

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

RE: 24479 - HARTZOG POOL HOUSE

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

Site Information:

Customer Info: HARTZOG POOL Project Name: 000 Model: 000
Lot/Block: 000 Subdivision: 000
Address: 000, 000
City: 000 State: 000

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

Name: License #:
Address: State:
City:

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):

Design Code: **FRC2020/TPI2014** Design Program: MiTek 20/20 8.4
Wind Code: ASCE 7-16 Wind Speed: 140 mph
Roof Load: 37.0 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.

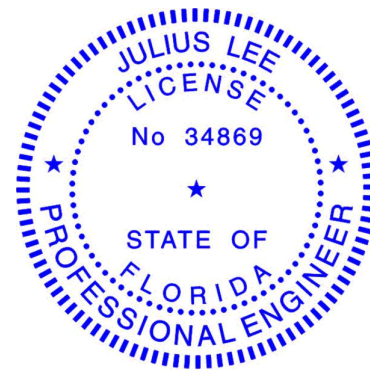
No.	Seal#	Truss Name	Date
1	T28580633	T1	8/19/22
2	T28580634	T2	8/19/22



This item has been electronically signed and sealed by Lee, Julius, 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 Duley Truss.

Truss Design Engineer's Name: Lee, Julius
My license renewal date for the state of Florida is February 28, 2023.



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

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.

August 22, 2022

Lee, Julius

1 of 1

Job	Truss	Truss Type	Qty	Ply	HARTZOG POOL HOUSE
24479	T1	Common Supported Gable	2	1	T28580633
Job Reference (optional)					

