-t	MT20	4.0	6.0	1.50	2.25
H	TMWW+p	MT20	4.0	6.0	2.75	2.00
J	BMV+p	MT20	2.0	4.0		
K	BMWW-t	MT20	4.0	4.0	2.00	1.50
L	BMWW-t	MT20	4.0	4.0	1.75	1.50
M	BS-t	MT20	3.0	6.0		
N	BMWW-t	MT20	4.0	6.0	2.00	2.75
O	BMWWW-t	MT20	5.0	6.0	2.00	2.00
P	BS-t	MT20	3.0	6.0		
Q	BMWW-t	MT20	4.0	4.0	2.00	1.50
R	BMV+p	MT20	2.0	4.0		

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

NOTE: Lateral brace(s) shown shall be 2x4 SPF #2



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

BEARINGS

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	UP
JT	1188	0	1673	0
R	1673	0	1673	0
K	2054	0	2054	0

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT R. MINIMUM BEARING LENGTH AT JOINT R = 1-15.

UNFACTORED REACTIONS

	1ST CASE	MAX/MIN. COMPONENT REACTIONS						
	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL	
JT	1188	753 / 0	0 / 0	0 / 0	0 / 0	435 / 0	0 / 0	
R	1456	938 / 0	0 / 0	0 / 0	0 / 0	518 / 0	0 / 0	

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.64 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT. OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. L1 (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. L1 (LC)	
FR-TO		FROM TO		FR-TO			
A-B	-1444 / 0	-84.9 -84.9	0.34 (1)	Q-B	-305 / 0	0.22 (1)	
B-C	-2160 / 0	-84.9 -84.9	0.75 (1)	B-O	0 / 1423	0.23 (1)	
C-D	-2160 / 0	-84.9 -84.9	0.75 (1)	O-C	-791 / 0	0.58 (1)	
D-E	-2160 / 0	-84.9 -84.9	0.75 (1)	O-E	0 / 182	0.03 (1)	
E-F	-2013 / 0	-84.9 -84.9	0.73 (1)	N-E	-901 / 0	0.66 (1)	
F-G	-846 / 0	-84.9 -84.9	0.11 (1)	N-F	0 / 1796	0.29 (1)	
G-H	0 / 181	-84.9 -84.9	0.13 (1)	L-F	-855 / 0	0.63 (1)	
H-I	0 / 42	-84.9 -84.9	0.12 (1)	L-G	0 / 1197	0.27 (1)	
R-A	-1652 / 0	0.0 0.0	0.21 (1)	K-G	-1942 / 0	0.36 (1)	
J-H	0 / 22	0.0 0.0	0.01 (4)	A-Q	0 / 1110	0.25 (1)	
R-Q	0 / 0	-18.5 -18.5	0.20 (4)	K-H	-134 / 0	0.02 (1)	
Q-P	0 / 1013	-18.5 -18.5	0.36 (4)				
P-O	0 / 1013	-18.5 -18.5	0.36 (4)				
O-N	0 / 2014	-18.5 -18.5	0.47 (1)				
N-M	0 / 566	-18.5 -18.5	0.32 (4)				
M-L	0 / 566	-18.5 -18.5	0.32 (4)				
L-K	-111 / 0	-18.5 -18.5	0.20 (4)				
K-J	0 / 0	-18.5 -18.5	0.04 (1)				

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
DL	=	6.0	PSF	
BOT CH.	LL	=	0.0	PSF
DL	=	7.4	PSF	
TOTAL LOAD	=	36.7	PSF	

SPACING = 24.0 IN. C/C

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

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

THIS DESIGN COMPLIES WITH:

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

(65 % OF 27.2 P.S.F. G.S.I. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)=	L/360 (1.09")
CALCULATED VERT. DEFL.(LL)=	L/999 (0.09")
ALLOWABLE DEFL.(TL)=	L/360 (1.09")
CALCULATED VERT. DEFL.(TL)=	L/999 (0.21")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= L/120 (0.22")
CALCULATED VERT. DEFL.(LL)= L/999 (0.00")
ALLOWABLE DEFL.(TL)= L/120 (0.22")
CALCULATED VERT. DEFL.(TL)= L/999 (0.00")

CSI: TC=0.75/1.00 (B-C:1), BC=0.47/1.00 (N-D:1), WB=0.66/1.00 (E-N:1), SSI=0.34/1.00 (E-F:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

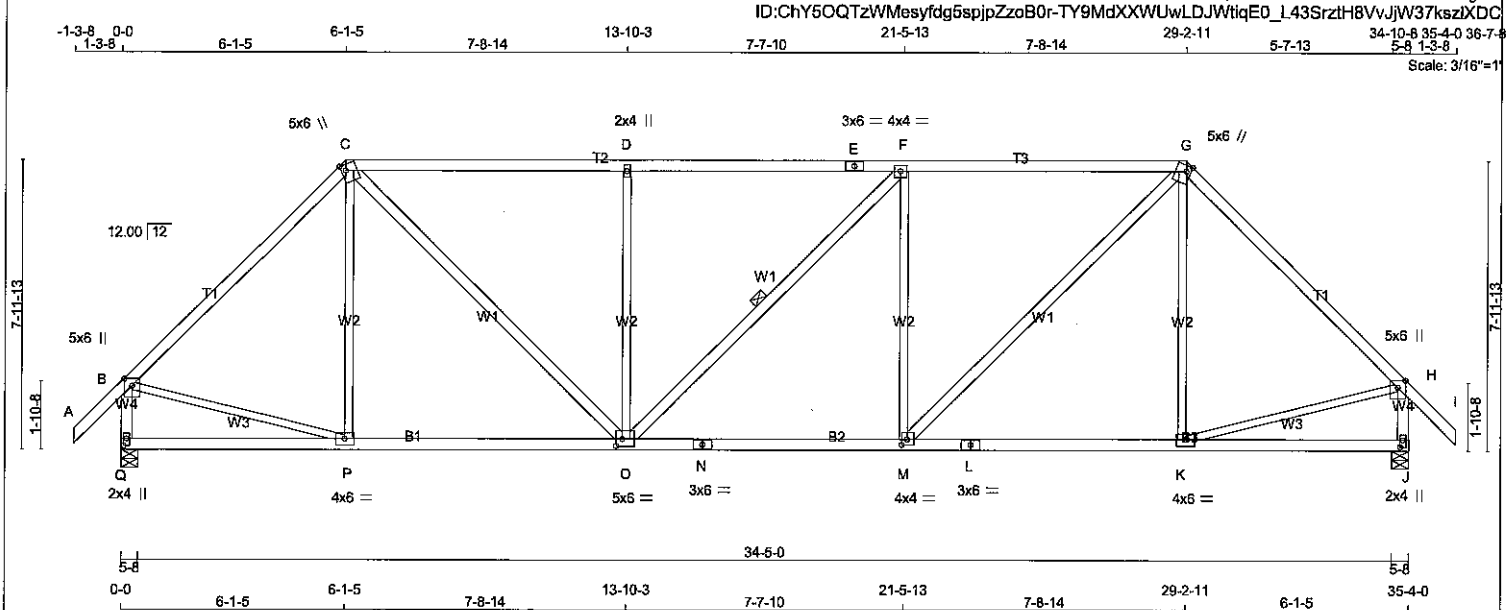
NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.88 (N) (INPUT = 0.90)
JSI METAL= 0.54 (A) (INPUT = 1.00)



TOTAL WEIGHT = 164 lb

LUMBER				N. L. G. A. RULES	
CHORDS	SIZE	LUMBER	DESCR.	CHORDS	SIZE
A - C	2x4	DRY	2100F 1.8E	SPF	
C - E	2x4	DRY	1650F 1.5E	SPF	
E - G	2x4	DRY	1650F 1.5E	SPF	
G - I	2x4	DRY	2100F 1.8E	SPF	
Q - B	2x4	DRY	No.2	SPF	
J - H	2x4	DRY	No.2	SPF	
Q - N	2x4	DRY	No.2	SPF	
N - L	2x4	DRY	No.2	SPF	
L - J	2x4	DRY	No.2	SPF	
ALL WEBS	2x3	DRY	No.2	SPF	
EXCEPT					
C - O	2x4	DRY	No.2	SPF	
O - F	2x4	DRY	No.2	SPF	
M - G	2x4	DRY	No.2	SPF	

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW+p	MT20	5.0	6.0	2.25	2.50
C	TTWW+m	MT20	5.0	6.0	2.00	1.50
D	TMVW+m	MT20	2.0	4.0		
E	TS-t	MT20	3.0	6.0		
F	TMVW-t	MT20	4.0	4.0		
G	TTWW+m	MT20	5.0	6.0	2.00	1.50
H	TMVW+p	MT20	5.0	6.0	2.25	2.50
J	BMV1+p	MT20	2.0	4.0	2.25	1.00
K	BMVW-t	MT20	4.0	6.0		
L	BS-t	MT20	3.0	6.0		
M	BMVW-t	MT20	4.0	4.0	1.75	1.75
N	BS-t	MT20	3.0	6.0		
O	BMVW-t	MT20	5.0	6.0	2.25	2.00
P	BMVW-t	MT20	4.0	6.0		
Q	BMV1+p	MT20	2.0	4.0	2.25	1.00

NOTE: Lateral brace(s) shown shall be 2x4 SPF #2

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

BEARINGS		FACTORED		MAXIMUM FACTORED		INPUT		REQRD	
JT	VERT	GROSS REACTION	HORZ	GROSS REACTION	DOWN	BRG	IN-SX	BRG	IN-SX
Q	1944	0	1944	0	0	5-8	2-14		
J	1944	0	1944	0	0	5-8	2-14		

UNFACTORED REACTIONS

JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
Q	1378	888 / 0	0 / 0	0 / 0	0 / 0	490 / 0	0 / 0
J	1378	888 / 0	0 / 0	0 / 0	0 / 0	490 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.36 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-O.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS		FACTORED		WEBS		MAX. FACTORED	
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	LC1 MAX (CSI (LC))	MEMB.	FORCE (LBS)	MAX. FACTORED (LBS)	MAX. FACTORED (CSI (LC))
FR-TO				FR-TO			
A-B	0 / 42	-84.9	-84.9 0.08 (1)	10.00	P-C	-155 / 49	0.19 (1)
B-C	-1728 / 0	-84.9	-84.9 0.46 (1)	5.51	C-O	0 / 1205	0.19 (1)
C-D	-2073 / 0	-84.9	-84.9 0.74 (1)	4.38	O-D	-707 / 0	0.86 (1)
D-E	-2073 / 0	-84.9	-84.9 0.74 (1)	4.36	O-F	-1 / 0	0.00 (1)
E-F	-2073 / 0	-84.9	-84.9 0.74 (1)	4.36	M-F	-708 / 0	0.86 (1)
F-G	-2074 / 0	-84.9	-84.9 0.75 (1)	4.36	M-G	0 / 1207	0.19 (1)
G-H	-1728 / 0	-84.9	-84.9 0.46 (1)	5.51	K-G	-156 / 49	0.19 (1)
H-I	0 / 42	-84.9	-84.9 0.08 (1)	10.00	B-P	0 / 1255	0.28 (1)
Q-B	-1901 / 0	0.0	0.0 0.21 (1)	6.09	K-H	0 / 1255	0.28 (1)
J-H	-1901 / 0	0.0	0.0 0.21 (1)	6.08			
Q-P	0 / 0	-18.5	-18.5 0.21 (4)	10.00			
P-O	0 / 1217	-18.5	-18.5 0.32 (4)	10.00			
O-N	0 / 2074	-18.5	-18.5 0.45 (1)	10.00			
N-M	0 / 2074	-18.5	-18.5 0.45 (1)	10.00			
M-L	0 / 1217	-18.5	-18.5 0.32 (4)	10.00			
L-K	0 / 1217	-18.5	-18.5 0.32 (4)	10.00			
K-J	0 / 0	-18.5	-18.5 0.21 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 23.3 PSF
DL = 6.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.4 PSF
TOTAL LOAD = 36.7 PSF

SPACING = 24.0 IN. C/C

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

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

THIS DESIGN COMPLIES WITH:

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

(56 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.18")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.09")
ALLOWABLE DEFL.(TL)= L/360 (1.18")
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.19")

CSI: TC=0.75/1.00 (F-G:1), BC=0.45/1.00 (M-O:1), WB=0.86/1.00 (F-M:1), SS=0.31/1.00 (F-G:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

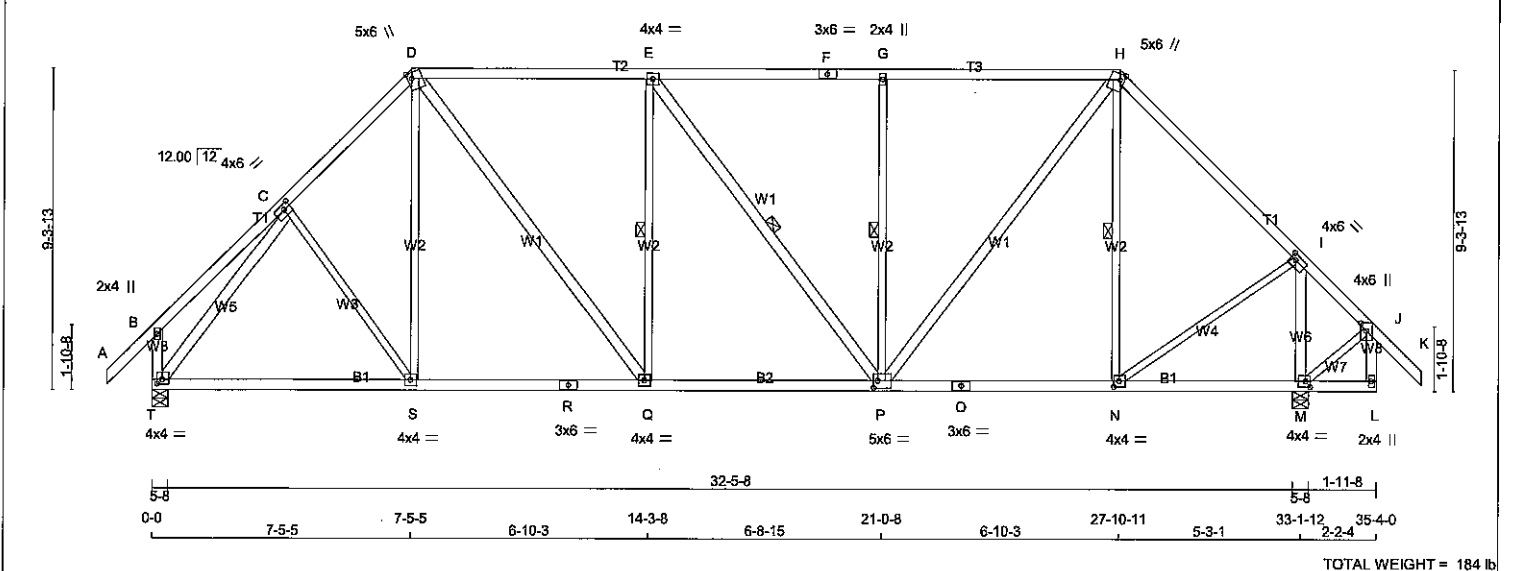
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.84 (M) (INPUT = 0.90)
JSI METAL= 0.65 (N) (INPUT = 1.00)







LUMBER

N. L. G. A. RULES

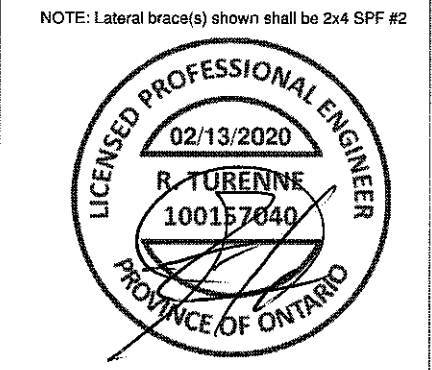
CHORDS	SIZE	LUMBER	DESCR.
A - D	2x4	DRY	No.2 SPF
D - F	2x4	DRY	No.2 SPF
F - H	2x4	DRY	No.2 SPF
H - K	2x4	DRY	No.2 SPF
T - B	2x4	DRY	No.2 SPF
L - J	2x4	DRY	No.2 SPF
T - R	2x4	DRY	No.2 SPF
R - O	2x4	DRY	No.2 SPF
O - L	2x4	DRY	No.2 SPF

ALL WEBS EXCEPT	SIZE	LUMBER	DESCR.
D - Q	2x4	DRY	No.2 SPF
E - P	2x4	DRY	No.2 SPF
P - H	2x4	DRY	No.2 SPF
M - I	2x4	DRY	No.2 SPF
T - C	2x4	DRY	No.2 SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	2.0	4.0		
C	TTWW-t	MT20	4.0	6.0	1.75	2.50
D	TTWW+m	MT20	5.0	6.0	2.00	1.50
E	TMWW-t	MT20	4.0	4.0		
F	TS-t	MT20	3.0	6.0		
G	TMW+w	MT20	2.0	4.0		
H	TTWW+m	MT20	5.0	6.0	2.00	1.50
I	TMWW-t	MT20	4.0	6.0	1.75	2.00
J	TMVW+p	MT20	4.0	6.0	2.75	2.00
L	BMV+p	MT20	2.0	4.0		
M	BMWW-t	MT20	4.0	4.0	2.00	1.50
N	BMWW-t	MT20	4.0	4.0	2.00	1.75
O	BS-t	MT20	3.0	6.0		
P	BMWWW-t	MT20	5.0	6.0	2.50	1.50
Q	BMWW-t	MT20	4.0	4.0		
R	BS-t	MT20	3.0	6.0		
S	BMWW-t	MT20	4.0	4.0		
T	BMVW-t	MT20	4.0	4.0	1.50	1.75



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
	VERT	HORZ	DOWN	HORZ		
JT	2073	0	2073	0	5-8	2-3
M	1816	0	1816	0	5-8	1-15

UNFACTORED REACTIONS

	1ST LCASE		MAX./MIN. COMPONENT REACTIONS		WIND	DEAD	SOIL
	COMBINED	SNOW	LIVE	PERM. LIVE			
JT	1469	946 / 0	0 / 0	0 / 0	0 / 0	523 / 0	0 / 0
M	1287	829 / 0	0 / 0	0 / 0	0 / 0	458 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.41 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.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF E-Q, E-P, G-P, H-N.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED HORIZ. LOAD (PLF)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED HORIZ. LOAD (PLF)	MEMB.
FR-TO				FR-TO			
A-B	0 / 42	-84.9	-84.9 0.12 (1)	10.00	C-S	0 / 55	0.02 (4)
B-C	0 / 26	-84.9	-84.9 0.18 (1)	10.00	S-D	0 / 126	0.04 (4)
C-D	-1582 / 0	-84.9	-84.9 0.23 (1)	5.02	D-Q	0 / 776	0.12 (1)
D-E	-1568 / 0	-84.9	-84.9 0.67 (1)	4.41	Q-E	-500 / 0	0.29 (1)
E-F	-1472 / 0	-84.9	-84.9 0.65 (1)	4.53	E-P	-160 / 0	0.11 (1)
F-G	-1472 / 0	-84.9	-84.9 0.65 (1)	4.53	P-G	-626 / 0	0.36 (1)
G-H	-1472 / 0	-84.9	-84.9 0.65 (1)	4.55	P-H	0 / 1107	0.18 (1)
H-I	-1175 / 0	-84.9	-84.9 0.39 (1)	5.44	N-H	-490 / 0	0.28 (1)
I-J	0 / 161	-84.9	-84.9 0.33 (1)	10.00	N-I	0 / 1058	0.24 (1)
J-K	0 / 42	-84.9	-84.9 0.12 (1)	10.00	M-I	-1838 / 0	0.35 (1)
T-B	-238 / 0	0.0	0.0 0.03 (1)	7.81	T-C	-1863 / 0	0.95 (1)
L-J	-2 / 5	0.0	0.0 0.00 (4)	7.81	M-J	-76 / 0	0.01 (1)
T-S	0 / 1075	-18.5	-18.5 0.33 (4)	10.00			
S-R	0 / 1098	-18.5	-18.5 0.34 (4)	10.00			
R-Q	0 / 1098	-18.5	-18.5 0.34 (4)	10.00			
Q-P	0 / 1568	-18.5	-18.5 0.34 (1)	10.00			
P-O	0 / 802	-18.5	-18.5 0.25 (4)	10.00			
O-N	0 / 802	-18.5	-18.5 0.25 (4)	10.00			
N-M	-62 / 0	-18.5	-18.5 0.14 (4)	6.25			
M-L	0 / 0	-18.5	-18.5 0.08 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH. LL = 23.3 PSF

DL = 6.0 PSF

BOT CH. LL = 0.0 PSF

DL = 7.4 PSF

TOTAL LOAD = 36.7 PSF

SPACING = 24.0 IN. C/C

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

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.10")

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

ALLOWABLE DEFL.(TL)= L/360 (1.10")

CALCULATED VERT. DEFL.(TL) = L/899 (0.13")

CANTILEVER DEFLECTION:

ALLOWABLE DEFL.(LL)= L/120 (0.22")

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

ALLOWABLE DEFL.(TL)= L/120 (0.22")

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

CSI: TC=0.67/1.00 (D-E:1), BC=0.34/1.00 (P-Q:1), WB=0.95/1.00 (C-T:1), SSI=0.27/1.00 (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

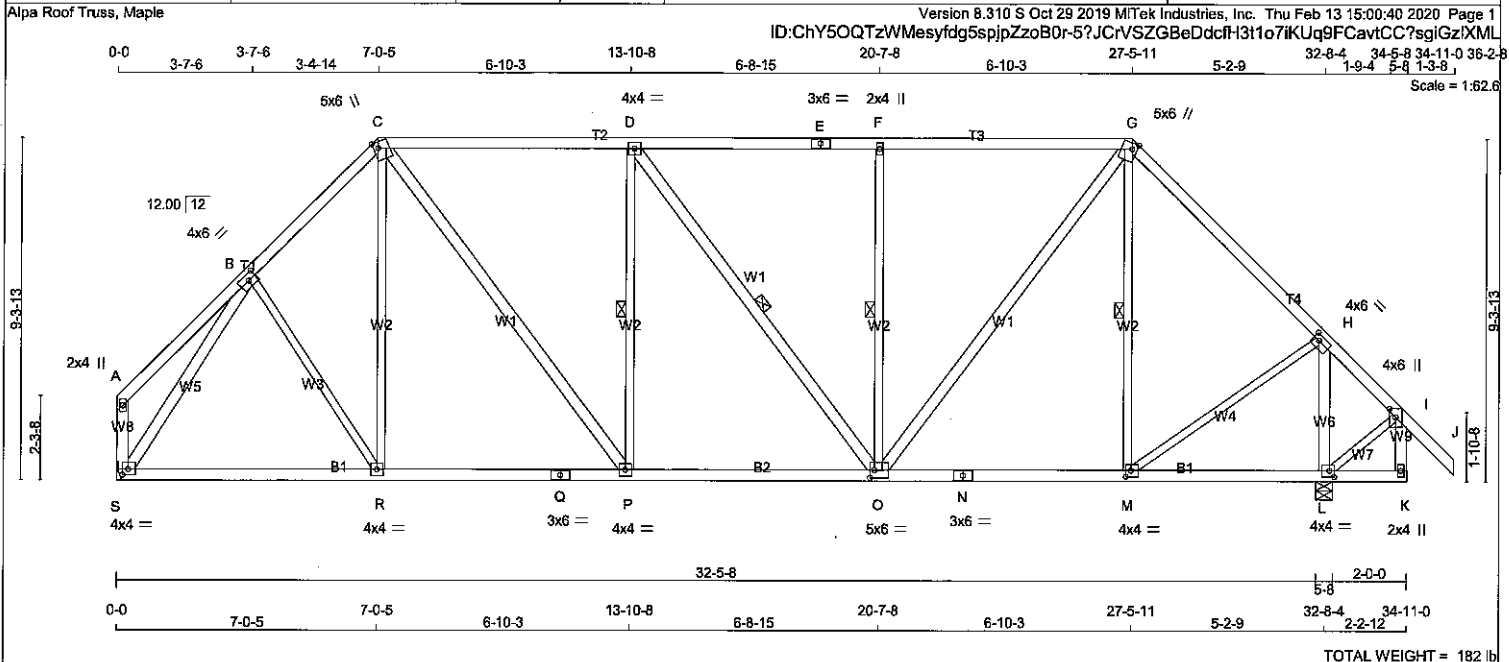
PLATE	GRIP(DRY)	SHEAR	SECTION
(PSI)	(PLI)	(PLI)	(PLI)
MAX	MIN	MAX	MIN
MT20	650	371	1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.87 (C) (INPUT = 0.80)

JSI METAL= 0.44 (C) (INPUT = 1.00)



LUMBER			
N. L. G. A. RULES			
CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY	No.2 SPF
C - E	2x4	DRY	No.2 SPF
E - G	2x4	DRY	No.2 SPF
G - J	2x4	DRY	No.2 SPF
S - A	2x4	DRY	No.2 SPF
K - I	2x4	DRY	No.2 SPF
S - Q	2x4	DRY	No.2 SPF
Q - N	2x4	DRY	No.2 SPF
N - K	2x4	DRY	No.2 SPF

ALL WEBS EXCEPT			
C - P	2x4	DRY	No.2 SPF
D - O	2x4	DRY	No.2 SPF
O - G	2x4	DRY	No.2 SPF
L - H	2x4	DRY	No.2 SPF
S - B	2x4	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	TMVW-t	MT20	4.0	6.0	2.00	2.75
C	TTVW+m	MT20	5.0	6.0	2.00	1.50
D	TMVW-t	MT20	4.0	4.0		
E	TS-t	MT20	3.0	6.0		
F	TMV+w	MT20	2.0	4.0		
G	TTVW+m	MT20	5.0	6.0	2.00	1.50
H	TMVW-t	MT20	4.0	6.0	1.75	2.00
I	TMVW+p	MT20	4.0	6.0	2.75	2.00
K	BMV+p	MT20	2.0	4.0		
L	BMVW1-t	MT20	4.0	4.0	2.00	1.50
M	BMVW-t	MT20	4.0	4.0	2.00	1.75
N	BS-t	MT20	3.0	6.0		
O	BMVWVW-t	MT20	5.0	6.0	2.50	1.50
P	BMVW-t	MT20	4.0	4.0		
Q	BS-t	MT20	3.0	6.0		
R	BMVW-t	MT20	4.0	4.0		
S	BMVW1-t	MT20	4.0	4.0	1.75	1.75

NOTE: Lateral brace(s) shown shall be 2x4 SPF #2

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER							
BEARINGS							
	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG			
JT	VERT	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	
L	2054	0	2054	0	0	5-8	2-3
S	1673	0	1673	0	0	MECHANICAL	

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

UNFACTORED REACTIONS							
	1ST LCASE	SNOW	MAX./MIN. COMPONENT REACTIONS				
JT	COMBINED		LIVE	PERM.LIVE	WIND	DEAD	SOIL
L	1456	938 / 0	0 / 0	0 / 0	0 / 0	518 / 0	0 / 0
S	1188	753 / 0	0 / 0	0 / 0	0 / 0	435 / 0	0 / 0

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

BRACING
 TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.47 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.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF D-P, D-O, F-O, G-M.

