



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

RE: 3666367 - IC CONST. - KNOLL GARAGE

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

Site Information:

Customer Info: IC CONSTRUCTION Project Name: Knoll Garage Model: Custom
Lot/Block: N/A Subdivision: THE OAKS
Address: 523 SW Upstage Glen, 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: 37.0 psf Floor Load: N/A psf

This package includes 6 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.

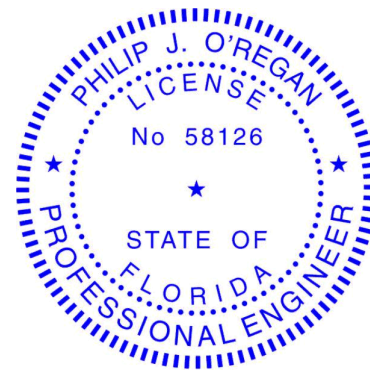
No.	Seal#	Truss Name	Date
1	T31723435	T01	10/3/23
2	T31723436	T01G	10/3/23
3	T31723437	T02	10/3/23
4	T31723438	T03	10/3/23
5	T31723439	T03G	10/3/23
6	T31723440	T04	10/3/23

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: _____

October 3, 2023

ORegan, Philip

1 of 1

Job	Truss	Truss Type	Qty	Ply	IC CONST. - KNOLL GARAGE	T31723435
3666367	T01	COMMON	11	1	Job Reference (optional)	

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

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ID:geJYtbqs?yyG6vuh8bABT6z81v?-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

