

For conventional framing roof/ceilings
framing shall conform to OBC.9.23

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

TR - GREENPARK - MINNISALE HOMES - MILLWOOD 2 ELE 1

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TW0918-067

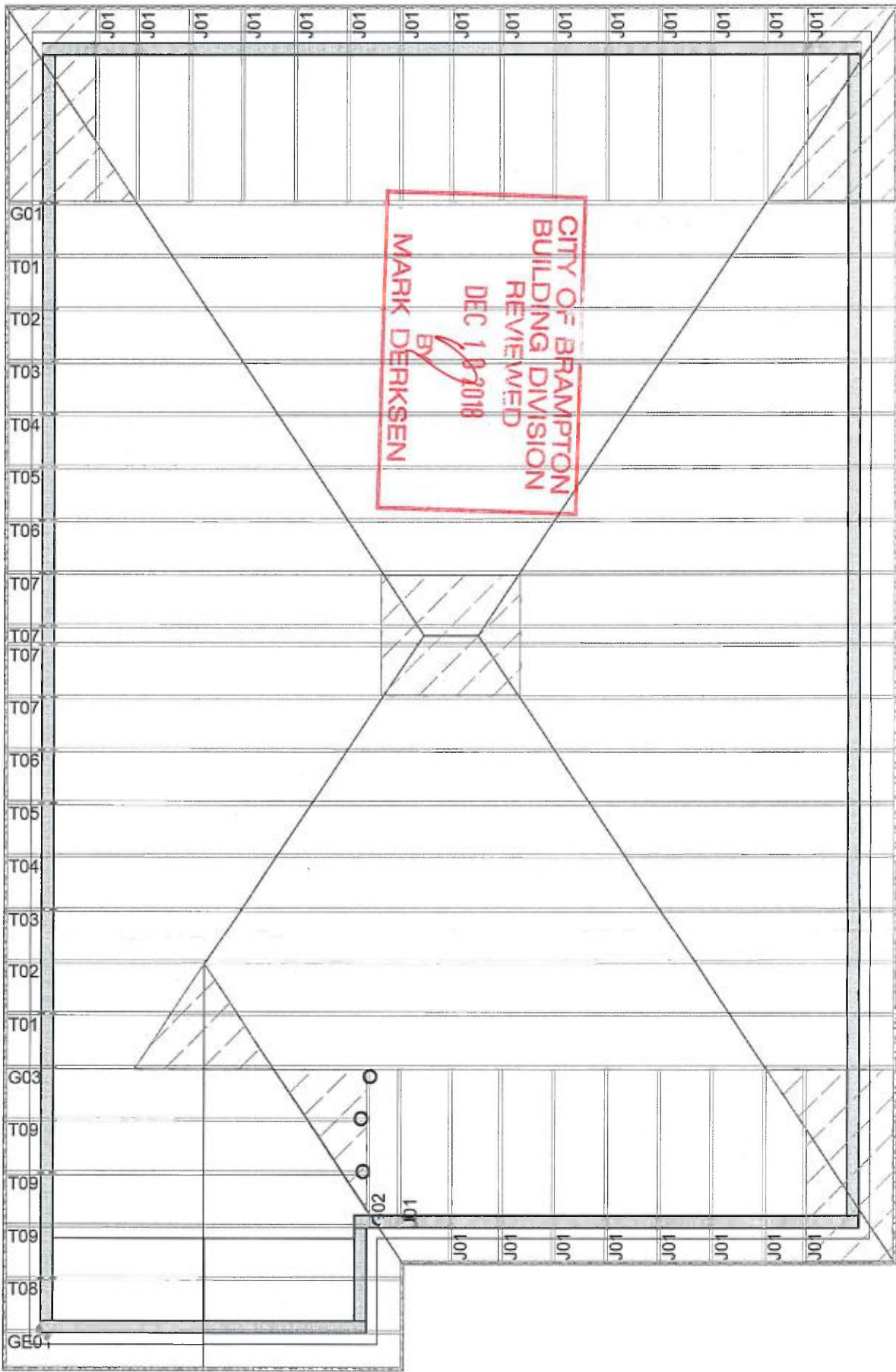


Layout based on plans provided by
JARDIN DESIGN GROUP INC
Dated April 26/18

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.



September 14, 2018



18-331278-000-00 RE - Roof

ROOF TRUSS LAYOUT

LOT 27

CONVENTIONAL
FRAMING BY OTHERS

HANGER LEGEND

X - LUS24 O - LJS26DS
- HGUS26 % - HGUS26-2

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" 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 1
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'

LOT 27

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.

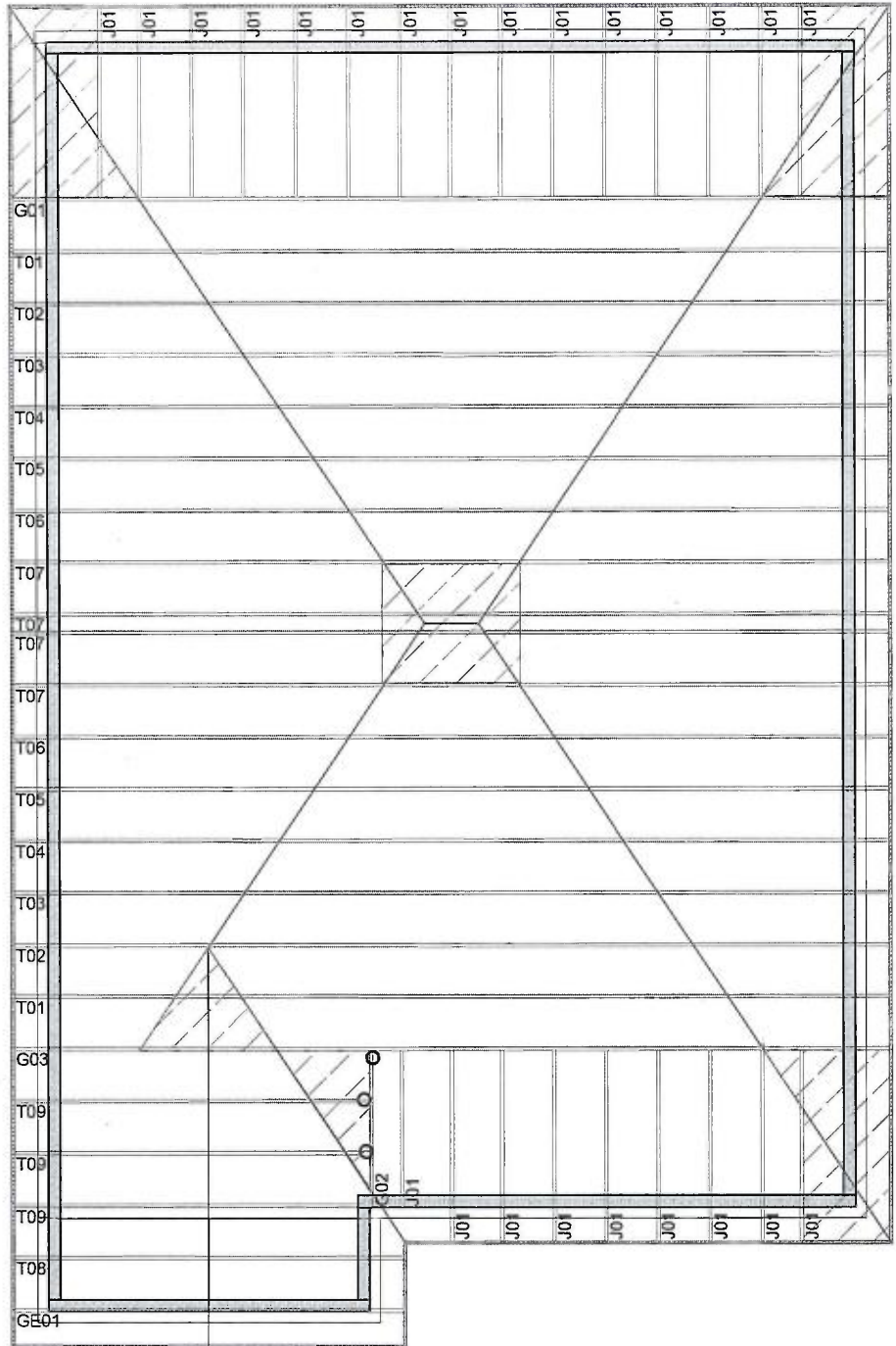


Layout based on plans provided by
JARDIN DESIGN GROUP INC
Dated April 26/18

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.



September 14, 2018



FLAT ROOF BELOW
BY OTHERS

ROOF TRUSS LAYOUT



**CONVENTIONAL
FRAMING** BY OTHERS

HANGER LEGEND

X - LUS24
- HGUS26

O - LJS26DS
% - HGUS26-2

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" CENTERS,
THIS TRUSS SYSTEM IS DESIGN FOR RESIDENTIAL
OR SMALL BUILDING REQUIREMENTS OF
PART 9, NBCC 2010

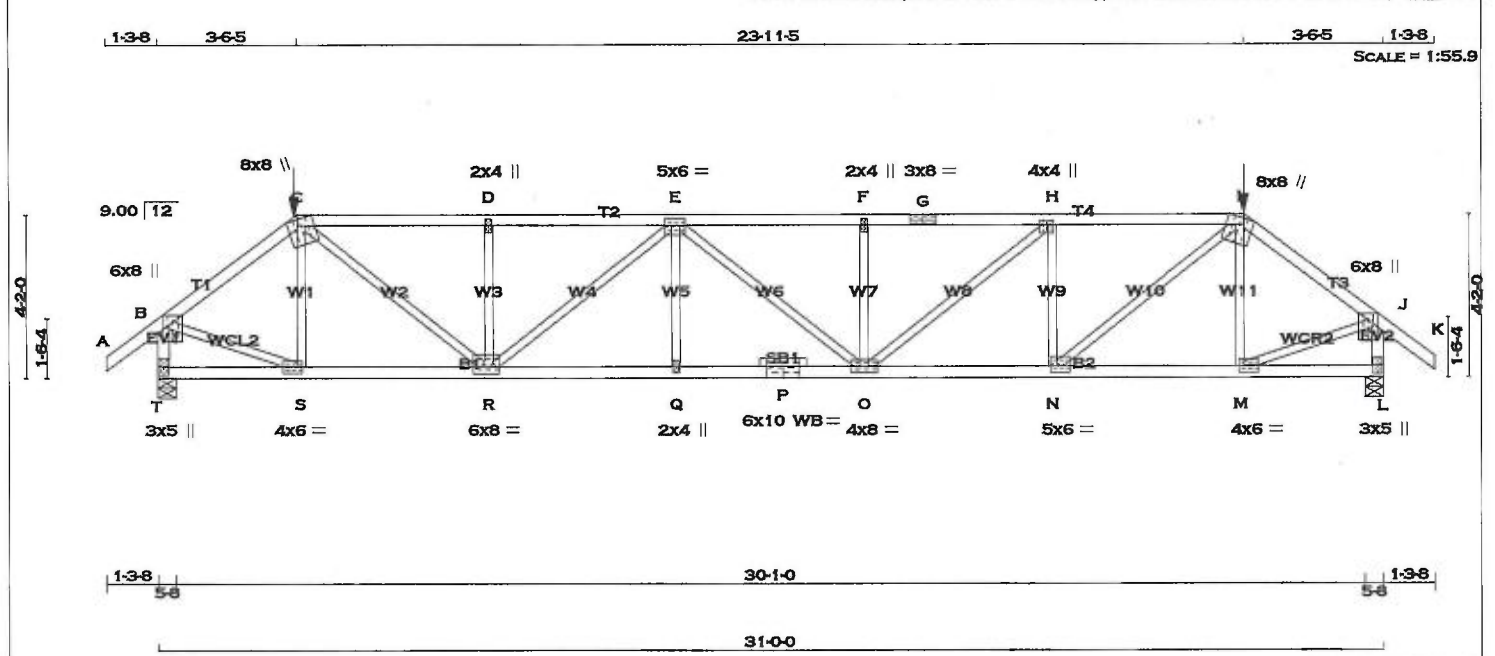
THIS DESIGN COMPLIES WITH PART 9 OF CBC 2012,
BCBC 2012, ABC 2012, CSA 086-09, TPIC 2011