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

C H O R D S				W E B S			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)	
FR-TO		FROM TO	LENGTH	FR-TO			
A-B	0 / 23	-84.9 -84.9	0.16 (1)	10.00	B-R	0 / 115	0.03 (4)
B-C	-1492 / 0	-84.9 -84.9	0.20 (1)	5.16	R-C	0 / 96	0.03 (4)
C-D	-1520 / 0	-84.9 -84.9	0.66 (1)	4.47	C-P	0 / 801	0.13 (1)
D-E	-1438 / 0	-84.9 -84.9	0.65 (1)	4.58	P-D	-518 / 0	0.30 (1)
E-F	-1438 / 0	-84.9 -84.9	0.65 (1)	4.58	D-O	-137 / 0	0.10 (1)
F-G	-1438 / 0	-84.9 -84.9	0.64 (1)	4.60	O-F	-626 / 0	0.36 (1)
G-H	-1146 / 0	-84.9 -84.9	0.38 (1)	5.50	O-G	0 / 1084	0.17 (1)
H-I	0 / 165	-84.9 -84.9	0.33 (1)	10.00	M-G	-490 / 0	0.28 (1)
I-J	0 / 42	-84.9 -84.9	0.12 (1)	10.00	M-H	0 / 1045	0.24 (1)
S-A	-117 / 0	0.0 0.0	0.01 (1)	7.81	L-H	-1919 / 0	0.35 (1)
K-I	-1 / 6	0.0 0.0	0.00 (4)	7.81	S-B	-1790 / 0	0.94 (1)
					L-I	-81 / 0	0.01 (1)
S-R	0 / 971	-18.5 -18.5	0.31 (4)	10.00			
R-Q	0 / 1034	-18.5 -18.5	0.32 (4)	10.00			
Q-P	0 / 1034	-18.5 -18.5	0.32 (4)	10.00			
P-O	0 / 1520	-18.5 -18.5	0.33 (1)	10.00			
O-N	0 / 781	-18.5 -18.5	0.24 (4)	10.00			
N-M	0 / 781	-18.5 -18.5	0.24 (4)	10.00			
M-L	-67 / 0	-18.5 -18.5	0.14 (4)	6.25			
L-K	0 / 0	-18.5 -18.5	0.08 (4)	10.00			

DESIGN CRITERIA			
SPECIFIED LOADS:			
TOP CH.	LL	=	23.3 PSF
	DL	=	6.0 PSF
BOT CH.	LL	=	0.0 PSF
	DL	=	7.4 PSF
TOTAL LOAD	=	36.7 PSF	

SPACING = 24.0 IN. C/C

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

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

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

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.09")
 CALCULATED VERT. DEFL.(LL) = L/ 999 (0.06")
 ALLOWABLE DEFL.(TL)= L/360 (1.09")
 CALCULATED VERT. DEFL.(TL) = L/ 999 (0.13")

CANTILEVER DEFLECTION:
 ALLOWABLE DEFL.(LL)= L/120 (0.22")
 CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")
 ALLOWABLE DEFL.(TL)= L/120 (0.22")
 CALCULATED VERT. DEFL.(TL) = L/ 999 (0.00")

CSI: TC=0.66/1.00 (C-D:1) , BC=0.33/1.00 (O-P:1) , WB=0.94/1.00 (B-S:1) , SSI=0.27/1.00 (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 .

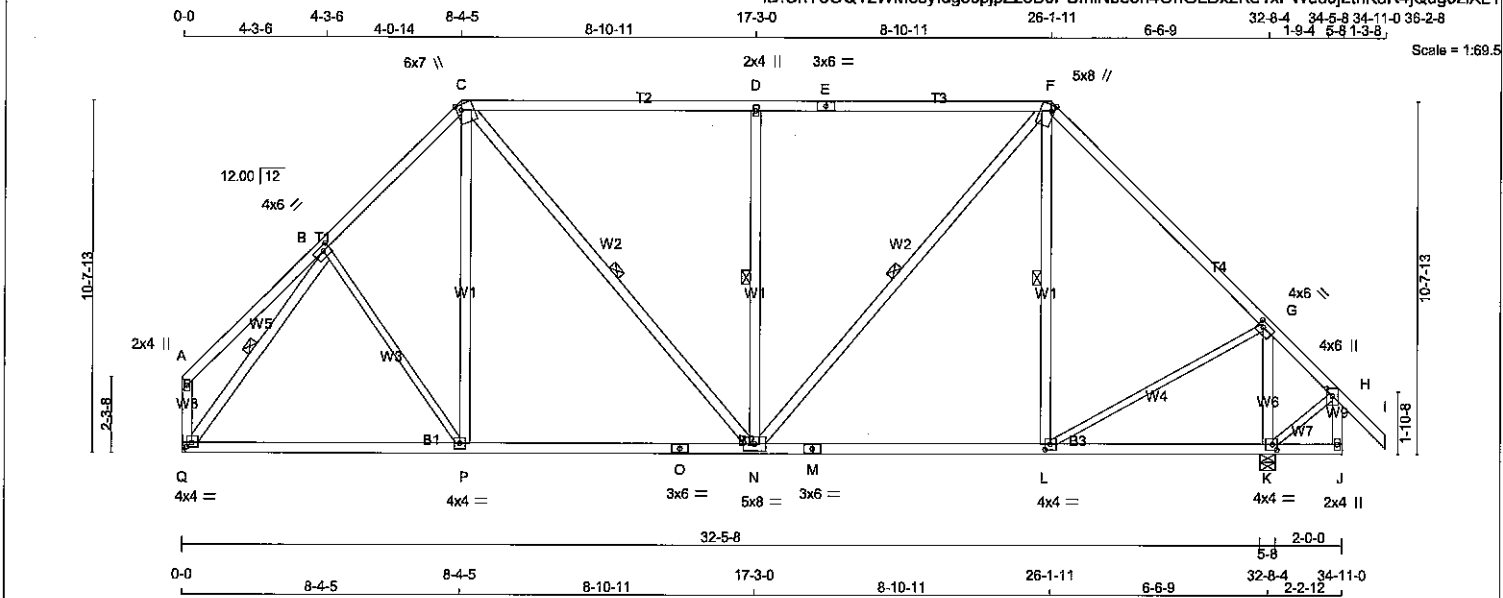
NAIL VALUES					
PLATE	GRIP(DRY)	SHEAR	SECTION		
	(PSI)	(PLI)	(PLI)		
	MAX	MIN	MAX	MIN	MAX
MT20	650	371	1747	788	1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (S) (INPUT = 0.90)
 JSI METAL= 0.39 (B) (INPUT = 1.00)





TOTAL WEIGHT = 2 X 184 = 369 lb [M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY No.2	SPF
C - E	2x4	DRY 2100F 1.8E	SPF
E - F	2x4	DRY 2100F 1.8E	SPF
F - I	2x4	DRY No.2	SPF
Q - A	2x4	DRY No.2	SPF
J - H	2x4	DRY No.2	SPF
Q - O	2x4	DRY No.2	SPF
O - M	2x4	DRY No.2	SPF
M - J	2x4	DRY No.2	SPF
ALL WEBS EXCEPT	2x4	DRY No.2	SPF
B - P	2x3	DRY No.2	SPF
L - G	2x3	DRY No.2	SPF
K - H	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	1.75	2.50
C	TTWW+m	MT20	6.0	7.0	Edge	1.75
D	TMW+w	MT20	2.0	4.0		
E	TS-t	MT20	3.0	6.0		
F	TTWW+m	MT20	5.0	8.0	Edge	1.25
G	TMWW-t	MT20	4.0	6.0	1.75	2.00
H	TMW+p	MT20	4.0	6.0	2.75	2.00
J	BMV+p	MT20	2.0	4.0		
K	BMWW1-t	MT20	4.0	4.0	2.00	1.50
L	BMWW-t	MT20	4.0	4.0	2.00	1.75
M	BS-t	MT20	3.0	6.0		
N	BMWWW-t	MT20	5.0	8.0		
O	BS-t	MT20	3.0	6.0		
P	BMWW-t	MT20	4.0	4.0		
Q	BMWW1-t	MT20	4.0	4.0	1.50	1.75

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

NOTE: Lateral brace(s) shown shall be 2x4 SPF #2

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

BEARINGS

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG
JT	VERT	DOWN	0	0
K	2054	0	2054	0
Q	1673	0	1673	0

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

UNFACTORED REACTIONS

	1ST CASE	MAX/MIN	COMPONENT REACTIONS
JT	COMBINED	SNOW	LIVE PERM.LIVE WIND DEAD SOIL
K	1456	938 / 0	0 / 0 0 / 0 518 / 0 0 / 0
Q	1188	753 / 0	0 / 0 0 / 0 435 / 0 0 / 0

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

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.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF C-N, D-N, F-N, F-L, B-Q.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX. CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED CSI (LC)	
FR-TO				FR-TO			
A-B	0 / 30	-84.9	-84.9 0.24 (1)	10.00	B-P	0 / 54	0.02 (4)
B-C	-1472 / 0	-84.9	-84.9 0.30 (1)	5.08	P-C	0 / 163	0.04 (4)
C-D	-1392 / 0	-84.9	-84.9 0.88 (1)	4.91	C-N	0 / 572	0.09 (1)
D-E	-1393 / 0	-84.9	-84.9 0.88 (1)	4.91	N-D	-930 / 0	0.53 (1)
E-F	-1393 / 0	-84.9	-84.9 0.88 (1)	4.91	N-F	0 / 867	0.14 (1)
F-G	-1217 / 0	-84.9	-84.9 0.67 (1)	5.02	L-F	-335 / 0	0.19 (1)
G-H	0 / 153	-84.9	-84.9 0.51 (1)	10.00	L-G	0 / 985	0.22 (1)
H-I	0 / 42	-84.9	-84.9 0.12 (1)	10.00	K-G	-1931 / 0	0.36 (1)
Q-A	-133 / 0	0.0	0.0 0.02 (1)	7.81	Q-B	-1787 / 0	0.46 (1)
J-H	-6 / 0	0.0	0.0 0.00 (1)	7.81	K-H	-34 / 0	0.01 (1)
Q-P	0 / 1005	-18.5	-18.5 0.42 (4)	10.00			
P-O	0 / 1019	-18.5	-18.5 0.43 (4)	10.00			
O-N	0 / 1019	-18.5	-18.5 0.43 (4)	10.00			
N-M	0 / 827	-18.5	-18.5 0.35 (4)	10.00			
M-L	0 / 827	-18.5	-18.5 0.35 (4)	10.00			
L-K	-28 / 0	-18.5	-18.5 0.24 (4)	6.25			
K-J	0 / 0	-18.5	-18.5 0.11 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH. LL = 23.3 PSF

DL = 6.0 PSF

BOT CH. LL = 0.0 PSF

DL = 7.4 PSF

TOTAL LOAD = 36.7 PSF

SPACING = 24.0 IN. C/C

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

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.08")

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

ALLOWABLE DEFL.(TL)= L/360 (1.09")

CALCULATED VERT. DEFL.(TL) = L/999 (0.15")

CANTILEVER DEFLECTION:

ALLOWABLE DEFL.(LL)= L/120 (0.22")

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

ALLOWABLE DEFL.(TL)= L/120 (0.22")

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

CSI: TC=0.88/1.00 (D-F:1), BC=0.43/1.00 (N-P:4), WB=0.53/1.00 (D-N:1), SSI=0.37/1.00 (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)	SHEAR (PSI)	SECTION (PLI)
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= 0.42 (B) (INPUT = 1.00)

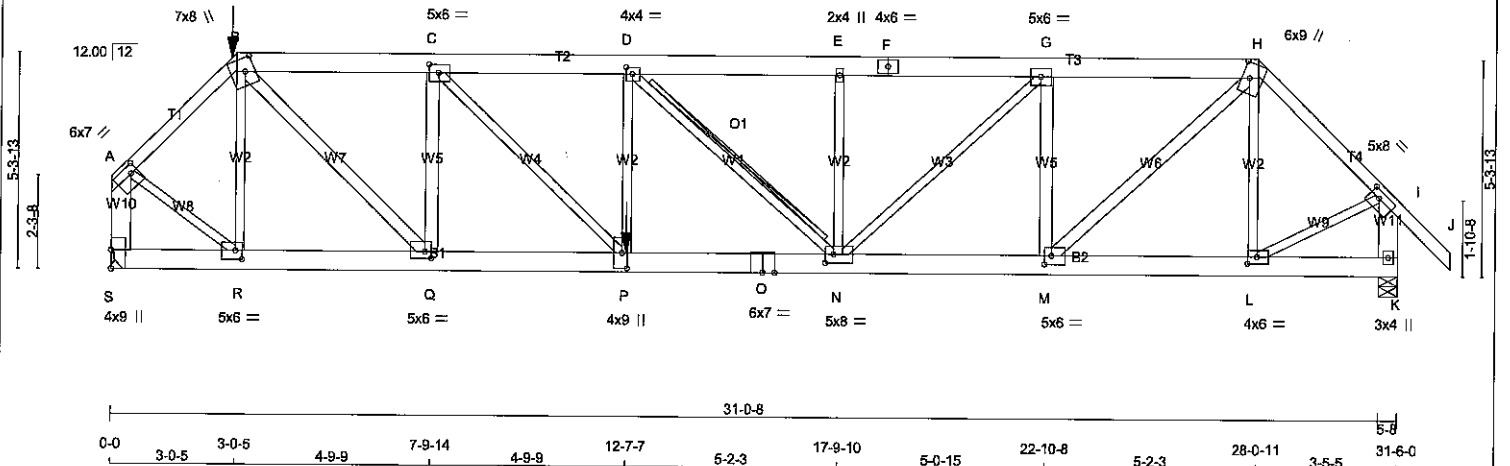


JOB NAME 317090	TRUSS NAME H06	QUANTITY 1	PLY 1	JOB DESC. JT-39002	DRWG NO. E-20023789
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Alpa Roof Truss, Maple

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ID:ChY5OQTzWMesyfdg5spjPZzoB0r-7UtsNMfszct6EGw jI3EO5ZXYCn_kxCfQ_yn9vzIXeA

0-0 3-0-5 3-0-5 4-9-9 7-9-14 4-9-9 12-7-7 5-2-3 17-9-10 5-0-15 22-10-8 5-2-3 28-0-11 2-11-13 5-6 1-3-8
Scale = 1:56.6



TOTAL WEIGHT = 181 lb

LUMBER			
N. L. G. A. RULES			
CHORDS	SIZE	LUMBER	DESCR.
A - B	2x4	DRY	No.2 SPF
B - F	2x6	DRY	No.2 SPF
F - H	2x6	DRY	No.2 SPF
H - J	2x4	DRY	No.2 SPF
S - A	2x6	DRY	No.2 SPF
K - I	2x6	DRY	No.2 SPF
S - O	2x6	DRY	1650F 1.5E SPF
O - K	2x6	DRY	1650F 1.5E SPF
ALL WEBS EXCEPT			
B - Q	2x4	DRY	No.2 SPF
Q - C	2x4	DRY	No.2 SPF
M - G	2x4	DRY	No.2 SPF
M - H	2x4	DRY	No.2 SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMWW-t	MT20	6.0	7.0	2.25	2.00
B	TTWW+m	MT20	7.0	8.0	4.00	2.75
C	TMWW-t	MT20	5.0	6.0	2.50	2.75
D	TMWW-t	MT20	4.0	4.0	2.00	1.75
E	TMWW-w	MT20	2.0	4.0		
F	TS-t	MT20	4.0	6.0		
G	TMWW-t	MT20	5.0	6.0		
H	TTWW+m	MT20	6.0	9.0	4.50	2.25
I	TMWW-t	MT20	5.0	8.0	2.00	3.00
K	BMV1+p	MT20	3.0	4.0		
L	BMWW-t	MT20	4.0	6.0	2.00	2.75
M	BMWW-t	MT20	5.0	6.0	2.50	2.00
N	BMWW-t	MT20	5.0	8.0	2.50	2.50
O	BS-t	MT20	6.0	7.0		
P	BMWW-t	MT20	4.0	9.0	4.50	1.50
Q	BMWW-t	MT20	5.0	6.0	2.00	1.75
R	BMWW-t	MT20	5.0	6.0	2.50	2.00
S	BMV1+t	MT20	4.0	9.0	5.50	

NOTE: Lateral brace(s) shown shall be 2x4 SPF #2

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER							
BEARINGS							
	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQ'D BRG	
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
S	3482	0	3482	0	0	MECHANICAL	
K	2614	0	2614	0	0	5-8	3-0

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT S. MINIMUM BEARING LENGTH AT JOINT S = 3-5.

UNFACTORED REACTIONS

JT	1ST CASE	MAX/MIN.	COMPONENT REACTIONS				
	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
S	2473	1562 / 0	0 / 0	0 / 0	0 / 0	911 / 0	0 / 0
K	1853	1190 / 0	0 / 0	0 / 0	0 / 0	663 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.16 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.

2x4 DRY SPF No.2 T-BRACE AT D-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				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. UNBRACED LENGTH	FACTORED CSI (LC)
FR-TO		FROM TO		FR-TO			
A-B	-2950 / 0	-84.9 -84.9 0.29 (1)	3.79	R-B	-1065 / 0		0.40 (1)
B-C	-4546 / 0	-167.1 -167.1 0.42 (1)	3.69	B-Q	0 / 3533		0.62 (1)
C-D	-5915 / 0	-167.1 -167.1 0.52 (1)	3.16	Q-C	-2322 / 0		0.83 (1)
D-E	-5062 / 0	-84.9 -84.9 0.30 (1)	3.66	C-P	0 / 1948		0.48 (1)
E-F	-5062 / 0	-84.9 -84.9 0.34 (1)	3.63	P-D	0 / 222		0.07 (4)
F-G	-5062 / 0	-84.9 -84.9 0.34 (1)	3.63	D-N	-1169 / 0		0.44 (1)
G-H	-3683 / 0	-84.9 -84.9 0.25 (1)	4.25	N-E	-414 / 0		0.16 (1)
H-I	-2345 / 0	-84.9 -84.9 0.30 (1)	4.18	E-G	0 / 1910		0.47 (1)
I-J	0 / 42	-84.9 -84.9 0.13 (1)	10.00	M-G	-1820 / 0		0.49 (1)
S-A	-3450 / 0	0.0 0.0 0.29 (1)	5.68	M-H	0 / 2781		0.49 (1)
K-I	-2594 / 0	0.0 0.0 0.20 (1)	6.41	L-H	-576 / 0		0.22 (1)
S-R	0 / 0	-36.4 -36.4 0.05 (4)	10.00	A-R	0 / 2430		0.60 (1)
R-Q	0 / 2067	-36.4 -36.4 0.21 (1)	10.00	L-I	0 / 1793		0.44 (1)
Q-P	0 / 4546	-36.4 -36.4 0.44 (1)	10.00				
P-O	0 / 5915	-18.5 -18.5 0.54 (1)	10.00				
O-N	0 / 5915	-18.5 -18.5 0.54 (1)	10.00				
N-M	0 / 3683	-18.5 -18.5 0.33 (1)	10.00				
M-L	0 / 1649	-18.5 -18.5 0.16 (1)	10.00				
L-K	0 / 0	-18.5 -18.5 0.03 (4)	10.00				

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
B	3-0-5	-187	-187		FRONT	VERT	TOTAL		C1
P	12-7-7	-1520	-1520		FRONT	VERT	TOTAL		C1

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 =	23.3	PSF
	DL =	6.0	PSF
BOT CH.	LL =	0.0	PSF
	DL =	7.4	PSF
TOTAL LOAD	=	36.7	PSF

SPACING = 24.0 IN./C

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

GIRDER TYPE: CPrimeHip

LEFT SETBACK = 3-0-5

RIGHT SETBACK = 3-5-5

END SETBACK = 5-10-8

END WALL WIDTH = 0-0

CORNER FRAMING TYPE: CONVENTIONAL

END JACK TYPE: CONVENTIONAL

APPLIED TO FRONT SIDE

- ADDTL LOADS BASED ON 55 % OF GSL.

LOADS APPLIED TO FIRST 12-7-7 OF SPAN MEASURED FROM THE LEFT.

*** NON STANDARD GIRDER ***

ADDTL USER-DEFINED LOADS APPLIED TO ALL LOAD CASES.

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

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018, ABC 2019

- PART 9 OF OBC 2012 (2019 AMENDMENT)

- CSA 086-14

- TPIC 2014

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.05")

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

ALLOWABLE DEFL.(TL)= L/360 (1.05")

CALCULATED VERT. DEFL.(TL)= L/999 (0.35")

CSI: TC=0.52/1.00 (C-D:1), BC=0.54/1.00

(N-P:1), WB=0.63/1.00 (C-Q:1), SS=0.32/1.00

(B-C:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00

COMP=1.00 SHEAR=1.00 TENS=1.00

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE HEELS OFF

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

CONTINUED ON PAGE 2

NOTE: Lateral brace(s) shown shall be 2x4 SPF #2



CONTINUED ON PAGE 2

JOB NAME 317090	TRUSS NAME H07G	QUANTITY 1	PLY 1	JOB DESC. TRUSS DESC.	JT-39002	DRWG NO. E-20023790
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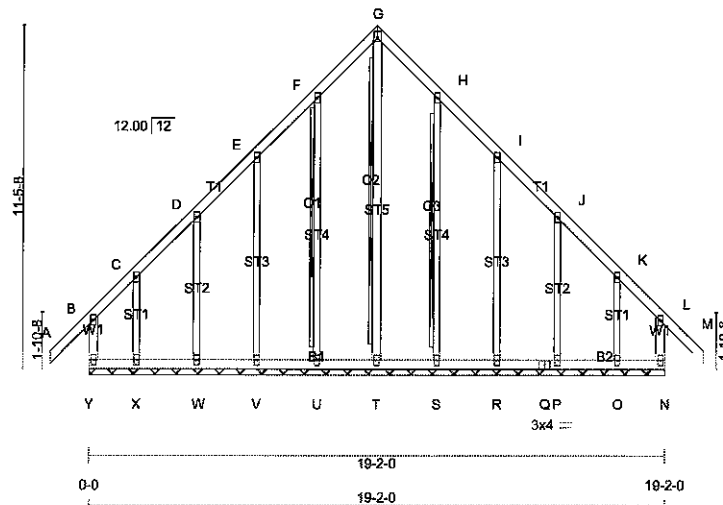
Alpha Roof Truss, Maple

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ID:ChY5OQTzWMeSyfdg5spjZzoB0r-BID9dZkRF3H881y1N7U2WGVA6SXZMJ4TVrGlpzIXPs

-1-3-8 0-0 9-7-0 9-7-0 9-1-8 18-8-8 19-2-0 20-5-8
1-3-8 3x4 || 5-81-3-8

Scale = 1:76.9



TOTAL WEIGHT = 111 lb

LUMBER **DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER** **DESIGN CRITERIA**

CHORDS	SIZE	DRY	LUMBER	DESCR.
Y - B	2x4	DRY	No.2	SPF
A - G	2x4	DRY	No.2	SPF
G - M	2x4	DRY	No.2	SPF
N - L	2x4	DRY	No.2	SPF
Y - Q	2x4	DRY	No.2	SPF
Q - N	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				
T - G	2x4	DRY	No.2	SPF
ALL GABLE WEBS	2x3	DRY	No.2	SPF
EXCEPT				
ST1	2x4	DRY	No.2	SPF

DRY: SEASONED LUMBER.

