



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

RE: 3736115 - IC - BURTON BARN ADDITION

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

Site Information:

Customer Info: IC CONSTRUCTION Project Name: Burton Barn Addition Model: Custom
Lot/Block: N/A Subdivision: N/A
Address: TBD, TBD
City: Columbia Cty 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 8.6
Wind Code: ASCE 7-16 Wind Speed: 130 mph
Roof Load: 30.0 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.

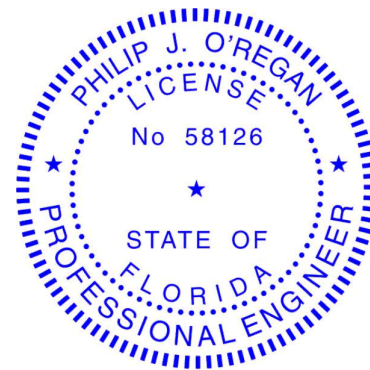
No.	Seal#	Truss Name	Date
1	T31988079	T01	11/1/23
2	T31988080	T01G	11/1/23

This item has been electronically signed and sealed by ORegan, Philip, PE using a Digital Signature.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies

The truss drawing(s) referenced above have been prepared by
MiTek USA, Inc. under my direct supervision based on the parameters
provided by Builders FirstSource-Lake City, FL.

Truss Design Engineer's Name: ORegan, Philip
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.



Philip J. O'Regan PE No.58126
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date:

November 1, 2023

ORegan, Philip

1 of 1

Job	Truss	Truss Type	Qty	Ply	IC - BURTON BARN ADDITION	T31988079
3736115	T01	FINK	2	1	Job Reference (optional)	

Builders FirstSource (Lake City,FL), Lake City, FL - 32055,

8.630 s Aug 30 2023 MiTek Industries, Inc. Tue Oct 31 12:09:39 2023 Page 1

ID:mXLdnZOBfn8pnU6UwJ2B0MysuZm-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCd0i7J4zJC?f