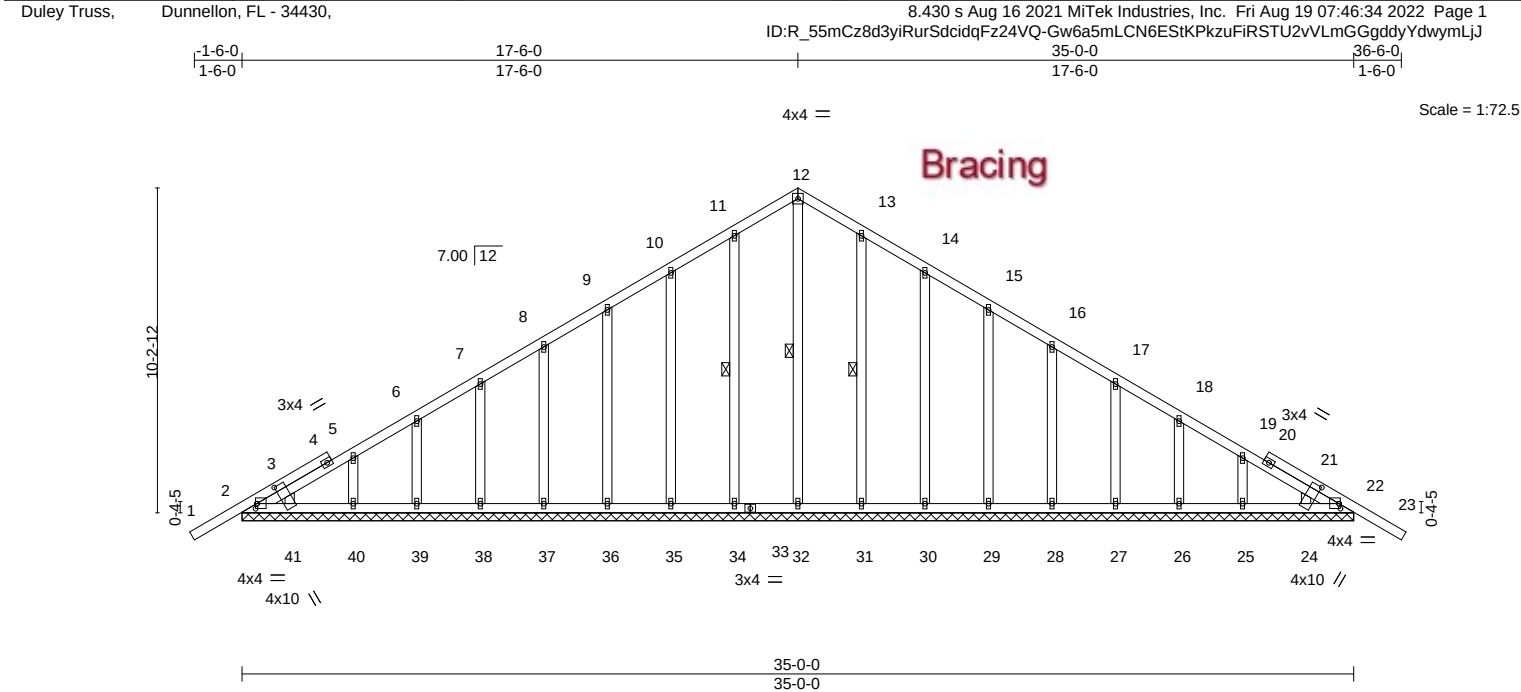


Plate Offsets (X,Y)--	[2:0-0-8,0-1-14], [22:0-0-8,0-1-14], [24:0-2-0,0-8-12], [41:0-2-0,0-8-12]			
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.
TCLL 20.0	Plate Grip DOL	1.25	TC 0.19	in (loc) l/defl L/d
TCDL 7.0	Lumber DOL	1.25	BC 0.06	Vert(LL) -0.01 23 n/r 120
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.14	Vert(CT) -0.01 23 n/r 120
BCDL 10.0	Code FRC2020/TPI2014		Matrix-S	Horz(CT) 0.01 22 n/a n/a
PLATES MT20 GRIP 244/190 Weight: 245 lb FT = 20%				

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2D	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SP No.2D	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.3	WEBS 1 Row at midpt 12-32, 11-34, 13-31

REACTIONS.	All bearings 35-0-0.
(lb) - Max Horz	2=-356(LC 10)
Max Uplift	All uplift 100 lb or less at joint(s) 32, 34, 35, 36, 37, 38, 39, 40, 41, 31, 30, 29, 28, 27, 26, 25, 24 except 2=-126(LC 12), 22=-126(LC 12)
Max Grav	All reactions 250 lb or less at joint(s) 2, 22, 34, 35, 36, 37, 38, 39, 40, 41, 31, 30, 29, 28, 27, 26, 25, 24 except 32=258(LC 12)

FORCES.	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	10-11=-189/325, 11-12=-229/393, 12-13=-229/393, 13-14=-189/325
BOT CHORD	2-41=-135/268, 40-41=-135/268, 39-40=-135/268, 38-39=-135/268, 37-38=-135/268, 36-37=-135/268, 35-36=-135/268, 34-35=-135/268, 32-34=-135/268, 31-32=-135/268, 30-31=-135/268, 29-30=-135/268, 28-29=-135/268, 27-28=-135/268, 26-27=-135/268, 25-26=-135/268, 24-25=-135/268, 22-24=-135/268
WEBS	12-32=-279/123

NOTES-	
1) Unbalanced roof live loads have been considered for this design.	
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; B=45ft; L=35ft; eave=2ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (directional) and C-C Corner(3E) -1-6-14 to 1-11-2, Exterior(2N) 1-11-2 to 17-6-0, Corner(3R) 17-6-0 to 21-0-0, Exterior(2N) 21-0-0 to 36-6-14 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) 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) All plates are 1.5x4 MT20 unless otherwise indicated.	
5) Gable requires continuous bottom chord bearing.	
6) Gable studs spaced at 2-0-0 oc.	
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.	
8) * 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.	
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 32, 34, 35, 36, 37, 38, 39, 40, 41, 31, 30, 29, 28, 27, 26, 25, 24 except (jt=lb) 2=126, 22=126.	

This item has been electronically signed and sealed by Lee, Julius, 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.

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

August 22,2022

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	HARTZOG POOL HOUSE	T28580634
24479	T2	Common	17	1	Job Reference (optional)	

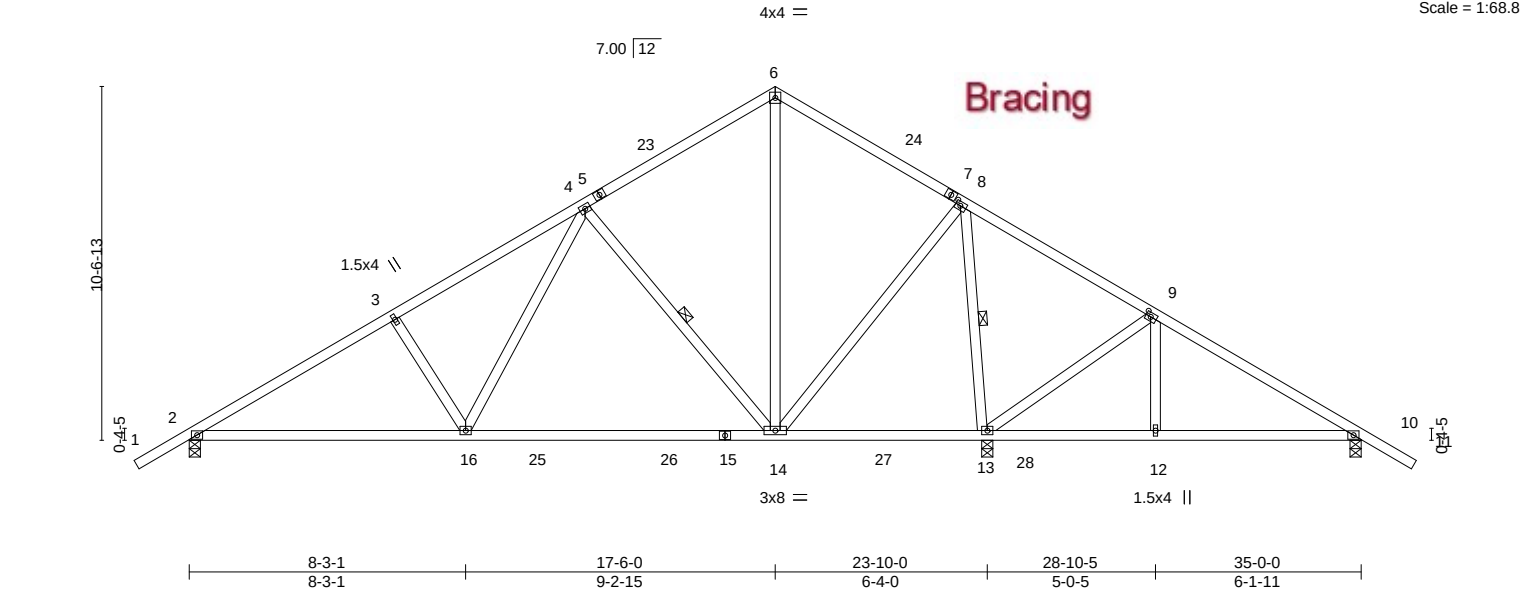
Duley Truss, Dunnellon, FL - 34430,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Aug 19 07:46:36 2022 Page 1