GABLE STUDS SPACED AT 2-0-0 O.C.

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 = 10.00 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT. OR RIGID CEILING DIRECTLY APPLIED.
ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.
2x4 DRY SPF No.2 T-BRACE AT G-T, F-U, H-S
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

DESIGN CRITERIA
SPECIFIED LOADS:
TOP CH. LL = 23.3 PSF
DL = 6.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.4 PSF
TOTAL LOAD = 36.7 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 2015, ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014
DESIGN ASSUMPTIONS
- OVERHANG NOT TO BE ALTERED OR CUT OFF.
(55% OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

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, J, K					
C TMW+w	MT20	2.0	4.0		
G TTW+p	MT20	3.0	4.0	Edge	
L TMV+p	MT20	2.0	4.0		
N BMV1+p	MT20	2.0	4.0		
O, P, R, S, T, U, V, W, X					
O BMW1+w	MT20	2.0	4.0		
Q BS-t	MT20	3.0	4.0		
Y BMV1+p	MT20	2.0	4.0		

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

LOADING
TOTAL LOAD CASES: (4)

MEMB.	CHORDS MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. UNBRACED LENGTH FR-TO	MEMB.	WEBS MAX. FACTORED FORCE (LBS)	MAX. UNBRACED LENGTH FR-TO
FR-TO						
Y-B	-200 / 0	0.0	0.0 0.03 (1)	7.81	T-G	-225 / 0
A-B	0 / 42	-84.9	-84.9 0.12 (1)	10.00	U-F	-173 / 0
B-C	-5 / 0	-84.9	-84.9 0.08 (1)	10.00	V-E	-164 / 0
C-D	0 / 27	-84.9	-84.9 0.05 (1)	10.00	W-D	-177 / 0
D-E	0 / 24	-84.9	-84.9 0.05 (1)	10.00	X-C	-106 / 0
E-F	0 / 30	-84.9	-84.9 0.05 (1)	10.00	S-H	-173 / 0
F-G	0 / 32	-84.9	-84.9 0.05 (1)	10.00	R-I	-164 / 0
G-H	0 / 32	-84.9	-84.9 0.05 (1)	10.00	P-J	-177 / 0
H-I	0 / 30	-84.9	-84.9 0.05 (1)	10.00	O-K	-106 / 0
I-J	0 / 24	-84.9	-84.9 0.05 (1)	10.00		
J-K	0 / 27	-84.9	-84.9 0.05 (1)	10.00		
K-L	-5 / 0	-84.9	-84.9 0.08 (1)	10.00		
L-M	0 / 42	-84.9	-84.9 0.12 (1)	10.00		
N-L	-200 / 0	0.0	0.0 0.03 (1)	7.81		
Y-X	-11 / 0	-18.5	-18.5 0.01 (4)	6.25		
X-W	-14 / 0	-18.5	-18.5 0.01 (4)	6.25		
W-V	-18 / 0	-18.5	-18.5 0.01 (4)	6.25		
V-U	-21 / 0	-18.5	-18.5 0.01 (4)	6.25		
U-T	-23 / 0	-18.5	-18.5 0.01 (4)	6.25		
T-S	-23 / 0	-18.5	-18.5 0.01 (4)	6.25		
S-R	-21 / 0	-18.5	-18.5 0.01 (4)	6.25		
R-Q	-18 / 0	-18.5	-18.5 0.01 (4)	6.25		
Q-P	-18 / 0	-18.5	-18.5 0.01 (4)	6.25		
P-O	-14 / 0	-18.5	-18.5 0.01 (4)	6.25		
O-N	-11 / 0	-18.5	-18.5 0.01 (4)	6.25		

CSI: TC=0.12/1.00 (A-B-1), BC=0.01/1.00 (P-R-4), WB=0.20/1.00 (G-T-1), SS=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) SHEAR SECTION
(PSI) (PLI) (PLI)
MAX MIN MAX MIN MAX MIN
MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.80 (G) (INPUT = 0.80)
JSI METAL = 0.10 (L) (INPUT = 1.00)

NOTE: Lateral brace(s) shown shall be 2x4 SPF #2



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
317090	H07S		1	TRUSS DESC.	E-20023791

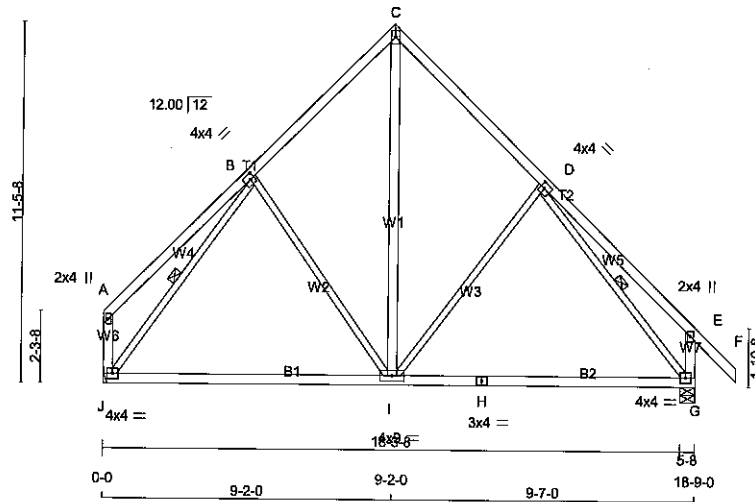
Alpa Roof Truss, Maple

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ID:ChY5OQTzWMeSyfdg5spjPzZoB0r-ii4Uin6pV4kWu2_2KCZrPIME1UWAlsQVPFVUqzXQg

0-0 4-8-4 4-8-4 9-2-0 4-8-4 4-5-12 13-10-4 18-3-8 18-9-0 20-0-8
3x5 || 5-9-1-3-8

Scale = 1:73.1



TOTAL WEIGHT = 2 X 95 = 190 lb

LUMBER	CHORDS	SIZE	DRY	LUMBER	DESCR.
N. L. G. A. RULES					
A - C	2x4	DRY	No.2	SPF	
C - F	2x4	DRY	No.2	SPF	
J - A	2x4	DRY	No.2	SPF	
G - E	2x4	DRY	No.2	SPF	
J - H	2x4	DRY	No.2	SPF	
H - G	2x4	DRY	No.2	SPF	
ALL WEBS EXCEPT	2x3	DRY	No.2	SPF	
I - C	2x4	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	TMVW-t	MT20	4.0	4.0	2.00	1.50
C	TTW+p	MT20	3.0	5.0		
D	TMVW-t	MT20	4.0	4.0	2.00	1.50
E	TMV+p	MT20	2.0	4.0		
G	BMVW1-t	MT20	4.0	4.0		
H	BS-t	MT20	3.0	4.0		
I	BMVW1-t	MT20	4.0	9.0		
J	BMVW1-t	MT20	4.0	4.0		

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

BEARINGS	FACTORED	MAXIMUM FACTORED	INPUT	REQRD
	GROSS REACTION	GROSS REACTION	BRG	BRG
JT	VERT	DOWN	HORZ	UPLIFT
J	969	0	969	0
G	1087	0	1087	0

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

UNFACTORED REACTIONS

JT	1ST CASE	MAX/MIN. COMPONENT REACTIONS	SNOW	LIVE	PERM. LIVE	WIND	DEAD	SOIL
J	688	437 / 0	0 / 0	0 / 0	0 / 0	0 / 0	251 / 0	0 / 0
G	770	502 / 0	0 / 0	0 / 0	0 / 0	0 / 0	268 / 0	0 / 0

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

BRACING

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

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

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS	MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1	MAX	CS1 (LC)	UNBRAC LENGTH	WEBS	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CS1 (LC)
FR-TO								FR-TO			
A-B	0 / 33	-84.9	-84.9	0.30 (1)	10.00	0.24 (1)		B-I	-182 / 0	0.09 (1)	
B-C	-636 / 0	-84.9	-84.9	0.23 (1)	6.25	0.30 (1)		I-C	0 / 546	0.30 (1)	
C-D	-637 / 0	-84.9	-84.9	0.26 (1)	6.25	0.39 (1)		D-G	-939 / 0	0.39 (1)	
D-E	0 / 35	-84.9	-84.9	0.32 (1)	10.00	7.81					
E-F	0 / 42	-84.9	-84.9	0.12 (1)	10.00						
J-A	-148 / 0	0.0	0.0	0.02 (1)	7.81						
G-E	-271 / 0	0.0	0.0	0.03 (1)	7.81						
J-I	0 / 533	-18.5	-18.5	0.52 (4)	10.00						
I-H	0 / 567	-18.5	-18.5	0.52 (4)	10.00						
H-G	0 / 567	-18.5	-18.5	0.52 (4)	10.00						

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH. LL = 23.3 PSF
DL = 6.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.4 PSF
TOTAL LOAD = 36.7 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, ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(65 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.63")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.02")
ALLOWABLE DEFL.(TL)= L/360 (0.63")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.19")

CSI: TC=0.32/1.00 (D-E:1), BC=0.52/1.00 (G-I:4), WB=0.39/1.00 (B-J:1), SSI=0.15/1.00 (G-I:4)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

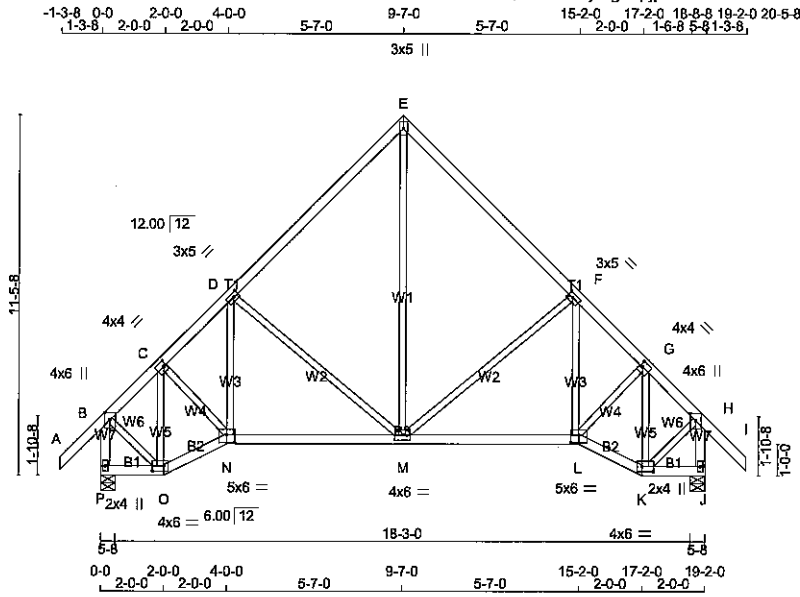
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.82 (B) (INPUT = 0.90)
JSI METAL= 0.33 (D) (INPUT = 1.00)

NOTE: Lateral brace(s) shown shall be 2x4 SPF #2





Scale = 1:73.3

TOTAL WEIGHT = 4 X 101 = 406 lb
(M)F

LUMBER			
N. L. G. A. RULES	SIZE	LUMBER	DESCR.
CHORDS			
A - E	2x4	DRY	No.2
E - I	2x4	DRY	No.2
P - B	2x4	DRY	No.2
J - H	2x4	DRY	No.2
P - O	2x4	DRY	No.2
O - N	2x4	DRY	No.2
N - L	2x4	DRY	No.2
L - K	2x4	DRY	No.2
K - J	2x4	DRY	No.2
ALL WEBS EXCEPT	2x3	DRY	No.2

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	TMVW-t	MT20	4.0	4.0	2.00 1.00
D	TMVW-t	MT20	3.0	5.0	1.50 2.00
E	TTW+p	MT20	3.0	5.0	
F	TMVW-t	MT20	3.0	5.0	1.50 2.00
G	TMVW-t	MT20	4.0	4.0	2.00 1.00
H	TMVW+p	MT20	4.0	6.0	2.75 2.00
J	BMV1+p	MT20	2.0	4.0	
K	BBWW-I	MT20	4.0	6.0	2.00 4.25
L	BBWW-I	MT20	5.0	6.0	3.00 3.00
M	BBWW-t	MT20	4.0	6.0	
N	BBWW-I	MT20	5.0	6.0	3.00 3.00
O	BBWW-I	MT20	4.0	6.0	2.00 4.25
P	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
	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
JT	1109	0	1109	0	0	5-8	1-10
P	1109	0	1109	0	0	5-8	1-10

UNFACTORED REACTIONS							
	1ST CASE	MAX/MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM. LIVE	WIND	DEAD	SOIL
P	785	511 / 0	0 / 0	0 / 0	0 / 0	274 / 0	0 / 0
J	785	511 / 0	0 / 0	0 / 0	0 / 0	274 / 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 = 6.09 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING
TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. UNBRACED LENGTH (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. UNBRACED LENGTH (LC)	
FR-TO		FROM TO		FR-TO			
A-B	0 / 42	-84.9 -84.9	0.12 (1)	10.00	M-E	0 / 559	0.13 (1)
B-C	-711 / 0	-84.9 -84.9	0.09 (1)	6.25	M-F	-336 / 0	0.33 (1)
C-D	-933 / 0	-84.9 -84.9	0.26 (1)	6.09	L-F	-27 / 50	0.02 (4)
D-E	-693 / 0	-84.9 -84.9	0.31 (1)	6.25	L-G	0 / 414	0.09 (1)
E-F	-693 / 0	-84.9 -84.9	0.31 (1)	6.25	K-G	-544 / 0	0.12 (1)
F-G	-933 / 0	-84.9 -84.9	0.26 (1)	6.09	D-M	-336 / 0	0.33 (1)
G-H	-711 / 0	-84.9 -84.9	0.09 (1)	6.25	N-D	-27 / 50	0.02 (4)
H-I	0 / 42	-84.9 -84.9	0.12 (1)	10.00	C-N	0 / 414	0.09 (1)
P-B	-1090 / 0	0.0 0.0	0.12 (1)	7.57	O-C	-544 / 0	0.12 (1)
J-H	-1090 / 0	0.0 0.0	0.12 (1)	7.57	B-O	0 / 588	0.13 (1)
					K-H	0 / 588	0.13 (1)
P-O	0 / 0	-18.5 -18.5	0.02 (4)	10.00			
O-N	0 / 505	-18.5 -18.5	0.09 (1)	10.00			
N-M	0 / 725	-18.5 -18.5	0.23 (4)	10.00			
M-L	0 / 725	-18.5 -18.5	0.23 (4)	10.00			
L-K	0 / 505	-18.5 -18.5	0.09 (1)	10.00			
K-J	0 / 0	-18.5 -18.5	0.02 (4)	10.00			

DESIGN CRITERIA	
SPECIFIED LOADS:	
TOP CH.	LL = 23.3 PSF
	DL = 6.0 PSF
BOT CH.	LL = 0.0 PSF
	DL = 7.4 PSF
TOTAL LOAD = 36.7 PSF	

SPACING = 24.0 IN. C/C

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

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

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

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.64")
CALCULATED VERT. DEFL.(LL) = L/999 (0.02")
ALLOWABLE DEFL.(TL)= L/360 (0.64")
CALCULATED VERT. DEFL.(TL) = L/999 (0.06")

CSI: TC=0.31/1.00 (D-E:1), BC=0.23/1.00 (M-N:4), WB=0.33/1.00 (D-M:1), SS=0.15/1.00 (D-E:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

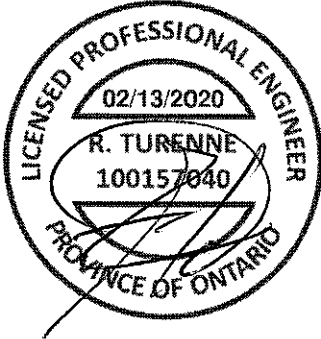
NAIL VALUES				
PLATE	GRIP(DRY)	SHEAR	SECTION	
(PSI)	(PLI)	(PLI)	MAX MIN	MAX MIN
MT20	650	371	1747	788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.78 (D) (INPUT = 0.90)
JSI METAL= 0.32 (H) (INPUT = 1.00)

NOTE: Lateral brace(s) shown shall be 2x4 SPF #2



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	TRUSS DESC.	DRWG NO.
317090	H07TS		1			E-20023793

Alpa Roof Truss, Maple

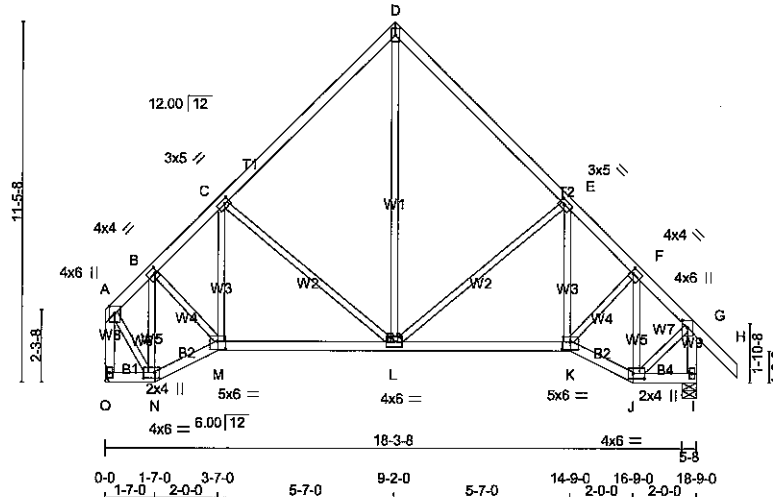
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0-0 1-7-0 3-7-0 5-7-0 9-2-0 14-9-0 16-9-0 18-3-8 18-9-0 20-0-8
1-7-0 2-0-0 5-7-0 5-7-0 2-0-0 1-6-8 5-8 1-3-8

3x5 II

Scale = 1:73.3



TOTAL WEIGHT = 99 lb

LUMBER				N. L. G. A. RULES	
CHORDS	SIZE	LUMBER	DESCR.		
A - D	2x4	DRY	No.2	SPF	
D - H	2x4	DRY	No.2	SPF	
O - A	2x4	DRY	No.2	SPF	
I - G	2x4	DRY	No.2	SPF	
O - N	2x4	DRY	No.2	SPF	
N - M	2x4	DRY	No.2	SPF	
M - K	2x4	DRY	No.2	SPF	
K - J	2x4	DRY	No.2	SPF	
J - I	2x4	DRY	No.2	SPF	

ALL WEBS 2x3 DRY No.2. SPF

EXCEPT

DRY: SEASONED LUMBER.

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
A	TMVW+p	MT20	4.0	6.0	2.75 2.00
B	TMVW-t	MT20	4.0	4.0	2.00 1.00
C	TMVW-t	MT20	3.0	5.0	1.50 2.00
D	TTW+p	MT20	3.0	5.0	
E	TMVW-t	MT20	3.0	5.0	1.50 2.00
F	TMVW-t	MT20	4.0	4.0	2.00 1.00
G	TMVW+p	MT20	4.0	6.0	2.75 2.00
I	BMV1+p	MT20	2.0	4.0	
J	BBVW-t	MT20	4.0	6.0	2.00 4.25
K	BBVW-t	MT20	5.0	6.0	3.00 3.00
L	BMVW-t	MT20	4.0	6.0	
M	BBVW-t	MT20	5.0	6.0	3.00 3.00
N	BBVW-t	MT20	4.0	6.0	2.00 4.25
O	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	UP
O	965	0	965	0
I	1092	0	1092	0

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

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
O	685	434 / 0	0 / 0	0 / 0	0 / 0	251 / 0	0 / 0
I	773	504 / 0	0 / 0	0 / 0	0 / 0	269 / 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 = 6.14 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. CS1 (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CS1 (LC)	
FR-TO		FROM TO		FR-TO			
A-B	-567 / 0	-84.9 -84.9	0.07 (1)	6.25	N-B	-623 / 0	0.14 (1)
B-C	-853 / 0	-84.9 -84.9	0.26 (1)	6.25	B-M	0 / 454	0.10 (1)
C-D	-670 / 0	-84.9 -84.9	0.31 (1)	6.25	M-C	-99 / 20	0.04 (1)
D-E	-670 / 0	-84.9 -84.9	0.31 (1)	6.25	C-L	-284 / 0	0.28 (1)
E-F	-911 / 0	-84.9 -84.9	0.26 (1)	6.14	L-D	0 / 526	0.12 (1)
F-G	-697 / 0	-84.9 -84.9	0.09 (1)	6.25	L-E	-337 / 0	0.33 (1)
G-H	0 / 42	-84.9 -84.9	0.12 (1)	10.00	K-E	-25 / 50	0.02 (4)
O-A	-950 / 0	0.0 0.0	0.12 (1)	7.81	K-F	0 / 405	0.09 (1)
I-G	-1073 / 0	0.0 0.0	0.12 (1)	7.61	J-F	-532 / 0	0.12 (1)
					A-N	0 / 610	0.14 (1)
					J-G	0 / 576	0.13 (1)
O-N	0 / 0	-18.5 -18.5	0.01 (4)	10.00			
N-M	0 / 411	-18.5 -18.5	0.08 (1)	10.00			
M-L	0 / 669	-18.5 -18.5	0.22 (4)	10.00			
L-K	0 / 710	-18.5 -18.5	0.23 (4)	10.00			
K-J	0 / 495	-18.5 -18.5	0.09 (1)	10.00			
J-I	0 / 0	-18.5 -18.5	0.02 (4)	10.00			

NOTE: Lateral brace(s) shown shall be 2x4 SPF #2



DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH. LL	=	23.3	PSF
DL	=	6.0	PSF
BOT CH. LL	=	0.0	PSF
DL	=	7.4	PSF
TOTAL LOAD	=	36.7	PSF

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:

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

DESIGN ASSUMPTIONS

- OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.63")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.02")
ALLOWABLE DEFL.(TL)= L/360 (0.63")
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.06")

CSI: TC=0.31/1.00 (C-D:1), BC=0.23/1.00 (K-L:4)
WB=0.33/1.00 (E-L:1), SSI=0.15/1.00 (D-E:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL = 0.250 inches

PLATE ROTATION TOL = 5.0 Deg.

JSI GRIP= 0.78 (E) (INPUT = 0.90)
JSI METAL= 0.31 (G) (INPUT = 1.00)

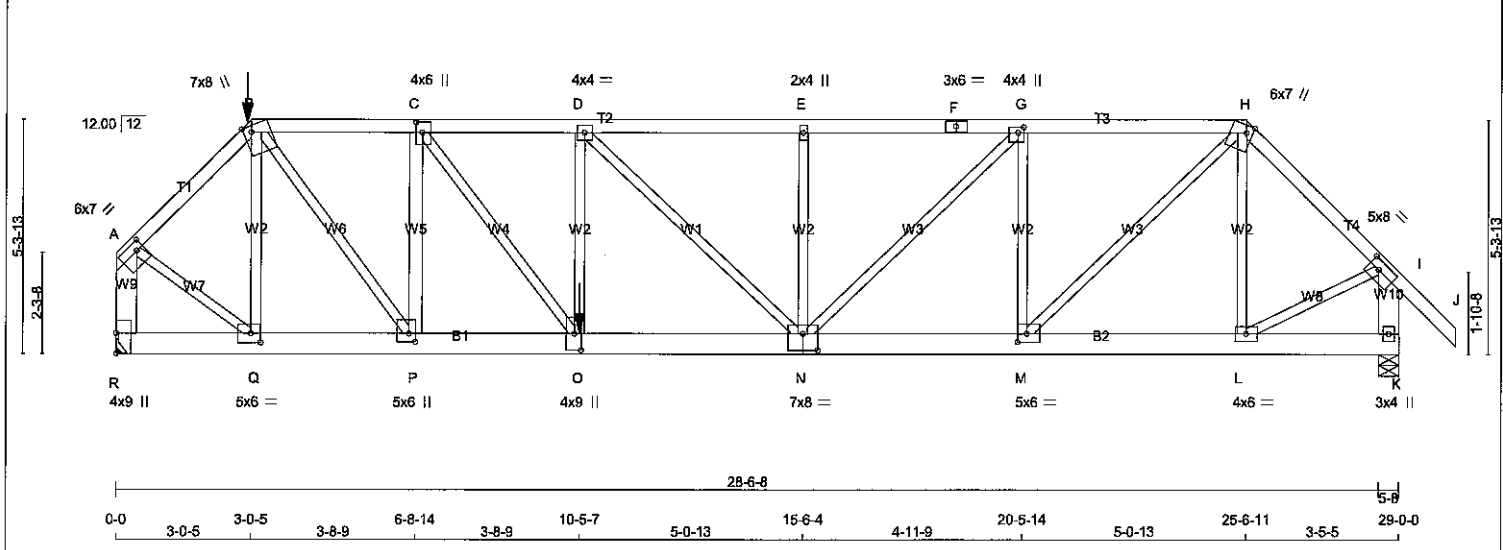
Alpa Roof Truss, Maple

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28-6-8 29-0-0 30-3-8
5-8 1-3-8

Scale = 1:52.3



TOTAL WEIGHT = 151 lb

LUMBER

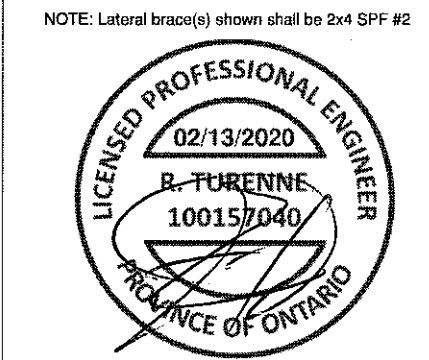
N. L. G. A. RULES

CHORDS	SIZE	DRY	LUMBER	DESCR.
A - B	2x4	DRY	No.2	SPF
B - F	2x4	DRY	No.2	SPF
F - H	2x4	DRY	No.2	SPF
H - J	2x4	DRY	No.2	SPF
R - A	2x6	DRY	No.2	SPF
K - I	2x6	DRY	No.2	SPF
R - N	2x6	DRY	No.2	SPF
N - K	2x6	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				
P - C	2x4	DRY	No.2	SPF

DRY: SEASONED LUMBER.