22-11-1
28-3-8
34-0-0
35-6-0

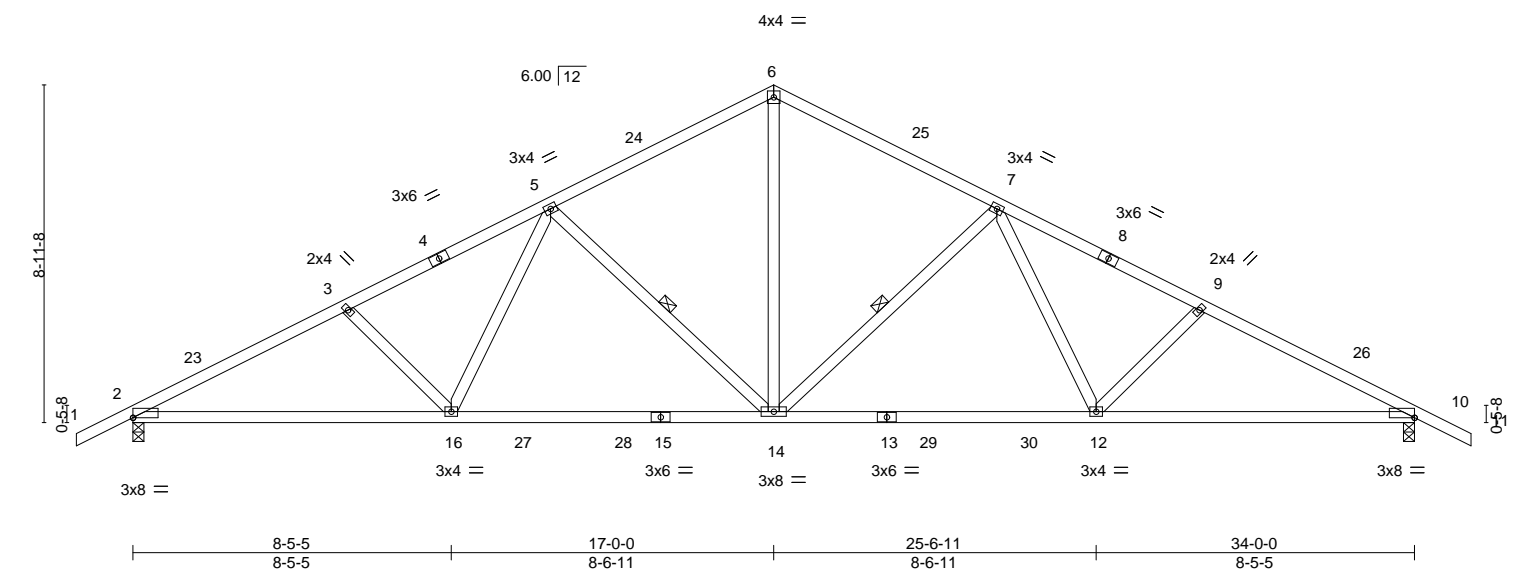
-1-6-0
5-8-8
11-0-15
17-0-0

1-6-0
5-8-8
5-4-8
5-11-1

22-11-1
28-3-8
34-0-0
35-6-0

5-11-1
5-4-8
5-8-8
1-6-0

Scale = 1:61.1



LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL	20.0	Plate Grip DOL	1.25	TC	0.36	Vert(LL)	-0.25 12-14 >999	MT20	244/190		
TCDL	7.0	Lumber DOL	1.25	BC	0.92	Vert(CT)	-0.42 12-14 >978				
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.44	Horz(CT)	0.10 10 n/a n/a				
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MS							
								Weight: 178 lb		FT = 20%	

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 3-7-1 oc purlins.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS	2x4 SP No.3	WEBS	1 Row at midpt 7-14, 5-14

REACTIONS. (size) 2=0-3-8, 10=0-3-8
Max Horz 2=138(LC 12)
Max Uplift 2=-293(LC 12), 10=-293(LC 13)
Max Grav 2=1449(LC 2), 10=1449(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2505/472, 3-5=-2340/443, 5-6=-1636/378, 6-7=-1636/378, 7-9=-2340/444, 9-10=-2505/472
BOT CHORD 2-16=-477/2191, 14-16=-331/1835, 12-14=-236/1835, 10-12=-339/2191
WEBS 6-14=-195/1166, 7-14=-604/254, 7-12=-73/516, 9-12=-254/165, 5-14=-604/254, 5-16=-73/516, 3-16=-254/165

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-6-0 to 1-10-13, Interior(1) 1-10-13 to 17-0-0, Exterior(2R) 17-0-0 to 20-4-13, Interior(1) 20-4-13 to 35-6-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
 - 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.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 293 lb uplift at joint 2 and 293 lb uplift at joint 10.

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.

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

October 3,2023

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)

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

Job	Truss	Truss Type	Qty	Ply	IC CONST. - KNOLL GARAGE	T31723436
3666367	T01G	COMMON SUPPORTED GAB	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 3 05:32:34 2023 Page 1
ID:geJYtbqs?yyG6vuh8bABT6z81v?-RIC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f 34-0-0 35-6-0 1-6-0