ALLOWABLE DEFLECTION OF EACH COMPONENT = L/360

Model:	MILLWOOD 2 EL 1
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'

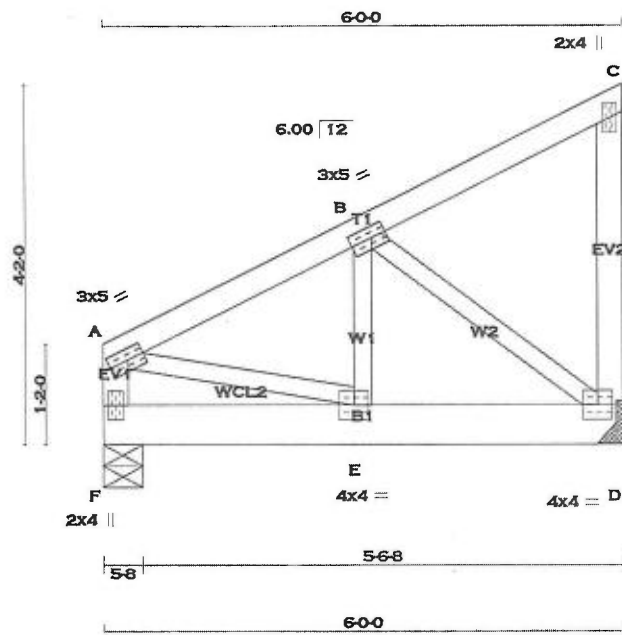


LUMBER N. L. G. A. RULES CHORDS SIZE A - C 2x4 DRY No.2 C - G 2x4 DRY 2100F 1.8E G - I 2x4 DRY 2100F 1.8E I - K 2x4 DRY No.2 T - B 2x4 DRY No.2 L - J 2x4 DRY No.2 T - P 2x4 DRY 2100F 1.8E P - L 2x4 DRY 2100F 1.8E ALL WEBS 2x3 DRY No.2 EXCEPT DRY: SEASONED LUMBER.				DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER BEARINGS FACTORED MAXIMUM FACTORED INPUT REQD GROSS REACTION GROSS REACTION BRG BRG JT VERT HORZ DOWN HORZ UPLIFT IN-SX IN-SX T 2842 0 2842 0 0 5-8 4-13 L 2842 0 2842 0 0 5-8 4-13 UNFACTORED REACTIONS 1ST LCASE MAX./MIN. COMPONENT REACTIONS JT COMBINED SNOW LIVE PERM.LIVE WIND DEAD SOIL T 1993 1403 / 0 0 / 0 0 / 0 590 / 0 0 / 0 L 1993 1403 / 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 = 3.25 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 VERT. LOAD LC1 MAX. MAX. FACTORED FORCE MAX. FACTORED (LBS) (PLF) CSI (LC) UNBRAC (LBS) CSI (LC) FR-TO FROM TO LENGTH FR-TO A-B 0 / 32 -77.4 -77.4 0.12 (1) 10.00 S-C -612 / 0 0.17 (1) B-C -2956 / 0 -77.4 -77.4 0.33 (1) 3.74 C-R 0 / 2807 0.69 (1) C-D -4540 / 0 -145.9 -145.9 0.49 (1) 3.64 R-D -766 / 0 0.21 (1) D-E -4540 / 0 -145.9 -145.9 0.48 (1) 3.64 R-E -1318 / 0 0.88 (1) E-F -5556 / 0 -145.9 -145.9 0.47 (1) 3.38 Q-E 0 / 175 0.07 (4) F-G -5556 / 0 -145.9 -145.9 0.57 (1) 3.25 E-O -7 / 0 0.00 (1) G-H -5556 / 0 -145.9 -145.9 0.57 (1) 3.25 O-F -668 / 0 0.18 (1) H-I -4543 / 0 -145.9 -145.9 0.50 (1) 3.64 C-H 0 / 1307 0.32 (1) I-J -2956 / 0 -77.4 -77.4 0.33 (1) 3.74 N-H -1597 / 0 0.44 (1) J-K 0 / 32 -77.4 -77.4 0.12 (1) 10.00 N-I 0 / 2812 0.70 (1) T-B -2800 / 0 0.0 0.0 0.32 (1) 5.08 M-I -614 / 0 0.17 (1) L-J -2798 / 0 0.0 0.0 0.32 (1) 5.08 B-S 0 / 2483 0.61 (1) M-J 0 / 2483 0.61 (1) T-S 0 / 0 -33.0 -33.0 0.10 (4) 10.00 S-R 0 / 2343 -33.0 -33.0 0.26 (1) 10.00 R-Q 0 / 5561 -33.0 -33.0 0.52 (1) 10.00 Q-P 0 / 5561 -33.0 -33.0 0.52 (1) 10.00 P-O 0 / 5561 -33.0 -33.0 0.52 (1) 10.00 O-N 0 / 4543 -33.0 -33.0 0.43 (1) 10.00 N-M 0 / 2342 -33.0 -33.0 0.25 (1) 10.00 M-L 0 / 0 -33.0 -33.0 0.10 (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 - 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, 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 (0.26") ALLOWABLE DEFL.(TL)= L/360 (1.03") CALCULATED VERT. DEFL.(TL) = L/799 (0.47") CSI: TC=0.57/1.00 (F-H:1), BC=0.52/1.00 (Q-R:1), WB=0.88/1.00 (E-R:1), SSI=0.36/1.00 (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= 0.90 (N) (INPUT = 0.90) JSI METAL= 0.94 (P) (INPUT = 1.00)			
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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 [M]

LUMBER

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

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW-t	MT20	3.0	5.0	1.50	2.25
B	TMWW-t	MT20	3.0	5.0	1.50	2.00
C	TMV+p	MT20	2.0	4.0		
D	BMVW-t	MT20	4.0	4.0		
E	BMWW-t	MT20	4.0	4.0		
F	BMV1+p	MT20	2.0	4.0		

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	MAXIMUM	FACTORED	INPUT	REQRD
JT	VERT	GROSS REACTION	DOWN	GROSS REACTION	BRG	BRG
D	987	0	987	0	0	0
F	987	0	987	0	0	0

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

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
D	693	485 / 0	0 / 0	0 / 0	0 / 0	208 / 0	0 / 0
F	693	485 / 0	0 / 0	0 / 0	0 / 0	208 / 0	0 / 0

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

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS		FACTORED				WEBS		FACTORED	
MEMB.	MAX. FORCE (LBS)	VERT. (PLF)	LOAD LC1	MAX	UNBRAC	MEMB.	MAX. FORCE (LBS)	MAX	CS1 (LC)
FR-TO		FROM	TO	LENGTH	FR-TO				
A-B	-839 / 0	-77.4	-77.4	0.12 (1)	6.25	E-B	0 / 677	0.17 (1)	
B-C	-10 / 0	-77.4	-77.4	0.10 (1)	6.25	B-D	-953 / 0	0.23 (1)	
D-C	-93 / 0	0.0	0.0	0.02 (1)	7.81	A-E	0 / 784	0.19 (1)	
F-A	-669 / 0	0.0	0.0	0.07 (1)	7.81				
F-E	0 / 0	-251.7	-251.7	0.15 (1)	10.00				
E-D	0 / 759	-251.7	-251.7	0.25 (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

GIRDER TYPE: CStdGirder
START DISTANCE = 0-0
START SPAN CARRIED = 12-4-0
END DISTANCE = 6-0-0
END SPAN CARRIED = 12-4-0
END WALL WIDTH = 5-8
APPLIED TO FRONT SIDE OF BOTTOM CHORD.
- 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 (0.20")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.20")
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.02")

CS1: TC=0.12/1.00 (A-B:1) , BC=0.25/1.00 (D-E:1) , WB=0.23/1.00 (B-D:1) , SS1=0.29/1.00 (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
MT20	618 354 1667 822 2284 1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

