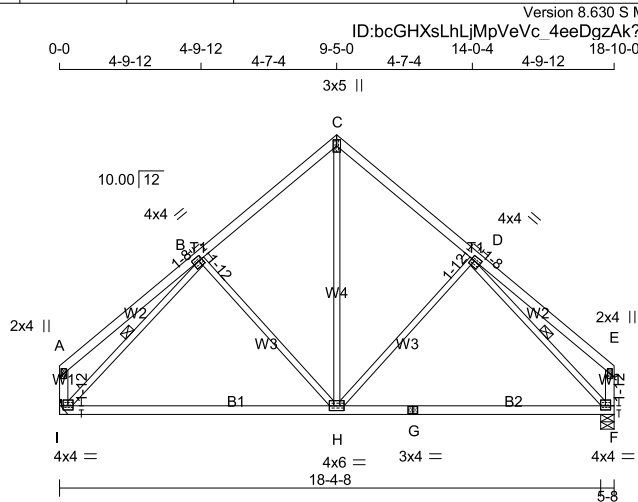


JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.																																																																																																								
IM0723-092	TRUSS NAME OF PERMIT PLANS Oct 30 2023  PER: CHIEF BUILDING OFFICIAL	2	1	TRUSS DESC.	MHP 23030																																																																																																								
Version 8.630 S Mar 22 2023 MiTek Industries, Inc. Fri Jul 14 07:34:08 2023 Page 1 ID:bcGHXsLhLiMpVeVc_4eeDgzAk?y-njxNNI06QuIYYzEGUDjkzE7UGt1cX4iJuaKZDJyyE9D 0-0 4-9-12 4-9-12 4-7-4 9-5-0 4-7-4 14-0-4 4-9-12 18-10-0 20-1-8 1-3-8 3x5 10.00 12 4x4 // 4x4 // 2x4 4x4 // 2x4 4x4 // 4x4 // 4x6 = 3x4 = 4x4 = 18-4-8 1-3-8 5-8 Scale = 1:78.2 TOTAL WEIGHT = 2 X 84 = 167 lb																																																																																																													
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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM0723-092	TRUSS NAME Oct 30 2023	1	1	TRUSS DESC.	MHP 23030

PER: 
CHIEF BUILDING OFFICIAL



Scale = 1:78.2

TOTAL WEIGHT = 82 lb

LUMBER

N. L. G. A. RULES	CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY	No.2	SPF
C - E	2x4	DRY	No.2	SPF
I - A	2x4	DRY	No.2	SPF
F - E	2x4	DRY	No.2	SPF
I - 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
A	TMV+p	MT20	2.0	4.0		
B	TMWW-t	MT20	4.0	4.0	1.75	1.50
C	TTW+p	MT20	3.0	5.0		
D	TMWW-t	MT20	4.0	4.0	1.75	1.50
E	TMV+p	MT20	2.0	4.0		
F	BMVW1-t	MT20	4.0	4.0	1.75	2.00
G	BS-t	MT20	3.0	4.0		
H	BMVWW-t	MT20	4.0	6.0		
I	BMVW1-t	MT20	4.0	4.0	1.75	2.00

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

	FACTORED	MAXIMUM FACTORED	INPUT	REQRD
GROSS REACTION	GROSS REACTION	BRG	BRG	
JT	VERT	HORZ	DOWN	UP
I	1296	0	1296	0
F	1296	0	1296	0

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

UNFACTORED REACTIONS

JT	1ST LCASE	MAX./MIN.	COMPONENT REACTIONS				
	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
I	906	656 / 0	0 / 0	0 / 0	0 / 0	250 / 0	0 / 0
F	906	656 / 0	0 / 0	0 / 0	0 / 0	250 / 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 = 5.90 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 B-I, D-F. DBS = 20-0-0 . CBF = 171 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)

C H O R D S				W E B S			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. CS1 (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CS1 (LC)	
FR-TO		FROM TO	LENGTH	FR-TO			
A-B	0 / 43	-119.4 -119.4	0.44 (1)	10.00	H-C	0 / 714	0.16 (1)
B-C	-938 / 0	-119.4 -119.4	0.35 (1)	5.90	H-D	-339 / 0	0.32 (1)
C-D	-938 / 0	-119.4 -119.4	0.35 (1)	5.90	B-H	-339 / 0	0.32 (1)
D-E	0 / 43	-119.4 -119.4	0.44 (1)	10.00	I-B	-1370 / 0	0.45 (1)
I-A	-212 / 0	0.0	0.02 (1)	7.81	D-F	-1370 / 0	0.45 (1)
F-E	-212 / 0	0.0	0.02 (1)	7.81			
I-H	0 / 916	-18.2 -18.2	0.52 (4)	10.00			
H-G	0 / 916	-18.2 -18.2	0.52 (4)	10.00			
G-F	0 / 916	-18.2 -18.2	0.52 (4)	10.00			

DESIGN CRITERIA**SPECIFIED LOADS:**

TOP CH.	LL	=	34.8	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.3	PSF
TOTAL LOAD	=	48.1	PSF	

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.63")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.03")
ALLOWABLE DEFL.(TL)= L/360 (0.63")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.18")

CSI: TC=0.44/0.97 (D-E:1) , BC=0.52/0.97 (F-H:4) ,
WB=0.45/0.97 (D-F:1) , SSI=0.21/1.00 (C-D:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (F) (INPUT = 0.90)
JSI METAL= 0.46 (B) (INPUT = 1.00)



JULY 14, 2023

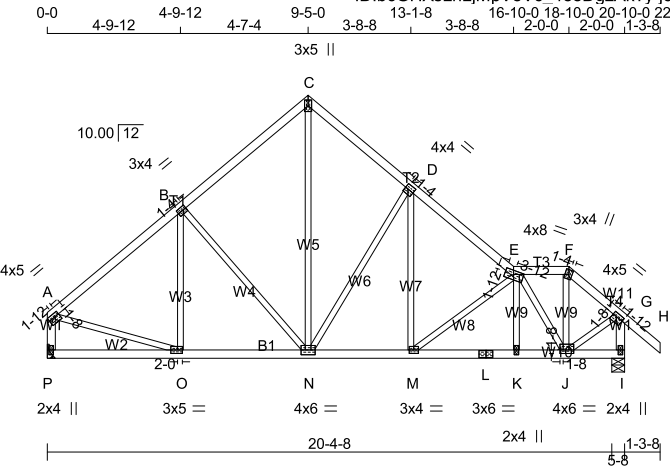
READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTES: TRUSSES. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM0723-092	TRUSS OF PERMIT PLANS Oct 30 2023  PER: CHIEF BUILDING OFFICIAL	1	1	TRUSS DESC.	MHP 23030

Version 8.630 S Mar 22 2023 MiTek Industries, Inc. Fri Jul 14 07:34:10 2023 Page 1
ID:bcGHXsLhLjMpVeVc.4eeDgzAk?y-i638oRSNw?GnHOebelC2fCrqhg?xOcLupglCyyE9B

Scale = 1:83.1



TOTAL WEIGHT = 103 lb [M][F]

LUMBER				DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER				DESIGN CRITERIA			
N. L. G. A. RULES				BEARINGS				SPECIFIED LOADS:			
CHORDS	SIZE	LUMBER	DESCR.	FACTORED	MAXIMUM FACTORED	INPUT	REQRD	TOP CH.	LL	=	34.8 PSF
A - C	2x4	DRY	No.2	GROSS REACTION	GROSS REACTION	BRG	BRG	DL	=	6.0 PSF	
C - E	2x4	DRY	No.2	JT VERT	DOWN	UPLIFT	IN-SX	BOT CH.	LL	=	0.0 PSF
E - F	2x4	DRY	No.2	P 1434	0	1434	0	DL	=	7.3 PSF	
F - H	2x4	DRY	No.2	I 1600	0	1600	0	TOTAL LOAD	=	48.1 PSF	
P - A	2x4	DRY	No.2	A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT P. MINIMUM BEARING LENGTH AT JOINT P = 1-9.				SPACING = 24.0 IN. C/C			
I - G	2x4	DRY	No.2					LOADING IN ALL FLAT SECTIONS BASED ON A SLOPE OF 2.00/12 MINIMUM			
P - L	2x4	DRY	No.2					THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015			
L - I	2x4	DRY	No.2					THIS DESIGN COMPLIES WITH:			
ALL WEBS	2x3	DRY	No.2					- PART 9 OF CBC 2018, NBC-2019AE			
EXCEPT								- PART 9 OF OBC 2012 (2019 AMENDMENT)			
								- CSA 086-14			
								- TPIC 2014			
								(55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD			
DRY: SEASONED LUMBER.								ALLOWABLE DEFL.(LL)= L/360 (0.69")			
								CALCULATED VERT. DEFL.(LL) = L/ 999 (0.05")			
								ALLOWABLE DEFL.(TL)= L/360 (0.69")			
								CALCULATED VERT. DEFL.(TL) = L/ 999 (0.09")			
								CSI: TC=0.37/0.97 (A-B:1) , BC=0.29/0.97 (K-M:1)			
								, WB=0.69/0.97 (D-N:1) , SSI=0.21/1.00 (A-B:1)			
								DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10			
								COMP=1.10 SHEAR=1.10 TENS=1.10			
								COMPANION LIVE LOAD FACTOR = 1.00			
								TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .			
								NAIL VALUES			
								PLATE GRIP(DRY) SHEAR SECTION			
								(PSI) (PLI) (PLI)			
								MAX MIN MAX MIN MAX MIN			
								MT20 650 371 1747 788 1987 1873			
								PLATE PLACEMENT TOL. = 0.250 inches			
								PLATE ROTATION TOL. = 5.0 Deg.			
								JSI GRIP= 0.90 (F) (INPUT = 0.90)			
								JSI METAL= 0.52 (E) (INPUT = 1.00)			

