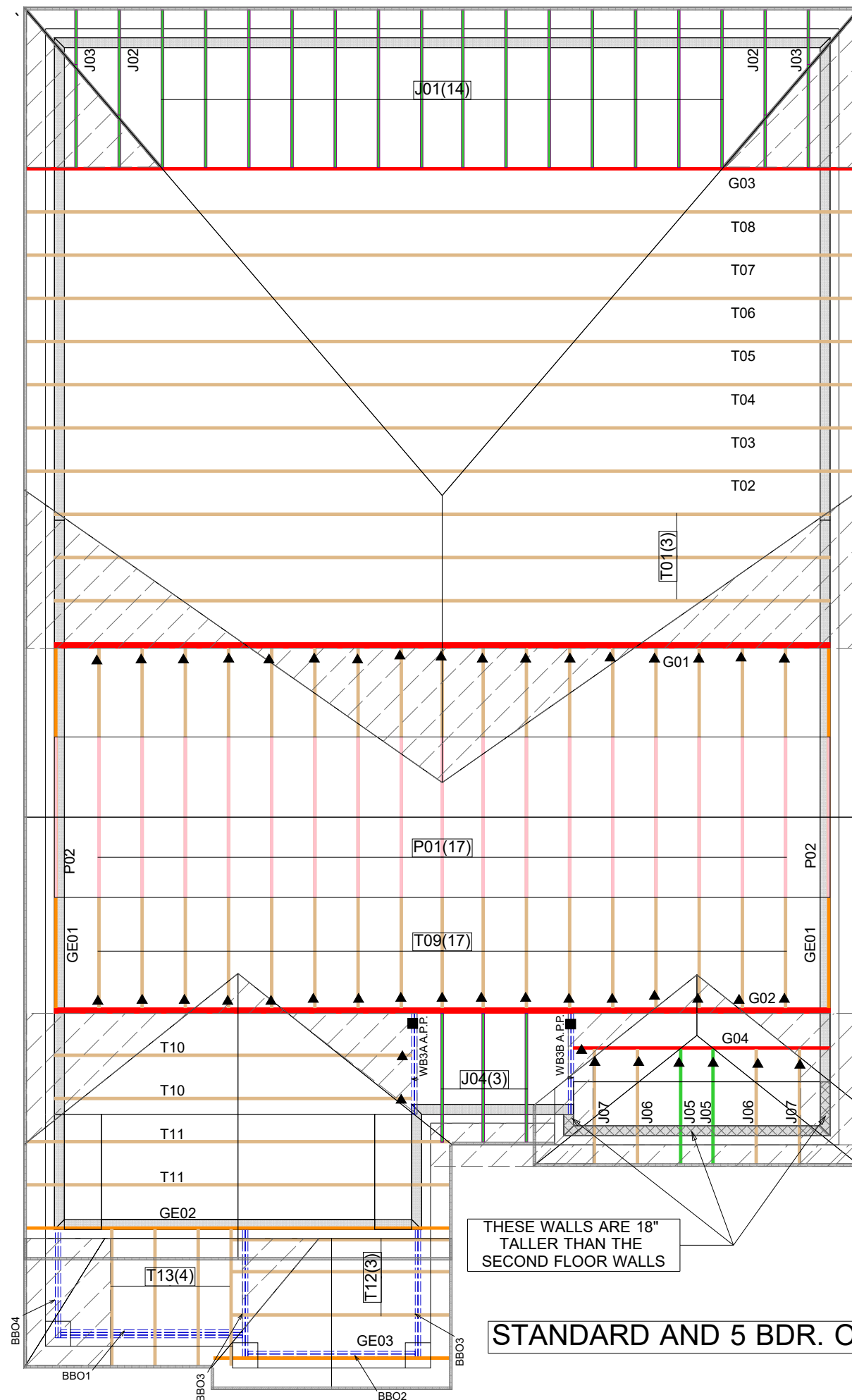




PIGGYBACK TRUSSES TO BE SUPPORTED ON 2X4 SPF #1/2 MEMBERS @ 24"O/C PLACED PERPENDICULAR TO THE PIGGYBACK DIRECTION. PLACE 2X4 MEMBERS BETWEEN THE BOTTOM CHORD OF THE PIGGYBACK TRUSS AND THE TOP CHORD OF THE SUPPORTING TRUSS.

Hanger Name	Symbol	QTY
LUS24	▲	43
LUS26-2	■	2

CITY OF RICHMOND HILL
BUILDING DIVISION

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Per:maddy.toalaalejandro



CONVENTIONAL
FRAMING BY OTHERS

ALL CONVENTIONAL FRAMING TO CONFORM WITH PART 9 OF THE OBC. ROOF RAFTERS THAT CROSS OVER TRUSSES TO BE MIN. 2x4 SPF @ 24" C/C WITH A 2x4 VERTICAL POST TO THE TRUSS BELOW. VERTICAL POSTS TO BE Laterally BRACED SO THAT UNBRACED LENGTH DOES NOT EXCEED 6'. DESIGN OF CONVENTIONAL FRAMING IS THE RESPONSIBILITY OF THE PROJECT ENGINEER.

JOB INFORMATION

Customer	ROUNDEL HOMES INC
Job #	21-00108R0
Address	TERRACOTTA 3 RICHMOND HILL,ON
Model	45-03 ELEV 2
Sales Rep	RALPH MIRIGELLO
Designer	KR
Date	9/29/2021
Path	C:\MITEK\CA\JOBS\GREENPARK GROUP\ROUNDEL HOMES INC\T-TC45-03-2\

DESIGN INFORMATION

Code	NBCC 2015
Bldg	Residential - HSB (NBCC Part 9)
TC LL	25.6 lb/ft ²
TC DL	3.0 lb/ft ²
BC LL	0.0 lb/ft ²
BC DL	7.3 lb/ft ²
Deflection	LL=L/360 TL=L/360
Spacing	24" O/C unless otherwise noted
Complies With	OBC 2012 (2019 Amendment) CSA O86-14 and TPIC 2014

IMPORTANT INFORMATION

Refer to truss drawings in the Truss Engineering Package for ply-to-ply attachment notes

For site-framed valleys: top chords of all roof trusses must be laterally supported using 2x4 continuous bracing @24 O/C - all bracing must be anchored at ends as per TPIC Installation Guidelines

Read all notes on this page in addition to those shown on the KOTT Truss Engineering package

Field erection, handling and bracing are not the responsibility of KOTT, or KOTT Engineering

Unless noted otherwise, hurricane ties are to be installed at the bearings of all trusses > 40 ft clear span, and any girder or beam supporting trusses with a clear span >40 ft. See hanger legend for type.

Unless noted otherwise, for Part 9 bldgs, all trusses are to be anchored to the top of supporting walls as follows: trusses with a clear span <40 ft use 3-1/4" nails @ each bearing; trusses with a clear span >40 ft use 3-1/4" nails @ each bearing in addition to the appropriate hurricane tie.

KOTT Inc.
14 Anderson Blvd.
Uxbridge, ON
905.642.4400



ENGINEERING NOTE PAGE (ENP-1)

PLEASE READ PRIOR TO INSTALLATION

CITY OF RICHMOND HILL
BUILDING DIVISION

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Per: maddy.toal@alejandro

RESPONSIBILITIES

THIS DESIGN IS FOR AN INDIVIDUAL BUILDING COMPONENT AND HAS BEEN BASED ON INFORMATION PROVIDED BY KOTT DESIGN. 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 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.

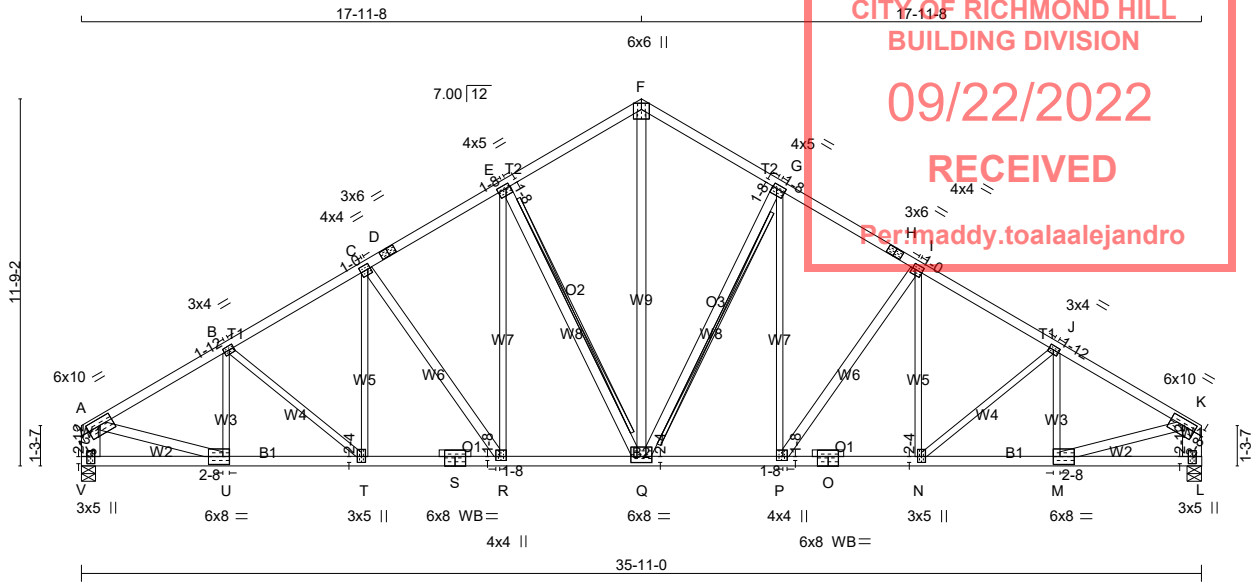
DIMENSIONS

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



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM1021-037	G01	1	2	TRUSS DESC.	

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ID:aRX40AUyo8NMuwOhGasZzPzT9sH-4TaVeTWC0E7mqEXGkb11y77Z1S129UfLBbQI02yW745



Scale = 1:73.9

TOTAL WEIGHT = 2 X 194 = 388 lb

LUMBER			
N. L. G. A. RULES	CHORDS	SIZE	DESCR.
A - D	2x4	DRY	No.2 SPF
D - F	2x4	DRY	No.2 SPF
F - H	2x4	DRY	No.2 SPF
H - K	2x4	DRY	No.2 SPF
V - A	2x8	DRY	No.2 SPF
L - K	2x8	DRY	No.2 SPF
V - S	2x4	DRY	2100F 1.8E SPF
S - O	2x4	DRY	2100F 1.8E SPF
O - L	2x4	DRY	2100F 1.8E SPF
ALL WEBS EXCEPT	2x3	DRY	No.2 SPF
Q - F	2x4	DRY	No.2 SPF
P - G	2x4	DRY	No.2 SPF
P - I	2x4	DRY	No.2 SPF
E - Q	2x4	DRY	No.2 SPF
C - R	2x4	DRY	No.2 SPF
A - U	2x4	DRY	No.2 SPF
M - K	2x4	DRY	No.2 SPF

DRY: SEASONED LUMBER.

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

CHORDS #ROWS	SURFACE SPACING (IN)	LOAD (PLF)
TOP CHORDS : (0.122"x3") SPIRAL NAILS		
A - D 1	12	TOP
D - F 1	12	TOP
F - H 1	12	TOP
H - K 1	12	TOP
V - A 2	12	TOP
L - K 2	12	TOP
BOTTOM CHORDS : (0.122"x3") SPIRAL NAILS		
V - S 1	8	SIDE(186.1)
S - O 1	8	SIDE(186.1)
O - L 1	8	SIDE(186.1)
WEBS : (0.122"x3") SPIRAL NAILS		
2x3 1	6	
2x4 1	6	

NAILS TO BE DRIVEN FROM ONE SIDE ONLY.

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	HORZ	UPLIFT	BRG	IN-SX
V	8523	0	0	8523	0	0	0	5-8	4-10
L	8523	0	0	8523	0	0	0	5-8	4-10

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
V	5968	4255 / 0	0 / 0	0 / 0	0 / 0	1713 / 0	0 / 0
L	5968	4255 / 0	0 / 0	0 / 0	0 / 0	1713 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 2.49 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.

2x6 DRY SPF No.2 T-BRACE AT G-Q, E-Q

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		W E B S		FACTORED	
MEMB.	FORCE (LBS)	VERT. LOAD	LC1 MAX	MAX. UNBRAC	MEMB.	FORCE (LBS)	MAX. CSI (LC)
FR-TO		FROM	TO	LENGTH	FR-TO		
A-B	-11100 / 0	-84.3	-84.3	0.79 (1)	2.49	Q-F	0 / 7558
B-C	-10803 / 0	-84.3	-84.3	0.65 (1)	2.63	Q-G	-3221 / 0
C-D	-9480 / 0	-84.3	-84.3	0.54 (1)	2.90	P-G	0 / 3311
D-E	-9480 / 0	-84.3	-84.3	0.54 (1)	2.90	P-I	-1972 / 0
E-F	-7828 / 0	-84.3	-84.3	0.42 (1)	3.28	N-I	0 / 1908
F-G	-7828 / 0	-84.3	-84.3	0.42 (1)	3.28	N-J	-346 / 0
G-H	-9480 / 0	-84.3	-84.3	0.54 (1)	2.90	M-J	-29 / 71
H-I	-9480 / 0	-84.3	-84.3	0.54 (1)	2.90	E-Q	-3221 / 0
I-J	-10803 / 0	-84.3	-84.3	0.65 (1)	2.63	R-E	0 / 3311
J-K	-11100 / 0	-84.3	-84.3	0.79 (1)	2.49	C-R	-1972 / 0
V-A	-7776 / 0	0.0	0.0	0.21 (1)	6.07	T-C	0 / 1908
L-K	-7776 / 0	0.0	0.0	0.21 (1)	6.07	B-T	-346 / 0
V-U	0 / 0	-390.4	-390.4	0.37 (1)	10.00	U-B	-29 / 71
U-T	0 / 9598	-390.4	-390.4	0.76 (1)	10.00	A-U	0 / 9805
T-S	0 / 9331	-390.4	-390.4	0.67 (1)	10.00	M-K	0 / 9805
S-R	0 / 9331	-390.4	-390.4	0.67 (1)	10.00		
R-Q	0 / 8192	-390.4	-390.4	0.69 (1)	10.00		
Q-P	0 / 8192	-390.4	-390.4	0.69 (1)	10.00		
P-O	0 / 9331	-390.4	-390.4	0.67 (1)	10.00		
O-N	0 / 9331	-390.4	-390.4	0.67 (1)	10.00		
N-M	0 / 9598	-390.4	-390.4	0.76 (1)	10.00		
M-L	0 / 0	-390.4	-390.4	0.37 (1)	10.00		

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 25.6 PSF
DL = 3.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.3 PSF
TOTAL LOAD = 35.9 PSF

SPACING = 24.0 IN. C/C

GIRDER TYPE: CStdGirder
START DISTANCE = 0-0
START SPAN CARRIED = 16-8-0
END DISTANCE = 35-11-0
END SPAN CARRIED = 16-8-0
END WALL WIDTH = 1-12
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 2015

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

(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.20")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.27")
ALLOWABLE DEFL.(TL)= L/360 (1.20")
CALCULATED VERT. DEFL.(TL) = L/ 907 (0.47")

CSI: TC=0.79/1.00 (A-B:1), BC=0.76/1.00 (T-U:1), WB=0.87/1.00 (A-U:1), SSI=0.46/1.00 (U-V:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES
PLATE GRIP(DRY) 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.

CONTINUED ON PAGE 2



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.



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM1021-037	G01	1	2	TRUSS DESC.	

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ID:aRX4OAUyo8NMuwOhGAsZzPzT9sH-4TaVeTWC0E7mgEXGKb11y77Z1S129UfLBbQI02yW745

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW-t	MT20	6.0	10.0	2.50	5.00
B	TMWW-t	MT20	3.0	4.0	1.50	1.75
C	TMWW-t	MT20	4.0	4.0	2.00	1.00
D	TS-t	MT20	3.0	6.0		
E	TMWW-t	MT20	4.0	5.0	1.50	1.50
F	TTW+p	MT20	6.0	6.0	Edge	
G	TMWW-t	MT20	4.0	5.0	1.50	1.50
H	TS-t	MT20	3.0	6.0		
I	TMWW-t	MT20	4.0	4.0	2.00	1.00
J	TMWW-t	MT20	3.0	4.0	1.50	1.75
K	TMVW-t	MT20	6.0	10.0	2.50	5.00
L	BMV1+p	MT20	3.0	5.0	2.75	1.50
M	BMWW-t	MT20	6.0	8.0	3.00	2.50
N	BMWW+t	MT20	3.0	5.0	2.25	1.50
O	BS-t	MT20	6.0	8.0		
P	BMWW+t	MT20	4.0	4.0	1.50	1.50
Q	BMWWW-t	MT20	6.0	8.0	2.25	4.00
R	BMWW+t	MT20	4.0	4.0	1.50	1.50
S	BS-t	MT20	6.0	8.0		
T	BMWW+t	MT20	3.0	5.0	2.25	1.50
U	BMWW-t	MT20	6.0	8.0	3.00	2.50
V	BMV1+p	MT20	3.0	5.0	2.75	1.50

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

WB - INDICATES BLOCKING REQUIRED

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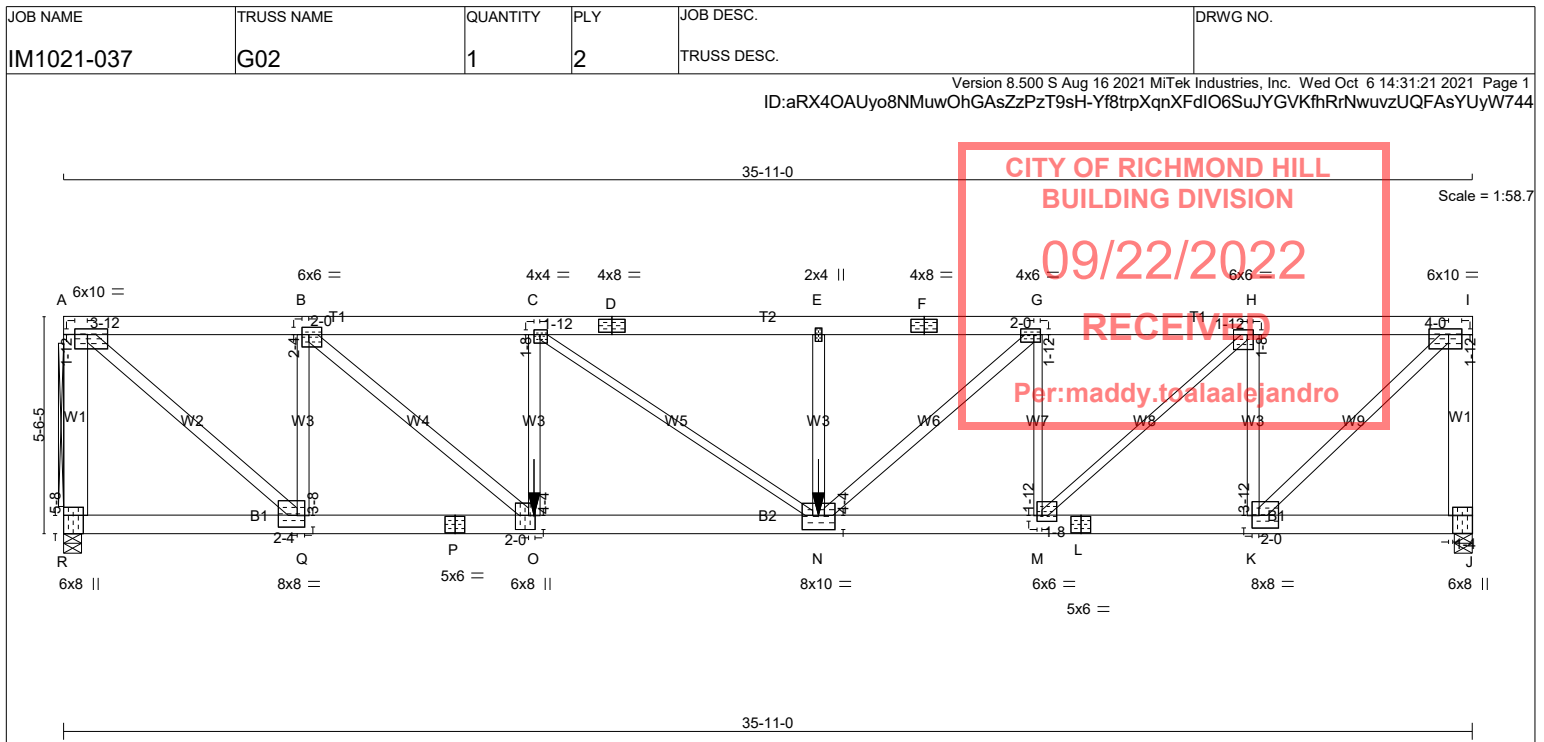
JSI GRIP = 0.89 (U) (INPUT = 0.90)
JSI METAL = 1.00 (S) (INPUT = 1.00)



