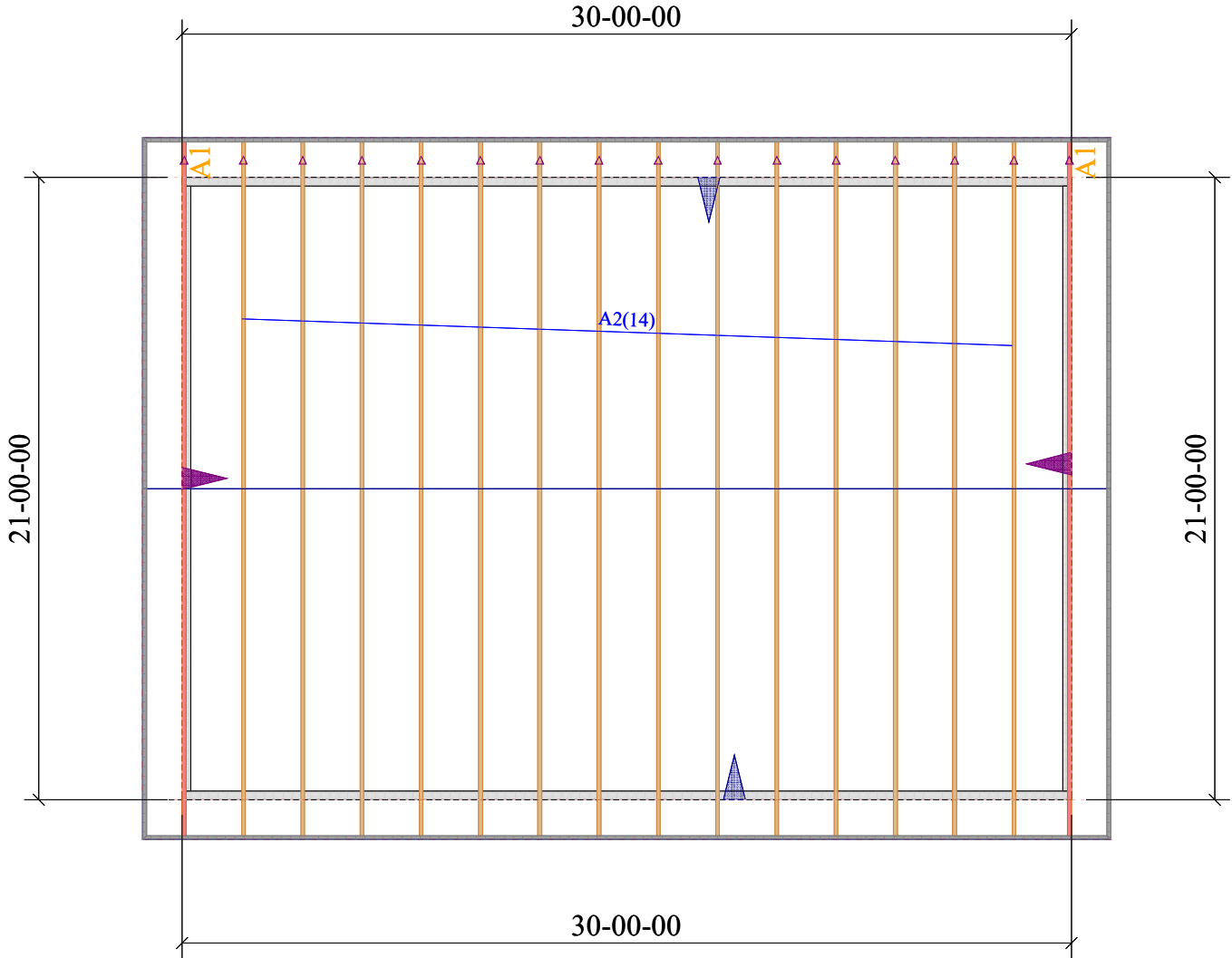


TRUSSES ARE SPACED AT 24" CENTERS
OVERHANGS ARE 16"
PITCHES ARE 4/12

HEARTLAND TRUSS
500 MID AMERICA DRIVE
PLATTSBURG, MO 64477



84 LUMBER / REUNION AT BLACKWELL
SHED
TRUSS PLACEMENT DIAGRAM

JOB: 250110

BY: JUSTIN FITZGERALD

STAND STRUCTURAL ENGINEERING
8234 Robinson St
Overland Park, KS 66204
(913) 214-2169

