



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

RE: 3250262 - GIEGEIG CONST. - LOT 29 CW

**MiTek USA, Inc.**

16023 Swingley Ridge Rd  
Chesterfield, MO 63017

**Site Information:**

Customer Info: GIEBEIG CONST. Project Name: Spec Hse Model: St. Johns Modified  
Lot/Block: 29 Subdivision: Crosswinds  
Address: TBD SW Chesterfield Circle, TBD  
City: Columbia City State: FL

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

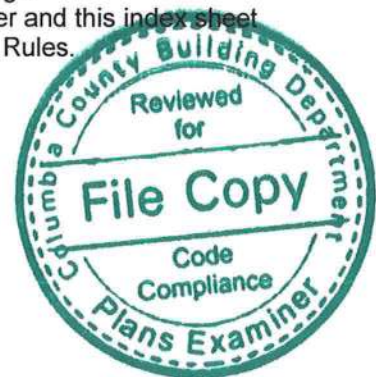
Name: License #:  
Address:  
City: State:

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

Design Code: FBC2020/TPI2014 Design Program: MiTek 20/20 8.5  
Wind Code: ASCE 7-16 Wind Speed: 130 mph  
Roof Load: 37.0 psf Floor Load: N/A psf

This package includes 25 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	No.	Seal#	Truss Name	Date
1	T28368025	CJ01	7/27/22	15	T28368039	T09	7/27/22
2	T28368026	CJ03	7/27/22	16	T28368040	T10	7/27/22
3	T28368027	CJ05	7/27/22	17	T28368041	T11	7/27/22
4	T28368028	EJ01	7/27/22	18	T28368042	T12	7/27/22
5	T28368029	HJ10	7/27/22	19	T28368043	T13	7/27/22
6	T28368030	T01	7/27/22	20	T28368044	T14	7/27/22
7	T28368031	T01G	7/27/22	21	T28368045	T15	7/27/22
8	T28368032	T02	7/27/22	22	T28368046	T16	7/27/22
9	T28368033	T03	7/27/22	23	T28368047	T17	7/27/22
10	T28368034	T04	7/27/22	24	T28368048	T17G	7/27/22
11	T28368035	T05	7/27/22	25	T28368049	T18	7/27/22
12	T28368036	T06	7/27/22				
13	T28368037	T07	7/27/22				
14	T28368038	T08	7/27/22				



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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: Magid, Michael  
My license renewal date for the state of Florida is February 28, 2023.

**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.



Michael S. Magid PE No. 53681  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

July 27, 2022

Magid, Michael

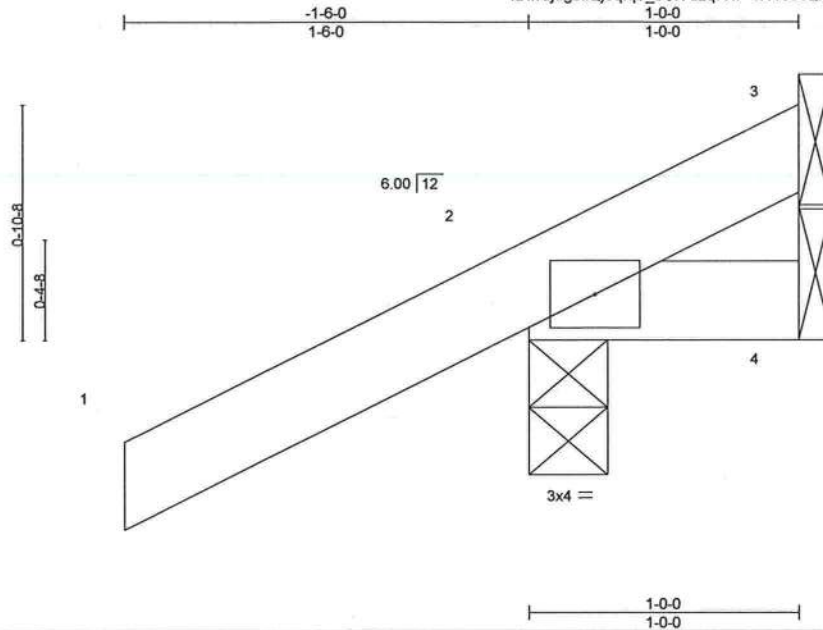
1 of 1



Job 3250262	Truss CJ01	Truss Type Jack-Open	Qty 10	Ply 1	GIEGEIG CONST. - LOT 29 CW T28368025
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Builders FirstSource (Lake City, FL), Lake City, FL - 32055,