October 06, 2021

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 220 = 440 lb

LUMBER				DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER				DESIGN CRITERIA			
N. L. G. A. RULES				BEARINGS				*** SPECIAL LOADS ANALYSIS ***			
CHORDS SIZE LUMBER DESCR.				FACTORED MAXIMUM FACTORED INPUT REQRD				GEOMETRY AND/OR BASIC LOADS CHANGED BY USER.			
R - A 2x8 DRY No.2 SPF				GROSS REACTION GROSS REACTION BRG BRG				LOADS WERE DERIVED FROM USER INPUT			
A - D 2x6 DRY 2100F 1.8E SPF				VERT HORZ DOWN HORZ UPLIFT IN-SX IN-SX				NO FURTHER MODIFICATIONS WERE MADE			
D - F 2x6 DRY 2100F 1.8E SPF				R 9866 0 9866 0 0 5-8 5-8							
F - I 2x6 DRY 2100F 1.8E SPF				J 9621 0 9621 0 0 5-8 5-8							
J - I 2x8 DRY No.2 SPF				UNFACTORED REACTIONS				SPECIFIED LOADS:			
R - P 2x6 DRY 2100F 1.8E SPF				1ST LCASE MAX./MIN. COMPONENT REACTIONS				TOP CH. LL = 25.6 PSF			
P - L 2x6 DRY 2100F 1.8E SPF				JT COMBINED SNOW LIVE PERM.LIVE WIND DEAD SOIL				DL = 3.0 PSF			
L - J 2x6 DRY 2100F 1.8E SPF				R 6908 4925 / 0 0 / 0 0 / 0 1982 / 0 0 / 0				BOT CH. LL = 0.0 PSF			
				J 6736 4803 / 0 0 / 0 0 / 0 1933 / 0 0 / 0				DL = 7.3 PSF			
								TOTAL LOAD = 35.9 PSF			
ALL WEBS 2x4 DRY No.2 SPF				BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) R, J				SPACING = 24.0 IN. C/C			
EXCEPT				BRACING				LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM			
A - Q 2x4 DRY 2100F 1.8E SPF				TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.34 FT.				GIRDER TYPE: CStdGirder			
C - N 2x3 DRY No.2 SPF				MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.				START DISTANCE = 0-0			
N - G 2x4 DRY 2100F 1.8E SPF				ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.				START SPAN CARRIED = 16-8-0			
M - G 2x3 DRY No.2 SPF				2x4 DRY SPF No.2 T-BRACE AT A-R				END DISTANCE = 35-11-0			
M - H 2x3 DRY No.2 SPF				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 SPAN CARRIED = 16-8-0			
K - I 2x4 DRY 2100F 1.8E SPF				END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW				END WALL WIDTH = 1-12			
DRY: SEASONED LUMBER.				LOADING				APPLIED TO BACK SIDE OF BOTTOM CHORD.			
DESIGN CONSISTS OF 2 TRUSSES BUILT SEPARATELY THEN FASTENED TOGETHER AS FOLLOWS:				TOTAL LOAD CASES: (4)				- ADDTL LOADS BASED ON 55 % OF GSL.			
CHORDS #ROWS SURFACE SPACING (IN) LOAD(PLF)				C H O R D S W E B S				*** NON STANDARD GIRDER ***			
TOP CHORDS : (0.122"x3") SPIRAL NAILS				MEMB. MAX. FACTORED FORCE (LBS) FACTORED VERT. LOAD LC1 MAX CSI (LC) UNBRAC LENGTH FR-TO				ADDTL USER-DEFINED LOADS APPLIED TO ALL LOAD CASES.			
R-A 2 12 TOP				FR-TO				THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015			
I-J 2 12 TOP				R-A -8889 / 0 0.0 0.0 0.54 (1) 7.81 A-Q 0 / 13539 0.56 (1)				THIS DESIGN COMPLIES WITH:			
A-D 2 12 SIDE(49.4)				A-B -10416 / 0 -84.3 -84.3 0.15 (1) 4.59 Q-B -6091 / 0 0.90 (1)				- PART 9 OF BCBC 2018, ABC 2019			
D-F 2 12 SIDE(49.4)				B-C -16953 / 0 -84.3 -84.3 0.28 (1) 3.64 B-O 0 / 8621 0.76 (1)				- PART 9 OF OBC 2012 (2019 AMENDMENT)			
F-I 2 12 TOP				C-D -18971 / 0 -183.0 -183.0 0.45 (1) 3.34 O-C -2378 / 0 0.35 (1)				- CSA 086-14			
BOTTOM CHORDS : (0.122"x3") SPIRAL NAILS				D-E -18971 / 0 -183.0 -183.0 0.45 (1) 3.34 C-N 0 / 2463 0.30 (1)				- TPIC 2014			
R-P 2 12 SIDE(186.1)				E-F -18971 / 0 -84.3 -84.3 0.33 (1) 3.43 N-E -1005 / 0 0.15 (1)				(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD			
P-L 2 12 SIDE(186.1)				F-G -18971 / 0 -84.3 -84.3 0.33 (1) 3.43 N-G 0 / 4899 0.20 (1)				ALLOWABLE DEFL.(LL)= L/360 (1.20")			
L-J 2 12 SIDE(186.1)				G-H -15342 / 0 -84.3 -84.3 0.22 (1) 3.85 M-G -3562 / 0 0.74 (1)				CALCULATED VERT. DEFL.(LL) = L/999 (0.39")			
WEBS : (0.122"x3") SPIRAL NAILS				H-I -9463 / 0 -84.3 -84.3 0.12 (1) 4.79 M-H 0 / 8004 0.99 (1)				ALLOWABLE DEFL.(TL)= L/360 (1.20")			
2x3 1 6				J-I -8765 / 0 0.0 0.0 1.00 (1) 5.78 K-H -6039 / 0 0.89 (1)				CALCULATED VERT. DEFL.(TL) = L/630 (0.68")			
2x4 1 6				R-Q 0 / 0 -390.4 -390.4 0.26 (1) 10.00				CSI: TC=1.00/1.00 (I-J:1), BC=0.72/1.00 (N-O:1), WB=0.99/1.00 (H-M:1), SSI=0.50/1.00 (N-O:1)			
NAILS TO BE DRIVEN FROM ONE SIDE ONLY.				Q-P 0 / 10416 -390.4 -390.4 0.54 (1) 10.00				DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00 COMP=1.00 SHEAR=1.00 TENS= 1.00			
GIRDER NAILING ASSUMES NAILED HANGERS ARE FASTENED WITH MIN. 3-0 INCH NAILS.				P-O 0 / 10416 -390.4 -390.4 0.54 (1) 10.00				COMPANION LIVE LOAD FACTOR = 1.00			
				O-N 0 / 16953 -411.6 -411.6 0.72 (1) 10.00				CONTINUED ON PAGE 2			
October 06, 2021				N-M 0 / 15342 -390.4 -390.4 0.67 (1) 10.00							
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.				M-L 0 / 9463 -390.4 -390.4 0.51 (1) 10.00							
				L-K 0 / 9463 -390.4 -390.4 0.51 (1) 10.00							
				K-J 0 / 0 -390.4 -390.4 0.26 (1) 10.00							
				FACTORED CONCENTRATED LOADS (LBS)							
				JT LOC. LC1 MAX- MAX+ FACE DIR. TYPE HEEL CONN.							
N 19-3-0 -241 -270 --- FRONT VERT DEAD --- C1											
N 19-3-0 -722 -722 --- FRONT VERT SNOW --- C1											
O 12-0-0 -153 -171 --- FRONT VERT DEAD --- C1											
O 12-0-0 -455 -455 --- FRONT VERT SNOW --- C1											
CONNECTION REQUIREMENTS											
1) C1: A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED.											



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.

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM1021-037	G02	1	2	TRUSS DESC.	

Version 8.500 S Aug 16 2021 MiTek Industries, Inc. Wed Oct 6 14:31:21 2021 Page 2
ID:aRX4OAUyo8NMuwOhGAsZzPzT9sH-Yf8trpXqnXFdIO6SuJYGVKfhRrNwuvzUQFAsYUyW744

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW-t	MT20	6.0	10.0	1.75	3.75
B	TMWW-t	MT20	6.0	6.0	2.25	2.00
C	TMWW-t	MT20	4.0	4.0	1.50	1.75
D	TS-t	MT20	4.0	8.0		
E	TMW+w	MT20	2.0	4.0		
F	TS-t	MT20	4.0	8.0		
G	TMWW-t	MT20	4.0	6.0	1.75	2.00
H	TMWW-t	MT20	6.0	6.0	1.50	1.75
I	TMVW-t	MT20	6.0	10.0	1.75	4.00
J	BMV1+p	MT20	6.0	8.0	Edge	1.25
K	BMWW-t	MT20	8.0	8.0	3.75	2.00
L	BS-t	MT20	5.0	6.0		
M	BMWW-t	MT20	6.0	6.0	1.75	1.50
N	BMWW-t	MT20	8.0	10.0	4.25	5.00
O	BMWW-t	MT20	6.0	8.0	4.25	2.00
P	BS-t	MT20	5.0	6.0		
Q	BMWW-t	MT20	8.0	8.0	3.50	2.25
R	BMV1+p	MT20	6.0	8.0	5.50	

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

CONNECTION REQUIREMENTS

- 1) C1: A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED.

CITY OF RICHMOND HILL
BUILDING DEPARTMENT

09/22/2022

RECEIVED

Per: maddy.toalaalejandro

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP = 0.90 (I) (INPUT = 0.90)

JSI METAL = 0.98 (O) (INPUT = 1.00)



October 06, 2021

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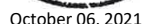


Version 8.500 S Aug 16 2021 MiTek Industries, Inc. Wed Oct 6 14:31:22 2021 Page 1
ID:aRX4OAUvo8NMuwOhGAsZzPzT9sH-0rhF29YSyNUwYheR03V2YCsFFihdOJefvP5wyW743

WB - INDICATES BLOCKING REQUIRED

1) **C1:** A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED.

CONTINUED ON PAGE 2



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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM1021-037	G03	1	1	TRUSS DESC.	

Version 8.500 S Aug 16 2021 MiTek Industries, Inc. Wed Oct 6 14:31:22 2021 Page 2
 ID:aRX4OAUyo8NMuwOhGAsZzPzT9sH-0rhF29YSYrNUwYheR03V2YCsfFjhdOJefvvP5wyW743

CITY OF RICHMOND HILL
BUILDING DIVISION

09/22/2022

RECEIVED

Per:maddy.toalaalejandro

MT18HS 586 403 2455 1382 3163 3004
 PLATE PLACEMENT TOL. = 0.250 inches
 PLATE ROTATION TOL. = 5.0 Deg.
 JSI GRIP = 0.90 (D) (INPUT = 0.90)
 JSI METAL = 0.95 (D) (INPUT = 1.00)



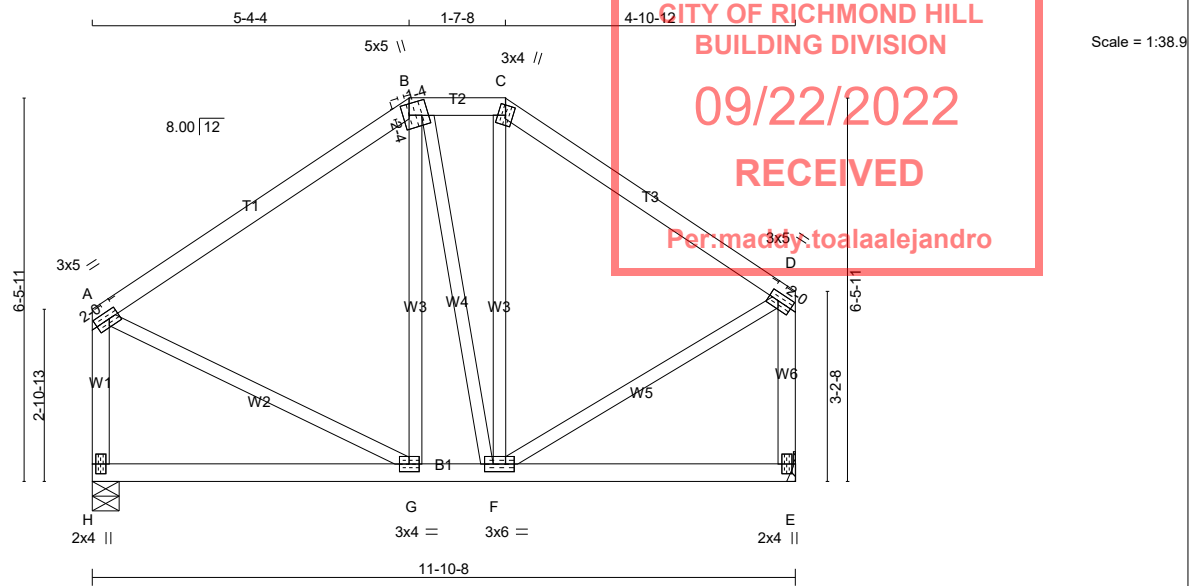
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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM1021-037	G04	1	1	TRUSS DESC.	

Version 8.500 S Aug 16 2021 MiTek Industries, Inc. Wed Oct 6 14:31:23 2021 Page 1
ID: aRX4OAUyo8NMuwOhGAsZzPzT9sH-U1FdGVY4J9VLXiGr?kbbal95fAuM15nuZfydNyW742



TOTAL WEIGHT = 59 lb

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

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	3.0	5.0	1.50	2.00
B	TTWW+m	MT20	5.0	5.0	2.25	1.25
C	TTW+m	MT20	3.0	4.0		
D	TMVW-t	MT20	3.0	5.0	1.50	2.00
E	BMV1+p	MT20	2.0	4.0		
F	BMWW-t	MT20	3.0	6.0		
G	BMWW-t	MT20	3.0	4.0		
H	BMV1+p	MT20	2.0	4.0		

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

BEARINGS								
JT	FACTORED		MAXIMUM FACTORED			INPUT	REQRD	
	GROSS REACTION		GROSS REACTION			BRG	BRG	
	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	
H	843	0	843	0	0	5-8	1-8	
E	843	0	843	0	0	MECHANICAL		

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

UNFACTORED REACTIONS

JT	1ST CASE	MAX./MIN.	COMPONENT REACTIONS				
	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
H	590	421 / 0	0 / 0	0 / 0	0 / 0	169 / 0	0 / 0
E	590	421 / 0	0 / 0	0 / 0	0 / 0	169 / 0	0 / 0

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

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. LC1 MAX. CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)	
FR-TO		FROM	TO	FR-TO			
A-B	-514 / 0	-84.3	-84.3 0.48 (1)	6.25	G-B	0 / 75	0.03 (4)
B-C	-415 / 0	-84.3	-84.3 0.04 (1)	6.25	B-F	-56 / 0	0.04 (1)
C-D	-499 / 0	-84.3	-84.3 0.40 (1)	6.25	F-C	0 / 54	0.02 (4)
H-A	-714 / 0	0.0	0.0 0.12 (1)	7.81	A-G	0 / 473	0.12 (1)
E-D	-723 / 0	0.0	0.0 0.14 (1)	7.81	F-D	0 / 479	0.12 (1)
H-G	0 / 0	-57.8	-57.8 0.23 (1)	10.00			
G-F	0 / 428	-57.8	-57.8 0.31 (1)	10.00			
F-E	0 / 0	-57.8	-57.8 0.19 (1)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 25.6 PSF
DL = 3.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.3 PSF
TOTAL LOAD = 35.9 PSF

SPACING = 24.0 IN. C/C

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

GIRDER TYPE: CStdGirder
START DISTANCE = 0-0
START SPAN CARRIED = 4-0-0
END DISTANCE = 11-10-8
END SPAN CARRIED = 4-0-0
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, NBC 2015

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

(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.40")
CALCULATED VERT. DEFL.(LL) = L/999 (0.03")
ALLOWABLE DEFL.(TL)= L/360 (0.40")
CALCULATED VERT. DEFL.(TL) = L/999 (0.08")

CSI: TC=0.48/1.00 (A-B:1), BC=0.31/1.00 (F-G:1), WB=0.12/1.00 (D-F:1), SSI=0.16/1.00 (A-B:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

CONTINUED ON PAGE 2



October 06, 2021

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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM1021-037	G04	1	1	TRUSS DESC.	

Version 8.500 S Aug 16 2021 MiTek Industries, Inc. Wed Oct 6 14:31:23 2021 Page 2

ID:aRX4OAUyo8NMuwOhGAsZzPzT9sH-U1FdGVY4J9VLXiGr?kbal195fAuM15nuZfydNyW742

CITY OF RICHMOND HILL
BUILDING DIVISION

09/22/2022

RECEIVED

Per:maddy.toalaalejandro

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.83 (F) (INPUT = 0.90)

JSI METAL= 0.16 (A) (INPUT = 1.00)



October 06, 2021

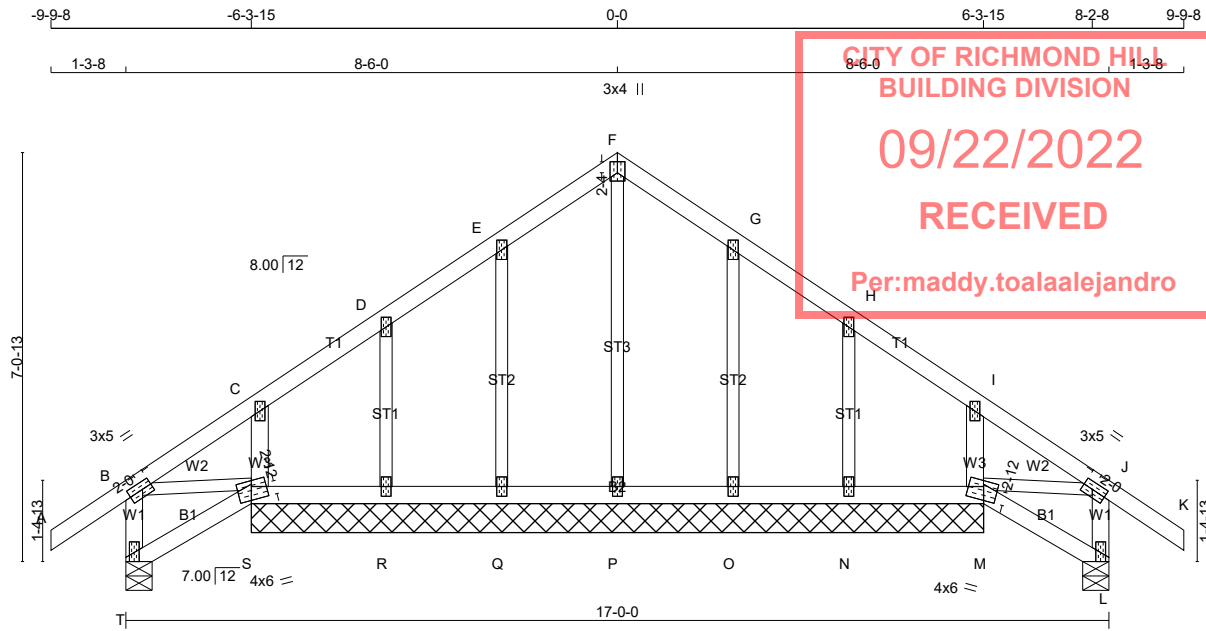
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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM1021-037	GE02	1	1	TRUSS DESC.	

Version 8.500 S Aug 16 2021 MiTek Industries, Inc. Wed Oct 6 14:31:25 2021 Page 1

ID: aRX4OAUyo8NMuwOhGAsZzPzT9sH-QQNOhBaLml2n?QD79dCfAqayTvkqxO4Ls83hFyW740



Scale = 1:39.8

TOTAL WEIGHT = 72 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
T - B	2x4	DRY	No.2
A - F	2x4	DRY	No.2
F - K	2x4	DRY	No.2
L - J	2x4	DRY	No.2
T - S	2x4	DRY	No.2
S - M	2x4	DRY	No.2
M - L	2x4	DRY	No.2

ALL WEBS	2x3	DRY	No.2	SPF
EXCEPT				
S - C	2x4	DRY	No.2	SPF
M - I	2x4	DRY	No.2	SPF

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

GABLE STUDS SPACED AT 2-0-0 OC.

PLATES (table is in inches)

JT TYPE	PLATES	W	LEN	Y	X
B TMVW-t	MT20	3.0	5.0	1.50	2.00
C, D, E, G, H, I					
C TMW+w	MT20	2.0	4.0		
F TTW+p	MT20	3.0	4.0	2.25	1.50
J TMVW-t	MT20	3.0	5.0	1.50	2.00
L BMV1+p	MT20	2.0	4.0	Edge	
M BBWW1-m	MT20	4.0	6.0	2.75	3.00
N, O, P, Q, R					
N BMW1+w	MT20	2.0	4.0		
S BBWW1-m	MT20	4.0	6.0	2.75	3.00
T BMV1+p	MT20	2.0	4.0	Edge	

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

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

THIS TRUSS DESIGNED FOR CONTINUOUS BEARINGS.

THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE.

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

BRACINGTOP 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: (6)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED CSI (LC)	
FR-TO		FROM TO		FR-TO			
T-B	-200 / 0	0.0	0.0 0.02 (5)	7.81	P-F	-119 / 0	0.07 (1)
A-B	0 / 32	-84.3	-84.3 0.13 (5)	10.00	Q-E	-192 / 0	0.06 (1)
B-C	-22 / 14	-84.3	-84.3 0.07 (5)	6.25	R-D	-178 / 4	0.04 (6)
C-D	-34 / 0	-84.3	-84.3 0.06 (1)	6.25	O-G	-192 / 0	0.06 (1)
D-E	-26 / 3	-84.3	-84.3 0.05 (1)	6.25	N-H	-160 / 0	0.03 (6)
E-F	-31 / 0	-84.3	-84.3 0.05 (1)	6.25	B-S	-6 / 22	0.01 (6)
F-G	-32 / 0	-84.3	-84.3 0.05 (1)	6.25	S-C	-221 / 0	0.02 (1)
G-H	-24 / 0	-84.3	-84.3 0.05 (1)	6.25	M-I	-221 / 0	0.02 (6)
H-I	-36 / 0	-84.3	-84.3 0.06 (6)	6.25	M-J	0 / 17	0.00 (6)
I-J	-9 / 2	-84.3	-84.3 0.06 (6)	10.00			
J-K	0 / 32	-84.3	-84.3 0.11 (1)	10.00			
L-J	-202 / 0	0.0	0.0 0.02 (6)	7.81			
T-S	0 / 0	-18.2	-18.2 0.03 (4)	10.00			
S-R	0 / 27	-18.2	-18.2 0.02 (4)	10.00			
R-Q	0 / 22	-18.2	-18.2 0.02 (4)	10.00			
Q-P	0 / 18	-18.2	-18.2 0.02 (4)	10.00			
P-O	0 / 18	-18.2	-18.2 0.02 (4)	10.00			
O-N	0 / 22	-18.2	-18.2 0.02 (4)	10.00			
N-M	0 / 26	-18.2	-18.2 0.02 (4)	10.00			
M-L	0 / 0	-18.2	-18.2 0.03 (4)	10.00			

PATTERN-LOADING CHECK APPLIED TO THIS TRUSS.

DESIGN CRITERIA**SPECIFIED LOADS:**

TOP CH.	LL	=	25.6	PSF
DL	=	3.0	PSF	
BOT CH.	LL	=	0.0	PSF
DL	=	7.3	PSF	
TOTAL LOAD	=	35.9	PSF	

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.19")
CALCULATED VERT. DEFL.(LL)= L/999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.19")
CALCULATED VERT. DEFL.(TL)= L/999 (0.00")CSI: TC=0.13/1.00 (A-B:5), BC=0.03/1.00 (S-T:4),
WB=0.07/1.00 (F-P:1), SSI=0.09/1.00 (A-B:5)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= 0.68 (J) (INPUT = 0.90)
JSI METAL= 0.12 (I) (INPUT = 1.00)

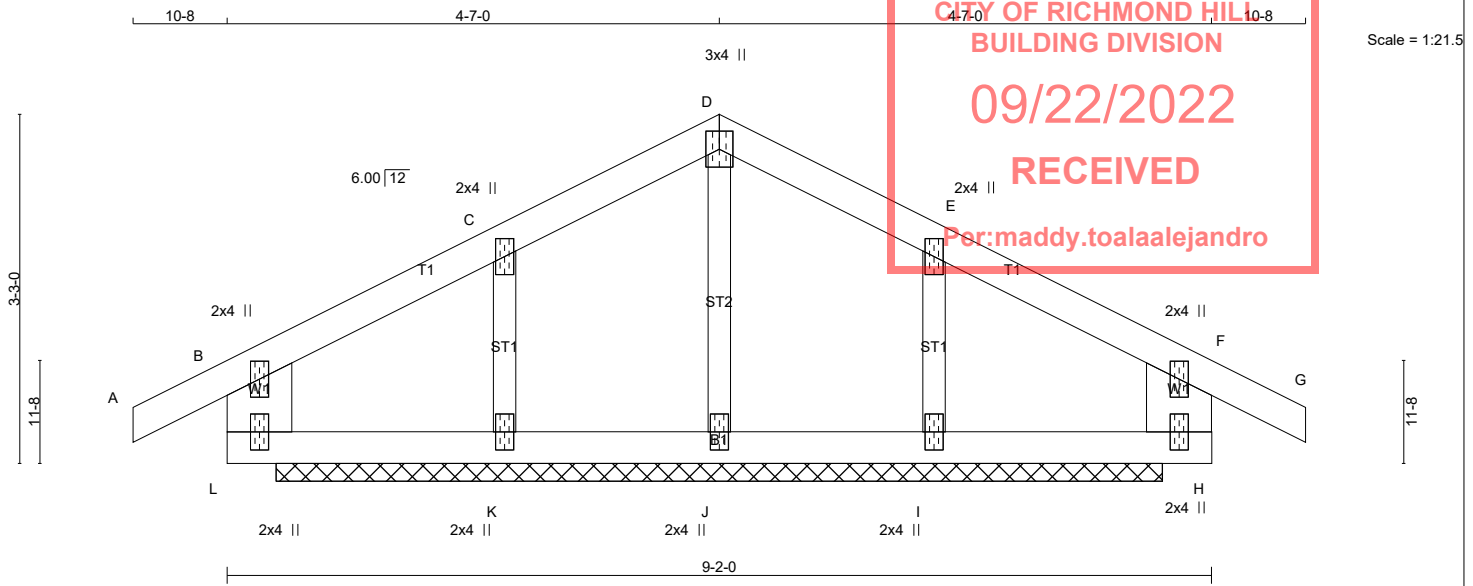
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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM1021-037	GE03	1	1	TRUSS DESC.	