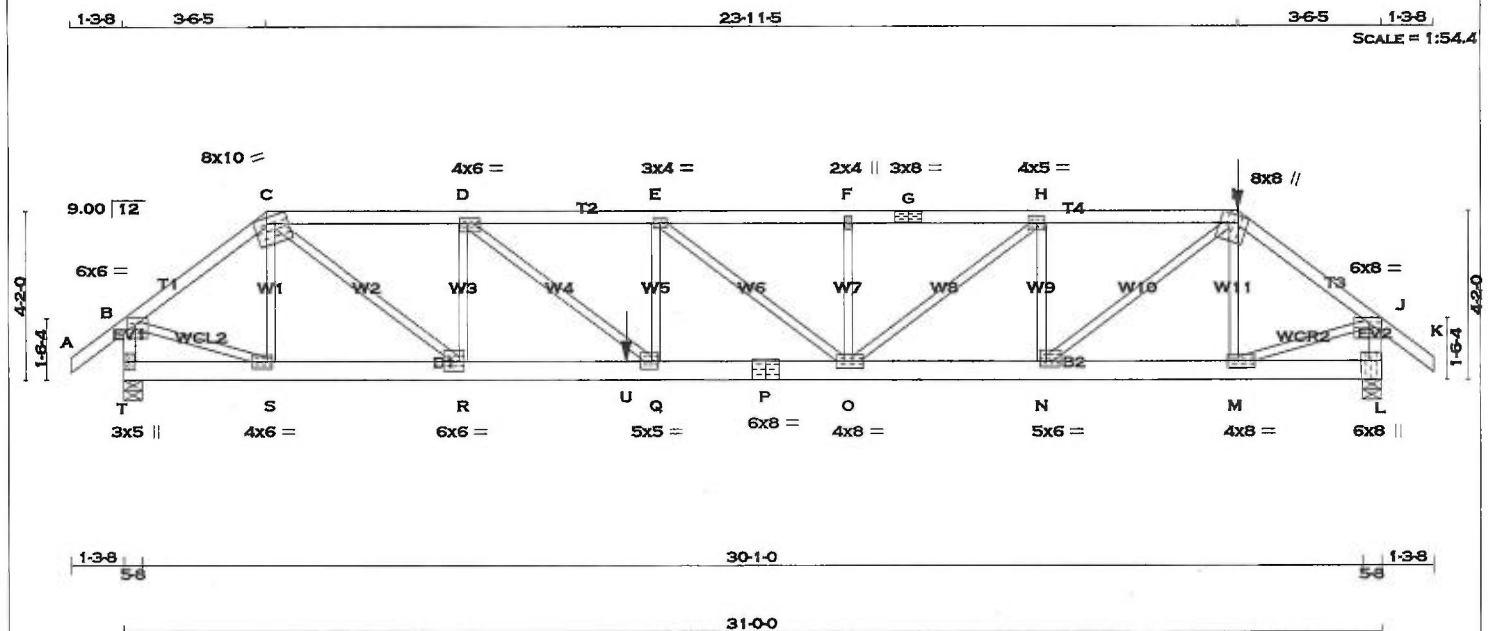
JSI GRIP= 0.88 (B) (INPUT = 0.90)
JSI METAL= 0.28 (D) (INPUT = 1.00)



September 14, 2018



READ ALL NOTES ON THIS PAGE AND 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 = 144 lb [M]

LUMBER	N. L. G. A. RULES	CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY	No.2	SPF	
C - G	2x4	DRY	2100F 1.8E	SPF	
G - I	2x4	DRY	2100F 1.8E	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	6.0	2.00	2.50
C TTWW-m	MT20	8.0	10.0	Edge	4.00
D TMVW-t	MT20	4.0	6.0	1.50	2.25
E TMVW-t	MT20	3.0	4.0		
F TMVW-w	MT20	2.0	4.0		
G TS-t	MT20	3.0	8.0		
H TMVW-t	MT20	4.0	5.0	1.75	2.25
I TTWW-m	MT20	8.0	8.0	Edge	3.00
J TMVW-p	MT20	6.0	8.0	Edge	3.50
L BMV1-t	MT20	6.0	8.0	Edge	2.50
M BMVW-t	MT20	4.0	8.0	2.00	3.00
N BMVW-t	MT20	5.0	6.0	1.75	1.75
O BMVW-t	MT20	4.0	8.0	2.00	2.25
P BS-t	MT20	6.0	8.0		
Q BMVW-t	MT20	5.0	5.0	2.25	1.75
R BMVW-t	MT20	6.0	6.0	2.75	1.50
S BMVW-t	MT20	4.0	6.0	2.00	1.50
T BMV1-p	MT20	3.0	5.0		

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

DESIGNER								
BEARINGS								
FACTORED				MAXIMUM FACTORED			INPUT	REQRD
GROSS REACTION				GROSS REACTION			BRG	BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	
T	2612	0	2612	0	0	5-8	5-0	
L	2994	0	2994	0	0	5-8	5-8	

UNFACTORED REACTIONS

JT	1ST LCASE	MAX/MIN	COMPONENT REACTIONS	WIND	DEAD	SOIL
T	1831	1295 / 0	0 / 0	0 / 0	535 / 0	0 / 0
L	2100	1477 / 0	0 / 0	0 / 0	623 / 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 = 3.06 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		W E B S		MAX. FACTORED	
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	LC1 MAX	MAX. UNBRAC	MEMB.	FORCE (LBS)	MAX. CSI (LC)
FR-TO				LENGTH FR-TO			
A-B	0 / 32	-77.4	-77.4 0.12 (1)	10.00	S-C	-608 / 0	0.16 (1)
B-C	-2769 / 0	-77.4	-77.4 0.32 (1)	3.86	C-R	0 / 3199	0.79 (1)
C-D	-4718 / 0	-77.4	-77.4 0.32 (1)	3.80	R-D	-1738 / 0	0.45 (1)
D-E	-6420 / 0	-77.4	-77.4 0.45 (1)	3.20	D-Q	0 / 2177	0.54 (1)
E-F	-6173 / 0	-145.9	-145.9 0.52 (1)	3.18	Q-E	-321 / 3	0.08 (1)
F-G	-6173 / 0	-145.9	-145.9 0.61 (1)	3.06	E-O	-316 / 0	0.20 (1)
G-H	-6173 / 0	-145.9	-145.9 0.61 (1)	3.06	O-F	-692 / 0	0.18 (1)
H-I	-4967 / 0	-145.9	-145.9 0.52 (1)	3.47	O-H	0 / 1542	0.38 (1)
I-J	-3201 / 0	-77.4	-77.4 0.36 (1)	3.58	N-H	-1726 / 0	0.45 (1)
J-K	0 / 32	-77.4	-77.4 0.12 (1)	10.00	N-I	0 / 3079	0.76 (1)
T-B	-2587 / 0	0.0	0.0 0.29 (1)	5.28	M-I	-609 / 0	0.16 (1)
L-J	-2952 / 0	0.0	0.0 0.33 (1)	4.95	B-S	0 / 2311	0.57 (1)
					M-J	0 / 2671	0.66 (1)
T-S	0 / 0	-17.5	-17.5 0.04 (4)	10.00			
S-R	0 / 2193	-17.5	-17.5 0.35 (1)	10.00			
R-U	0 / 4718	-17.5	-17.5 0.96 (1)	10.00			
U-Q	0 / 4718	-17.5	-17.5 0.96 (1)	10.00			
Q-P	0 / 6420	-33.0	-33.0 0.97 (1)	10.00			
P-O	0 / 6420	-33.0	-33.0 0.97 (1)	10.00			
O-N	0 / 4967	-33.0	-33.0 0.76 (1)	10.00			
N-M	0 / 2537	-33.0	-33.0 0.38 (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
I	27-5-11	-205	-205	--	FRONT	VERT	TOTAL
U	12-4-12	-987	-987	--	FRONT	VERT	TOTAL

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 = 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.
LOADS APPLIED TO FIRST 18-0-0 OF SPAN
MEASURED FROM THE RIGHT.

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

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 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 (0.28")
ALLOWABLE DEFL.(TL) = L/360 (1.03")
CALCULATED VERT. DEFL.(TL) = L/749 (0.50")

CSI: TC=0.61/1.00 (F-H); BC=0.97/1.00 (O-Q); 1)
WB=0.79/1.00 (C-R); 1), SSI=0.60/1.00 (Q-R); 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

CONTINUED ON PAGE 2



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HANGERS NOTES

1) SPECIAL HANGER(S) OR CONNECTION(S) REQUIRED TO SUPPORT CONCENTRATED LOAD(S) 204.6 lbs FACTORED DOWN AT 27'-5-11" ON TOP CHORD, AND 987.5 lbs FACTORED DOWN AT 12'-4-12" ON BOTTOM CHORD. DESIGN FOR UNSPECIFIED CONNECTION(S) IS DELEGATED TO THE BUILDING DESIGNER.

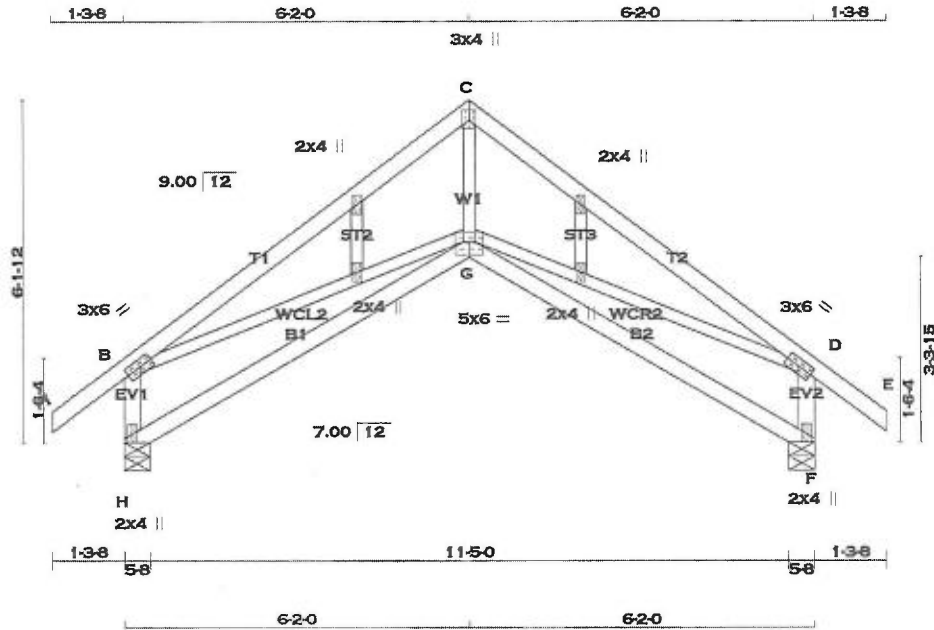
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (I) (INPUT = 0.90)
JSI METAL= 0.83 (P) (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.