PLATES (table is in inches)									
JT	TYPE	PLATES	W	LEN	Y	X			
A	TMVW-t	MT20	4.0	5.0	1.50	1.75			
B	TMVW-t	MT20	3.0	4.0	1.50	1.25			
C	TTW+p	MT20	3.0	5.0					
D	TMVW-t	MT20	4.0	4.0	2.00	1.25			
E	TTWWW-m	MT20	4.0	8.0	1.75	3.75			
F	TTW+m	MT20	3.0	4.0	2.00	1.25			
G	TMVW-t	MT20	4.0	5.0	1.50	1.75			
I	BMV1+p	MT20	2.0	4.0					
J	BMVWW-t	MT20	4.0	6.0	1.50	1.50			
K	BMV+w	MT20	2.0	4.0					
L	BS-t	MT20	3.0	6.0					
M	BMVW-t	MT20	3.0	4.0					
N	BMVWW-t	MT20	4.0	6.0					
O	BMVW-t	MT20	3.0	5.0	1.50	2.00			
P	BMV1+p	MT20	2.0	4.0					

CHORDS									
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1	MAX	W E B S	MEMB.	MAX. FACTORED FORCE (LBS)	MAX	CS (LC)
FR-TO					LENGTH	FR-TO			
A-B	-1343 / 0	-119.4	-119.4	0.37 (1)	5.13	O-B	-194 / 32	0.09 (1)	
B-C	-1100 / 0	-119.4	-119.4	0.35 (1)	5.55	B-N	-386 / 0	0.36 (1)	
C-D	-1089 / 0	-119.4	-119.4	0.22 (1)	5.77	N-C	0 / 976	0.22 (1)	
D-E	-1502 / 0	-119.4	-119.4	0.23 (1)	5.09	N-D	-712 / 0	0.69 (1)	
E-F	-905 / 0	-119.4	-119.4	0.07 (1)	6.25	M-D	0 / 364	0.08 (1)	
F-G	-1161 / 0	-119.4	-119.4	0.08 (1)	5.81	M-E	-463 / 0	0.17 (1)	
G-H	0 / 53	-119.4	-119.4	0.16 (1)	10.00	K-E	0 / 56	0.02 (4)	
P-A	-1397 / 0	0.0	0.0	0.15 (1)	6.81	E-J	-1196 / 0	0.27 (1)	
I-G	-1584 / 0	0.0	0.0	0.17 (1)	6.48	J-F	0 / 510	0.11 (1)	
						A-O	0 / 1103	0.25 (1)	
						J-G	0 / 1044	0.23 (1)	
P-O	0 / 0	-18.2	-18.2	0.10 (4)	10.00				
O-N	0 / 1064	-18.2	-18.2	0.21 (1)	10.00				
N-M	0 / 1183	-18.2	-18.2	0.22 (1)	10.00				
M-L	0 / 1543	-18.2	-18.2	0.29 (1)	10.00				
L-K	0 / 1543	-18.2	-18.2	0.29 (1)	10.00				
K-J	0 / 1544	-18.2	-18.2	0.27 (1)	10.00				
J-I	0 / 0	-18.2	-18.2	0.02 (4)	10.00				



JULY 14, 2023

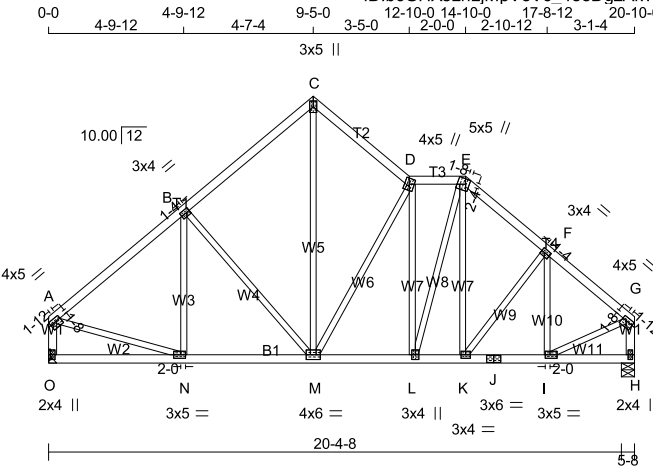
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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM0723-092	TRUSS OF PERMIT PLANS Oct 30 2023  PER: CHIEF BUILDING OFFICIAL	1	1	TRUSS DESC.	MHP 23030

Version 8.630 S Mar 22 2023 MiTek Industries, Inc. Fri Jul 14 07:34:11 2023 Page 1
ID:bcGHXsLhLjMpVeVc_4eeDgzAk?y-BldW?nS?ip77PRzq9LGRbt0a587kPXlaYZDqeyyE9A

Scale = 1:81.9



TOTAL WEIGHT = 108 lb [M]F

LUMBER				DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER				DESIGN CRITERIA			
N. L. G. A. RULES				BEARINGS				SPECIFIED LOADS:			
CHORDS	SIZE	LUMBER	DESCR.	FACTORED MAXIMUM FACTORED INPUT REQD				TOP CH. LL = 34.8 PSF			
A - C	2x4	DRY	No.2	GROSS REACTION GROSS REACTION BRG BRG				DL = 6.0 PSF			
C - D	2x4	DRY	No.2	JT VERT HORZ DOWN HORZ UPLIFT IN-SX IN-SX				BOT CH. LL = 0.0 PSF			
D - E	2x4	DRY	No.2	O 1434 0 1434 0 0 5-8 1-9				DL = 7.3 PSF			
E - G	2x4	DRY	No.2	H 1434 0 1434 0 0 5-8 1-9				TOTAL LOAD = 48.1 PSF			
O - A	2x4	DRY	No.2	A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT O. MINIMUM BEARING LENGTH AT JOINT O = 1-9.				SPACING = 24.0 IN. C/C			
H - G	2x4	DRY	No.2	UNFACTORED REACTIONS				LOADING IN ALL FLAT SECTIONS BASED ON A SLOPE OF 2.00/12 MINIMUM			
O - J	2x4	DRY	No.2	1ST LCASE MAX./MIN. COMPONENT REACTIONS				THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015			
J - H	2x4	DRY	No.2	JT COMBINED SNOW LIVE PERM.LIVE WIND DEAD SOIL				THIS DESIGN COMPLIES WITH:			
ALL WEBS EXCEPT	2x3	DRY	No.2	O 1002 725 / 0 0 / 0 0 / 0 277 / 0 0 / 0				- PART 9 OF BCBC 2018, NBC-2019AE			
DRY: SEASONED LUMBER.				H 1002 725 / 0 0 / 0 0 / 0 277 / 0 0 / 0				- PART 9 OF OBC 2012 (2019 AMENDMENT)			
				BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) H				- CSA 086-14			
				BRACING				- TPIC 2014			
				TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.13 FT.				(55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD			
				MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.				ALLOWABLE DEFL.(LL)= L/360 (0.69")			
				ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.				CALCULATED VERT. DEFL.(LL) = L/ 999 (0.04")			
				LOADING				ALLOWABLE DEFL.(TL)= L/360 (0.69")			
				TOTAL LOAD CASES: (4)				CALCULATED VERT. DEFL.(TL) = L/ 999 (0.07")			
				CHORDS				CSI: TC=0.37/0.97 (A-B:1), BC=0.22/0.97 (M-N:1)			
				MEMB. MAX. FACTORED FORCE (LBS)				, WB=0.63/0.97 (D-M:1), SSI=0.21/1.00 (A-B:1)			
				FACTORED VERT. LOAD LC1 MAX UNBRACED				DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10			
				FROM TO LENGTH FR-TO				COMP=1.10 SHEAR=1.10 TENS=1.10			
				A-B -1343 / 0 -119.4 -119.4 0.37 (1) 5.13 N-B -194 / 32 0.09 (1)				COMPANION LIVE LOAD FACTOR = 1.00			
				B-C -1100 / 0 -119.4 -119.4 0.35 (1) 5.55 B-M -387 / 0 0.36 (1)				TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .			
				C-D -1053 / 0 -119.4 -119.4 0.19 (1) 5.88 M-C 0 / 937 0.21 (1)				NAIL VALUES			
				D-E -1109 / 0 -119.4 -119.4 0.07 (1) 5.91 M-D -641 / 0 0.63 (1)				PLATE GRIP(DRY) SHEAR SECTION			
				E-F -1294 / 0 -119.4 -119.4 0.15 (1) 5.49 L-D -430 / 0 0.31 (1)				(PSI) (PLI) (PLI)			
				F-G -1284 / 0 -119.4 -119.4 0.15 (1) 5.51 L-E 0 / 479 0.11 (1)				MAX MIN MAX MIN MAX MIN			
				G-H -1397 / 0 0.0 0.0 0.15 (1) 6.81 K-E 0 / 106 0.02 (1)				MT20 650 371 1747 788 1987 1873			
				H-G -1407 / 0 0.0 0.0 0.15 (1) 6.79 K-F -60 / 0 0.02 (1)				PLATE PLACEMENT TOL. = 0.250 inches			
				O-N 0 / 0 -18.2 -18.2 0.10 (4) 10.00 I-F -369 / 0 0.10 (1)				PLATE ROTATION TOL. = 5.0 Deg.			
				N-M 0 / 1064 -18.2 -18.2 0.22 (1) 10.00 A-N 0 / 1103 0.25 (1)				JSI GRIP= 0.86 (N) (INPUT = 0.90)			
				M-L 0 / 1116 -18.2 -18.2 0.21 (1) 10.00 I-G 0 / 1091 0.25 (1)				JSI METAL= 0.44 (A) (INPUT = 1.00)			
				L-K 0 / 971 -18.2 -18.2 0.18 (1) 10.00							
				K-J 0 / 1006 -18.2 -18.2 0.18 (1) 10.00							
				J-I 0 / 1006 -18.2 -18.2 0.18 (1) 10.00							
				I-H 0 / 0 -18.2 -18.2 0.04 (4) 10.00							

PLATES (table is in inches)