Version 8.500 S Aug 16 2021 MiTek Industries, Inc. Wed Oct 6 14:31:25 2021 Page 1
ID:aRX4OAUyo8NMuwOhGAsZzPzT9sH-QQNOhBaLml2n?QD79dCfAqb_Tvkqy_4Ls83hFyW740



TOTAL WEIGHT = 33 lb [M]

LUMBER

N. L. G. A. RULES	CHORDS	SIZE	LUMBER	DESCR.
L - B	2x8	DRY	No.2	SPF
A - D	2x4	DRY	No.2	SPF
D - G	2x4	DRY	No.2	SPF
H - F	2x8	DRY	No.2	SPF
L - H	2x4	DRY	No.2	SPF

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

GABLE STUDS SPACED AT 2-0-0 OC.

PLATES (table is in inches)

JT TYPE	PLATES	W	LEN	Y	X
B TMV+p	MT20	2.0	4.0		
C TMW+w	MT20	2.0	4.0		
D TTW+p	MT20	3.0	4.0		
E TMW+w	MT20	2.0	4.0		
F TMV+p	MT20	2.0	4.0		
H BMV1+p	MT20	2.0	4.0		
I, J, K					
I BMV1+w	MT20	2.0	4.0		
L BMV1+p	MT20	2.0	4.0		

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

BEARINGS

THIS TRUSS DESIGNED FOR CONTINUOUS BEARINGS.
THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE.
BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S)

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	VERT. LOAD (PLF)	MAX. FACTORED CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED CSI (LC)	UNBRACED LENGTH (FT)
FR-TO		FROM TO		FR-TO			
L-B	-203 / 0	0.0	0.0 (0.01 (4))	J-D	-144 / 0	0.03 (1)	7.81
A-B	0 / 18	-84.3	-84.3 (0.05 (1))	K-C	-190 / 0	0.03 (1)	10.00
B-C	-31 / 0	-84.3	-84.3 (0.07 (1))	I-E	-190 / 0	0.03 (1)	6.25
C-D	-24 / 0	-84.3	-84.3 (0.05 (1))				6.25
D-E	-24 / 0	-84.3	-84.3 (0.05 (1))				6.25
E-F	-31 / 0	-84.3	-84.3 (0.07 (1))				6.25
F-G	0 / 18	-84.3	-84.3 (0.05 (1))				10.00
H-F	-203 / 0	0.0	0.0 (0.01 (4))				7.81
L-K	0 / 26	-18.2	-18.2 (0.03 (4))				10.00
K-J	0 / 19	-18.2	-18.2 (0.02 (4))				10.00
J-I	0 / 19	-18.2	-18.2 (0.02 (4))				10.00
I-H	0 / 26	-18.2	-18.2 (0.03 (4))				10.00

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 25.6 PSF
DL = 3.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.3 PSF
TOTAL LOAD = 35.9 PSF

SPACING = 24.0 IN. C/C

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

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

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

(55% OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

CSI: TC=0.07/1.00 (E-F:1), BC=0.03/1.00 (H-I:4), WB=0.03/1.00 (E-I:1), SSI=0.08/1.00 (E-F:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.13 (B) (INPUT = 0.90)
JSI METAL= 0.11 (F) (INPUT = 1.00)



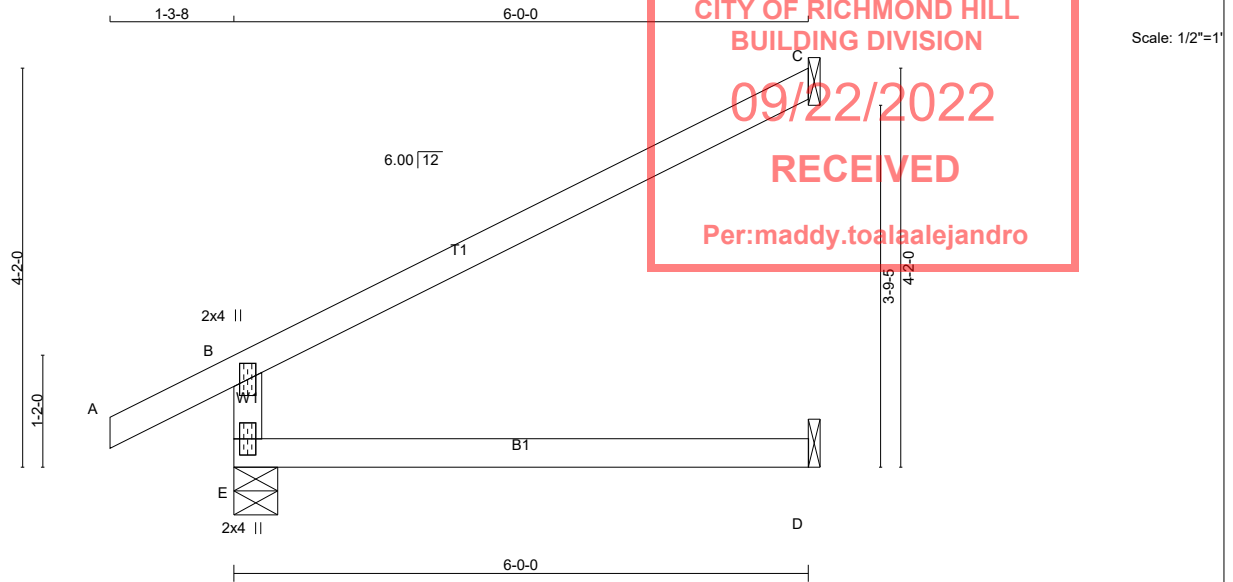
October 06, 2021

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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM1021-037	J01	14	1	TRUSS DESC.	

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ID:aRX4OAUyo8NMuwOhGAsZzPzT9sH-ucxmuXbzc4tvO9?Pqs8RCONeJsDGZPgEaWtdEiyW74?



TOTAL WEIGHT = 14 X 17 = 239 lb [M]

LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
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		

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQD BRG
	VERT	HORZ	DOWN	HORZ		
E	495	0	495	0	5-8	1-8
C	190	0	190	0	1-8	1-8
D	45	0	51	0	1-8	1-8

SEE MITEK STANDARD DETAIL MSD2015-H FOR CONNECTION TO JOINT(S) C, D

UNFACTORED REACTIONS

JT	1ST LCASE		MAX / MIN. COMPONENT REACTIONS		WIND	DEAD	SOIL
	COMBINED	SNOW	LIVE	PERM. LIVE			
E	343	261 / 0	0 / 0	0 / 0	0 / 0	82 / 0	0 / 0
C	129	115 / 0	0 / 0	0 / 0	0 / 0	14 / 0	0 / 0
D	36	0 / 0	0 / 0	0 / 0	0 / 0	36 / 0	0 / 0

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

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

MEMB.	CHORDS		VERT. LOAD	LC1	MAX	MAX	MEMB.	W E B S	
	MAX. FACTORED FORCE (LBS)	FACTORED (PLF)						MAX. FACTORED FORCE (LBS)	MAX. FACTORED CSI (LC)
FR-TO									
E-B	-430 / 0	0.0	0.0	0.13 (4)	7.81				
A-B	0 / 26	-84.3	-84.3	0.11 (1)	10.00				
B-C	-28 / 0	-84.3	-84.3	0.52 (1)	6.25				
E-D	0 / 0	-18.2	-18.2	0.13 (4)	10.00				

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	25.6	PSF
DL	=	3.0	PSF	
BOT CH.	LL	=	0.0	PSF
DL	=	7.3	PSF	
TOTAL LOAD	=	35.9	PSF	

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:

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

DESIGN ASSUMPTIONS

- OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 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: $TC=0.52/1.00$ (B-C:1), $BC=0.13/1.00$ (D-E:4),
 $WB=0.00/1.00$ (n/a:0), $SSI=0.22/1.00$ (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

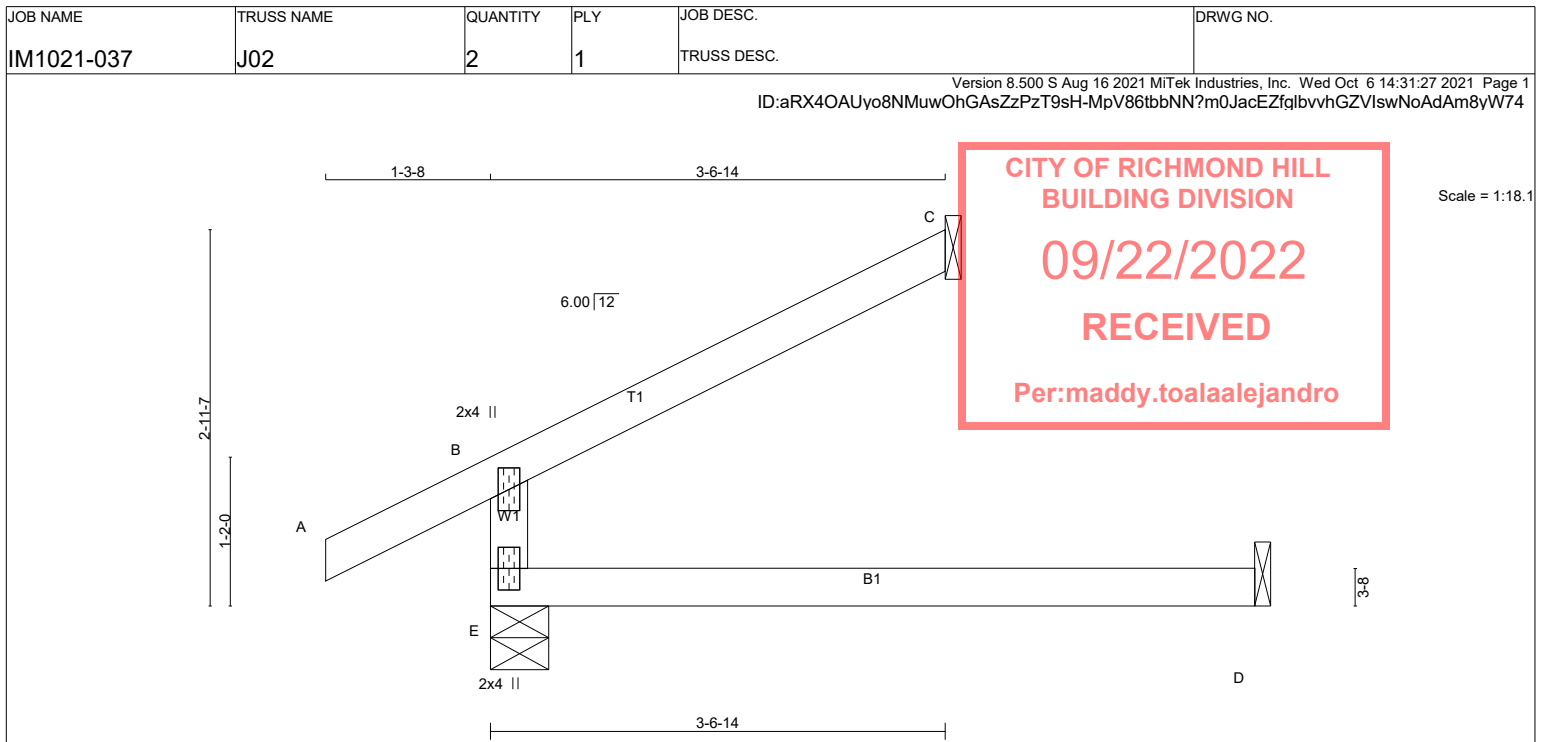
JSI GRIP= 0.24 (B) (INPUT = 0.90)
JSI METAL= 0.18 (B) (INPUT = 1.00)



October 06, 2021

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TOTAL WEIGHT = 2 X 14 = 28 lb [M]

LUMBER

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

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

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

BEARINGS

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQD BRG
JT	VERT	HORZ	DOWN	HORZ
E	367	0	367	0
C	113	0	113	0
D	45	0	51	0

SEE MITEK STANDARD DETAIL MSD2015-H FOR CONNECTION TO JOINT(S) C, D

UNFACTORED REACTIONS

JT	1ST LCASE	MAX / MIN	COMPONENT REACTIONS	WIND	DEAD	SOIL
	COMBINED	SNOW	LIVE	PERM.LIVE		
E	257	184 / 0	0 / 0	0 / 0	73 / 0	0 / 0
C	77	69 / 0	0 / 0	0 / 0	8 / 0	0 / 0
D	36	0 / 0	0 / 0	0 / 0	36 / 0	0 / 0

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

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				W E B S			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX LC1	MAX UNBRAC	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)
FR-TO					FR-TO		
E-B	-302 / 0	0.0	0.0	0.13 (4)	7.81		
A-B	0 / 26	-84.3	-84.3	0.11 (1)	10.00		
B-C	-17 / 0	-84.3	-84.3	0.18 (1)	6.25		
E-D	0 / 0	-18.2	-18.2	0.13 (4)	10.00		

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	25.6	PSF
	DL	=	3.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.3	PSF
TOTAL LOAD	=	35.9	PSF	

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:

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

DESIGN ASSUMPTIONS

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 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=0.18/1.00 (B-C:1), BC=0.13/1.00 (D-E:4), WB=0.00/1.00 (n/a:0), SSI=0.13/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

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



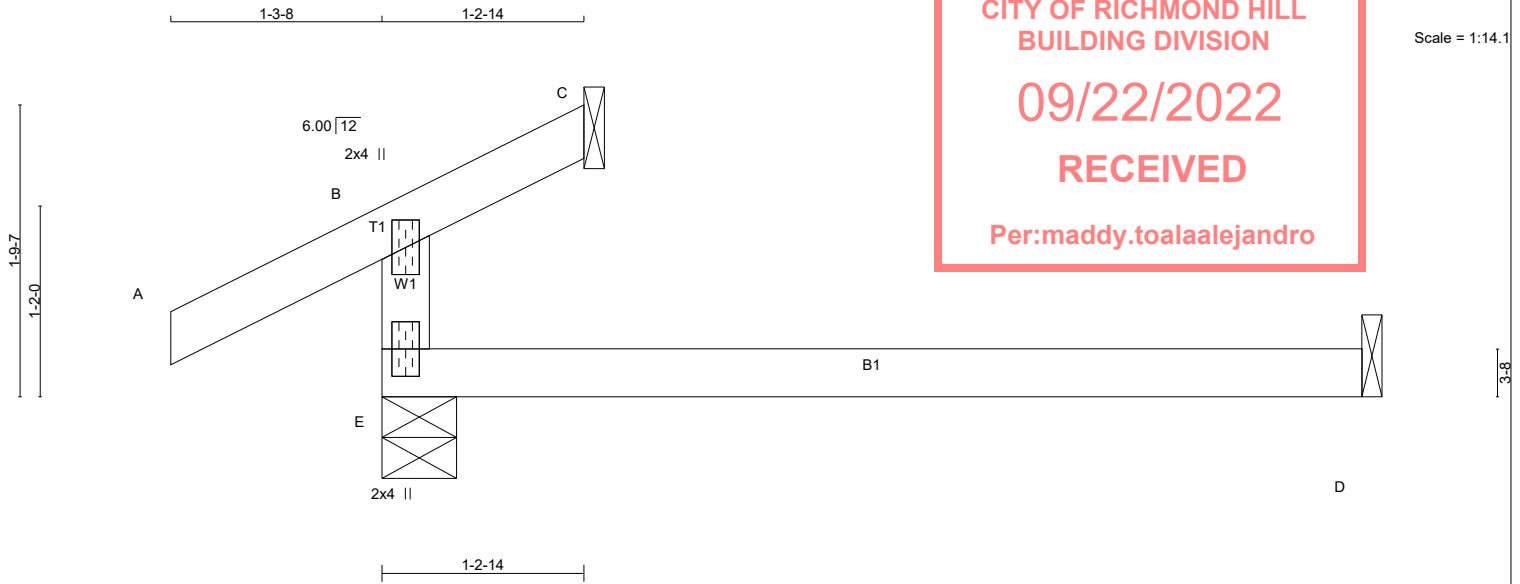
October 06, 2021

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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM1021-037	J03	2	1	TRUSS DESC.	

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMV+p	MT20	2.0	4.0	
E	BMV1+p	MT20	2.0	4.0	

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

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG		REQD BRG	
	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	
E	246	0	246	0	0	5-8	1-8	
C	37	0	44	0	0	1-8	1-8	
D	45	0	52	0	0	1-8	1-8	

SEE MITEK STANDARD DETAIL MSD2015-H FOR CONNECTION TO JOINT(S) C, D

UNFACTORED REACTIONS

JT	1ST LCASE		MAX / MIN. COMPONENT REACTIONS		WIND	DEAD	SOIL
	COMBINED	SNOW	LIVE	PERM. LIVE			
E	170	136 / 0	0 / 0	0 / 0	0 / 0	34 / 0	0 / 0
C	30	0 / -2	0 / 0	0 / 0	0 / 0	32 / 0	0 / 0
D	36	0 / -1	0 / 0	0 / 0	0 / 0	37 / 0	0 / 0

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

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS			W E B S		
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX LC1	MAX UNBRAC	MEMB. MAX. FACTORED FORCE (LBS)
FR-TO					
E-B	-182 / 23	0.0	0.0	0.12 (4)	7.81
A-B	0 / 26	-84.3	-84.3	0.11 (1)	10.00
B-C	-7 / 18	-84.3	-84.3	0.11 (4)	10.00
E-D	0 / 0	-18.2	-18.2	0.14 (4)	10.00

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 25.6 PSF
DL = 3.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.3 PSF
TOTAL LOAD = 35.9 PSF

SPACING = 24.0 IN. C/C

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

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

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

(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 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 (0.04")

CSI: TC=0.12/1.00 (B-E:4), BC=0.14/1.00 (D-E:4), WB=0.00/1.00 (n/a:0), SSI=0.08/1.00 (D-E:4)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.10 (B) (INPUT = 0.90)
JSI METAL= 0.08 (B) (INPUT = 1.00)



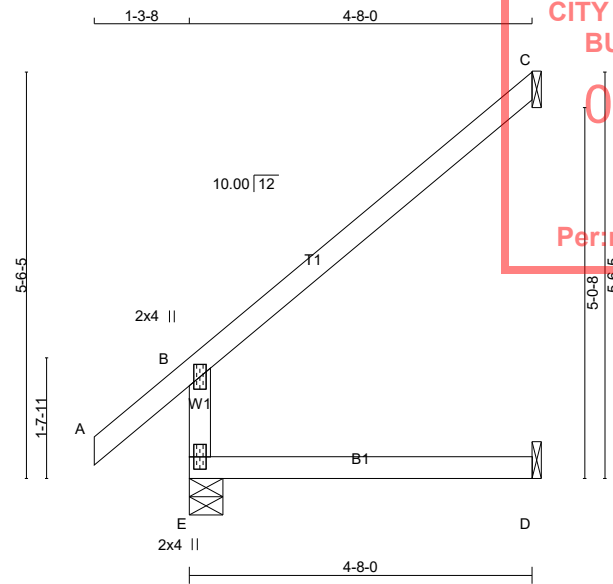
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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM1021-037	J04	3	1	TRUSS DESC.	

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ID:aRX40AUyo8NMuwOhGAsZzPzT9sH-r?3WJCCd7h7deT9ooHAvHpS2OgwU1JAW1qMjHayW73z



CITY OF RICHMOND HILL
BUILDING DIVISION

09/22/2022

RECEIVED

Per maddy.toalaalejandro

Scale = 1:31.4

TOTAL WEIGHT = 3 X 16 = 47 lb

LUMBER

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

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

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

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQD BRG
	VERT	HORZ	DOWN	HORZ		
E	411	0	411	0	5-8	1-8
C	148	0	148	0	1-8	1-8
D	37	0	41	0	1-8	1-8

SEE MITEK STANDARD DETAIL MSD2015-H FOR CONNECTION TO JOINT(S) C, D

UNFACTORED REACTIONS

JT	1ST LCASE		MAX / MIN. COMPONENT REACTIONS		WIND	DEAD	SOIL
	COMBINED	SNOW	LIVE	PERM. LIVE			
E	285	220 / 0	0 / 0	0 / 0	0 / 0	65 / 0	0 / 0
C	100	90 / 0	0 / 0	0 / 0	0 / 0	11 / 0	0 / 0
D	29	0 / 0	0 / 0	0 / 0	0 / 0	29 / 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)

MEMB.	CHORDS		VERT. LOAD	LC1	MAX	MAX	MEMB.	W E B S	
	MAX. FACTORED FORCE (LBS)	FACTORED (PLF)						MAX. FACTORED FORCE (LBS)	MAX. FACTORED CSI (LC)
FR-TO									
E-B	-362 / 0	0.0	0.0	0.06 (4)	7.81				
A-B	0 / 37	-84.3	-84.3	0.12 (1)	10.00				
B-C	-31 / 0	-84.3	-84.3	0.31 (1)	6.25				
E-D	0 / 0	-18.2	-18.2	0.09 (4)	10.00				

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	25.6	PSF
	DL	=	3.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.3	PSF
TOTAL LOAD	=	35.9	PSF	

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:

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

DESIGN ASSUMPTIONS

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = $L/360$ (0.19")
CALCULATED VERT. DEFL.(LL) = $L/999$ (0.00")
ALLOWABLE DEFL.(TL) = $L/360$ (0.19")
CALCULATED VERT. DEFL.(TL) = $L/999$ (0.01")

CSI: TC=0.31/1.00 (B-C:1), BC=0.09/1.00 (D-E:4), WB=0.00/1.00 (n/a:0), SSI=0.15/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 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.