- Reviewed
- Reviewed as Noted
- Not required by the Contract Documents
- For Record Only
- Revise and Resubmit
- Rejected

Review is only for general conformance with the design concept and the intent of the Contract Documents. Contractor is solely responsible for verifying dimensions, for establishing fabrication processes, means, techniques, sequences and procedures of construction and for coordination of work of all trades. Review action taken and noted to information shown does not authorize deviations from the intent of the contract documents, unless so stated in a separate letter or Change Order. The Structural Engineer and/or Architect-of-Record retained by the Contractor or his Supplier, for the Design / Build portion of the project represented by this submittal, is solely responsible for the correctness, appropriateness and adequacy of the Design / Build system.

By: JFunk
Date: 11/20/2025

**RELEASED FOR
CONSTRUCTION**
As Noted on Plans Review

Development Services Department
Lee's Summit, Missouri
11/21/2025

MiTek, Inc.

16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200

Re: 250110

84 LUMBER / REUNION @ BLACKWELL / MAINTENANCE GARAGE

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

Pages or sheets covered by this seal: I70365481 thru I70365482

My license renewal date for the state of Missouri is December 31, 2025.

Missouri COA: Engineering 001193

**RELEASED FOR
CONSTRUCTION**
As Noted on Plans Review

Development Services Department
Lee's Summit, Missouri
11/21/2025



STAND STRUCTURAL ENGINEERING
8234 Robinson St
Overland Park, KS 66204
(913) 214-2169

- Reviewed
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By: JFunk
Date: 11/20/2025

December 26, 2024

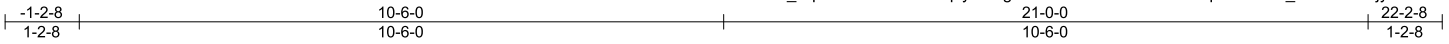
Sevier, Scott, Engineer

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.

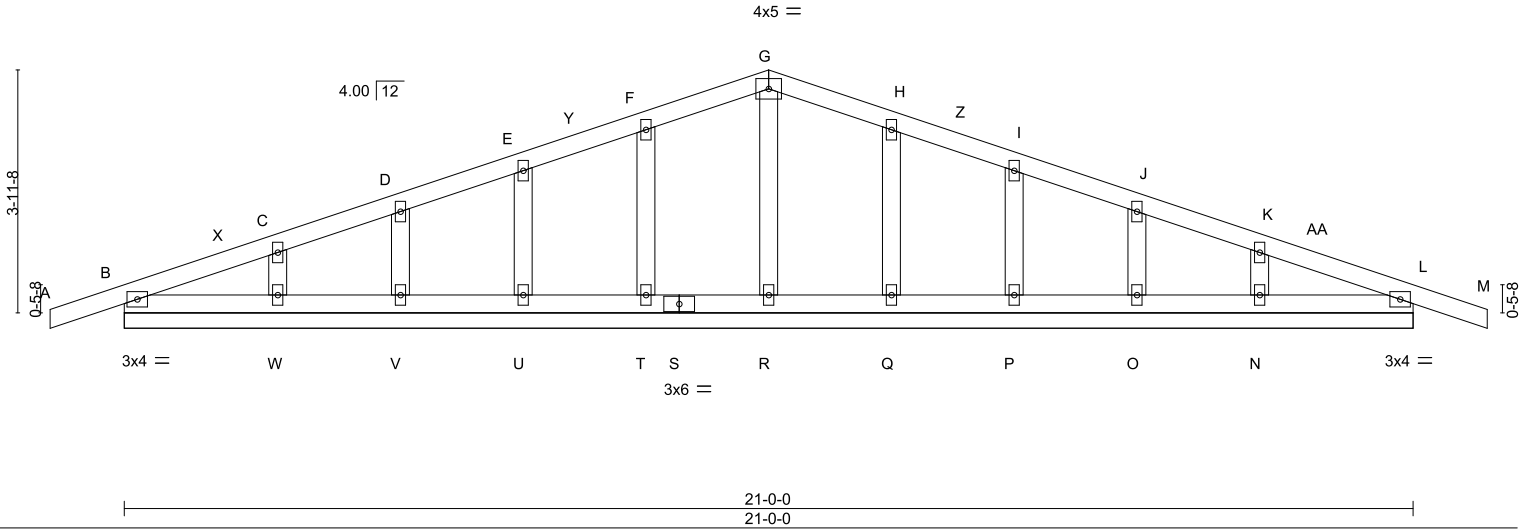
Job 250110	Truss A1	Truss Type Common Supported Gable	Qty 2	Ply 1	84 LUMBER / REUNION @ BLACKWELL / MAINTENANCE GARAGE 170365481
Heartland Truss, Inc, Plattsburg, MO - 64477,					Job Reference (optional)