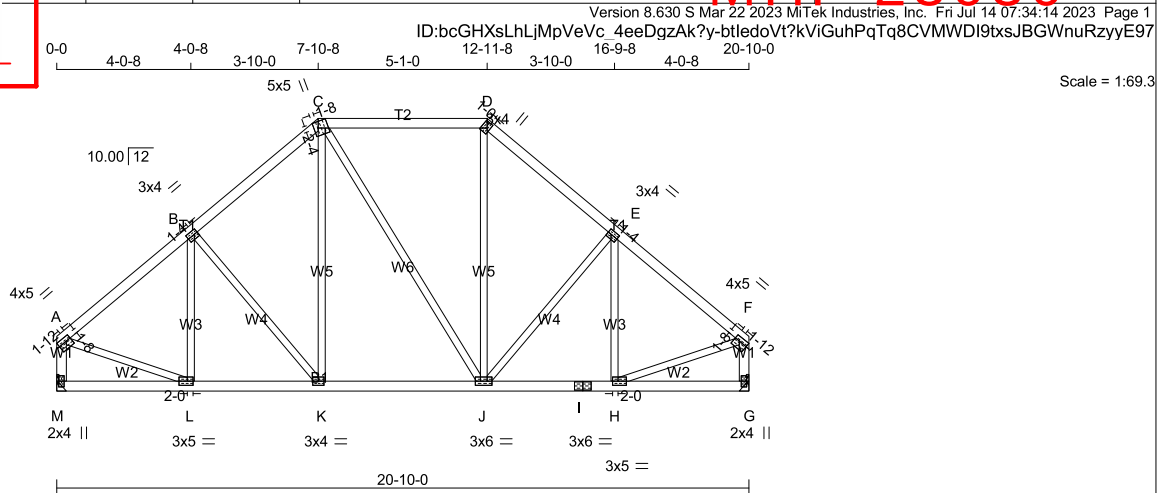
JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW-t	MT20	4.0	5.0	1.50	1.75
B	TMVW-t	MT20	3.0	4.0	1.50	1.25
C	TTW+p	MT20	3.0	5.0		
D	TTWW+m	MT20	4.0	5.0		
E	TTWW+m	MT20	5.0	5.0	2.25	1.50
F	TMVW-t	MT20	3.0	4.0	1.50	1.25
G	TMVW-t	MT20	4.0	5.0	1.50	1.75
H	BMV1+p	MT20	2.0	4.0		
I	BMVW-t	MT20	3.0	5.0	1.50	2.00
J	BS-t	MT20	3.0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

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LICENSED PROFESSIONAL ENGINEER
I.MATJJEVIC
100528832
PROVINCE OF ONTARIO
JULY 14, 2023

KOTT

PER: _____
CHIEF BUILDING OFFICIAL



Scale = 1:69.3

TOTAL WEIGHT = 99 lb

LUMBER

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

ALL WEBS EXCEPT	2x3	DRY
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DRY: SEASONED LUMBER.

PLATES (table is in inches)

J	TYPE	PLATES	W	LEN	Y	X
A	TMWV-t	MT20	4.0	5.0	1.50	1.75
B	TMWV-t	MT20	3.0	4.0	1.50	1.25
C	TTWV+m	MT20	5.0	5.0	2.25	1.50
D	TTW+h	MT20	3.0	4.0	2.00	1.00
E	TMWV-t	MT20	3.0	4.0	1.50	1.25
F	TMWV-t	MT20	4.0	5.0	1.50	1.75
G	BMV1+p	MT20	2.0	4.0		
H	BMWVW-t	MT20	3.0	5.0	1.50	2.00
I	BS-t	MT20	3.0	6.0		
J	BMWVWV-t	MT20	3.0	6.0		
K	BMWVW-t	MT20	3.0	4.0		
L	BMV1+p	MT20	3.0	5.0	1.50	2.00
M	BMV1+p	MT20	2.0	4.0		

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

BEARINGS

	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION			INPUT BRG	REQRD BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
M	1434	0	1434	0	0	MECHANICAL	
G	1434	0	1434	0	0	MECHANICAL	

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT M. G. MINIMUM BEARING LENGTH AT JOINT M = 1-9, JOINT G = 1-9.

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
M	1002	725 / 0	0 / 0	0 / 0	0 / 0	277 / 0	0 / 0
G	1002	725 / 0	0 / 0	0 / 0	0 / 0	277 / 0	0 / 0

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.30 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.

LOADING

TOTAL LOAD CASES: (4)

C H O R D S					W E B S				
MAX. FACTORED		FACTORED			MAX. FACTORED				
MEMB.	FORCE	VERT. LOAD	LC1	MAX	MAX.	MEMB.	FORCE	MAX	
	(LBS)	(PLF)		CS1 (LC)	UNBRAC		(LBS)	CS1 (LC)	
FR-TO		FROM	TO	LENGTH	FR-TO				
A-B	-1333 / 0	-119.4	-119.4	0.26 (1)	5.30	L-B	-265 / 0	0.10 (1)	
B-C	-1200 / 0	-119.4	-119.4	0.25 (1)	5.52	B-K	-248 / 0	0.16 (1)	
C-D	-895 / 0	-119.4	-119.4	0.41 (1)	5.88	K-C	0 / 272	0.06 (1)	
D-E	-1200 / 0	-119.4	-119.4	0.25 (1)	5.52	C-J	0 / 1	0.00 (1)	
E-F	-1332 / 0	-119.4	-119.4	0.26 (1)	5.30	J-D	0 / 273	0.06 (1)	
M-A	-1401 / 0	0.0	0.0	0.15 (1)	6.80	J-E	-246 / 0	0.16 (1)	
G-F	-1401 / 0	0.0	0.0	0.15 (1)	6.80	H-E	-266 / 0	0.10 (1)	
						A-L	0 / 1104	0.25 (1)	
						H-F	0 / 1104	0.25 (1)	
M-L	0 / 0	-18.2	-18.2	0.06 (4)	10.00				
L-K	0 / 1050	-18.2	-18.2	0.21 (1)	10.00				
K-J	0 / 894	-18.2	-18.2	0.19 (1)	10.00				
J-I	0 / 1050	-18.2	-18.2	0.21 (1)	10.00				
I-H	0 / 1050	-18.2	-18.2	0.21 (1)	10.00				
H-G	0 / 0	-18.2	-18.2	0.06 (4)	10.00				

DESIGN CRITERIA

SPECIFIED LOADS:

TOP	CH.	LL =	34.8	PSF
		DL =	6.0	PSF
BOT	CH.	LL =	0.0	PSF
		DL =	7.3	PSF
TOTAL LOAD		=	48.1	PSF

SPACING = 24.0 IN. C/C

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

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.69")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.03")
ALLOWABLE DEFL.(TL)= L/360 (0.69")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.06")

CSI: TC=0.41/0.97 (C-D:1), BC=0.21/0.97 (H-J:1),
WB=0.25/0.97 (A-L:1), SSI=0.24/1.00 (C-D:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (J) (INPUT = 0.90)
JSI METAL= 0.42 (A) (INPUT = 1.00)



JULY 14, 2023

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



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM0723-092	T13 OF PERMIT PLANS Oct 30 2023	6	1	TRUSS DESC.	MHP 23030

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ID:bcGHXsLhLjMpVeVc_4eeDgzAk?y-34s1r8VVm2dZtZGcOBLNijviLiS8gFULVAXRzPyyE96

PER: CHIEF BUILDING OFFICIAL

Scale = 1:27.0

<u>LUMBER</u>				
N. L. G. A. RULES				
CHORDS	SIZE		LUMBER	DESCR.
A - D	2x4	DRY	No.2	SPF
F - D	2x4	DRY	No.2	SPF
I - B	2x4	DRY	No.2	SPF
I - H	2x4	DRY	No.2	SPF
G - E	2x4	DRY	No.2	SPF

ALL WEBS EXCEPT	2x3	DRY	No.2	SPF
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DRY: SEASONED LUMBER.

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMWW-t	MT20	3.0	4.0	1.50 1.00
C	TMWW-t	MT20	3.0	4.0	1.50 1.50
D	TMV+p	MT20	2.0	4.0	
F	BMWW-t	MT20	3.0	4.0	
G	BWM-I	MT20	2.0	4.0	
H	BMWW-t	MT20	3.0	4.0	
I	BMV+p	MT20	2.0	4.0	

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

BEARINGS		FACTORED		MAXIMUM FACTORED		INPUT	REQ'D
	GROSS REACTION		GROSS REACTION			BRG	BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
H	755	0	755	0	0	3-8	1-8
E	-196	0	10	0	-228	1-8	1-8

PROVIDE ANCHORAGE AT BEARING JOINT E FOR 228 LBS FACTORED UPLIFT

UNFACTORED REACTIONS

1ST LCASE		MAX/MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
H	523	404 / 0	0 / 0	0 / 0	0 / 0	119 / 0	0 / 0
E	-133	17 / -137	0 / 0	0 / 0	0 / 0	0 / -12	0 / 0

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

BRACING

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

MAX. UNBRACED INTERIOR CHORD LENGTH = 6.17 FT

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

LOADING

TOTAL LOAD CASES: (7)

C H O R D S				W E B S			
MAX. FACTORED		FACTORED		MAX. FACTORED			
MEMB.	FORCE (LBS)	VERT. LOAD	LC1 MAX (PLF)	MAX. UNBRAC CSI (LC)	MEMB.	FORCE (LBS)	MAX FACTORED CSI (LC)
FR-TO		FROM	TO	LENGTH	FR-TO		
A-B	0 / 45	-119.4	-119.4	0.16 (1)	10.00	H-G	-716 / 0 0.51 (5)
B-C	0 / 263	-119.4	-119.4	0.38 (1)	10.00	G-C	-818 / 0 0.51 (5)
C-D	-19 / 9	-119.4	-119.4	0.34 (1)	6.25	C-F	0 / 274 0.06 (1)
F-D	-22 / 215	0.0	0.0	0.25 (7)	7.81	B-H	-24 / 0 0.00 (5)
I-B	0 / 17	0.0	0.0	0.16 (7)	10.00		
I-H	-128 / 0	-18.2	-18.2	0.03 (7)	6.25		
G-F	-351 / 0	-18.2	-18.2	0.19 (7)	6.25		
F-E	0 / 0	-18.2	-18.2	0.40 (7)	10.00		

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

PATTERN-LOADING CHECK APPLIED TO THIS TRUSS.

