

CITY OF BRAMPTON
BUILDING DIVISION
REVIEWED
DEC 11 2018
BY
MARK DERKSEN

TR - GREENPARK - MINNISALE HOMES - MILLWOOD 2 ELE 2

Page 2 of 24
TW0918-068



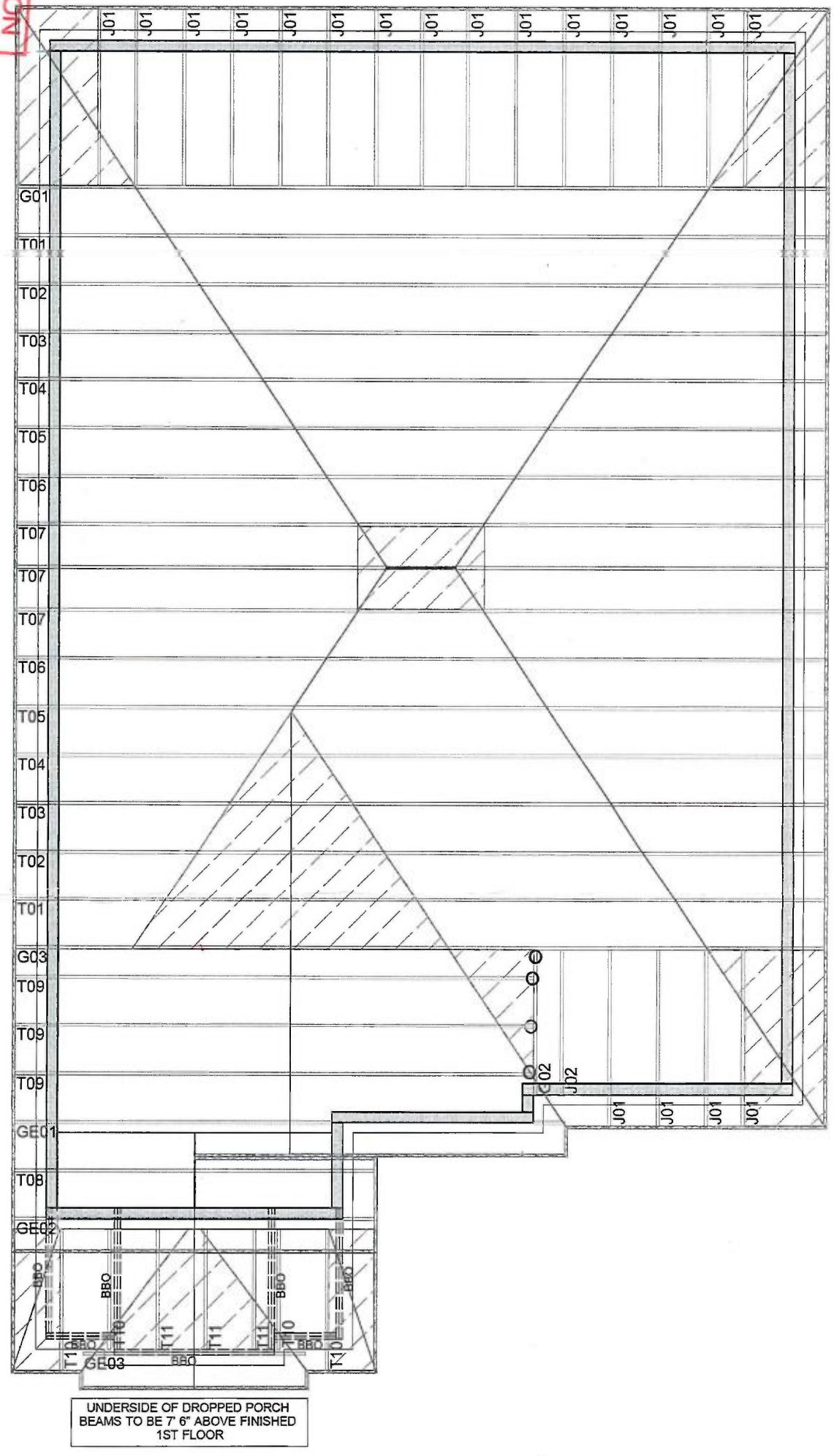
Layout based on plans provided by
JARDIN DESIGN GROUP INC
Dated April 26/18

This certification is for the engineering review of structural components shown on this drawing and is limited to the components supplied by KOTT for the loads and conditions shown on the calculation page of each component. The placement of these components on this layout is shown for reference only. Roof trusses must be installed according to manufacturer's guidelines at 24" C/C unless noted otherwise. Conventional framing shown on the layout must be designed and approved by the project engineer. Temporary and permanent bracing is to conform to BCSI guidelines.

For conventional framing roof/ceilings
framing shall conform to OBC.9.2.3



September 14, 2018



All work shall conform to the Ontario
Building Code O. Reg. 332/12 as amended

ROOF TRUSS LAYOUT

Lot 22

 CONVENTIONAL FRAMING BY OTHERS	HANGER LEGEND X - LUS24 # - HGUS26 O - LJS26DS % - HGUS26-2		DESIGN CRITERIA SPECIFIED LOADS: TOP CH. LL = 31.3 psf DL = 3.0 psf BOT CH. LL = 0.0 psf DL = 7.0 psf TOTAL LOAD = 41.3 psf SPACING @ 24" CENTERS, THIS TRUSS SYSTEM IS DESIGN FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010 THIS DESIGN COMPLIES WITH PART 9 OF OBC 2012, BCBC 2012, ABC 2012, CSA 086-09, TPIC 2011 ALLOWABLE DEFLECTION OF EACH COMPONENT = L/360	Model: MILLWOOD 2 EL 2
			Customer: GREENPARK	
			Project: MINNISALE HOMES	
			Location: BRAMPTON	
			Drawn By: DM	
			Date: 6/22/2018	

SIZE AND LOCATION OF CONVENTIONAL FRAMING IS APPROXIMATE. ALL AREAS MAY NOT BE SHOWN. REFER TO ARCHITECTURAL PLANS FOR DETAILS.

ALL CONVENTIONAL FRAMING TO CONFORM WITH PART 9 OF THE O.B.C RAFTER THAT CROSS MEET OVER TRUSSES TO BE 2X4 SPF @ 24" O/C WITH 2X4 VERT POST TO THE TRUSS BELOW EA CROSS PT. VERT POS . THAN 6' TO HAVE A LATERAL BRACING SO THAT THE DISTANCE BETEN PT & VERT ROWS OF BRACING DOES NOT EXCEED 6'

18-331276-000-001R-ROOF

LOT 22
ENGINEERING NOTE PAGE (ENP-1)**PLEASE READ PRIOR TO INSTALLATION****RESPONSIBILITIES**

THIS DESIGN IS FOR AN INDIVIDUAL BUILDING COMPONENT AND HAS BEEN BASED ON INFORMATION PROVIDED BY THE DESIGN OFFICE OF KOTT LUMBER. THE UNDERSIGNED ENGINEER DISCLAIMS ANY RESPONSIBILITY FOR DAMAGES AS A RESULT OF FAULTY OR INCORRECT INFORMATION, SPECIFICATION AND/OR DESIGNS FURNISHED TO THE ENGINEER. THE UNDERSIGNED ENGINEER IS ONLY RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THIS BUILDING COMPONENT FOR THE CONDITIONS AND LOADS SHOWN ON THIS DRAWING. THE STRUCTURAL INTEGRITY OF THE BUILDING AND THE VERIFICATION OF THE DIMENSIONS AND THE DESIGN LOADS USED ARE THE RESPONSIBILITY OF THE BUILDING DESIGNER.

TRUSSES ARE DESIGNED IN CONFORMANCE WITH THE RELEVANT SECTIONS OF THE NATIONAL BUILDING CODE OF CANADA OR THE CANADIAN CODE FOR FARM BUILDINGS, WHICHEVER APPLIES TO THE BUILDING TYPE INDICATED ON THE DRAWING

IT IS THE RESPONSIBILITY OF KOTT LUMBER TO ENSURE THAT TRUSSES ARE MANUFACTURED IN CONFORMANCE WITH THESE DESIGNS AND WITH THE SPECIFICATIONS OUTLINED BELOW. THE UNDERSIGNED ENGINEER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT.

USE AND OCCUPANCY

- The building is of the type indicated on the drawing

LOADING

- The truss loading intensity and distribution as well as load transfer mechanism is that indicated on the drawing
- No buildings, trees, parapets or other projections higher than the roof for which the trusses are used are located within a distance less than ten (10) times the difference in height, or five metres (16 ft) whichever is greater, unless the drawing indicates that the snow drifting has been taken into account

HANDLING, INSTALLATION AND BRACING

- The trusses must be handled and installed by a qualified professional as per the supplied document titled *Information for Truss Installers* and the BCSI-B1 and BCSI-B3 Summary Sheets
- The compression chords are laterally braced by continuous rigid diaphragm sheathing or as specified on the drawing
- Temporary and permanent bracing must be installed as indicated on the truss drawing and according to the BCSI-B1 and BCSI-B3 Summary Sheets. Bracing for the lateral stability of the truss is to be provided by the building designer
- **It is recommended that a Professional Engineer's advice be obtained for the bracing of trusses spanning more than 12.37m (40'-7")**

SUPPORTS

- The trusses are to be supported at the bearing points indicated and anchored to the supports where considered necessary by the designer of the overall structure
- Bearing sizes shown are the minimum required to prevent crushing of the truss members and do not necessarily take into account stability of the overall building structure
- Elevation of bearings must be carefully checked and shimmed to alignment for solid bearings
- Adequate wood truss bearing is the responsibility of the building designer.

DIMENSIONS

- Geometry of the truss and dimensions indicated on the drawing are identical to those of the installed truss.

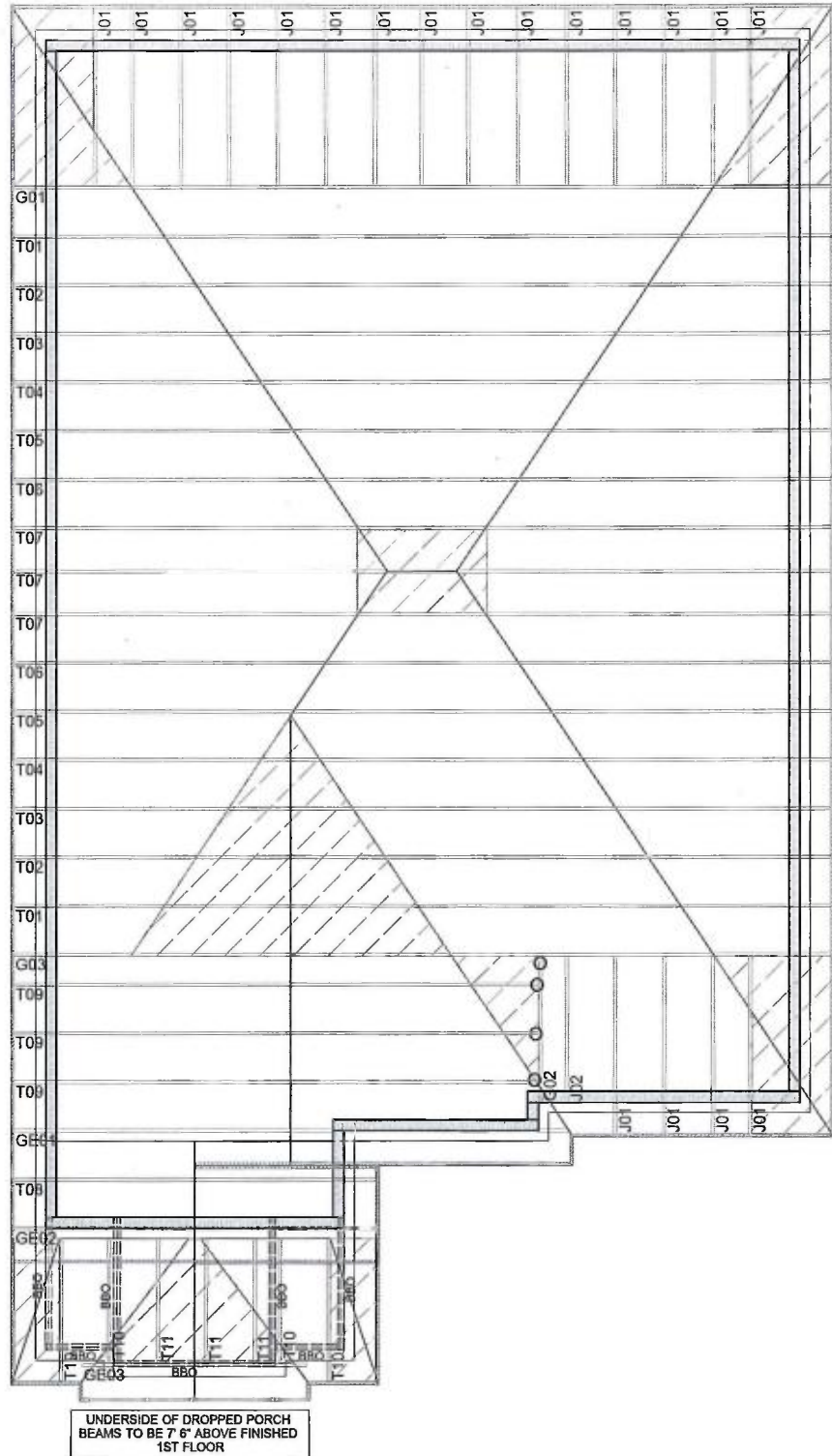


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September 14, 2018



ROOF TRUSS LAYOUT



CONVENTIONAL FRAMING BY OTHERS

SIZE AND LOCATION OF CONVENTIONAL FRAMING IS APPROXIMATE. ALL AREAS MAY NOT BE SHOWN. REFER TO ARCHITECTURAL PLANS FOR DETAILS.