SCALE = 1:39.5

TOTAL WEIGHT = 55 lb [M][F]

LUMBER	N. L. G. A. RULES	CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4 DRY	No.2	SPF		
C - E	2x4 DRY	No.2	SPF		
H - B	2x4 DRY	No.2	SPF		
F - D	2x4 DRY	No.2	SPF		
H - G	2x4 DRY	No.2	SPF		
G - F	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-t	MT20	3.0	6.0	1.50	2.75
C	TTW+p	MT20	3.0	4.0	2.25	1.50
D	TMVW-t	MT20	3.0	6.0	1.50	2.75
F	BMV1+p	MT20	2.0	4.0	Edge	
G	BBWWV+p	MT20	5.0	6.0	2.75	3.00
H	BMV1+p	MT20	2.0	4.0	Edge	
I, J, K, L						
I	NP+w	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

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

UNFACTORED 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		FACTORED		WEBS		MAX. FACTORED	
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	CS1 (LC)	MAX. UNBRAC LENGTH	MEMB.	FORCE (LBS)	MAX. CS1 (LC)
FR-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
 - 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 (0.41")
 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 (PSI)	SECTION (PLI)
MT20	618	354	1667
	822	2284	1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

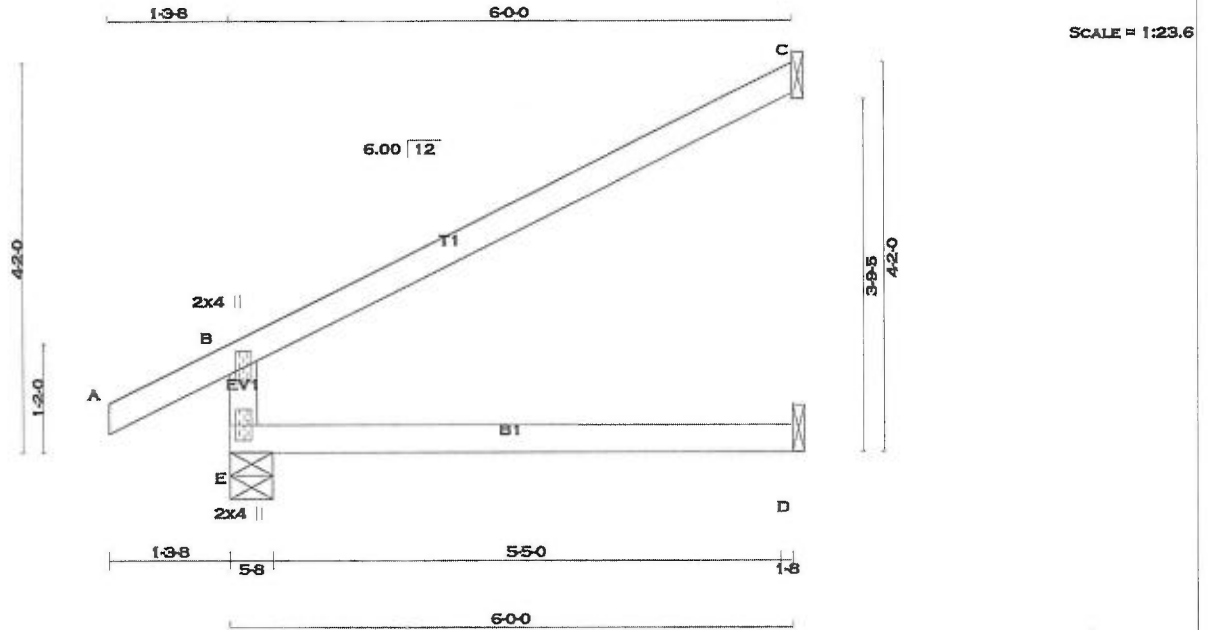
JSI GRIP= 0.89 (C) (INPUT = 0.90)
 JSI METAL= 0.28 (D) (INPUT = 1.00)



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TOTAL WEIGHT = 24 X 17 = 410 lb [M]

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

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

BEARINGS		FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG		REQRD BRG	
JT		VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	
B	EV1	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

JT	1ST LCASE	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)	MAX LC1 MAX CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX LC1 MAX CSI (LC)	
FR-TO		FROM TO		FR-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	-28 / 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) , SSI=0.20/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 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 (PSI)	SECTION (PLI)
MT20	618	354	1657
	822	2284	1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

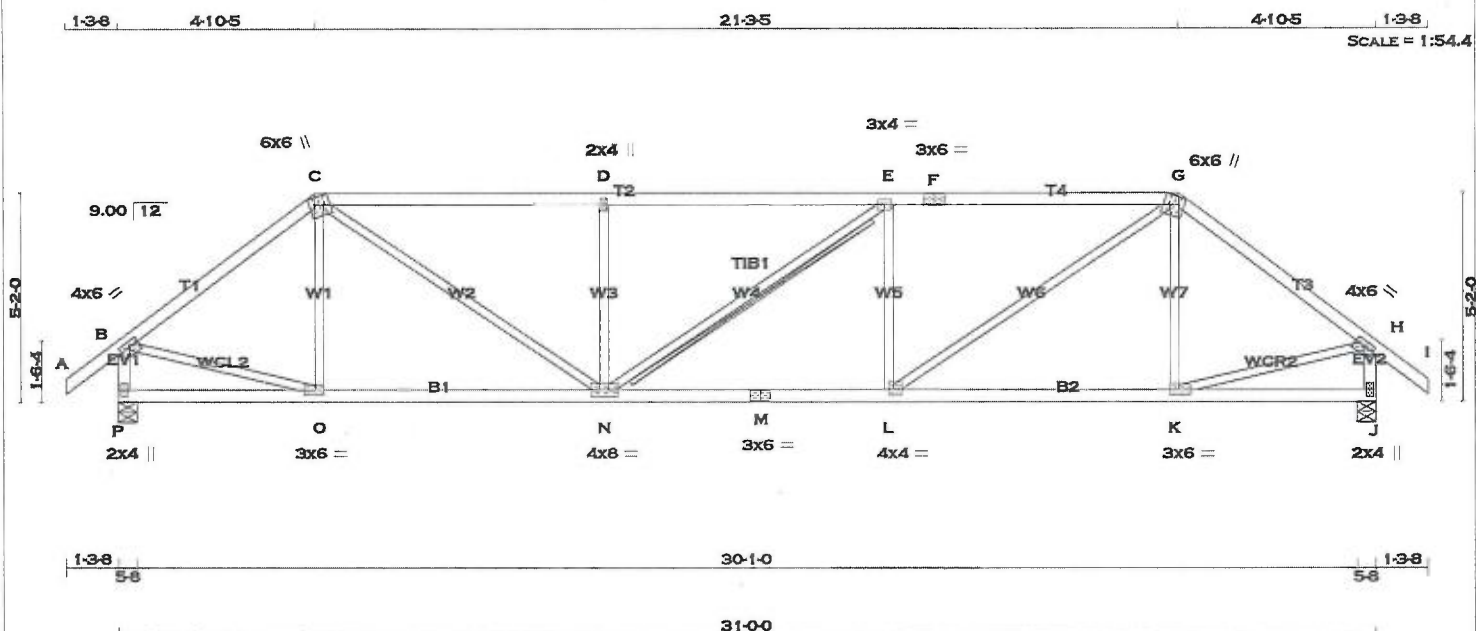
JSI GRIP= 0.23 (B) (INPUT = 0.90)
JSI METAL= 0.09 (B) (INPUT = 1.00)



September 14, 2018



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TOTAL WEIGHT = 2 X 123 = 246 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
F - G	2x4	DRY	No.2	SPF
G - J	2x4	DRY	No.2	SPF
J - L	2x4	DRY	No.2	SPF
L - 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	TMVW+m	MT20	6.0	6.0	Edge 4.25
D	TMW+w	MT20	2.0	4.0	
E	TMVW-t	MT20	3.0	4.0	
F	TS-t	MT20	3.0	6.0	
G	TMVW+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

BUILDING BEARINGS

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

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	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				
MAX. FACTORED		FACTORED			MAX. FACTORED				
MEMB.	FORCE	VERT. LOAD	LC1	MAX	MAX.	MEMB.	FORCE	MAX	
	(LBS)	(PLF)	CSI (LC)	(LC)	UNBRAC		(LBS)	CSI (LC)	
FR-TO		FROM	TO		LENGTH	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				



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CONTAINS SPECIFICATIONS AND CRITERIA USED
IN THE DESIGN OF THIS COMPONENT.

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
- 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 (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) , SSI=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.

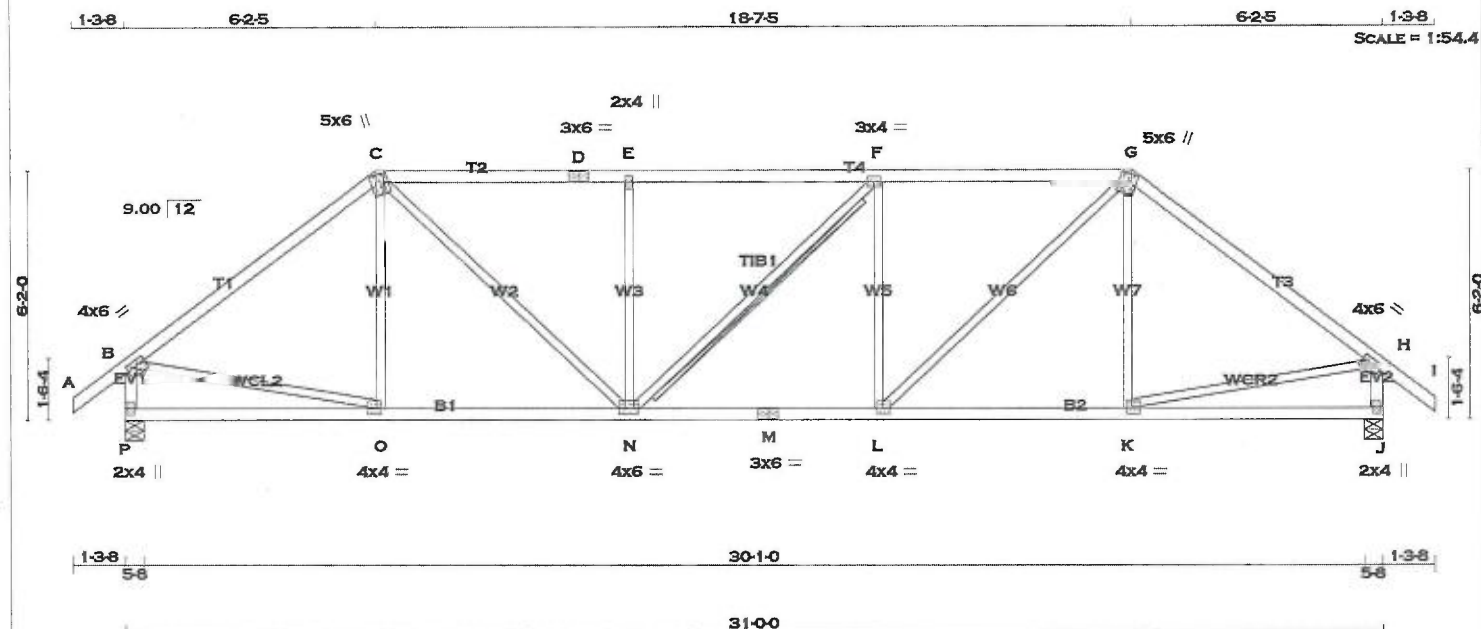
NAIL VALUES

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



LUMBER
 N. L. G. A. RULES
 CHORDS SIZE LUMBER DESCR.