DESIGN CRITERIA

SPECIFIED LOADS:

TOP	CH.	LL	=	34.8	PSF
		DL	=	6.0	PSF
BOT	CH.	LL	=	0.0	PSF
		DL	=	7.3	PSF
TOTAL LOAD				=	48.1 PSF

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:

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

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

(55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.19")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= L/120 (0.19")
CALCULATED VERT. DEFL.(LL) = L/274 (0.07")
ALLOWABLE DEFL.(TL)= L/120 (0.19")
CALCULATED VERT. DEFL.(TL) = L/178 (0.11")

CSI: TC=0.38/0.97 (B-C:1), BC=0.40/0.97 (E-F:7), WB=0.51/0.97 (C-G:5), SSI=0.25/1.00 (C-D:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.82 (C) (INPUT = 0.90)
JSI METAL= 0.13 (H) (INPUT = 1.00)



JULY 14, 2023

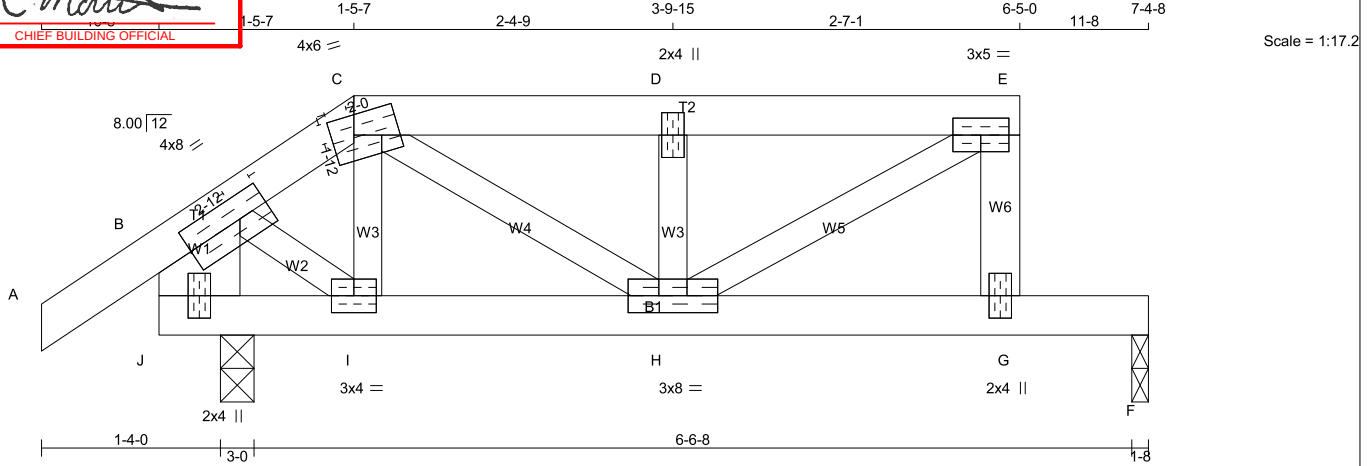
**READ ALL NOTES ON THIS PAGE AND ON THE
ENGINEERING NOTES: TRUSSES. THE NOTE PAGE
IS AN INTEGRAL PART OF THIS DRAWING AS IT
CONTAINS SPECIFICATIONS AND CRITERIA USED
IN THE DESIGN OF THIS COMPONENT.**



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM0723-092	TRUSS NAME	2	1	TRUSS DESC.	MHP 23030

PER: 
CHIEF BUILDING OFFICIAL

Version 8.630 S Mar 22 2023 MiTek Industries, Inc. Fri Jul 14 07:34:16 2023 Page 1
ID:bcGHXsLhLjMpVeVc_4eeDgzAk?y-YGQP2UW8XMIQVCroyusclwSxR6mfPniUkqG_VsyyE95



LUMBER	N. L. G. A. RULES	CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY	No.2	SPF	
C - E	2x4	DRY	No.2	SPF	
G - E	2x4	DRY	No.2	SPF	
J - B	2x8	DRY	No.2	SPF	
J - 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	4.0	8.0	2.00	2.75
C	TTWW-m	MT20	4.0	6.0	1.75	2.00
D	TMVW-w	MT20	2.0	4.0		
E	TMVW-t	MT20	3.0	5.0		
G	BMV+p	MT20	2.0	4.0		
H	BMVWW-t	MT20	3.0	8.0		
I	BMVW-t	MT20	3.0	4.0		
J	BMV1+p	MT20	2.0	4.0		

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

BEARINGS

	FACTORED	MAXIMUM FACTORED	INPUT	REQD
	GROSS REACTION	GROSS REACTION	BRG	BRG
JT	VERT	HORZ	UPLIFT	IN-SX
J	622	0	0	1-8
F	508	0	0	1-8

UNFACTORED REACTIONS

JT	1ST LCASE	MAX./MIN.	COMPONENT REACTIONS					
	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL	
J	433	323 / 0	0 / 0	0 / 0	0 / 0	110 / 0	0 / 0	
F	355	257 / 0	0 / 0	0 / 0	0 / 0	98 / 0	0 / 0	

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) J, 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				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX LC1 CSI (LC)	MAX. UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
FR-TO		FROM TO			FR-TO		
A-B	0 / 32	-119.4 -119.4	0.08 (1)	10.00	I-C	-159 / 0	0.02 (1)
B-C	-477 / 0	-119.4 -119.4	0.05 (1)	6.25	C-H	0 / 415	0.09 (1)
C-D	-737 / 0	-119.4 -119.4	0.09 (1)	6.25	H-D	-342 / 0	0.05 (1)
D-E	-737 / 0	-119.4 -119.4	0.10 (1)	6.25	H-E	0 / 851	0.19 (1)
G-E	-555 / 0	0.0 0.0	0.06 (1)	7.81	B-I	0 / 414	0.09 (1)
J-B	-593 / 0	0.0 0.0	0.03 (1)	7.81			
J-I	0 / 0	-18.2 -18.2	0.03 (1)	10.00			
I-H	0 / 384	-18.2 -18.2	0.20 (1)	10.00			
H-G	0 / 0	-18.2 -18.2	0.58 (1)	10.00			
G-F	0 / 0	-137.7 -137.7	0.58 (1)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	34.8	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.3	PSF
TOTAL LOAD	=	48.1	PSF	

SPACING = 24.0 IN. C/C

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

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (0.25")
CALCULATED VERT. DEFL.(LL) = L/999 (0.06")
ALLOWABLE DEFL.(TL) = L/360 (0.25")
CALCULATED VERT. DEFL.(TL) = L/807 (0.11")

CSI: TC=0.10/0.97 (D-E:1), BC=0.58/0.97 (F-G:1), WB=0.19/0.97 (E-H:1), SSI=0.40/1.00 (F-G:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

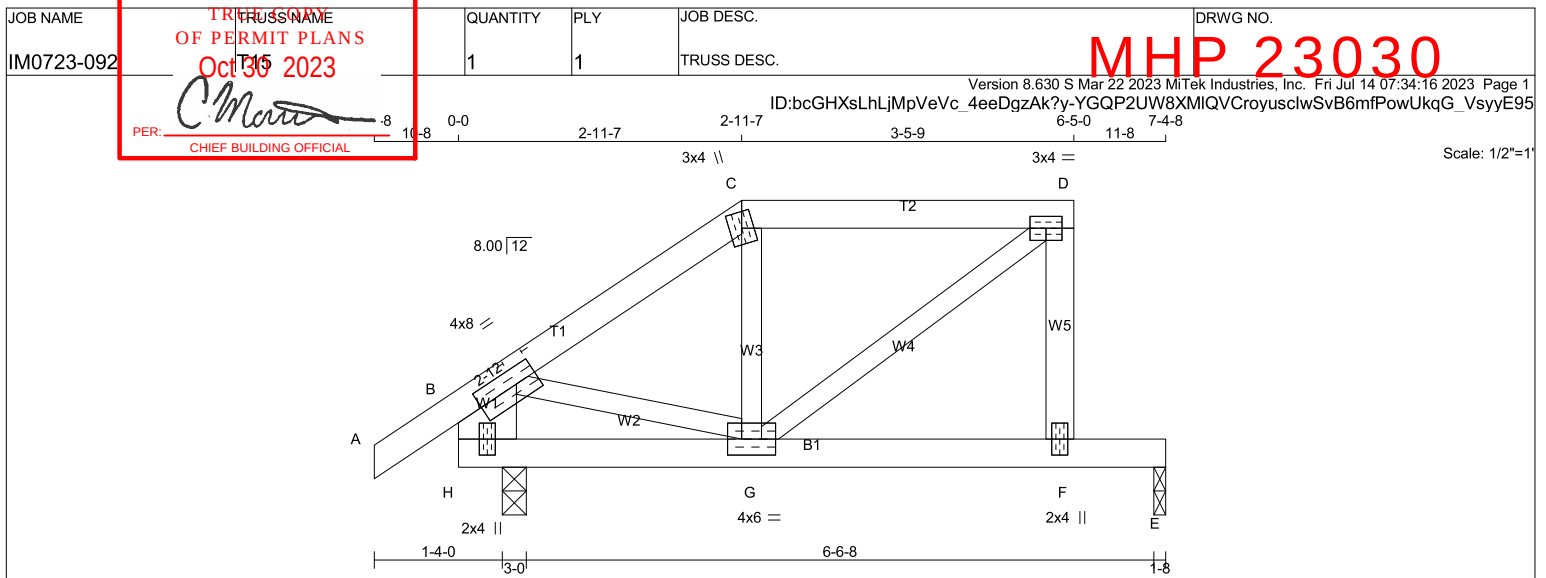
JSI GRIP= 0.89 (C) (INPUT = 0.90)
JSI METAL= 0.23 (E) (INPUT = 1.00)



JULY 14, 2023

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTES: TRUSSES. 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 = 28 lb

LUMBER

N. L. G. A. RULES	CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY	No.2	SPF
C - D	2x4	DRY	No.2	SPF
F - D	2x4	DRY	No.2	SPF
H - B	2x8	DRY	No.2	SPF
H - E	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-t	MT20	4.0	8.0	2.00	2.75
C	TTW+m	MT20	3.0	4.0		
D	TMVW-t	MT20	3.0	4.0		
F	BMV+p	MT20	2.0	4.0		
G	BMVWW-t	MT20	4.0	6.0		
H	BMV1+p	MT20	2.0	4.0		