8.530 s Dec 6 2021 MiTek Industries, Inc. Wed Jul 27 06:53:04 2022 Page 1  
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Scale = 1:8.2

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.25	TC 0.14	Vert(LL)	0.00	7	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.03	Vert(CT)	0.00	7	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL 10.0	Code FBC2020/TPI2014		Matrix-MP						Weight: 6 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 1-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
Max Horz 2=39(LC 12)  
Max Uplift 3=-6(LC 1), 2=-67(LC 12), 4=-19(LC 1)  
Max Grav 3=7(LC 16), 2=179(LC 1), 4=18(LC 16)

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

#### NOTES-

- 1) 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) zone; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 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.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2, 4.

This item has been electronically signed and sealed by Magid, Michael, 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:

July 27, 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 **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

**MiTek**

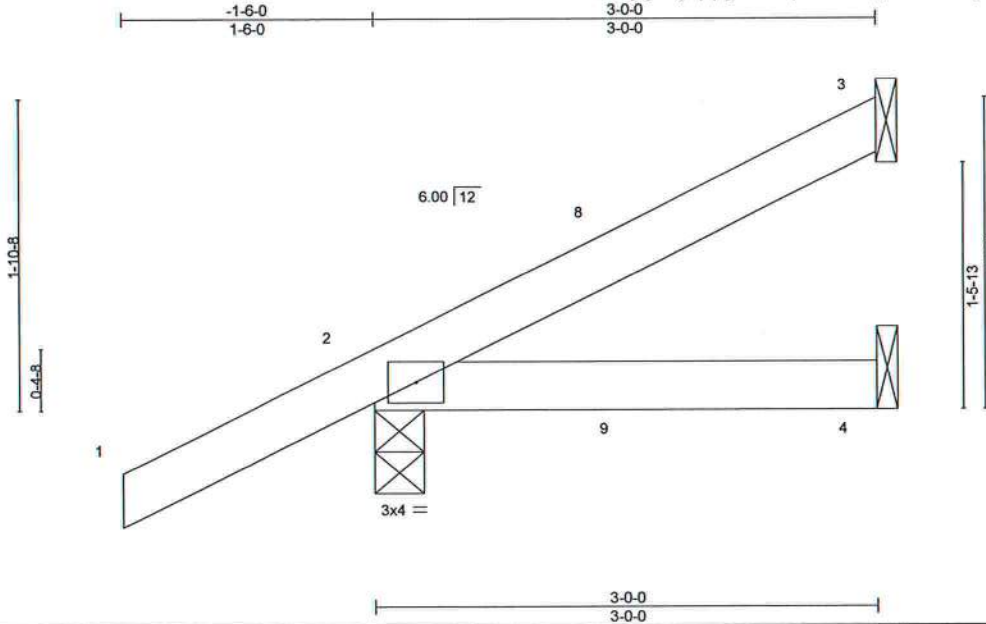
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Chesterfield, MO 63017



Job 3250262	Truss CJ03	Truss Type Jack-Open	Qty 10	Ply 1	GIEGEIG CONST. - LOT 29 CW T28368026
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8.530 s Dec 6 2021 MITek Industries, Inc. Wed Jul 27 06:53:05 2022 Page 1  
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Scale = 1:13.3

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 0.14	Vert(LL)	0.01	4-7	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.10	Vert(CT)	-0.01	4-7	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	-0.00	3	n/a	n/a		
BCDL 10.0	Code FBC2020/TPI2014		Matrix-MP						Weight: 12 lb	FT = 20%

#### LUMBER-

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2

#### BRACING-

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

#### REACTIONS.

(size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
Max Horz 2=73(LC 12)  
Max Uplift 3=-35(LC 12), 2=-58(LC 12), 4=-16(LC 9)  
Max Grav 3=60(LC 1), 2=210(LC 1), 4=50(LC 3)

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

#### NOTES-

- 1) 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 2-11-4 zone; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 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.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2, 4.