8.730 s Dec 5 2024 MiTek Industries, Inc. Fri Dec 20 16:36:25 2024 Page 1

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Scale = 1:37.5



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.12	Vert(LL)	-0.00	M	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.06	Vert(TL)	-0.00	M	n/r	120		
BCLL 10.0 *	Rep Stress Incr	YES	WB 0.03	Horz(TL)	0.00	L	n/a	n/a		
BCDL 10.0	Code IBC2006/TPI2002		Matrix-S						Weight: 94 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 21-0-0.
(lb) - Max Horz B=-33(LC 7)
Max Uplift All uplift 100 lb or less at joint(s) B, T, U, V, Q, P, O, L
Max Grav All reactions 250 lb or less at joint(s) B, R, T, U, V, W, Q, P, O, N, L


FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-05; 90mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (all heights) and C-C Corner(3) -1-2-8 to 1-9-8, Exterior(2) 1-9-8 to 10-6-0, Corner(3) 10-6-0 to 13-6-0, Exterior(2) 13-6-0 to 22-2-8 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
- 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.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * 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, with BCDL = 10.0psf.
- One RT7 MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) B, T, U, V, Q, P, O, and L. This connection is for uplift only and does not consider lateral forces.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) L.



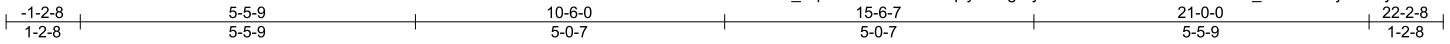
December 26, 2024

<p>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.</p> <p>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)</p>	 <p>16023 Swingley Ridge Rd. Chesterfield, MO 63017 314.434.1200 / MiTek-US.com</p>
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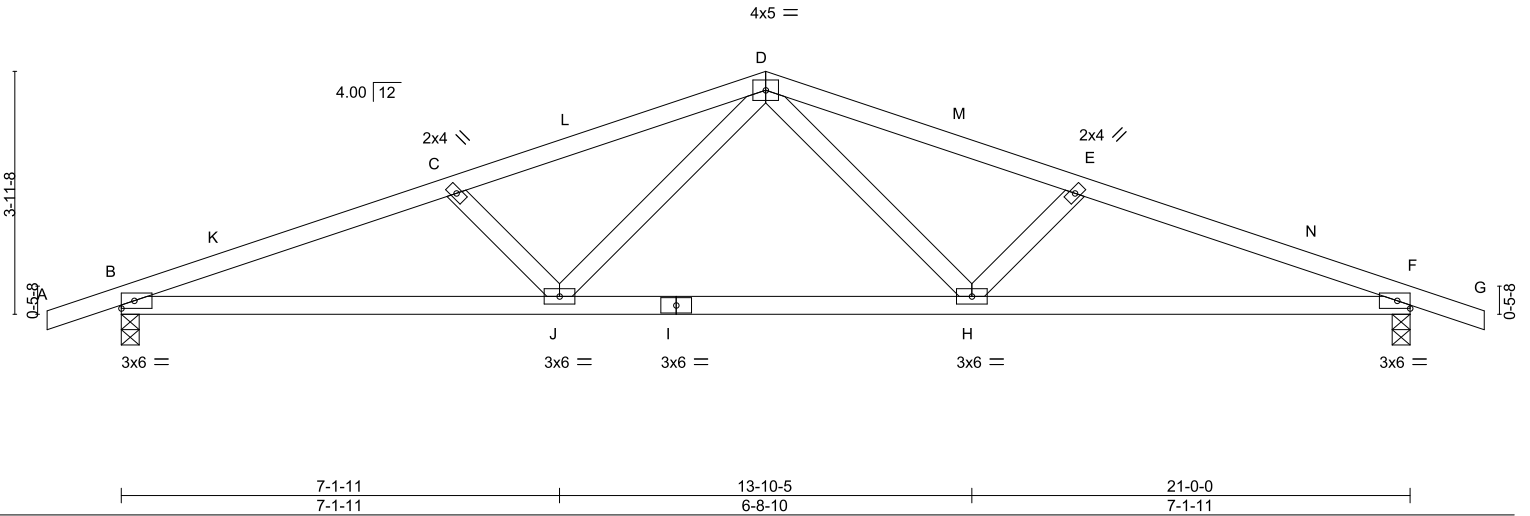
Job 250110	Truss A2	Truss Type Common	Qty 14	Ply 1	84 LUMBER / REUNION @ BLACKWELL / MAINTENANCE GARAGE 170365482
Heartland Truss, Inc., Plattsburg, MO - 64477,					Job Reference (optional)