ALL CONVENTIONAL FRAMING TO CONFORM WITH PART 9 OF THE O.B.C RAFTER THAT CROSS MEET OVER TRUSSES TO BE 2X4 SPF @ 24" O/C WITH 2X4 VERT POST TO THE TRUSS BELOW EA CROSS PT. VERT POS. THAN 6" TO HAVE A LATERAL BRACING SO THAT THE DISTANCE BETEN PT & VERT ROWS OF BRACING DOES NOT EXCEED 6'

HANGER LEGEND

X - LUS24
- HGUS26

O - LJS26DS
% - HGUS26-2

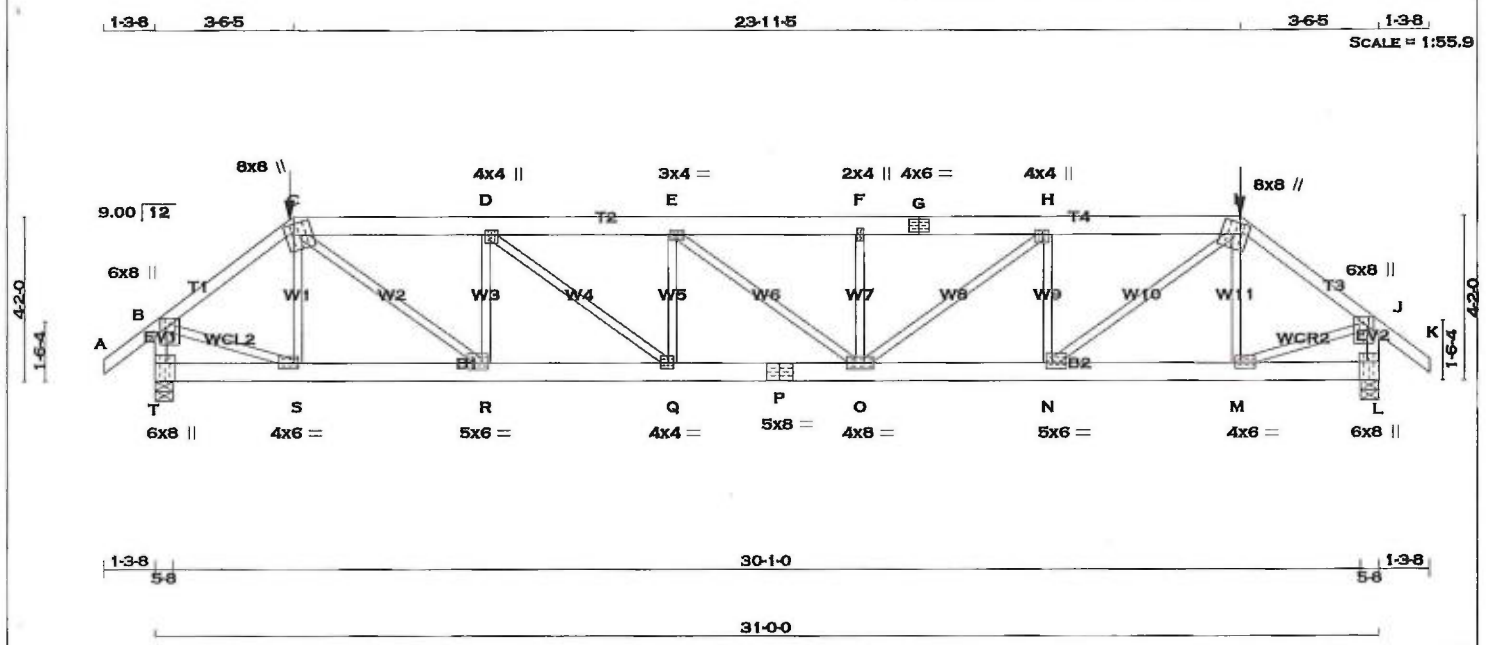
DESIGN CRITERIA
SPECIFIED LOADS:
TOP CH LL = 31.3 psf
DL = 3.8 psf
BOT CH LL = 0.0 psf
DL = 7.0 psf
TOTAL LOAD = 41.3 psf

SPACING @ 24" CENTERS,
THIS TRUSS SYSTEM IS DESIGN FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF
PART 9, NBC 2010

THIS DESIGN COMPLIES WITH PART 9 OF OBC 2012,
BCSC 2012, ABC 2012, CSA 085-09, TPIC 2011

ALLOWABLE DEFLECTION OF EACH COMPONENT = L/360

Model:	MILLWOOD 2 EL 2
Customer:	GREENPARK
Project:	MINNISALE HOMES
Location:	BRAMPTON
Drawn By:	DM
Date:	6/22/2018



LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY No.2	SPF
C - G	2x6	DRY No.2	SPF
G - I	2x6	DRY No.2	SPF
I - K	2x4	DRY No.2	SPF
T - B	2x4	DRY No.2	SPF
L - J	2x4	DRY No.2	SPF
T - P	2x6	DRY No.2	SPF
P - L	2x6	DRY No.2	SPF
ALL WEBS	2x3	DRY No.2	SPF

EXCEPT

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT TYPE	PLATES	W	LEN	Y	X	
B	TMVW+p	MT20	6.0	8.0	2.75	2.00
C	CTWW+m	MT20	8.0	8.0	4.00	3.25
D	TMWW+t	MT20	4.0	4.0	1.50	1.50
E	TMWW-t	MT20	3.0	4.0		
F	TMW+w	MT20	2.0	4.0		
G	TS-t	MT20	4.0	6.0		
H	TMWW+t	MT20	4.0	4.0	1.50	1.50
I	CTWW+m	MT20	8.0	8.0	4.00	3.25
J	TMVW+p	MT20	6.0	8.0	2.75	2.00
L	BMV1+t	MT20	6.0	8.0	Edge	2.50
M	BMWW-t	MT20	4.0	6.0	1.75	1.50
N	BMWW-t	MT20	5.0	6.0	2.00	1.75
O	BMWWW-t	MT20	4.0	8.0		
P	BS-t	MT20	5.0	8.0		
Q	BMWW-t	MT20	4.0	4.0	1.75	1.50
R	BMWW-t	MT20	5.0	6.0	2.00	1.75
S	BMWW-t	MT20	4.0	6.0	1.75	1.50
T	BMV1+t	MT20	6.0	8.0	5.50	

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

A SIZE FOR SIZE SUBSTITUTION OF MITEK MI20 WITH TEE-LOK TL20 PLATES IS ALLOWED.

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 2842	DOWN 2842	0	5-8
T	0	0	0	5-8
L	0	0	0	5-8

UNFACTORED REACTIONS

1ST LCASE	MAX/MIN COMPONENT REACTIONS
JT COMBINED	SNOW LIVE PERM.LIVE WIND DEAD SOIL
T 1993	1403 / 0 0 / 0 0 / 0 0 / 0 590 / 0 0 / 0
L 1993	1403 / 0 0 / 0 0 / 0 0 / 0 590 / 0 0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.31 FT.

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED CSI (LC)	
FR-TO		FROM TO		FR-TO			
A-B	0 / 32	-77.4 -77.4	0.12 (1)	10.00	S-C	-569 / 0	0.14 (1)
B-C	-3039 / 0	-77.4 -77.4	0.34 (1)	3.69	C-R	0 / 2892	0.72 (1)
C-D	-4716 / 0	-145.9 -145.9	0.39 (1)	3.67	R-D	-1625 / 0	0.40 (1)
D-E	-5783 / 0	-145.9 -145.9	0.43 (1)	3.31	D-Q	0 / 1354	0.34 (1)
E-F	-5774 / 0	-145.9 -145.9	0.41 (1)	3.34	Q-E	-674 / 0	0.16 (1)
F-G	-5774 / 0	-145.9 -145.9	0.43 (1)	3.31	E-O	-12 / 0	0.01 (1)
G-H	-5774 / 0	-145.9 -145.9	0.43 (1)	3.31	O-F	-669 / 0	0.16 (1)
H-I	-4718 / 0	-145.9 -145.9	0.39 (1)	3.67	O-H	0 / 1340	0.33 (1)
I-J	-3039 / 0	-77.4 -77.4	0.34 (1)	3.69	N-I	-1621 / 0	0.40 (1)
J-K	0 / 32	-77.4 -77.4	0.12 (1)	10.00	N-I	0 / 2895	0.72 (1)
T-B	-2801 / 0	0.0 0.0	0.32 (1)	5.08	M-I	-571 / 0	0.14 (1)
L-J	-2801 / 0	0.0 0.0	0.32 (1)	5.08	B-S	0 / 2550	0.63 (1)
					M-J	0 / 2550	0.63 (1)
T-S	0 / 0	-33.0 -33.0	0.07 (4)	10.00			
S-R	0 / 2423	-33.0 -33.0	0.37 (1)	10.00			
R-Q	0 / 4716	-33.0 -33.0	0.69 (1)	10.00			
Q-P	0 / 5783	-33.0 -33.0	0.84 (1)	10.00			
P-O	0 / 5783	-33.0 -33.0	0.84 (1)	10.00			
O-N	0 / 4718	-33.0 -33.0	0.70 (1)	10.00			
N-M	0 / 2423	-33.0 -33.0	0.37 (1)	10.00			
M-L	0 / 0	-33.0 -33.0	0.07 (4)	10.00			

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE
C	3-6-5	-205	-205	---	FRONT	VERT	TOTAL
I	27-5-11	-205	-205	---	FRONT	VERT	TOTAL

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH. LL = 23.3 PSF

DL = 3.0 PSF

BOT CH. LL = 0.0 PSF

DL = 7.0 PSF

TOTAL LOAD = 33.3 PSF

SPACING = 24.0 IN. C/C

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

GIRDER TYPE: CPrimeHip

SIDE SETBACK = 3-6-5

END SETBACK = 6-0-0

END WALL WIDTH = 5-8

CORNER FRAMING TYPE: CONVENTIONAL

END JACK TYPE: CONVENTIONAL

APPLIED TO FRONT SIDE

- ADDTL LOADS BASED ON 55 % OF GSL

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:

- PART 9 OF OBC 2012, BCBC 2012, ABC 2014

- CSA 086-09

- TPIC 2011

(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 (1.03")

CALCULATED VERT. DEFL.(LL) = L/999 (0.25")

ALLOWABLE DEFL.(TL)= L/360 (1.03")

CALCULATED VERT. DEFL.(TL) = L/842 (0.44")

CSI: TC=0.43/1.00 (F-H:1), BC=0.84/1.00 (O-Q:1), WB=0.72/1.00 (I-N:1), SSI=0.27/1.00 (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 = 0.50

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 618 354 1667 822 2284 1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

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

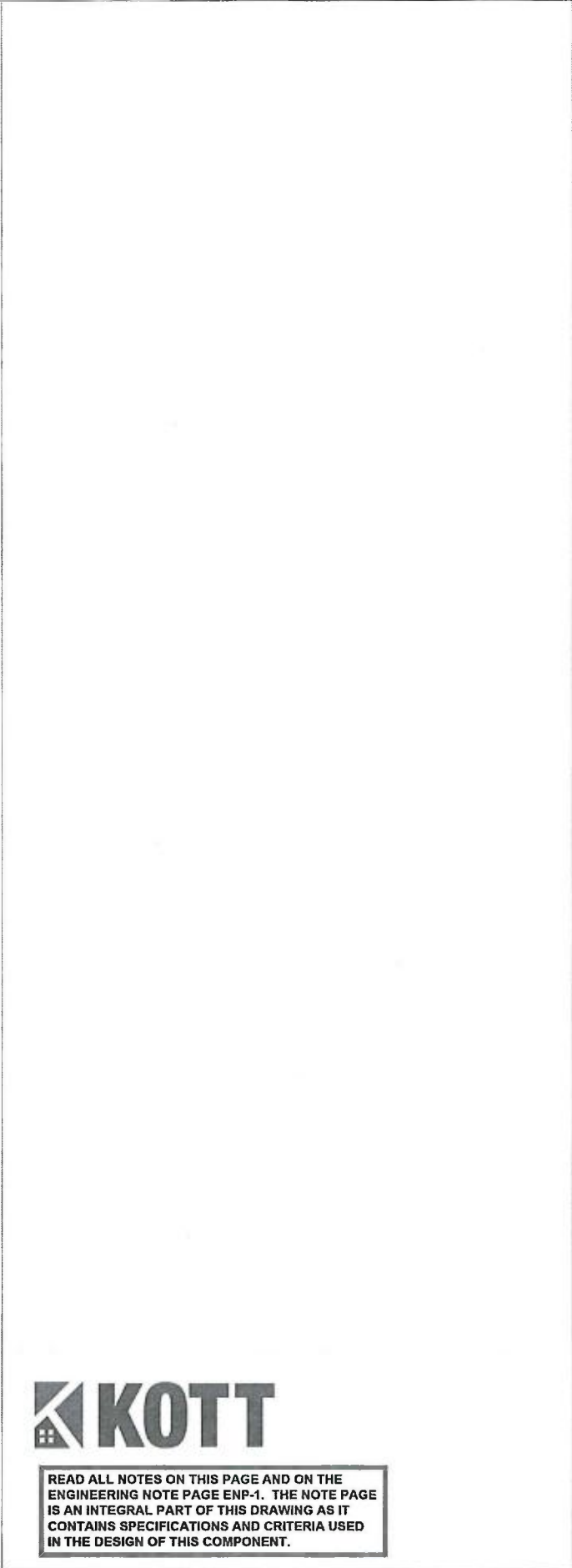
JSI METAL= 0.95 (P) (INPUT = 1.00)



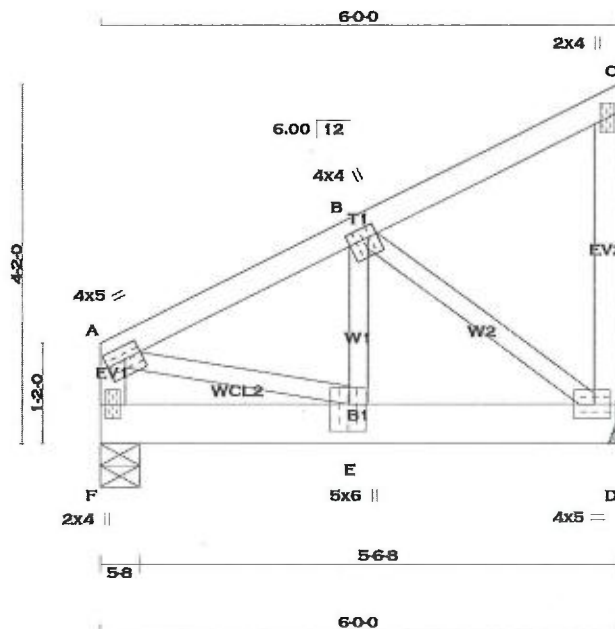
September 14, 2018

HANGERS NOTES

1) SPECIAL HANGER(S) OR CONNECTION(S) REQUIRED TO SUPPORT CONCENTRATED LOAD(S) 204.6 lbs FACTORED DOWN AT 27-5-11, AND 204.6 lbs FACTORED DOWN AT 3-6-5 ON TOP CHORD. DESIGN FOR UNSPECIFIED CONNECTION(S) IS DELEGATED TO THE BUILDING DESIGNER.



READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-1. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.



SCALE = 1:25.5

TOTAL WEIGHT = 29 lb

LUMBER					DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER					DESIGN CRITERIA				
N. L. G. A. RULES	CHORDS	SIZE	LUMBER	DESCR.	BEARINGS					SPECIFIED LOADS:				
A - C	2x4	DRY	No.2	SPF	FACTORED	MAXIMUM FACTORED	INPUT	REQRD		TOP CH.	LL =	23.3	PSF	
D - C	2x4	DRY	No.2	SPF	GROSS REACTION	GROSS REACTION	BRG	BRG		BOT CH.	LL =	0.0	PSF	
F - A	2x4	DRY	No.2	SPF	JT VERT	DOWN	HORZ	UPLIFT	IN-SX		DL =	7.0	PSF	
F - D	2x6	DRY	No.2	SPF	D 1550	0	1550	0	0	MECHANICAL	TOTAL LOAD =	33.3	PSF	
					F 1550	0	1550	0	0	5-8	2-10			
ALL WEBS 2x3 DRY No.2 SPF					A SUITABLE MECHANICAL CONNECTION IS REQUIRED AT JOINT D TO RESIST THE MAX FACTORED REACTIONS.					SPACING = 24.0 IN. C/C				
EXCEPT										GIRDER TYPE: CSldGirder				
DRY: SEASONED LUMBER.										START DISTANCE = 0-0				
										START SPAN CARRIED = 20-3-0				
										END DISTANCE = 6-0-0				
										END SPAN CARRIED = 20-3-0				
										END WALL WIDTH = 5-8				
										APPLIED TO FRONT SIDE OF BOTTOM CHORD.				
										- ADD'L LOADS BASED ON 55 % OF GSL.				
										THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010				
										THIS DESIGN COMPLIES WITH:				
										- PART 9 OF OBC 2012, CBC 2012, ABC 2014				
										- CSA 086-09				
										- TPIC 2011				
										(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 (0.20")				
										CALCULATED VERT. DEFL.(LL) = L/999 (0.02")				
										ALLOWABLE DEFL.(TL)= L/360 (0.20")				
										CALCULATED VERT. DEFL.(TL) = L/999 (0.03")				
										CSI: TC=0.12/1.00 (A-B:1), BC=0.41/1.00 (D-E:1)				
										, WB=0.36/1.00 (B-D:1), SSI=0.51/1.00 (E-F:1)				
										DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00				
										COMP=1.00 SHEAR=1.00 TENS= 1.00				
										COMPANION LIVE LOAD FACTOR = 0.50				
										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 618 354 1667 822 2284 1656				
										PLATE PLACEMENT TOL. = 0.250 inches				
										PLATE ROTATION TOL. = 5.0 Deg.				
										JSI GRIP= 0.89 (B) (INPUT = 0.90)				
										JSI METAL= 0.41 (B) (INPUT = 1.00)				



September 14, 2018



READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-1. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.



BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) T, L	SPACING =	24.0	N. C/C
BRACING			

B	TMVW+p	MT20	6.0	6.0	2.25	2.75	ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.	GIRDER TYPE: CPrimeHip
C	TTWW+m	MT20	8.0	8.0	4.00	3.75		SIDE SETBACK = 3-6-5
D	TMVW+t	MT20	4.0	5.0	1.50	2.00		END SETBACK = 6-0-0

[illegible]

M	BMWW-t	MT20	4.0	8.0	2.00	2.75	FR-TO	FROM	TO	LENGTH	FR-TO			
N	BMWW-t	MT20	6.0	6.0	2.00	1.50	A-B	0/32	-77.4	-77.4	0.12 (1)	10.00	S-C	-486 / 0 0.12 (1)
O	BMWW-t	MT20	4.0	8.0			B-C	-2369 / 0	-77.4	-77.4	0.28 (1)	4.17	C-R	0 / 2655 0.66 (1)

*** NON STANDARD GIRDER ***
ADDTL USER-DEFINED LOADS APPLIED TO

S	BMW1+L	MT20	3.0	4.0	2.00	2.00	E-F	-6397 / 0	-77.4	-77.4	0.43 (1)	3.17	E-O	0 / 1275	0.32 (1)	OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010
K	BMW1+L	MT20	4.0	6.0	2.00	2.00	G-U	-6397 / 0	-77.4	-77.4	0.43 (1)	3.17	O-F	-333 / 0	0.08 (1)	
T	BMW1+p	MT20	3.0	4.0			U-U	-6397 / 0	-77.4	-77.4	0.43 (1)	3.17	O-F	-333 / 0	0.08 (1)	

	J-K	0/32	-77.4	-77.4	0.12 (1)	10.00	M-I	-841 / 0	0.21 (1)	- CSA 086-09
	T-B	-2237 / 0	0.0	0.0	0.16 (1)	6.80	B-S	0 / 1988	0.49 (1)	- TPIC 2011
	L-L	2178 / 0	0.0	0.0	0.23 (1)	5.80	M-L	0 / 2926	0.72 (1)	

	S-R	0/1888	-17.5	-17.5	0.28 (1)	10.00	ROOF LIVE LOAD
	R-Q	0/3992	-17.5	-17.5	0.62 (1)	10.00	
	Q-P	0/5393	-17.5	-17.5	0.80 (1)	10.00	ALLOWABLE DEFL.(LL)= 1/360 (1.03")

V-W	0/5758	-17.5	-17.5	0.88 (1)	10.00	CALCULATED VERT. DEFL.(TL) = 1.756 (0.49)
W-N	0/5758	-33.0	-33.0	0.88 (1)	10.00	
N-M	0/2775	-33.0	-33.0	0.34 (1)	10.00	

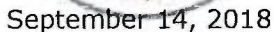
CSI: TC=0.49/1.00 (H-I:1), BC=0.88/1.00 (N-O:1),

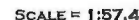
FACTORY CONCENTRATED LOADS (LBS)	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE
1	27-5-11	-205	-205	--	FRONT	VERT	TOTAL

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN

September 14, 2018		
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Continued on next page





[M]F

GABLE STUDS SPACED AT 2-0-0 OC.

J	BSW+I	MT20	3.0	6.0		
K	BMWVW+I	MT20	3.0	6.0		
L	BMWVW+I	MT20	3.0	5.0		
M	BMV1+p	MT20	2.0	4.0		
N ₁ , Q, Z, AB						
N	NP+w	MT20	2.0	4.0	1.50	1.00
N ₁ , O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AB, AC, AD, AE, AF						
N	NP+w	MT20	2.0	4.0		

WB - INDICATES BLOCKING REQUIRED

A SUITABLE MECHANICAL CONNECTION IS REQUIRED AT JOINT H TO RESIST THE MAX FACTORED REACTIONS.

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

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.04 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY
APPLIED

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

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MAX. FACTORED		FACTORED		MAX. FACTORED			
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRAC	MEMB.	FORCE (LBS)	MAX CSI (LC)
FR-TO		FROM TO		LENGTH	FR-TO		
A-B	0 / 32	-77.4	-77.4 0.11 (1)	10.00	K-D	0 / 548	0.12 (1)
B-C	-953 / 0	-77.4	-77.4 0.27 (1)	6.04	K-E	-325 / 0	0.31 (1)
C-D	-725 / 0	-77.4	-77.4 0.26 (1)	6.25	I-E	-83 / 60	0.04 (1)
D-E	-725 / 0	-77.4	-77.4 0.26 (1)	6.25	C-K	-325 / 0	0.31 (1)
E-F	-953 / 0	-77.4	-77.4 0.27 (1)	6.04	L-C	-83 / 60	0.04 (1)
F-G	0 / 32	-77.4	-77.4 0.11 (1)	10.00	B-L	0 / 805	0.18 (1)
M-B	-1030 / 0	0.0	0.0 0.11 (1)	7.74	I-F	0 / 805	0.18 (1)
H-F	-1030 / 0	0.0	0.0 0.11 (1)	7.74			
M-L	0 / 0	-17.5	-17.5 0.11 (4)	10.00			
L-K	0 / 784	-17.5	-17.5 0.18 (1)	10.00			
K-J	0 / 784	-17.5	-17.5 0.18 (1)	10.00			
J-I	0 / 784	-17.5	-17.5 0.18 (1)	10.00			
I-H	0 / 0	-17.5	-17.5 0.11 (4)	10.00			

SPECIFIED LOADS:

TOP CH.	LL =	23.3	PSF
	DL =	3.0	PSF
BOT CH.	LL =	0.0	PSF
	DL =	7.0	PSF
TOTAL LOAD =		33.3	PSF

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF
PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 9 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

(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 (0.68")
CALCULATED VERT. DEFL.(LL) = L/999 (0.02")
ALLOWABLE DEFL.(TL)= L/360 (0.68")
CALCULATED VERT. DEFL.(TL) = L/999 (0.05")

CSI: TC=0.27/1.00 (B-C:1), BC=0.18/1.00 (K-L:1),
WB=0.31/1.00 (C-K:1), SSI=0.15/1.00 (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 = 0.50

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

PLATE	GRIP(DRY)		SHEAR		SECTION	
	(PSI)	(PLI)	(PLI)	(PLI)	(PLI)	(PLI)
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	618	354	1667	822	2284	1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

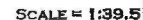
JSI GRIP= 0.88 (K) (INPUT = 0.90)
JSI METAL= 0.34 (F) (INPUT = 1.00)



September 14, 2018



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

ALL GABLE WEBS
2x3 DRY No.2 SPF
DRY- SEASONED LUMBER.

GABLE STUDS SPACED AT 2'-0" OC.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-I	MT2D	3.0	6.0	1.50	2.75
C	TTW+p	MT2D	3.0	4.0	2.25	1.50
D	TMVW-I	MT2D	3.0	6.0	1.50	2.75
F	BMV1+p	MT2D	2.0	4.0	Edge	
G	BBWWW-p	MT2D	5.0	6.0	2.75	3.00
H	BMV1+p	MT2D	2.0	4.0	Edge	
I, J, K, L, M, N, O, P						
I	NP+w	MT2D	2.0	4.0		

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

A SIZE FOR SIZE SUBSTITUTION OF MITEK MII20 WITH TEE-LOK TL20 PLATES IS ALLOWED.

BUILDING BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION			INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
H	692	0	692	0	0	5-8	1-8
F	692	0	692	0	0	5-8	1-8

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
H	483	351/0	0/0	0/0	0/0	132/0	0/0
F	483	351/0	0/0	0/0	0/0	132/0	0/0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.93 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY
APPLIED.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX. CSI (LC)	MAX. UNBRAC LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)
FR-TO		FROM TO			FR-TO		
A-B	0/32	-77.4	-77.4	0.11 (1)	10.00	G-C	0/621 0.14 (1)
B-C	-915/0	-77.4	-77.4	0.40 (1)	5.93	B-G	0/775 0.17 (1)
C-D	-915/0	-77.4	-77.4	0.40 (1)	5.93	G-D	0/775 0.17 (1)
D-E	0/32	-77.4	-77.4	0.11 (1)	10.00		
H-B	-638/0	0.0	0.0	0.07 (1)	7.81		
F-D	-638/0	0.0	0.0	0.07 (1)	7.81		
H-G	0/0	-17.5	-17.5	0.20 (4)	10.00		
G-F	0/0	-17.5	-17.5	0.20 (4)	10.00		

DESIGN CRITERIA

SPECIFIED LOADS:

TOP	CH.	LL =	23.3	PSF
		DL =	3.0	PSF
BOT	CH.	LL =	0.0	PSF
		DL =	7.0	PSF
TOTAL LOAD		=	33.3	PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF
PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 9 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIQ 2011

(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 (0.41")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.04")
ALLOWABLE DEFL.(TL)= L/360 (0.41")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.11")

CSI: TC=0.40/1.00 (C-D:1), BC=0.20/1.00 (F-G:4)
W/R=0.17/1.00 (B-C:1), SS=0.15/1.00 (C-D:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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	618	354	1667	822	2284 1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

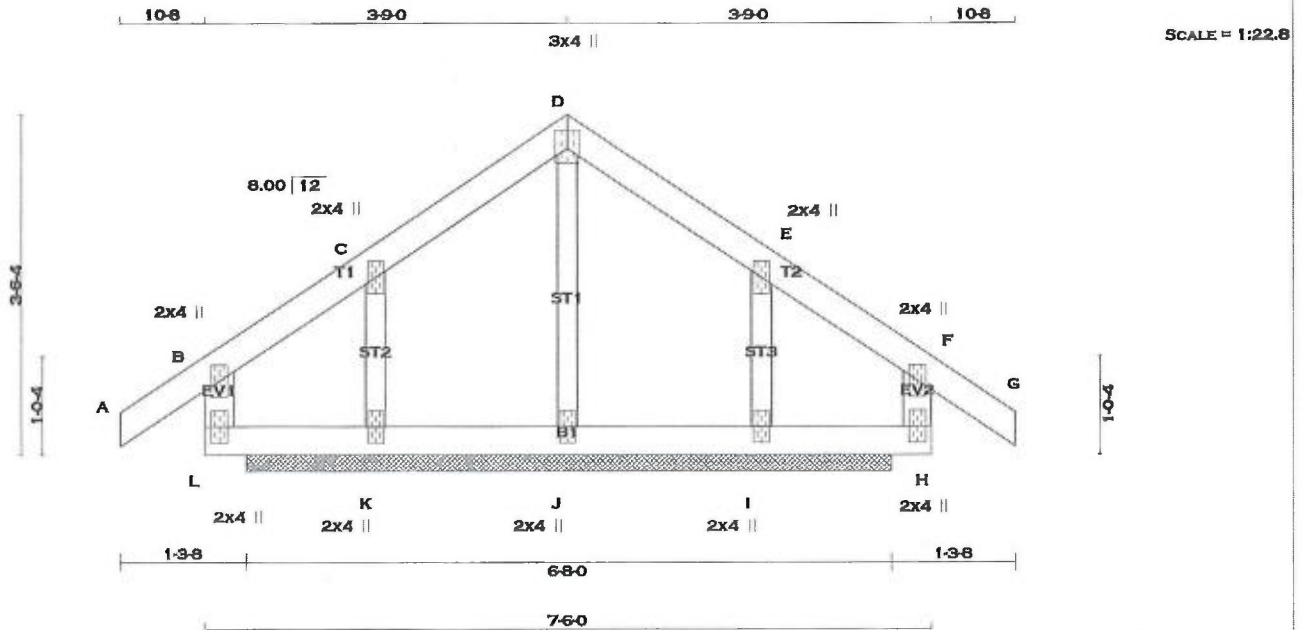
JSI GRIP= 0.89 (C) (INPUT = 0.90)
JSI METAL= 0.28 (D) (INPUT = 1.00)



September 14, 2018



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LUMBER

N. L. G. A. RULES

CHORDS

SIZE

LUMBER

DESCR.