Scale = 1:62.6

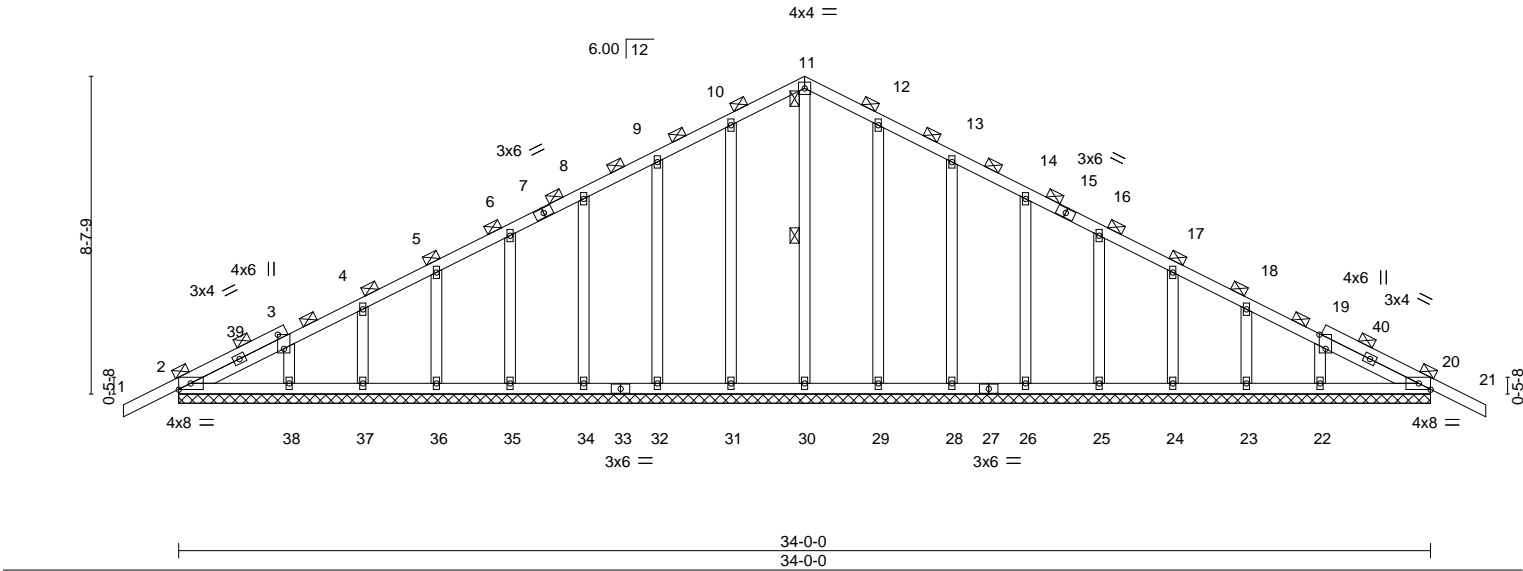


Plate Offsets (X,Y)--		[3:0-4-10,0-2-0], [19:0-4-10,0-2-0]	
LOADING (psf)	SPACING-	2-0-0	CSI.
TCLL 20.0	Plate Grip DOL	1.25	TC 0.13
TCDL 7.0	Lumber DOL	1.25	BC 0.06
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.12
BCDL 10.0	Code	FBC2020/TPI2014	Matrix-S
DEFL.	in (loc)	I/defl	L/d
Vert(LL)	-0.01 21	n/r	120
Vert(CT)	-0.01 21	n/r	120
Horz(CT)	0.01 20	n/a	n/a
PLATES	GRIP		
MT20	244/190		
Weight: 218 lb		FT = 20%	

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD 2-0-0 oc purlins (6-0-0 max.).
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.3	WEBS 1 Row at midpt 11-30

REACTIONS.	All bearings 34-0-0.
(lb) - Max Horz	2=133(LC 12)
Max Uplift	All uplift 100 lb or less at joint(s) 2, 31, 32, 34, 35, 36, 37, 38, 29, 28, 26, 25, 24, 23, 22, 20
Max Grav	All reactions 250 lb or less at joint(s) 2, 30, 31, 32, 34, 35, 36, 37, 38, 29, 28, 26, 25, 24, 23, 22, 20

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 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-6-0 to 1-10-13, Exterior(2N) 1-10-13 to 17-0-0, Corner(3R) 17-0-0 to 20-4-13, Exterior(2N) 20-4-13 to 35-6-0 zone;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.
 - Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
 - 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.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 31, 32, 34, 35, 36, 37, 38, 29, 28, 26, 25, 24, 23, 22, 20.
 - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

