MiTek

Lumber design values are in accordance with ANSI/TPI 1 section 6.3
These truss designs rely on lumber values established by others.

RE: 0923-051 -

MiTek, Inc.
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200

Site Information:
Customer Info: JERRY LERNER Project Name: FARRIS Model: .
Lot/Block: . Subdivision: .
Address: ., .
City: . State: FL

Name Address and License # of Structural Engineer of Record, If there is one, for the building.
Name: License #:
Address:
City: State:

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):
Design Code: FBC2020/TPI2014 Design Program: MiTek 20/20 8.7
Wind Code: ASCE 7-16 Wind Speed: 130 mph
Roof Load: 27.0 psf Floor Load: N/A psf

This package includes 2 individual, Truss Design Drawings and 0 Additional Drawings.
With my seal affixed to this sheet, I hereby certify that I am the Truss Design Engineer and this index sheet conforms to 61G15-31.003, section 5 of the Florida Board of Professional Engineers Rules.

No.	Seal#	Truss Name	Date
1	T32077440	A01	11/13/23
2	T32077441	A02	11/13/23

The truss drawing(s) referenced above have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Mayo Truss Company, Inc..

Truss Design Engineer's Name: Lee, Julius
My license renewal date for the state of Florida is February 28, 2025.

IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

Julius Lee PE No. 34869
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date:

November 13,2023

Job	Truss	Truss Type	Qty	Ply	
0923-051	A01	Common Structural Gable	1	1	T32077440 Job Reference (optional)

Mayo Truss Company, Inc., Mayo, FL - 32066,

Run: 8.72 S Oct 5 2023 Print: 8.720 S Oct 5 2023 MiTek Industries, Inc. Fri Nov 10 08:52:22 Page: 1
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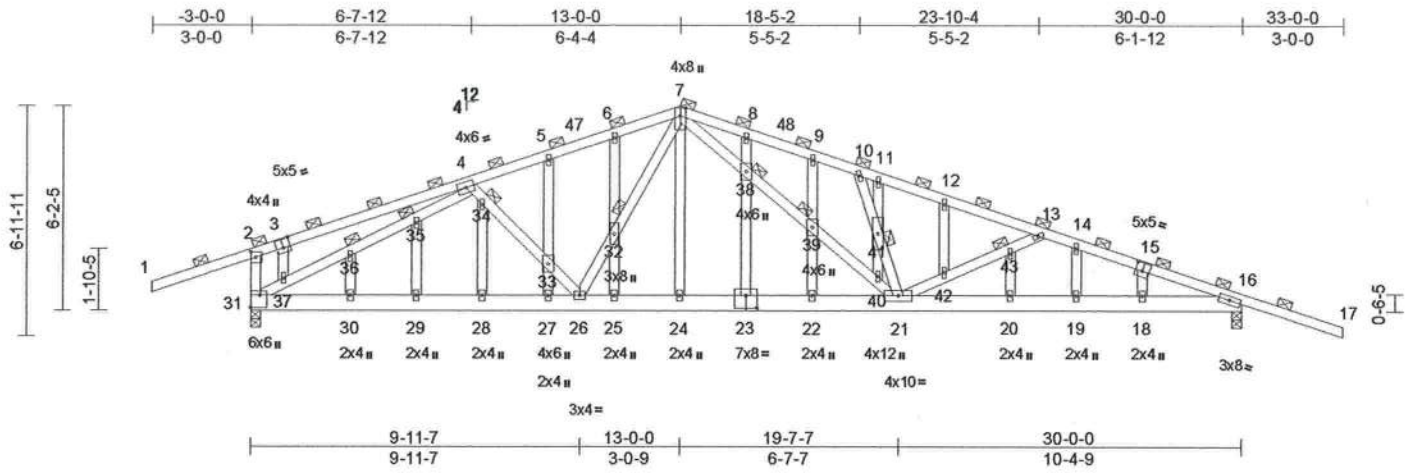

Scale = 1:64.7

Plate Offsets (X, Y): [2:0-2-0,0-1-12], [3:0-2-8,0-3-4], [15:0-2-8,0-3-0], [23:0-4-0,0-4-8], [31:Edge,0-3-8]

Loading	(psf)	Spacing	4-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.94	Vert(LL)	-0.26	21-22	>999	240	MT20	244/190
TCDL	5.0	Lumber DOL	1.25	BC	0.97	Vert(CT)	-0.36	21-22	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.62	Horz(CT)	0.07	16	n/a	n/a		
BCDL	2.0	Code	FBC2020/TPI2014	Matrix-MS							Weight: 239 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-3,15-17:2x4 SP No.1
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2
OTHERS 2x4 SP No.2