<u>PLATES (table is in inches)</u>						
JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW-t	MT20	6.0	7.0	2.25	2.00
B	TTWW+m	MT20	7.0	8.0	Edge	2.25
C	TMVW-t	MT20	4.0	6.0	2.75	1.75
D	TMVW-t	MT20	4.0	4.0		
E	TMVW-w	MT20	2.0	4.0		
F	TS-t	MT20	3.0	6.0		
G	TMVW-t	MT20	4.0	4.0	1.50	1.50
H	TTWW+m	MT20	6.0	7.0	Edge	1.75
I	TMVW-t	MT20	5.0	8.0	2.25	3.00
K	BMV1+p	MT20	3.0	4.0		
L	BMVW-t	MT20	4.0	6.0		
M	BMVW-t	MT20	5.0	6.0	2.25	2.50
N	BSVWV-t	MT20	7.0	8.0	4.50	4.00
O	BMVW-t	MT20	4.0	9.0	4.50	1.75
P	BMVW-t	MT20	5.0	6.0	2.25	1.75
Q	BMVW-t	MT20	5.0	6.0	2.50	2.50
R	BMV1-t	MT20	4.0	9.0	5.50	

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



NOTE: Lateral brace(s) shown shall be 2x4 SPF #2

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

BEARINGS

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG
JT	VERT 3236	DOWN 3236	0	MECHANICAL
R	0	0	0	5-8
K	2346	0	0	2-9

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT R. MINIMUM BEARING LENGTH AT JOINT R = 3-1.

UNFACTORED REACTIONS

	1ST CASE	MAX./MIN. COMPONENT REACTIONS						
JT	COMBINED	SNOW	LIVE	PERM. LIVE	WIND	DEAD	SOIL	
R	2299	1452 / 0	0 / 0	0 / 0	0 / 0	847 / 0	0 / 0	
K	1663	1070 / 0	0 / 0	0 / 0	0 / 0	594 / 0	0 / 0	

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 2.51 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING
TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. LC1 MAX. CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. UNBRACED LENGTH FR-TO	MAX. FACTORED MAX. CSI (LC)
FR-TO		FROM TO		FR-TO			
A-B	-2734 / 0	-84.9	-84.9 0.27 (1)	Q-B	-955 / 0	3.94	0.39 (1)
B-C	-3642 / 0	-167.1	-167.1 0.57 (1)	B-P	0 / 2884	3.10	0.71 (1)
C-D	-4775 / 0	-167.1	-167.1 0.73 (1)	P-C	-2175 / 0	2.51	0.63 (1)
D-E	-4207 / 0	-84.9	-84.9 0.62 (1)	C-O	0 / 1885	2.95	0.47 (1)
E-F	-4207 / 0	-84.9	-84.9 0.71 (1)	O-D	0 / 107	2.82	0.04 (4)
F-G	-4207 / 0	-84.9	-84.9 0.71 (1)	D-N	-794 / 0	2.82	0.75 (1)
G-H	-3120 / 0	-84.9	-84.9 0.55 (1)	N-E	-413 / 0	3.43	0.17 (1)
H-I	-2076 / 0	-84.9	-84.9 0.28 (1)	N-G	0 / 1533	4.42	0.38 (1)
I-J	0 / 42	-84.9	-84.9 0.13 (1)	M-G	-1542 / 0	10.00	0.63 (1)
R-A	-3211 / 0	0.0	0.0 0.27 (1)	M-H	0 / 2324	5.86	0.58 (1)
K-I	-2332 / 0	0.0	0.0 0.18 (1)	L-H	-481 / 0	6.69	0.20 (1)
				A-Q	0 / 2236		0.55 (1)
				L-I	0 / 1577		0.39 (1)
R-Q	0 / 0	-36.4	-36.4 0.07 (1)				
Q-P	0 / 1903	-36.4	-36.4 0.32 (1)				
P-O	0 / 3642	-36.4	-36.4 0.57 (1)				
O-N	0 / 4775	-18.5	-18.5 0.71 (1)				
N-M	0 / 3120	-18.5	-18.5 0.45 (1)				
M-L	0 / 1451	-18.5	-18.5 0.24 (1)				
L-K	0 / 0	-18.5	-18.5 0.05 (4)				

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	HEEL	CONN.
B	3-0-5	-187	-187		FRONT	VERT		C1
O	10-6-7	-1482	-1482		FRONT	VERT		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 = 23.3 PSF
DL = 6.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.4 PSF
TOTAL LOAD = 36.7 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 = 3-0-5
RIGHT SETBACK = 3-5-5
END SETBACK = 5-10-8
END WALL WIDTH = 0-0
CORNER FRAMING TYPE: CONVENTIONAL
END JACK TYPE: CONVENTIONAL
APPLIED TO FRONT SIDE
- ADDTL LOADS BASED ON 55 % OF GSL.
LOADS APPLIED TO FIRST 10-5-7 OF SPAN MEASURED FROM THE LEFT.

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

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

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

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (0.97")
CALCULATED VERT. DEFL.(LL) = L/999 (0.17")
ALLOWABLE DEFL.(TL) = L/360 (0.97")
CALCULATED VERT. DEFL.(TL) = L/999 (0.32")

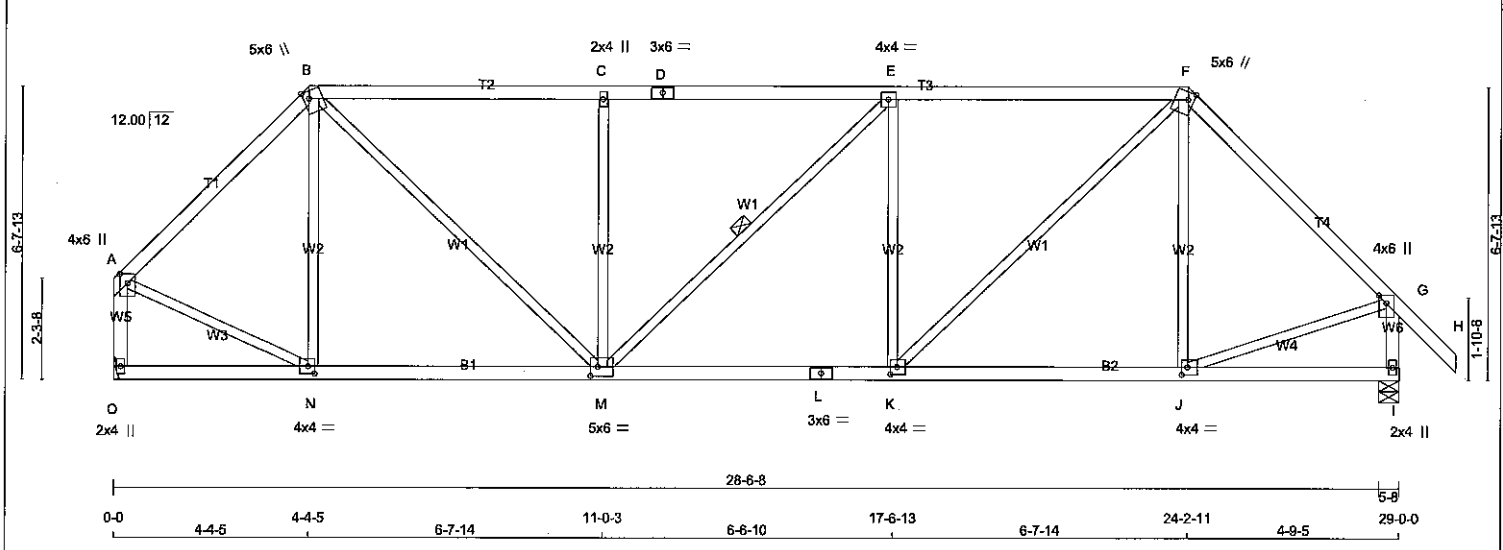
CSI: TC=0.73/1.00 (C-D:1), BC=0.71/1.00 (N-O:1), WB=0.75/1.00 (D-N:1), SSI=0.32/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE HEELS OFF

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



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
 F - H 2x4 DRY No.2 SPF
 O - A 2x4 DRY No.2 SPF
 I - G 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
 DRY: SEASONED LUMBER.

BEARINGS
 FACTORED MAXIMUM FACTORED INPUT REQ'D
 GROSS REACTION GROSS REACTION BRG BRG
 JT VERT HORZ DOWN HORZ UPLIFT IN-SX IN-SX
 O 1499 0 1499 0 0 MECHANICAL
 I 1617 0 1617 0 0 5-8 2-6
 A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT O. MINIMUM BEARING LENGTH AT JOINT O = 1-10.

DESIGN CRITERIA
 SPECIFIED LOADS:
 TOP CH. LL = 23.3 PSF
 DL = 6.0 PSF
 BOT CH. LL = 0.0 PSF
 DL = 7.4 PSF
 TOTAL LOAD = 36.7 PSF
 SPACING = 24.0 IN. C/C
 LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM
 THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015
 THIS DESIGN COMPLIES WITH:
 - PART 9 OF BCBC 2018 , ABC 2019
 - PART 9 OF OBC 2012 (2019 AMENDMENT)
 - CSA 086-14
 - TPIC 2014
 (55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD
 ALLOWABLE DEFL.(LL)= L/360 (0.97")
 CALCULATED VERT. DEFL.(LL) = L/ 999 (0.07")
 ALLOWABLE DEFL.(TL)= L/360 (0.97")
 CALCULATED VERT. DEFL.(TL) = L/ 999 (0.14")
 CSI: TC=0.64/1.00 (E-F:1) , BC=0.35/1.00 (K-M:1) , WB=0.44/1.00 (C-M:1) , SS=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
 TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .
 NAIL VALUES
 PLATE GRIP(DRY) SHEAR SECTION
 (PSI) (PLI) (PLI)
 MAX MIN MAX MIN MAX MIN
 MT20 650 371 1747 788 1987 1873
 PLATE PLACEMENT TOL. = 0.250 inches
 PLATE ROTATION TOL. = 5.0 Deg.
 JSI GRIP= 0.90 (G) (INPUT = 0.90)
 JSI METAL= 0.59 (G) (INPUT = 1.00)

UNFACTORED REACTIONS		MAX./MIN. COMPONENT REACTIONS						
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL	
O	1064	675 / 0	0 / 0	0 / 0	0 / 0	389 / 0	0 / 0	
I	1146	740 / 0	0 / 0	0 / 0	0 / 0	405 / 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 = 4.33 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-M.

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

LOADING		TOTAL LOAD CASES: (4)									
C H O R D S		W E B S									
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1	MAX	MAX. UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX	MAX. UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)
FR-TO		FROM	TO			FR-TO				FR-TO	
A-B	-1266 / 0	-84.9	-84.9	0.33 (1)	5.33	N-B	-272 / 0	0.20 (1)			
B-C	-1675 / 0	-84.9	-84.9	0.63 (1)	4.37	B-M	0 / 1087	0.24 (1)			
C-D	-1675 / 0	-84.9	-84.9	0.63 (1)	4.36	M-C	-606 / 0	0.44 (1)			
D-E	-1675 / 0	-84.9	-84.9	0.63 (1)	4.36	M-E	-32 / 0	0.02 (1)			
E-F	-1698 / 0	-84.9	-84.9	0.64 (1)	4.33	K-E	-585 / 0	0.43 (1)			
F-G	-1360 / 0	-84.9	-84.9	0.41 (1)	5.10	K-F	0 / 1026	0.23 (1)			
G-H	0 / 42	-84.9	-84.9	0.12 (1)	10.00	J-F	-181 / 21	0.13 (1)			
O-A	-1471 / 0	0.0	0.0	0.18 (1)	6.75	A-N	0 / 973	0.22 (1)			
I-G	-1584 / 0	0.0	0.0	0.18 (1)	6.56	J-G	0 / 1004	0.23 (1)			
O-N	0 / 0	-18.5	-18.5	0.13 (4)	10.00						
N-M	0 / 888	-18.5	-18.5	0.23 (4)	10.00						
M-L	0 / 1699	-18.5	-18.5	0.35 (1)	10.00						
L-K	0 / 1699	-18.5	-18.5	0.35 (1)	10.00						
K-J	0 / 955	-18.5	-18.5	0.24 (4)	10.00						
J-I	0 / 0	-18.5	-18.5	0.14 (4)	10.00						

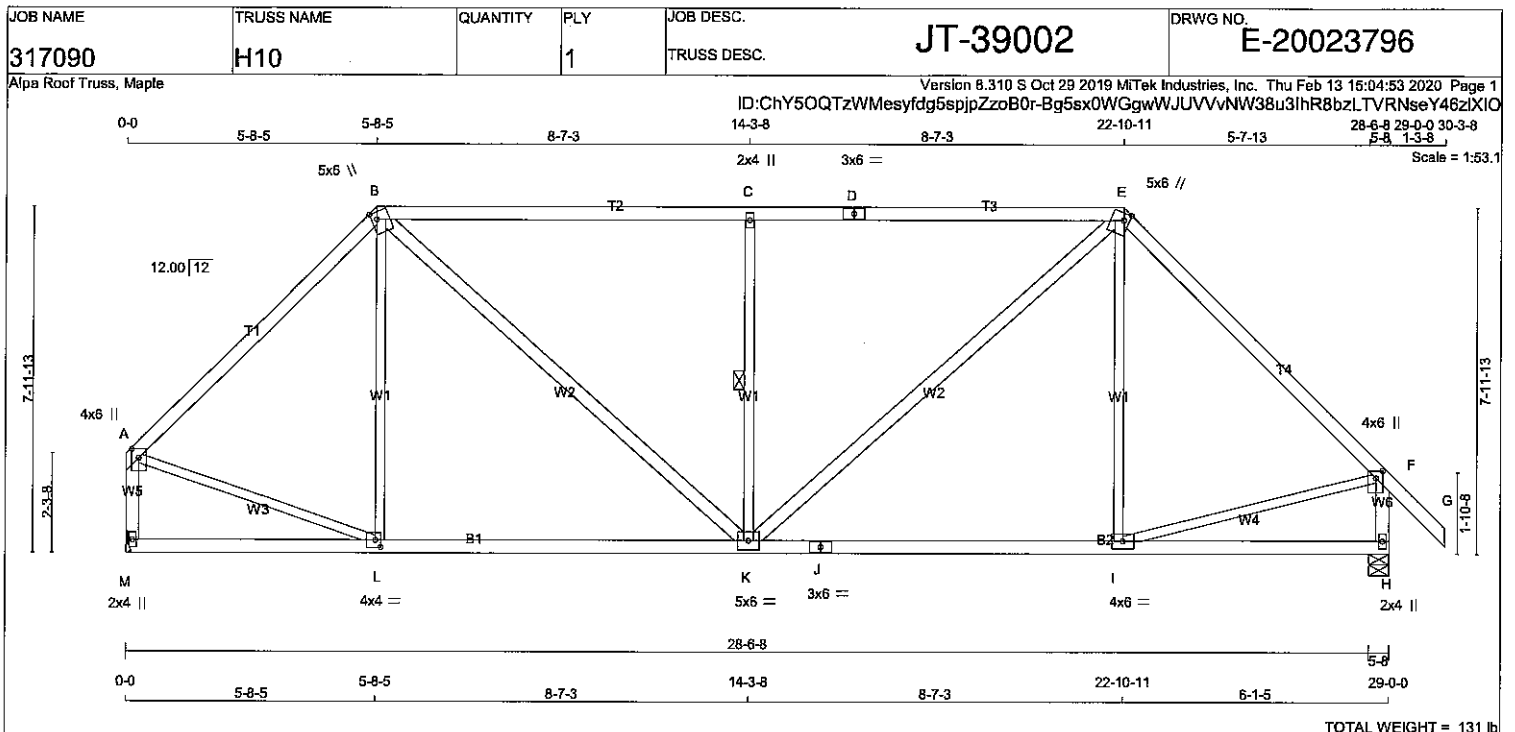
NOTE: Lateral brace(s) shown shall be 2x4 SPF #2

02/13/2020

R. TURENNE

100157040

PROVINCE OF ONTARIO



TOTAL WEIGHT = 131 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE	DRY	LUMBER	DESCR.
A - B	2x4	DRY	No.2	SPF
B - D	2x4	DRY	2100F 1.8E	SPF
D - E	2x4	DRY	2100F 1.8E	SPF
E - G	2x4	DRY	2100F 1.8E	SPF
M - A	2x4	DRY	No.2	SPF
H - F	2x4	DRY	No.2	SPF
M - J	2x4	DRY	No.2	SPF
J - H	2x4	DRY	No.2	SPF
ALL WEBS EXCEPT B - K	2x3	DRY	No.2	SPF
K - 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	2.50	2.00
B	TTWW+m	MT20	5.0	6.0	2.00	1.50
C	TMW+w	MT20	2.0	4.0		
D	TS-t	MT20	3.0	6.0		
E	TTWW+m	MT20	5.0	6.0	2.00	1.50
F	TMVW+p	MT20	4.0	6.0	2.00	1.75
H	BMV1+p	MT20	2.0	4.0		
I	BMWW-t	MT20	4.0	6.0		
J	BS-t	MT20	3.0	6.0		
K	BMWW-t	MT20	5.0	6.0		
L	BMWW-t	MT20	4.0	4.0	2.00	1.50
M	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
M	1498	0	1499	0
H	1617	0	1617	0

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

UNFACTORED REACTIONS

JT	1ST LCASE	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
M	1064	675 / 0	0 / 0	0 / 0	0 / 0	369 / 0	0 / 0
H	1146	740 / 0	0 / 0	0 / 0	0 / 0	405 / 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 = 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 C-K.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS				
MAX. FACTORED		FACTORED		MAX. FACTORED				
MEMB.	FORCE	VERT. LOAD	LC1 MAX	MAX.	MEMB.	FORCE	MAX	
	(LBS)	(PLF)	CSI (LC)	UNBRACED		(LBS)	CSI (LC)	
FR-TO		FROM TO		LENGTH	FR-TO			
A-B	-1291 / 0	-84.9	-84.9	0.61 (1)	4.93	L-B	-158 / 50	0.19 (1)
B-C	-1526 / 0	-84.9	-84.9	0.83 (1)	4.92	B-K	0 / 828	0.13 (1)
C-D	-1527 / 0	-84.9	-84.9	0.83 (1)	4.92	K-C	-897 / 0	0.36 (1)
D-E	-1527 / 0	-84.9	-84.9	0.83 (1)	4.92	K-E	0 / 762	0.12 (1)
E-F	-1359 / 0	-84.9	-84.9	0.43 (1)	6.04	I-E	-85 / 80	0.10 (1)
F-G	0 / 42	-84.9	-84.9	0.08 (1)	10.00	A-L	0 / 960	0.22 (1)
M-A	-1461 / 0	0.0	0.0	0.18 (1)	6.77	I-F	0 / 987	0.22 (1)
H-F	-1575 / 0	0.0	0.0	0.18 (1)	6.57			
M-L	0 / 0	-18.5	-18.5	0.22 (4)	10.00			
L-K	0 / 908	-18.5	-18.5	0.36 (4)	10.00			
K-J	0 / 957	-18.5	-18.5	0.36 (4)	10.00			
J-I	0 / 957	-18.5	-18.5	0.36 (4)	10.00			
I-H	0 / 0	-18.5	-18.5	0.23 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL = 23.3	PSF
DL = 6.0	PSF	
BOT CH.	LL = 0.0	PSF
DL = 7.4	PSF	
TOTAL LOAD = 36.7	PSF	

SPACING = 24.0 IN./C

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

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.97")
CALCULATED VERT. DEFL.(LL) = L/999 (0.04")
ALLOWABLE DEFL.(TL)= L/360 (0.97")
CALCULATED VERT. DEFL.(TL) = L/999 (0.13")

CSI: TC=0.83/1.00 (C-E:1), BC=0.36/1.00 (I-K:4), WB=0.36/1.00 (C-K:1), SSI=0.35/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

PLATE	GRIP(DRY)	SHEAR	SECTION
(PSI)	(PLI)	(PLI)	(PLI)
MAX	MIN	MAX	MIN
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= 0.56 (F) (INPUT = 1.00)

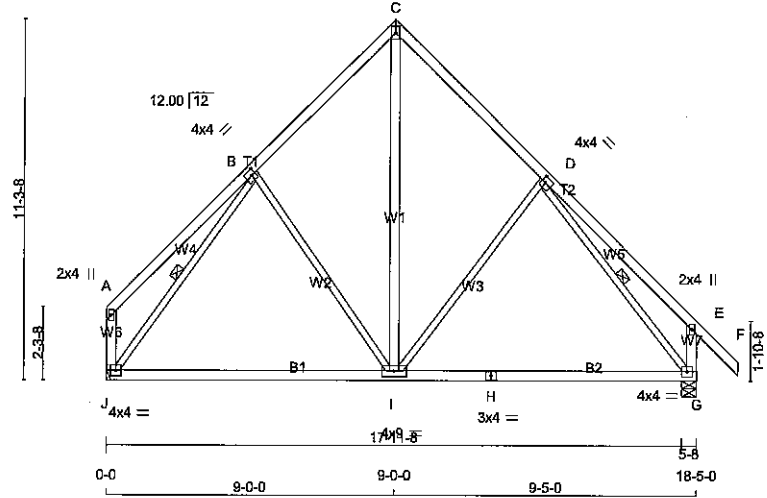
NOTE: Lateral brace(s) shown shall be 2x4 SPF #2



Alpa Roof Truss, Maple

ID: ChY5OQTzWMesyfdg5spjpZzoB0r-QdhGpCD589755alzvjKbPmyhW58Wldvoyg1qFzIXQW
9-0-0 4-7-4 4-4-12 4-7-4 13-7-4 4-4-4 17-11-8 18-5-0 18-8-8
5-8 1-3-6

Scale = 1:72.1



TOTAL WEIGHT = 2 X 94 = 187 lb
[M][F]

LUMBER				
N. L. G. A. RULES				
CHORDS	SIZE	LUMBER	DESCR.	
A - C	2x4	DRY	No.2	SPF
C - F	2x4	DRY	No.2	SPF
J - A	2x4	DRY	No.2	SPF
G - E	2x4	DRY	No.2	SPF
J - H	2x4	DRY	No.2	SPF
H - G	2x4	DRY	No.2	SPF
ALL WEBS EXCEPT I - C	2x3	DRY	No.2	SPF
I - C	2x4	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	4.0	2.00 1.50
C	TTW+p	MT20	3.0	5.0	
D	TMWW-t	MT20	4.0	4.0	2.00 1.50
E	TMV+p	MT20	2.0	4.0	
G	BMVW1-t	MT20	4.0	4.0	
H	BS-t	MT20	3.0	4.0	
I	BMWW1-t	MT20	4.0	9.0	
J	BMVW1-t	MT20	4.0	4.0	

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

BEARINGS		FACTORED		MAXIMUM FACTORED		INPUT		REQRD	
JT	GROSS REACTION	DOWN	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	
J	952	0	0	952	0	0	MECHANICAL		
G	1070	0	0	1070	0	0	5-8	1-8	

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

UNFACTORED REACTIONS

JT	1ST LCASE	MAX/MIN	COMPONENT REACTIONS
JT	COMBINED	SNOW	LIVE PERM.LIVE WIND DEAD SOIL
J	676	429 / 0	0 / 0 0 / 0 0 / 0 247 / 0 0 / 0
G	757	494 / 0	0 / 0 0 / 0 0 / 0 264 / 0 0 / 0

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

BRACING

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

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

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. UNBRACED LENGTH (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. UNBRACED LENGTH (LC)	
FR-TO		FROM TO		FR-TO			
A-B	0 / 33	-84.9 -84.9	0.28 (1)	10.00	B-I	-177 / 0	0.22 (1)
B-C	-623 / 0	-84.9 -84.9	0.22 (1)	6.25	I-C	0 / 534	0.09 (1)
C-D	-624 / 0	-84.9 -84.9	0.25 (1)	6.25	I-D	-224 / 0	0.28 (1)
D-E	0 / 34	-84.9 -84.9	0.31 (1)	10.00	J-B	-910 / 0	0.37 (1)
E-F	0 / 42	-84.9 -84.9	0.12 (1)	10.00	D-G	-921 / 0	0.37 (1)
J-A	-143 / 0	0.0 0.0	0.02 (1)	7.81			
G-E	-268 / 0	0.0 0.0	0.03 (1)	7.81			
J-I	0 / 520	-18.5 -18.5	0.50 (4)	10.00			
I-H	0 / 554	-18.5 -18.5	0.50 (4)	10.00			
H-G	0 / 554	-18.5 -18.5	0.50 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 23.3 PSF
DL = 6.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.4 PSF
TOTAL LOAD = 36.7 PSF