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

	FACTORED	MAXIMUM FACTORED	INPUT	REQRD
	GROSS REACTION	GROSS REACTION	BRG	BRG
JT	VERT	HORZ	UP/LIFT	IN-SX
H	622	0	622	0
E	508	0	508	0

UNFACTORED REACTIONS

JT	1ST LCASE	MAX./MIN.	COMPONENT REACTIONS				
	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
H	433	323 / 0	0 / 0	0 / 0	0 / 0	110 / 0	0 / 0
E	355	257 / 0	0 / 0	0 / 0	0 / 0	98 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 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. CSI (LC)	MAX. UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)
FR-TO		FROM TO			FR-TO		
A-B	0 / 32	-119.4 -119.4	0.08 (1)	10.00	G-C	-109 / 24	0.02 (1)
B-C	-495 / 0	-119.4 -119.4	0.18 (1)	6.25	G-D	0 / 506	0.11 (1)
C-D	-403 / 0	-119.4 -119.4	0.25 (1)	6.25	B-G	0 / 416	0.09 (1)
F-D	-511 / 0	0.0 0.0	0.07 (1)	7.81			
H-B	-631 / 0	0.0 0.0	0.03 (1)	7.81			
H-G	0 / 0	-18.2 -18.2	0.16 (1)	10.00			
G-F	0 / 0	-18.2 -18.2	0.58 (1)	10.00			
F-E	0 / 0	-137.7 -137.7	0.58 (1)	10.00			

DESIGN CRITERIA**SPECIFIED LOADS:**

TOP CH.	LL =	34.8	PSF
	DL =	6.0	PSF
BOT CH.	LL =	0.0	PSF
	DL =	7.3	PSF
TOTAL LOAD	=	48.1	PSF

SPACING = 24.0 IN. C/C

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

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (0.25")
 CALCULATED VERT. DEFL.(LL) = L/999 (0.08")
 ALLOWABLE DEFL.(TL) = L/360 (0.25")
 CALCULATED VERT. DEFL.(TL) = L/667 (0.13")

CSI: TC=0.25/0.97 (C-D:1), BC=0.58/0.97 (F-G:1)
 , WB=0.11/0.97 (D-G:1), SSI=0.40/1.00 (E-F:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE RIGHT HEEL ONLY

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.73 (D) (INPUT = 0.90)
 JSI METAL= 0.16 (D) (INPUT = 1.00)



JULY 14, 2023

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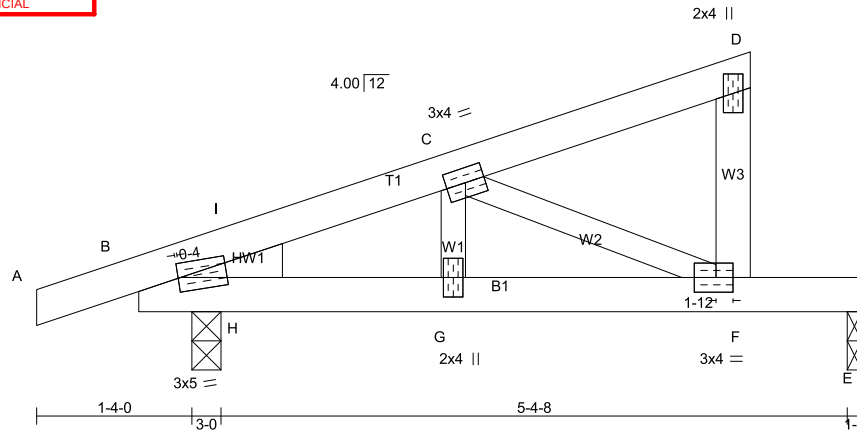
JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM0723-092	TRUSS NAME	3	1	TRUSS DESC.	MHP 23030

TRUSS NAME
OF PERMIT PLANS

Oct 30 2023

PER: 
CHIEF BUILDING OFFICIAL

Version 8.630 S Mar 22 2023 MiTek Industries, Inc. Fri Jul 14 07:34:17 2023 Page 1
ID:bcGHXsLhLjMpVeVc_4eeDgzAk?y-0S_nGqXmIfH7MQ_VcNrQ8_6KV6p8EyeyU0Y1IyyE94



TOTAL WEIGHT = 3 X 20 = 60 lb

LUMBER

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

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMBH1-m	MT20	3.0	5.0	1.50	0.25
C	TMWW-t	MT20	3.0	4.0		
D	TMV+p	MT20	2.0	4.0		
F	BMVW-t	MT20	3.0	4.0	1.50	1.75
G	BMW+w	MT20	2.0	4.0		

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

BEARINGS

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG	HEEL
JT	VERT	HORZ	DOWN	HORZ	UPLIFT
B	529	0	529	0	0
E	322	0	322	0	0

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
B	368	275 / 0	0 / 0	0 / 0	0 / 0	93 / 0	0 / 0
E	226	155 / 0	0 / 0	0 / 0	0 / 0	72 / 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 LC1 CSI (LC)	MAX UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
FR-TO		FROM	TO		FR-TO		
A-B	0 / 8	-119.4	-119.4	0.07 (1)	10.00	G-C	0 / 228
B-I	-753 / 0	-119.4	-119.4	0.03 (1)	6.25	C-F	-732 / 0
I-C	-708 / 0	-119.4	-119.4	0.04 (1)	6.25	H-I	-41 / 6
C-D	-5 / 0	-119.4	-119.4	0.09 (1)	10.00		
F-D	-138 / 0	0.0	0.0	0.02 (1)	7.81		
B-H	0 / 674	-18.2	-18.2	0.13 (1)	10.00		
H-G	0 / 674	-18.2	-18.2	0.19 (1)	10.00		
G-F	0 / 674	-18.2	-18.2	0.52 (1)	10.00		
F-E	0 / 0	-18.2	-18.2	0.41 (1)	10.00		

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	34.8	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.3	PSF
TOTAL LOAD	=	48.1	PSF	

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.21")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.04")
ALLOWABLE DEFL.(TL)= L/360 (0.21")
CALCULATED VERT. DEFL.(TL) = L/ 957 (0.08")

CSI: TC=0.09/0.97 (C-D:1) , BC=0.52/0.97 (F-G:1)
WB=0.13/0.97 (C-F:1) , SSI=0.25/1.00 (E-F:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.82 (F) (INPUT = 0.90)
JSI METAL= 0.23 (F) (INPUT = 1.00)



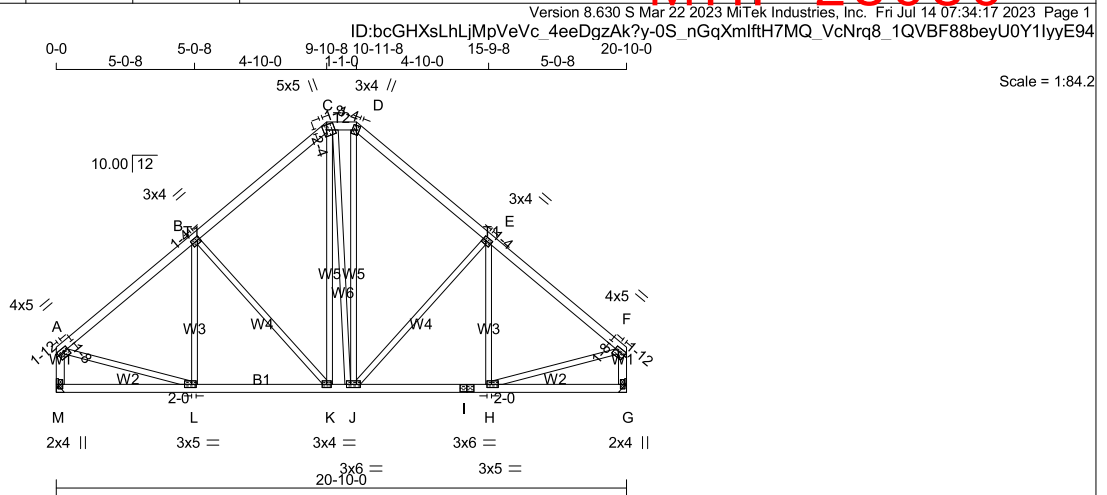
JULY 14, 2023

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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM0723-092	TRUSS NAME OF PERMIT PLANS Oct 30 2023	1	1	TRUSS DESC.	MHP 23030

PER: 
CHIEF BUILDING OFFICIAL



TOTAL WEIGHT = 108 lb

LUMBER

N. L. G. A. RULES	CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY	No.2	SPF
C - D	2x4	DRY	No.2	SPF
D - F	2x4	DRY	No.2	SPF
M - A	2x4	DRY	No.2	SPF
G - F	2x4	DRY	No.2	SPF
M - 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
A	TMVW-t	MT20	4.0	5.0	1.50	1.75
B	TMWW-t	MT20	3.0	4.0	1.50	1.25
C	TTWW+m	MT20	5.0	5.0	2.25	1.50
D	TTW+m	MT20	3.0	4.0	2.00	1.25
E	TMWW-t	MT20	3.0	4.0	1.50	1.25
F	TMVW-t	MT20	4.0	5.0	1.50	1.75
G	BMV1+p	MT20	2.0	4.0		
H	BMWW-t	MT20	3.0	5.0	1.50	2.00
I	BS-t	MT20	3.0	6.0		
J	BMWW-t	MT20	3.0	6.0		
K	BMWW-t	MT20	3.0	4.0		
L	BMWW-t	MT20	3.0	5.0	1.50	2.00
M	BMV1+p	MT20	2.0	4.0		

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

	FACTORED	MAXIMUM FACTORED	INPUT	REQRD
	GROSS REACTION	GROSS REACTION	BRG	BRG
JT	VERT	HORZ	DOWN	UP
M	1434	0	1434	0
G	1434	0	1434	0

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT M, G. MINIMUM BEARING LENGTH AT JOINT M = 1-9, JOINT G = 1-9.