8.730 s Dec 5 2024 MiTek Industries, Inc. Fri Dec 20 16:36:26 2024 Page 1

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Scale = 1:37.5



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC 0.35	Vert(LL)	-0.14	F-H >999	360	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.79	Vert(TL)	-0.31	F-H >808	240		
BCLL 10.0 *	Rep Stress Incr	YES	WB 0.29	Horz(TL)	0.08	F n/a	n/a		
BCDL 10.0	Code IBC2006/TPI2002		Matrix-S	Wind(LL)	0.05	H-J >999	240		
								Weight: 90 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-6-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) B=0-3-8, F=0-3-8
Max Horz B=-33(LC 7)
Max Uplift B=-21(LC 9), F=-21(LC 9)
Max Grav B=1117(LC 1), F=1117(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD B-C=-2269/83, C-D=-2062/65, D-E=-2062/65, E-F=-2269/83
BOT CHORD B-J=-36/2093, H-J=0/1451, F-H=-40/2093
WEBS D-H=0/692, E-H=-297/95, D-J=0/692, C-J=-297/95

NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-05; 90mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (all heights) and C-C Exterior(2) -1-2-8 to 1-9-8, Interior(1) 1-9-8 to 10-6-0, Exterior(2) 10-6-0 to 13-6-0, Interior(1) 13-6-0 to 22-2-8 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
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) * 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, with BCDL = 10.0psf.
- 5) One RT7 MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) B and F. This connection is for uplift only and does not consider lateral forces.



December 26, 2024

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

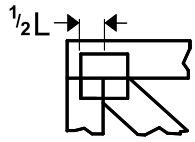
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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®

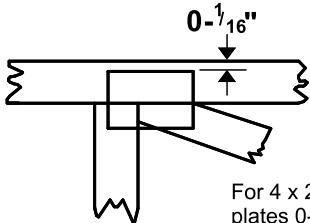
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

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.

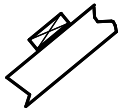
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

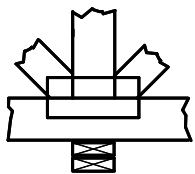
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

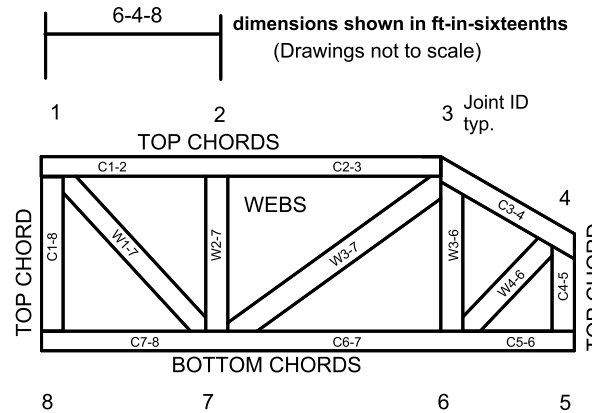


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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.

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MiTek Engineering Reference Sheet: MII-7473 rev. 1/2/2023

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/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.