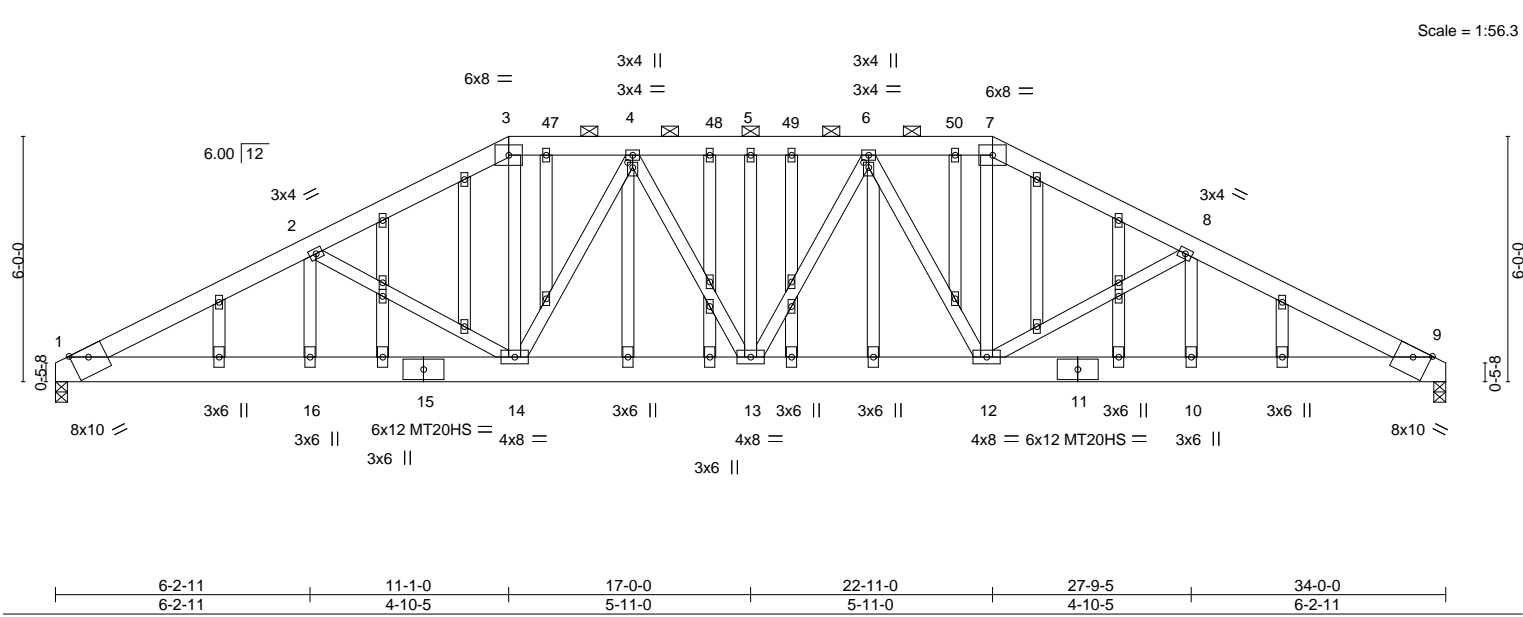
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Philip J. O'Regan PE No.58126
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date:

October 3,2023

Job	Truss	Truss Type	Qty	Ply	IC CONST. - KNOLL GARAGE	T31723437
3666367	T02	GABLE	1	2	Job Reference (optional)	

Builders FirstSource (Lake City,FL),		Lake City, FL - 32055,		8.630 s Aug 30 2023 MiTek Industries, Inc. Tue Oct 3 05:32:37 2023 Page 1					
				ID:geJYtbqs?yyG6vuh8bABT6z81v?-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f					
6-2-11	11-1-0	14-1-6	17-0-0	19-10-10	22-11-0	27-9-5	34-0-0		
6-2-11	4-10-5	3-0-6	2-10-10	2-10-10	3-0-6	4-10-5	6-2-11		



LOADING (psf)	SPACING-	CSL	DEFL.	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.25	TC 0.80	in (loc) l/defl L/d	MT20	244/190
TCDL 7.0	Lumber DOL 1.25	BC 0.49	Vert(LL) -0.22 13 >999 240	MT20HS	187/143
BCLL 0.0 *	Rep Stress Incr NO	WB 0.66	Vert(CT) -0.41 13 >978 180		
BCDL 10.0	Code FBC2020/TP12014	Matrix-MS	Horz(CT) 0.11 9 n/a n/a		
				Weight: 600 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.2	TOP CHORD Structural wood sheathing directly applied or 2-11-10 oc purlins, except
BOT CHORD 2x8 SP 2400F 2.0E	2-0-0 oc purlins (4-5-12 max.): 3-7.
WEBS 2x4 SP No.3	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.3	

REACTIONS.	(size) 1=0-3-8 (req. 0-4-8), 9=0-3-8 (req. 0-4-8)
	Max Horz 1=82(LC 8)
	Max Uplift 1=1838(LC 8), 9=1838(LC 9)
	Max Grav 1=7646(LC 1), 9=7646(LC 1)

FORCES.	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	1-2=-14372/3377, 2-3=-11593/2652, 3-4=-9980/2322, 4-5=-11089/2477, 5-6=-11089/2477, 6-7=-9980/2321, 7-8=-11593/2651, 8-9=-14372/3377
BOT CHORD	1-16=-2954/12441, 14-16=-2954/12441, 13-14=-2345/10793, 12-13=-2296/10793, 10-12=-2872/12442, 9-10=-2872/12442
WEBS	2-16=-112/425, 2-14=-2985/974, 3-14=-737/3446, 4-14=-1836/393, 4-13=-158/713, 5-13=-1073/236, 6-13=-158/712, 6-12=-1835/393, 7-12=-737/3446, 8-12=-2985/975, 8-10=-113/425

NOTES-	
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows: Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc. Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc. Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.	
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.	
3) Unbalanced roof live loads have been considered for this design.	
4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone; 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/TP1 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) Provide adequate drainage to prevent water ponding.	
8) All plates are MT20 plates unless otherwise indicated.	
9) All plates are 2x4 MT20 unless otherwise indicated.	
10) Gable studs spaced at 2-0-0 oc.	
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.	
12) * 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.	