A - C	2x4	DRY	No.2	SPF
C - D	2x4	DRY	No.2	SPF
D - 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	5.0	6.0	2.00	1.50
D	TS-t	MT20	3.0	6.0		
E	TMVW+w	MT20	2.0	4.0		
F	TMVW-t	MT20	3.0	4.0		
G	TTWW+m	MT20	5.0	6.0	2.00	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	4.0	4.0	1.75	1.50
L	BMVW-t	MT20	4.0	4.0	2.00	1.75
M	BS-t	MT20	3.0	6.0		
N	BMVW-w-t	MT20	4.0	6.0	1.75	2.00
O	BMVW-t	MT20	4.0	4.0	1.75	1.50
P	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

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							
	1ST LCASE	MAX/MIN. COMPONENT REACTIONS					
JT	COMBINED	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 = 4.30 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-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 VERT. LOAD (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED VERT. LOAD (LC)	MAX. FACTORED VERT. LOAD (LC)

FR-TO	FROM	TO	MAX. FACTORED VERT. LOAD (LC)	MAX. FACTORED VERT. LOAD (LC)	FR-TO	FROM	TO	MAX. FACTORED VERT. LOAD (LC)	MAX. FACTORED VERT. LOAD (LC)
A-B	0/32	-77.4	-77.4	0.11 (1)	10.00	O-C	-114/66	0.07 (1)	0.20 (1)
B-C	-1576/0	-77.4	-77.4	0.68 (1)	4.46	C-N	0/907	0.20 (1)	0.31 (1)
C-D	-1919/0	-77.4	-77.4	0.52 (1)	4.32	N-F	-517/0	0.31 (1)	0.00 (1)
D-E	-1919/0	-77.4	-77.4	0.52 (1)	4.32	F-G	-519/0	0.31 (1)	0.20 (1)
E-F	-1919/0	-77.4	-77.4	0.52 (1)	4.30	L-G	0/910	0.20 (1)	0.07 (1)
F-G	-1920/0	-77.4	-77.4	0.53 (1)	4.30	K-G	-115/66	0.07 (1)	0.29 (1)
G-H	-1576/0	-77.4	-77.4	0.68 (1)	4.46	B-O	0/1282	0.29 (1)	0.29 (1)
H-I	0/32	-77.4	-77.4	0.11 (1)	10.00	K-H	0/1281	0.29 (1)	
P-B	-1533/0	0.0	0.0	0.16 (1)	6.64				
J-H	-1533/0	0.0	0.0	0.16 (1)	6.65				
P-O	0/0	-17.5	-17.5	0.17 (4)	10.00				
O-N	0/1257	-17.5	-17.5	0.30 (1)	10.00				
N-M	0/1920	-17.5	-17.5	0.37 (1)	10.00				
M-L	0/1920	-17.5	-17.5	0.37 (1)	10.00				
L-K	0/1257	-17.5	-17.5	0.29 (1)	10.00				
K-J	0/0	-17.5	-17.5	0.16 (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, 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 (0.09")
 ALLOWABLE DEFL.(TL)= L/360 (1.03")
 CALCULATED VERT. DEFL.(TL) = L/999 (0.17")

CSI: TC=0.68/1.00 (B-C:1), BC=0.37/1.00 (L-N:1), WB=0.31/1.00 (F-L:1), SSI=0.22/1.00 (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 = 0.50

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

NAIL VALUES

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

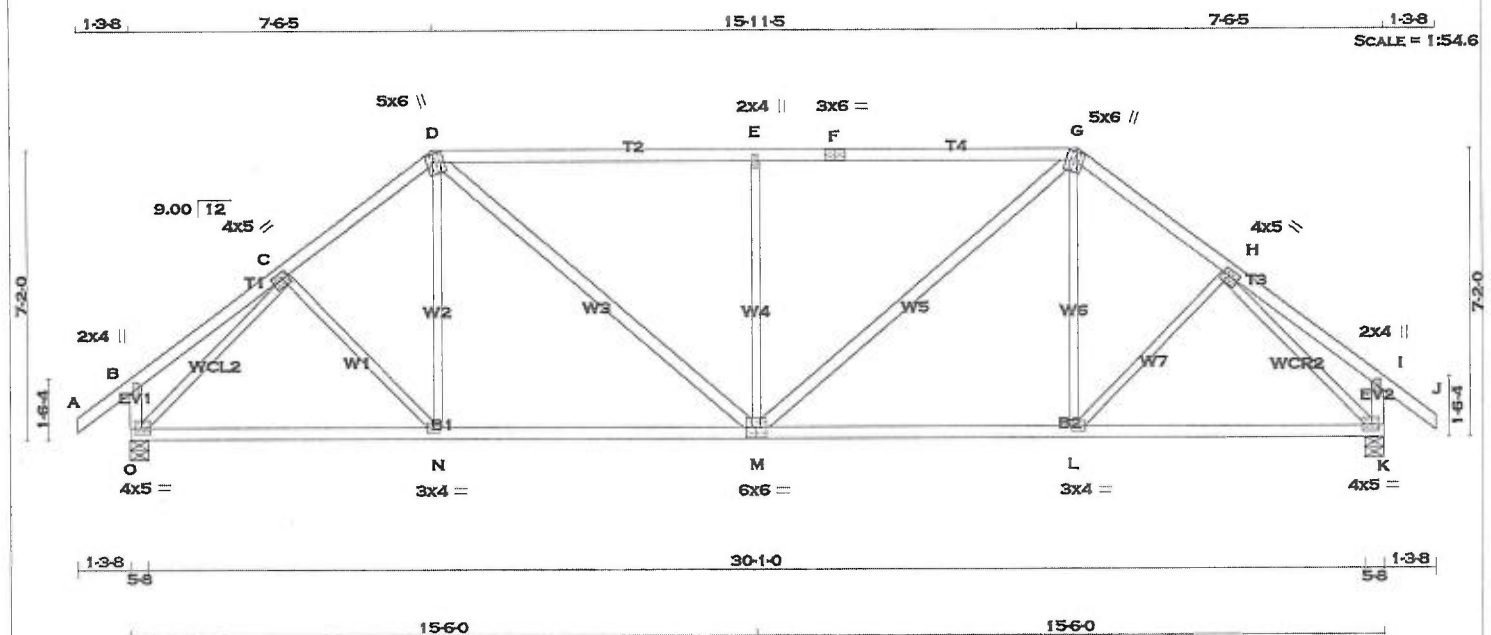
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (G) (INPUT= 0.90)
 JSI METAL= 0.56 (M) (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 = 2 X 138 = 275 lb

LUMBER		N. L. G. A. RULES		LUMBER		DESCR	
CHORDS	SIZE						
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	TMV+p	MT20	2.0	4.0		
C	MTWW-t	MT20	4.0	5.0	1.75	2.00
D	TTWW+m	MT20	5.0	6.0	2.25	1.75
E	TMW+w	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	MTWW-t	MT20	4.0	5.0	1.75	2.00
I	TMV+p	MT20	2.0	4.0		
K	BMVW-1-t	MT20	4.0	5.0	1.75	2.25
L	BMVW-t	MT20	3.0	4.0		
M	BSVWWV-I	MT20	6.0	6.0	3.25	3.00
N	BMVW-t	MT20	3.0	4.0		
O	BMVW-1-t	MT20	4.0	5.0	1.75	2.25

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								REQRD
FACTORED GROSS REACTION			MAXIMUM FACTORED GROSS REACTION			INPUT BRG	REQRD BRG	
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	
K	1577	0	1577	0	0	5-8	1-13	
O	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)	LC1 MAX 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 / 135 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	-1760 / 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 (M-N:4)
WB=0.87/1.00 (H-K:1), SSI=0.30/1.00 (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.

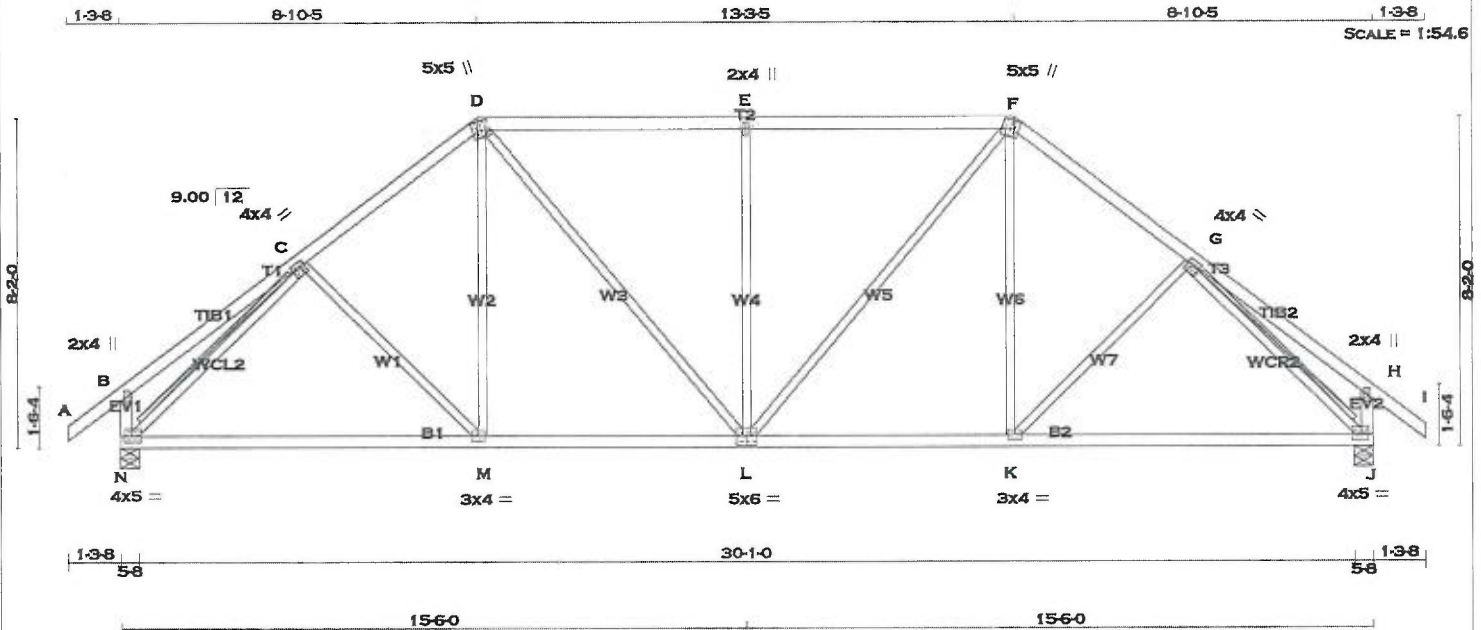
JSI GRIP= 0.89 (C) (INPUT = 0.90)
JSI METAL= 0.53 (H) (INPUT = 1.00)



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.**



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

DRY: SEASONED LUMBER.