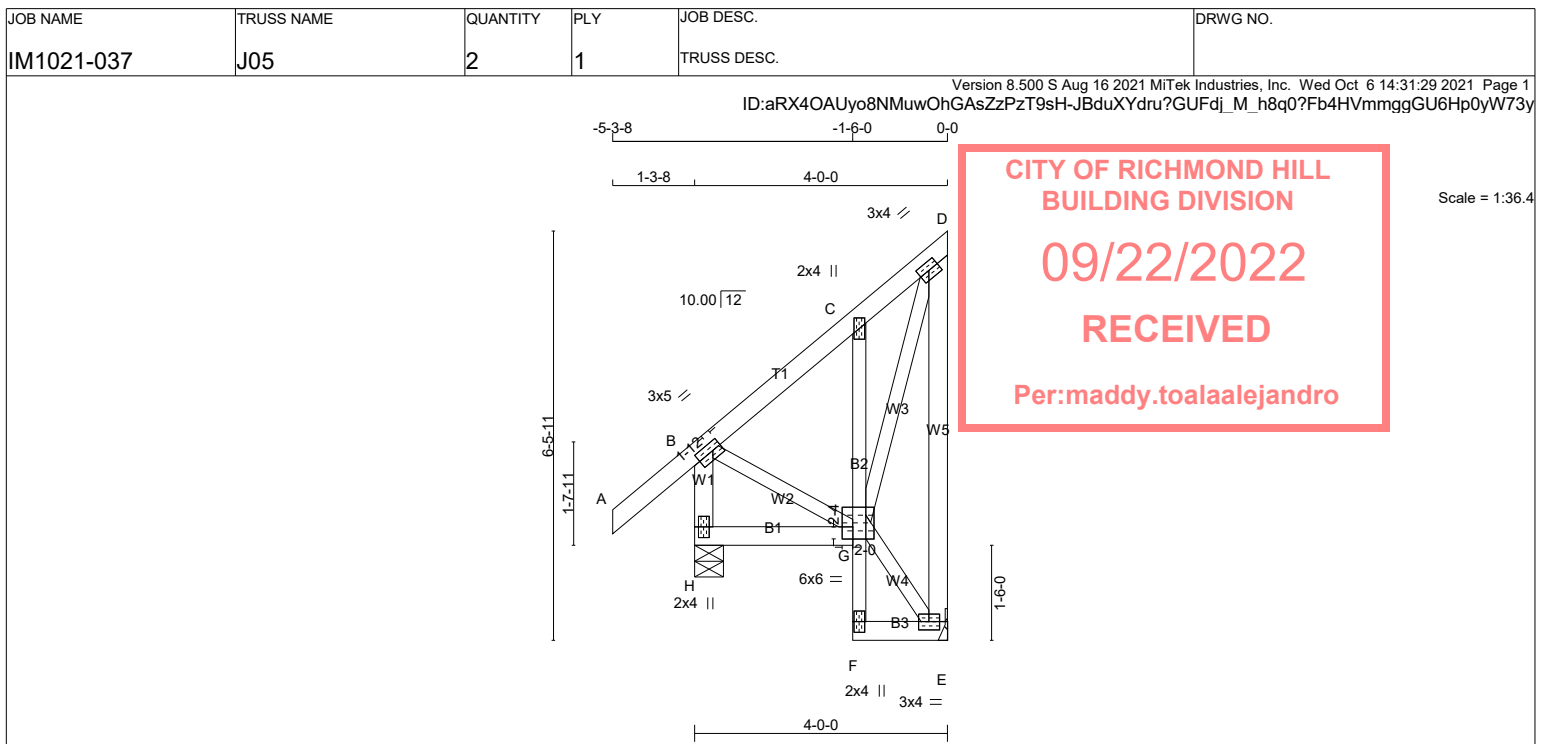
JSI GRIP= 0.25 (B) (INPUT = 0.90)
JSI METAL= 0.19 (B) (INPUT = 1.00)



October 06, 2021

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TOTAL WEIGHT = 2 X 32 = 63 lb

LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
H - B	2x4	DRY	No.2
A - D	2x4	DRY	No.2
E - D	2x4	DRY	No.2
H - G	2x4	DRY	No.2
F - C	2x3	DRY	No.2
F - E	2x4	DRY	No.2

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

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
H	322	0	322	0
E	205	0	205	0

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

UNFACTORED REACTIONS

JT	1ST CASE COMBINED	MAX/MIN. SNOW	MAX/MIN. LIVE	MAX/MIN. PERM. LIVE	WIND	DEAD	SOIL
H	223	173 / 0	0 / 0	0 / 0	0 / 0	50 / 0	0 / 0
E	144	102 / 0	0 / 0	0 / 0	0 / 0	41 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
 MAX. UNBRACED BOTTOM CHORD LENGTH = 7.81 FT. OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED LC1 (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED LC1 (LC)	
FR-TO		FROM	TO	FR-TO			
H-B	-298 / 0	0.0	0.0 0.03 (1)	7.81	B-G	0 / 76	0.02 (1)
A-B	0 / 37	-84.3	-84.3 0.12 (1)	10.00	G-E	-4 / 0	0.00 (1)
B-C	-79 / 0	-84.3	-84.3 0.07 (1)	6.25	G-D	0 / 214	0.05 (1)
C-D	-97 / 0	-84.3	-84.3 0.05 (1)	6.25			
E-D	-189 / 0	0.0	0.0 0.16 (1)	7.81			
H-G	0 / 0	-18.2	-18.2 0.04 (4)	10.00			
F-G	0 / 14	0.0	0.0 0.01 (1)	10.00			
G-C	-205 / 0	0.0	0.0 0.02 (1)	7.81			
F-E	0 / 3	-18.2	-18.2 0.01 (4)	10.00			

DESIGN CRITERIA**SPECIFIED LOADS:**

TOP CH.	LL	=	25.6	PSF
DL	=	3.0	PSF	
BOT CH.	LL	=	0.0	PSF
DL	=	7.3	PSF	
TOTAL LOAD	=	35.9	PSF	

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

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

CSI: TC=0.16/1.00 (D-E:1), BC=0.04/1.00 (G-H:4)
 , WB=0.05/1.00 (D-G:1), SSI=0.07/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

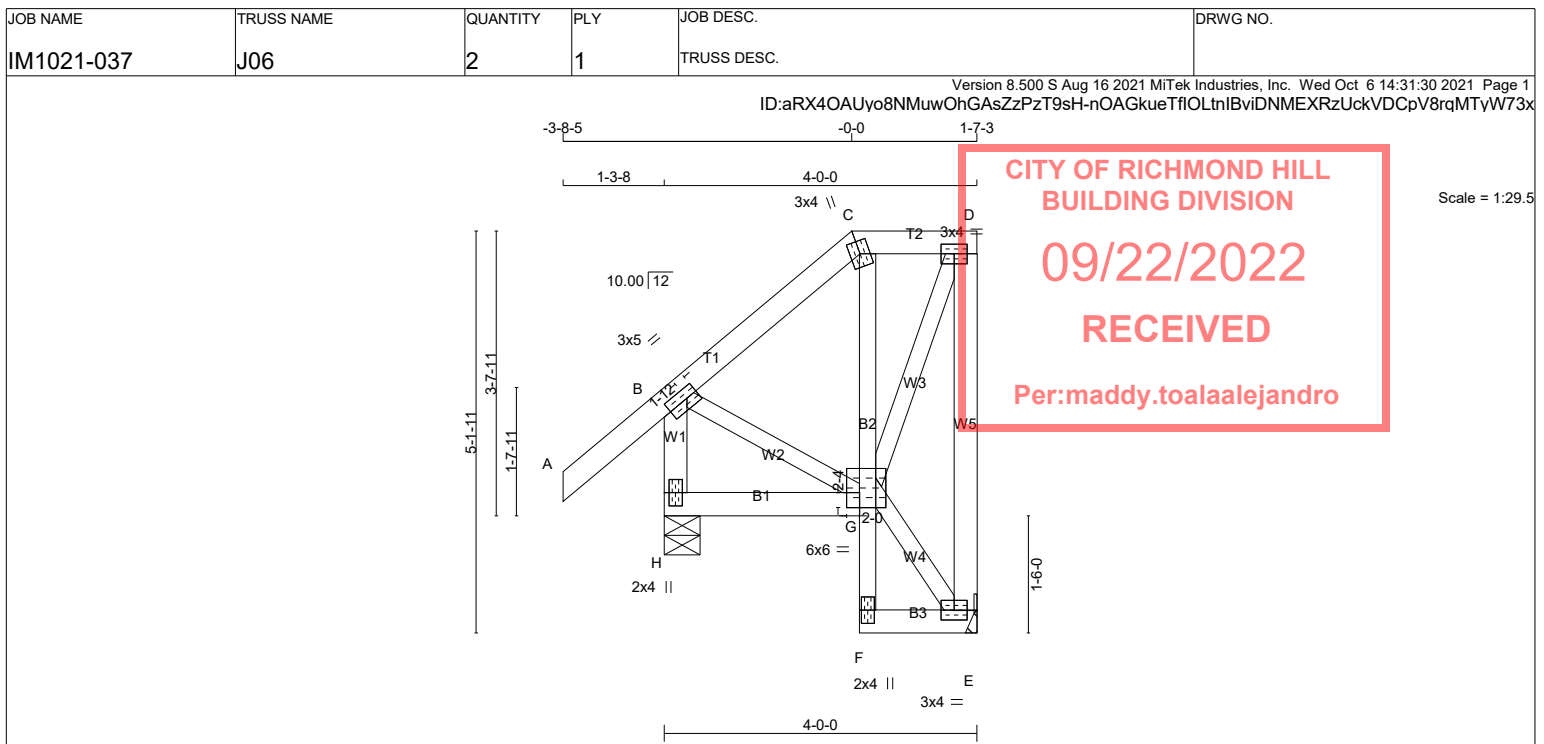
JSI GRIP= 0.53 (D) (INPUT = 0.90)
 JSI METAL= 0.11 (C) (INPUT = 1.00)



October 06, 2021

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 29 = 57 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
E - D	2x4	DRY	No.2	SPF
H - B	2x4	DRY	No.2	SPF
H - G	2x4	DRY	No.2	SPF
F - C	2x3	DRY	No.2	SPF
F - 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	TTV+m	MT20	3.0	4.0		
D	TMVW-t	MT20	3.0	4.0		
E	BMVW1-t	MT20	3.0	4.0		
F	BMV+p	MT20	2.0	4.0		
G	BVMWWW-I	MT20	6.0	6.0	2.25	2.00
H	BMV1+p	MT20	2.0	4.0		

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
E	205	0	205	0	0	MECHANICAL
H	322	0	322	0	0	5-8 1-8

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

UNFACTORED REACTIONS

JT	1ST LCASE	MAX./MIN.	COMPONENT REACTIONS				
E	144	102 / 0	0 / 0	0 / 0	0 / 0	41 / 0	0 / 0
H	223	173 / 0	0 / 0	0 / 0	0 / 0	50 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 7.81 FT. OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. LC1 MAX. CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)	
FR-TO		FROM	TO	FR-TO			
A-B	0 / 37	-84.3	-84.3 0.12 (1)	10.00	G-E	-2 / 0	0.00 (1)
B-C	-76 / 0	-84.3	-84.3 0.09 (1)	6.25	G-D	0 / 136	0.03 (1)
C-D	-52 / 0	-84.3	-84.3 0.03 (1)	6.25	B-G	0 / 65	0.01 (1)
E-D	-191 / 0	0.0	0.0 0.09 (1)	7.81			
H-B	-298 / 0	0.0	0.0 0.03 (1)	7.81			
H-G	0 / 0	-18.2	-18.2 0.04 (4)	10.00			
F-G	0 / 14	0.0	0.0 0.01 (1)	10.00			
G-C	-120 / 0	0.0	0.0 0.01 (1)	7.81			
F-E	0 / 1	-18.2	-18.2 0.01 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	25.6	PSF
DL	=	3.0	PSF	
BOT CH.	LL	=	0.0	PSF
DL	=	7.3	PSF	
TOTAL LOAD	=	35.9	PSF	

SPACING = 24.0 IN. C/C

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

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

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

CSI: TC=0.12/1.00 (A-B:1), BC=0.04/1.00 (G-H:4), WB=0.03/1.00 (D-G:1), SSI=0.07/1.00 (A-B:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE RIGHT HEEL ONLY

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

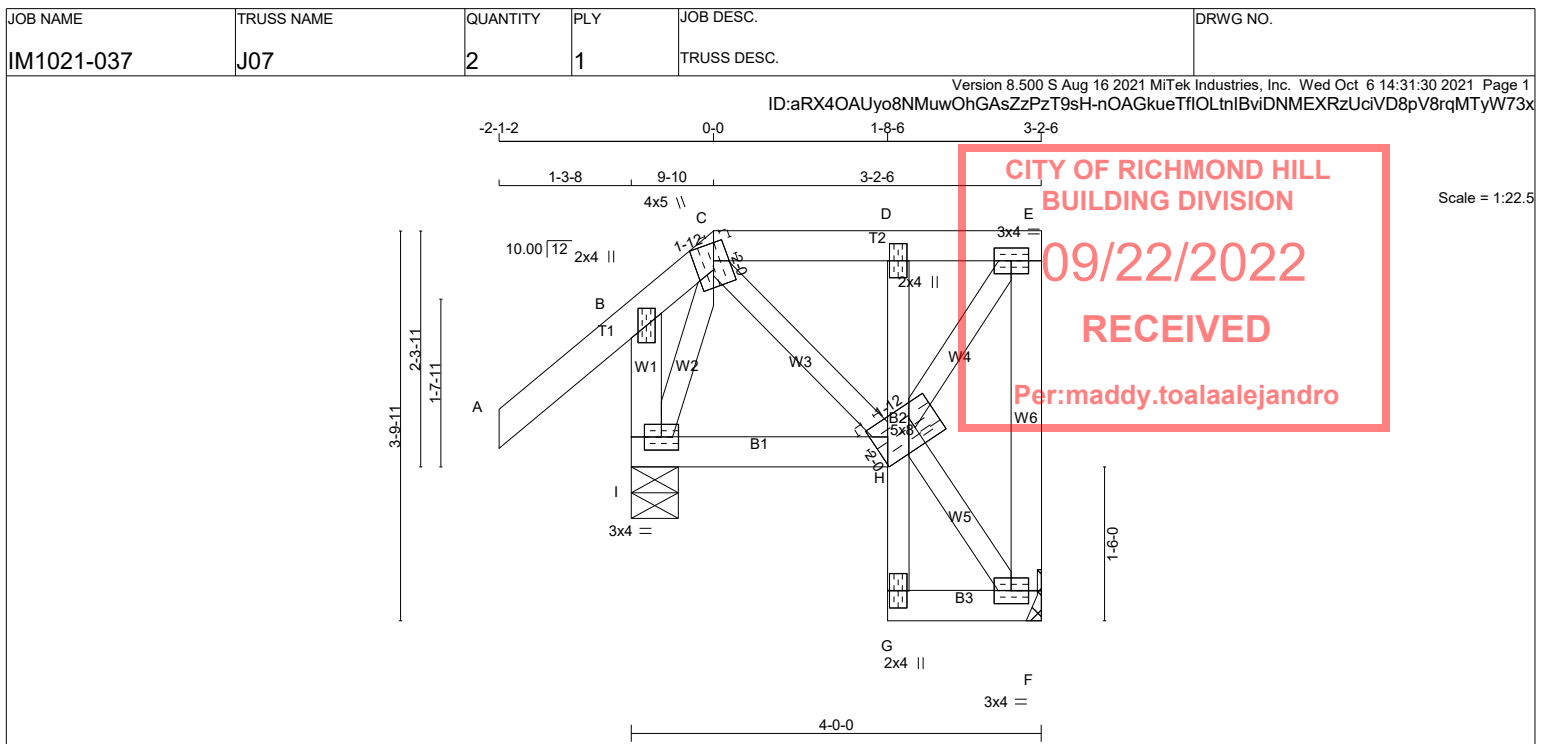
JSI GRIP= 0.32 (D) (INPUT = 0.90)
JSI METAL= 0.06 (H) (INPUT = 1.00)



October 06, 2021

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TOTAL WEIGHT = 2 X 26 = 52 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
F - E	2x4	DRY	No.2	SPF
I - B	2x4	DRY	No.2	SPF
I - H	2x4	DRY	No.2	SPF
G - D	2x3	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	TMV+p	MT20	2.0	4.0		
C	TTWW+m	MT20	4.0	5.0	2.00	1.75
D	TMV+p	MT20	2.0	4.0		
E	TMVW-t	MT20	3.0	4.0		
F	BMVW1-t	MT20	3.0	4.0		
G	BMV+p	MT20	2.0	4.0		
H	BVMWWW-w	MT20	5.0	8.0	2.00	1.75
I	BMVW1-t	MT20	3.0	4.0		

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

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG
	VERT	HORZ	DOWN	HORZ		
F	185	0	185	0	0	MECHANICAL
I	342	0	342	0	0	5-8 1-8

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

UNFACTORED REACTIONS

JT	1ST LCASE	MAX./MIN.	COMPONENT REACTIONS				
	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
F	130	90 / 0	0 / 0	0 / 0	0 / 0	40 / 0	0 / 0
I	236	185 / 0	0 / 0	0 / 0	0 / 0	51 / 0	0 / 0

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

BRACINGTOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 7.81 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. LC1 MAX. CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)	
FR-TO		FROM	TO	FR-TO			
A-B	0 / 37	-84.3	-84.3 0.12 (1)	10.00	C-H	0 / 91	0.02 (1)
B-C	-66 / 0	-84.3	-84.3 0.11 (1)	6.25	H-F	-2 / 0	0.00 (1)
C-D	-88 / 0	-84.3	-84.3 0.03 (1)	6.25	H-E	0 / 152	0.03 (1)
D-E	-87 / 0	-84.3	-84.3 0.03 (1)	6.25	I-C	-72 / 0	0.01 (1)
F-E	-171 / 0	0.0	0.0 0.04 (1)	7.81			
I-B	-251 / 0	0.0	0.0 0.03 (1)	7.81			
I-H	0 / 27	-18.2	-18.2 0.04 (4)	10.00			
G-H	0 / 14	0.0	0.0 0.01 (1)	10.00			
H-D	-158 / 0	0.0	0.0 0.01 (1)	7.81			
G-F	0 / 1	-18.2	-18.2 0.01 (4)	10.00			

DESIGN CRITERIA**SPECIFIED LOADS:**

TOP CH.	LL	=	25.6	PSF
DL	=	3.0	PSF	
BOT CH.	LL	=	0.0	PSF
DL	=	7.3	PSF	
TOTAL LOAD = 35.9 PSF				

SPACING = 24.0 IN. C/C

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

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

THIS DESIGN COMPLIES WITH:

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

DESIGN ASSUMPTIONS

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.19")
CALCULATED VERT. DEFL.(LL) = L/999 (0.00")
ALLOWABLE DEFL.(TL)= L/360 (0.19")
CALCULATED VERT. DEFL.(TL) = L/999 (0.00")CSI: TC=0.12/1.00 (A-B:1), BC=0.04/1.00 (H-I:4),
WB=0.03/1.00 (E-H:1), SSI=0.08/1.00 (B-C:1)DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10
COMP=1.10 SHEAR=1.10 TENS=1.10

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE RIGHT HEEL ONLY

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

CONTINUED ON PAGE 2



October 06, 2021

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.



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM1021-037	J07	2	1	TRUSS DESC.	

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ID:aRX4OAUyo8NMuwOhGAsZzPzT9sH-nOAGkueTfiOLtnlBviDNMEXRzUciVD8pV8rqMTyW73x

CITY OF RICHMOND HILL
BUILDING DIVISION

09/22/2022

RECEIVED

Per:maddy.toalaalejandro

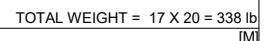
JSL GRIP = 0.26 (E) (INPUT = 0.90)
JSL METAL = 0.14 (B) (INPUT = 1.00)

October 06, 2021

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.

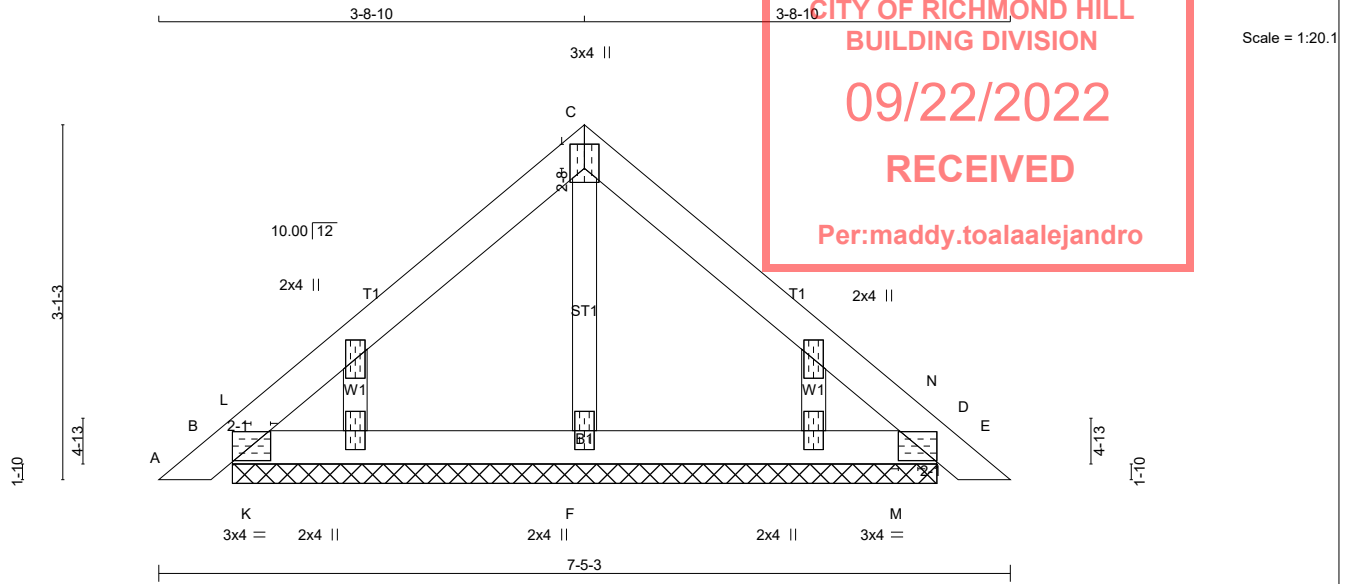


Version 8.500 S Aug 16 2021 MiTek Industries, Inc. Wed Oct 6 14:31:31 2021 Page 1
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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM1021-037	P02	2	1	TRUSS DESC.	

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ID:aRX4OAUyo8NMuwOhGAsZzPzT9sH-jml19afkBwe364SZ17FrfdnqHHHz7w6ySKxQLyW73v



TOTAL WEIGHT = 2 X 21 = 42 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
B - D	2x4	DRY	No.2	SPF
ALL WEBS	2x3	DRY	No.2	SPF
DRY: SEASONED LUMBER.				