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.

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Date:

October 3,2023

Continuation of 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/TP1 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 CONST. - KNOLL GARAGE	T31723437
3666367	T02	GABLE	1	2	Job Reference (optional)	

Builders FirstSource (Lake City,FL),
Lake City, FL - 32055,
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Page 2
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- NOTES-**
- 14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=1838, 9=1838.
 - 15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
 - 16) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 609 lb down and 135 lb up at 12-0-12, 609 lb down and 135 lb up at 14-0-12, 609 lb down and 135 lb up at 16-0-12, 609 lb down and 135 lb up at 17-11-4, and 609 lb down and 135 lb up at 19-11-4, and 609 lb down and 135 lb up at 21-11-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
 - 17) Studding applied to ply: 1(Front)

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25

Uniform Loads (plf)

Vert: 3-7=-54, 1-9=-35(F=-15)

Concentrated Loads (lb)

Vert: 4=-609(B) 6=-609(B) 47=-609(B) 48=-609(B) 49=-609(B) 50=-609(B)

Trapezoidal Loads (plf)

Vert: 1=-494(F=-90)-to-3=-404, 7=-404-to-9=-494(F=-90)

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MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
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Job	Truss	Truss Type	Qty	Ply	IC CONST. - KNOLL GARAGE	T31723438
3666367	T03	Common	13	1	Job Reference (optional)	

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

8.630 s Aug 30 2023 MiTek Industries, Inc. Tue Oct 3 05:32:37 2023 Page 1

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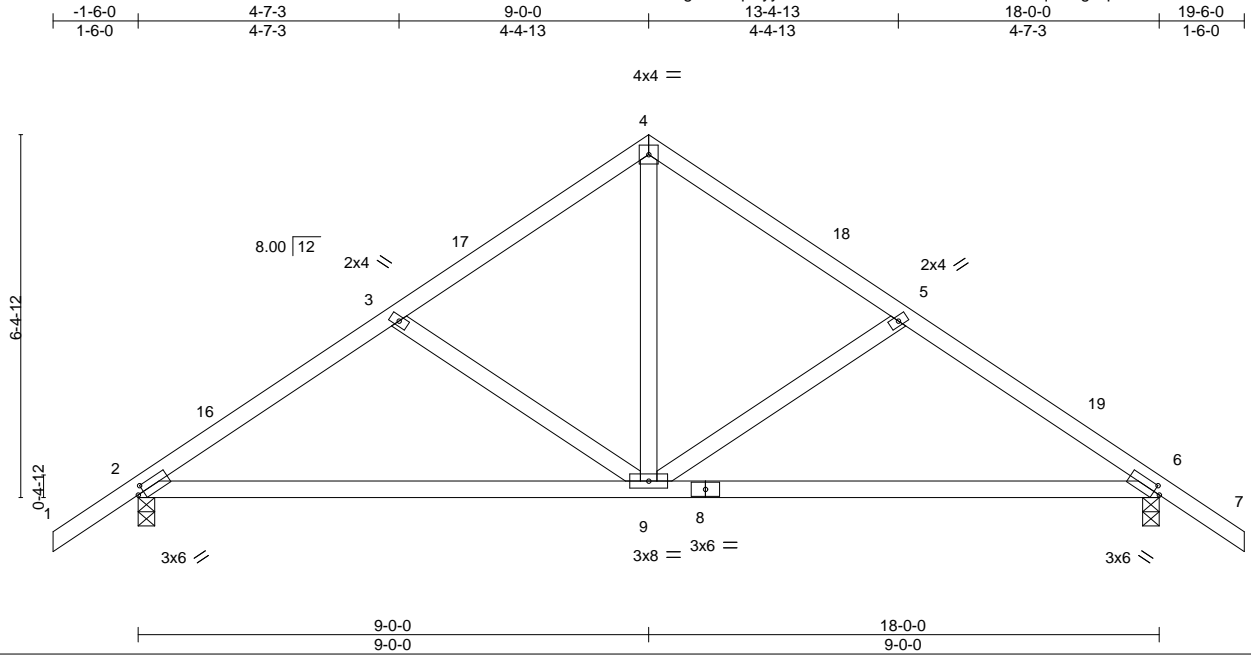