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMV+p	MT20	2.0	4.0	
C	TMWW-t	MT20	4.0	4.0	1.50 1.50
D	TTWW+m	MT20	5.0	5.0	2.25 1.50
E	TMV+w	MT20	2.0	4.0	
F	TTWW+m	MT20	5.0	5.0	2.25 1.50
G	TMWW-t	MT20	4.0	4.0	1.50 1.50
H	TMV+p	MT20	2.0	4.0	
J	BMVW1-t	MT20	4.0	5.0	1.75 2.25
K	BMWW-t	MT20	3.0	4.0	
L	BSWWW-t	MT20	5.0	6.0	3.00 3.00
M	BMWW-t	MT20	3.0	4.0	
N	BMVW1-t	MT20	4.0	5.0	1.75 2.25

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		FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQD BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT
N	1577	0	1577	0	5-8
J	1577	0	1577	0	5-8

UNFACTORED REACTIONS		1ST LCASE	MAX./MIN. COMPONENT REACTIONS
JT	COMBINED	SNOW	LIVE
N	1104	786 / 0	0 / 0
J	1104	786 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.79 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

2x4 DRY SPF No.2 T-BRACE AT C-N, G-J

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS		MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED VERT. LOAD (PLF)	MAX. FACTORED VERT. LOAD (PLF)	MAX. FACTORED VERT. LOAD (PLF)	MAX. FACTORED VERT. LOAD (PLF)	MAX. FACTORED VERT. LOAD (PLF)	MAX. FACTORED VERT. LOAD (PLF)
MEMB.	FR-TO	FORCE (LBS)	VERT. LOAD (PLF)	VERT. LOAD (PLF)	VERT. LOAD (PLF)	VERT. LOAD (PLF)	VERT. LOAD (PLF)	VERT. LOAD (PLF)	VERT. LOAD (PLF)
A-B	0 / 32	-77.4	-77.4	0.11 (1)	10.00	C-M	-71 / 38	0.05 (1)	
B-C	0 / 23	-77.4	-77.4	0.24 (1)	10.00	M-D	0 / 216	0.06 (4)	
C-D	-1525 / 0	-77.4	-77.4	0.22 (1)	5.12	D-L	0 / 466	0.10 (1)	
D-E	-1502 / 0	-77.4	-77.4	0.48 (1)	4.79	L-E	-630 / 0	0.82 (1)	
E-F	-1502 / 0	-77.4	-77.4	0.48 (1)	4.79	F-G	0 / 466	0.10 (1)	
F-G	-1525 / 0	-77.4	-77.4	0.22 (1)	5.12	G-H	0 / 216	0.06 (4)	
G-H	0 / 23	-77.4	-77.4	0.24 (1)	10.00	H-I	-71 / 38	0.05 (1)	
H-I	0 / 32	-77.4	-77.4	0.11 (1)	10.00	I-J	-1785 / 0	0.53 (1)	
N-B	-238 / 0	0.0	0.0	0.02 (1)	7.81	J-K	-1785 / 0	0.53 (1)	
J-H	-238 / 0	0.0	0.0	0.02 (1)	7.81				
N-M	0 / 1249	-17.5	-17.5	0.40 (4)	10.00				
M-L	0 / 1202	-17.5	-17.5	0.40 (4)	10.00				
L-K	0 / 1202	-17.5	-17.5	0.40 (4)	10.00				
K-J	0 / 1249	-17.5	-17.5	0.40 (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 (0.20")

CSI: TC=0.48/1.00 (D-E:1), BC=0.40/1.00 (L-M:4), WB=0.82/1.00 (E-L:1), SSI=0.25/1.00 (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.

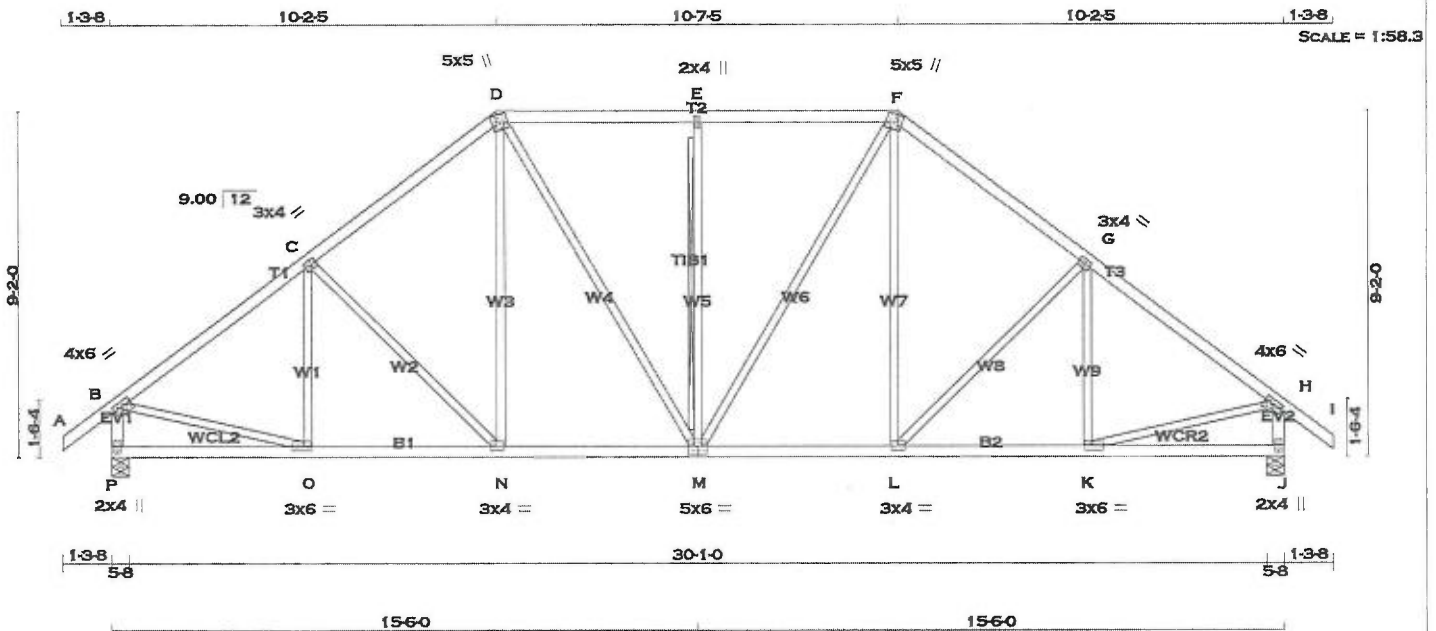
JSI GRIP= 0.89 (C) (INPUT = 0.90)
JSI METAL= 0.66 (C) (INPUT = 1.00)



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.



LUMBER
 N. L. G. A. RULES
 CHORDS SIZE LUMBER DESCR. SPF

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 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	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-w	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	BSVWV-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 MITEK M1120 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	REORD BRG
P	1577 0	1577 0	5-8	2-11
J	1577 0	1577 0	5-8	2-11

UNFACTORED REACTIONS

JT	COMBINED	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 = 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)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED VERT. LOAD (LBS)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED VERT. LOAD (LBS)	MAX. FACTORED VERT. LOAD (LBS)
FR-TO		FROM TO	CS1 (LC)	FR-TO			
A-B	0 / 32	-77.4 -77.4	0.11 (1)	10.00	O-C	-202 / 25	0.09 (1)
B-C	-1602 / 0	-77.4 -77.4	0.30 (1)	4.93	C-N	-235 / 0	0.24 (1)
C-D	-1453 / 0	-77.4 -77.4	0.29 (1)	5.13	N-D	0 / 256	0.06 (1)
D-E	-1317 / 0	-77.4 -77.4	0.30 (1)	5.30	D-M	0 / 344	0.08 (1)
E-F	-1317 / 0	-77.4 -77.4	0.30 (1)	5.30	M-E	-499 / 0	0.31 (1)
F-G	-1453 / 0	-77.4 -77.4	0.29 (1)	5.13	M-F	0 / 344	0.08 (1)
G-H	-1602 / 0	-77.4 -77.4	0.30 (1)	4.93	L-F	0 / 256	0.06 (1)
H-I	0 / 32	-77.4 -77.4	0.11 (1)	10.00	L-G	-235 / 0	0.24 (1)
P-B	-1538 / 0	0.0 0.0	0.16 (1)	6.64	K-G	-202 / 25	0.09 (1)
J-H	-1538 / 0	0.0 0.0	0.16 (1)	6.64	B-O	0 / 1337	0.30 (1)
					K-H	0 / 1337	0.30 (1)
P-O	0 / 0	-17.5 -17.5	0.11 (4)	10.00			
O-N	0 / 1304	-17.5 -17.5	0.26 (1)	10.00			
N-M	0 / 1141	-17.5 -17.5	0.23 (1)	10.00			
M-L	0 / 1141	-17.5 -17.5	0.23 (1)	10.00			
L-K	0 / 1304	-17.5 -17.5	0.26 (1)	10.00			
K-J	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

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 (N-O:1), WB=0.31/1.00 (E-M:1), SSI=0.20/1.00 (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 = 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.