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMB1-I	MT20	3.0	4.0	1.50	2.00
C	TTW+p	MT20	3.0	4.0	2.50	1.50
D	TMB1-I	MT20	3.0	4.0	1.50	2.00
F	BMW1+w	MT20	2.0	4.0		
G, H, I, J						
G	NP+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	REQD BRG
JT	VERT	HORZ	DOWN	UPLIFT
B	251	0	251	0
D	251	0	251	0
F	220	0	220	0

UNFACTORED REACTIONS

JT	1ST LCASE	MAX/MIN. COMPONENT REACTIONS	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
B	174	137 / 0	0 / 0	0 / 0	0 / 0	0 / 0	37 / 0	0 / 0
D	174	137 / 0	0 / 0	0 / 0	0 / 0	0 / 0	37 / 0	0 / 0
F	157	97 / 0	0 / 0	0 / 0	0 / 0	0 / 0	59 / 0	0 / 0

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

BRACINGS

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)

MEMB.	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)
FR-TO								
A-B	0 / 13	-84.3	-84.3	0.02 (1)	10.00	F-C	-87 / 0	0.02 (1)
B-L	-25 / 0	-84.3	-84.3	0.05 (1)	6.25	K-L	-264 / 0	0.00 (1)
L-C	-107 / 0	-84.3	-84.3	0.09 (1)	6.25	M-N	-264 / 0	0.00 (1)
C-N	-107 / 0	-84.3	-84.3	0.09 (1)	6.25			
N-D	-25 / 0	-84.3	-84.3	0.05 (1)	6.25			
D-E	0 / 13	-84.3	-84.3	0.02 (1)	10.00			
B-K	0 / 76	-18.2	-18.2	0.10 (1)	10.00			
K-F	0 / 76	-18.2	-18.2	0.10 (1)	10.00			
F-M	0 / 76	-18.2	-18.2	0.10 (1)	10.00			
M-D	0 / 76	-18.2	-18.2	0.10 (1)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 25.6 PSF
DL = 3.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.3 PSF
TOTAL LOAD = 35.9 PSF

SPACING = 24.0 IN. C/C

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

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

(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

CSI: TC=0.09/1.00 (C-L:1), BC=0.10/1.00 (B-K:1), WB=0.02/1.00 (C-F:1), SSI=0.20/1.00 (B-K:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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	MAX MIN
MT20	650	371	1747

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

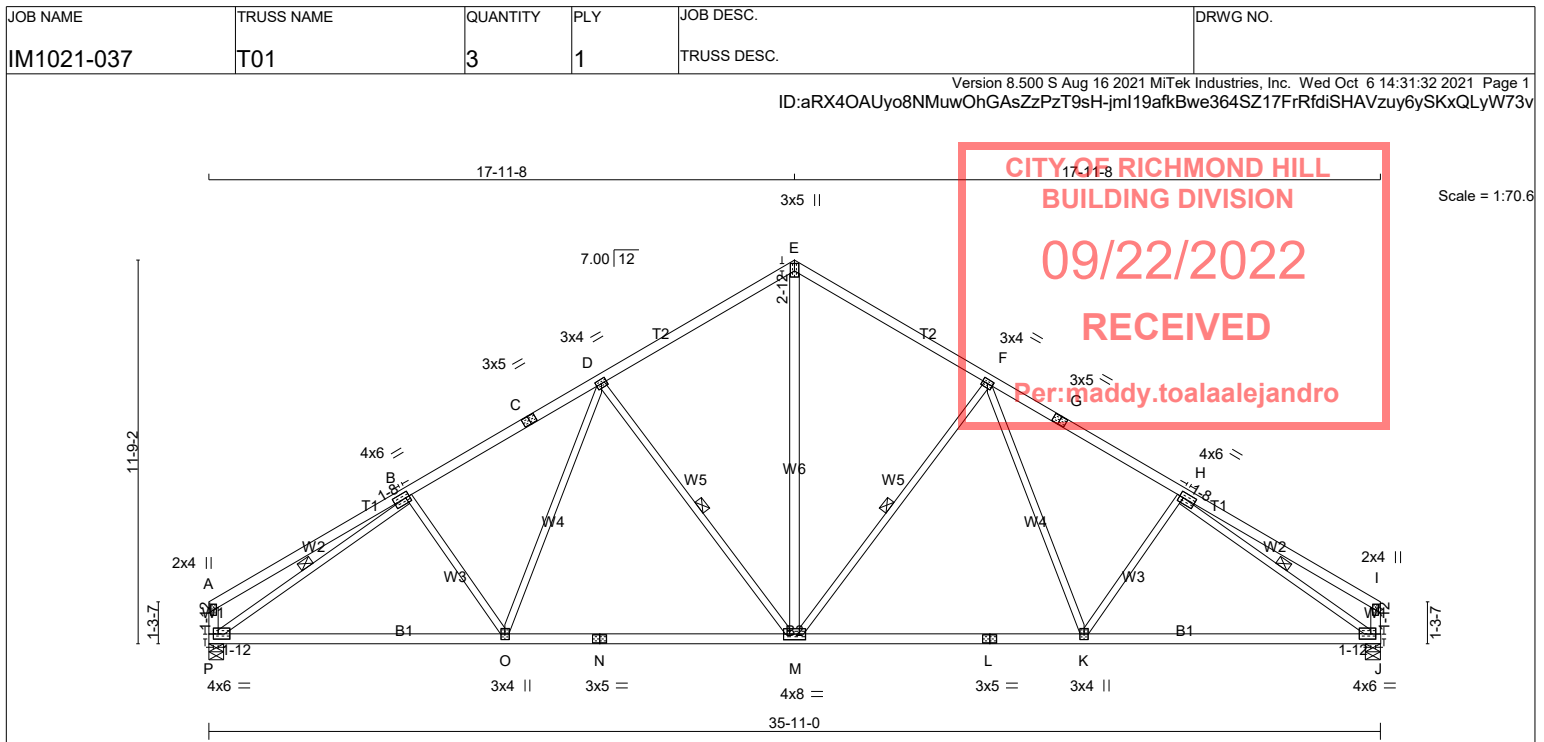
JSI GRIP= 0.21 (B) (INPUT = 0.90)
JSI METAL= 0.05 (D) (INPUT = 1.00)



October 06, 2021

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TOTAL WEIGHT = 3 X 152 = 457 lb [M]F

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
A	TMV+p	MT20	2.0	4.0	
B	TMWW-t	MT20	4.0	6.0	2.00 1.50
C	TS-t	MT20	3.0	5.0	
D	TMWW-t	MT20	3.0	4.0	
E	TTW+p	MT20	3.0	5.0	2.75 1.50
F	TMWW-t	MT20	3.0	4.0	
G	TS-t	MT20	3.0	5.0	
H	TMWW-t	MT20	4.0	6.0	2.00 1.50
I	TMV+p	MT20	2.0	4.0	
J	BMVW-t	MT20	4.0	6.0	1.75 1.75
K	BMVW-t	MT20	3.0	4.0	
L	BS-t	MT20	3.0	5.0	
M	BMVW-t	MT20	4.0	8.0	
N	BS-t	MT20	3.0	5.0	
O	BMVW-t	MT20	3.0	4.0	
P	BMVW-t	MT20	4.0	6.0	1.75 1.75

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

BEARINGS		FACTORED		MAXIMUM FACTORED		INPUT		REQRD	
JT	GROSS REACTION	VERT	HORZ	DOWN	HORZ	BRG	IN-SX	BRG	IN-SX
P	1841	0	0	1841	0	0	5-8	2-0	2-0
J	1841	0	0	1841	0	0	5-8	2-0	2-0

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS							
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL		
P	1289	919 / 0	0 / 0	0 / 0	0 / 0	370 / 0	0 / 0		
J	1289	919 / 0	0 / 0	0 / 0	0 / 0	370 / 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 = 4.14 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 - 1x4 LATERAL BRACE(S) AT 1/2 LENGTH OF F-M, D-M. DBS = 20-0-0 . CBF = 89 LBS.
1 - 1x4 LATERAL BRACE(S) AT 1/2 LENGTH OF B-P, H-J. DBS = 12-0-0 . CBF = 197 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)	MEMB.	MAX. FACTORED FORCE (LBS)
FR-TO		FR-TO	
A-B	0 / 24	M-E	0 / 1296
B-C	-2315 / 0	M-F	-710 / 0
C-D	-2315 / 0	F-K	0 / 358
D-E	-1708 / 0	K-H	-185 / 33
E-F	-1708 / 0	D-M	-710 / 0
F-G	-2315 / 0	O-D	0 / 358
G-H	-2315 / 0	B-O	-185 / 33
H-I	0 / 24	P-B	-2624 / 0
P-A	-206 / 0	H-J	-2624 / 0
J-I	-206 / 0		
P-O	0 / 2105		
O-N	0 / 1876		
N-M	0 / 1876		
M-L	0 / 1876		
L-K	0 / 1876		
K-J	0 / 2105		

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 25.6 PSF
DL = 3.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.3 PSF
TOTAL LOAD = 35.9 PSF

SPACING = 24.0 IN. C/C

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

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

(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.20")
CALCULATED VERT. DEFL.(LL)= L/999 (0.13")
ALLOWABLE DEFL.(TL)= L/360 (1.20")
CALCULATED VERT. DEFL.(TL)= L/999 (0.28")

CSI: TC=0.44/1.00 (B-D:1) , BC=0.53/1.00 (O-P:1) , WB=0.97/1.00 (B-P:1) , SSI=0.20/1.00 (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 (B) (INPUT = 0.90)
JSI METAL= 0.60 (N) (INPUT = 1.00)



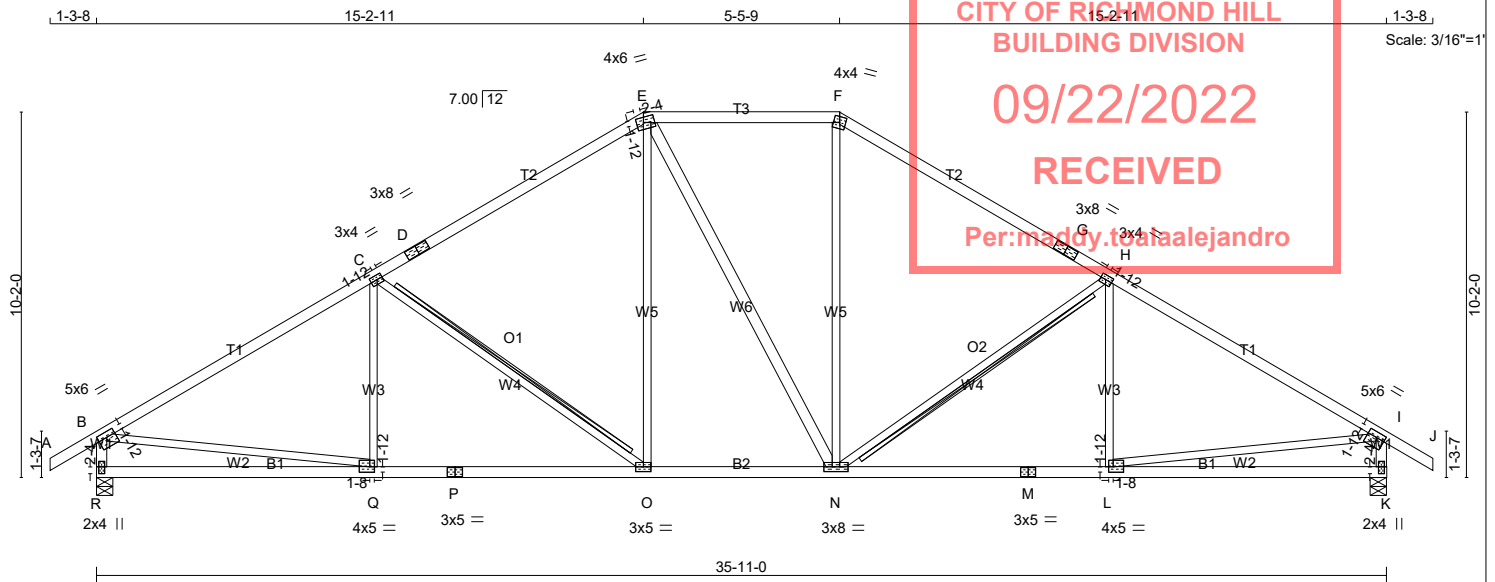
October 06, 2021

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JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM1021-037	T03	1	1	TRUSS DESC.	

Version 8.500 S Aug 16 2021 MiTek Industries, Inc. Wed Oct 6 14:31:34 2021 Page 1
ID: aRX40AOuYo8NMuWOhGASzZpT9sH-f9QnaGh_jXunMOcy8YHJX4iWn5tfrw_PQmp2VEyW73t



TOTAL WEIGHT = 156 lb

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

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y
B	TMVW-t	MT20	5.0	6.0	1.75
C	TMVW-t	MT20	3.0	4.0	1.50
D	TS-t	MT20	3.0	8.0	
E	TTWW-m	MT20	4.0	6.0	1.75
F	TTWW-m	MT20	4.0	4.0	
G	TS-t	MT20	3.0	8.0	
H	TMVW-t	MT20	3.0	4.0	1.50
I	TMVW-t	MT20	5.0	6.0	1.75
K	BMV1+p	MT20	2.0	4.0	2.25
L	BMVW-t	MT20	4.0	5.0	1.75
M	BS-t	MT20	3.0	5.0	
N	BMVW-t	MT20	3.0	8.0	
O	BMVW-t	MT20	3.0	5.0	
P	BS-t	MT20	3.0	5.0	
Q	BMVW-t	MT20	4.0	5.0	1.75
R	BMV1+p	MT20	2.0	4.0	2.25

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

BEARINGS		FACTORED		MAXIMUM FACTORED		INPUT		REQRD	
JT	VERT	GROSS REACTION	HORZ	GROSS REACTION	DOWN	HORZ	BRG	IN-SX	BRG
R	1956	0	1956	0	0	0	5-8	2-14	2-14
K	1956	0	1956	0	0	0	5-8	2-14	2-14

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
R	1367	989 / 0	0 / 0	0 / 0	0 / 0	378 / 0	0 / 0
K	1367	989 / 0	0 / 0	0 / 0	0 / 0	378 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.37 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-O, H-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. CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)	
FR-TO		FROM TO	LENGTH	FR-TO			
A-B	0 / 29	-84.3 -84.3	0.11 (1)	10.00	Q-C	-113 / 106	0.06 (1)
B-C	-2468 / 0	-84.3 -84.3	0.92 (1)	3.37	C-O	-650 / 0	0.46 (1)
C-D	-1937 / 0	-84.3 -84.3	0.79 (1)	3.86	O-E	0 / 490	0.11 (1)
D-E	-1937 / 0	-84.3 -84.3	0.79 (1)	3.86	E-N	0 / 1	0.00 (1)
E-F	-1644 / 0	-84.3 -84.3	0.36 (1)	4.79	N-F	0 / 491	0.11 (1)
F-G	-1938 / 0	-84.3 -84.3	0.79 (1)	3.86	N-H	-649 / 0	0.46 (1)
G-H	-1938 / 0	-84.3 -84.3	0.79 (1)	3.86	L-H	-114 / 105	0.06 (1)
H-I	-2468 / 0	-84.3 -84.3	0.92 (1)	3.37	B-Q	0 / 2182	0.49 (1)
I-J	0 / 29	-84.3 -84.3	0.11 (1)	10.00	L-I	0 / 2182	0.49 (1)
R-B	-1898 / 0	0.0 0.0	0.19 (1)	6.10			
K-I	-1898 / 0	0.0 0.0	0.19 (1)	6.10			
R-Q	0 / 0	-18.2 -18.2	0.27 (4)	10.00			
Q-P	0 / 2165	-18.2 -18.2	0.49 (1)	10.00			
P-O	0 / 2165	-18.2 -18.2	0.49 (1)	10.00			
O-N	0 / 1643	-18.2 -18.2	0.35 (1)	10.00			
N-M	0 / 2165	-18.2 -18.2	0.48 (1)	10.00			
M-L	0 / 2165	-18.2 -18.2	0.48 (1)	10.00			
L-K	0 / 0	-18.2 -18.2	0.27 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 25.6 PSF
DL = 3.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.3 PSF
TOTAL LOAD = 35.9 PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

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

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

(55% OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (1.20")
CALCULATED VERT. DEFL.(LL) = L/999 (0.12")
ALLOWABLE DEFL.(TL) = L/360 (1.20")
CALCULATED VERT. DEFL.(TL) = L/999 (0.24")

CSI: TC=0.92/1.00 (B-C:1), BC=0.49/1.00 (O-Q:1), WB=0.49/1.00 (B-Q:1), SSI=0.27/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

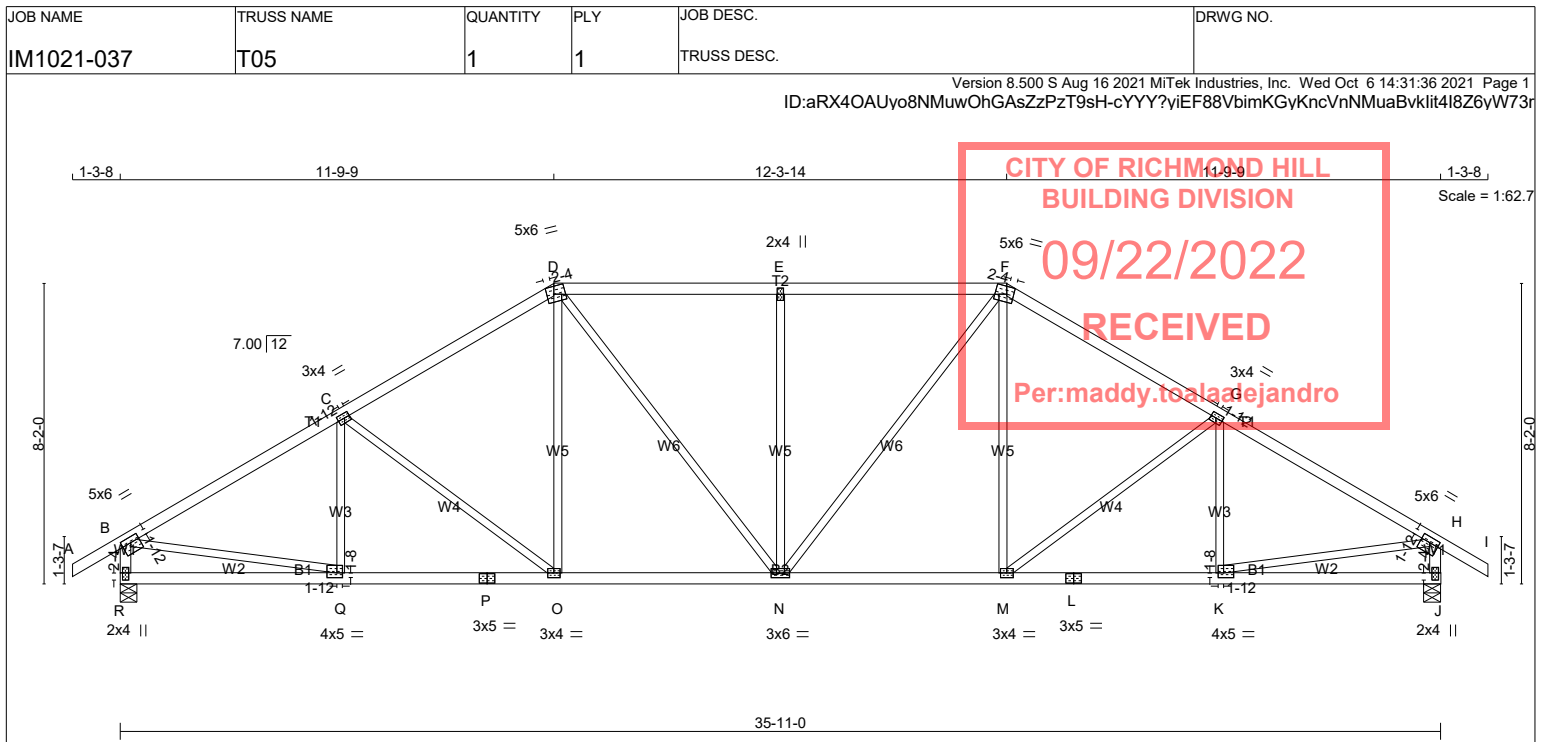
JSI GRIP= 0.88 (Q) (INPUT = 0.90)
JSI METAL= 0.67 (P) (INPUT = 1.00)



October 06, 2021

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**LUMBER**

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - D	2x4	DRY	No.2
D - F	2x4	DRY	No.2
F - I	2x4	DRY	No.2
R - B	2x4	DRY	No.2
J - H	2x4	DRY	No.2
R - P	2x4	DRY	No.2
P - L	2x4	DRY	No.2
L - J	2x4	DRY	No.2

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	5.0	6.0	1.75	3.00
C	TMVW-t	MT20	3.0	4.0	1.50	1.75
D	TTWW-m	MT20	5.0	6.0	Edge	2.25
E	TMW-w	MT20	2.0	4.0		
F	TTWW-m	MT20	5.0	6.0	Edge	2.25
G	TMVW-t	MT20	3.0	4.0	1.50	1.75
H	TMVW-t	MT20	5.0	6.0	1.75	3.00
J	BMV1+p	MT20	2.0	4.0	2.25	1.00
K	BMVW-t	MT20	4.0	5.0	1.50	1.75
L	BS-t	MT20	3.0	5.0		
M	BMVW-t	MT20	3.0	4.0		
N	BMVW-t	MT20	3.0	6.0		
O	BMVW-t	MT20	3.0	4.0		
P	BS-t	MT20	3.0	5.0		
Q	BMVW-t	MT20	4.0	5.0	1.50	1.75
R	BMV1+p	MT20	2.0	4.0	2.25	1.00

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

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

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG
JT	VERT	HORZ	DOWN	HORZ
R	1956	0	1956	0
J	1956	0	1956	0

UNFACTORED REACTIONS

JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
R	1367	989 / 0	0 / 0	0 / 0	0 / 0	378 / 0	0 / 0
J	1367	989 / 0	0 / 0	0 / 0	0 / 0	378 / 0	0 / 0

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

BRACINGTOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.94 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.	FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED VERT. LOAD (LC)	MEMB.	FORCE (LBS)	MAX. FACTORED VERT. LOAD (LC)	
FR-TO		FROM	TO	FR-TO		FROM	TO
A-B	0 / 29	-84.3	-84.3	0.11 (1)	10.00	Q-C	-232 / 38
B-C	-2455 / 0	-84.3	-84.3	0.51 (1)	3.94	C-O	-361 / 0
C-D	-2183 / 0	-84.3	-84.3	0.46 (1)	4.17	O-D	0 / 330
D-E	-2154 / 0	-84.3	-84.3	0.49 (1)	4.13	D-N	0 / 473
E-F	-2154 / 0	-84.3	-84.3	0.49 (1)	4.13	N-E	-636 / 0
F-G	-2183 / 0	-84.3	-84.3	0.46 (1)	4.17	N-F	0 / 473
G-H	-2455 / 0	-84.3	-84.3	0.51 (1)	3.94	M-F	0 / 330
H-I	0 / 29	-84.3	-84.3	0.11 (1)	10.00	M-G	-361 / 0
R-B	-1909 / 0	0.0	0.0	0.19 (1)	6.08	K-G	-232 / 38
J-H	-1909 / 0	0.0	0.0	0.19 (1)	6.08	B-Q	0 / 2174
						K-H	0 / 2174
R-Q	0 / 0	-18.2	-18.2	0.15 (4)	10.00		
Q-P	0 / 2146	-18.2	-18.2	0.42 (1)	10.00		
P-O	0 / 2146	-18.2	-18.2	0.42 (1)	10.00		
O-N	0 / 1862	-18.2	-18.2	0.37 (1)	10.00		
N-M	0 / 1862	-18.2	-18.2	0.37 (1)	10.00		
M-L	0 / 2146	-18.2	-18.2	0.42 (1)	10.00		
L-K	0 / 2146	-18.2	-18.2	0.42 (1)	10.00		
K-J	0 / 0	-18.2	-18.2	0.15 (4)	10.00		

DESIGN CRITERIA**SPECIFIED LOADS:**

TOP CH.	LL	=	25.6	PSF
	DL	=	3.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.3	PSF
TOTAL LOAD		=	35.9	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.20")
CALCULATED VERT. DEFL.(LL)= L/999 (0.13")
ALLOWABLE DEFL.(TL)= L/360 (1.20")
CALCULATED VERT. DEFL.(TL)= L/999 (0.22")CSI: TC=0.51/1.00 (B-C:1), BC=0.42/1.00 (O-Q:1)
WB=0.82/1.00 (E-N:1), SS=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 = 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

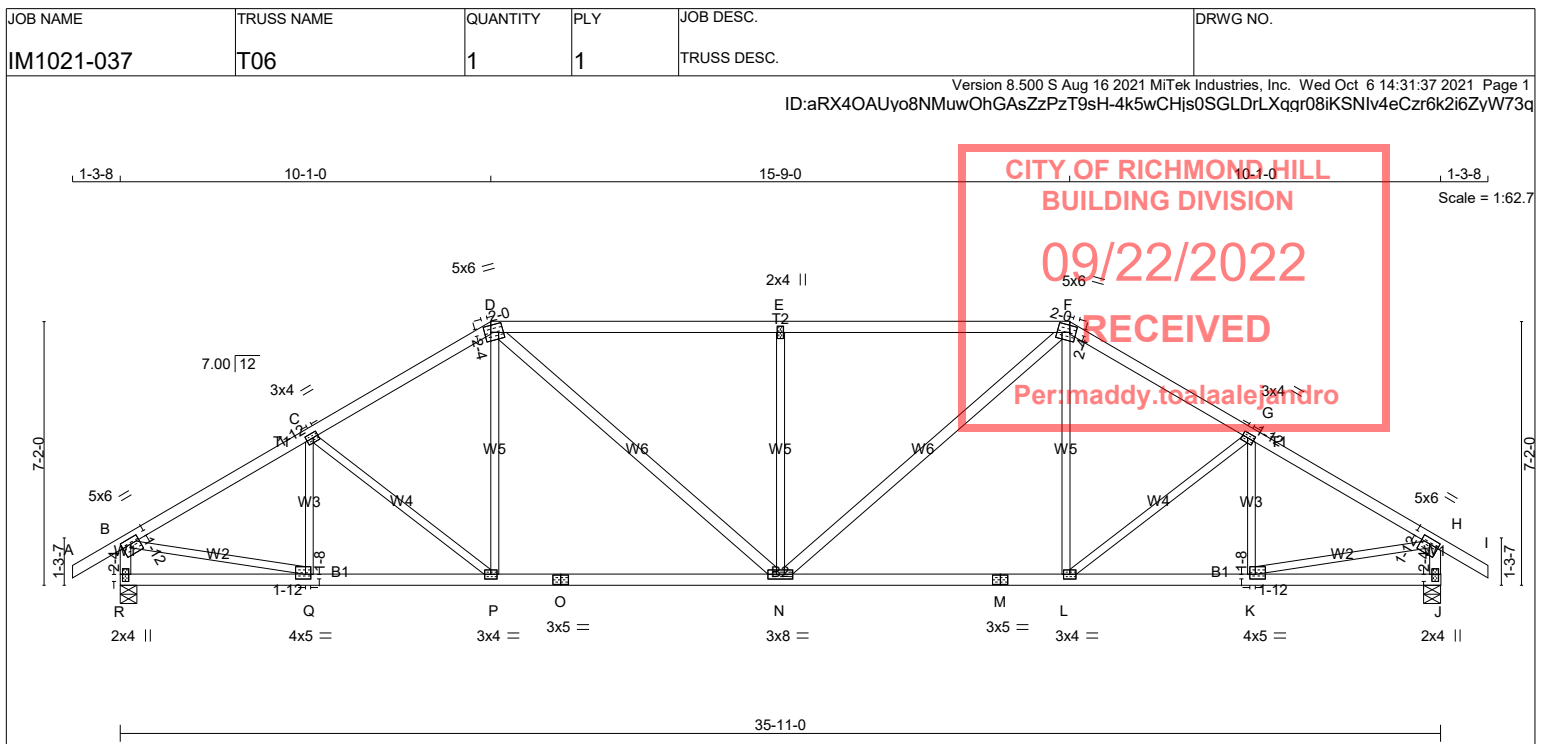
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (N) (INPUT = 0.90)
JSI METAL= 0.65 (P) (INPUT = 1.00)