Plate Offsets (X,Y)-- [2:0-1-5,0-1-8], [6:0-1-5,0-1-8]

LOADING (psf)	SPACING-	CSL.	DEFL.	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.33	Vert(LL)	-0.11	9-12	>999	MT20	244/190
TCDL 7.0	Plate Grip DOL 1.25	BC 0.71	Vert(CT)	-0.22	9-15	>992		
BCLL 0.0 *	Lumber DOL 1.25	WB 0.19	Horz(CT)	0.02	6	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-MS					Weight: 89 lb	FT = 20%
	Code FBC2020/TPI2014							

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 6'-0" oc purlins.
BOT CHORD Rigid ceiling directly applied or 10'-0" oc bracing.

REACTIONS.

(size) 2=0-3-8, 6=0-3-8
Max Horz 2=-154(LC 10)
Max Uplift 2=-164(LC 12), 6=-164(LC 13)
Max Grav 2=747(LC 1), 6=747(LC 1)

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

TOP CHORD 2-3=-901/192, 3-4=-695/169, 4-5=-695/169, 5-6=-901/192
BOT CHORD 2-9=-172/739, 6-9=-89/723
WEBS 4-9=-83/507, 5-9=-272/173, 3-9=-271/173

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior(1) 1-6-0 to 9-0-0, Exterior(2R) 9-0-0 to 12-0-0, Interior(1) 12-0-0 to 19-6-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 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" tall by 2'-0" wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=164, 6=164.

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October 3,2023

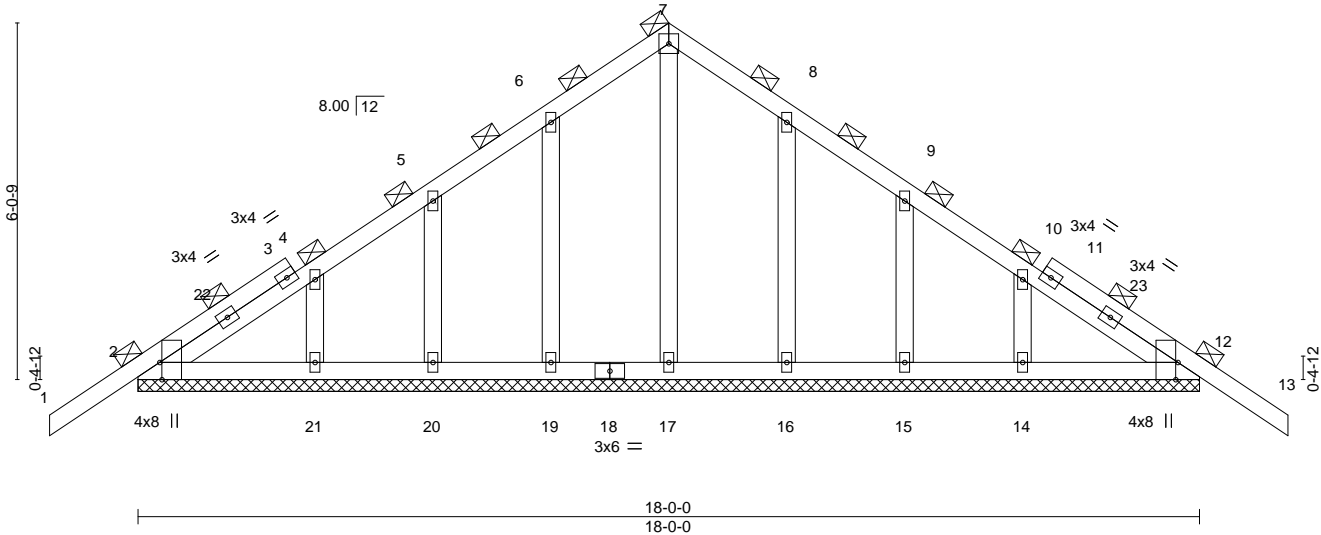
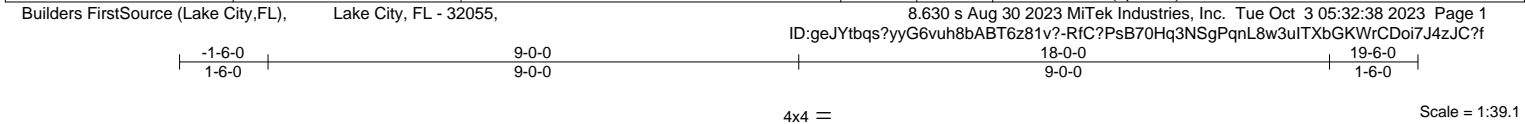
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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