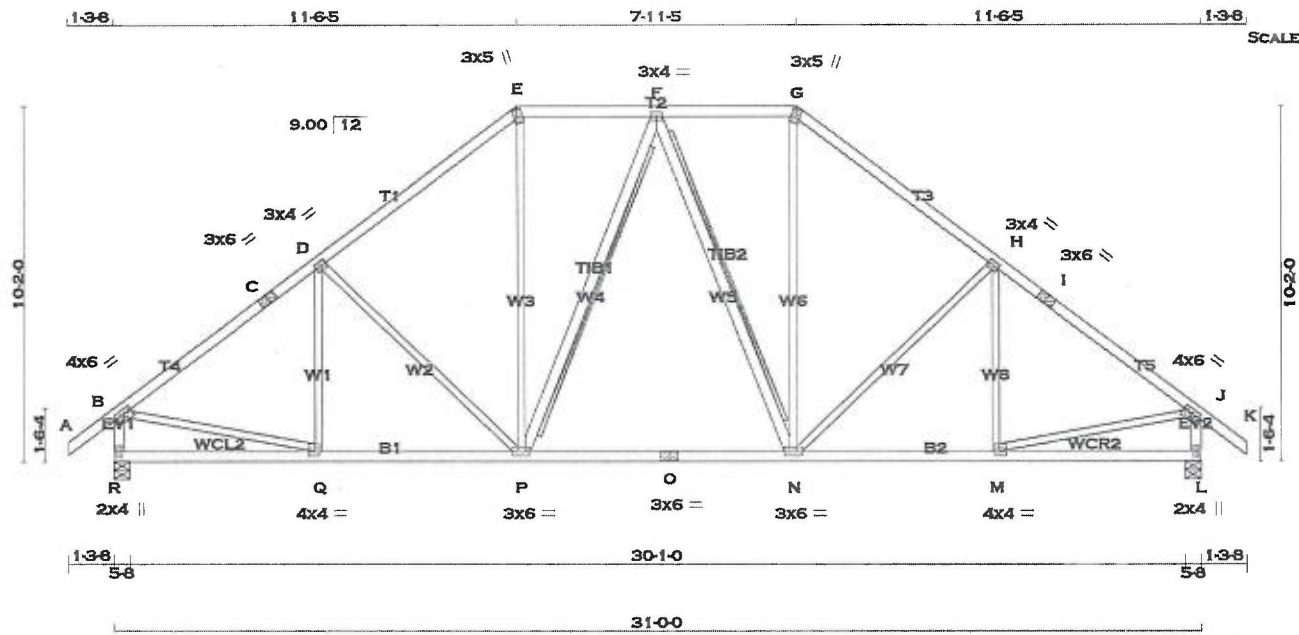
JSI GRIP= 0.83 (O) (INPUT = 0.90)
 JSI METAL= 0.45 (B) (INPUT = 1.00)



September 14, 2018



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TOTAL WEIGHT = 2 X 153 = 307 lb
[MIF]

LUMBER		RULES		LUMBER	DESCR.
CHORDS	SIZE				
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	TMVW-t	MT20	3.0	4.0	1.50	1.50
E	TTW+m	MT20	3.0	5.0	Edge	1.25
F	TMVW-t	MT20	3.0	4.0		
G	TTW+m	MT20	3.0	5.0	Edge	1.25
H	TMVW-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	BMVW-t	MT20	4.0	4.0	1.50	1.50
N	BMVW-t	MT20	3.0	6.0		
O	BS-t	MT20	3.0	6.0		
P	BMVW-t	MT20	3.0	6.0		
Q	BMVW-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 MI20 WITH TEE-LOK TL20 PLATES IS ALLOWED.

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

BEARINGS		FACTORED		MAXIMUM FACTORED		INPUT		REQRD	
JT	GROSS REACTION	VERT	HORZ	GROSS REACTION	DOWN	UP	IN-SX	BRG	IN-SX
R	1577	0	0	1577	0	0	5-8	2-11	
L	1577	0	0	1577	0	0	5-8	2-11	

UNFACTORED REACTIONS		1ST LCASE		MAX/MIN, COMPONENT REACTIONS	
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND
R	1104	786 / 0	0 / 0	0 / 0	318 / 0
L	1104	786 / 0	0 / 0	0 / 0	318 / 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		FACTORED		MEMB.		WEBS	
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	CS (LC)	MAX. FORCE (LBS)	MAX. CS (LC)	MEMB.	FORCE (LBS)
FR-TO		FROM TO		LENGTH		FR-TO	
A-B	0 / 32	-77.4 -77.4	0.11 (1)	10.00		Q-D	-163 / 42
B-C	-1610 / 0	-77.4 -77.4	0.40 (1)	4.81		D-P	-319 / 0
C-D	-1610 / 0	-77.4 -77.4	0.40 (1)	4.81		P-E	0 / 529
D-E	-1391 / 0	-77.4 -77.4	0.37 (1)	5.11		F-F	-197 / 0
E-F	-1090 / 0	-77.4 -77.4	0.16 (1)	5.88		F-N	-197 / 0
F-G	-1090 / 0	-77.4 -77.4	0.16 (1)	5.88		N-G	0 / 529
G-H	-1391 / 0	-77.4 -77.4	0.37 (1)	5.11		H-H	-319 / 0
H-I	-1610 / 0	-77.4 -77.4	0.40 (1)	4.81		M-H	-163 / 42
I-J	-1610 / 0	-77.4 -77.4	0.40 (1)	4.81		B-Q	0 / 1340
J-K	0 / 32	-77.4 -77.4	0.11 (1)	10.00		M-J	0 / 1340
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/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 (P-Q: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)	(PSI)	(PLI)	(PSI)	(PLI)
MAX	MIN	MAX	MIN	MAX	MIN
MT20	618	354	1667	822	2284

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

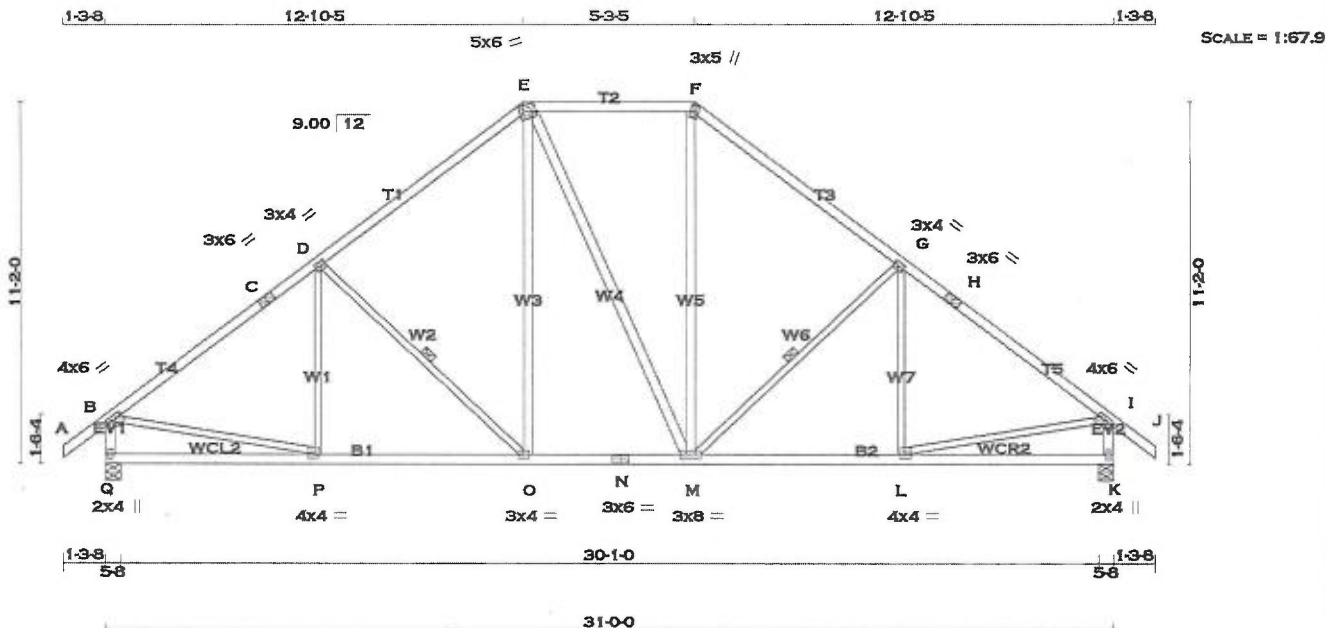
JSI GRIP= 0.88 (P) (INPUT = 0.90)
JSI METAL= 0.49 (Q) (INPUT = 1.00)



September 14, 2018



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TOTAL WEIGHT = 4 X 156 = 622 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	
J - K	2x4	DRY	No.2	SPF	
K - L	2x4	DRY	No.2	SPF	
L - M	2x4	DRY	No.2	SPF	
M - 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	TMVW-t	MT20	3.0	4.0	1.50	1.50
E	TTWW-m	MT20	5.0	6.0	2.00	1.50
F	TTWW-m	MT20	3.0	5.0	Edge	1.25
G	TMVW-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	BMVW-t	MT20	4.0	4.0	1.50	1.50
M	BMVW-t	MT20	3.0	8.0		
N	BS-t	MT20	3.0	6.0		
O	BMVW-t	MT20	3.0	4.0		
P	BMVW-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 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
	VERT	HORZ	DOWN	HORZ
JT	1577	0	1577	0
Q	1577	0	1577	0
K	1577	0	1577	0

UNFACTORED REACTIONS

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

MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	FACTORED HORIZ. LOAD (PLF)	MAX. UNBRACED LENGTH (FT)	MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED HORIZ. LOAD (PLF)
FR-TO					FR-TO		
A-B	0 / 32	-77.4	-77.4	0.11 (1)	10.00	P-D	-112 / 76
B-C	-1614 / 0	-77.4	-77.4	0.51 (1)	4.66	D-O	-414 / 0
C-D	-1614 / 0	-77.4	-77.4	0.51 (1)	4.66	O-E	0 / 379
D-E	-1312 / 0	-77.4	-77.4	0.47 (1)	5.09	E-M	0 / 0
E-F	-1024 / 0	-77.4	-77.4	0.29 (1)	5.84	M-F	0 / 380
F-G	-1312 / 0	-77.4	-77.4	0.47 (1)	5.09	G-H	-413 / 0
G-H	-1614 / 0	-77.4	-77.4	0.51 (1)	4.66	H-I	-113 / 76
H-I	-1614 / 0	-77.4	-77.4	0.51 (1)	4.66	I-J	0 / 1342
I-J	0 / 32	-77.4	-77.4	0.11 (1)	10.00	J-K	0 / 1342
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, 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 (0.11")

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 (PSI)	SECTION (PLI)
MT20	618	354	1667
	822	2284	1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