October 06, 2021

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 - D	2x4	DRY	No.2 SPF
D - F	2x4	DRY	No.2 SPF
F - I	2x4	DRY	No.2 SPF
R - B	2x4	DRY	No.2 SPF
J - H	2x4	DRY	No.2 SPF
R - O	2x4	DRY	No.2 SPF
O - M	2x4	DRY	No.2 SPF
M - J	2x4	DRY	No.2 SPF
ALL WEBS EXCEPT	2x3	DRY	No.2 SPF
D - N	2x4	DRY	No.2 SPF
N - 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	5.0	6.0	1.75	3.00
C	TMWW-t	MT20	3.0	4.0	1.50	1.75
D	TTWW-m	MT20	5.0	6.0	2.25	2.00
E	TMW+w	MT20	2.0	4.0		
F	TTWW-m	MT20	5.0	6.0	2.25	2.00
G	TMWW-t	MT20	3.0	4.0	1.50	1.75
H	TMVW-t	MT20	5.0	6.0	1.75	3.00
J	BMV1+p	MT20	2.0	4.0	2.25	1.00
K	BMWW-t	MT20	4.0	5.0	1.50	1.75
L	BMWW-t	MT20	3.0	4.0		
M	BS-t	MT20	3.0	5.0		
N	BMWW-t	MT20	3.0	8.0		
O	BS-t	MT20	3.0	5.0		
P	BMWW-t	MT20	3.0	4.0		
Q	BMWW-t	MT20	4.0	5.0	1.50	1.75
R	BMV1+p	MT20	2.0	4.0	2.25	1.00

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

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG
JT	VERT	HORZ	DOWN	HORZ
R	1956	0	1956	0
J	1956	0	1956	0

UNFACTORED REACTIONS

1ST LCASE	MAX/MIN. COMPONENT REACTIONS						
JT	COMBINED	SNOW	LIVE	PERM. LIVE	WIND	DEAD	SOIL
R	1367	989 / 0	0 / 0	0 / 0	0 / 0	378 / 0	0 / 0
J	1367	989 / 0	0 / 0	0 / 0	0 / 0	378 / 0	0 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.26 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.	FORCE (LBS)	FACTORED VERT. LOAD (PLF)	FACTORED LC1 MAX (LC)	MEMB.	FORCE (LBS)	FACTORED MAX (LC)	MEMB.
FR-TO		FROM	TO	FR-TO		FROM	TO
A-B	0 / 29	-84.3	-84.3	0.11 (1)	10.00	Q-C	-311 / 0
B-C	-2419 / 0	-84.3	-84.3	0.36 (1)	4.11	C-P	-200 / 0
C-D	-2288 / 0	-84.3	-84.3	0.34 (1)	4.22	P-D	0 / 248
D-E	-2510 / 0	-84.3	-84.3	0.87 (1)	3.26	D-N	0 / 735
E-F	-2510 / 0	-84.3	-84.3	0.87 (1)	3.26	N-E	-818 / 0
F-G	-2288 / 0	-84.3	-84.3	0.34 (1)	4.22	N-F	0 / 735
G-H	-2419 / 0	-84.3	-84.3	0.36 (1)	4.11	L-F	0 / 248
H-I	0 / 29	-84.3	-84.3	0.11 (1)	10.00	L-G	-200 / 0
R-B	-1912 / 0	0.0	0.0	0.19 (1)	6.07	K-G	-311 / 0
J-H	-1912 / 0	0.0	0.0	0.19 (1)	6.07	B-Q	0 / 2147
						K-H	0 / 2147
R-Q	0 / 0	-18.2	-18.2	0.10 (4)	10.00		
Q-P	0 / 2110	-18.2	-18.2	0.43 (1)	10.00		
P-O	0 / 1956	-18.2	-18.2	0.44 (1)	10.00		
O-N	0 / 1956	-18.2	-18.2	0.44 (1)	10.00		
N-M	0 / 1956	-18.2	-18.2	0.44 (1)	10.00		
M-L	0 / 1956	-18.2	-18.2	0.44 (1)	10.00		
L-K	0 / 2110	-18.2	-18.2	0.43 (1)	10.00		
K-J	0 / 0	-18.2	-18.2	0.10 (4)	10.00		

DESIGN CRITERIA**SPECIFIED LOADS:**

TOP CH.	LL	=	25.6	PSF
DL	=	3.0	PSF	
BOT CH.	LL	=	0.0	PSF
DL	=	7.3	PSF	
TOTAL LOAD	=	35.9	PSF	

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = $L/360$ (1.20")
CALCULATED VERT. DEFL.(LL) = $L/999$ (0.14")
ALLOWABLE DEFL.(TL) = $L/360$ (1.20")
CALCULATED VERT. DEFL.(TL) = $L/999$ (0.27")

CSI: TC=0.87/1.00 (D-E:1), BC=0.44/1.00 (N-P:1),
WB=0.73/1.00 (E-N:1), SSI=0.32/1.00 (D-E:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.87 (F) (INPUT = 0.90)
JSI METAL= 0.62 (H) (INPUT = 1.00)



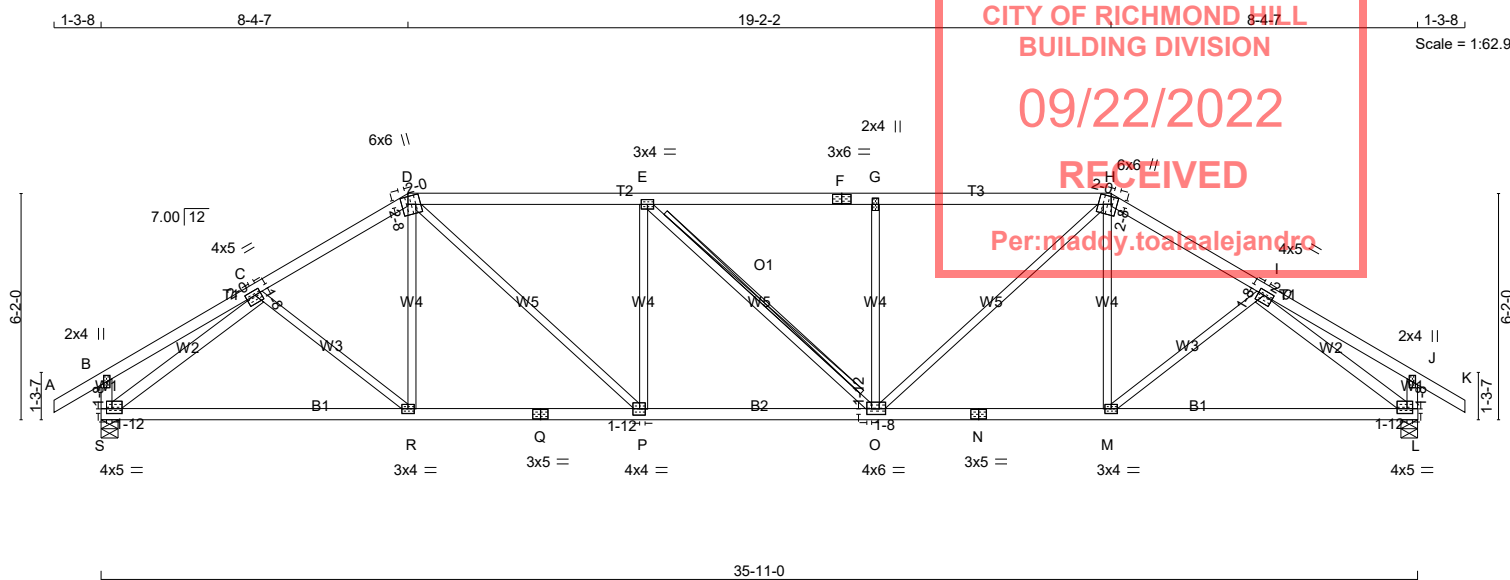
October 06, 2021

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.



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM1021-037	T07	1	1	TRUSS DESC.	

Version 8.500 S Aug 16 2021 MiTek Industries, Inc. Wed Oct 6 14:31:38 2021 Page 1
ID:aRX4OAUvo8NMuwOhGAsZzPzT9sH-YwfpdkVnmOCq?viNNMFhwtfHid2Ndg?KONFe?vW73p



TOTAL WEIGHT = 149 lb

LUMBER

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

IT	TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	2.0	4.0		
C	TMWV-t	MT20	4.0	5.0	1.50	2.00
D	TTWV+m	MT20	6.0	6.0	2.50	2.00
E	TMWV-t	MT20	3.0	4.0		
F	TS-t	MT20	3.0	6.0		
G	TMV+w	MT20	2.0	4.0		
H	TTWV+m	MT20	6.0	6.0	2.50	2.00
I	TMWV-t	MT20	4.0	5.0	1.50	2.00
J	TMV+p	MT20	2.0	4.0		
L	BMWV-1-t	MT20	4.0	5.0	1.50	1.75
M	BMWV-t	MT20	3.0	4.0		
N	BS-t	MT20	3.0	5.0		
O	BMWVW-t	MT20	4.0	6.0	1.75	1.50
P	BMWV-t	MT20	4.0	4.0	2.00	1.75
Q	BS-t	MT20	3.0	5.0		
R	BMWV-t	MT20	3.0	4.0		
S	BMWV-1-t	MT20	4.0	5.0	1.50	1.75



October 06, 2021

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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.**

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

BOILING BEARINGS

	FACTORED		MAXIMUM FACTORED			INPUT	REQRD
	GROSS REACTION		GROSS REACTION			BRG	BRG
JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
S	1956	0	1956	0	0	5-8	2-2
L	1956	0	1956	0	0	5-8	2-2

UNFACTORED REACTIONS

1ST LCASE		MAX./MIN. COMPONENT REACTIONS					
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
S	1367	989/0	0/0	0/0	0/0	378/0	0/0
L	1367	989/0	0/0	0/0	0/0	378/0	0/0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.48 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-O

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

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

LOADING

TOTAL LOAD CASES: (4)

C H O R D S					W E B S				
MAX. FACTORED		FACTORED			MAX. FACTORED				
MEMB.	FORCE (LBS)	VERT. LOAD (PLF)	LC1 (LC)	MAX. UNBRAC	MEMB.	FORCE (LBS)	MAX. CSI (LC)		
FR-TO		FROM	TO	LENGTH	FR-TO				
A-B	0 / 29	-84.3	-84.3	0.11 (1)	10.00	C-R	0 / 75	0.03 (4)	
B-C	0 / 19	-84.3	-84.3	0.22 (1)	10.00	R-D	0 / 142	0.05 (4)	
C-D	-2376 / 0	-84.3	-84.3	0.32 (1)	4.17	D-P	0 / 1020	0.23 (1)	
D-E	-2789 / 0	-84.3	-84.3	0.73 (1)	3.48	P-E	-583 / 0	0.35 (1)	
E-F	-2788 / 0	-84.3	-84.3	0.73 (1)	3.48	E-O	-2 / 0	0.00 (1)	
F-G	-2788 / 0	-84.3	-84.3	0.73 (1)	3.48	O-G	-583 / 0	0.35 (1)	
G-H	-2788 / 0	-84.3	-84.3	0.73 (1)	3.49	O-H	0 / 1018	0.23 (1)	
H-I	-2376 / 0	-84.3	-84.3	0.32 (1)	4.17	H-M	0 / 143	0.05 (4)	
I-J	0 / 19	-84.3	-84.3	0.22 (1)	10.00	M-I	0 / 75	0.03 (4)	
J-K	0 / 29	-84.3	-84.3	0.11 (1)	10.00	S-C	-2594 / 0	0.89 (1)	
S-B	-254 / 0	0.0	0.0	0.03 (1)	7.81	I-L	-2594 / 0	0.89 (1)	
L-J	-254 / 0	0.0	0.0	0.03 (1)	7.81				
S-R	0 / 2011	-18.2	-18.2	0.48 (1)	10.00				
R-Q	0 / 2036	-18.2	-18.2	0.48 (1)	10.00				
Q-P	0 / 2036	-18.2	-18.2	0.48 (1)	10.00				
P-O	0 / 2790	-18.2	-18.2	0.52 (1)	10.00				
O-N	0 / 2036	-18.2	-18.2	0.48 (1)	10.00				
N-M	0 / 2036	-18.2	-18.2	0.48 (1)	10.00				
M-L	0 / 2011	-18.2	-18.2	0.48 (1)	10.00				

DESIGN CRITERIA

SPECIFIED LOADS:

TOP	CH.	LL =	25.6	PSF
		DL =	3.0	PSF
BOT	CH.	LL =	0.0	PSF
		DL =	7.3	PSF
TOTAL LOAD		=	35.9	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A
SLOPE OF 6.00/12

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.20")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.16")
ALLOWABLE DEFL.(TL)= L/360 (1.20")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.31")

CSI: TC=0.73/1.00 (D-E:1) , BC=0.52/1.00 (O-P:1)
 , WB=0.89/1.00 (I-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 = 1.00

AUTOSOLVE HEELS OFF

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

NAIL VALUES

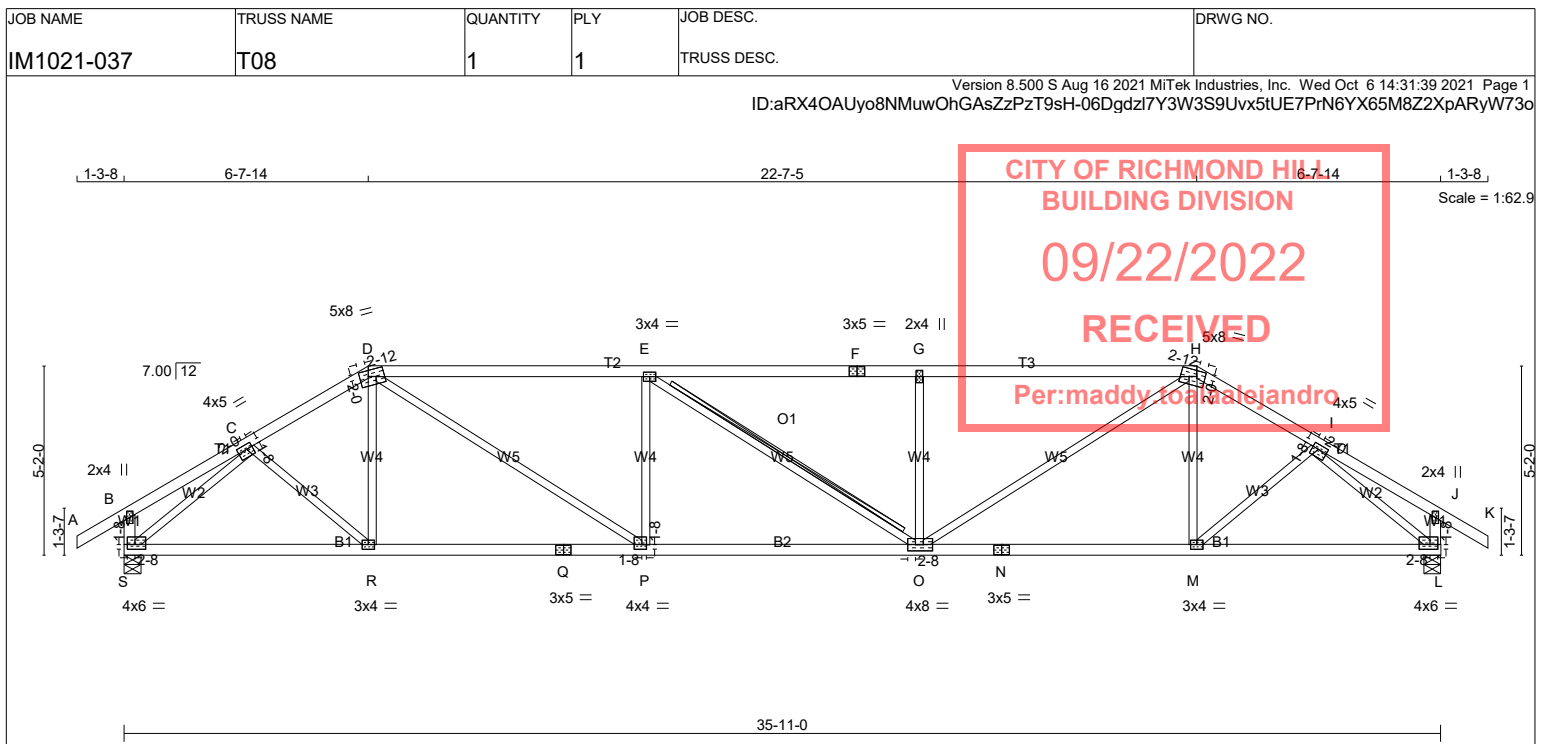
PLATE	GRIP(DRY) (PSI)		SHEAR (PLI)		SECTION (PLI)	
	MAX	MIN	MAX	MIN	MAX	MIN
MT20	650	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (L) (INPUT = 0.90)
JSI METAL= 0.73 (I) (INPUT = 1.00)





TOTAL WEIGHT = 139 lb

LUMBER			
N. L. G. A. RULES	CHORDS	SIZE	DESCR.
A - D	2x4	DRY	No.2
D - F	2x4	DRY	2100F 1.8E
F - H	2x4	DRY	2100F 1.8E
H - K	2x4	DRY	No.2
S - B	2x4	DRY	No.2
L - J	2x4	DRY	No.2
S - Q	2x4	DRY	No.2
Q - N	2x4	DRY	No.2
N - L	2x4	DRY	No.2
ALL WEBS EXCEPT	2x3	DRY	No.2

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	5.0 1.50 2.00
D	TTWW-m	MT20	5.0	8.0 2.00 2.75
E	TMWW-t	MT20	3.0	4.0
F	TS-t	MT20	3.0	5.0
G	TMW+w	MT20	2.0	4.0
H	TTWW-m	MT20	5.0	8.0 2.00 2.75
I	TMWW-t	MT20	4.0	5.0 1.50 2.00
J	TMV+p	MT20	2.0	4.0
L	BMVW1-t	MT20	4.0	6.0 1.50 2.50
M	BMWW-t	MT20	3.0	4.0
N	BS-t	MT20	3.0	5.0
O	BMWWW-t	MT20	4.0	8.0 2.00 2.50
P	BMWW-t	MT20	4.0	4.0 1.50 1.50
Q	BS-t	MT20	3.0	5.0
R	BMWW-t	MT20	3.0	4.0
S	BMVW1-t	MT20	4.0	6.0 1.50 2.50

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

BEARINGS		FACTORED		MAXIMUM FACTORED		INPUT		REQRD	
JT	GROSS REACTION	VERT	HORZ	DOWN	HORZ	BRG	IN-SX	BRG	IN-SX
S	1956	0	1956	0	0	5-8	2-2		
L	1956	0	1956	0	0	5-8	2-2		

UNFACTORED REACTIONS

1ST LCASE	MAX/MIN.	COMPONENT REACTIONS				
JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD
S	1367	989 / 0	0 / 0	0 / 0	0 / 0	378 / 0
L	1367	989 / 0	0 / 0	0 / 0	0 / 0	378 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.11 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-O

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	VERT. LOAD	MEMB.	MAX. FACTORED	FORCE	MAX
	(LBS)	(PLF)	LC1 MAX		(LBS)	(LBS)	CSI (LC)
FR-TO			FROM TO	FR-TO			
A-B	0 / 29	-84.3	-84.3 0.11 (1)	C-R	0 / 203	0.05 (1)	
B-C	0 / 12	-84.3	-84.3 0.11 (1)	R-D	0 / 92	0.03 (4)	
C-D	-2414 / 0	-84.3	-84.3 0.19 (1)	D-P	0 / 1521	0.34 (1)	
D-E	-3352 / 0	-84.3	-84.3 0.65 (1)	P-E	-689 / 0	0.27 (1)	
E-F	-3352 / 0	-84.3	-84.3 0.64 (1)	E-O	0 / 0	0.00 (1)	
F-G	-3352 / 0	-84.3	-84.3 0.64 (1)	O-G	-689 / 0	0.27 (1)	
G-H	-3352 / 0	-84.3	-84.3 0.65 (1)	O-H	0 / 1521	0.34 (1)	
H-I	-2414 / 0	-84.3	-84.3 0.19 (1)	M-H	0 / 92	0.03 (4)	
I-J	0 / 12	-84.3	-84.3 0.11 (1)	M-I	0 / 203	0.05 (1)	
J-K	0 / 29	-84.3	-84.3 0.11 (1)	S-C	-2547 / 0	0.80 (1)	
S-B	-230 / 0	0.0	0.0 0.02 (1)	I-L	-2547 / 0	0.80 (1)	
L-J	-230 / 0	0.0	0.0 0.02 (1)				
S-R	0 / 1917	-18.2	-18.2 0.43 (1)				
R-Q	0 / 2072	-18.2	-18.2 0.45 (1)				
Q-P	0 / 2072	-18.2	-18.2 0.45 (1)				
P-O	0 / 3352	-18.2	-18.2 0.63 (1)				
O-N	0 / 2072	-18.2	-18.2 0.45 (1)				
N-M	0 / 2072	-18.2	-18.2 0.45 (1)				
M-L	0 / 1917	-18.2	-18.2 0.43 (1)				

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 25.6 PSF
DL = 3.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.3 PSF
TOTAL LOAD = 35.9 PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

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

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

(55% OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (1.20")
CALCULATED VERT. DEFL.(LL) = L/999 (0.20")
ALLOWABLE DEFL.(TL) = L/360 (1.20")
CALCULATED VERT. DEFL.(TL) = L/999 (0.38")

CSI: TC=0.65/1.00 (D-E:1), BC=0.63/1.00 (O-P:1), WB=0.80/1.00 (I-L: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 = 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 (P) (INPUT = 0.90)
JSI METAL= 0.73 (I) (INPUT = 1.00)



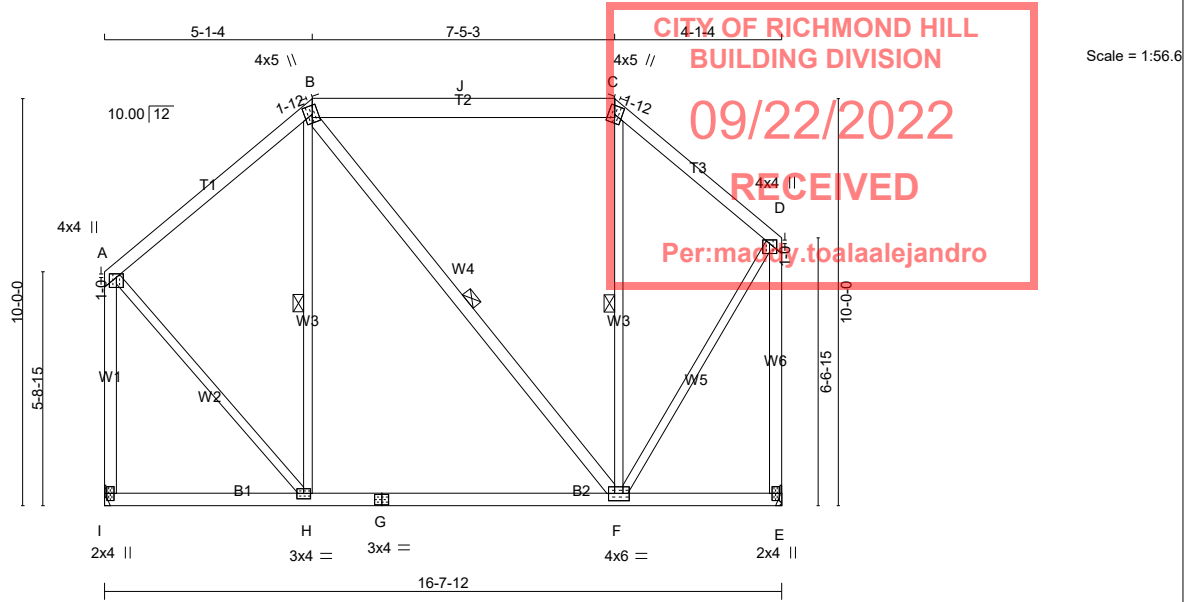
October 06, 2021

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.