SPF

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.

LOADING

TOTAL LOAD CASES: (4)

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH. LL = 23.3 PSF

DL = 3.0 PSF

BOT CH. LL = 0.0 PSF

DL = 7.0 PSF

TOTAL LOAD = 33.3 PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:

- PART 9 OF OBC 2012, BCBC 2012, ABC 2014

- CSA 086-09

- TPIC 2011

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

CSI: TC=0.09/1.00 (B-C:1), BC=0.05/1.00 (H-I:1), WB=0.06/1.00 (D-J:1), SI=0.09/1.00 (B-L: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 = 0.50

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 618 354 1667 822 2284 1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.20 (D) (INPUT = 0.90)

JSI METAL= 0.07 (L) (INPUT = 1.00)

ALL WEBS

2x3

DRY

No.2

SPF

ALL GABLE WEBS

2x3

DRY

No.2

SPF

DRY: SEASONED LUMBER.

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

PLATES (table is in inches)

JT

TYPE

PLATES

W

LEN

Y

X

B

TMV+p

MT20

2.0

4.0

C

TMW+w

MT20

2.0

4.0

D

TTW+p

MT20

3.0

4.0

2.25

1.50

E

TMW+w

MT20

2.0

4.0

F

TMV+p

MT20

2.0

4.0

H

BMV+p

MT20

2.0

4.0

I, J, K

I

BMW1+w

MT20

2.0

4.0

L

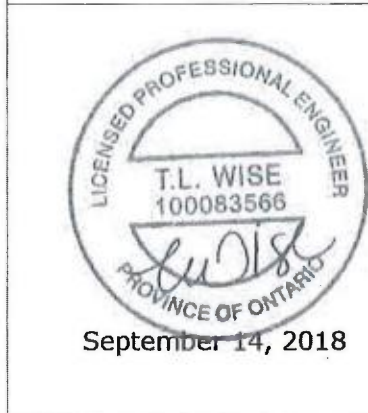
BMV+p

MT20

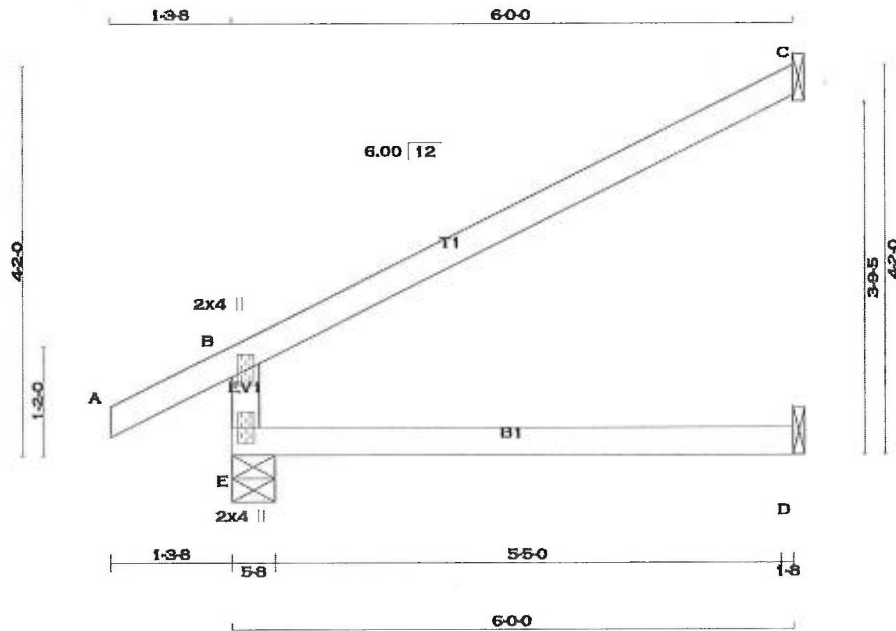
2.0

4.0

A SIZE FOR SIZE SUBSTITUTION OF MITEK MII20 WITH TEE-LOK TL20 PLATES IS ALLOWED.



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TOTAL WEIGHT = 20 X 17 = 342 lb

LUMBER

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

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

A SIZE FOR SIZE SUBSTITUTION OF MITEK MII20 WITH TEE-LOK TL20 PLATES IS ALLOWED.

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

BUILDING DESIGNER							
<u>BEARINGS</u>							
	FACTORED		MAXIMUM FACTORED		INPUT	REQRD	
	GROSS REACTION		GROSS REACTION		BRG	BRG	
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
E	457	0	457	0	0	5-8	1-8
C	174	0	174	0	0	1-8	1-8
D	43	0	49	0	0	1-8	1-8

SEE MITEK STANDARD DETAIL B37579H FOR CONNECTION TO JOINT(S) C, D

UNFACTORED REACTIONS

	1ST LCASE	MAX/MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	318	238 / 0	0 / 0	0 / 0	0 / 0	80 / 0	0 / 0
C	118	105 / 0	0 / 0	0 / 0	0 / 0	14 / 0	0 / 0
D	35	0 / 0	0 / 0	0 / 0	0 / 0	35 / 0	0 / 0

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

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX. UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX. UNBRACED LENGTH
FR-TO		FROM TO		FR-TO		FROM TO	
E-B	-395 / 0	0.0 0.0	0.13 (4) 7.81				
A-B	0 / 23	-77.4 -77.4	0.10 (1) 10.00				
B-C	-26 / 0	-77.4 -77.4	0.47 (1) 6.25				
E-D	0 / 0	-17.5 -17.5	0.13 (4) 10.00				

DESIGN CRITERIA

SPECIFIED LOADS:
 TOP CH. LL = 23.3 PSF
 DL = 3.0 PSF
 BOT CH. LL = 0.0 PSF
 DL = 7.0 PSF
 TOTAL LOAD = 33.3 PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:
 - PART 9 OF OBC 2012, BCBC 2012, ABC 2014
 - CSA 086-09
 - TPIC 2011

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

CSI: TC=0.47/1.00 (B-C:1), BC=0.13/1.00 (D-E:4)
 WB=0.00/1.00 (n/a:0), SS=0.20/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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
MT20	618	354	1667 822 2284 1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

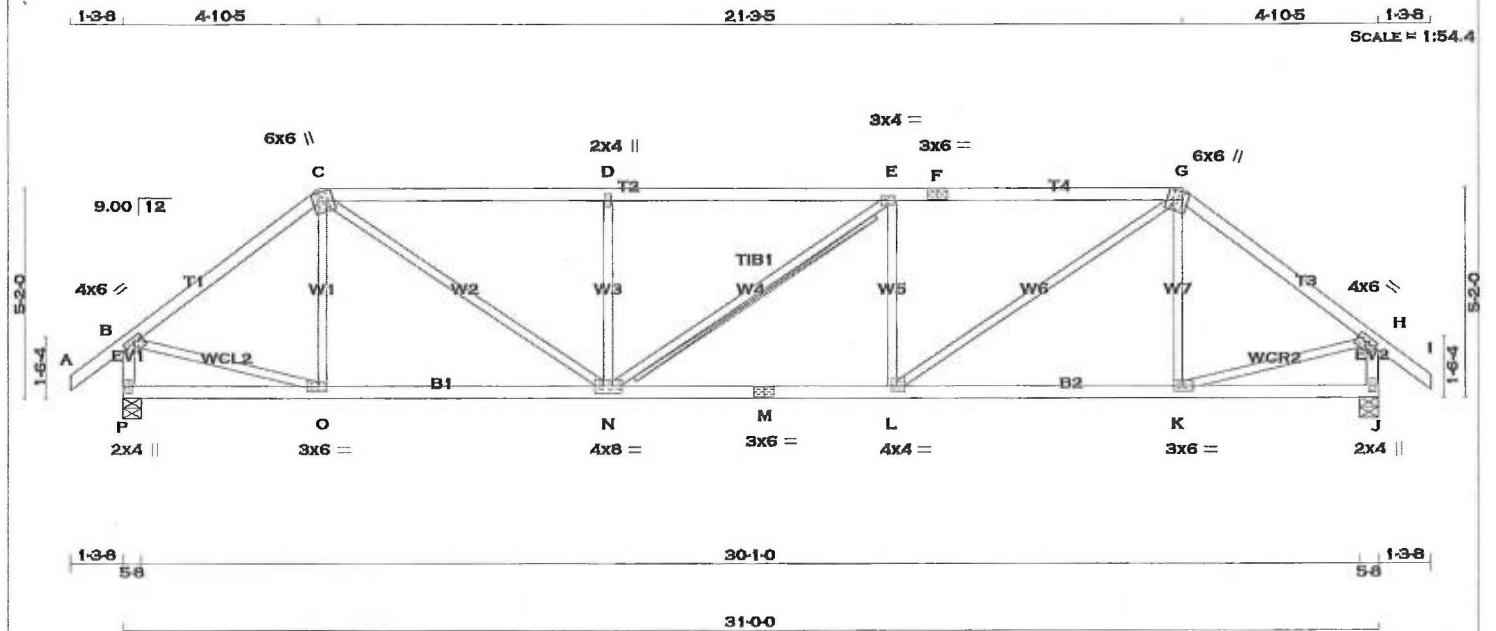
JSI GRIP= 0.23 (B) (INPUT = 0.90)
 JSI METAL= 0.09 (B) (INPUT = 1.00)



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LUMBER
 N. L. G. A. RULES
 CHORDS SIZE LUMBER DESCR.
 A - C 2x4 DRY No.2 SPF
 C - F 2x4 DRY No.2 SPF
 F - G 2x4 DRY No.2 SPF
 G - I 2x4 DRY No.2 SPF
 P - B 2x4 DRY No.2 SPF
 J - H 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
 DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-t	MT20	4.0	6.0	1.50	2.75
C	TTWW+m	MT20	6.0	6.0	Edge	4.25
D	TMW+w	MT20	2.0	4.0		
E	TMWW-t	MT20	3.0	4.0		
F	TS-t	MT20	3.0	6.0		
G	TTWW+m	MT20	6.0	6.0	Edge	4.25
H	TMVW-t	MT20	4.0	6.0	1.50	2.75
J	BMV1+p	MT20	2.0	4.0		
K	BMWW-t	MT20	3.0	6.0	1.50	2.50
L	BMWW-t	MT20	4.0	4.0	1.75	1.50
M	BS-t	MT20	3.0	6.0		
N	BMWWW-t	MT20	4.0	8.0		
O	BMWW-t	MT20	3.0	6.0	1.50	2.50
P	BMV1+p	MT20	2.0	4.0		

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.
 A SIZE FOR SIZE SUBSTITUTION OF MITEK MII20 WITH TEE-LOK TL20 PLATES IS ALLOWED.

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG IN-SX	REQRD BRG IN-SX
	VERT	HORZ	DOWN	HORZ		
P	1577	0	1577	0	5-8	2-11
J	1577	0	1577	0	5-8	2-11

UNFACTORED REACTIONS							
JT	1ST LCASE COMBINED	MAX./MIN. COMPONENT REACTIONS					
		SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
P	1104	786 / 0	0 / 0	0 / 0	0 / 0	318 / 0	0 / 0
J	1104	786 / 0	0 / 0	0 / 0	0 / 0	318 / 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 = 3.72 FT.
 MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

2x4 DRY SPF No.2 T-BRACE AT E-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. FACTORED CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED CSI (LC)	
FR-TO		FROM TO		FR-TO			
A-B	0 / 32	-77.4 -77.4	0.11 (1)	10.00	O-C	-184 / 39 0.07 (1)	
B-C	-1577 / 0	-77.4 -77.4	0.39 (1)	4.82	C-N	0 / 1272 0.29 (1)	
C-D	-2306 / 0	-77.4 -77.4	0.79 (1)	3.72	N-D	-594 / 0 0.23 (1)	
D-E	-2306 / 0	-77.4 -77.4	0.78 (1)	3.72	N-E	0 / 0 0.00 (1)	
E-F	-2307 / 0	-77.4 -77.4	0.78 (1)	3.72	L-E	-593 / 0 0.23 (1)	
F-G	-2307 / 0	-77.4 -77.4	0.78 (1)	3.72	L-G	0 / 1272 0.29 (1)	
G-H	-1577 / 0	-77.4 -77.4	0.39 (1)	4.83	K-G	-185 / 39 0.07 (1)	
H-I	0 / 32	-77.4 -77.4	0.11 (1)	10.00	B-O	0 / 1295 0.29 (1)	
P-B	-1546 / 0	0.0 0.0	0.16 (1)	6.62	K-H	0 / 1295 0.29 (1)	
J-H	-1546 / 0	0.0 0.0	0.16 (1)	6.62			
P-O	0 / 0	-17.5 -17.5	0.15 (4)	10.00			
O-N	0 / 1255	-17.5 -17.5	0.29 (1)	10.00			
N-M	0 / 2307	-17.5 -17.5	0.46 (1)	10.00			
M-L	0 / 2307	-17.5 -17.5	0.46 (1)	10.00			
L-K	0 / 1255	-17.5 -17.5	0.29 (1)	10.00			
K-J	0 / 0	-17.5 -17.5	0.15 (4)	10.00			

TOTAL WEIGHT = 2 X 123 = 246 lb [M]

DESIGN CRITERIA

SPECIFIED LOADS:
 TOP CH. LL = 23.3 PSF
 DL = 3.0 PSF
 BOT CH. LL = 0.0 PSF
 DL = 7.0 PSF
 TOTAL LOAD = 33.3 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 2010