SPACING = 24.0 IN. C/C

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

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

(55 % OF 27.2 P.S.F. G.S.I. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.61")
CALCULATED VERT. DEFL.(LL) = L/999 (0.02")
ALLOWABLE DEFL.(TL)= L/360 (0.61")
CALCULATED VERT. DEFL.(TL) = L/999 (0.18")

CSI: TC=0.31/1.00 (D-E:1) , BC=0.50/1.00 (G-I:4) , WB=0.37/1.00 (B-J:1) , SSI=0.14/1.00 (G-I:4)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.84 (H) (INPUT = 0.90)
JSI METAL= 0.32 (D) (INPUT = 1.00)

NOTE: Lateral brace(s) shown shall be 2x4 SPF #2



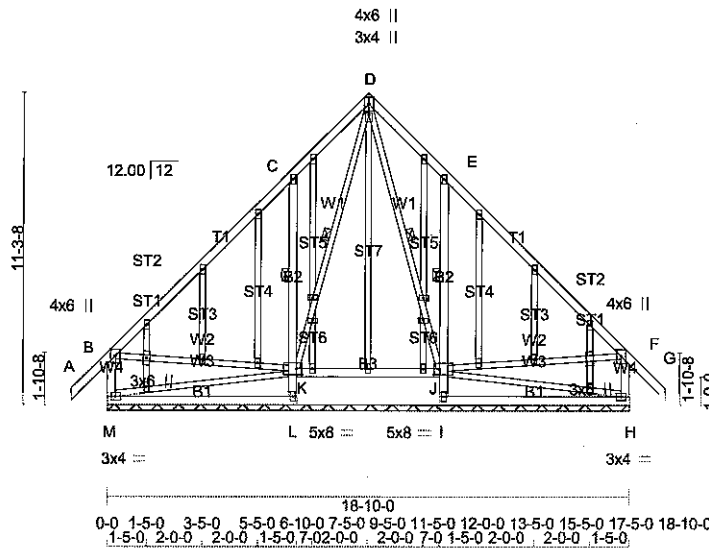
JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
317090	H11TG		1	TRUSS DESC.	JT-39002
Alpa Roof Truss, Maple					E-20023798

Alpa Roof Truss, Maple

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 1-3-8 1-5-0 2-0-0 2-0-0 1-5-0 7-02-0-0 2-0-0 7-0 1-5-0 2-0-0 2-0-0 11-8 2-0 3-8 1-3-8

Scale = 1:83.3

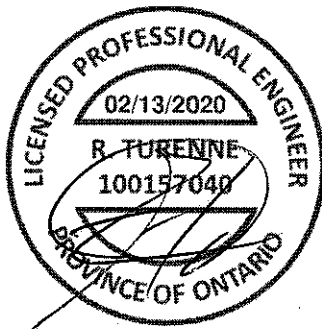


LUMBER	N. L. G. A. RULES	CHORDS	SIZE	DRY	LUMBER	DESCR.
A - D	2x4	DRY	No.2	SPF		
D - G	2x4	DRY	No.2	SPF		
M - B	2x4	DRY	No.2	SPF		
H - F	2x4	DRY	No.2	SPF		
M - L	2x4	DRY	No.2	SPF		
L - C	2x4	DRY	No.2	SPF		
K - J	2x4	DRY	No.2	SPF		
I - E	2x4	DRY	No.2	SPF		
I - H	2x4	DRY	No.2	SPF		

ALL WEBS	2x3	DRY	No.2	SPF		
EXCEPT						
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	TMVW+p	MT20	4.0	6.0	2.75	2.00
C	TMV+p	MT20	2.0	4.0		
D	TTWW+p	MT20	4.0	6.0		
D	NP+p	MT20	3.0	4.0	1.00	1.50
E	TMV+p	MT20	2.0	4.0		
F	TMVW+p	MT20	4.0	6.0	2.75	2.00
H	BMVW1-i	MT20	3.0	4.0	1.50	1.75
I	BMV1+p	MT20	2.0	4.0		
J	BVMWVW1-i	MT20	5.0	8.0	2.50	2.25
K	BVMWVW1-i	MT20	5.0	8.0	2.50	2.25
L	BMV1+p	MT20	2.0	4.0		
M	BMVW1-i	MT20	3.0	4.0	1.50	1.75
N	P, Q, R, S, T, U, W, X, Y, Z, AB, AC, AD, AE, AF, AG					
N	NP+w	MT20	2.0	4.0		
O	O, AA, AA					
O	NP-p	MT20	2.0	4.0	0.75	2.00
V	V, AH, AH					
V						
V	WMWV+i	MT20	3.0	6.0		
AH	WMWV+i	MT20	3.0	6.0	1.75	0.25

NOTE: Lateral brace(s) shown shall be 2x4 SPF #2



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

BEARINGS	FACTORED		MAXIMUM FACTORED		INPUT		REQD	
	GROSS REACTION	DOWN	GROSS REACTION	DOWN	BRG	IN-SX	BRG	IN-SX
JT	VERT	HORZ	VERT	HORZ	UPLIFT	IN-SX		
M	413	0	413	0	0	18-10-0 (6-10)3-0		
L	678	0	678	0	0	18-10-0 (6-10)3-0		
I	678	0	678	0	0	18-10-0 (6-10)3-0		
H	413	0	413	0	0	18-10-0 (6-10)3-0		

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
M	292	192 / 0	0 / 0	0 / 0	0 / 0	100 / 0	0 / 0
L	481	311 / 0	0 / 0	0 / 0	0 / 0	169 / 0	0 / 0
I	481	311 / 0	0 / 0	0 / 0	0 / 0	169 / 0	0 / 0
H	292	192 / 0	0 / 0	0 / 0	0 / 0	100 / 0	0 / 0

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

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.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF C-K, E-J, D-J, D-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		FACTORED				WEBS			
MEMB.	MAX. FORCE (LBS)	VERT. LOAD (PLF)	LC1	MAX. CSI (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FORCE (LBS)	FACTORED MAX. CSI (LC)	
FR-TO		FROM	TO			FR-TO			
A-B	0 / 42	-84.9	-84.9	0.12 (1)	10.00	D-J	-2 / 0	0.00 (1)	
B-C	0 / 29	-84.9	-84.9	0.47 (1)	10.00	K-D	-2 / 0	0.00 (1)	
C-D	-81 / 0	-84.9	-84.9	0.47 (1)	6.25	M-K	0 / 1	0.00 (1)	
D-E	-81 / 0	-84.9	-84.9	0.47 (1)	6.25	B-K	0 / 5	0.00 (1)	
E-F	0 / 29	-84.9	-84.9	0.47 (1)	10.00	J-H	0 / 1	0.00 (1)	
F-G	0 / 42	-84.9	-84.9	0.12 (1)	10.00	J-F	0 / 5	0.00 (1)	
M-B	-351 / 0	0.0	0.0	0.04 (1)	7.81				
H-F	-351 / 0	0.0	0.0	0.04 (1)	7.81				
M-L	-1 / 0	-18.5	-18.5	0.24 (4)	10.00				
L-K	-617 / 0	0.0	0.0	0.01 (1)	7.81				
K-C	-565 / 0	0.0	0.0	0.02 (1)	6.25				
K-J	-3 / 0	-18.5	-18.5	0.16 (4)	10.00				
I-J	-617 / 0	0.0	0.0	0.01 (1)	7.81				
J-E	-565 / 0	0.0	0.0	0.02 (1)	6.25				
I-H	-1 / 0	-18.5	-18.5	0.24 (4)	10.00				

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL = 23.3	PSF
	DL = 6.0	PSF
BOT CH.	LL = 0.0	PSF
	DL = 7.4	PSF
TOTAL LOAD	= 36.7	PSF

SPACING = 24.0 IN./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, ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

CSI: TC=0.47/1.00 (B-C:1), BC=0.24/1.00 (L-M:4), WB=0.00/1.00 (D-J:1), SSI=0.18/1.00 (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 HEELS OFF

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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

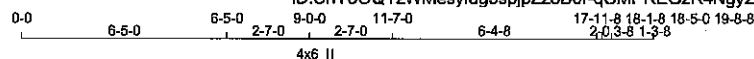
JSI GRIP= 0.85 (M) (INPUT = 0.90)
 JSI METAL= 0.30 (E) (INPUT = 1.00)

JOB NAME 317090	TRUSS NAME H11TS	QUANTITY 1	PLY 1	JOB DESC. TRUSS DESC.	JT-39002	DRWG NO. E-20023799
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Alpa Roof Truss, Maple

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Scale = 1:72.1

TOTAL WEIGHT = 107 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
L - A	2x4	DRY	No.2	SPF
G - E	2x4	DRY	No.2	SPF
L - K	2x4	DRY	No.2	SPF
K - B	2x3	DRY	No.2	SPF
J - I	2x4	DRY	No.2	SPF
H - D	2x3	DRY	No.2	SPF
H - G	2x4	DRY	No.2	SPF

ALL WEBS 2x3 DRY No.2 SPF
EXCEPT

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW+p	MT20	4.0	6.0	2.75	2.00
B	TMV+p	MT20	2.0	4.0		
C	TTWV+p	MT20	4.0	6.0	2.50	2.00
D	TMV+p	MT20	2.0	4.0		
E	TMVW+p	MT20	4.0	6.0	2.75	2.00
G	BMVW1-I	MT20	3.0	5.0		
H	BMV+p	MT20	2.0	4.0		
I	BVMWVW-w	MT20	8.0	9.0	2.50	3.25
J	BVMWVW-w	MT20	7.0	8.0	1.75	3.25
K	BMV+p	MT20	2.0	4.0		
L	BMVW1-I	MT20	3.0	5.0		

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

BEARINGS

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT	REQRD
	VERT	HORZ	DOWN	UP
JT	952	0	952	0
L	1070	0	1070	0

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

UNFACTORED REACTIONS

JT	1ST LCASE	MAX/MIN	COMPONENT REACTIONS					
	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL	
L	676	429 / 0	0 / 0	0 / 0	0 / 0	247 / 0	0 / 0	
G	767	494 / 0	0 / 0	0 / 0	0 / 0	264 / 0	0 / 0	

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.91 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.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF B-J, D-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)

MEMB.	CHORDS	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX	MAX. UNBRACED LENGTH	MEMB.	WEBS	MAX. FACTORED FORCE (LBS)	MAX. UNBRACED LENGTH
FR-TO						FR-TO			
A-B	-800 / 0	-84.9	-84.9	0.42 (1)	6.20	C-I	0 / 649	0.15 (1)	
B-C	-896 / 0	-84.9	-84.9	0.31 (1)	6.09	L-J	-2 / 0	0.00 (1)	
C-D	-938 / 0	-84.9	-84.9	0.36 (1)	5.91	A-J	0 / 595	0.13 (1)	
D-E	-829 / 0	-84.9	-84.9	0.49 (1)	6.01	J-C	0 / 566	0.13 (1)	
E-F	0 / 42	-84.9	-84.9	0.12 (1)	10.00	I-G	-2 / 0	0.00 (1)	
L-A	-893 / 0	0.0	0.0	0.11 (1)	7.81	I-E	0 / 613	0.14 (1)	
G-E	-1008 / 0	0.0	0.0	0.11 (1)	7.80				
L-K	0 / 2	-18.5	-18.5	0.22 (4)	10.00				
K-J	0 / 65	0.0	0.0	0.03 (4)	10.00				
J-B	-526 / 0	0.0	0.0	0.04 (1)	6.25				
J-I	0 / 434	-18.5	-18.5	0.19 (4)	10.00				
H-I	0 / 70	0.0	0.0	0.03 (4)	10.00				
I-D	-562 / 0	0.0	0.0	0.05 (1)	6.25				
H-G	0 / 2	-18.5	-18.5	0.25 (4)	10.00				

NOTE: Lateral brace(s) shown shall be 2x4 SPF #2



DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 23.3 PSF
DL = 6.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.4 PSF
TOTAL LOAD = 36.7 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, ABC 2018
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (0.61")
CALCULATED VERT. DEFL.(LL) = L/999 (0.03")
ALLOWABLE DEFL.(TL) = L/360 (0.61")
CALCULATED VERT. DEFL.(TL) = L/999 (0.12")

CSI: TC=0.49/1.00 (D-E:1), BC=0.25/1.00 (G-H:4), WB=0.15/1.00 (C-I:1), SSI=0.18/1.00 (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 HEELS OFF

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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.84 (J) (INPUT = 0.80)
JSI METAL= 0.41 (E) (INPUT = 1.00)

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
317090	H12		1	TRUSS DESC.	JT-39002

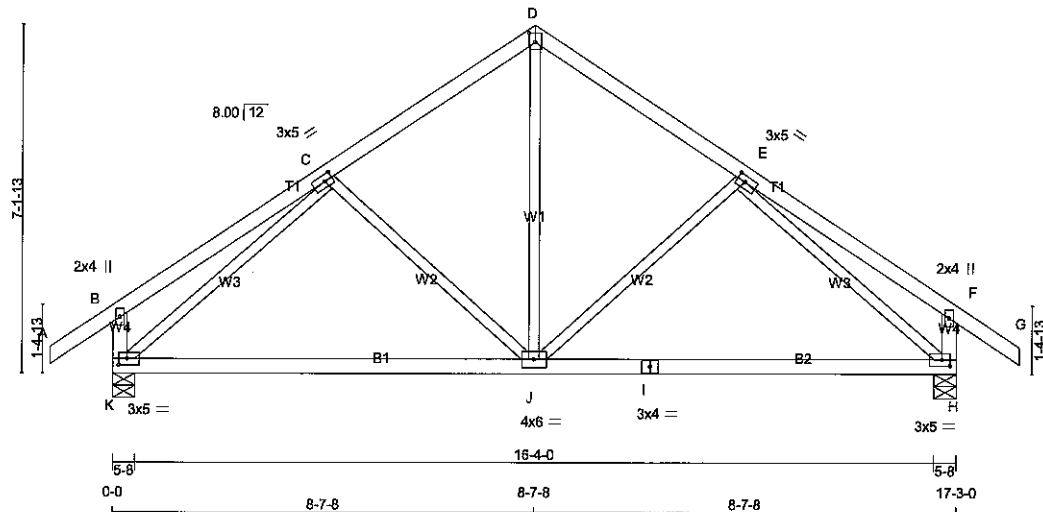
Alpa Roof Truss, Maple

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1-3-8 0-0 4-5-0 4-5-0 4-2-8 8-7-8 4-2-8 12-10-0 3-11-8 16-8-8 17-3-0 18-8-8 5-8, 1-3-8

Scale = 1:47.2



TOTAL WEIGHT = 2 X 73 = 145 lb

LUMBER	CHORDS	SIZE	DRY	LUMBER	DESCR.
N. L. G. A. RULES					
A - D	2x4	DRY	No.2	SPF	
D - G	2x4	DRY	No.2	SPF	
K - B	2x4	DRY	No.2	SPF	
H - F	2x4	DRY	No.2	SPF	
K - I	2x4	DRY	No.2	SPF	
I - 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	TMV+p	MT20	2.0	4.0		
C	TMWW-t	MT20	3.0	5.0	1.50	2.00
D	TTW+p	MT20	3.0	4.0	2.25	1.50
E	TMWW-t	MT20	3.0	5.0	1.50	2.00
F	TMV+p	MT20	2.0	4.0		
H	BMVW1-t	MT20	3.0	5.0	1.50	2.00
I	BS-t	MT20	3.0	4.0		
J	BMVWW1-t	MT20	4.0	6.0		
K	BMVW1-t	MT20	3.0	5.0	1.50	2.00

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

BEARINGS		FACTORED		MAXIMUM FACTORED		INPUT		REQRD	
JT	GROSS REACTION	GROSS REACTION	DOWN	HORZ	UPLIFT	IN-SX	BRG	IN-SX	BRG
K	1008 0	1008 0	0	0	0	5-8	1-8		
H	1008 0	1008 0	0	0	0	5-8	1-8		

UNFACTORED REACTIONS

JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
K	713	466 / 0	0 / 0	0 / 0	0 / 0	248 / 0	0 / 0
H	713	466 / 0	0 / 0	0 / 0	0 / 0	248 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) K, 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		FACTORED		WEBS		FACTORED	
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	MAX. UNBRACED LENGTH	MEMB.	FORCE (LBS)	MAX. UNBRACED LENGTH	MEMB.
FR-TO		FROM TO		FR-TO			
A-B	0 / 32	-84.9 -84.9	0.11 (1)	10.00	J-D	0 / 501	0.11 (1)
B-C	0 / 24	-84.9 -84.9	0.25 (1)	10.00	J-E	-225 / 0	0.13 (1)
C-D	-729 / 0	-84.9 -84.9	0.20 (1)	6.25	C-J	-225 / 0	0.13 (1)
D-E	-729 / 0	-84.9 -84.9	0.20 (1)	6.25	K-C	-1022 / 0	0.58 (1)
E-F	0 / 24	-84.9 -84.9	0.25 (1)	10.00	E-H	-1022 / 0	0.58 (1)
F-G	0 / 32	-84.9 -84.9	0.11 (1)	10.00			
K-B	-256 / 0	0.0 0.0	0.03 (1)	7.81			
H-F	-256 / 0	0.0 0.0	0.03 (1)	7.81			
K-J	0 / 753	-18.5 -18.5	0.46 (4)	10.00			
J-I	0 / 753	-18.5 -18.5	0.46 (4)	10.00			
I-H	0 / 753	-18.5 -18.5	0.46 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH. LL = 23.3 PSF
DL = 6.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.4 PSF
TOTAL LOAD = 36.7 PSF

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.58")
CALCULATED VERT. DEFL.(LL) = L/999 (0.02")
ALLOWABLE DEFL.(TL)= L/360 (0.58")
CALCULATED VERT. DEFL.(TL) = L/999 (0.13")

CSI: TC=0.25/1.00 (E-F:1), BC=0.46/1.00 (J-K:4)
WB=0.58/1.00 (E-H:1), SSI=0.15/1.00 (D-E:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.86 (H) (INPUT = 0.80)
JSI METAL= 0.27 (C) (INPUT = 1.00)

NOTE: Lateral brace(s) shown shall be 2x4 SPF #2

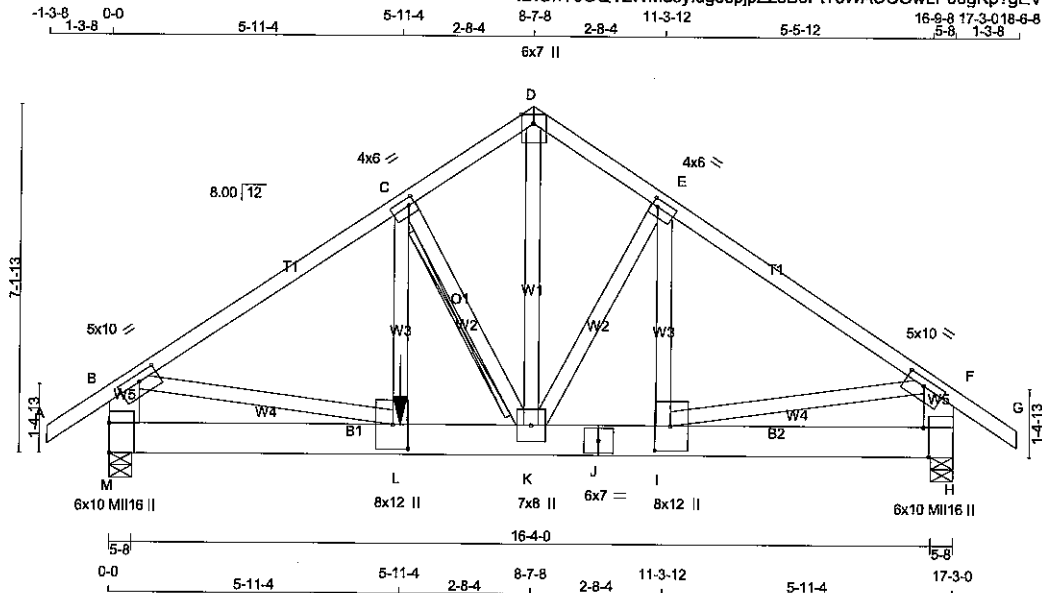


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
317090	H12A		2	JT-39002	E-20023801

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TOTAL WEIGHT = 2 X 113 = 227 lb

LUMBER	CHORDS	SIZE	DRY	LUMBER	DESCR.
N.L.G.A. RULES					
A - D	2x4	DRY	1650F 1.5E	SPF	
D - G	2x4	DRY	1650F 1.5E	SPF	
M - B	2x8	DRY	No.2	SPF	
H - F	2x8	DRY	No.2	SPF	
M - J	2x8	DRY	1950F 1.7E	SPF	
J - H	2x8	DRY	1950F 1.7E	SPF	

ALL WEBS 2x4 DRY No.2 SPF

DRY: SEASONED LUMBER.

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

CHORDS #ROWS	SURFACE SPACING (IN)	LOAD(PLF)
TOP CHORDS : (0.122"x3") SPIRAL NAILS		
A-D 1	12	TOP
D-G 1	12	TOP
M-B 2	12	TOP
H-F 2	12	TOP
BOTTOM CHORDS : (0.122"x3") SPIRAL NAILS		
M-J 2	6	SIDE(425.3)
J-H 2	6	SIDE(425.3)
WEBS : (0.122"x3") SPIRAL NAILS		
C-L 2	3	SIDE(1464.2)
2x4 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 TRANSFERRING. REMAINING PLF MUST BE APPLIED ON THE OPPOSITE SIDE OR ON THE TOP.

NOTE: Lateral brace(s) shown shall be 2x4 SPF #2



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

BEARINGS	FACTORED		MAXIMUM FACTORED		INPUT BRG	REQRD BRG
	GROSS REACTION	DOWN	GROSS REACTION	UP		
JT	7930	0	7930	0	5-8	5-8
M	9439	0	9439	0	5-8	5-8

UNFACTORED REACTIONS

1ST LCASE	MAX/MIN	COMPONENT REACTIONS
JT	COMBINED	SNOW LIVE PERM.LIVE WIND DEAD SOIL
M	5627	3585 / 0 0 / 0 0 / 0 2042 / 0 0 / 0
H	6698	4265 / 0 0 / 0 0 / 0 2434 / 0 0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.24 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.