BRACING
TOP CHORD 2-0-0 oc purlins (2-11-4 max.), except end verticals
(Switched from sheeted: Spacing > 2-0-0).
BOT CHORD Rigid ceiling directly applied or 5-3-4 oc bracing.
JOINTS 1 Brace at Jt(s): 7, 2, 32, 34, 35, 36, 38, 39, 41, 43

REACTIONS (size) 16=0-3-8, 31=0-3-8
Max Horiz 31=-207 (LC 10)
Max Uplift 16=-931 (LC 12), 31=-935 (LC 12)
Max Grav 16=1911 (LC 1), 31=1928 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/99, 2-4=-280/289, 4-5=-2291/1497, 5-6=-2244/1533, 6-7=-2254/1600, 7-8=-3188/2190, 8-9=-3183/2126, 9-10=-3201/2093, 10-11=-3086/1983, 11-12=-3096/1949, 12-13=-3133/1891, 13-14=-3503/2148, 14-16=-3588/2145, 16-17=0/95, 2-31=-613/575
BOT CHORD 30-31=-1077/2134, 29-30=-1077/2134, 28-29=-1077/2134, 27-28=-1077/2134, 26-27=-1077/2134, 25-26=-913/1996, 24-25=-913/1996, 22-24=-913/1996, 21-22=-913/1996, 20-21=-1872/3343, 19-20=-1872/3343, 18-19=-1872/3343, 16-18=-1878/3350
WEBS 4-34=-52/262, 33-34=-219/137, 26-33=-188/173, 26-32=-245/467, 7-32=-239/454, 7-38=-936/1411, 38-39=-895/1351, 39-40=-900/1356, 21-40=-893/1352, 10-41=-226/156, 21-41=-347/244, 21-42=-592/421, 42-43=-496/349, 13-43=-520/373, 31-37=-2409/1352, 36-37=-2365/1345, 35-36=-2326/1315, 4-35=-2489/1413, 6-32=-219/187, 25-32=-233/195, 5-33=-120/91, 27-33=-199/113, 28-34=-138/396, 29-35=-324/196, 30-36=-67/109, 3-37=-208/154, 8-38=-203/179, 23-38=-112/118, 9-39=-99/84, 22-39=-107/93, 11-41=-148/117, 40-41=-16/21, 12-42=-210/165, 20-43=-68/82, 14-19=-11/108, 15-18=-182/142, 7-24=-221/318

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=3.0psf; BCDL=1.2psf; h=15ft; B=45ft; L=30ft; eave=4ft; Cat. I; Exp B; Partially Enclosed; MWFRS (directional) and C-C Exterior(2E) -3-0-0 to 0-1-12, Interior (1) 0-1-12 to 13-0-0, Exterior (2R) 13-0-0 to 16-0-0, Interior (1) 16-0-0 to 33-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60 (Actual dead loads used per ANSI/TPI-1)
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) The bottom chord dead load shown is sufficient only to cover the truss weight itself and does not allow for any additional load to be added to the bottom chord.
6) Dead loads shown include weight of truss. Top chord dead load of 5.0 psf (or less) is not adequate for a shingle roof. Architect to verify adequacy of top chord dead load.
7) All plates are 1.5x4 MT20 unless otherwise indicated.
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) All bearings are assumed to be SP No.2 .
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 935 lb uplift at joint 31 and 931 lb uplift at joint 16.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Julius Lee PE No. 34869
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date:

November 13,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	
0923-051	A02	Common	9	1	T32077441
					Job Reference (optional)

Mayo Truss Company, Inc., Mayo, FL - 32066,

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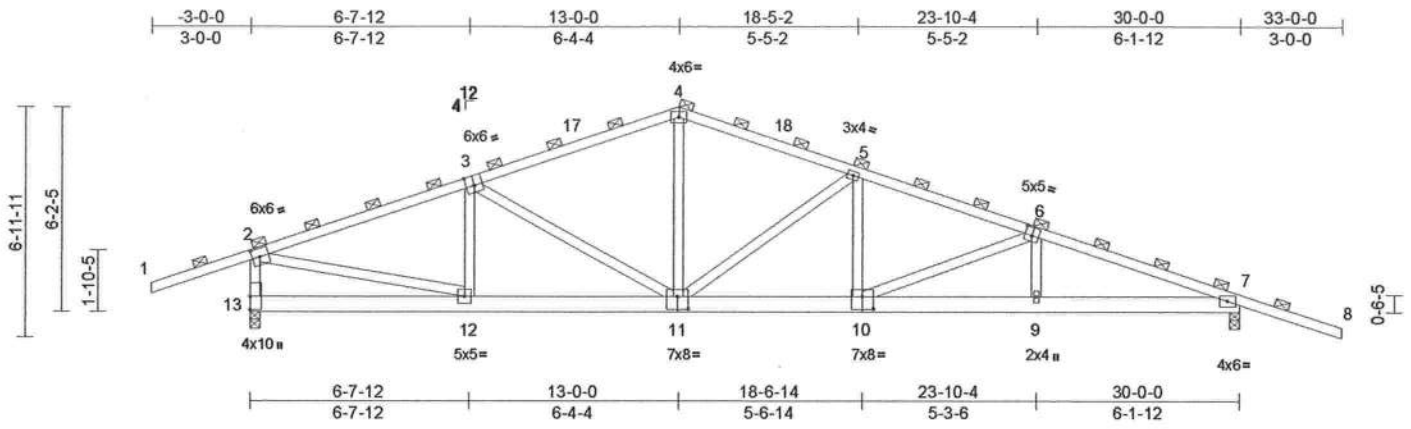