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Date:

July 27, 2022

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**MITek**

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Chesterfield, MO 63017

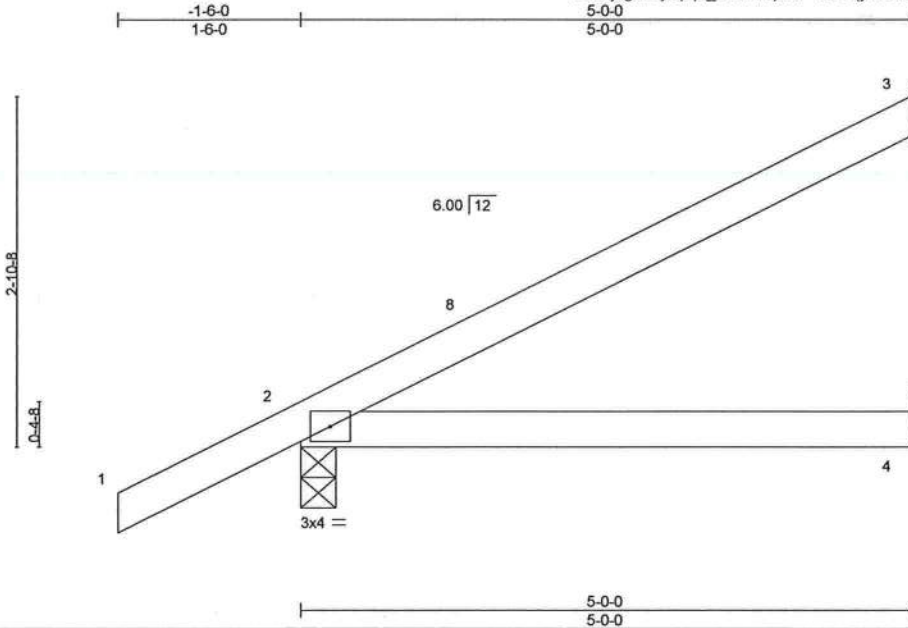


Job	Truss	Truss Type	Qty	Ply	GIEGEIG CONST. - LOT 29 CW	T28368027
3250262	CJ05	Jack-Open	10	1	Job Reference (optional)	

Builders FirstSource (Lake City, FL),

Lake City, FL - 32055,

8.530 s Dec 6 2021 MiTek Industries, Inc. Wed Jul 27 06:53:05 2022 Page 1  
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Scale = 1:18.2

LOADING (psf)	SPACING-		CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	2-0-0	TC 0.28	Vert(LL)	0.03	4-7	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.24	Vert(CT)	-0.05	4-7	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL 10.0	Code FBC2020/TPI2014		Matrix-MP						Weight: 18 lb	FT = 20%

#### LUMBER-

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS.

(size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
Max Horz 2=107(LC 12)  
Max Uplift 3=-67(LC 12), 2=-65(LC 12)  
Max Grav 3=113(LC 1), 2=276(LC 1), 4=88(LC 3)

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

#### NOTES-

- 1) 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 4-11-4 zone; porch right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 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.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.

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Date:

July 27, 2022

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	GIEGEIG CONST. - LOT 29 CW	T28368028
3250262	EJ01	Jack-Partial	23	1	Job Reference (optional)	