THIS DESIGN COMPLIES WITH:
 - PART 9 OF OBC 2012, BCBC 2012, ABC 2014
 - CSA 086-09
 - TPIC 2011

(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 (1.03")
 CALCULATED VERT. DEFL.(LL) = L/999 (0.12")
 ALLOWABLE DEFL.(TL) = L/360 (1.03")
 CALCULATED VERT. DEFL.(TL) = L/999 (0.24")

CSI: TC=0.79/1.00 (C-D:1), BC=0.46/1.00 (L-N:1), WB=0.29/1.00 (B-O:1), CSI=0.26/1.00 (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 = 0.50

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	618	354	1667
	822	2284	1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

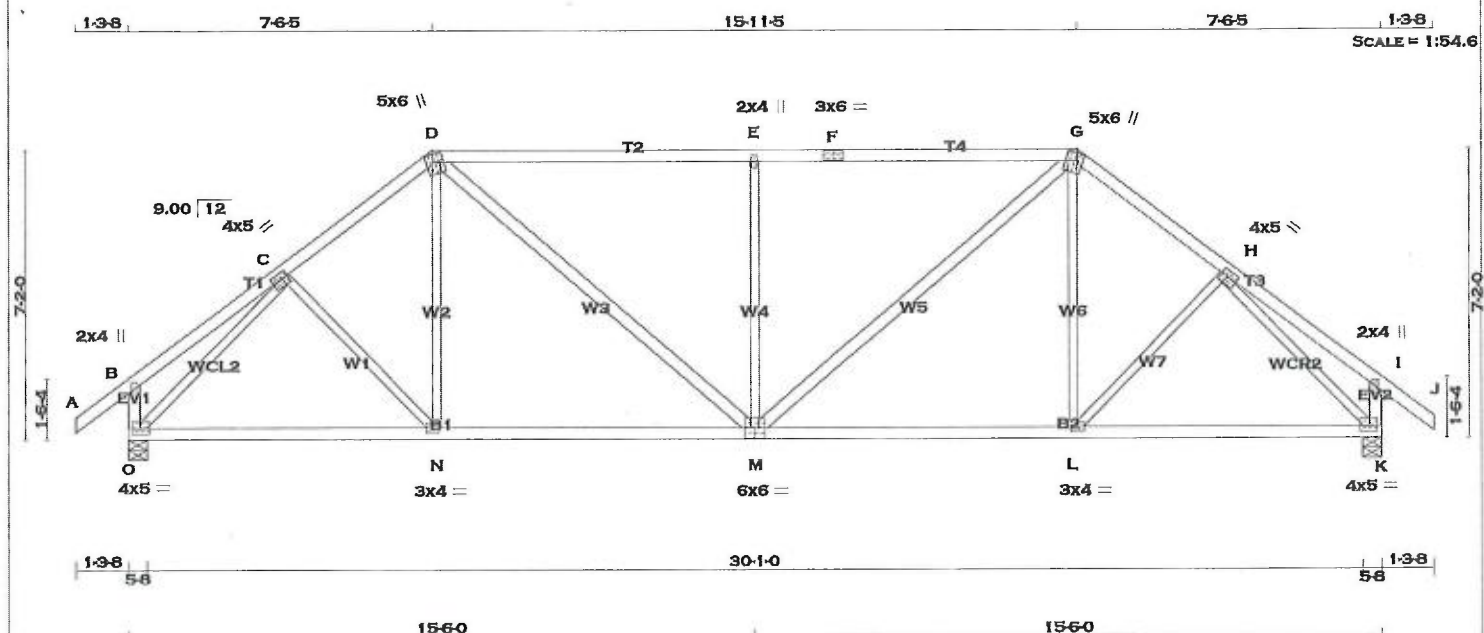
JSI GRIP= 0.88 (O) (INPUT = 0.90)
 JSI METAL= 0.68 (M) (INPUT = 1.00)



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READ ALL NOTES ON THIS PAGE AND THE ENGINEERING NOTE PAGE ENP-1. THE NOTE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.



TOTAL WEIGHT = 2 X 138 = 275 lb

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

ALL WEBS EXCEPT	2x3	DRY	No.2	SPF
D - M	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	TMW+p	MT20	2.0	4.0	
C	TMWW-t	MT20	4.0	5.0	1.75 2.00
D	TTWW+m	MT20	5.0	6.0	2.25 1.75
E	TMW+m	MT20	2.0	4.0	
F	TS-t	MT20	3.0	6.0	
G	TTWW+m	MT20	5.0	6.0	2.25 1.75
H	TMWW-t	MT20	4.0	5.0	1.75 2.00
I	TMW+p	MT20	2.0	4.0	
K	BMWV-1t	MT20	4.0	5.0	1.75 2.25
L	BMWW-t	MT20	3.0	4.0	
M	BSWWW-1	MT20	6.0	6.0	3.25 3.00
N	BMWW-t	MT20	3.0	4.0	
O	BMWV-1t	MT20	4.0	5.0	1.75 2.25

A SIZE FOR SIZE SUBSTITUTION OF MITEK MII20 WITH TEE-LOK TI 20 PLATES IS ALLOWED

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

BUILDING BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION			INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
O	1577	0	1577	0	0	5-8	1-13
K	1577	0	1577	0	0	5-8	1-13

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
O	1104	786 / 0	0 / 0	0 / 0	0 / 0	318 / 0	0 / 0
K	1104	786 / 0	0 / 0	0 / 0	0 / 0	318 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.34 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 LOAD LC1 (CSI (LC))	MAX. UNBRAC	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)
FR-TO		FROM TO		LENGTH	FR-TO		
A-B	0 / 32	-77.4	-77.4	0.11 (1)	10.00	C-N	0 / 56 0.02 (4)
B-C	0 / 19	-77.4	-77.4	0.16 (1)	10.00	N-D	0 / 136 0.05 (4)
C-D	-1568 / 0	-77.4	-77.4	0.20 (1)	5.07	D-M	0 / 687 0.11 (1)
D-E	-1759 / 0	-77.4	-77.4	0.68 (1)	5.03	M-E	-766 / 0 0.69 (1)
E-F	-1767 / 0	-77.4	-77.4	0.68 (1)	4.34	M-G	0 / 687 0.11 (1)
F-G	-1760 / 0	-77.4	-77.4	0.68 (1)	4.34	L-G	0 / 136 0.05 (4)
G-H	-1568 / 0	-77.4	-77.4	0.20 (1)	5.07	L-H	0 / 56 0.02 (4)
H-I	0 / 19	-77.4	-77.4	0.16 (1)	10.00	O-C	-1786 / 0 0.87 (1)
I-J	0 / 32	-77.4	-77.4	0.11 (1)	10.00	H-K	-1786 / 0 0.87 (1)
O-B	-220 / 0	0.0	0.0	0.02 (1)	7.81		
K-I	-220 / 0	0.0	0.0	0.02 (1)	7.81		
Q-N	0 / 1220	-17.5	-17.5	0.34 (4)	10.00		
N-M	0 / 1239	-17.5	-17.5	0.35 (4)	10.00		
M-L	0 / 1239	-17.5	-17.5	0.35 (4)	10.00		
L-K	0 / 1220	-17.5	-17.5	0.34 (4)	10.00		

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL =	23.3	PSF
	DL =	3.0	PSF
BOT CH.	LL =	0.0	PSF
	DL =	7.0	PSF
TOTAL LOAD =		33.3	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 2010

THIS DESIGN COMPLIES WITH:
- PART 9 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

(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 (1.03")
CALCULATED VERT. DEFL.(LL) = L/999 (0.07")
ALLOWABLE DEFL.(TL)= L/360 (1.03")
CALCULATED VERT. DEFL.(TL) = L/999 (0.14")

CSI: TC=0.68/1.00 (E-G:1), BC=0.35/1.00 (L-M:4)
WR=0.87/1.00 (H-K:1), SSI=0.30/1.00 (D-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 = 0.50

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

NAIL VALUES

PLATE	GRIP(DRY) (PSI)		SHEAR (PLI)		SECTION (PLI)	
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	618	354	1667	822	2284	1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL = 5.0 Deg.

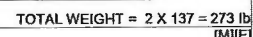
JSI GRIP= 0.89 (H) (INPUT = 0.90)
JSI METAL= 0.53 (H) (INPUT = 1.00)



September 14, 2018



**READ ALL NOTES ON THIS PAGE AND ON THE
ENGINEERING NOTE PAGE ENP-1. THE NOTE PAGE
IS AN INTEGRAL PART OF THIS DRAWING AS IT
CONTAINS SPECIFICATIONS AND CRITERIA USED
IN THE DESIGN OF THIS COMPONENT.**

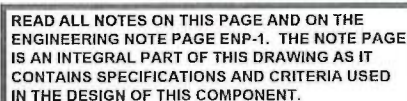
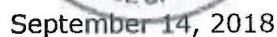


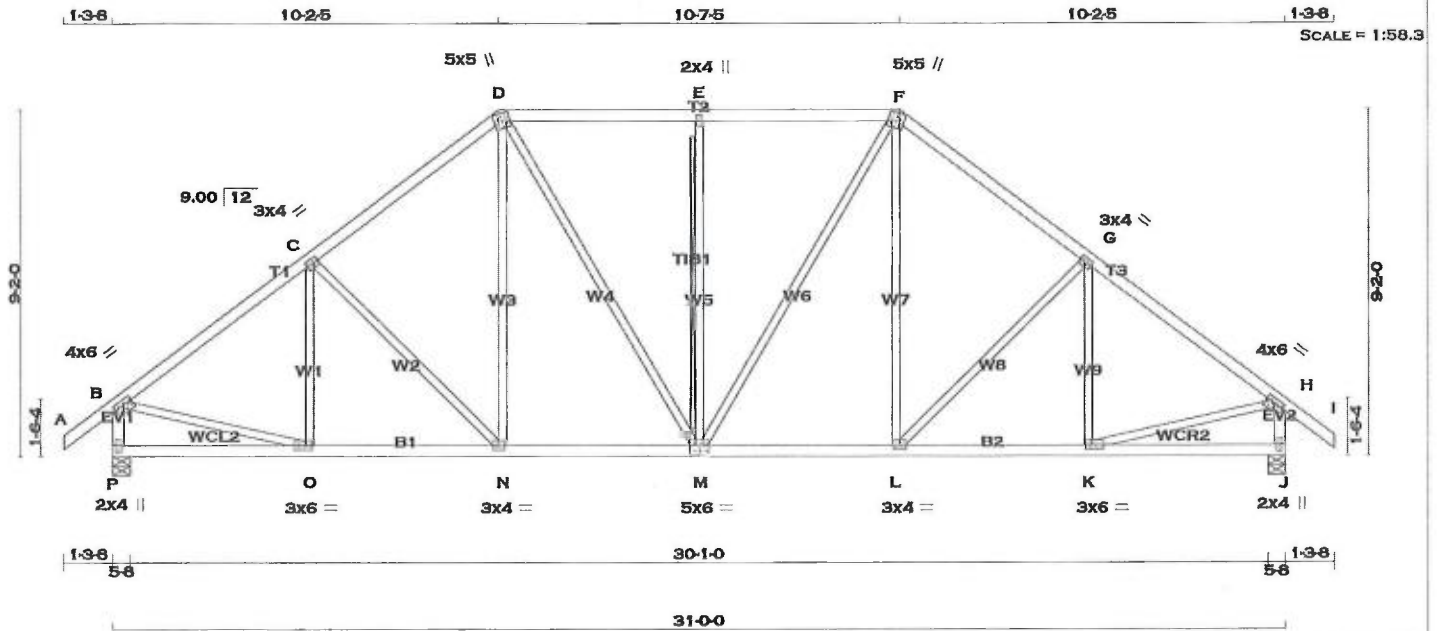
DRY: SEASONED LUMBER.

A SIZE FOR SIZE SUBSTITUTION OF MITEK MII20 WITH TEE-LOK TI 20 PLATES IS ALLOWED

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

JSI GRIP= 0.89 (C) (INPUT = 0.90)
JSI METAL= 0.66 (C) (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 - I	2x4	DRY	No.2	SPF
P - B	2x4	DRY	No.2	SPF
J - H	2x4	DRY	No.2	SPF
P - M	2x4	DRY	No.2	SPF
M - J	2x4	DRY	No.2	SPF
ALL WEBS EXCEPT	2x3	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-t	MT20	4.0	6.0	1.50	2.75
C	TMVW-t	MT20	3.0	4.0	1.50	1.50
D	TTWW+m	MT20	5.0	5.0	2.25	1.50
E	TMVW-t	MT20	2.0	4.0		
F	TTWW+m	MT20	5.0	5.0	2.25	1.50
G	TMVW-t	MT20	3.0	4.0	1.50	1.50
H	TMVW-t	MT20	4.0	6.0	1.50	2.75
J	BMV1+p	MT20	2.0	4.0		
K	BMVW-t	MT20	3.0	6.0	1.50	2.25
L	BMVW-t	MT20	3.0	4.0		
M	BSVWW-t	MT20	5.0	6.0	3.00	3.00
N	BMVW-t	MT20	3.0	4.0		
O	BMVW-t	MT20	3.0	6.0	1.50	2.25
P	BMV1+p	MT20	2.0	4.0		

A SIZE FOR SIZE SUBSTITUTION OF MI TEK MI20 WITH TEE-LK TL20 PLATES IS ALLOWED.