Job	Truss	Truss Type	Qty	Ply	IC CONST. - KNOLL GARAGE	T31723439
3666367	T03G	Common Supported Gable	2	1	Job Reference (optional)	



LOADING (psf)		SPACING-		CSL		DEFL.		PLATES		GRIP	
TCLL	20.0	Plate Grip DOL	1.25	TC	0.14	Vert(LL)	-0.01 13 n/r 120	MT20		244/190	
TCDL	7.0	Lumber DOL	1.25	BC	0.06	Vert(CT)	-0.01 13 n/r 120				
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00 12 n/a n/a				
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-S							
								Weight: 106 lb FT = 20%			

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	2-0-0 oc purlins (6-0-0 max.).
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS	2x4 SP No.3		

REACTIONS. All bearings 18-0-0.
 (lb) - Max Horz 2=-146(LC 10)
 Max Uplift All uplift 100 lb or less at joint(s) 2, 12, 19, 20, 21, 16, 15, 14
 Max Grav All reactions 250 lb or less at joint(s) 2, 12, 17, 19, 20, 21, 16, 15, 14

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 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-6-0 to 1-6-0, Exterior(2N) 1-6-0 to 9-0-0, Corner(3R) 9-0-0 to 12-0-0, Exterior(2N) 12-0-0 to 19-6-0 zone; 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.
 - Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
 - 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.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 12, 19, 20, 21, 16, 15, 14.
 - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

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.

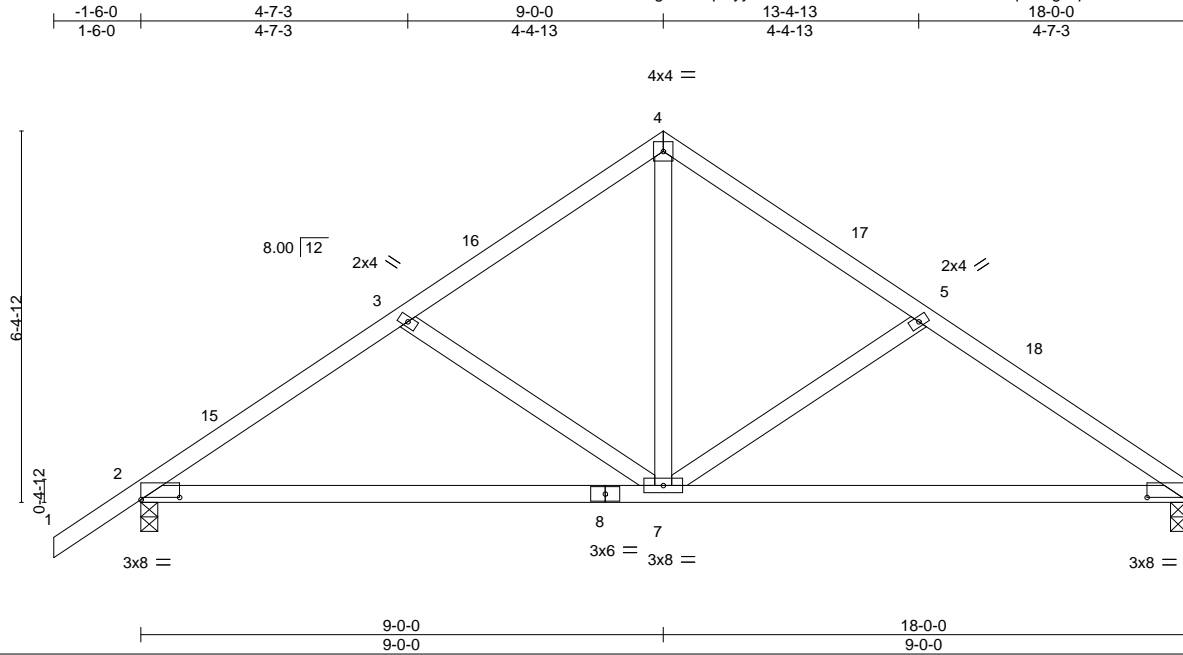
Philip J. O'Regan PE No.58126
 MiTek Inc. DBA MiTek USA FL Cert 6634
 16023 Swingley Ridge Rd. Chesterfield, MO 63017
 Date:

October 3,2023

Job	Truss	Truss Type	Qty	Ply	IC CONST. - KNOLL GARAGE	T31723440
3666367	T04	Common	6	1	Job Reference (optional)	

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

8.630 s Aug 30 2023 MiTek Industries, Inc. Tue Oct 3 05:32:39 2023 Page 1
ID:geJYtbqs?yyG6vuh8bABT6z81v?-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:39.7

Plate Offsets (X,Y)-- [2:0-8-0,0-0-7], [6:0-8-0,0-0-8]

LOADING (psf)	SPACING-		CSL	DEFL.	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.25	TC 0.36	Vert(LL)	-0.11	7-11	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.72	Vert(CT)	-0.22	7-11	>971	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.19	Horz(CT)	0.02	6	n/a	n/a		
BCDL 10.0	Code	FBC2020/TPI2014	Matrix-MS						Weight: 86 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 5-10-4 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.

(size) 6=0-3-2, 2=0-3-8
Max Horz 2=147(LC 9)
Max Uplift 6=131(LC 13), 2=165(LC 12)
Max Grav 6=663(LC 1), 2=750(LC 1)

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

TOP CHORD 2-3=-907/198, 3-4=-702/172, 4-5=-703/177, 5-6=-913/205
BOT CHORD 2-7=-187/731, 6-7=-121/738
WEBS 4-7=-91/510, 5-7=-283/181, 3-7=-271/173

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior(1) 1-6-0 to 9-0-0, Exterior(2R) 9-0-0 to 12-0-0, Interior(1) 12-0-0 to 18-0-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 6=131, 2=165.

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.

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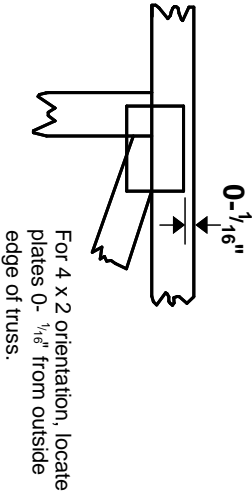
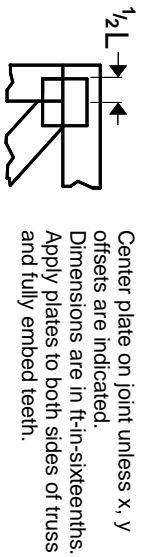
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Symbols

PLATE LOCATION AND ORIENTATION



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

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

PLATE SIZE

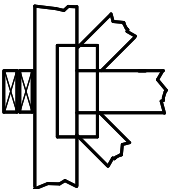
4 X 4
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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.

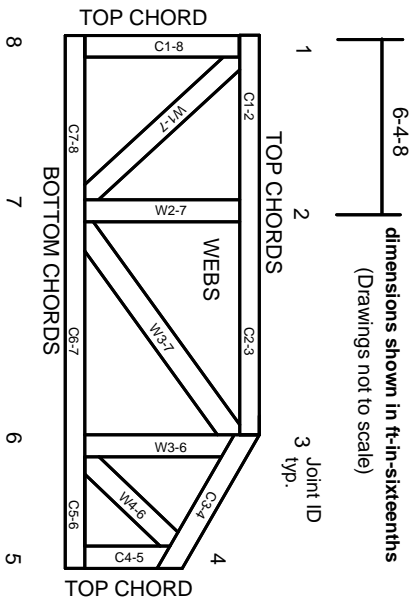
BEARING



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/TP1: 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/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. 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/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.