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8.530 s Dec 6 2021 MiTek Industries, Inc. Wed Jul 27 06:53:06 2022 Page 1  
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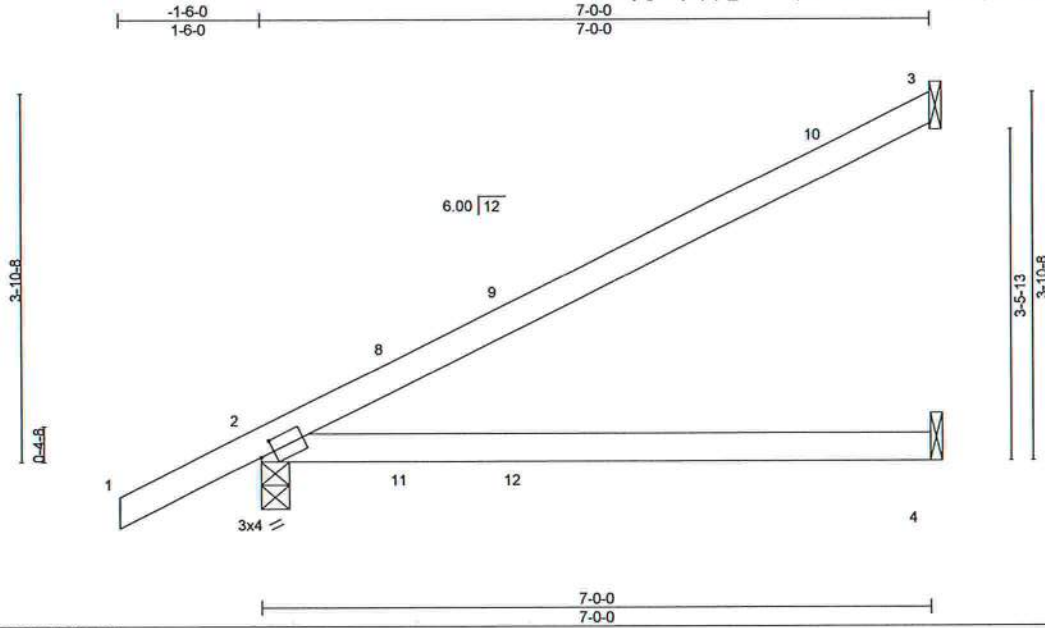


Plate Offsets (X,Y)-- [2-0-1-13,0-1-8]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.25	TC 0.70	Vert(LL)	0.30	4-7	>274	240	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.69	Vert(CT)	0.26	4-7	>323	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCDL 10.0	Code FBC2020/TPI2014		Matrix-MS						Weight: 25 lb	FT = 20%

#### LUMBER-

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2

#### 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.

(size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
Max Horz 2=137(LC 12)  
Max Uplift 3=-86(LC 12), 2=-76(LC 12), 4=-40(LC 9)  
Max Grav 3=164(LC 1), 2=346(LC 1), 4=126(LC 3)

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

#### NOTES-

- 1) 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 6-11-4 zone; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 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.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2, 4.

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Date:

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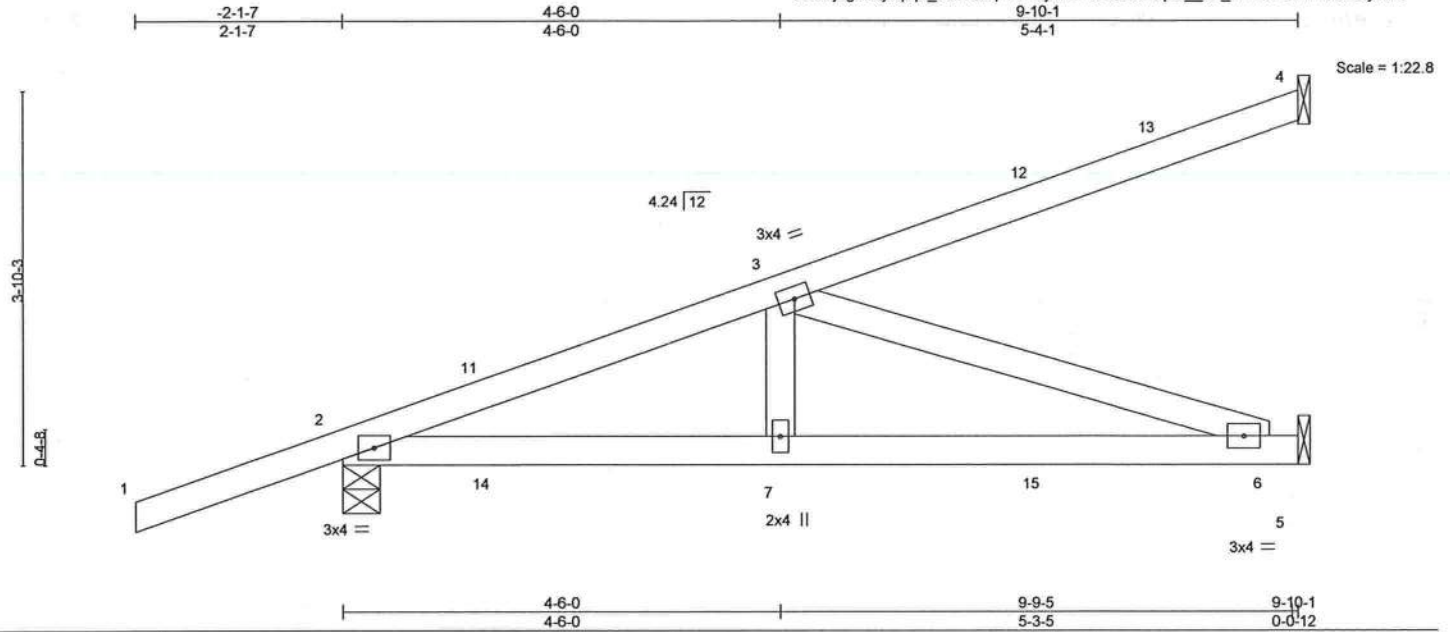
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Chesterfield, MO 63017