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM1021-037	T09	17	1	TRUSS DESC.	

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ID:aRX40AUyo8NMuwOhGAsZzPzT9sH-UJn2qJlJNew4J36VoOjmlY JW HrilHoiGMiuyW73n



TOTAL WEIGHT = 17 X 100 = 1698 lb

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

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y
A	TMVW+p	MT20	4.0	4.0	1.00
B	TTWW+m	MT20	4.0	5.0	2.50
C	TTW+m	MT20	4.0	5.0	2.50
D	TMVW+p	MT20	4.0	4.0	1.00
E	BMV1+p	MT20	2.0	4.0	
F	BMVWW-t	MT20	4.0	6.0	
G	BS-t	MT20	3.0	4.0	
H	BMVWW-t	MT20	3.0	4.0	
I	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	
JT	GROSS REACTION	VERT	HORZ	DOWN	HORZ	UPLIFT	BRG	IN-SX	BRG
I	879	0	879	0	0	0	MECHANICAL		
E	883	0	879	0	0	0	MECHANICAL		

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

UNFACTORED REACTIONS

JT	1ST LCASE	MAX./MIN.	COMPONENT REACTIONS					
I	618	426 / 0	0 / 0	0 / 0	0 / 0	192 / 0	0 / 0	0 / 0
E	621	426 / 0	0 / 0	0 / 0	0 / 0	195 / 0	0 / 0	0 / 0

BRACING

FOR SECTION B-C, MAX. PURLIN SPACING = 2.00 FT.
FOR OTHER SECTIONS, TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 - 1x4 LATERAL BRACE(S) AT 1/2 LENGTH OF B-H, B-F, C-F. DBS = 20-0-0. CBF = 34 LBS.

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)	
FR-TO		FROM TO	UNBRAC LENGTH	FR-TO			
A-B	-431 / 0	-84.3 -84.3	0.28 (1)	6.25	H-B	-226 / 27	0.15 (1)
B-J	-292 / 0	-91.8 -91.8	0.42 (1)	2.00	B-F	-69 / 0	0.06 (1)
J-C	-292 / 0	-91.8 -91.8	0.42 (1)	2.00	F-C	-275 / 2	0.18 (1)
C-D	-375 / 0	-84.3 -84.3	0.18 (1)	6.25	A-H	0 / 489	0.11 (1)
I-A	-850 / 0	0.0 0.0	0.56 (1)	7.81	F-D	0 / 536	0.12 (1)
E-D	-863 / 0	0.0 0.0	0.83 (1)	7.81			
I-H	0 / 0	-18.2 -18.2	0.19 (4)	10.00			
H-G	0 / 334	-18.2 -18.2	0.22 (4)	10.00			
G-F	0 / 334	-18.2 -18.2	0.22 (4)	10.00			
F-E	0 / 0	-18.2 -18.2	0.17 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:
TOP CH. LL = 25.6 PSF
DL = 3.0 PSF
BOT CH. LL = 0.0 PSF
DL = 7.3 PSF
TOTAL LOAD = 35.9 PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON PIGGYBACK TRUSS WITH SLOPES OF 10.00/12 AND -10.00/12 AND RESPECTIVE HEEL HEIGHTS OF 0-0 AND 0-0 AND AN ADDITIONAL DEAD LOAD OF 3.0 P.S.F.

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

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

(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.55")
CALCULATED VERT. DEFL.(LL) = L/999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.55")
CALCULATED VERT. DEFL.(TL) = L/999 (0.07")

CSI: TC=0.83/1.00 (D-E:1), BC=0.22/1.00 (F-H:4), WB=0.18/1.00 (C-F:1), SSI=0.21/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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.

CONTINUED ON PAGE 2



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.



October 06, 2021

JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM1021-037	T09	17	1	TRUSS DESC.	

Version 8.500 S Aug 16 2021 MiTek Industries, Inc. Wed Oct 6 14:31:40 2021 Page 2

ID:aRX4OAUyo8NMuwOhGAsZzPzT9sH-UJn2qJlJNew4J36VoQjmLy_JW_HrllHoiGMiuyW73n

CITY OF RICHMOND HILL
BUILDING DIVISION

09/22/2022

RECEIVED

Per:maddy.toalaalejandro

JSL GRIP = 0.76 (H) (INPUT = 0.90)
JSL METAL = 0.18 (E) (INPUT = 1.00)

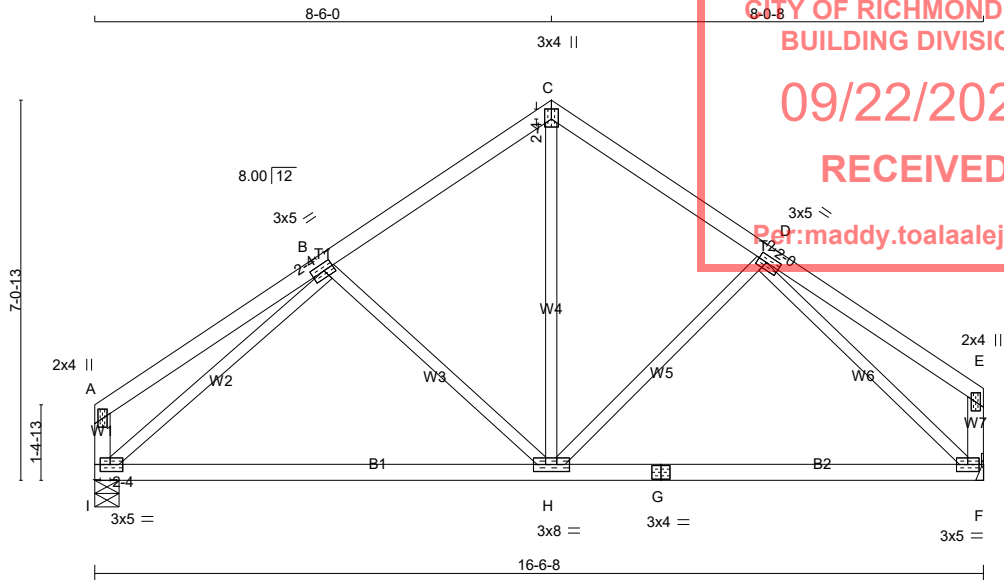
October 06, 2021

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IN THE DESIGN OF THIS COMPONENT.



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM1021-037	T10	2	1	TRUSS DESC.	

Version 8.500 S Aug 16 2021 MiTek Industries, Inc. Wed Oct 6 14:31:40 2021 Page 1
ID:aRX40AUyo8NMuwOhGAsZzPzT9sH-UJn2qJlJNew4J36VoOjmlY7RWxKrcrHoiGMiuyW73n



Scale = 1:42.9

TOTAL WEIGHT = 2 X 67 = 135 lb

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

ALL WEBS	2x3	DRY	No.2	SPF
----------	-----	-----	------	-----

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
A	TMV+p	MT20	2.0	4.0		
B	TMWW-t	MT20	3.0	5.0	1.50	2.25
C	TTW+p	MT20	3.0	4.0	2.25	1.50
D	TMWW-t	MT20	3.0	5.0	1.50	2.00
E	TMV+p	MT20	2.0	4.0		
F	BMVW1-t	MT20	3.0	5.0		
G	BS-t	MT20	3.0	4.0		
H	BMVWW-t	MT20	3.0	8.0		
I	BMVW1-t	MT20	3.0	5.0	1.50	2.25

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	UPLIFT	IN-SX	IN-SX
I	848	0		848	0	0	5-8	1-8
F	848	0		848	0	0	MECHANICAL	

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

UNFACTORED REACTIONS

JT	1ST LCASE	MAX/MIN.	COMPONENT REACTIONS	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
I	594	423 / 0	0 / 0	0 / 0	0 / 0	0 / 0	170 / 0	170 / 0	0 / 0
F	594	423 / 0	0 / 0	0 / 0	0 / 0	0 / 0	170 / 0	170 / 0	0 / 0

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

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

C H O R D S				W E B S			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED CSI (LC)	
FR-TO		FROM	TO	FR-TO			
A-B	0 / 23	-84.3	-84.3 0.24 (1)	10.00	B-H	-224 / 0	0.13 (1)
B-C	-673 / 0	-84.3	-84.3 0.19 (1)	6.25	H-C	0 / 453	0.10 (1)
C-D	-672 / 0	-84.3	-84.3 0.17 (1)	6.25	H-D	-162 / 13	0.09 (1)
D-E	0 / 22	-84.3	-84.3 0.22 (1)	10.00	I-B	-960 / 0	0.53 (1)
I-A	-137 / 0	0.0	0.0 0.01 (1)	7.81	D-F	-932 / 0	0.50 (1)
F-E	-130 / 0	0.0	0.0 0.01 (1)	7.81			
I-H	0 / 706	-18.2	-18.2 0.40 (4)	10.00			
H-G	0 / 655	-18.2	-18.2 0.40 (4)	10.00			
G-F	0 / 655	-18.2	-18.2 0.40 (4)	10.00			

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	=	25.6	PSF
DL	=	3.0	PSF	
BOT CH.	LL	=	0.0	PSF
DL	=	7.3	PSF	
TOTAL LOAD	=	35.9	PSF	

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:

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

(55% OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.55")
CALCULATED VERT. DEFL.(LL)= L/999 (0.02")
ALLOWABLE DEFL.(TL)= L/360 (0.55")
CALCULATED VERT. DEFL.(TL)= L/999 (0.13")

CSI: TC=0.24/1.00 (A-B:1), BC=0.40/1.00 (H-I:4), WB=0.53/1.00 (B-I:1), SSI=0.14/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

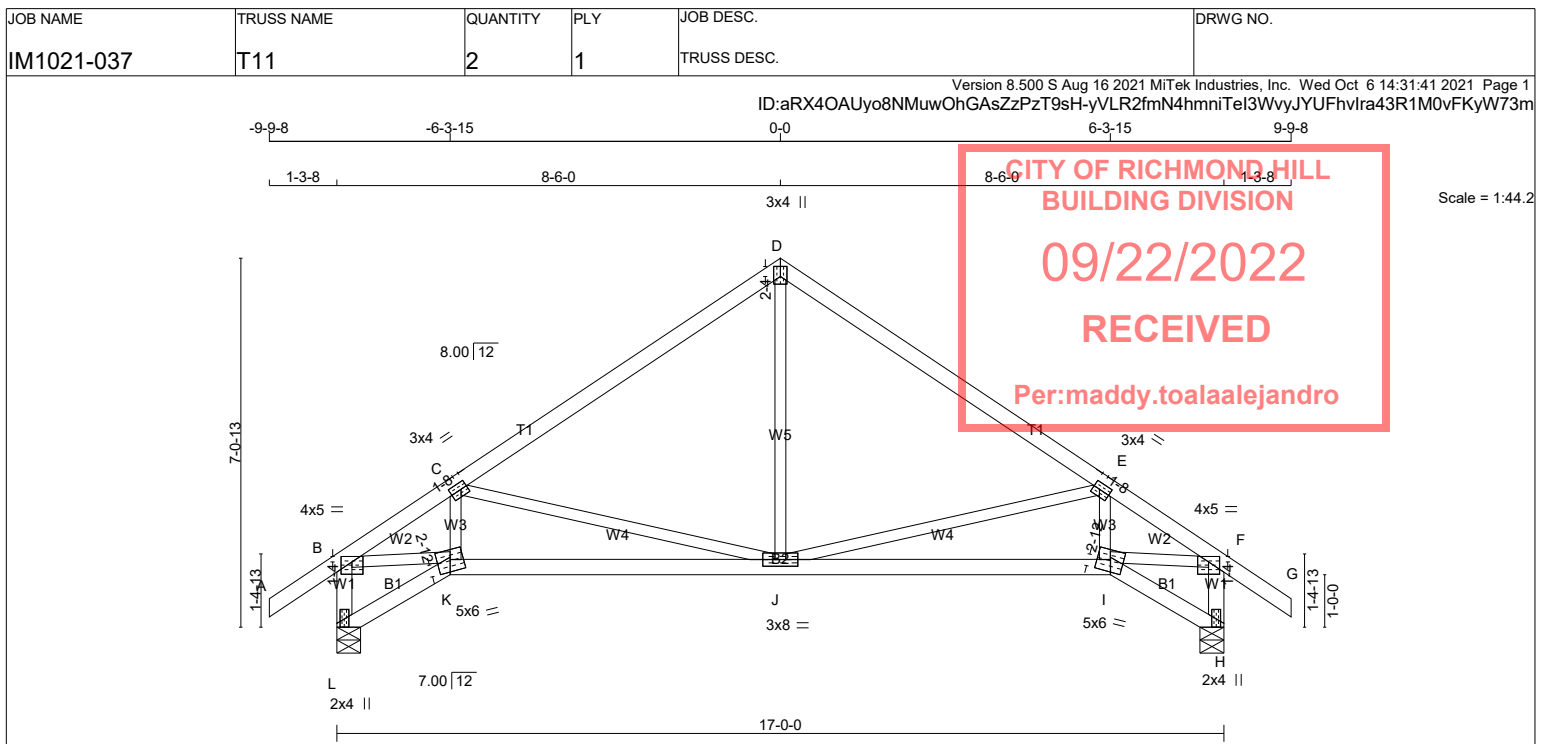
JSI GRIP= 0.89 (F) (INPUT = 0.90)
JSI METAL= 0.26 (B) (INPUT = 1.00)



October 06, 2021

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**LUMBER**

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - D	2x4	DRY	No.2
D - G	2x4	DRY	No.2
L - B	2x4	DRY	No.2
H - F	2x4	DRY	No.2
L - K	2x4	DRY	No.2
K - I	2x4	DRY	No.2
I - H	2x4	DRY	No.2

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	4.0	5.0	1.25	2.50
C	TMWW-t	MT20	3.0	4.0	1.50	1.50
D	TTW+p	MT20	3.0	4.0	2.25	1.50
E	TMWW-t	MT20	3.0	4.0	1.50	1.50
F	TMVW-p	MT20	4.0	5.0	1.25	2.50
H	BMV1+p	MT20	2.0	4.0	Edge	
I	BBWW-m	MT20	5.0	6.0	2.75	3.00
J	BMWW-t	MT20	3.0	8.0		
K	BBWW-m	MT20	5.0	6.0	2.75	3.00
L	BMV1+p	MT20	2.0	4.0	Edge	

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

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

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQD BRG
JT	VERT	HORZ	DOWN	UPLIFT
L	987	0	987	0
H	987	0	987	0

UNFACTORED REACTIONS

1ST LCASE	MAX./MIN.	COMPONENT REACTIONS
JT	COMBINED	SNOW LIVE PERM. LIVE WIND DEAD SOIL
L	689	505 / 0 0 / 0 0 / 0 0 / 0 183 / 0 0 / 0
H	689	505 / 0 0 / 0 0 / 0 0 / 0 183 / 0 0 / 0

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

BRACINGTOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.08 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. CSI (LC)	MEMB.	FACTORED FORCE (LBS)	MAX. CSI (LC)	
FR-TO		FROM TO	LENGTH	FR-TO			
A-B	0 / 32	-84.3 -84.3	0.11 (1)	10.00	J-D	0 / 446	0.10 (1)
B-C	-1444 / 0	-84.3 -84.3	0.32 (1)	5.08	J-E	-617 / 0	0.47 (1)
C-D	-818 / 0	-84.3 -84.3	0.40 (1)	6.16	I-E	0 / 61	0.02 (4)
D-E	-818 / 0	-84.3 -84.3	0.40 (1)	6.16	C-J	-617 / 0	0.47 (1)
E-F	-1444 / 0	-84.3 -84.3	0.32 (1)	5.08	K-C	0 / 61	0.02 (4)
F-G	0 / 32	-84.3 -84.3	0.11 (1)	10.00	B-K	0 / 1260	0.28 (1)
L-B	-967 / 0	0.0 0.0	0.10 (1)	7.81	I-F	0 / 1260	0.28 (1)
H-F	-967 / 0	0.0 0.0	0.10 (1)	7.81			
L-K	0 / 0	-18.2 -18.2	0.03 (4)	10.00			
K-J	0 / 1258	-18.3 -18.3	0.32 (1)	10.00			
J-I	0 / 1258	-18.3 -18.3	0.32 (1)	10.00			
I-H	0 / 0	-18.2 -18.2	0.03 (4)	10.00			

DESIGN CRITERIA**SPECIFIED LOADS:**

TOP CH.	LL	=	25.6	PSF
	DL	=	3.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.3	PSF
TOTAL LOAD	=	35.9	PSF	

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.57")
CALCULATED VERT. DEFL.(LL)= L/999 (0.03")
ALLOWABLE DEFL.(TL)= L/360 (0.57")
CALCULATED VERT. DEFL.(TL)= L/999 (0.08")

CSI: TC=0.40/1.00 (D-E:1), BC=0.32/1.00 (I-J:1), WB=0.47/1.00 (E-J:1), SSI=0.20/1.00 (D-E:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE HEELS OFF

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

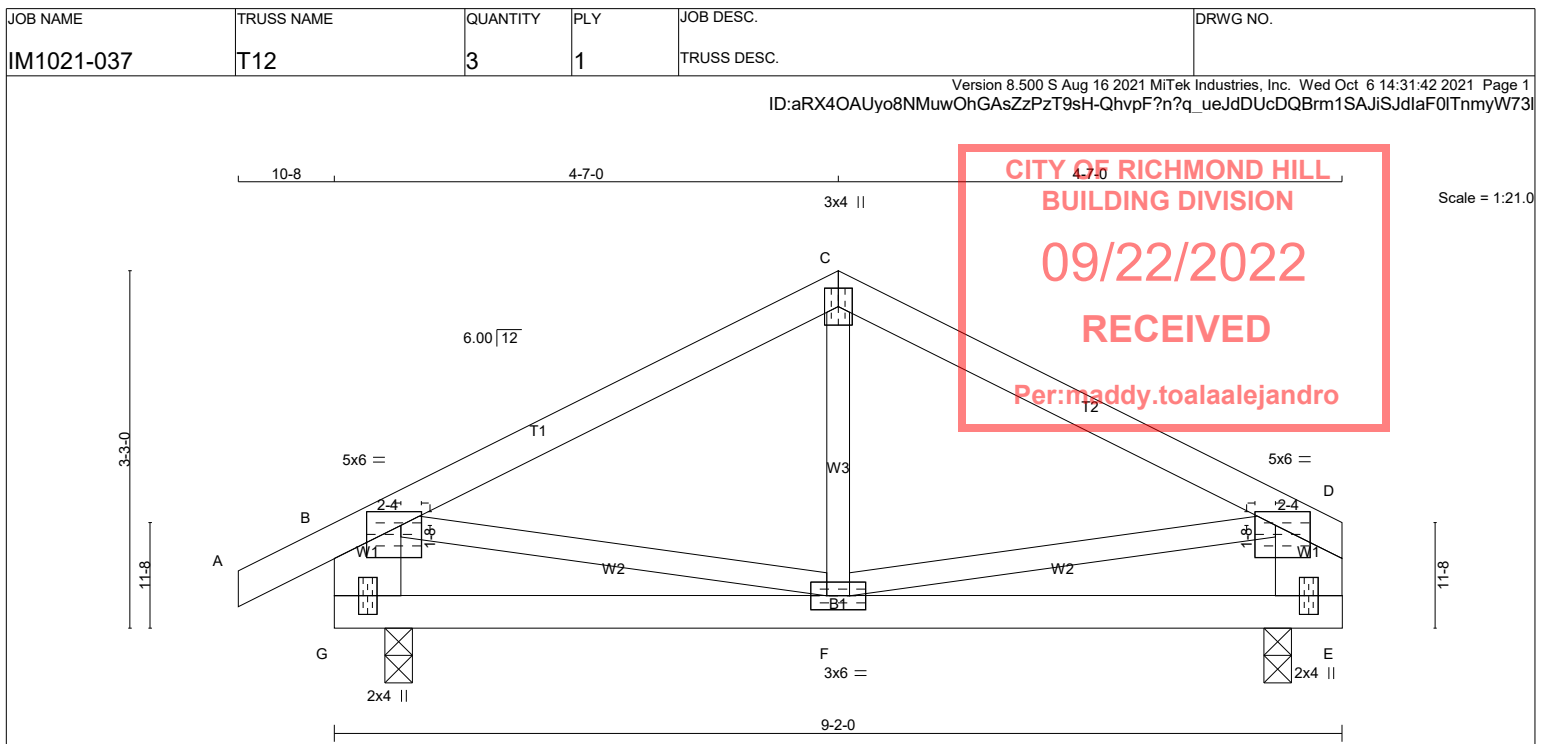
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.80 (F) (INPUT = 0.90)
JSI METAL= 0.45 (H) (INPUT = 1.00)

October 06, 2021

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**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	2x8	DRY	No.2	SPF
E - D	2x8	DRY	No.2	SPF
G - E	2x4	DRY	No.2	SPF
ALL WEBS EXCEPT	2x3	DRY	No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-p	MT20	5.0	6.0	1.50	2.25
C	TTW+p	MT20	3.0	4.0		
D	TMVW-p	MT20	5.0	6.0	1.50	2.25
E	BMV1+p	MT20	2.0	4.0		
F	BMVWW-t	MT20	3.0	6.0		
G	BMV1+p	MT20	2.0	4.0		

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

JT	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG
	VERT	DOWN	IN-SX	IN-SX
G	549	0	3-0	1-8
E	470	0	3-0	1-8

UNFACTORED REACTIONS

JT	1ST LCASE COMBINED	MAX/MIN. SNOW	MAX/MIN. LIVE	MAX/MIN. PERM. LIVE	WIND	DEAD	SOIL
G	383	283 / 0	0 / 0	0 / 0	0 / 0	100 / 0	0 / 0
E	329	235 / 0	0 / 0	0 / 0	0 / 0	94 / 0	0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) G, 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)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CSI (LC)	
FR-TO		FROM TO		FR-TO			
A-B	0 / 18	-84.3 -84.3	0.05 (1)	F-C	-6 / 82	0.03 (4)	
B-C	-424 / 0	-84.3 -84.3	0.23 (1)	B-F	0 / 383	0.09 (1)	
C-D	-424 / 0	-84.3 -84.3	0.23 (1)	F-D	0 / 383	0.09 (1)	
G-B	-516 / 0	0.0 0.0	0.03 (1)				
E-D	-437 / 0	0.0 0.0	0.02 (1)				
G-F	0 / 0	-18.2 -18.2	0.11 (4)				
F-E	0 / 0	-18.2 -18.2	0.11 (4)				

DESIGN CRITERIA**SPECIFIED LOADS:**

TOP CH.	LL	=	25.6	PSF
DL	=	3.0	PSF	
BOT CH.	LL	=	0.0	PSF
DL	=	7.3	PSF	
TOTAL LOAD	=	35.9	PSF	

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.31")
CALCULATED VERT. DEFL.(LL)= L/999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.31")
CALCULATED VERT. DEFL.(TL)= L/999 (0.02")

CSI: TC=0.23/1.00 (C-D:1), BC=0.11/1.00 (E-F:4),
WB=0.09/1.00 (B-F:1), SSI=0.13/1.00 (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)
MT20	650	371	1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.77 (F) (INPUT = 0.90)
JSI METAL= 0.13 (F) (INPUT = 1.00)



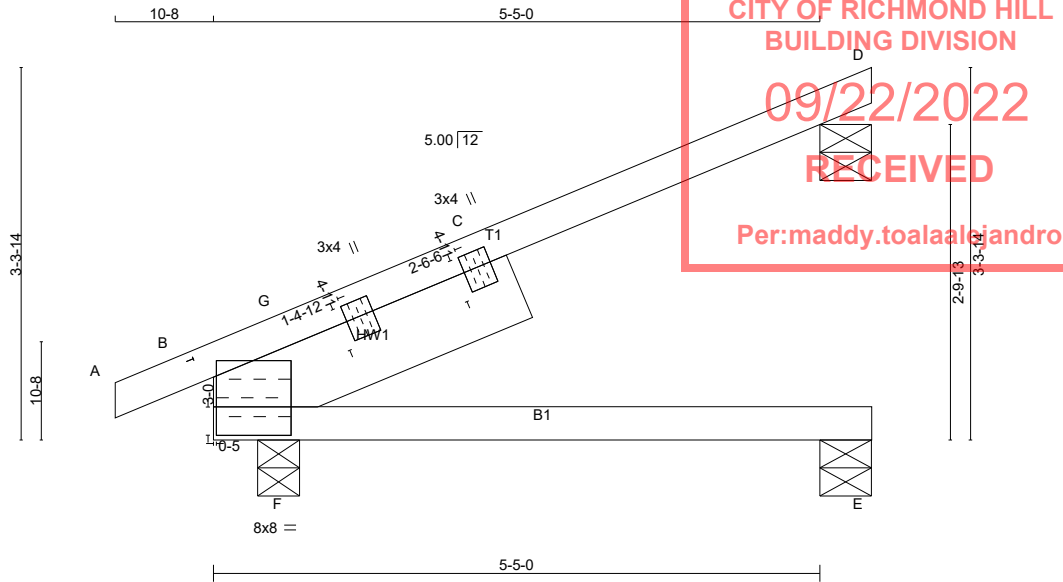
October 06, 2021

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.