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		
P	1577	0	1577	0	5-8	2-11
J	1577	0	1577	0	5-8	2-11

UNFACTORED REACTIONS

JT	COMBINED	MAX/MIN COMPONENT REACTIONS					SOIL
		1ST LCASE	SNOW	LIVE	PERM.LIVE	WIND	
P	1104	786 / 0	0 / 0	0 / 0	0 / 0	318 / 0	0 / 0
J	1104	786 / 0	0 / 0	0 / 0	0 / 0	318 / 0	0 / 0

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.93 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 E-M

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

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

LOADING
TOTAL LOAD CASES: (4)

MEMB.	CHORDS			WEBS		
	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED VERT. LOAD (LC)	MAX. FACTORED FORCE (LBS)	MAX. FACTORED VERT. LOAD (LC)	MAX. FACTORED VERT. LOAD (LC)
FR-TO		FROM	TO	FR-TO		
A-B	0 / 32	-77.4	-77.4 0.11 (1)	O-C	-202 / 25	0.09 (1)
B-C	-1602 / 0	-77.4	-77.4 0.30 (1)	C-N	-235 / 0	0.24 (1)
C-D	-1453 / 0	-77.4	-77.4 0.29 (1)	N-D	0 / 256	0.06 (1)
D-E	-1317 / 0	-77.4	-77.4 0.30 (1)	D-M	0 / 344	0.08 (1)
E-F	-1317 / 0	-77.4	-77.4 0.30 (1)	M-E	-499 / 0	0.31 (1)
F-G	-1453 / 0	-77.4	-77.4 0.29 (1)	M-F	0 / 344	0.08 (1)
G-H	-1602 / 0	-77.4	-77.4 0.30 (1)	L-F	0 / 256	0.06 (1)
H-I	0 / 32	-77.4	-77.4 0.11 (1)	L-G	-235 / 0	0.24 (1)
P-B	-1538 / 0	0.0	0.0 0.16 (1)	K-G	-202 / 25	0.09 (1)
J-H	-1538 / 0	0.0	0.0 0.16 (1)	B-O	0 / 1337	0.30 (1)
P-O	0 / 0	-17.5	-17.5 0.11 (4)	K-H	0 / 1337	0.30 (1)
O-N	0 / 1304	-17.5	-17.5 0.26 (1)			
N-M	0 / 1141	-17.5	-17.5 0.23 (1)			
M-L	0 / 1141	-17.5	-17.5 0.23 (1)			
L-K	0 / 1304	-17.5	-17.5 0.26 (1)			
K-J	0 / 0	-17.5	-17.5 0.11 (4)			

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 23.3 PSF
DL = 3.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.0 PSF
TOTAL LOAD = 33.3 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 2010

THIS DESIGN COMPLIES WITH:
- PART 9 OF OBC 2012, BCBC 2012, ABC 2014
- CSA 086-09
- TPIC 2011

(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 (1.03")
CALCULATED VERT. DEFL.(LL) = L/999 (0.06")
ALLOWABLE DEFL.(TL) = L/360 (1.03")
CALCULATED VERT. DEFL.(TL) = L/999 (0.10")

CSI: TC=0.30/1.00 (G-H:1), BC=0.26/1.00 (K-L:1), WB=0.31/1.00 (E-M:1), SSI=0.20/1.00 (D-E:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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 618 354 1667 822 2284 1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

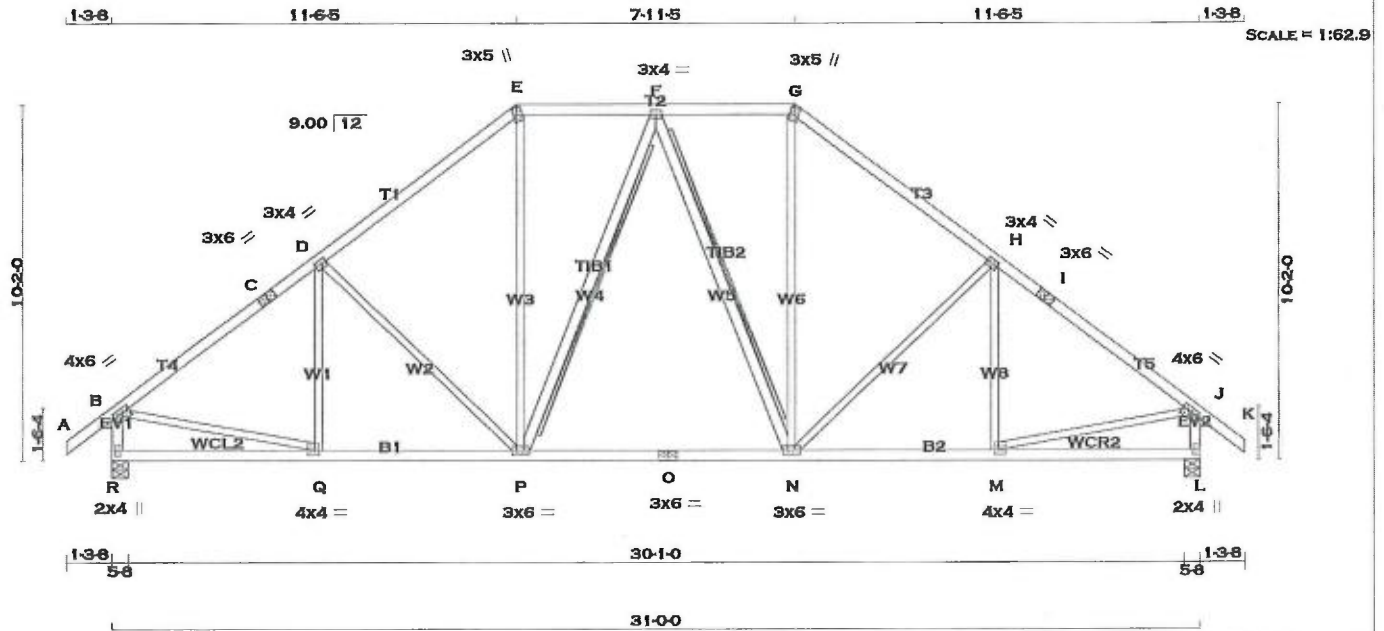
JSI GRIP= 0.83 (K) (INPUT = 0.90)
JSI METAL= 0.45 (B) (INPUT = 1.00)



September 14, 2018



READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-1. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.



TOTAL WEIGHT = 2 X 153 = 307 lb [M/F]

LUMBER
N. L. G. A. RULES

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-t	MT20	4.0	6.0	1.50	2.75
C	TS-t	MT20	3.0	6.0		
D	TMWW-t	MT20	3.0	4.0	1.50	1.50
E	TTW+m	MT20	3.0	5.0	Edge	1.25
F	TMWW-t	MT20	3.0	4.0		
G	TTW+m	MT20	3.0	5.0	Edge	1.25
H	TMWW-t	MT20	3.0	4.0	1.50	1.50
I	TS-t	MT20	3.0	6.0		
J	TMVW-t	MT20	4.0	6.0	1.50	2.75
L	BMV1+p	MT20	2.0	4.0		
M	BMWW-t	MT20	4.0	4.0	1.50	1.50
N	BMWW-t	MT20	3.0	6.0		
O	BS-t	MT20	3.0	6.0		
P	BMWW-t	MT20	3.0	6.0		
Q	BMWW-t	MT20	4.0	4.0	1.50	1.50
R	BMV1+p	MT20	2.0	4.0		

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.
 A SIZE FOR SIZE SUBSTITUTION OF MITEK M120 WITH TEE-LOK TL20 PLATES IS ALLOWED.

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	UP	IN-SX
R	1577	0	0	5-8
L	1577	0	0	5-8

UNFACTORED REACTIONS

	1ST LCASE	MAX/MIN. COMPONENT REACTIONS
JT	COMBINED	SNOW LIVE PERM.LIVE WIND DEAD SOIL
R	1104	786 / 0 0 / 0 0 / 0 318 / 0 0 / 0
L	1104	786 / 0 0 / 0 0 / 0 318 / 0 0 / 0

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

BRACING
 TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.81 FT.
 MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

2x4 DRY SPF No.2 T-BRACE AT F-P, F-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. FACTORED LC1 MAX. UNBRACED LENGTH (FT)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED VERT. LOAD (PLF)	MAX. FACTORED LC1 MAX. UNBRACED LENGTH (FT)
FR-TO				FR-TO			
A-B	0 / 32	-77.4	-77.4 0.11 (1)	10.00	Q-D	-163 / 42	0.09 (1)
B-C	-1610 / 0	-77.4	-77.4 0.40 (1)	4.81	D-P	-319 / 0	0.43 (1)
C-D	-1610 / 0	-77.4	-77.4 0.40 (1)	4.81	P-E	0 / 529	0.12 (1)
D-E	-1391 / 0	-77.4	-77.4 0.37 (1)	5.11	F-P	-197 / 0	0.16 (1)
E-F	-1090 / 0	-77.4	-77.4 0.16 (1)	5.88	F-N	-197 / 0	0.16 (1)
F-G	-1090 / 0	-77.4	-77.4 0.16 (1)	5.88	N-G	0 / 529	0.12 (1)
G-H	-1391 / 0	-77.4	-77.4 0.37 (1)	5.11	H-N	-319 / 0	0.43 (1)
H-I	-1610 / 0	-77.4	-77.4 0.40 (1)	4.81	M-H	-163 / 42	0.09 (1)
I-J	-1610 / 0	-77.4	-77.4 0.40 (1)	4.81	B-Q	0 / 1340	0.30 (1)
J-K	0 / 32	-77.4	-77.4 0.11 (1)	10.00	M-J	0 / 1340	0.30 (1)
R-B	-1533 / 0	0.0	0.0 0.16 (1)	6.64			
L-J	-1533 / 0	0.0	0.0 0.16 (1)	6.64			
R-Q	0 / 0	-17.5	-17.5 0.12 (4)	10.00			
Q-P	0 / 1314	-17.5	-17.5 0.31 (1)	10.00			
P-O	0 / 1162	-17.5	-17.5 0.29 (1)	10.00			
O-N	0 / 1162	-17.5	-17.5 0.29 (1)	10.00			
N-M	0 / 1314	-17.5	-17.5 0.31 (1)	10.00			
M-L	0 / 0	-17.5	-17.5 0.12 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:
 TOP CH. LL = 23.3 PSF
 DL = 3.0 PSF
 BOT CH. LL = 0.0 PSF
 DL = 7.0 PSF
 TOTAL LOAD = 33.3 PSF

SPACING = 24.0 IN./C

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

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2010

THIS DESIGN COMPLIES WITH:
 - PART 9 OF OBC 2012, BCBC 2012, ABC 2014
 - CSA 086-09
 - TPIC 2011

(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 (1.03")
 CALCULATED VERT. DEFL.(LL) = L/999 (0.06")
 ALLOWABLE DEFL.(TL) = L/360 (1.03")
 CALCULATED VERT. DEFL.(TL) = L/999 (0.15")

CSI: TC=0.40/1.00 (H-J:1), BC=0.31/1.00 (M-N:1), WB=0.43/1.00 (H-N:1), SSI=0.17/1.00 (H-J:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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 618 354 1667 822 2284 1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

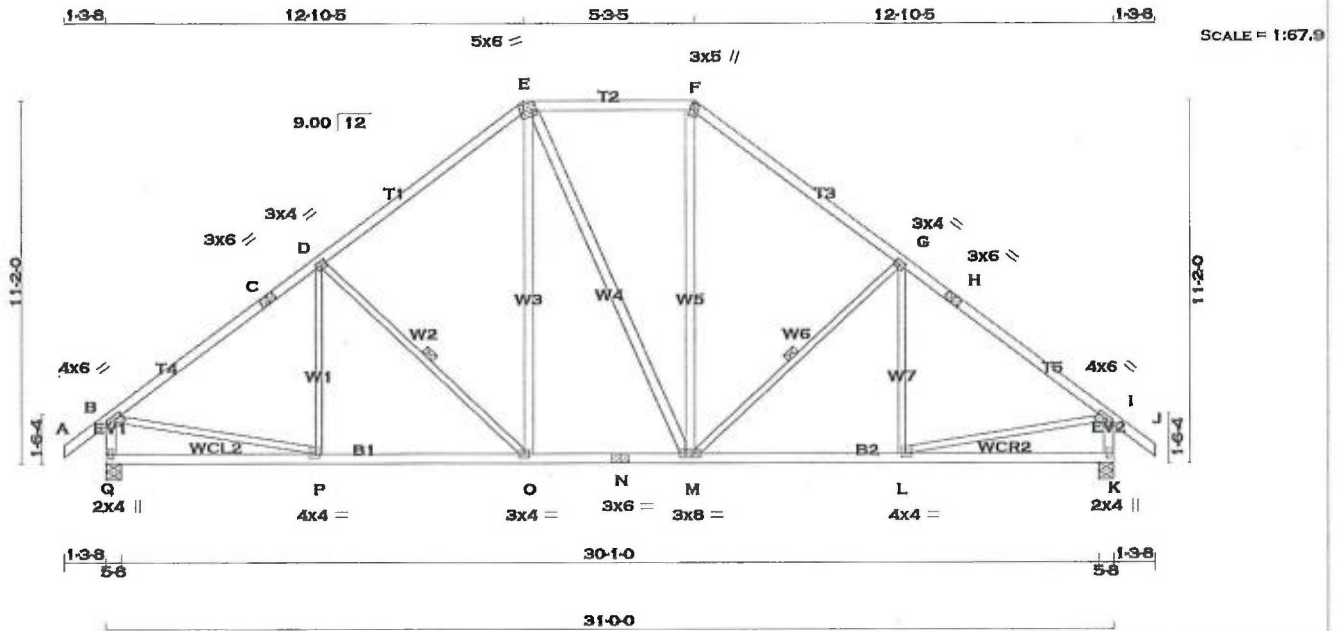
JSI GRIP= 0.88 (P) (INPUT = 0.90)
 JSI METAL= 0.49 (Q) (INPUT = 1.00)



September 14, 2018



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TOTAL WEIGHT = 3 X 156 = 467 lb [M][F]

LUMBER
N. L. G. A. RULES

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-t	MT20	4.0	6.0	1.50	2.75
C	TS-t	MT20	3.0	6.0		
D	TMWW-t	MT20	3.0	4.0	1.50	1.50
E	TTWW-m	MT20	5.0	6.0	2.00	1.50
F	TTW+m	MT20	3.0	5.0	Edge	1.25
G	TMWW-t	MT20	3.0	4.0	1.50	1.50
H	TS-t	MT20	3.0	6.0		
I	TMVW-t	MT20	4.0	6.0	1.50	2.75
K	BMV1+p	MT20	2.0	4.0		
L	BMWW-t	MT20	4.0	4.0	1.50	1.50
M	BMWW-t	MT20	3.0	6.0		
N	BS-t	MT20	3.0	6.0		
O	BMWW-t	MT20	3.0	4.0		
P	BMWW-t	MT20	4.0	4.0	1.50	1.50
Q	BMV1+p	MT20	2.0	4.0		

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

A SIZE FOR SIZE SUBSTITUTION OF MI TEK M120 WITH TEE-LOK TL20 PLATES IS ALLOWED.