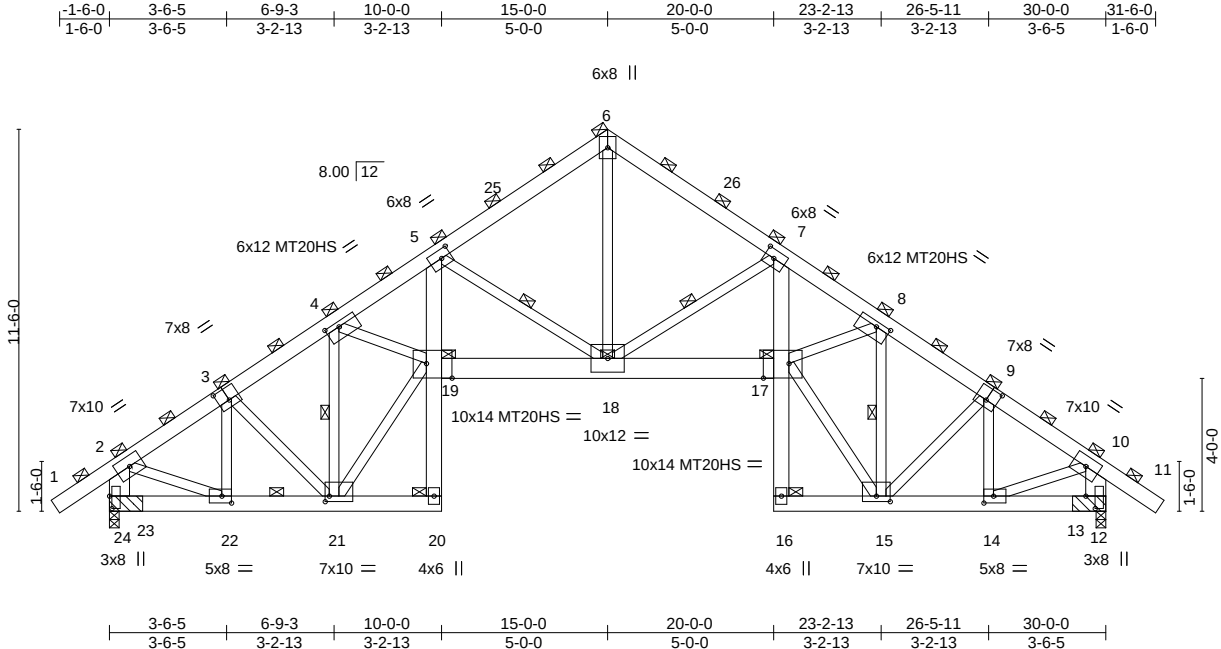


Plate Offsets (X,Y)--	[3:0-4-0,0-4-8], [4:0-5-0,0-1-12], [5:0-3-8,0-3-0], [7:0-3-8,0-3-0], [8:0-5-0,0-1-12], [9:0-4-0,0-4-8], [12:0-4-8,0-3-6], [14:0-3-8,0-2-8], [15:0-5-0,0-2-0], [17:0-9-4,0-5-4], [19:0-9-4,0-5-4], [21:0-1-8,0-2-0], [22:0-3-8,0-2-8], [24:0-4-8,0-0-14]
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LOADING (psf)	SPACING-	10-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.25	TC 0.47	Vert(LL)	-0.43 18-19	>818	240	MT20	244/190
TCDL 5.0	Lumber DOL	1.25	BC 0.51	Vert(CT)	-0.65 18-19	>541	180	MT20HS	187/143
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.97	Horz(CT)	0.73 12	n/a	n/a		
BCDL 5.0	Code FBC2020/TPI2014		Matrix-MS						
								Weight: 309 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP M 26	TOP CHORD 2-0-0 oc purlins (2-10-15 max.), except end verticals.
BOT CHORD 2x6 SP M 26 *Except*	BOT CHORD 8-0-0 oc bracing: 17-19
17-19: 2x8 SP 2400F 2.0E	8-5-0 oc bracing: 20-24
WEBS 2x4 SP No.1 *Except*	10-0-0 oc bracing: 19-20, 16-17
2-24,10-12: 2x8 SP 2400F 2.0E	WEBS 1 Row at midpt 7-18, 8-15, 5-18, 4-21

REACTIONS.	(size) 24=(0-3-8 + bearing block) (req. 0-4-1), 12=(0-3-8 + bearing block) (req. 0-4-1)	
	Max Horz 24=-1414(LC 10)	
	Max Uplift 24=-1456(LC 12), 12=-1456(LC 13)	
	Max Grav 24=4892(LC 1), 12=4892(LC 1)	
		THIS DRAWING ASSUMES NO RESPONSIBILITY FOR THE DESIGN OF THE LATERAL BRACING SHOWN. DUE TO THE WIDE SPACING OF THE TRUSSES, SPECIAL CONSIDERATIONS MUST BE GIVEN IN THIS AREA. IT IS THE RESPONSIBILITY OF THE PROJECT ENGINEER/ARCHITECT TO SPECIFY PROPER BRACING SIZE AND ATTACHMENT.

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.	
TOP CHORD 1-2=0/268, 2-3=-4706/1323, 3-4=-4998/1550, 4-5=-10237/3068, 5-6=-6047/1721, 6-7=-6046/1849, 7-8=-10237/2397, 8-9=-4998/1555, 9-10=-4706/1322, 10-11=0/268, 11-12=-4710/1552, 12-13=-4710/1553	
BOT CHORD 22-24=-1126/1374, 21-22=-1419/4123, 20-21=-87/280, 19-20=-5/268, 18-19=-1217/4156, 17-18=-2245/8933, 16-17=0/268, 15-16=-52/268, 14-15=-756/3677, 13-14=-11/311	
WEBS 6-18=-1384/4922, 7-18=-4501/1532, 15-17=-1055/6353, 8-17=-679/4863, 8-15=-5395/971, 9-15=-139/416, 9-14=-1233/432, 5-18=-4890/2046, 19-21=-1989/6782, 4-19=-1039/5020, 4-21=-5565/1579, 3-21=-202/468, 3-22=-1233/428, 2-22=-851/3700, 10-14=-869/3700	

NOTES-	
1) 2x6 SP M 26 bearing block 12" long at jt. 24 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. Bearing is assumed to be SP 2400F 2.0E.	
2) 2x6 SP M 26 bearing block 12" long at jt. 12 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. Bearing is assumed to be SP 2400F 2.0E.	
3) Unbalanced roof live loads have been considered for this design.	
4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCCL=3.0psf; BCDL=3.0psf; h=20ft; Cat. I; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-7-8 to 1-4-8, Interior(1) 1-4-8 to 15-0-0, Exterior(2R) 15-0-0 to 18-0-0, Interior(1) 18-0-0 to 31-7-8 zone; 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	
5) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.	
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 MT20 plates unless otherwise indicated.	
8) The Fabrication Tolerance at joint 17 = 8%, joint 19 = 8%	
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.	
	This item has been electronically signed and sealed by O'Regan, Philip, PE using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.
	Philip J. O'Regan PE No.58126 MiTek Inc. DBA MiTek USA FL Cert 6634 16023 Swingley Ridge Rd. Chesterfield, MO 63017 Date:
	November 1,2023

Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE. Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria and DSB-22 available from Truss Plate Institute (www.tpinst.org) and BCSI Building Component Safety Information available from the Structural Building Component Association (www.sbcsccomponents.com)	MiTek® 16023 Swingley Ridge Rd. Chesterfield, MO 63017 314.434.1200 / MiTek-US.com
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Job	Truss	Truss Type	Qty	Ply	IC - BURTON BARN ADDITION
3736115	T01	FINK	2	1	T31988079

Builders FirstSource (Lake City,FL), Lake City, FL - 32055,

8.630 s Aug 30 2023 MiTek Industries, Inc. Tue Oct 31 12:09:39 2023 Page 2
ID:mXLdnZOBfn8pnU6UwJ2B0MysuZm-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWwCDoi7J4zJC?f

- NOTES-**
- 10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1456 lb uplift at joint 24 and 1456 lb uplift at joint 12.
 - 12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

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Job	Truss	Truss Type	Qty	Ply	IC - BURTON BARN ADDITION	T31988080
3736115	T01G	GABLE	1	1	Job Reference (optional)	

Builders FirstSource (Lake City,FL), Lake City, FL - 32055, 8.630 s Aug 30 2023 MiTek Industries, Inc. Tue Oct 31 12:09:43 2023 Page 1
ID:mXLdnZOBfn8pnU6UwJ2B0MysuZm-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

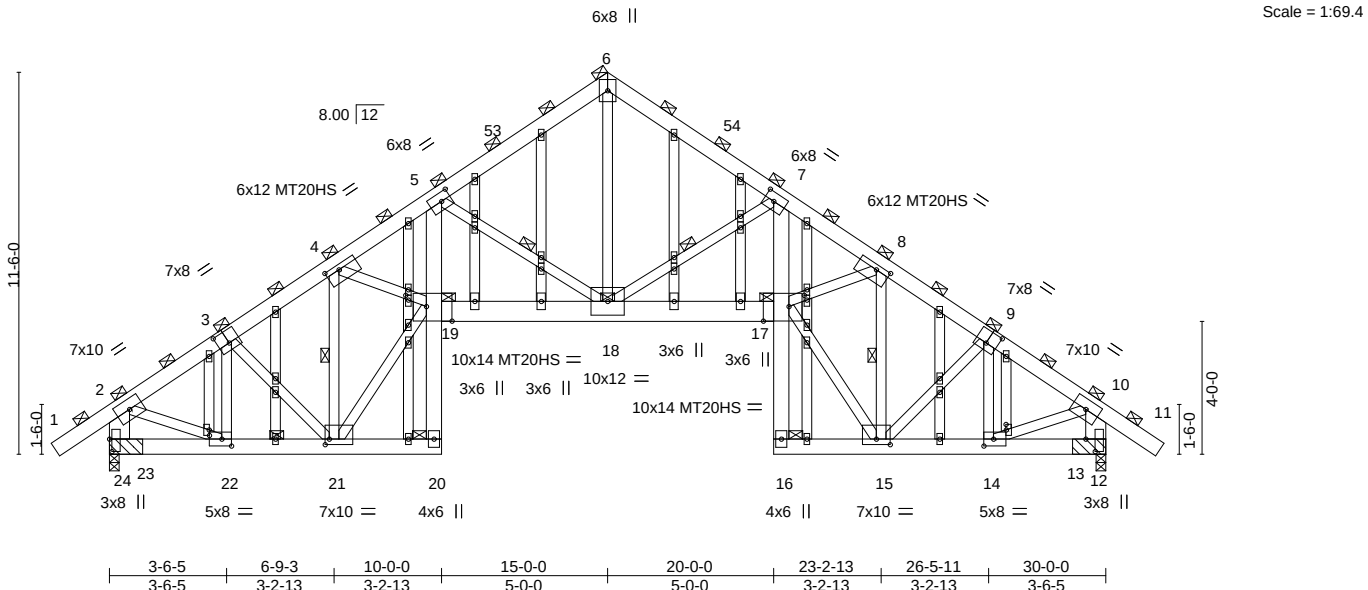


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-----------------------	---

LOADING (psf)	SPACING-	10-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.25	TC 0.47	Vert(LL)	-0.43 18-19	>818	240	MT20	244/190
TCDL 5.0	Lumber DOL	1.25	BC 0.51	Vert(CT)	-0.65 18-19	>541	180	MT20HS	187/143
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.97	Horz(CT)	0.73 12	n/a	n/a		
BCDL 5.0	Code FBC2020/TPI2014		Matrix-MS					Weight: 372 lb	FT = 20%