Job	Truss	Truss Type	Qty	Ply	GIEGEIG CONST. - LOT 29 CW	T28368029
3250262	HJ10	Diagonal Hip Girder	5	1		

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8.530 s Dec 6 2021 MiTek Industries, Inc. Wed Jul 27 06:53:07 2022 Page 1  
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LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.25	TC 0.58	Vert(LL) 0.06	6-7	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL 1.25	BC 0.62	Vert(CT) -0.12	6-7	>992	180		
BCDL 0.0 *	Rep Stress Incr NO	WB 0.44	Horz(CT) 0.01	5	n/a	n/a		
BCDL 10.0	Code FBC2020/TPI2014	Matrix-MS					Weight: 43 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 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 9-2-14 oc bracing.

#### REACTIONS.

(size) 4=Mechanical, 2=0-4-9, 5=Mechanical  
Max Horz 2=149(LC 22)  
Max Uplift 4=-77(LC 4), 2=-298(LC 4), 5=-142(LC 4)  
Max Grav 4=149(LC 1), 2=527(LC 1), 5=299(LC 1)

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

TOP CHORD 2-3=-799/340  
BOT CHORD 2-7=-395/729, 6-7=-395/729  
WEBS 3-7=-60/281, 3-6=-768/416

#### NOTES-

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCCL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone; porch left and right exposed; 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.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4 except (jt=lb) 2=298, 5=142.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 59 lb down and 73 lb up at 1-6-1, 59 lb down and 73 lb up at 1-6-1, 22 lb down and 38 lb up at 4-4-0, 22 lb down and 38 lb up at 4-4-0, and 43 lb down and 78 lb up at 7-1-15, and 43 lb down and 78 lb up at 7-1-15 on top chord, and 41 lb down and 43 lb up at 1-6-1, 41 lb down and 43 lb up at 1-6-1, 19 lb down and 24 lb up at 4-4-0, 19 lb down and 24 lb up at 4-4-0, and 64 lb down at 7-1-15, and 64 lb down at 7-1-15 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

#### LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25  
Uniform Loads (plf)  
Vert: 1-4=-54, 5-8=-20  
Concentrated Loads (lb)  
Vert: 7=-6(F=-3, B=-3) 12=-73(F=-36, B=-36) 15=-59(F=-29, B=-29)

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Date:

July 27, 2022



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16023 Swingley Ridge Rd  
Chesterfield, MO 63017



Job 3250262	Truss T01	Truss Type Common	Qty 9	Ply 1	GIEGEIG CONST. - LOT 29 CW Job Reference (optional)	T28368030
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Builders FirstSource (Lake City, FL), Lake City, FL - 32055,