JOB NAME	TRUSS NAME	QUANTITY	PLY	JOB DESC.	DRWG NO.
IM1021-037	T13	4	1	TRUSS DESC.	

Version 8.500 S Aug 16 2021 MiTek Industries, Inc. Wed Oct 6 14:31:42 2021 Page 1
ID:aRX4OAUyo8NMuwOhGAsZzPzT9sH-QhvpF?n?q_ueJdDUcDQBm1PLJgEJeeaf0ITnmyW73l



Scale = 1:20.6

TOTAL WEIGHT = 4 X 22 = 88 lb

LUMBER

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT TYPE	PLATES	W	LEN	Y	X
B TMBMR1-I	MT20	8.0	8.0	3.00	0.25
B RT+t	MT20	3.0	4.0	4.75	16.75
B RT+t	MT20	3.0	4.0	4.75	30.25

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
D	222	0	222	0
B	380	0	380	0
E	79	0	79	0

BEVELED PLATE OR SHIM REQUIRED TO PROVIDE FULL BEARING SURFACE WITH TRUSS CHORD AT JT(S): D

UNFACTORED REACTIONS

JT	1ST CASE	SNOW	LIVE	PERM. LIVE	WIND	DEAD	SOIL
D	152	128 / 0	0 / 0	0 / 0	0 / 0	24 / 0	0 / 0
B	264	198 / 0	0 / 0	0 / 0	0 / 0	66 / 0	0 / 0
E	59	23 / 0	0 / 0	0 / 0	0 / 0	36 / 0	0 / 0

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

MEMB.	CHORDS	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. CS1 (LC)	MAX. UNBRACED LENGTH	MEMB.	WEBS	MAX. FACTORED FORCE (LBS)	MAX. CS1 (LC)
FR-TO			FROM TO			FR-TO			
A-B	-8 / 0	-84.3	-84.3	0.04 (1)	10.00	F-G	-337 / 0	0.00 (1)	
B-G	-129 / 0	-84.3	-84.3	0.10 (1)	6.25	F-C	0 / 177	0.02 (4)	
G-C	-82 / 0	-84.3	-84.3	0.41 (1)	6.25				
C-D	-82 / 0	-84.3	-84.3	0.41 (1)	6.25				
B-F	0 / 130	-18.2	-18.2	0.25 (1)	10.00				
F-E	0 / 0	-18.2	-18.2	0.24 (1)	10.00				

DESIGN CRITERIA**SPECIFIED LOADS:**

TOP CH.	LL	=	25.6	PSF
	DL	=	3.0	PSF
BOT CH.	LL	=	0.0	PSF
	DL	=	7.3	PSF
TOTAL LOAD	=	35.9	PSF	

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.20")
CALCULATED VERT. DEFL.(LL) = L/999 (0.07")
ALLOWABLE DEFL.(TL)= L/360 (0.20")
CALCULATED VERT. DEFL.(TL) = L/573 (0.12")

CSI: TC=0.41/1.00 (D-G:1), BC=0.25/1.00 (B-F:1),
WB=0.02/1.00 (C-F:4), SSI=0.20/1.00 (D-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)
MT20	650	371	1747
	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.13 (B) (INPUT = 0.90)
JSI METAL= 0.05 (B) (INPUT = 1.00)



October 06, 2021

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.





STANDARD DETAIL MSD2015-H

Issued: **SEPTEMBER 22, 2020**

Expiry: **APRIL 30, 2022**

**CITY OF RICHMOND HILL
BUILDING DIVISION**

09/22/2022

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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

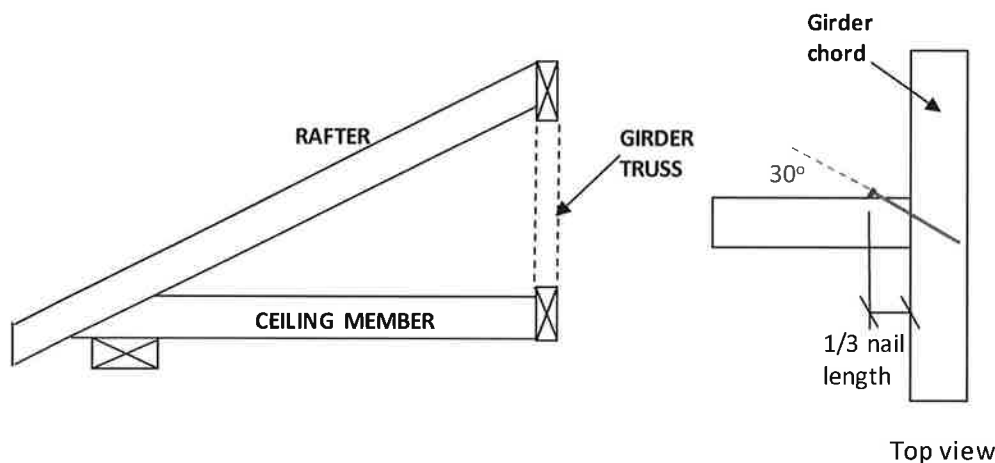


Figure 1: Toe-Nailing Rafter / Ceiling Member to Girder Truss

PEO
Certificate No. 10889485



December 21, 2020

Issued: **SEPTEMBER 22, 2020**Expiry: **APRIL 30, 2022**CITY OF RICHMOND HILL
BUILDING DIVISION

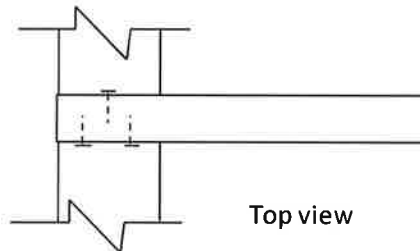
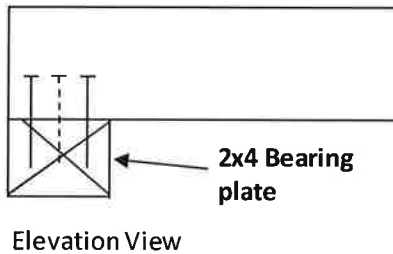
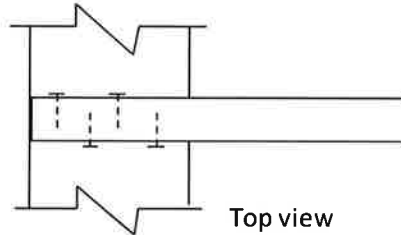
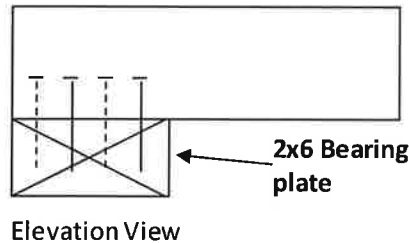
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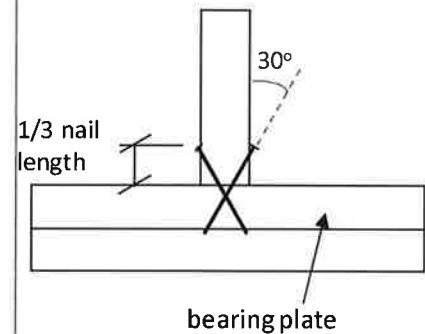
Per: maddy.toalaalejandro

TOE-NAIL CAPACITY DETAILS

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



Nails are installed at a 30° angle to vertical, through member into bearing plate



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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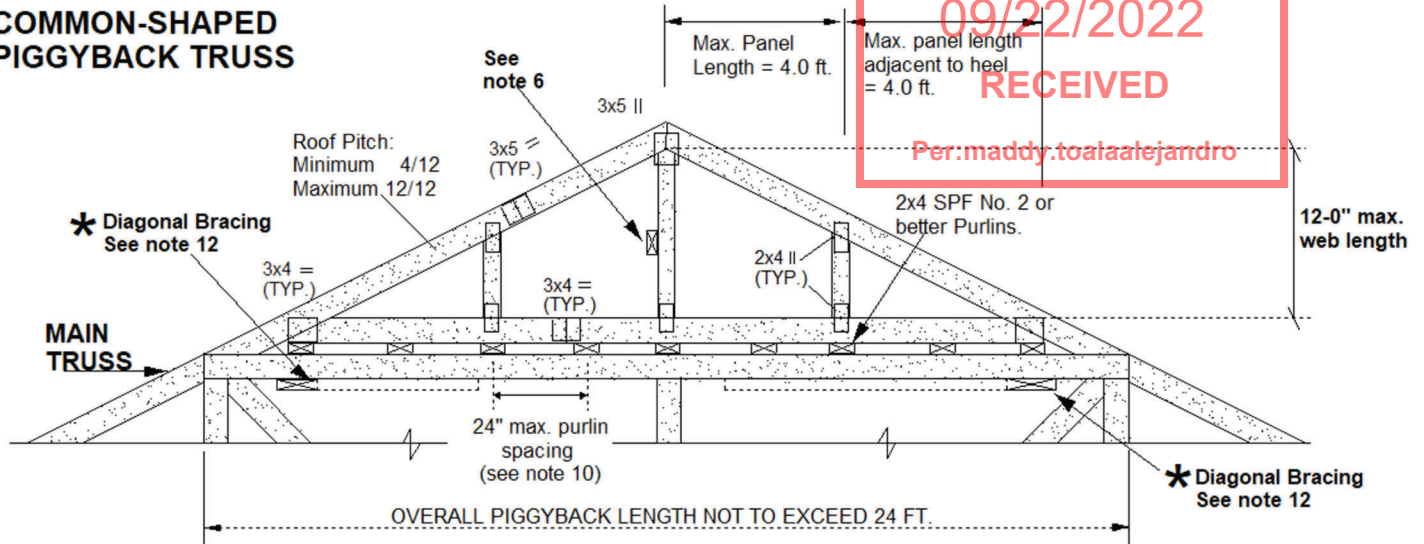
STANDARD PIGGYBACK TRUSS

**CITY OF RICHMOND HILL
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**09/22/2022
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Per: maddy.toalaalejandro

**COMMON-SHAPED
PIGGYBACK TRUSS**

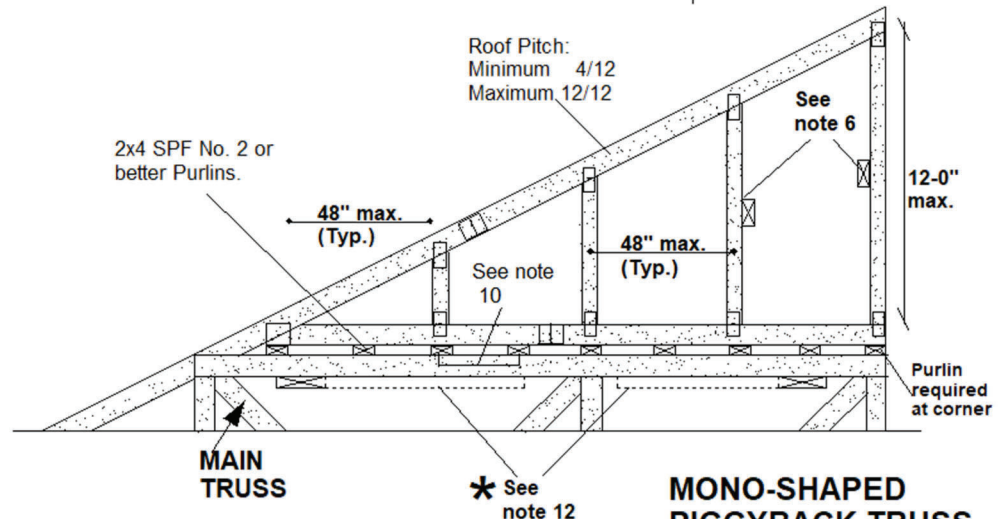


Specified Load Rating:

Top chord live:	60.0 PSF
Top chord dead:	6.0 PSF
Bottom chord live:	0.0 PSF
Bottom chord dead:	7.3 PSF

Truss spacing not to exceed 24 inches cc

The design requirements and limits shown on this page are applicable to both common shaped and mono-shaped piggybacks. Diagrams are for illustration purposes only.



**MONO-SHAPED
PIGGYBACK TRUSS**

NOTES:

1. This detail is applicable only to projects conforming to **PART 9 NBCC2015** that do not require a wind analysis to be incorporated into the truss design. Piggyback length not to exceed 24 ft.
2. All piggyback truss lumber to be SPF or D. Fir species and No. 2 DRY (or better) grade.
3. Piggyback top chord size shall be 2x4. Vertical webs and bottom chord sizes shall be 2x3 or 2x4.
4. Splice joints shall not be located in the first panel adjacent to the heel joint or peak joint. Splices shall be located at 1/4 length of any permissible panel.
5. Maximum web length not to exceed 12.0 ft. Maximum panel lengths not to exceed 48 inches.
6. One continuous lateral brace required at 1/2 length of all vertical members longer than 6.0 ft. Scab brace or L-brace substitutions are permitted. Scab braces shall be limited to 10 ft. long webs or less. Scab and L-braces shall cover 90% of web length and connected as per MITEK detail MSD2015-K.
7. Piggyback truss must be installed directly on top of each main truss.
8. All plates shall be MiTek MT20, centered at each joint and pressed into both faces of truss.
9. **DO NOT** cantilever mono-shaped piggyback truss over the end of main truss. Piggyback length must match the length of the flat chord of the main truss.
10. Purlin spacing to be equal to main truss maximum unbraced top chord length (as shown on main truss engineering drawing), but not to exceed 24 inches c/c.
11. Purlin design and overall roof system bracing shall be specified by the building designer.
12. Diagonal bracing required. See '**BCSI CANADA -B2C: FIELD ASSEMBLY & OTHER SPECIAL CONDITIONS**'

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Certificate No. 10889485



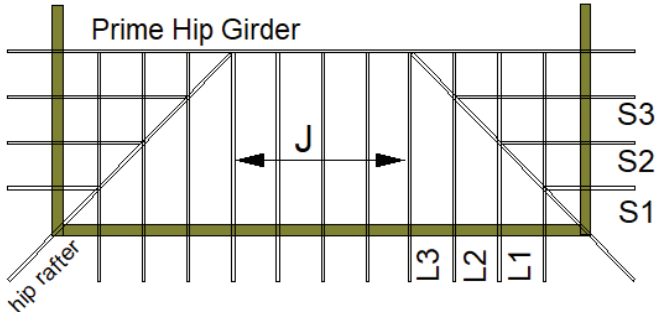
STANDARD HIP END FRAMING

CITY OF RICHMOND HILL
BUILDING DIVISION

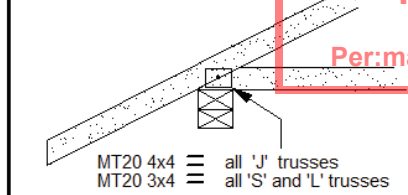
09/22/2022
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Per: maddy.toalaalej21/2/20

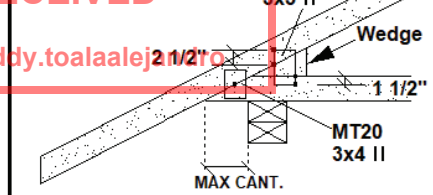
PLAN VIEW



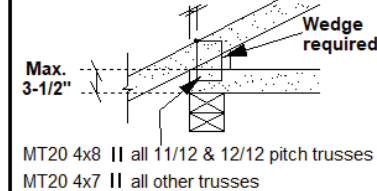
HEEL DETAIL 'A' Standard Heel



HEEL DETAIL 'C' Cantilever



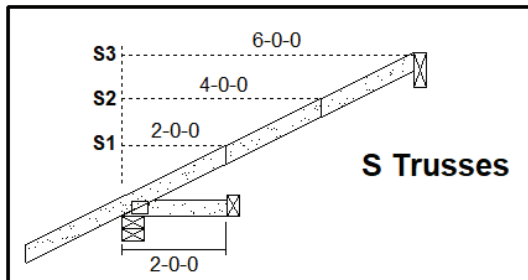
DETAIL 'B': Raised Heel



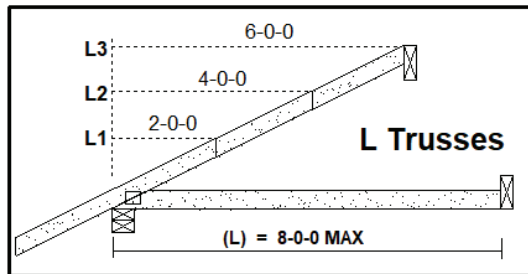
CANTILEVER DETAIL "C"

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

S Trusses



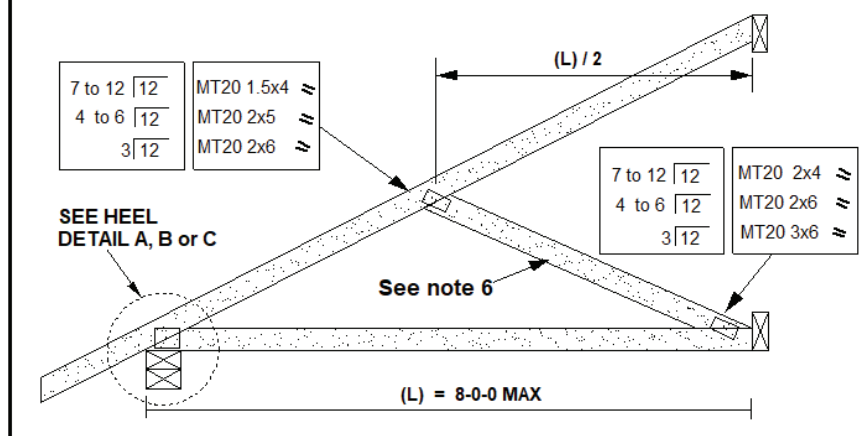
L Trusses



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

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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STANDARD GABLE END DETAIL

CITY OF RICHMOND HILL
BUILDING DIVISION

09/22/2022

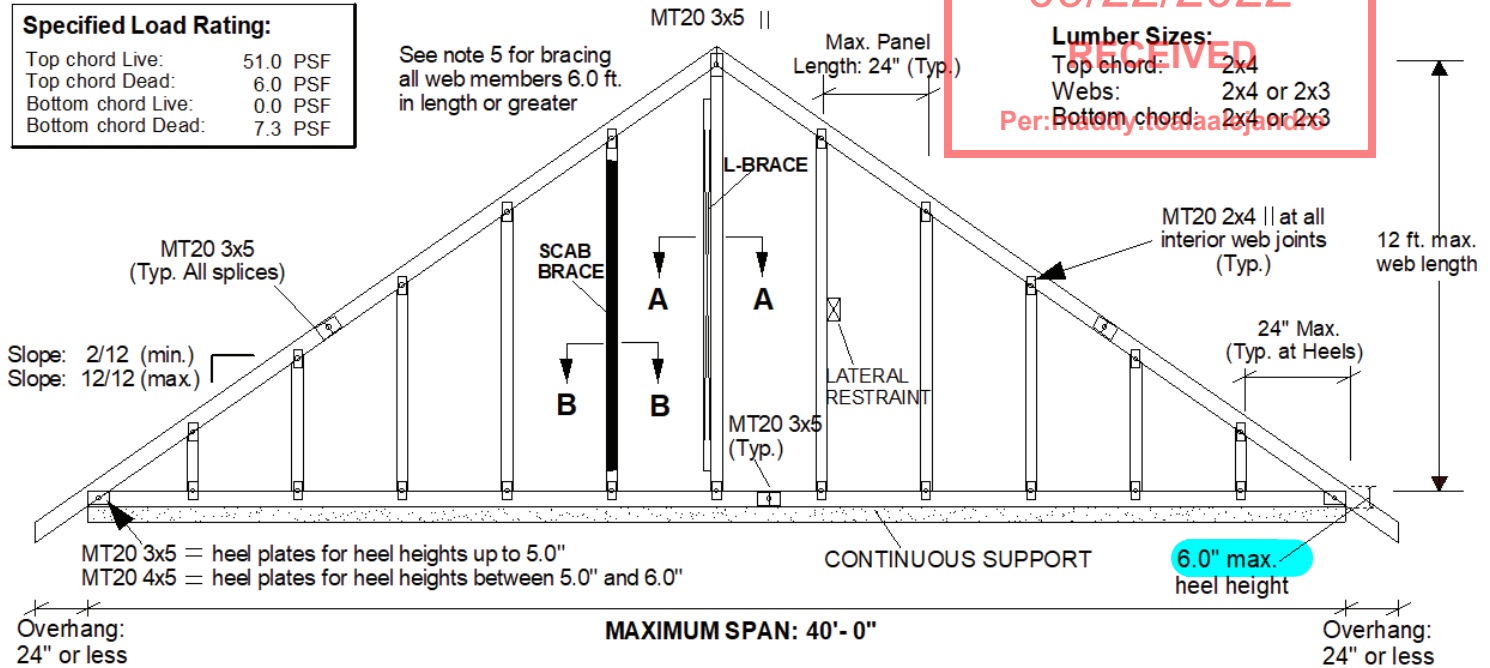
Lumber Sizes:

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

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

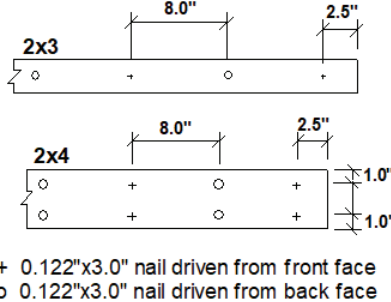
See note 5 for bracing
all web members 6.0 ft.
in length or greater



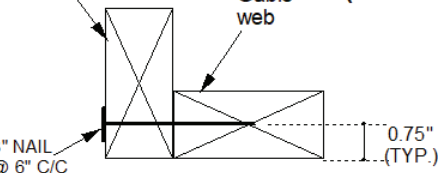
SCAB BRACE DETAIL (Section B-B)

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.

PEO
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