Scale = 1:64.7

Plate Offsets (X, Y): [2:0-2-11,0-3-0], [3:0-3-0,Edge], [6:0-2-8,0-3-0], [10:0-4-0,0-4-8], [11:0-4-0,0-4-8]

Loading	(psf)	Spacing	4-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.94	Vert(LL)	-0.23	9-10	>999	240	MT20	244/190
TCDL	5.0	Lumber DOL	1.25	BC	0.86	Vert(CT)	-0.31	9-10	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.95	Horz(CT)	0.06	7	n/a	n/a		
BCDL	2.0	Code	FBC2020/TPI2014	Matrix-MS							Weight: 187 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.1 *Except* 4-6:2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2

BRACING
TOP CHORD 2-0-0 oc purlins (2-10-13 max.), except end verticals
(Switched from sheeted: Spacing > 2-0-0).
BOT CHORD Rigid ceiling directly applied or 5-3-14 oc bracing.

REACTIONS (size) 7=0-3-8, 13=0-3-8
Max Horiz 13=-207 (LC 10)
Max Uplift 7=-931 (LC 12), 13=-935 (LC 12)
Max Grav 7=1911 (LC 1), 13=1928 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-13=-1887/1261, 1-2=0/99, 2-4=-2387/1462, 4-5=-2176/1436, 5-7=-3627/2135, 7-8=0/95
BOT CHORD 12-13=-58/226, 9-12=-1874/3354, 7-9=-1870/3350
WEBS 2-12=-1260/2225, 4-11=-508/785, 5-11=-1059/707, 5-10=-165/441, 6-10=-641/438, 6-9=-93/207, 3-12=-483/337, 3-11=-441/266

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=3.0psf; BCDL=1.2psf; h=15ft; B=45ft; L=30ft; eave=4ft; Cat. I; Exp B; Partially Enclosed; MWFRS (directional) and C-C Exterior(2E) -3-0-0 to 0-1-12, Interior (1) 0-1-12 to 13-0-0, Exterior (2R) 13-0-0 to 16-0-0, Interior (1) 16-0-0 to 33-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60 (Actual dead loads used per ANSI/TPI-1)
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) The bottom chord dead load shown is sufficient only to cover the truss weight itself and does not allow for any additional load to be added to the bottom chord.
5) Dead loads shown include weight of truss. Top chord dead load of 5.0 psf (or less) is not adequate for a shingle roof. Architect to verify adequacy of top chord dead load.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SP No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 935 lb uplift at joint 13 and 931 lb uplift at joint 7.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

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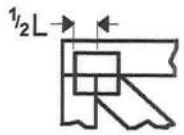
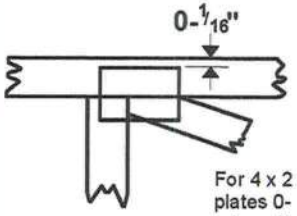
Symbols

PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.

This symbol indicates the required direction of slots in connector plates.

* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION

Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

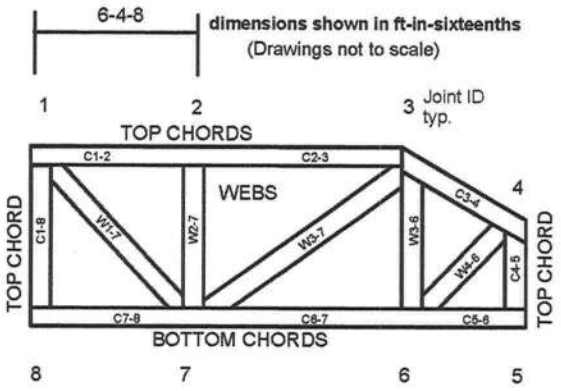
BEARING

Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

Product Code Approvals

ICC-ES Reports:

ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

MiTek®

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.