2x4 DRY SPF No.2 T-BRACE AT C-K

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED VERT. LOAD (LC1 MAX)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED VERT. LOAD (LC1 MAX)	MAX. FACTORED VERT. LOAD (LC1 MAX)
FR-TO		FROM TO	CSI (LC)	FR-TO		FROM TO	CSI (LC)
A-B	0 / 32	-84.9 -84.9	0.05 (1)	I-E	0 / 2982	0.26 (1)	
B-C	-10661 / 0	-84.9 -84.9	0.67 (1)	L-C	0 / 4557	0.40 (1)	
C-D	-8284 / 0	-84.9 -84.9	0.19 (1)	B-L	0 / 8989	0.79 (1)	
D-E	-8286 / 0	-84.9 -84.9	0.20 (1)	I-F	0 / 8349	0.74 (1)	
E-F	-9900 / 0	-84.9 -84.9	0.60 (1)	K-D	0 / 8041	0.80 (1)	
F-G	0 / 32	-84.9 -84.9	0.05 (1)	K-E	-2866 / 0	0.52 (1)	
G-H	-7647 / 0	0.0 0.0	0.21 (1)	C-K	-4177 / 0	0.49 (1)	
H-F	-7125 / 0	0.0 0.0	0.19 (1)				
M-L	0 / 0	-18.5 -44.3	0.15 (1)				
L-K	0 / 8882	-869.1 -869.1	0.36 (1)				
K-J	0 / 8250	-869.1 -869.1	0.38 (1)				
J-I	0 / 8250	-869.1 -869.1	0.38 (1)				
I-H	0 / 0	-869.1 -869.1	0.38 (1)				

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
L	5-11-4	-5654	-5654	---	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	= 23.3 PSF
DL	= 8.0 PSF
BOT CH. LL	= 0.0 PSF
DL	= 7.4 PSF
TOTAL LOAD	= 36.7 PSF

SPACING = 24.0 IN./C

GIRDER TYPE: CSldGirder
START DISTANCE = 5-11-4
START SPAN CARRIED = 34-11-0
END DISTANCE = 17-3-0
END SPAN CARRIED = 34-11-0
END WALL WIDTH = 0-0
APPLIED TO FRONT SIDE OF BOTTOM CHORD.
- ADDTL LOADS BASED ON 55 % OF GSL. (DEFINED BY USER)

GIRDER TYPE: CSldGirder
START DISTANCE = 0-0
START SPAN CARRIED = 2-0-0
END DISTANCE = 5-11-4
END SPAN CARRIED = 3-0-0
END WALL WIDTH = 0-0
APPLIED TO FRONT SIDE OF BOTTOM CHORD.
- ADDTL LOADS BASED ON 55 % OF GSL. (DEFINED BY USER)

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

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (0.58")
CALCULATED VERT. DEFL.(LL) = L/999 (0.11")
ALLOWABLE DEFL.(TL) = L/360 (0.58")
CALCULATED VERT. DEFL.(TL) = L/999 (0.20")

CSI: TC=0.67/1.00 (B-C:1), BC=0.38/1.00 (I-K:1), WB=0.80/1.00 (D-K:1), SSI=0.84/1.00 (H-I:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE HEELS OFF

CONTINUED ON PAGE 2

JOB NAME 317090	TRUSS NAME H12A	QUANTITY 2	PLY 2	JOB DESC. JT-39002	DRWG NO. E-20023801(2)
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Alpa Roof Truss, Maple

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PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-t	MT20	5.0	10.0	1.75	4.75
C	TMWW-t	MT20	4.0	6.0	1.75	1.50
D	TTW+p	MT20	6.0	7.0	Edge	
E	TMWW-t	MT20	4.0	6.0	1.75	1.50
F	TMVW-t	MT20	5.0	10.0	1.75	4.75
H	BMV1-t	MII16	6.0	10.0	Edge	1.25
I	BMWW-t	MT20	8.0	12.0	6.00	3.75
J	BS-t	MT20	6.0	7.0		
K	BMWWW-t	MT20	7.0	8.0		
L	BMWW-t	MT20	8.0	12.0	6.00	3.75
M	BMV1-t	MII16	6.0	10.0	7.25	

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

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

NAIL VALUES

PLATE	GRIP(DRY)	SHEAR	SECTION
	(PSI)	(PLI)	(PLI)
	MAX	MIN	MAX MIN
MT20	650	371	1747 788 1987 1873
MII16	438	302	2547 1256 4283 1816

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

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

NOTE: Lateral brace(s) shown shall be 2x4 SPF #2

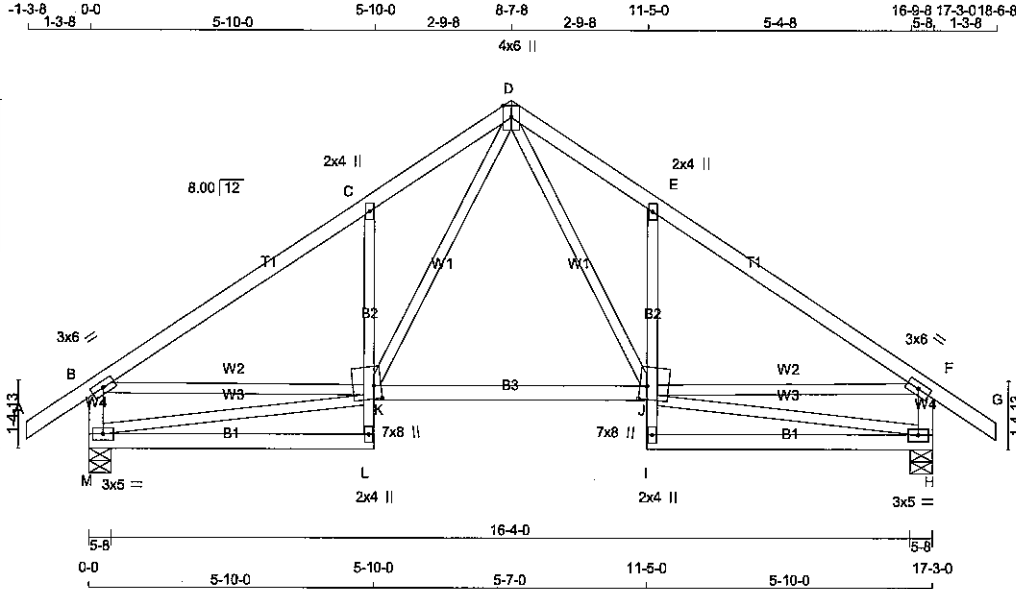


JOB NAME 317090	TRUSS NAME H12T	QUANTITY 1	PLY 1	JOB DESC. TRUSS DESC.	JT-39002	DRWG NO. E-20023802
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Alpa Roof Truss, Maple

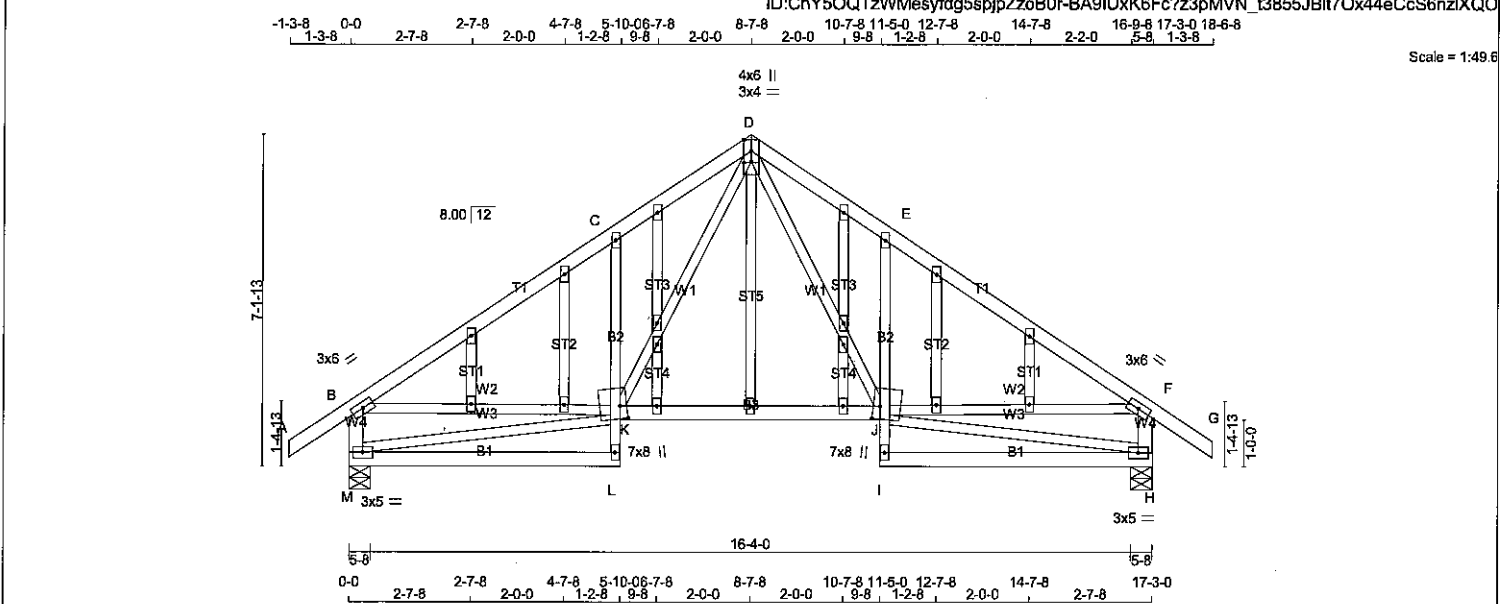
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TOTAL WEIGHT = 85 lb

LUMBER N. L. G. A. RULES CHORDS SIZE A - D 2x4 DRY No.2 SPF D - B 2x4 DRY No.2 SPF M - G 2x4 DRY No.2 SPF H - F 2x4 DRY No.2 SPF M - L 2x4 DRY No.2 SPF L - C 2x3 DRY No.2 SPF K - J 2x4 DRY No.2 SPF I - E 2x3 DRY No.2 SPF I - H 2x4 DRY No.2 SPF ALL WEBS 2x3 DRY No.2 SPF EXCEPT DRY: SEASONED LUMBER.				DESIGN CRITERIA SPECIFIED LOADS: TOP CH. LL = 23.3 PSF DL = 6.0 PSF BOT CH. LL = 0.0 PSF DL = 7.4 PSF TOTAL LOAD = 36.7 PSF SPACING = 24.0 IN./C THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015 THIS DESIGN COMPLIES WITH: - PART 9 OF CBC 2018, ABC 2019 - PART 9 OF OBC 2012 (2019 AMENDMENT) - CSA 086-14 - TPIC 2014 (55 % OF 27.2 P.S.F. G.S.I. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD ALLOWABLE DEFL.(LL)= L/360 (0.58") CALCULATED VERT. DEFL.(LL) = L/999 (0.03") ALLOWABLE DEFL.(TL)= L/360 (0.58") CALCULATED VERT. DEFL.(TL) = L/999 (0.11") CSI: TC=0.34/1.00 (E-F:1), BC=0.24/1.00 (J-K:4), WB=0.21/1.00 (B-K:1), SSI=0.18/1.00 (E-F:1) DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS=1.10 COMPANION LIVE LOAD FACTOR = 1.00 TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT. NAIL VALUES PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI) MAX MIN MAX MIN MAX MIN MT20 650 371 1747 788 1987 1873 PLATE PLACEMENT TOL. = 0.250 inches PLATE ROTATION TOL. = 5.0 Deg. JSI GRIP= 0.83 (B) (INPUT = 0.90) JSI METAL= 0.31 (B) (INPUT = 1.00)			
PLATES (table is in inches) JT TYPE PLATES W LEN Y X B TMVW-t MT20 3.0 6.0 C TMV+p MT20 2.0 4.0 D TTWW+p MT20 4.0 6.0 Edge E TMV+p MT20 2.0 4.0 F TMVW-t MT20 3.0 6.0 H BMVW-t MT20 3.0 5.0 I BMV+p MT20 2.0 4.0 J BVMMWW-w MT20 7.0 8.0 1.75 3.25 K BVMMWW-w MT20 7.0 8.0 1.75 3.25 L BMV+p MT20 2.0 4.0 M BMVW-t MT20 3.0 5.0 Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.				BEARINGS FACTORED MAXIMUM FACTORED INPUT REQD GROSS REACTION GROSS REACTION BRG BRG JT VERT HORZ DOWN HORZ UPLIFT IN-SX IN-SX M 1008 0 1008 0 0 5-8 1-8 H 1008 0 1008 0 0 5-8 1-8 UNFACTORED REACTIONS 1ST LCASE MAX/MIN COMPONENT REACTIONS JT COMBINED SNOW LIVE PERM.LIVE WIND DEAD SOIL M 713 466 / 0 0 / 0 0 / 0 0 / 0 248 / 0 0 / 0 H 713 466 / 0 0 / 0 0 / 0 0 / 0 248 / 0 0 / 0 BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) M, H BRACING TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.61 FT. MAX. UNBRACED BOTTOM CHORD LENGTH = 7.81 FT. OR RIGID CEILING DIRECTLY APPLIED. ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED. LOADING TOTAL LOAD CASES: (4) CHORDS FACTORED WEBS MEMB. FORCE VERT. LOAD LC1 MAX MAX. MEMB. FORCE MAX. (LBS) (PLF) CSI (LC) UNBRAC LENGTH FR-TO (LBS) CSI (LC) FR-TO FROM TO A-B 0 / 32 -84.9 -84.9 0.11 (1) 10.00 D-J 0 / 639 0.14 (1) B-C -1106 / 0 -84.9 -84.9 0.34 (1) 5.61 K-D 0 / 639 0.14 (1) C-D -1162 / 0 -84.9 -84.9 0.26 (1) 5.61 M-K -6 / 0 0.00 (1) D-E -1162 / 0 -84.9 -84.9 0.26 (1) 5.61 B-K 0 / 939 0.21 (1) E-F -1106 / 0 -84.9 -84.9 0.34 (1) 5.61 J-H -6 / 0 0.00 (1) F-G 0 / 32 -84.9 -84.9 0.11 (1) 10.00 J-F 0 / 939 0.21 (1) M-B -954 / 0 0.0 0.0 0.10 (1) 7.81 H-F -954 / 0 0.0 0.0 0.10 (1) 7.81 M-L 0 / 6 -18.5 -18.5 0.18 (4) 10.00 L-K 0 / 59 0.0 0.0 0.03 (4) 10.00 K-C -480 / 0 0.0 0.0 0.06 (1) 7.81 K-J 0 / 646 -18.5 -18.5 0.24 (4) 10.00 I-J 0 / 59 0.0 0.0 0.03 (4) 10.00 J-E -480 / 0 0.0 0.0 0.06 (1) 7.81 I-H 0 / 6 -18.5 -18.5 0.18 (4) 10.00			
NOTE: Lateral brace(s) shown shall be 2x4 SPF #2							



TOTAL WEIGHT = 103 lb

LUMBER
N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - D	2x4	DRY	No.2
D - G	2x4	DRY	No.2
M - B	2x4	DRY	No.2
H - F	2x4	DRY	No.2
M - L	2x4	DRY	No.2
L - C	2x3	DRY	No.2
K - J	2x4	DRY	No.2
I - E	2x3	DRY	No.2
I - H	2x4	DRY	No.2
ALL WEBS EXCEPT	2x3	DRY	No.2
ALL GABLE WEBS	2x3	DRY	No.2
DRY: SEASONED LUMBER.			
GABLE STUDS SPACED AT	2-0-0	OC.	

PLATES (table is in inches)

JT TYPE	PLATES	W	LEN	Y	X
B	TMVW-t	MT20	3.0	6.0	
C	TMV+p	MT20	2.0	4.0	
D	TTWW+p	MT20	4.0	6.0	Edge
D	NP-p	MT20	3.0	4.0	0.25 2.00
E	TMV+p	MT20	2.0	4.0	
F	TMVW-t	MT20	3.0	6.0	
H	BMVW1-t	MT20	3.0	5.0	
I	BMV+p	MT20	2.0	4.0	
J	BVMVWW-w	MT20	7.0	8.0	1.75 3.25
K	BVMVWW-w	MT20	7.0	8.0	1.75 3.25
L	BMV+p	MT20	2.0	4.0	
M	BMVW1-t	MT20	3.0	5.0	
N, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AB	NP+w	MT20	2.0	4.0	

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

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
M	1008	0	1008	0	5-8	1-8
H	1008	0	1008	0	5-8	1-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED		MAX/MIN. COMPONENT REACTIONS		WIND	DEAD	SOIL
	SNOW	LIVE	PERM. LIVE	WIND			
M	713	466 / 0	0 / 0	0 / 0	0 / 0	248 / 0	0 / 0
H	713	466 / 0	0 / 0	0 / 0	0 / 0	248 / 0	0 / 0

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.61 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 7.81 FT. OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING
TOTAL LOAD CASES: (4)

MEMB.	CHORDS		FACTORED		MAX. UNBRACED LENGTH	MEMB.	FACTORED	
	MAX. FORCE (LBS)	VERT. LOAD (PLF)	MAX. (LC1)	MAX. (LC)			MAX. FORCE (LBS)	MAX. (LC)
FR-TO						FR-TO		
A-B	0 / 32	-84.9	-84.9	0.11 (1)	10.00	D-J	0 / 639	0.14 (1)
B-C	-1106 / 0	-84.9	-84.9	0.34 (1)	5.61	K-D	0 / 639	0.14 (1)
C-D	-1162 / 0	-84.9	-84.9	0.26 (1)	5.61	M-K	-6 / 0	0.00 (1)
D-E	-1162 / 0	-84.9	-84.9	0.26 (1)	5.61	B-K	0 / 939	0.21 (1)
E-F	-1106 / 0	-84.9	-84.9	0.34 (1)	5.61	J-H	-6 / 0	0.00 (1)
F-G	0 / 32	-84.9	-84.9	0.11 (1)	10.00	J-F	0 / 939	0.21 (1)
M-B	-954 / 0	0.0	0.0	0.10 (1)	7.81			
H-F	-954 / 0	0.0	0.0	0.10 (1)	7.81			
M-L	0 / 6	-18.5	-18.5	0.18 (4)	10.00			
L-K	0 / 59	0.0	0.0	0.03 (4)	10.00			
K-C	-480 / 0	0.0	0.0	0.06 (1)	7.81			
K-J	0 / 646	-18.5	-18.5	0.24 (4)	10.00			
I-J	0 / 59	0.0	0.0	0.03 (4)	10.00			
J-E	-480 / 0	0.0	0.0	0.06 (1)	7.81			
I-H	0 / 6	-18.5	-18.5	0.18 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 23.3 PSF
DL = 6.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.4 PSF
TOTAL LOAD = 36.7 PSF

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:
- PART 9 OF CBC 2015, ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (0.58")
CALCULATED VERT. DEFL.(LL) = L/999 (0.03")
ALLOWABLE DEFL.(TL) = L/360 (0.58")
CALCULATED VERT. DEFL.(TL) = L/999 (0.11")

CSI: TC=0.34/1.00 (E-F:1), BC=0.24/1.00 (J-K:4), WB=0.21/1.00 (B-K:1), SSI=0.18/1.00 (E-F:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.83 (B) (INPUT = 0.80)
JSI METAL= 0.31 (B) (INPUT = 1.00)

NOTE: Lateral brace(s) shown shall be 2x4 SPF #2



SECRET

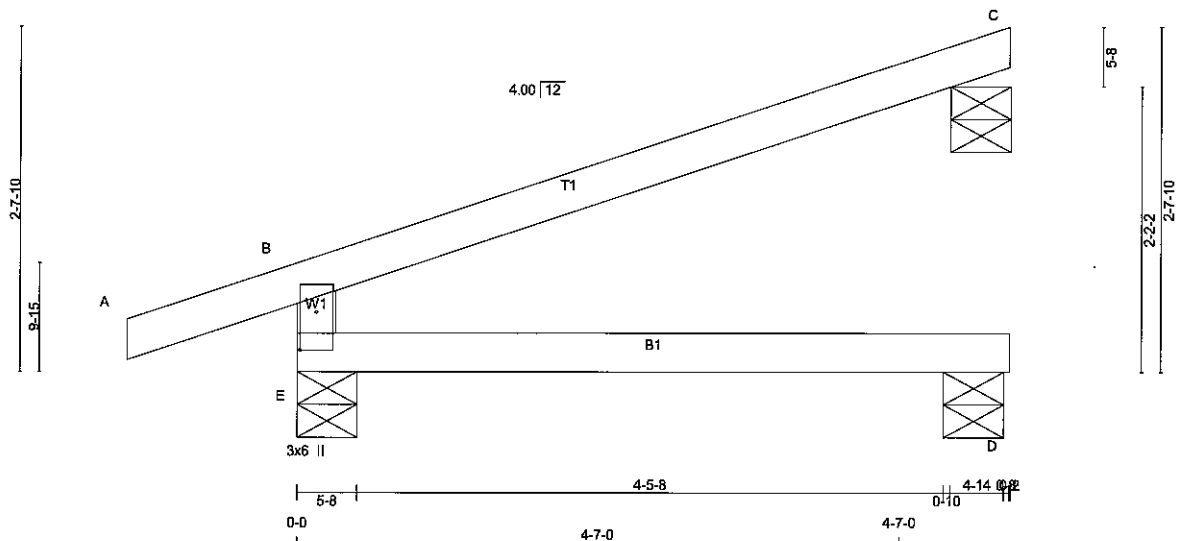
Alpha Roof Truss, Maple

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-1-3-8 1-3-8 0-0 4-1-8 4-1-8 5-8 4-7-0

Scale = 1:17.6



TOTAL WEIGHT = 6 X 15 = 88 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE	DRY	LUMBER	DESCR.
A - C	2x4	DRY	No.2	SPF
E - B	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	3.0	6.0	3.50 1.50

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
C	172	0	172	0	5-8 (5-6)	5-6
E	461	0	461	0	5-8	1-8
D	40	0	45	0	5-8	1-8

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH

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
C	119	95 / 0	0 / 0	0 / 0	0 / 0	24 / 0	0 / 0
E	324	220 / 0	0 / 0	0 / 0	0 / 0	105 / 0	0 / 0
D	32	0 / 0	0 / 0	0 / 0	0 / 0	32 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) C, E, 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			WEBS				
MEMB.	MAX. FACTORED FORCE (LBS)		FACTORED			MEMB.	MAX. FACTORED FORCE (LBS)
			VERT. LOAD (PLF)	LC1 MAX CSI (LC)	UNBRAC LENGTH		MAX CSI (LC)
FR-TO			FROM	TO		FR-TO	
A-B	0 / 18		-84.9	-84.9	0.11 (1)	10.00	
B-C	-18 / 0		-84.9	-84.9	0.42 (1)	6.25	
E-B	-401 / 0		0.0	0.0	0.12 (4)	7.81	
E-D	0 / 0		-18.5	-18.5	0.12 (4)	10.00	

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL = 23.3 PSF
DL = 6.0 PSF	
BOT CH.	LL = 0.0 PSF
DL = 7.4 PSF	
TOTAL LOAD	= 36.7 PSF

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:

- PART 9 OF CBC 2015, ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS

- OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 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=0.42/1.00 (B-C:1), BC=0.12/1.00 (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

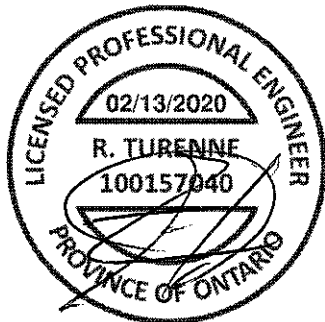
PLATE	GRIP(DRY)	SHEAR	SECTION
(PSI)	(PLI)	(PLI)	
MAX MIN	MAX MIN	MAX MIN	
MT20	650 371	1747 788	1987 1873

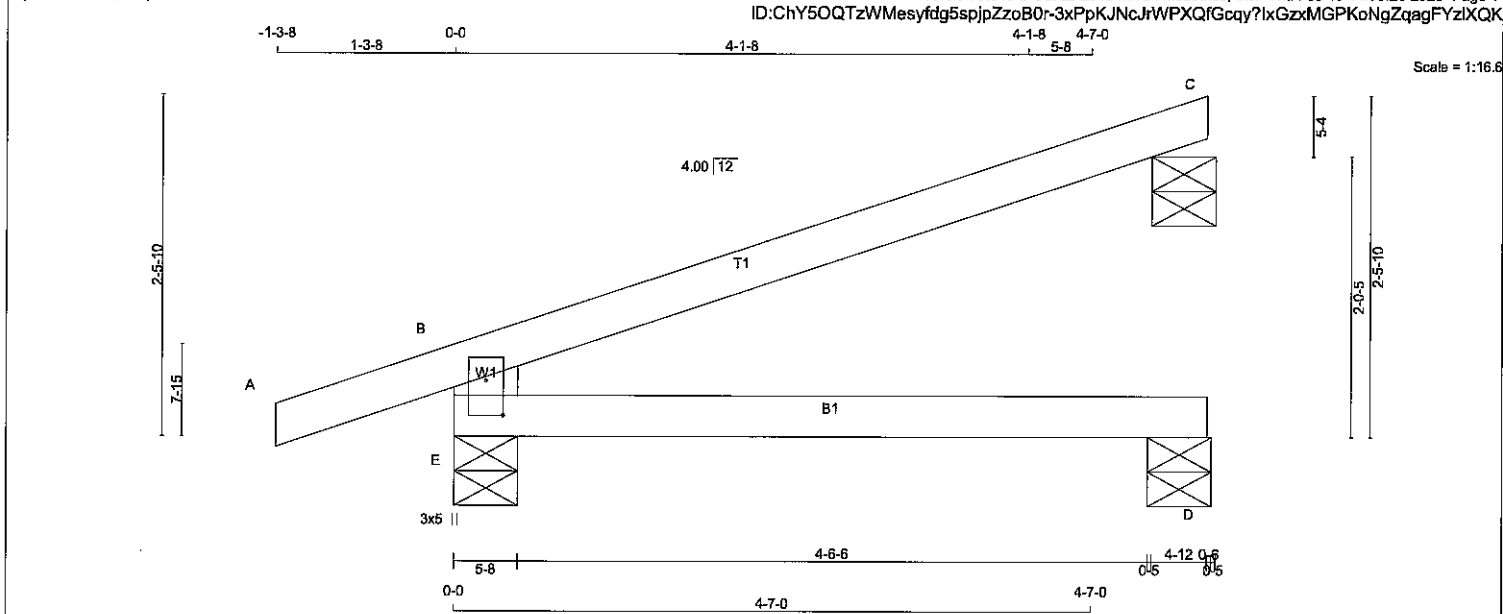
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.39 (E) (INPUT = 0.90)
JSI METAL= 0.08 (E) (INPUT = 1.00)

NOTE: Lateral brace(s) shown shall be 2x4 SPF #2





TOTAL WEIGHT = 6 X 15 = 88 lb [M]

LUMBER

CHORDS	SIZE	DRY	LUMBER	DESCR.
A - C	2x4	DRY	No.2	SPF
E - B	2x6	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	3.0	5.0	3.00 1.50

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

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG IN-SX	REQRD BRG IN-SX
	VERT	HORZ	DOWN	HORZ		
C	172	0	172	0	5-8 (4-12)	4-12
E	463	0	463	0	5-8	1-8
D	38	0	43	0	5-8 (5-2)	1-8

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH

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
C	119	85 / 0	0 / 0	0 / 0	0 / 0	24 / 0	0 / 0
E	326	220 / 0	0 / 0	0 / 0	0 / 0	106 / 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) C, E, 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				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED VERT. LOAD LC1 (LC)	MAX. FACTORED VERT. LOAD LC1 (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED VERT. LOAD LC1 (LC)
FR-TO		FROM	TO	LENGTH	FR-TO		
A-B	0 / 18	-84.9	-84.9	0.11 (1)	10.00		
B-C	-18 / 0	-84.9	-84.9	0.42 (1)	6.25		
E-B	-401 / 0	0.0	0.0	0.07 (4)	7.81		
E-D	0 / 0	-18.5	-18.5	0.15 (4)	10.00		

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL = 23.3 PSF
DL = 6.0 PSF	
BOT CH.	LL = 0.0 PSF
DL = 7.4 PSF	
TOTAL LOAD	= 36.7 PSF

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:

- PART 9 OF CBC 2018, ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA D86-14
- TPIC 2014

DESIGN ASSUMPTIONS

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 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=0.42/1.00 (B-C:1), BC=0.15/1.00 (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)	SHEAR	SECTION
(PSI)	(PLI)	(PLI)	(PLI)
MAX MIN	MAX MIN	MAX MIN	MAX MIN
MT20	650 371	1747 788	1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.24 (E) (INPUT = 0.90)
JSI METAL= 0.08 (E) (INPUT = 1.00)

NOTE: Lateral brace(s) shown shall be 2x4 SPF #2



December 18, 2019

Re: Expiration Date for Technical Bulletins Extended to 4/1/2020

Please be advised that the expiration date of the Technical Bulletins listed below has been extended until April 1, 2020.