UNFACTORED REACTIONS

JT	1ST LCASE	SNOW	MAX./MIN. LIVE	PERM. LIVE	WIND	DEAD	SOIL
M	1002	725 / 0	0 / 0	0 / 0	0 / 0	277 / 0	0 / 0
G	1002	725 / 0	0 / 0	0 / 0	0 / 0	277 / 0	0 / 0

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.06 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)

C H O R D S				W E B S			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. LC1 (LC)	MAX. UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. LC1 (LC)
FR-TO		FROM	TO		FR-TO		
A-B	-1345 / 0	-119.4	-119.4 0.41 (1)	5.06	L-B	-169 / 45	0.09 (1)
B-C	-1060 / 0	-119.4	-119.4 0.39 (1)	5.56	B-K	-436 / 0	0.47 (1)
C-D	-784 / 0	-119.4	-119.4 0.02 (1)	6.25	K-C	0 / 327	0.07 (1)
D-E	-1065 / 0	-119.4	-119.4 0.39 (1)	5.55	C-J	0 / 44	0.01 (1)
E-F	-1342 / 0	-119.4	-119.4 0.41 (1)	5.07	J-D	0 / 374	0.08 (1)
M-A	-1397 / 0	0.0	0.0 0.15 (1)	6.81	J-E	-428 / 0	0.46 (1)
G-F	-1395 / 0	0.0	0.0 0.15 (1)	6.81	H-E	-180 / 41	0.09 (1)
M-L	0 / 0	-18.2	-18.2 0.11 (4)	10.00	A-L	0 / 1103	0.25 (1)
L-K	0 / 1067	-18.2	-18.2 0.23 (1)	10.00	H-F	0 / 1101	0.25 (1)
K-J	0 / 780	-18.2	-18.2 0.19 (1)	10.00			
J-I	0 / 1066	-18.2	-18.2 0.23 (1)	10.00			
I-H	0 / 1066	-18.2	-18.2 0.23 (1)	10.00			
H-G	0 / 0	-18.2	-18.2 0.11 (4)	10.00			

DESIGN CRITERIA**SPECIFIED LOADS:**

TOP CH.	LL	=	34.8	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.3	PSF
TOTAL LOAD	=	48.1	PSF	

SPACING = 24.0 IN. C/C

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

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.69")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.04")
ALLOWABLE DEFL.(TL)= L/360 (0.69")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.07")

CSI: TC=0.41/0.97 (A-B:1) , BC=0.23/0.97 (H-J:1) ,
WB=0.47/0.97 (B-K:1) , SSI=0.22/1.00 (A-B:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (J) (INPUT = 0.90)
JSI METAL= 0.44 (A) (INPUT = 1.00)

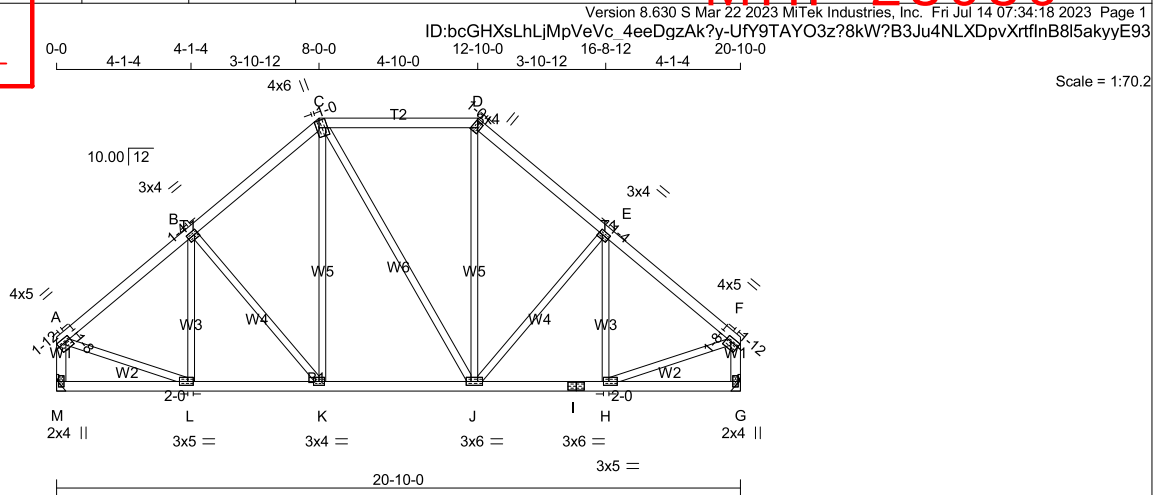


JULY 14, 2023

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



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM0723-092	TRUSS OF PERMIT PLANS Oct 30 2023	1	1	TRUSS DESC.	MHP 23030

PER: 
CHIEF BUILDING OFFICIAL**LUMBER**

N. L. G. A. RULES	CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY	No.2	SPF
C - D	2x4	DRY	No.2	SPF
D - F	2x4	DRY	No.2	SPF
M - A	2x4	DRY	No.2	SPF
G - F	2x4	DRY	No.2	SPF
M - 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
A	TMVW-t	MT20	4.0	5.0	1.50	1.75
B	TMWW-t	MT20	3.0	4.0	1.50	1.25
C	TTWW+m	MT20	4.0	6.0	Edge	1.00
D	TTW+h	MT20	3.0	4.0	2.00	1.00
E	TMWW-t	MT20	3.0	4.0	1.50	1.25
F	TMVW-t	MT20	4.0	5.0	1.50	1.75
G	BMV1+p	MT20	2.0	4.0		
H	BMWW-t	MT20	3.0	5.0	1.50	2.00
I	BS-t	MT20	3.0	6.0		
J	BMWW-t	MT20	3.0	6.0		
K	BMWW-t	MT20	3.0	4.0		
L	BMWW-t	MT20	3.0	5.0	1.50	2.00
M	BMV1+p	MT20	2.0	4.0		

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

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

	FACTORED	MAXIMUM FACTORED	INPUT	REQRD
	GROSS REACTION	GROSS REACTION	BRG	BRG
JT	VERT	HORZ	DOWN	HORZ
M	1434	0	1434	0
G	1434	0	1434	0

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT M, G. MINIMUM BEARING LENGTH AT JOINT M = 1-9, JOINT G = 1-9.

UNFACTORED REACTIONS

JT	1ST LCASE	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
M	1002	725 / 0	0 / 0	0 / 0	0 / 0	277 / 0	0 / 0
G	1002	725 / 0	0 / 0	0 / 0	0 / 0	277 / 0	0 / 0

BRACINGTOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.28 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 VERT. LOAD (PLF)	MAX LC1 (LC)	MAX UNBRAC	MEMB.	MAX. FACTORED FORCE (LBS)	MAX LC1 (LC)
FR-TO		FROM	TO	LENGTH	FR-TO		
A-B	-1334 / 0	-119.4	-119.4	0.26 (1)	5.28	L-B	-258 / 0
B-C	-1192 / 0	-119.4	-119.4	0.26 (1)	5.52	B-K	-260 / 0
C-D	-888 / 0	-119.4	-119.4	0.37 (1)	5.98	K-C	0 / 278
D-E	-1192 / 0	-119.4	-119.4	0.26 (1)	5.52	C-J	0 / 1
E-F	-1334 / 0	-119.4	-119.4	0.26 (1)	5.28	J-D	0 / 279
M-A	-1401 / 0	0.0	0.0	0.15 (1)	6.80	J-E	-259 / 0
G-F	-1401 / 0	0.0	0.0	0.15 (1)	6.80	H-E	-259 / 0
						A-L	0 / 1104
						H-F	0 / 1104
M-L	0 / 0	-18.2	-18.2	0.06 (4)	10.00		
L-K	0 / 1052	-18.2	-18.2	0.20 (1)	10.00		
K-J	0 / 888	-18.2	-18.2	0.18 (1)	10.00		
J-I	0 / 1052	-18.2	-18.2	0.21 (1)	10.00		
I-H	0 / 1052	-18.2	-18.2	0.21 (1)	10.00		
H-G	0 / 0	-18.2	-18.2	0.06 (4)	10.00		

DESIGN CRITERIA**SPECIFIED LOADS:**

TOP CH.	LL	=	34.8	PSF
	DL	=	6.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.3	PSF
TOTAL LOAD	=	48.1	PSF	

SPACING = 24.0 IN. C/C

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

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (0.69")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.03")
ALLOWABLE DEFL.(TL) = L/360 (0.69")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.06")

CSI: TC=0.37/0.97 (C-D:1), BC=0.21/0.97 (H-J:1), WB=0.25/0.97 (A-L:1), SSI=0.23/1.00 (C-D:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