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG IN-SX	REQRD BRG IN-SX
	VERT	HORZ	DOWN	HORZ		
Q	1577	0	1577	0	5-8	2-11
K	1577	0	1577	0	5-8	2-11

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED		MAX./MIN. COMPONENT REACTIONS			
	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
Q	1104	786 / 0	0 / 0	0 / 0	318 / 0	0 / 0
K	1104	786 / 0	0 / 0	0 / 0	318 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.66 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 - 1x4 LATERAL BRACE(S) AT 1/2 LENGTH OF D-O, G-M. DBS = 20-0-0. CBF = 52 LBS.

DBS = DIAGONAL BRACE SPACING (MAX). CBF = CUMULATIVE BRACING FORCE (PER BRACE). FASTEN LATERAL BRACE(S) USING (0.122"x3") SPIRAL NAILS : 1 NAIL FOR 2x3 BRACE(S), 2 FOR 1x4, 2x4, 2x5, 3 FOR 2x6, 4 FOR 2x8, 5 FOR 2x10, AND 6 FOR 2x12.

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 LC1 MAX. (CSI (LC))	UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED CSI (LC)
FR-TO		FROM TO			FR-TO		
A-B	0 / 32	-77.4	-77.4 0.11 (1)	10.00	P-D	-112 / 76	0.07 (1)
B-C	-1614 / 0	-77.4	-77.4 0.51 (1)	4.66	D-O	-414 / 0	0.22 (1)
C-D	-1614 / 0	-77.4	-77.4 0.51 (1)	4.66	O-E	0 / 379	0.06 (1)
D-E	-1312 / 0	-77.4	-77.4 0.47 (1)	5.09	E-M	0 / 0	0.00 (1)
E-F	-1024 / 0	-77.4	-77.4 0.29 (1)	5.84	M-F	0 / 380	0.06 (1)
F-G	-1312 / 0	-77.4	-77.4 0.47 (1)	5.09	M-G	-413 / 0	0.22 (1)
G-H	-1614 / 0	-77.4	-77.4 0.51 (1)	4.66	L-G	-113 / 76	0.08 (1)
H-I	-1614 / 0	-77.4	-77.4 0.51 (1)	4.66	B-P	0 / 1342	0.30 (1)
I-J	0 / 32	-77.4	-77.4 0.11 (1)	10.00	L-I	0 / 1342	0.30 (1)
Q-B	-1531 / 0	0.0	0.0 0.16 (1)	6.65			
K-I	-1530 / 0	0.0	0.0 0.16 (1)	6.65			
Q-P	0 / 0	-17.5	-17.5 0.18 (4)	10.00			
P-O	0 / 1320	-17.5	-17.5 0.31 (1)	10.00			
O-N	0 / 1024	-17.5	-17.5 0.23 (1)	10.00			
N-M	0 / 1024	-17.5	-17.5 0.23 (1)	10.00			
M-L	0 / 1320	-17.5	-17.5 0.31 (1)	10.00			
L-K	0 / 0	-17.5	-17.5 0.18 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:
 TOP CH. LL = 23.3 PSF
 DL = 3.0 PSF
 BOT CH. LL = 0.0 PSF
 DL = 7.0 PSF
 TOTAL LOAD = 33.3 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 2010

THIS DESIGN COMPLIES WITH:
 - PART 9 OF OBC 2012, BCBC 2012, ABC 2014
 - CSA 086-09
 - TPIC 2011

(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 (1.03")
 CALCULATED VERT. DEFL.(LL) = L/999 (0.06")
 ALLOWABLE DEFL.(TL) = L/360 (1.03")
 CALCULATED VERT. DEFL.(TL) = L/999 (0.11")

CSI: TC=0.51/1.00 (B-D:1), BC=0.31/1.00 (O-P:1), WB=0.30/1.00 (B-P:1), SSI=0.20/1.00 (B-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 = 0.50

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 618 354 1667 822 2284 1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.88 (F) (INPUT = 0.90)
 JSI METAL= 0.49 (P) (INPUT = 1.00)



September 14, 2018



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TOTAL WEIGHT = 53 lb

DRY: SEASONED LUMBER.

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

A SIZE FOR SIZE SUBSTITUTION OF MITEK MII20 WITH TEE-LOK TL20 PLATES IS ALLOWED.

BUILDING BEARINGS

UNFACTORED REACTIONS

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.93 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY
APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED

LOADING

TOTAL LOAD CASES: (4)

C H O R D S					W E B S				
MEMB.	MAX. FACTORED	FORCE (LBS)	FACTORED		MAX. UNBRAC	MEMB.	MAX. FACTORED	FORCE (LBS)	MAX CSI (LC)
			VERT. LOAD	LC1 MAX					
FR-TO			(PLF)	CSI (LC)					
A-B	0 / 32		-77.4	-77.4 0.11 (1)	10.00	G-C	0 / 621	0.14 (1)	
B-C	-915 / 0		-77.4	-77.4 0.40 (1)	5.93	B-G	0 / 775	0.17 (1)	
C-D	-915 / 0		-77.4	-77.4 0.40 (1)	5.93	G-D	0 / 775	0.17 (1)	
D-E	0 / 32		-77.4	-77.4 0.11 (1)	10.00				
H-B	-638 / 0		0.0	0.0 0.07 (1)	7.81				
F-D	-638 / 0		0.0	0.0 0.07 (1)	7.81				
H-G	0 / 0		-17.5	-17.5 0.20 (4)	10.00				
G-F	0 / 0		-17.5	-17.5 0.20 (4)	10.00				

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL =	23.3	PSF
	DL =	3.0	PSF
BOT CH.	LL =	0.0	PSF
	DL =	7.0	PSF
TOTAL LOAD =		33.3	PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF
PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 9 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIQ 2011

(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 (0.41")
CALCULATED VERT. DEFL.(LL) = L/999 (0.04")
ALLOWABLE DEFL.(TL)= L/360 (0.41")
CALCULATED VERT. DEFL.(TL) = L/999 (0.11")

CSI: TC=0.40/1.00 (C-D:1) , BC=0.20/1.00 (F-G:4)
WB=0.17/1.00 (B-G:1) , SSI=0.15/1.00 (C-D:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

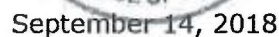
NAIL VALUES

PLATE	GRIP(DRY)		SHEAR		SECTION	
	(PSI)		(PLI)		(PLI)	
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	618	354	1667	822	2284	1656

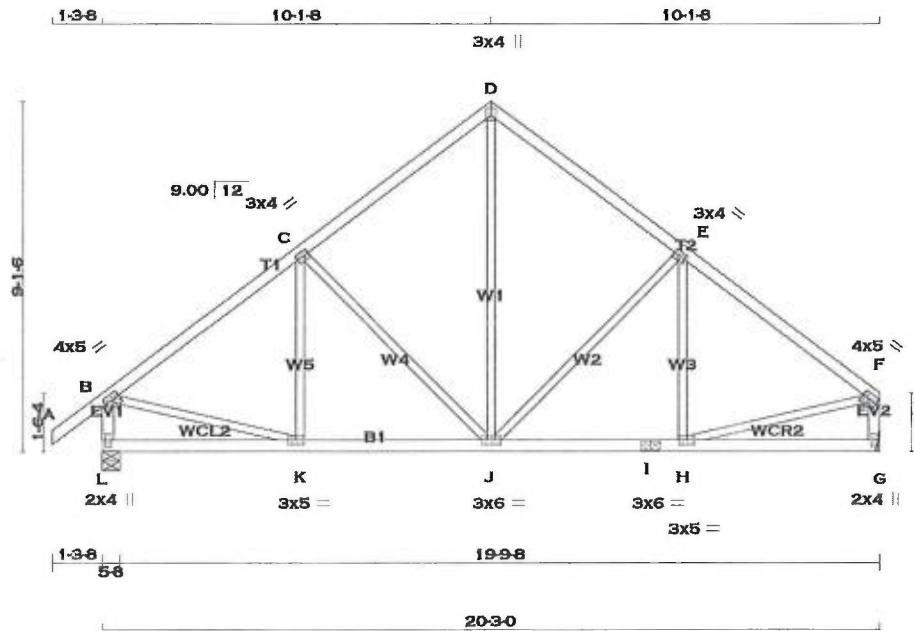
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (C) (INPUT = 0.90)
JSI METAL= 0.28 (D) (INPUT = 1.00)



**READ ALL NOTES ON THIS PAGE AND ON THE
ENGINEERING NOTE PAGE ENP-1. THE NOTE PAGE
IS AN INTEGRAL PART OF THIS DRAWING AS IT
CONTAINS SPECIFICATIONS AND CRITERIA USED
IN THE DESIGN OF THIS COMPONENT.**



TOTAL WEIGHT = 3 X 90 = 271 lb [M][F]

LUMBER

N. L. G. A. RULES	CHORDS	SIZE	LUMBER	DESCR.
A - D	2x4	DRY	No.2	SPF
D - F	2x4	DRY	No.2	SPF
L - B	2x4	DRY	No.2	SPF
G - F	2x4	DRY	No.2	SPF
L - I	2x4	DRY	No.2	SPF
I - 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
B	TMVW-t	MT20	4.0	5.0	1.75	2.00
C	TMWW-t	MT20	3.0	4.0	1.50	1.50
D	TTW+p	MT20	3.0	4.0	2.25	1.50
E	TMWW-t	MT20	3.0	4.0	1.50	1.50
F	TMVW-t	MT20	4.0	5.0	1.75	Edge
G	BMV1+p	MT20	2.0	4.0		
H	BMWW-t	MT20	3.0	5.0		
I	BS-t	MT20	3.0	6.0		
J	BMWW-t	MT20	3.0	6.0		
K	BMWW-t	MT20	3.0	5.0		
L	BMV1+p	MT20	2.0	4.0		

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

A SIZE FOR SIZE SUBSTITUTION OF MI TEK M120 WITH TEE-LOK TL20 PLATES IS ALLOWED.

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
L	1067	0	1067	0
G	960	0	960	0

A SUITABLE MECHANICAL CONNECTION IS REQUIRED AT JOINT G TO RESIST THE MAX FACTORED REACTIONS.

UNFACTORED REACTIONS

1ST LCASE	MAX / MIN COMPONENT REACTIONS						
JT	COMBINED	SNOW	LIVE	PERM. LIVE	WIND	DEAD	SOIL
L	747	536 / 0	0 / 0	0 / 0	0 / 0	211 / 0	0 / 0
G	674	472 / 0	0 / 0	0 / 0	0 / 0	202 / 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 = 6.04 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 (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. LC1 (LC)	
FR-TO		FROM	TO	FR-TO		FROM	TO
A-B	0 / 32	-77.4	-77.4 0.11 (1)	10.00	J-D	0 / 548	0.12 (1)
B-C	-953 / 0	-77.4	-77.4 0.27 (1)	6.04	J-E	-325 / 0	0.31 (1)
C-D	-725 / 0	-77.4	-77.4 0.26 (1)	6.25	H-E	-83 / 60	0.04 (1)
D-E	-725 / 0	-77.4	-77.4 0.26 (1)	6.25	C-J	-325 / 0	0.31 (1)
E-F	-953 / 0	-77.4	-77.4 0.27 (1)	6.04	K-C	-83 / 60	0.04 (1)
L-B	-1030 / 0	0.0	0.0 0.11 (1)	7.74	B-K	0 / 805	0.18 (1)
G-F	-923 / 0	0.0	0.0 0.10 (1)	7.81	H-F	0 / 805	0.18 (1)
L-K	0 / 0	-17.5	-17.5 0.11 (4)	10.00			
K-J	0 / 784	-17.5	-17.5 0.18 (1)	10.00			
J-I	0 / 784	-17.5	-17.5 0.18 (1)	10.00			
I-H	0 / 784	-17.5	-17.5 0.18 (1)	10.00			
H-G	0 / 0	-17.5	-17.5 0.11 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	3.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.0	PSF
TOTAL LOAD		=	33.3	PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:

- PART 9 OF OBC 2012, BCBC 2012, ABC 2014
- CSA 086-09
- TPIC 2011

(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 (0.67")
CALCULATED VERT. DEFL.(LL)= L/999 (0.02")
ALLOWABLE DEFL.(TL)= L/360 (0.67")
CALCULATED VERT. DEFL.(TL)= L/999 (0.05")

CSI: TC=0.27/1.00 (B-C:1), BC=0.18/1.00 (H-J:1), WB=0.31/1.00 (E-J:1), SSI=0.15/1.00 (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 = 0.50

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

NAIL VALUES

PLATE	GRIP(DRY)	SHEAR (PSI)	SECTION (PLI)
MT20	618	354	1667
	822	2284	1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

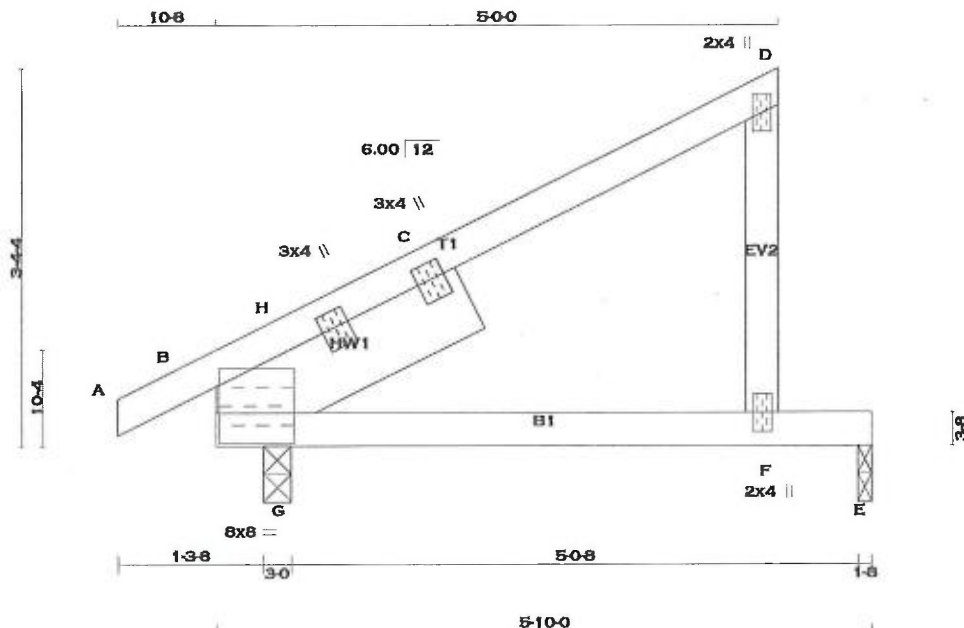
JSI GRIP= 0.88 (J) (INPUT = 0.90)
JSI METAL= 0.34 (B) (INPUT = 1.00)



September 14, 2018



READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-1. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.