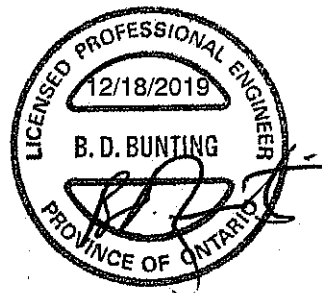
T-SPECCP17	T-SPECH17	T-SPECDSHGUS17R
T-SPECHGUS17-R	T-SPECHHUS17-R	T-SPECHUS17
T-SPECLF17	T-SPECLT17	T-SPECLU17
T-SPECCLUL17	T-SPECLUS17	T-SPECSUR17
T-SPECTBE17	T-SPECTC17	T-SPECTHGB17
T-SPECTHGBHV17	T-SPECTHGQ17	T-SPECTHGW17
T-SPECLSULSSU17	T-SPECHTHGQ17	T-SPECSTHGQ17

Should you have any questions or concerns regarding the above, please contact me at your convenience.

Sincerely,



Brent Bunting, P.Eng.
Simpson Strong-Tie Canada, Ltd.



LUS – Double Shear Joist Hangers



All LUS hangers have double shear nailing. This patented innovation distributes the load through two points on each joist nail for greater strength. It also allows the use of fewer nails, faster installation and the use of common nails for all connections.

Material: 18 gauge

Finish: G90 galvanized

Design:

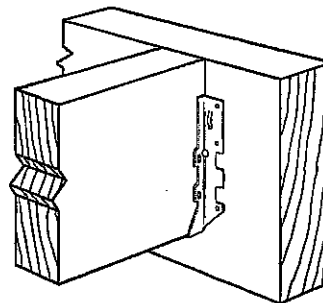
- Factored resistances are in accordance with CSA O86-14.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these loads.

Installation:

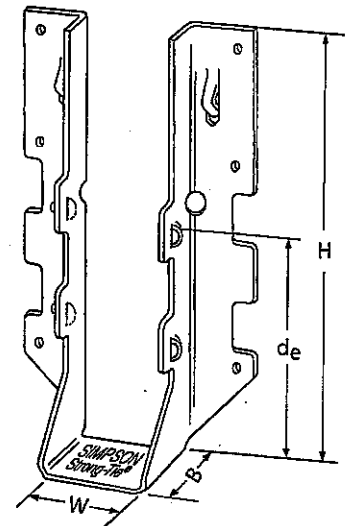
- Use all specified fasteners.
- Nails: 16d = 0.162" dia. x 3½" long common wire, 10d = 0.148" x 3" long common wire.
- Double shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads.
- Not designed for welded or nailer applications.

Options:

- These hangers cannot be modified



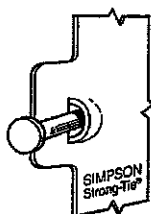
Typical LUS Installation



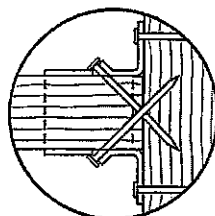
LUS28

Model No.	Ga.	Dimensions (in.)				Fasteners		Factored Resistance (lb.)			
		W	H	B	d _o ¹	Face	Joist	D.Fir-L		S-P-F	
								Uplift (K _o =1.15)	Normal (K _o =1.00)	Uplift (K _o =1.15)	Normal (K _o =1.00)
LUS24	18	1½	3½	1¼	1½	(4) 10d	(2) 10d	710	1630	645	1155
LUS24-2	18	3½	3½	2	1½	(4) 16d	(2) 16d	835	2020	590	1435
LUS26	18	1½	4¾	1¼	3¾	(4) 10d	(4) 10d	1420	2170	1290	1630
LUS26-2	18	3½	4¾	2	4	(4) 16d	(4) 16d	1720	2595	1545	1920
LUS26-3	18	4¾	4¾	2	3¼	(4) 16d	(4) 16d	1720	2595	1545	2340
LUS28	18	1½	6½	1¼	3¾	(6) 10d	(6) 10d	1420	2520	1290	1790
LUS28-2	18	3½	7	2	4	(6) 16d	(4) 16d	1720	3325	1545	2575
LUS28-3	18	4¾	6¼	2	3¼	(6) 16d	(4) 16d	1720	3325	1545	2375
LUS210	18	1½	7½	1¼	3¾	(8) 10d	(4) 10d	1420	2785	1290	2210
LUS210-2	18	3½	9	2	6	(8) 16d	(6) 16d	2580	4500	2320	3195
LUS210-3	18	4¾	8¾	2	5¼	(8) 16d	(6) 16d	2580	3345	2320	2375

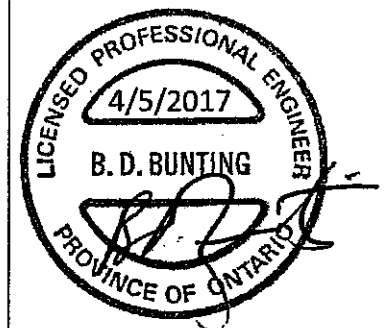
1. d_o is the distance from the seat of the hanger to the highest joist nail.



Dome Double Shear Nailing prevents tabs breaking off (available on some models).
U.S. Patent 5,603,580



Double Shear Nailing Top View.



LIMIT STATES DESIGN

This technical bulletin is effective until June 30, 2019, and reflects information available as of March 15, 2017. This information is updated periodically and should not be relied upon after June 30, 2019. Contact Simpson Strong-Tie for current information and limited warranty or see strongtie.com.

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T-SPEC/LUS17-3/17 Exp. 6/19

(800) 999-5099
strongtie.com

HUS/LJS – Double Shear Joist Hangers



All hangers have double shear nailing. This patented innovation distributes the load through two points on each joist nail for greater strength. It also allows the use of fewer nails, faster installation and the use of common nails for all connections. Do not bend or remove tabs.

Material: See table

Finish: G90 galvanized

Design:

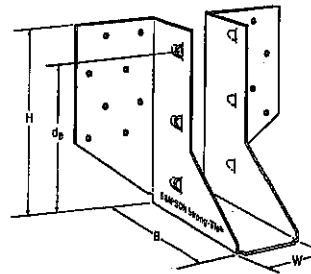
- Factored resistances are in accordance with CSA O86 -14.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these loads.

Installation:

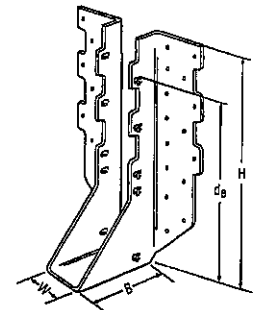
- Use all specified fasteners
- Nails: 16d = 0.162" dia. x 3 1/2" long common wire
- Double shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads
- Not designed for welded or nailer applications

Options:

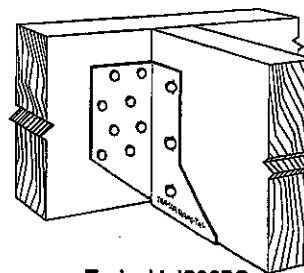
- See current catalogue for options



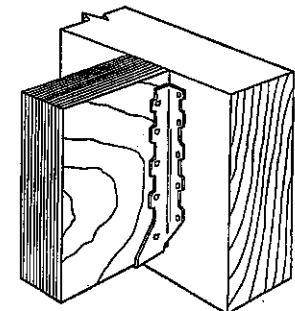
LJS26DS



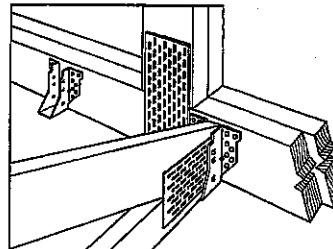
HUS210
(HUS26, HUS28, similar)



Typical LJS26DS
Installation



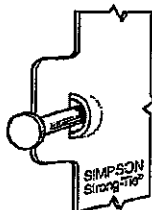
Typical HUS
Installation



Typical HUS Installation
(Truss Designer to provide fastener
quantity for connecting multiple
members together)

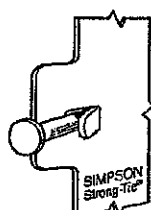
Model No.	Ga.	Dimensions (in.)				Fasteners		Factored Resistance (lb.)			
		W	H	B	d ₁	Face	Joist	D.Fir-L		S-P-F	
								Uplift (K ₀ =1.15)	Normal (K ₀ =1.00)	Uplift (K ₀ =1.15)	Normal (K ₀ =1.00)
LJS26DS	18	1 1/8	5	3 1/2	4 1/8	(16) 16d	(6) 16d	2055	4265	1460	4115
HUS26	16	1 1/8	5 1/8	3	3 1/8	(14) 16d	(6) 16d	2705	4940	2065	3875
HUS28	16	1 1/8	7 1/2	3	6 3/32	(22) 16d	(8) 16d	3605	5365	2675	4345
HUS210	16	1 1/8	9 1/2	3	7 3/32	(30) 16d	(10) 16d	4505	5795	4010	4740
HUS1.81/10	16	1 3/8	9	3	8	(30) 16d	(10) 16d	4505	6450	4010	5200

1. d₁ is the distance from the seat of the hanger to the highest joist nail.

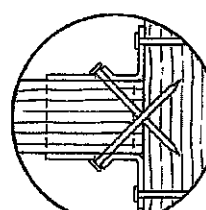


Dome Double
Shear Nailing
prevents tabs
breaking off
(available on
some models).

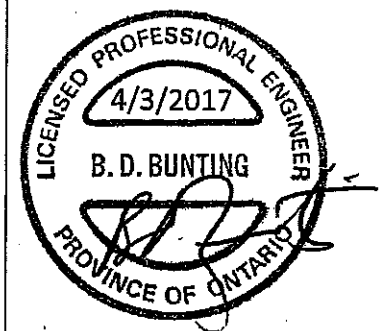
U.S. Patent
5,603,580



Double
Shear
Nailing
Side View.
Do not
bend tab
back.



Double
Shear
Nailing
Top View.



LIMIT
STATES
DESIGN

This technical bulletin is effective until June 30, 2019, and reflects information available as of March 1, 2017. This information is updated periodically and should not be relied upon after June 30, 2019. Contact Simpson Strong-Tie for current information and limited warranty (see strongtie.com).

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T-SPEC-HUS17 3/17 exp. 6/19

(800) 999-5099
strongtie.com

HHUS – Double Shear Joist Hangers



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:

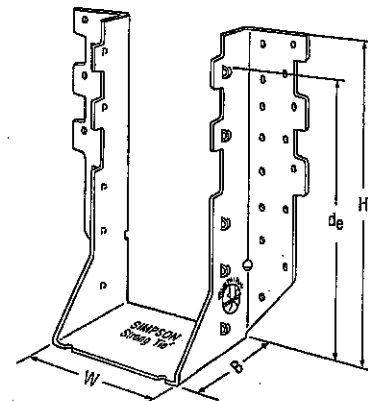
- Factored resistances are in accordance with CSA O86-14.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these loads.

Installation:

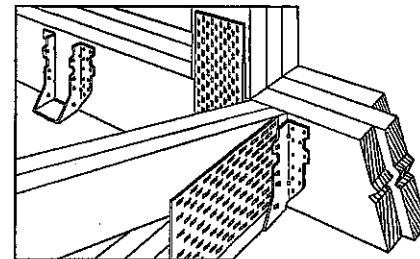
- Use all specified fasteners
- Nails: $16d = 0.162"$ dia. x $3\frac{1}{2}"$ long common wire
- Double shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads
- Not designed for welded or nailer applications

Options:

- See current catalogue for options



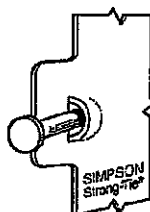
HHUS410



Typical HHUS Installation
(Truss Designer to provide fastener quantity for connecting multiple members together)

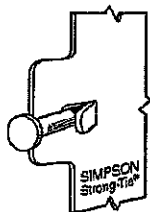
Model No.	Ga.	Dimensions (in.)					Fasteners		Factored Resistance (lb.)			
		W	H	B	d _e ¹	Face	Joist		D.Fir-L		S-P-F	
									Uplift (K _o =1.15)	Normal (K _o =1.00)	Uplift (K _o =1.15)	Normal (K _o =1.00)
HHUS26-2	14	3 $\frac{1}{16}$	5 $\frac{1}{16}$	3	3 $\frac{1}{16}$	(14) 16d	(6) 16d		2850	7335	2065	5205
HHUS28-2	14	3 $\frac{1}{16}$	7 $\frac{1}{32}$	3	6 $\frac{1}{32}$	(22) 16d	(8) 16d		3765	8940	2675	6345
HHUS210-2	14	3 $\frac{1}{16}$	9 $\frac{1}{32}$	3	8	(30) 16d	(10) 16d		4745	9660	4310	7000
HHUS210-3	14	4 $\frac{1}{16}$	9	3	7 $\frac{1}{16}$	(30) 16d	(10) 16d		4745	10545	4310	7485
HHUS210-4	14	6 $\frac{1}{16}$	8 $\frac{2}{32}$	3	7 $\frac{2}{32}$	(30) 16d	(10) 16d		4745	10545	4310	7485
HHUS46	14	3 $\frac{1}{16}$	5 $\frac{1}{32}$	3	3 $\frac{1}{16}$	(14) 16d	(6) 16d		2540	7335	2065	5205
HHUS48	14	3 $\frac{1}{16}$	7 $\frac{1}{16}$	3	6 $\frac{1}{16}$	(22) 16d	(8) 16d		3765	8945	2267	6345
HHUS410	14	3 $\frac{1}{16}$	9	3	8	(30) 16d	(10) 16d		4745	9855	4310	7000
HHUS5.50/10	14	5 $\frac{1}{2}$	9	3	8	(30) 16d	(10) 16d		4745	10545	4310	7485
HHUS7.25/10	14	7 $\frac{1}{4}$	9	3 $\frac{1}{16}$	7 $\frac{2}{32}$	(30) 16d	(10) 16d		4745	10770	4310	7650

1. d_e is the distance from the seat of the hanger to the highest joist nail.

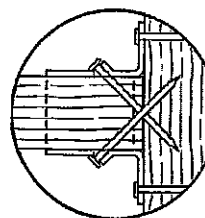


Dome Double Shear Nailing prevents tabs breaking off (available on some models).

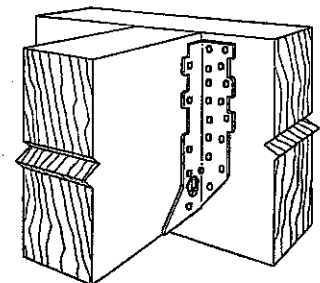
U.S. Patent 5,603,580



Double Shear Nailing Side View. Do not bend tab back.



Double Shear Nailing Top View.



Typical HHUS Installation



UNITED STATES DESIGN

This technical bulletin is effective until June 30, 2019 and reflects information available as of March 1, 2017. This information is updated periodically and is to be replaced by a new date June 30, 2019. Contact Simpson Strong-Tie for current information and visit www.strongtie.com.

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T-SPEC-HUS17-3/17 exp. 6/19

(800) 999-5099
strongtie.com

HGUS – Double Shear Joist Hangers

SIMPSON
Strong-Tie

All HGUS 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: 12 gauge

Finish: G90 galvanized

Design:

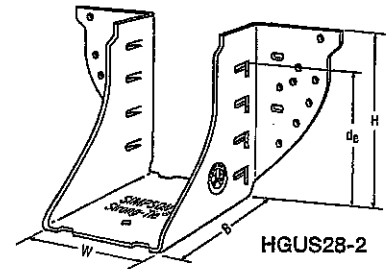
- Factored resistances are in accordance with CSA O86-14.
- Uplift resistances have been increased 15%.
No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these loads.

Installation:

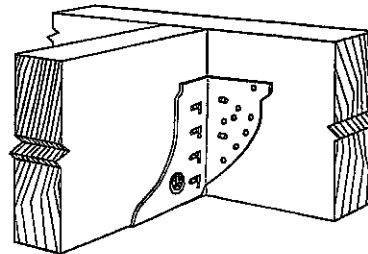
- Use all specified fasteners
- Nails: 16d = 0.162" dia x 3½" long common wire
- Double shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads
- Not designed for welded or nailer applications

Options:

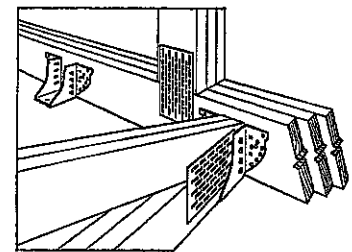
- See current catalogue for options



HGUS28-2



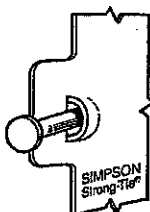
Typical HGUS
Installation



Typical HGUS
Installation
(Truss Designer to
provide fastener
quantity for
connecting multiple
members together)

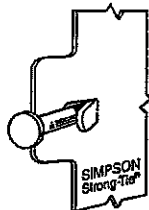
Model No.	Ga.	Dimensions (in.)				Fasteners		Factored Resistance (lb.)			
		W	H	B	d _e ¹	Face	Joist	D-Fir-L		S-P-F	
								Uplift (K _p =1.15)	Normal (K _p =1.00)	Uplift (K _p =1.15)	Normal (K _p =1.00)
HGUS26	12	1⅞	5⅞	5	4⅞ ₃₂	(20) 16d	(8) 16d	2685	6625	2685	5700
HGUS26-2	12	3⅞	5⅞ ₁₆	4	4⅞	(20) 16d	(8) 16d	4385	8950	3100	6355
HGUS26-3	12	4⅞ ₁₆	5½	4	4⅞	(20) 16d	(8) 16d	4385	8950	3100	6355
HGUS26-4	12	6⅞ ₁₆	5⅞ ₁₆	4	4⅞	(20) 16d	(8) 16d	4385	8950	3100	6355
HGUS28	12	1⅞	7⅞	5	6⅞	(36) 16d	(12) 16d	3310	7675	3100	6900
HGUS28-2	12	3⅞	7⅞ ₁₆	4	6⅞	(36) 16d	(12) 16d	6070	12980	4310	9215
HGUS28-3	12	4⅞ ₁₆	7¼	4	6⅞	(36) 16d	(12) 16d	6070	12980	4310	9215
HGUS28-4	12	6⅞ ₁₆	7⅞ ₁₆	4	6⅞	(36) 16d	(12) 16d	6070	12980	4310	9215
HGUS210-2	12	3⅞	9⅞ ₁₆	4	8⅞	(46) 16d	(16) 16d	6840	14645	4855	10400
HGUS210-3	12	4⅞ ₁₆	9¼	4	8⅞	(46) 16d	(16) 16d	6840	14645	4855	10400
HGUS210-4	12	6⅞ ₁₆	9⅞ ₁₆	4	8⅞	(46) 16d	(16) 16d	6840	14645	4855	10400
HGUS212-4	12	6⅞ ₁₆	10⅞	4	10⅞	(56) 16d	(20) 16d	7640	14995	5425	10645
HGUS214-4	12	6⅞ ₁₆	12⅞	4	11⅞	(66) 16d	(22) 16d	10130	16400	7195	11645

1. d_e is the distance from the seat of the hanger to the highest joist nail.

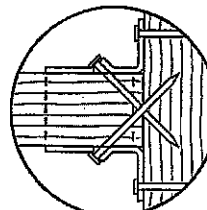


Dome Double
Shear Nailing
prevents tabs
breaking off
(available on
some models).

U.S. Patent
5,603,580



Double
Shear
Nailing
Side View.
Do not
bend tab
back.



Double
Shear
Nailing
Top View.



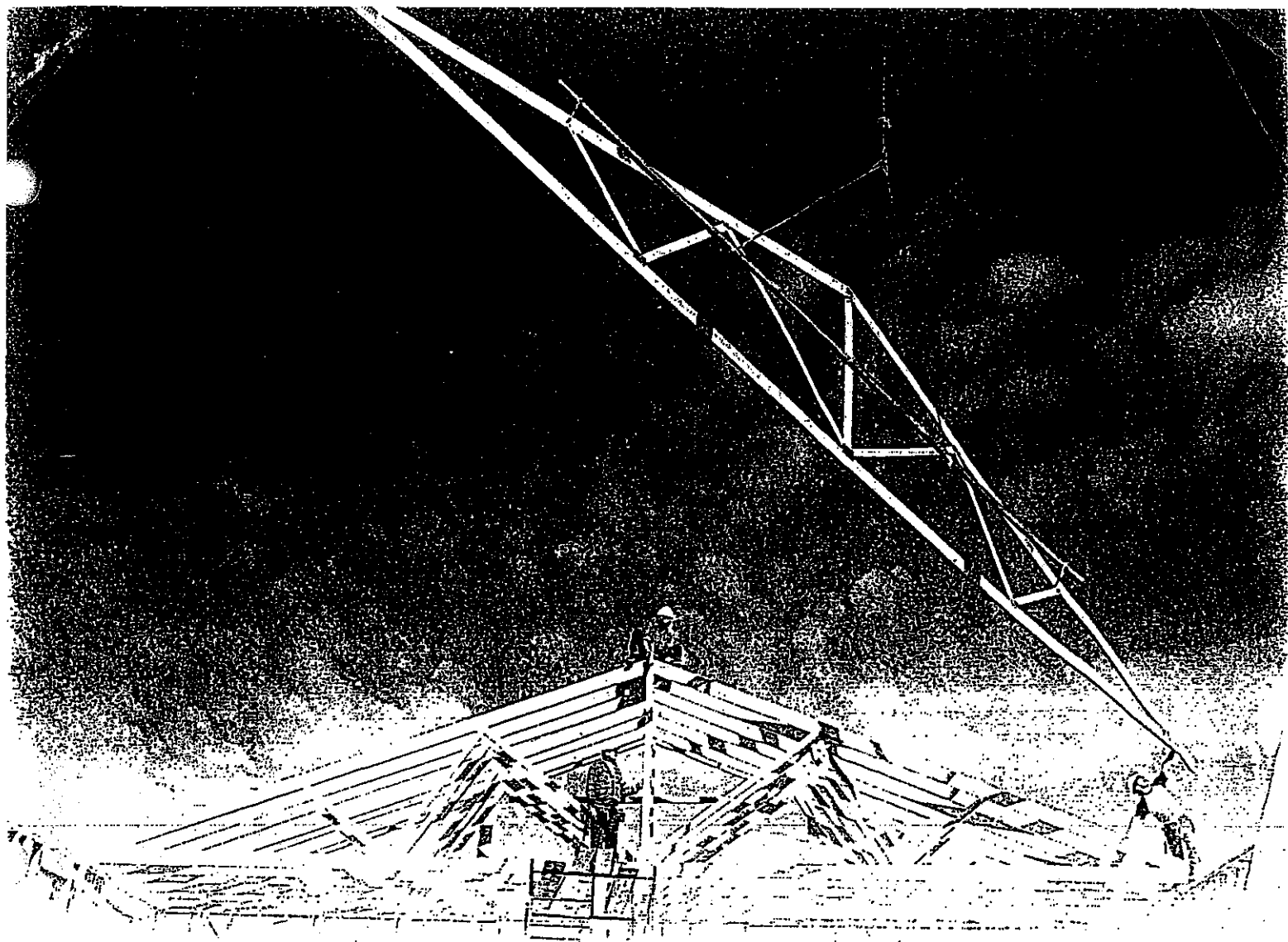
LIMIT
STATES
DESIGN

This technical bulletin is effective until June 30, 2019, and reflects information available as of March 1, 2017. The information is updated periodically and should not be relied upon after June 30, 2019. Contact Simpson Strong-Tie for current information and limited warranty or see strongtie.com.

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T-SPECHGUS17-3/17 exp. 6/19

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strongtie.com



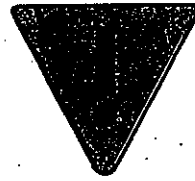
Wood Truss Installation

**A Guide to proper handling, erecting and bracing
metal plate connected wood trusses**

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Warning



General

Familiarity with the Construction Design Documents, the Truss Design Drawings, and Truss Placement Plans (if required by the Construction Design Documents) is required to properly erect, brace, and connect the trusses to the building system.

All of the care and quality involved in the design and manufacture of wood trusses can be jeopardized if the trusses are not properly handled, erected, and braced.

The consequences of improper handling, erecting, and bracing may be a collapse of the structure, which at best is a substantial loss of time and materials, and at worst is a loss of life. The majority of truss accidents occur during truss installation and not as a result of improper design or manufacture.

Prior to truss erection, the builder/erector shall meet with the erection crew for a safety and planning meeting, making sure each crew member understands his or her roles and responsibilities during the erection process.