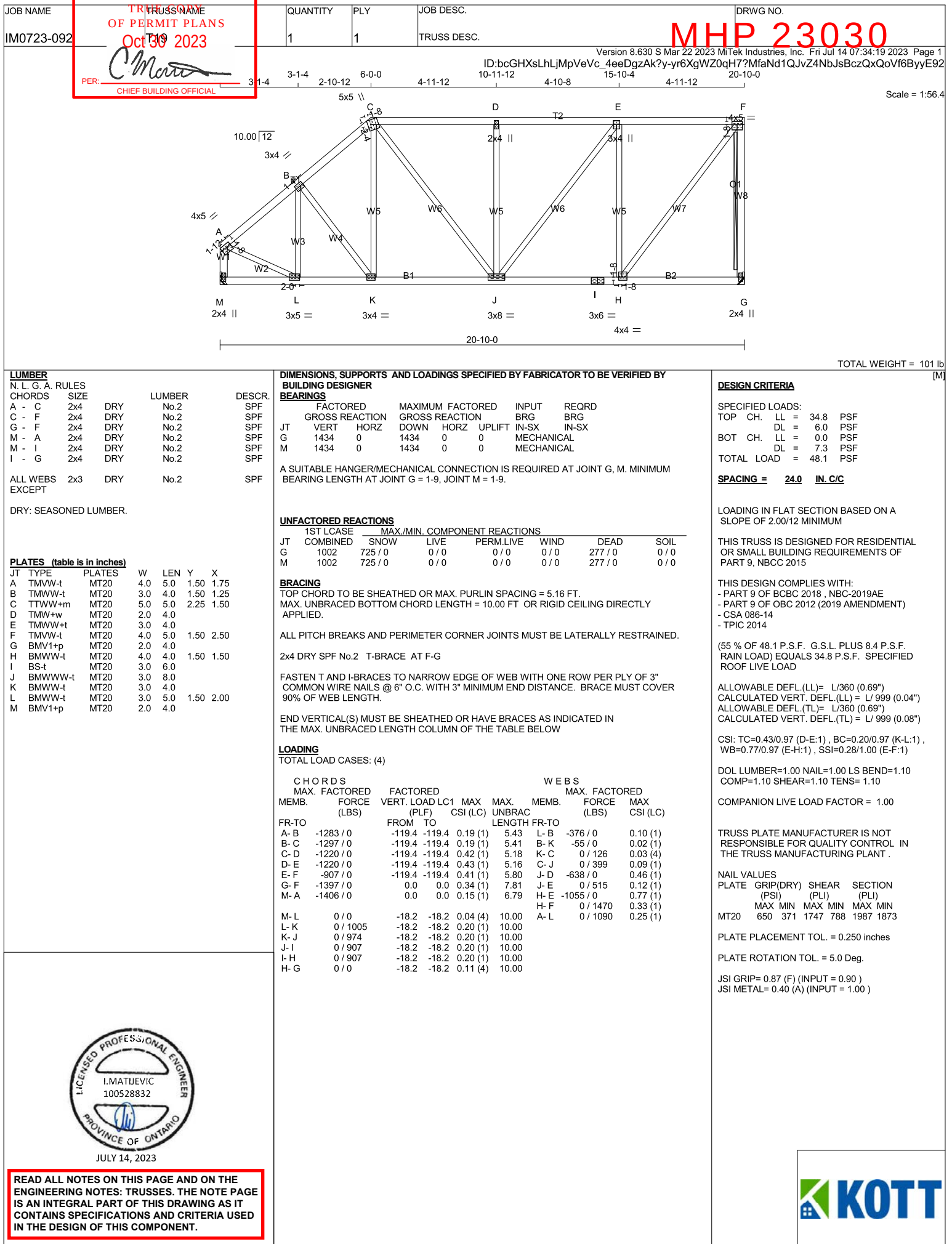
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (J) (INPUT = 0.90)
JSI METAL= 0.43 (A) (INPUT = 1.00)

JULY 14, 2023

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





TOE-NAIL CAPACITY DETAILS

LATERAL AND WITHDRAWAL RESISTANCE OF BEARING ANCHORAGE BY TOE-NAILS

NAIL TYPE	Length (in)	Diameter (in)	LATERAL Resistance per nail (Lbs.)		WITHDRAWAL Resistance per nail (Lbs.)	
			SPF	D. FIR	SPF	D. FIR
COMMON WIRE	3.00	0.144	122	139	30	42
	3.25	0.144	127	144	32	45
	3.50	0.160	152	173	38	52
COMMON SPIRAL	3.00	0.122	96	108	26	36
	3.25	0.122	97	108	28	40
	3.50	0.152	142	161	36	50
3.25" Gun nail	3.25	0.120	94	105	28	39

Note: If using truss with D. Fir lumber and SPF bearing plate, use tabulated SPF values in table.

Nail type:	Common wire	Common spiral	Common wire	Common spiral	Gun Nail
Diameter (in.)	0.160	0.152	0.144	0.122	0.120
Length (in.)	3.50	3.50	3.00	3.00	3.25
LUMBER	MAXIMUM NUMBER OF TOE-NAILS				
2x4 SPF	2	2	3	3	3
2x6 SPF	4	4	4	5	5
2x4 D. FIR	2	2	2	2	2
2x6 D. FIR	3	3	3	4	4

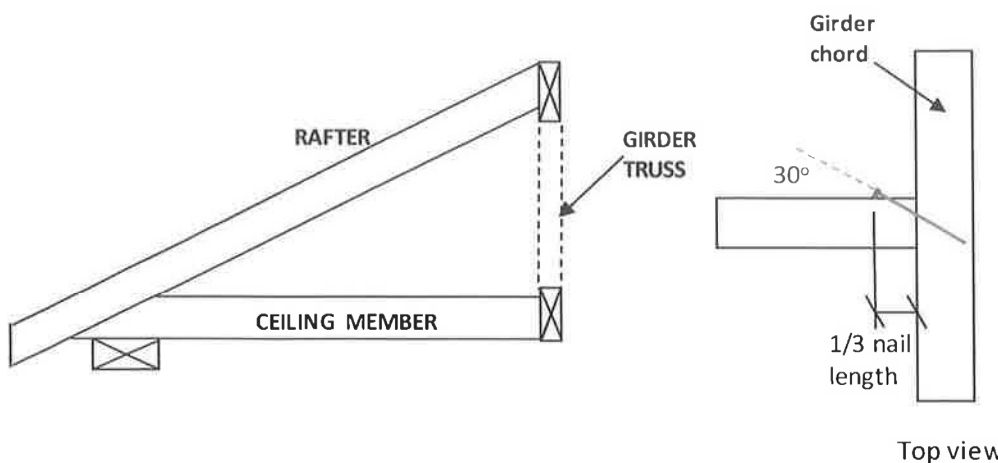
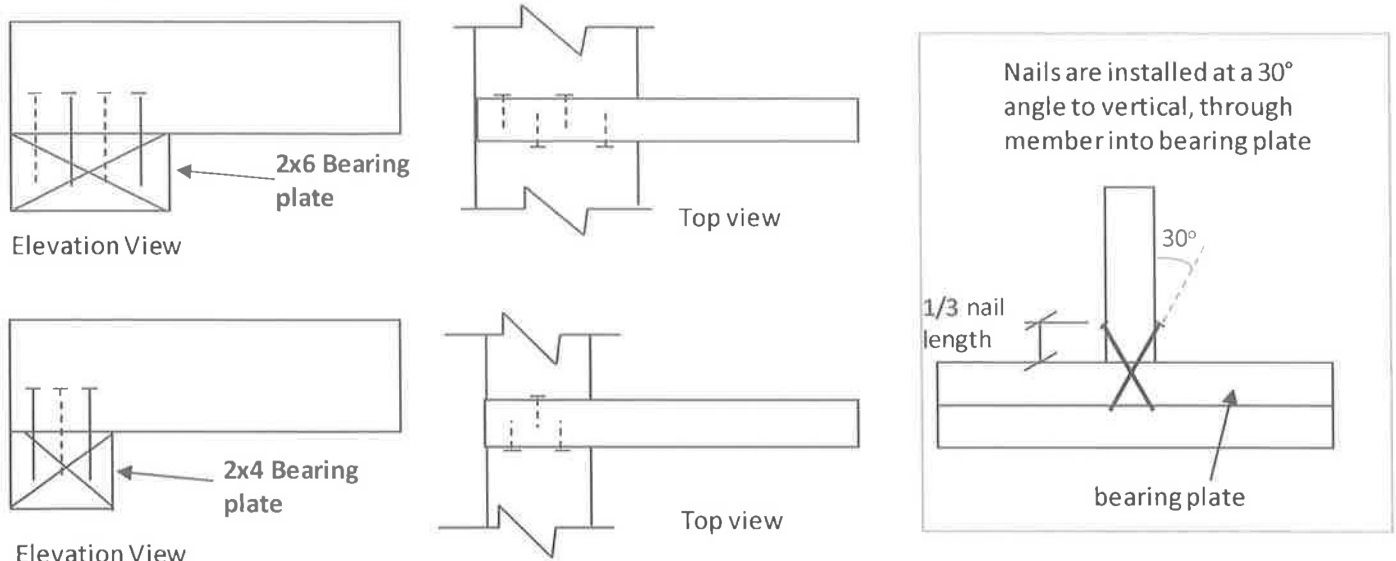


Figure 1: Toe-Nailing Rafter / Ceiling Member to Girder Truss

TOE-NAIL CAPACITY DETAILS

Figure 2: Toe-Nail Anchorage to Bearing Plate for Uplift



NOTES:

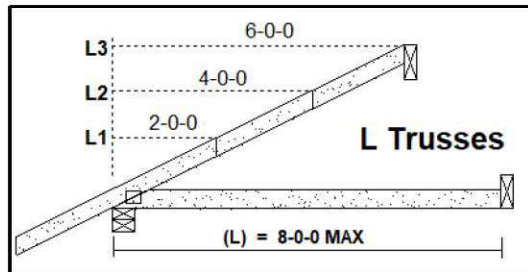
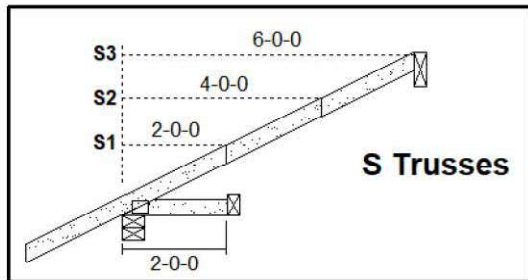
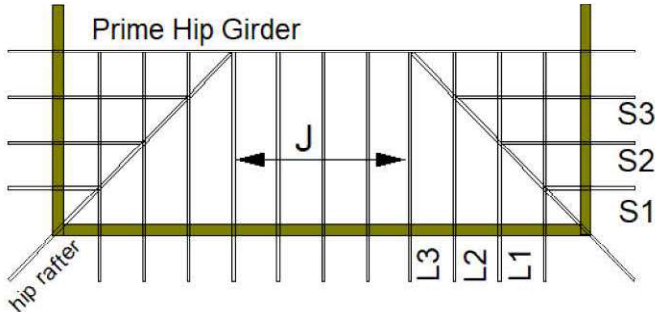
1. Rafter and ceiling members may be connected to top and bottom chords of girder truss by toe-nailing the members into the girder chords (see fig. 1), provided the factored vertical reactions of the supported members do not exceed the lateral resistance of the toe-nails. Mechanical connectors (hangers) are required if factored vertical reactions exceed the toe-nail capacity, or if the connection must resist horizontal loads (loads perpendicular to the face of girder or rafter).
2. Trusses, rafters or ceiling members may be anchored to the bearing plate with toe-nails (see fig. 2), provided that the factored uplift reactions due to **wind or earthquake loads** do not exceed the **withdrawal resistance of the toe-nails**. Mechanical anchors (tie-downs) are required for reactions that exceed the toe-nail withdrawal capacity. Toe-nail anchorage to bearing plates is **NOT** permitted if uplift reactions are generated from gravity loads (snow, floor live, dead).
3. Tabulated toe-nail resistances on page 1 are for **one** toe-nail. Multiply unit values by the number of nails used in the connection. Maximum number of nails in a connection shall not exceed the tabulated limits shown on page 1 for a given lumber size /species.
4. Nail values are based on specific gravity of $G = 0.42$ (SPF) and $G = 0.49$ (D. Fir).
5. 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.
6. For wind / earthquake loads, tabulated lateral resistances may be multiplied by 1.15 (K_D factor). No increases are permitted for tabulated withdrawal resistances.
7. Lumber must be dry ($< 19\%$ moisture content) at the time of nail installation.
8. Nail values in this table comply with CSA O86-19, Clause 12.9.