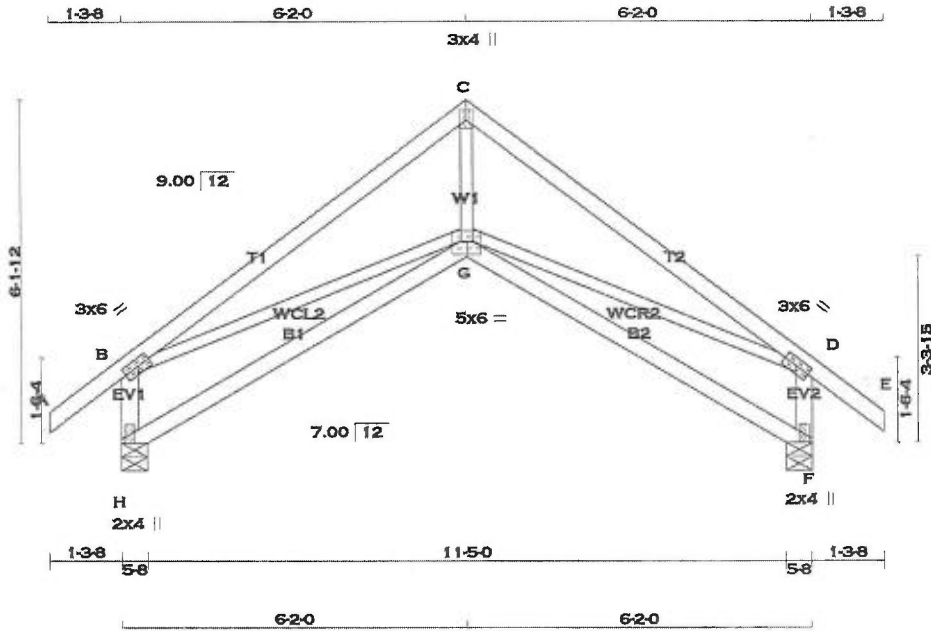
JSI GRIP= 0.88 (F) (INPUT = 0.90)
 JSI METAL= 0.49 (P) (INPUT = 1.00)



September 14, 2018



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SCALE = 1:39.5

TOTAL WEIGHT = 53 lb [M]F

LUMBER	N. L. G. A. RULES	CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY	No.2	SPF	
C - E	2x4	DRY	No.2	SPF	
H - B	2x4	DRY	No.2	SPF	
F - D	2x4	DRY	No.2	SPF	
H - G	2x4	DRY	No.2	SPF	
G - F	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	3.0	6.0	1.50	2.75
C	TTW+p	MT20	3.0	4.0	2.25	1.50
D	TMVW-t	MT20	3.0	6.0	1.50	2.75
F	BMV1+p	MT20	2.0	4.0	Edge	
G	BBWW-p	MT20	5.0	6.0	2.75	3.00
H	BMV1+p	MT20	2.0	4.0	Edge	

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

A SIZE FOR SIZE SUBSTITUTION OF MITEK MI120 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	REQD BRG
	VERT	HORZ	DOWN	HORZ		
JT	692	0	692	0	5-8	1-8
H	692	0	692	0	5-8	1-8

UNFACTORED REACTIONS

JT	1ST LCASE		MAX./MIN. COMPONENT REACTIONS				
	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)	LOAD LC1	MAX 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	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
 - 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 (0.41")
 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), 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 (PSI)	SECTION (PLI)
MT20	618	354	1667
	822	2284	1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

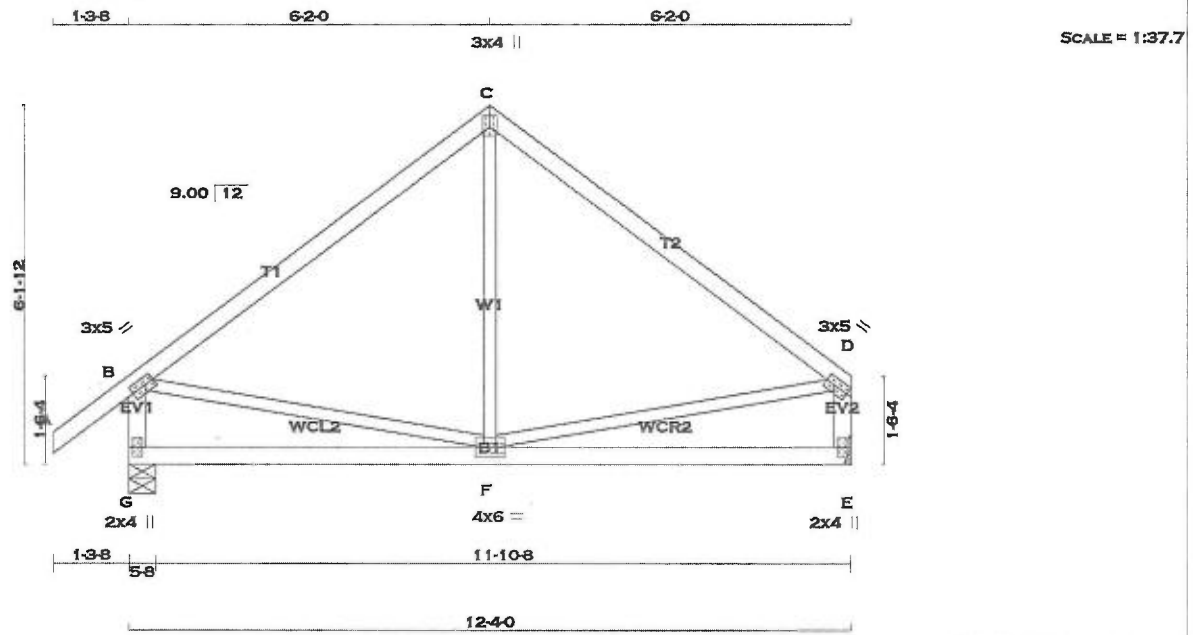
JSI GRIP= 0.89 (C) (INPUT = 0.90)
 JSI METAL= 0.28 (D) (INPUT = 1.00)



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.



LUMBER

N. L. G. A. RULES

CHORDS

SIZE

LUMBER

DESCR.

A - C

2x4

DRY

No.2

SPF

C - D

2x4

DRY

No.2

SPF

G - B

2x4

DRY

No.2

SPF

E - D

2x4

DRY

No.2

SPF

G - E

2x4

DRY

No.2

SPF

ALL WEBS

2x3

DRY

No.2

SPF

EXCEPT

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT

TYPE

PLATES

W

LEN

Y

X

B

TMVW-t

MT20

3.0

5.0

1.50

1.75

C

TTW+p

MT20

3.0

4.0

2.25

1.50

D

TMVW-t

MT20

3.0

5.0

1.50

Edge

E

BMV1+p

MT20

2.0

4.0

F

BMVWW-L

MT20

4.0

6.0

G

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

FACTORED

GROSS REACTION

DOWN

HORZ

UPLIFT

IN-SX

REQRD

BRG

BRG

IN-SX

JT

VERT

HORZ

DOWN

HORZ

UPLIFT

IN-SX

REQRD

BRG

BRG

IN-SX

G

692

0

692

0

0

5-8

1-8

MECHANICAL

E

585

0

585

0

0

MECHANICAL

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

UNFACTORED REACTIONS

1ST LCASE

MAX./MIN. COMPONENT REACTIONS

JT

COMBINED

SNOW

LIVE

PERM.LIVE

WIND

DEAD

SOIL

G

483

351 / 0

0 / 0

0 / 0

0 / 0

132 / 0

0 / 0

E

411

287 / 0

0 / 0

0 / 0

0 / 0

123 / 0

0 / 0

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

BRACING

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

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS

MEMB.

MAX. FACTORED FORCE (LBS)

FACTORED VERT. LOAD LC1 MAX. (PLF)

CSI (LC)

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

F-C

0 / 109

0.04 (4)

B-C

-404 / 0

-77.4

-77.4

0.38 (1)

6.25

B-F

0 / 330

0.07 (1)

C-D

-404 / 0

-77.4

-77.4

0.38 (1)

6.25

F-D

0 / 330

0.07 (1)

G-B

-650 / 0

0.0

0.0

0.07 (1)

7.81

E-D

-544 / 0

0.0

0.0

0.06 (1)

7.81

G-F

0 / 0

-17.5

-17.5

0.19 (4)

10.00

F-E

0 / 0

-17.5

-17.5

0.19 (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

- TCIP 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 (0.01")

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

CALCULATED VERT. DEFL.(TL) = L/ 999 (0.03")

CSI: TC=0.38/1.00 (C-D:1), BC=0.19/1.00 (F-G:4), WB=0.07/1.00 (B-F: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



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.

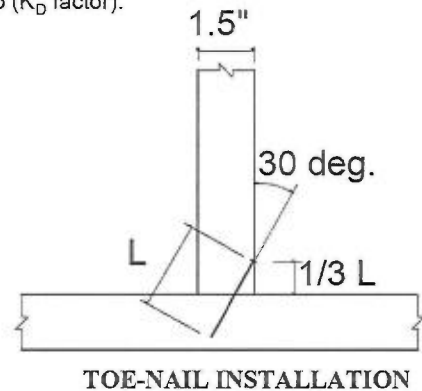
BEARING ANCHORAGE BY TOE-NAILS FOR LATERAL CAPACITY

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

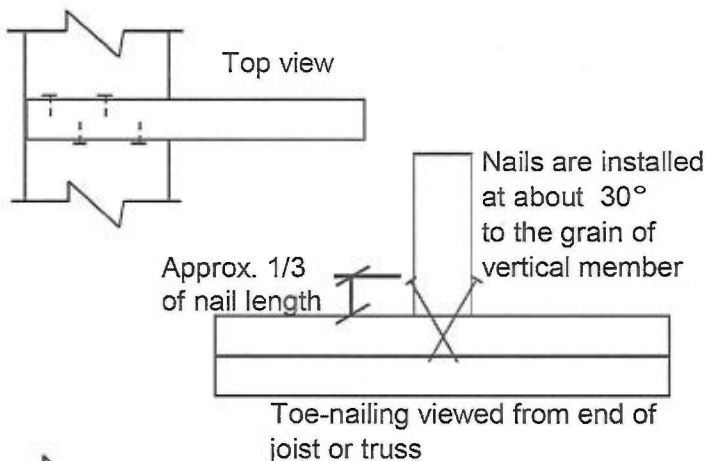
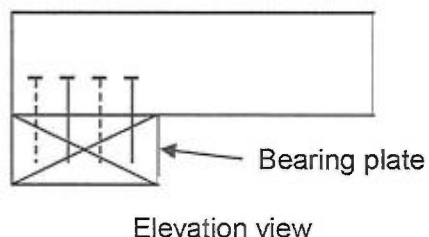
NAIL TYPE	LENGTH (IN)	DIAMETER (IN)	NAIL WITHDRAWAL CAPACITY (LB)	
			S-P-F	D. FIR
COMMON WIRE	3.00	0.144	30	42
	3.25	0.144	32	45
	3.50	0.160	38	52

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

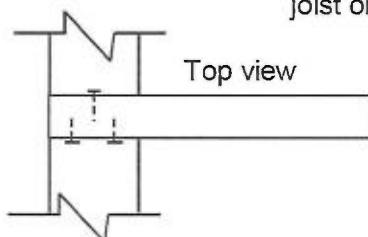
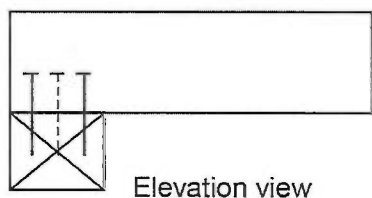
NOTES:

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