Temporary Erection Bracing

Trusses are not marked in any way to identify the frequency, or location of temporary erection bracing.

All temporary bracing shall comply with the latest edition of *Commentary and Recommendations for Handling, Installing & Bracing Metal Plate Connected Wood Trusses* (HIB), published by the Truss Plate Institute, and/or as specified in the Construction Design Documents prepared by the building designer.

Permanent Truss Bracing

Permanent bracing for the roof or floor trusses is the responsibility of the building designer and should be shown on the Construction Design Documents. Permanent bracing locations for individual compression members of a wood truss are shown on the Truss Design Drawings, and shall be installed by the building or erection contractor. This bracing is needed for the proper performance of individual trusses within the roof or floor system. The design and connection of the bracing to the truss and then to the overall building system is the responsibility of the building designer, and is in addition to the permanent bracing plan, which is also specified by the building designer.

Special Design Requirements

Special design requirements, such as wind bracing, portal bracing, seismic bracing, diaphragms, shear walls, or other load transfer elements and their connections to wood trusses must be considered separately by the building designer, who shall determine size, location, and method of connections for all bracing as needed to resist these forces.

1

Unloading & Lifting

Never handle trusses flat

Beginning with the unloading process, and throughout all phases of construction, care must be taken to avoid lateral bending of trusses, which can cause damage to the lumber and metal connector plates at the joints.

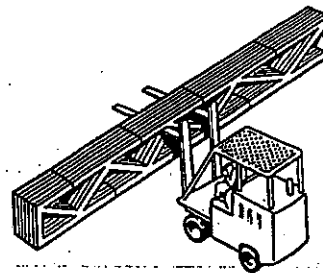
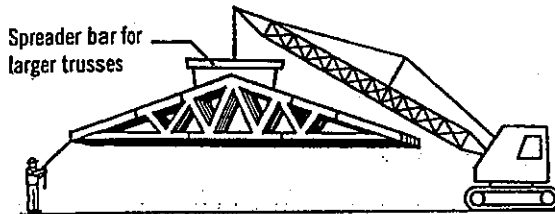


Avoid lateral bending

- Use special care in windy weather.
- If using a crane within 10 feet of an electric line, contact the local power company.
- If using a crane within 5 miles of an airport, contact the airport 30 days prior to erection to learn about any safety regulations that must be followed.

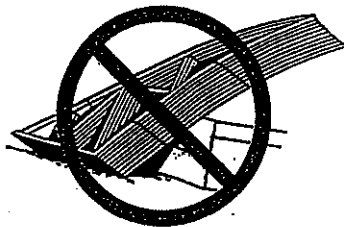
2

Job Site Handling



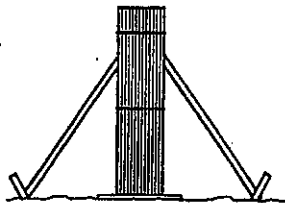
All trusses should be picked up at the top chords in a vertical position only

Proper banding and smooth ground allow for unloading of trusses without damage. This should be done as close to the building site as possible to minimize handling. Do not break banding until installation begins. Hand erection of trusses is allowed, provided excessive lateral bending is prevented.



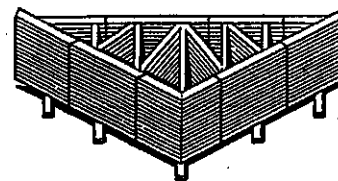
Do not store unbraced bundles upright

If trusses are stored vertically they shall be braced in a manner that will prevent tipping or topping. Generally, cutting of the banding is done just prior to installation.



Do not store on uneven ground

If trusses are stored horizontally, blocking should be used on eight to ten foot centers, or as required, to minimize lateral bending and moisture gain.

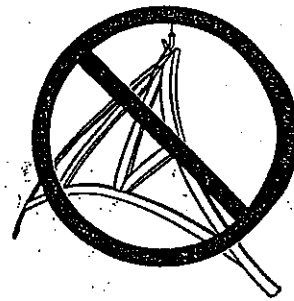


Care should be exercised when removing banding to avoid damaging trusses.

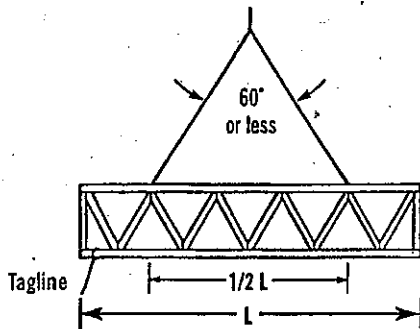
During long term storage, trusses shall be protected from the environment in a manner that provides for adequate ventilation of the trusses. If tarpaulins or other material is used, the ends shall be left open for ventilation. Plastic is not recommended, since it can trap moisture.

3 Hoisting

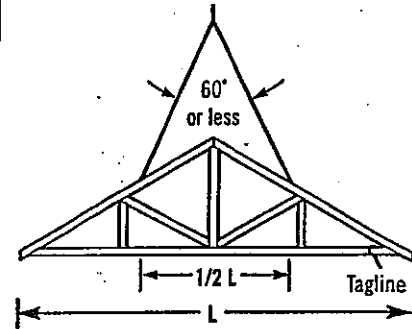
All trusses that are erected one at a time shall be held safely in position by the erection equipment until such time as all necessary bracing has been installed and the ends of the trusses are securely fastened to the building.



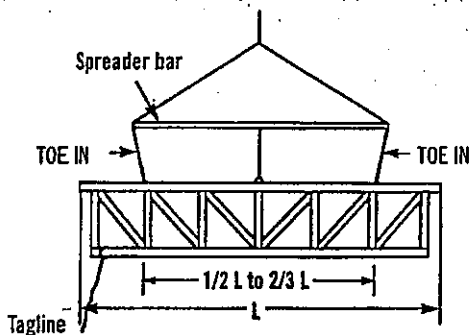
Avoid lateral bending



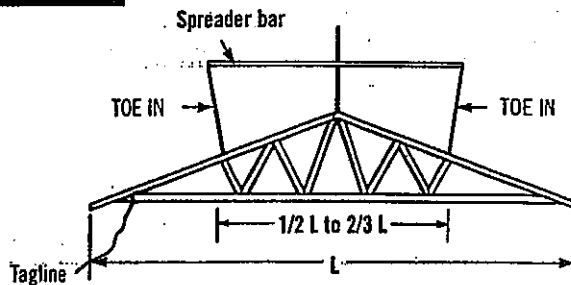
$L \leq 30'$



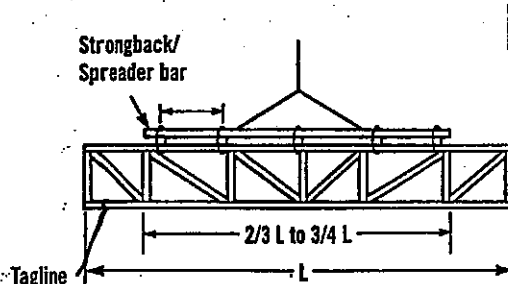
Truss sling is acceptable where these criteria are met.



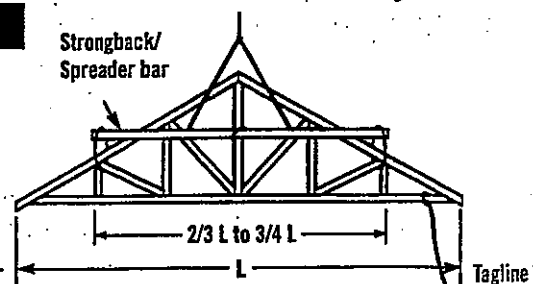
$30' < L \leq 60'$



Use spreader bar in all other cases. It should be noted that the lines from the ends of the spreader bar "TOE IN"; if these lines should "TOE OUT" the truss may fold in half.



$L > 60'$



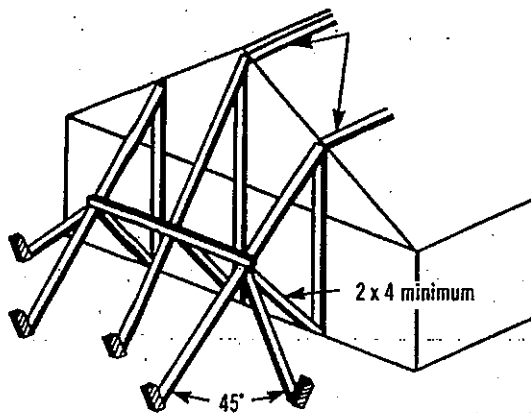
For lifting trusses with spans in excess of 60 feet, it is recommended that a strongback/spreader bar be used as illustrated. The strongback/spreader bar should be attached to the top chord and web members at intervals of approximately 10 feet. Further, the strongback/spreader bar should be at or above the mid-height of the truss to prevent overturning. The strongback/spreader bar can be of any material with sufficient strength to safely carry the weight of the truss and sufficient rigidity to adequately resist bending of the truss.

4 Beginning the Erection Process

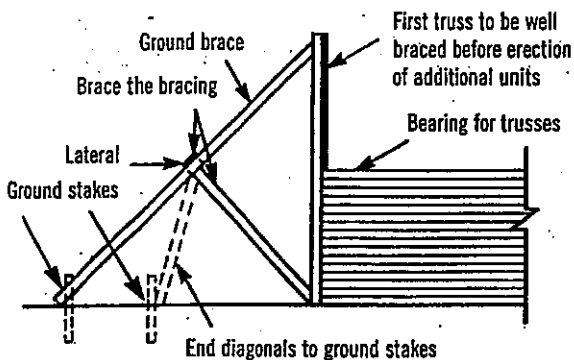
It is important for the builder or erection contractor to provide substantial bracing for the first truss erected. The two or more trusses making up the rest of the first set are tied to and rely upon the first truss for stability. Likewise, after this first set of trusses is adequately cross-braced, the remaining trusses installed rely upon this first set for stability. Thus, the performance of the truss bracing system depends to a great extent on how well the first group of trusses is braced.

Ground Brace – Exterior

One satisfactory method ties the first unit of trusses off to a series of braces that are attached to a stake driven into the ground and securely anchored. The ground brace itself should be supported as shown below or it is apt to buckle. Additional ground braces in the opposite direction, inside the building, are also recommended.

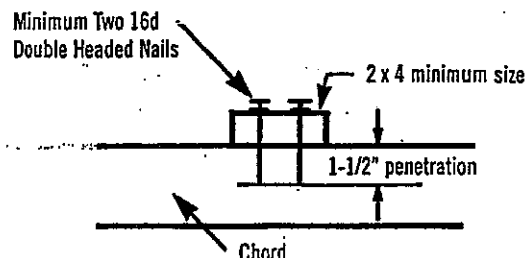
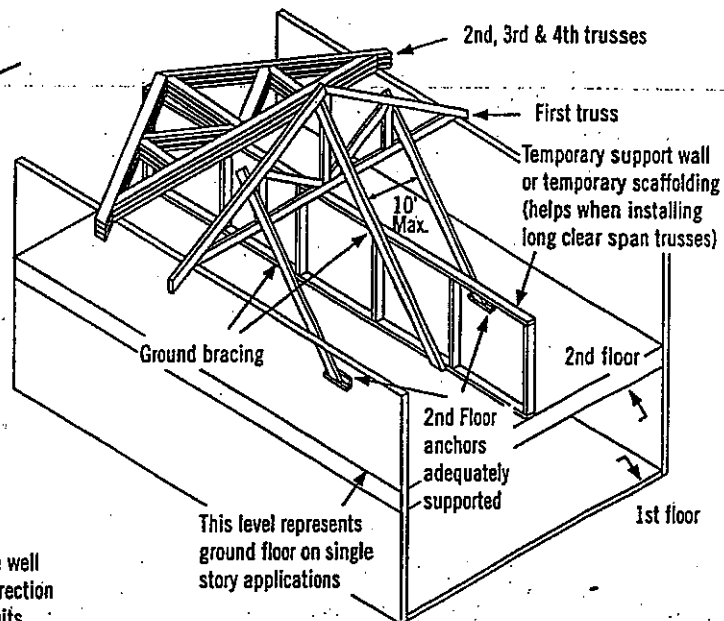


Note: Locate ground braces for first truss directly in line with all rows of top chord continuous lateral bracing (either temporary or permanent).



Ground Brace – Interior

Another satisfactory method where height of building or ground conditions prohibit bracing from the exterior is to tie the first truss rigidly in place from the interior at the floor level, provided the floor is substantially completed and capable of supporting the ground bracing forces. Securely fasten the first truss to the middle of the building. Brace the bracing similar to exterior ground bracing shown at left. Set trusses from the middle toward the end of the building. Properly cross-brace the first set of trusses before removing floor braces and setting remaining trusses.

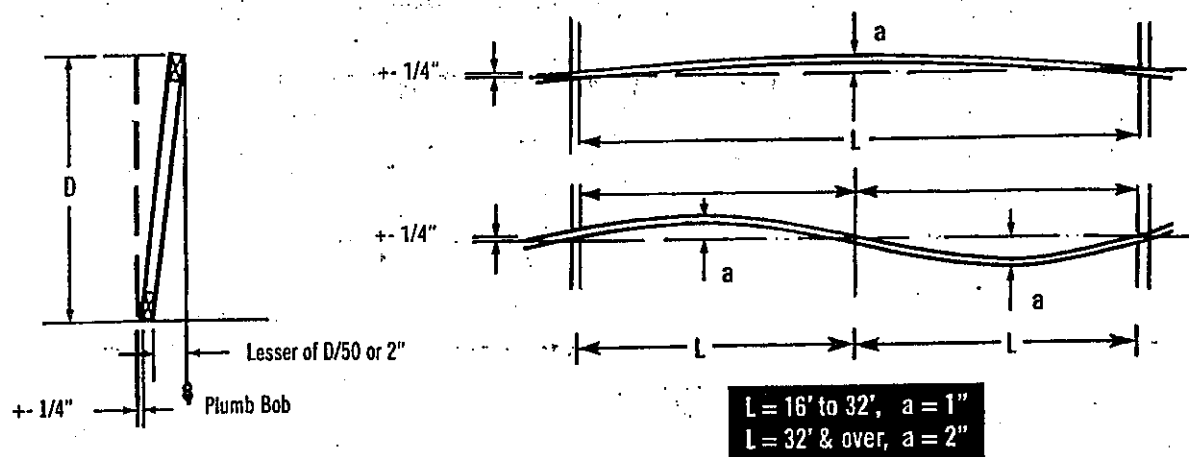


Inadequate size of bracing material or inadequate fastening is a major cause of erection dominoing.

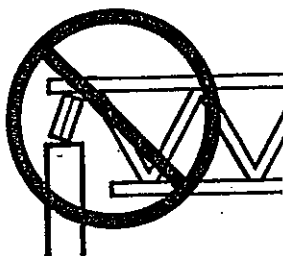
5 Erection Tolerance

Complying with erection tolerances is critical to achieving an acceptable roof or floor line, and to accomplishing effective bracing. Setting trusses within tolerance the first time will prevent the need for the hazardous practice of respacing or adjusting trusses when roof sheathing or roof purlins are installed. Trusses leaning or bowing can cause nails to miss the top chord when sheathing is applied, and create cumulative stresses on the bracing, which is a frequent cause of dominoing.

When sheathing, make sure nails are driven into the top chord of the trusses.



6 Bracing



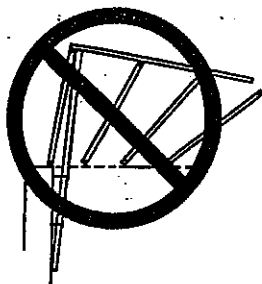
Do not install trusses on temporarily connected supports



Do not walk on unbraced trusses



Do not walk on trusses or gable ends lying flat

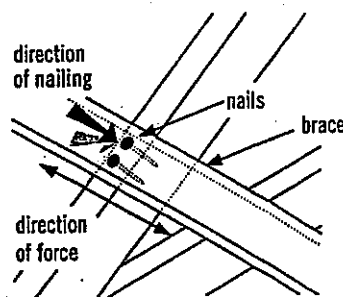


Nails in withdrawal (parallel to force)

All anchors, hangers, tie-downs, seats, bearing ledgers, etc., that are part of the supporting structure shall be accurately and properly placed and permanently attached before truss installation begins. No trusses shall ever be installed on anchors or ties that have temporary connections to the supporting structure.

Nailing scabs to the end of the building to brace the first truss is not recommended.

All nailing of bracing should be done so that nails are driven perpendicular to the direction of force, as shown at right.



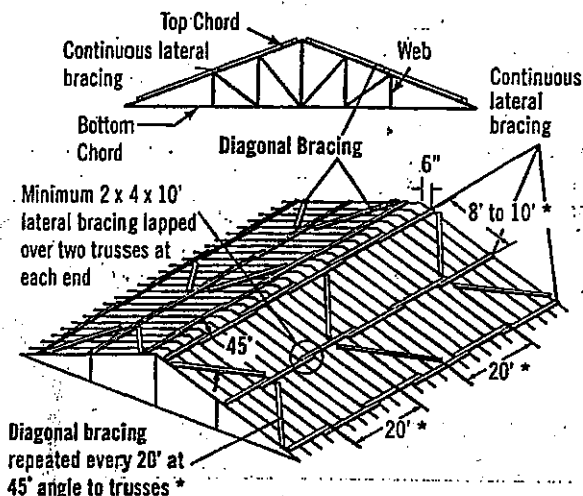
Well nailed (perpendicular to force)

7 Bracing Requirements for 3 Planes of Roof

Temporary erection bracing must be applied to three planes of the roof system to ensure stability: Plane 1) Top Chord (sheathing), Plane 2) Bottom Chord (ceiling plane), and Plane 3) Web Member plane or vertical plane perpendicular to trusses.

1) Top Chord Plane

Most important to the builder or erection contractor is bracing in the plane of the top chord. Truss top chords are susceptible to lateral buckling before they are braced or sheathed.



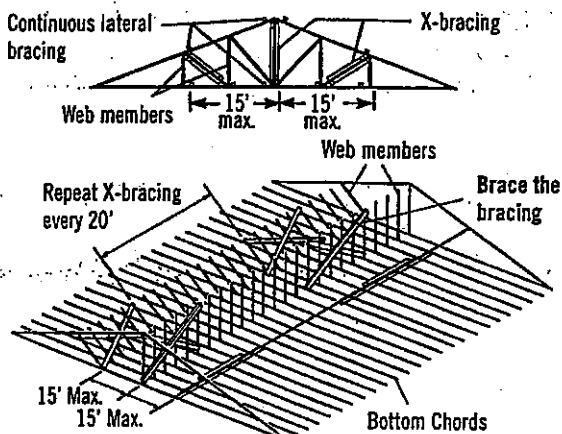
(NOT TO SCALE)

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.

3) Web Member Plane

"X" bracing, as shown, is critical in preventing trusses from leaning or dominoing. Repeat as shown to create a succession of rigid units.

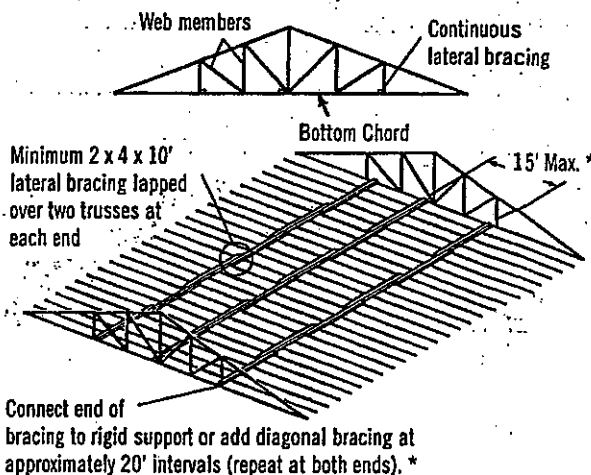
X-bracing should be installed on vertical web members wherever possible, at or near lateral bracing. Plywood or OSB may be substituted for X-bracing.



Note: Top chords and some web members are not shown, in order to make drawings more readable.

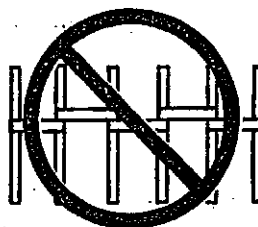
2) Bottom Chord Plane

In order to hold proper spacing on the bottom chord, temporary bracing is recommended on the top of the bottom chord.

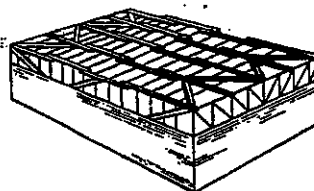


* Long spans, heavy loads or other spacing configurations may require closer spacing between lateral bracing and closer intervals between diagonals. Consult the building designer or HIB and DSB (*Recommended Design Specification for Temporary Bracing of Metal-Plate Connected Wood Trusses*) for details.

Diagonal or cross-bracing is very important!



Do not use short blocks to brace individual trusses without a specific bracing plan detailing their use



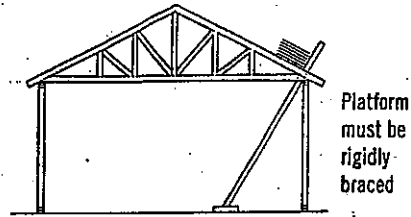
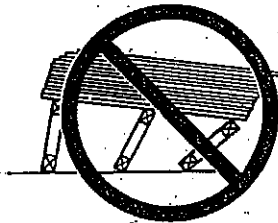
Bracing requirements using the same principles apply to parallel chord trusses

8

Stacking Materials

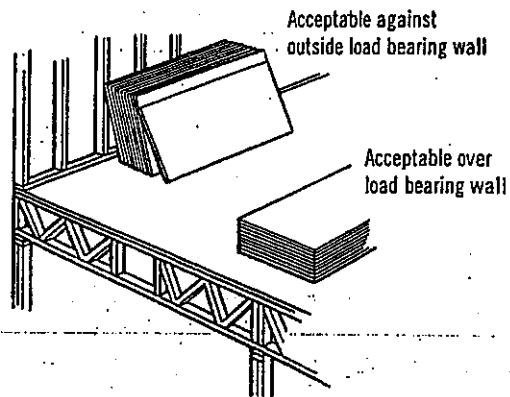
Do not proceed with building completion until all bracing is securely and properly in place

Never stack materials on unbraced or inadequately braced trusses

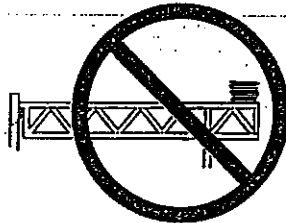


Proper distribution of construction materials is a must during construction.

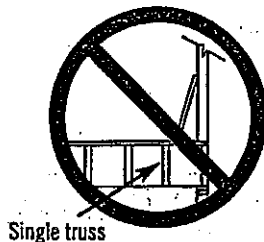
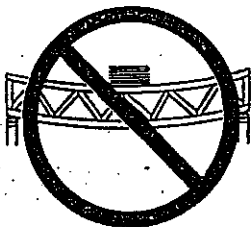
Never stack materials near a peak



Never stack materials on the cantilever of a truss

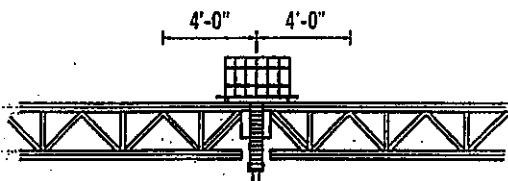


Always stack materials over two or more trusses.



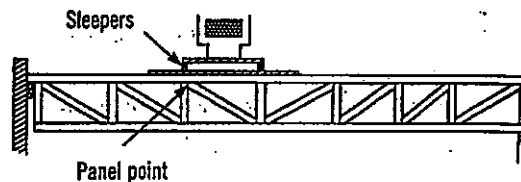
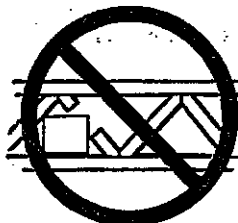
Single truss

Never overload small groups or single trusses. Position load over as many trusses as possible.



Roofing and mechanical contractors are cautioned to stack materials only along outside supporting members or directly over inside supporting members. Trusses are not designed for dynamic loads (i.e., moving vehicles). Extreme care should be taken when loading and stacking construction materials (rolled roofing, mechanical equipment, etc.) on the roof or floor system.

Never cut any structural member of a truss.



Sleepers for mechanical equipment should be located at panel points (joints) or over main supporting members, and only on trusses that have been designed for such loads.

Caution Notes

Errors in building lines and/or dimensions, or errors by others shall be corrected by the contractor or responsible construction trade subcontractor or supplier before erection of trusses begins.

Cutting of nonstructural overhangs is considered a part of normal erection and shall be done by the builder or erection contractor.

Any field modification that involves the cutting, drilling, or relocation of any structural truss member or connector plate shall not be done without the approval of the truss manufacturer or a licensed design professional.

The methods and procedures outlined are intended to ensure that the overall construction techniques employed will put floor and roof trusses safely in place in a completed structure. These recommendations for bracing wood trusses originate from the collective experience of leading technical personnel in the wood truss industry, but must, due to the nature of responsibilities involved, be presented only as a guide for use by a qualified building designer, builder, or erection contractor. Thus, the Wood Truss Council of America expressly disclaims any responsibility for damages arising from the use, application, or reliance on the recommendations and information contained herein.

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THE CANADIAN WOOD TRUSS ASSOCIATION



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