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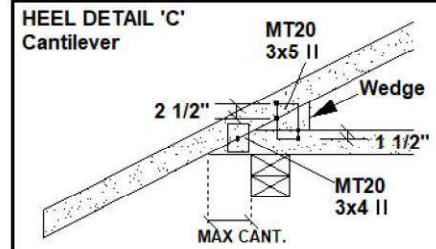
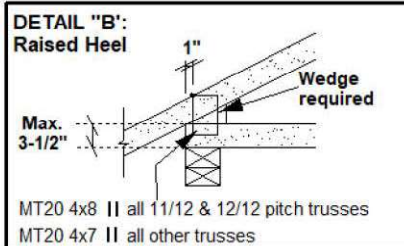
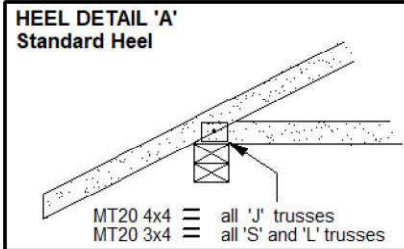
STANDARD HIP END FRAMING

PLAN VIEW



Specified Load Rating:

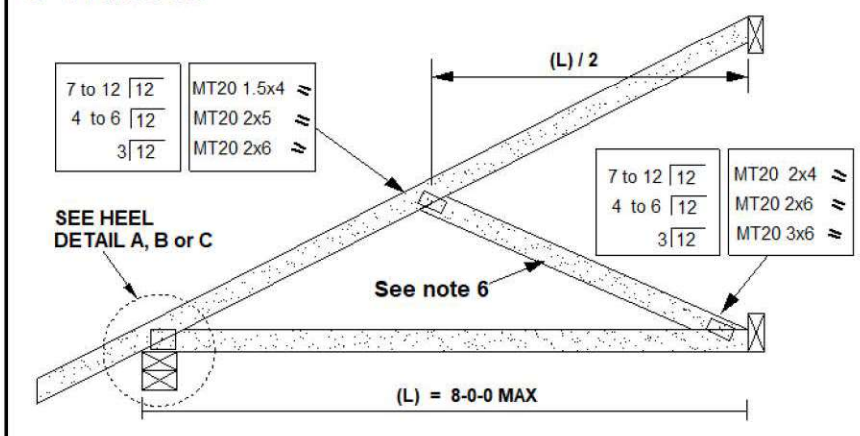
Top chord Live:	51.0 PSF or less
Top chord Dead:	6.0 PSF or less
Bottom chord Live:	0.0 PSF
Bottom chord Dead:	7.3 PSF or less



CANTILEVER DETAIL "C"

SLOPE	MAX CANT.	WEDGE PLATE	WEDGE SIZE
3/12	17"	3 X 5	2 X 3
4/12	14"	3 X 5	2 X 3
5/12	12"	3 X 5	2 X 4
6/12	10"	3 X 5	2 X 4
7/12	9"	3 X 5	2 X 6
8/12	8.5"	3 X 5	2 X 6
9/12	8"	3 X 5	2 X 6
10/12	7.5"	3 X 5	2 X 6

J Trusses



NOTES:

1. This detail is valid only for projects conforming to **PART 9 NBCC 2015** that do not require a wind analysis to be incorporated into the design of the trusses.
2. Overhang length shall not exceed 24 inches.
3. All lumber shall be 2x4 SPF (or D-Fir) DRY No. 2 grade or better.
4. All plates specified are MITEK MT20, pressed into both faces of each truss. Heel plates of all trusses shall conform to heel details 'A', 'B' or 'C'.
5. Diagonal hip rafter design shall conform to section 9.23.14.6 of NBCC 2015.
6. For 6.0 ft. or less span, diagonal web on truss 'J' is optional. Girder design must reflect choice of partial jack ('J' with diagonal web) or open jack ('J' without diagonal web)
7. All truss-to-rafter and truss-to-truss connections shall be specified as per MITEK standard detail 'MSD2015-H: Toe-Nail Capacity Details'

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MHP 23030
STANDARD DETAIL MSD2015-K

Issued: **MARCH 1, 2022**
Expiry: **APRIL 30, 2024**

STANDARD GABLE END DETAIL

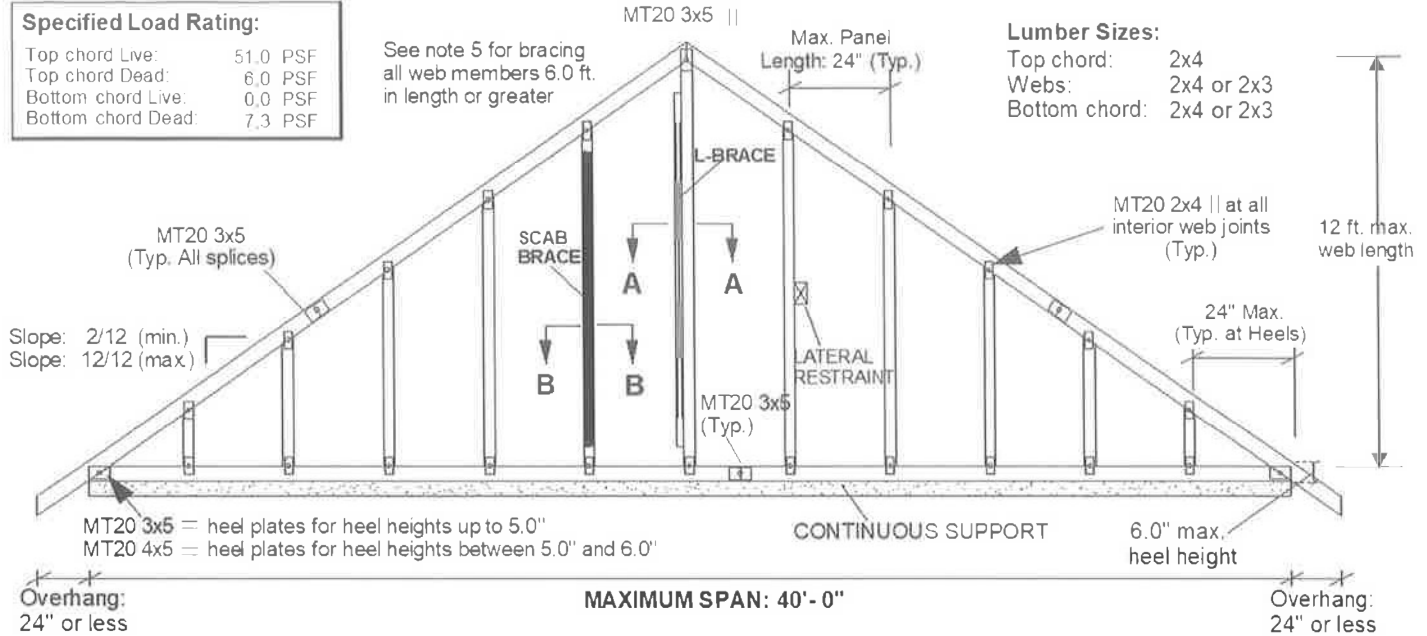
Specified Load Rating:

Top chord Live:	51.0 PSF
Top chord Dead:	6.0 PSF
Bottom chord Live:	0.0 PSF
Bottom chord Dead:	7.3 PSF

See note 5 for bracing
all web members 6.0 ft.
in length or greater

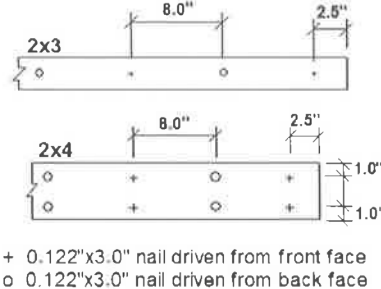
Lumber Sizes:

Top chord:	2x4
Webs:	2x4 or 2x3
Bottom chord:	2x4 or 2x3

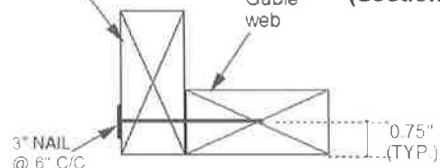


SCAB BRACE DETAIL (Section B-B)

Gable Web
SPF No. 2 DRY Scab, same size as web. Scab brace must cover 90% of web length



L BRACE DETAIL (Section A-A)



Fasten L-Brace to narrow edge of web with one row of 0.122" x 3.0" nails spaced at 6.0" c/c along entire length of web. Brace must cover 90% of the web length. Respect a 2.5" minimum end distance.

Notes:

1. This detail is only valid for projects conforming to **Part 9, NBCC 2015** that do not require a wind analysis to be incorporated into the design of the truss.
2. This detail is for vertical (gravity) load rating of the truss only. Truss must be continuously supported over the entire length of bottom chord.
3. Maximum web length not to exceed 12.0 ft. Spacing of gable stud webs in the truss not to exceed 24 inches cc.
4. Splice joints shall not be located in the first panel adjacent to the heel joint or peak joint.
5. Lateral restraint required at half-length of all webs over 6.0 ft. long. Alternatively install an L-Brace or scab brace as shown above. Scab braces shall be limited to 10 ft. long webs or less.
6. All plates are MITEK MT20 pressed into both faces of truss.
7. All lumber to be SPF (or D-Fir) DRY and of No.2 grade or better.
8. Additional building bracing is typically installed to brace the face of the end wall assembly. See BCSI Canada 'Building Designer Responsibilities for Gable End Frame Bracing' for additional information on building bracing for gable-end assemblies.

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