LUMBER-	BRACING-
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BOT CHORD 2x6 SP M 26 *Except* 17-19: 2x8 SP 2400F 2.0E	BOT CHORD 8-0-0 oc bracing: 17-19
WEBS 2x4 SP No.1 *Except* 2-24,10-12: 2x8 SP 2400F 2.0E	8-5-0 oc bracing: 20-24
OTHERS 2x4 SP No.3	10-0-0 oc bracing: 19-20, 16-17
	WEBS 1 Row at midpt 7-18, 8-15, 5-18, 4-21

REACTIONS.	(size) 24=(0-3-8 + bearing block) (req. 0-4-1), 12=(0-3-8 + bearing block) (req. 0-4-1)
	Max Horz 24=-1414(LC 10)
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NOTES-

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- 4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCCL=3.0psf, BCDL=3.0psf; h=20ft; Cat. I; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-7-8 to 1-4-8, Interior(1) 1-4-8 to 15-0-0, Exterior(2R) 15-0-0 to 18-0-0, Interior(1) 18-0-0 to 31-7-8 zone; 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
- 5) 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.
- 6) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 7) 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

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Date:

November 1,2023

Job	Truss	Truss Type	Qty	Ply	IC - BURTON BARN ADDITION	T31988080
3736115	T01G	GABLE	1	1	Job Reference (optional)	

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Page 2
ID:mXLdnZOBfn8pnU6UwJ2B0MysuZm-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWwCDoi7J4zJC?f

- NOTES-**
- 8) All plates are MT20 plates unless otherwise indicated.
 - 9) All plates are 2x4 MT20 unless otherwise indicated.
 - 10) The Fabrication Tolerance at joint 17 = 8%, joint 19 = 8%
 - 11) Gable studs spaced at 2-0-0 oc.
 - 12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 13) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - 14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1456 lb uplift at joint 24 and 1456 lb uplift at joint 12.
 - 15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

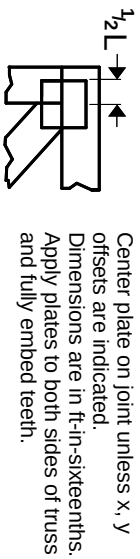
 **WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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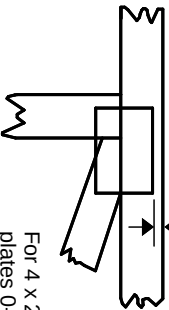
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Symbols

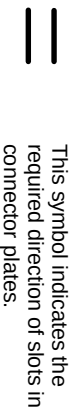
PLATE LOCATION AND ORIENTATION



0- $\frac{1}{16}$ "



For 4 x 2 orientation, locate plates 0- $\frac{1}{16}$ " from outside edge of truss.



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

PLATE SIZE

4 X 4

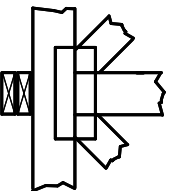
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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.

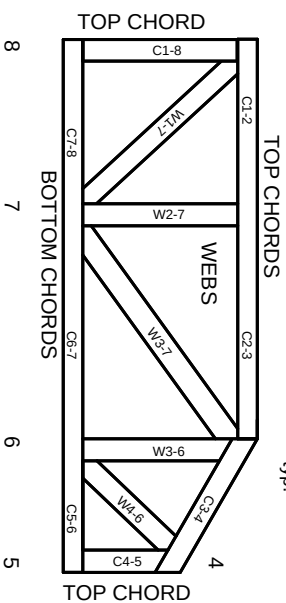
Industry Standards:

ANSI/TP1.1: 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



1 2 3 Joint ID typ.



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/TP1 1 section 6.3. These truss designs rely on lumber values established by others.

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MITek®

MITek Engineering Reference Sheet: MIL-7473 rev. 1/12/2023

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/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 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/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.