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Scale = 1:68.8



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.25	TC 0.34	Vert(LL)	-0.23 14-16	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.78	Vert(CT)	-0.35 14-16	>802	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.44	Horz(CT)	0.02 13	n/a	n/a		
BCDL 10.0	Code FRC2020/TPI2014		Matrix-MS					Weight: 199 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SP No.2D
BOT CHORD 2x4 SP No.2D
WEBS 2x4 SP No.3

BRACING-

TOP CHORD Structural wood sheathing directly applied or 4-11-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 4-14, 8-13

REACTIONS.

(size) 2=0-4-0, 13=0-4-0, 10=0-4-0
Max Horz 2=-367(LC 10)
Max Uplift 2=-397(LC 12), 13=-550(LC 12), 10=-202(LC 12)
Max Grav 2=1033(LC 17), 13=1744(LC 19), 10=417(LC 18)

FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1401/471, 3-4=-1283/490, 4-6=-461/336, 6-8=-454/341, 8-9=-28/449,
9-10=-308/89
BOT CHORD 2-16=-259/1427, 14-16=-64/916, 13-14=-305/278
WEBS 3-16=-330/273, 4-16=-149/741, 4-14=-726/388, 8-14=-125/968, 8-13=-1323/499,
9-13=-583/259

NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; B=45ft; L=35ft; eave=5ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (directional) and C-C Exterior(2E) -1-6-14 to 1-11-2, Interior(1) 1-11-2 to 17-6-0, Exterior(2R) 17-6-0 to 21-0-0, Interior(1) 21-0-0 to 36-6-14 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) All plates are 3x4 MT20 unless otherwise indicated.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) * 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.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=397, 13=550, 10=202.

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16023 Swingley Ridge Rd. Chesterfield, MO 63017
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August 22,2022

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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

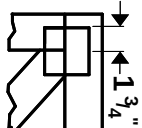
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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



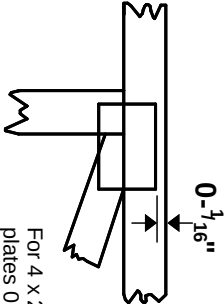
16023 Swingley Ridge Rd
Chesterfield, MO 63017

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- $\frac{3}{16}$ " from outside edge of truss.

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

*** Plate location details available in MITek 20120 software or upon request.**

PLATE SIZE

4 X 4

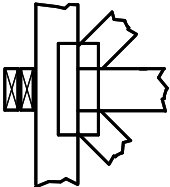
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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



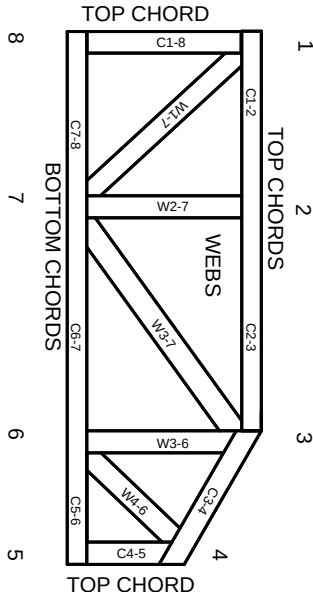
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TP1.1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

6-4-8 dimensions shown in ft-in-sixteenths (Drawings not to scale)



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-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

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 Engineering Reference Sheet: MII-7473 rev. 5/19/2020



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.