LUMBER				DESCR.
N. L. G. A. RULES	SIZE	LUMBER		
A - D	2x4	DRY	No.2	SPF
F - D	2x4	DRY	No.2	SPF
B - E	2x4	DRY	No.2	SPF
REINFORCING MEMBERS				
HW1	2x8	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMBMR1-I	MT20	8.0	8.0	6.00	0.25
B	RT+t	MT20	3.0	4.0	1.75	12.75
B	RT+t	MT20	3.0	4.0	1.75	24.00
D	TMV+p	MT20	2.0	4.0		
F	BMV+p	MT20	2.0	4.0		

A SIZE FOR SIZE SUBSTITUTION OF MITEK M120 WITH TEE-LOK TL20 PLATES IS ALLOWED.

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	HORZ
JT	345	0	345	0
B	217	0	217	0
E	217	0	217	0

UNFACTORED REACTIONS

JT	1ST LCASE	MAX/MIN. COMPONENT REACTIONS					
	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
B	240	177 / 0	0 / 0	0 / 0	0 / 0	64 / 0	0 / 0
E	153	100 / 0	0 / 0	0 / 0	0 / 0	54 / 0	0 / 0

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

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. CS1 (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CS1 (LC)	
FR-TO				FR-TO			
A-B	-3 / 0	-77.4	-77.4 0.04 (1)	10.00	G-H	-239 / 0	0.00 (1)
B-H	-189 / 0	-77.4	-77.4 0.06 (1)	6.25	G-C	0 / 240	0.02 (1)
H-C	-102 / 0	-77.4	-77.4 0.32 (1)	6.25			
C-D	-102 / 0	-77.4	-77.4 0.32 (1)	6.25			
F-D	-186 / 0	0.0	0.0 0.03 (1)	7.81			
B-G	0 / 154	-17.5	-17.5 0.13 (1)	10.00			
G-F	0 / 0	-17.5	-17.5 0.25 (1)	10.00			
F-E	0 / 0	-17.5	-17.5 0.24 (1)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	3.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.0	PSF
TOTAL LOAD		=	33.3	PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:

- PART 9 OF OBC 2012, BCBC 2012, ABC 2014
 - CSA 086-09
 - TPIC 2011

(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/986 (0.07")
 ALLOWABLE DEFL.(TL)= L/360 (0.19")
 CALCULATED VERT. DEFL.(TL) = L/525 (0.13")

CSI: TC=0.32/1.00 (D-H:1), BC=0.25/1.00 (F-G:1), WB=0.02/1.00 (C-G:1), SSI=0.18/1.00 (D-H:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

AUTOSOLVE LEFT 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	618	354	1667
	822	2284	1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.12 (B) (INPUT = 0.90)

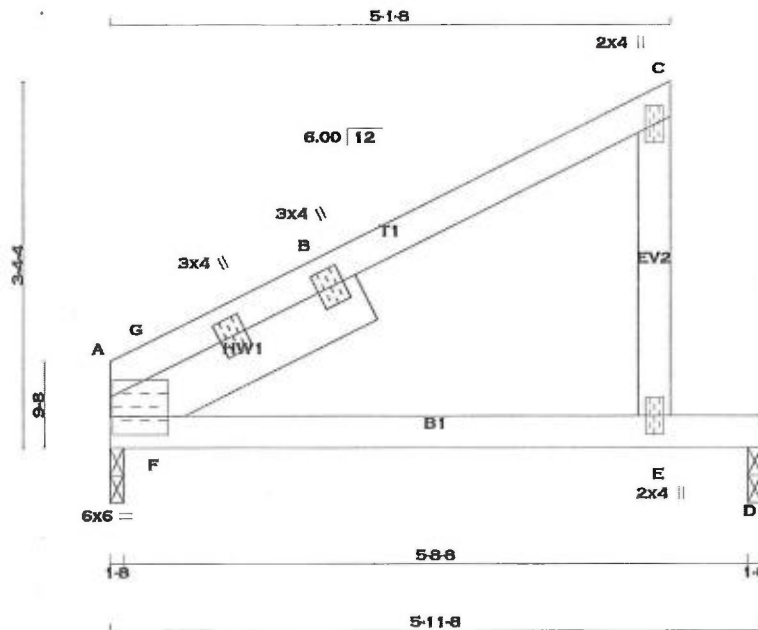
JSI METAL= 0.04 (D) (INPUT = 1.00)



September 14, 2018



READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-1. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.



SCALE = 1:20.2

TOTAL WEIGHT = 3 X 21 = 64 lb [MIF]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY	No.2
E - C	2x4	DRY	No.2
A - D	2x4	DRY	No.2
REINFORCING MEMBERS			
HW1	2x6	DRY	No.2

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMBMR1-I	MT20	6.0	6.0	2.00	0.25
A	RT-t	MT20	3.0	4.0		
A	RT-t	MT20	3.0	4.0		
C	TMV+p	MT20	2.0	4.0		
E	BMV+p	MT20	2.0	4.0		

A SIZE FOR SIZE SUBSTITUTION OF MITEK MII20 WITH TEE-LOK TL20 PLATES IS ALLOWED.

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

BEARINGS

JT	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQD BRG
	VERT	DOWN	IN-SX	IN-SX
A	278	0	1-8	1-8
D	223	0	1-8	1-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX/MIN. COMPONENT REACTIONS	SNOW	LIVE	PERM. LIVE	WIND	DEAD	SOIL
A	185	136 / 0	0 / 0	0 / 0	0 / 0	0 / 0	59 / 0	0 / 0
D	158	103 / 0	0 / 0	0 / 0	0 / 0	0 / 0	55 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) A, 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	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX. (LC)	MAX. UNBRACED LENGTH FR-TO	WEBS	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)
FR-TO								
A-G	-192 / 0	-77.4	-77.4 0.08 (1)	6.25	F-G	-245 / 13	0.00 (1)	
G-B	-111 / 0	-77.4	-77.4 0.34 (1)	6.25	F-B	0 / 246	0.03 (1)	
B-C	-111 / 0	-77.4	-77.4 0.34 (1)	6.25				
E-C	-191 / 0	0.0	0.0 0.03 (1)	7.81				
A-F	0 / 176	-17.5	-17.5 0.13 (1)	10.00				
F-E	0 / 0	-17.5	-17.5 0.26 (1)	10.00				
E-D	0 / 0	-17.5	-17.5 0.24 (1)	10.00				

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	23.3	PSF
	DL	=	3.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.0	PSF
TOTAL LOAD		=	33.3	PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:

- PART 9 OF OBC 2012, BCBC 2012, ABC 2014
- CSA 086-09
- TPIC 2011

(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 (0.20")
CALCULATED VERT. DEFL.(LL) = L/941 (0.08")
ALLOWABLE DEFL.(TL)= L/360 (0.20")
CALCULATED VERT. DEFL.(TL) = L/497 (0.14")

CSI: TC=0.34/1.00 (C-G:1), BC=0.26/1.00 (E-F:1), WB=0.03/1.00 (B-F:1), SSI=0.17/1.00 (C-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 = 0.50

AUTOSOLVE LEFT 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)
	MAX MIN	MAX MIN	MAX MIN
MT20	618 354	1667 822	2284 1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.11 (C) (INPUT = 0.90)

JSI METAL= 0.04 (C) (INPUT = 1.00)



September 14, 2018



READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-1. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

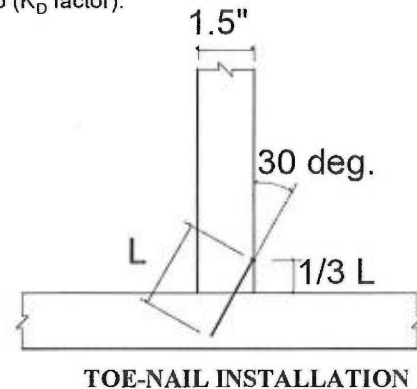
BEARING ANCHORAGE BY TOE-NAILS FOR LATERAL CAPACITY

B37579H1

NAIL TYPE	LENGTH (IN)	DIAMETER (IN)	NAIL LATERAL CAPACITY (LB)	
			S-P-F	D. FIR
COMMON WIRE	3.00	0.144	132	147
	3.25	0.144	132	147
	3.50	0.160	159	177

NOTES:

1. Rafter and ceiling members may be anchored to top and bottom chords of girder truss by toe-nailing rafter and ceiling members to girder chords provided the reaction does not exceed the lateral capacities in the table. Hangers (specified by others) are required for reactions higher than the maximum toe-nail capacity. Reactions are based on factored loads.
2. Toe nail capacities shown in the table are for **one** toe-nail. For additional toe-nails multiply values in table by the number of toe-nails used. Toe-nail capacities take into account toe-nailing factor J_A in CSA O86-09, section 10.9.4.1.
3. For 9- 3/4 gauge 3.25" common wire gun nails (diameter = 0.120") use 3" common spiral nail values.
4. Maximum number of toe-nails allowed depends on the lumber size & species to be toe-nailed to supporting member and nail diameter, as shown in tables below.
5. Nail values in table are based on the following relative lumber densities: G = 0.42 (SPF), G = 0.49 (D. Fir).
6. Toe-nails shall be driven at approximately 1/3 the nail length from the edge of the joist/truss chord and driven at an angle of 30° to the grain of the member (See next page for nailing on bearing plate).
7. For loads due to **wind** the nail lateral capacity in this table may be multiplied by 1.15 (K_D factor).
8. Lumber must be dry (< 19% moisture content) at the time of nail installation.
9. Nail values in this table comply with CSA O86-09, section 10.9.4
10. This design is not valid after April 30, 2019.



Nail type	Common wire	Common spiral	Common wire
Nail dia. (in)	0.160	0.152	0.144
	(3.5" nail)		(3" and 3.25" nail)
LUMBER SIZE	MAXIMUM NUMBER OF TOE-NAILS		
2X4 SPF	2	2	3
2X4 D. Fir	2	2	2
2X6 SPF	4	4	4
2X6 D. Fir	3	3	3



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Bradford, Ontario L3Z 3G7

PEO
Certificate No. 10889485



April 26, 2017

BEARING ANCHORAGE BY TOE-NAILS FOR WIND LOADING

B37579H2

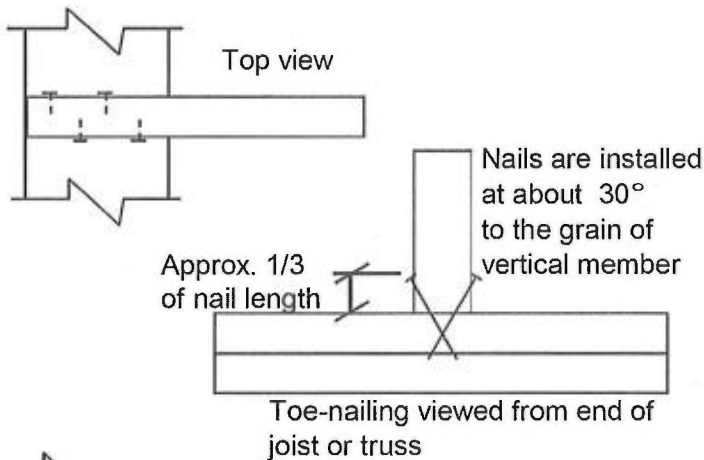
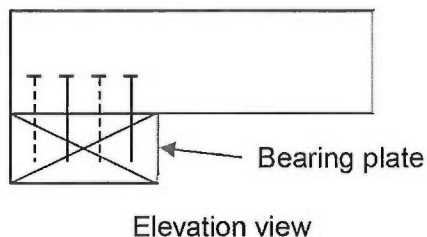
NAIL TYPE	LENGTH (IN)	DIAMETER (IN)	NAIL WITHDRAWAL CAPACITY (LB)	
			S-P-F	D. FIR
COMMON WIRE	3.00	0.144	30	42
	3.25	0.144	32	45
	3.50	0.160	38	52

Note: If using truss with D. Fir lumber and S-P-F bearing plate, use values in table for S-P-F.

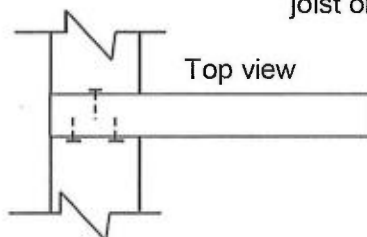
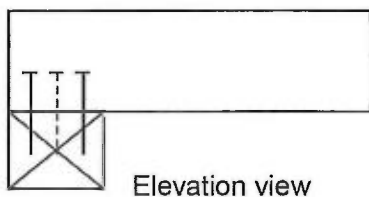
NOTES:

1. Truss chord, rafter, or ceiling members may be anchored to bearing plate by toe-nails, provided that the actual factored uplift force due to **wind or earthquake** load does not exceed the withdrawal capacities in the table. Hangers (specified by others) are required for uplift forces that are higher than the maximum toe-nail withdrawal capacity.
2. Toe nail capacities shown in the table are for **one** toe-nail. For additional toe-nails multiply values in table by the number of toe-nails used. Toe-nail capacities take into account toe-nailing factor J_A in CSA O86-09, section 10.9.5.2.
3. For 9- 3/4 gauge 3.25" common wire gun nails (diameter = 0.120") use 3" common spiral nail values.
4. Maximum number of toe-nails allowed depends on the lumber size & species to be toe-nailed to supporting member and nail diameter, as shown in table above.
5. Nail values in table are based on the following relative lumber densities: $G = 0.42$ (SPF), $G = 0.49$ (D. Fir).
6. Toe-nails shall be driven at approximately 1/3 the nail length from the edge of the joist/truss chord and driven at an angle of 30° to the grain of the member (See drawing on detail B37579H1).
7. Lumber must be dry (< 19% moisture content) at the time of nail installation.
8. Nail values in this table comply with CSA O86-09, section 10.9.5
9. This design is not valid after April 30, 2019

Toe-nailing on 2x6 Bearing Plate



Toe-nailing on 2x4 Bearing Plate



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April 26, 2017