8.530 s Dec 6 2021 MiTek Industries, Inc. Wed Jul 27 06:53:08 2022 Page 1  
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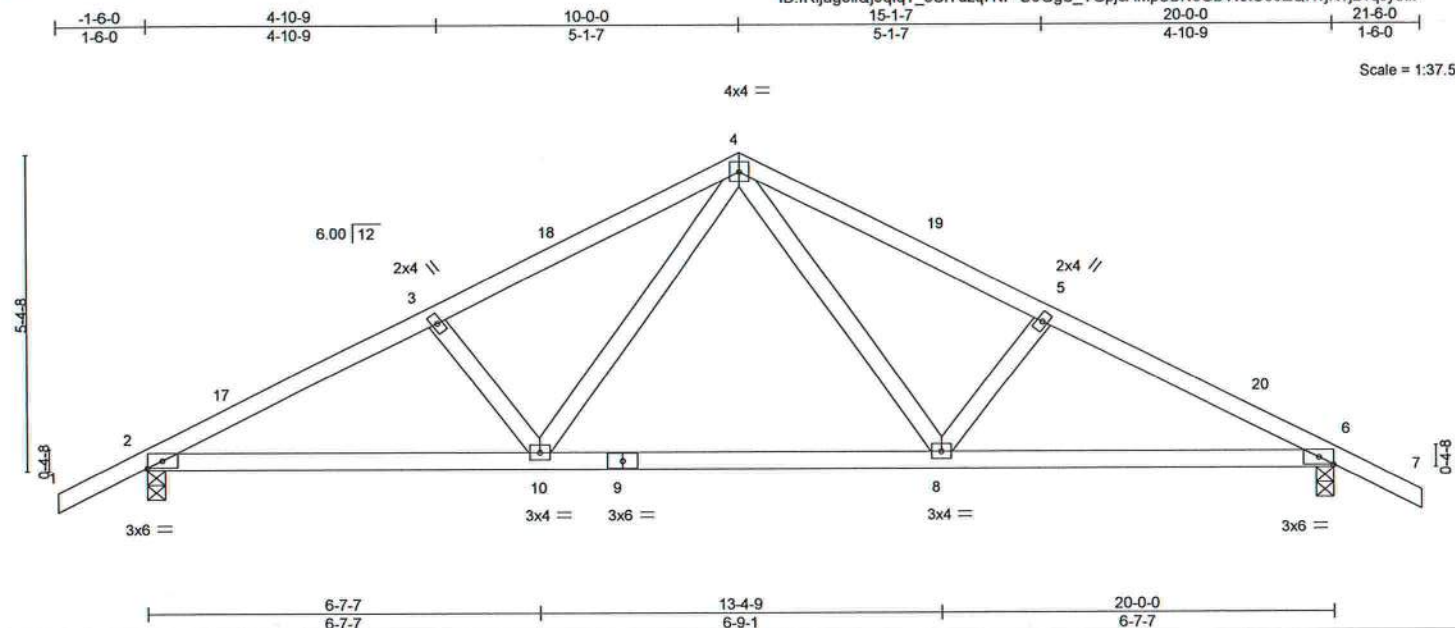


Plate Offsets (X,Y) - [6:0-2-15,Edge]		6-7-7		13-4-9		20-0-0	
LOADING (psf)		SPACING-		CSI.		DEFL.	
TCLL	20.0	Plate Grip DOL	1.25	TC	0.40	in (loc)	l/defl
TCDL	7.0	Lumber DOL	1.25	BC	0.93	Vert(LL)	L/d
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.26	Vert(CT)	
BCDL	10.0	Code FBC2020/TPI2014		Matrix-MS		Horz(CT)	
						PLATES	
						MT20	
						GRIP	
						244/190	
						Weight: 94 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 4-2-10 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 9-3-8 oc bracing.

#### REACTIONS.

(size) 2=0-3-8, 6=0-3-8  
Max Horz 2=85(LC 12)  
Max Uplift 2=241(LC 12), 6=241(LC 13)  
Max Grav 2=1024(LC 1), 6=1024(LC 1)

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

TOP CHORD 2-3=-1764/517, 3-4=-1619/510, 4-5=-1619/510, 5-6=-1764/517  
BOT CHORD 2-10=-378/1532, 8-10=-193/1019, 6-8=-392/1532  
WEBS 4-8=-194/680, 4-10=-194/680

#### 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 10-0-0, Exterior(2R) 10-0-0 to 13-0-0, Interior(1) 13-0-0 to 21-6-0 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=241, 6=241.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

#### LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25  
Uniform Loads (plf)  
Vert: 1-4=-54, 4-7=-54, 10-11=-20, 8-10=-80(F=-60), 8-14=-20

This item has been electronically signed and sealed by Magid, Michael, 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.

Michael S. Magid PE No.53681  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

July 27, 2022



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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	GIEGEIG CONST. - LOT 29 CW	T28368031
3250262	T01G	Common Supported Gable	1	1	Job Reference (optional)	

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

8.530 s Dec 6 2021 MiTek Industries, Inc. Wed Jul 27 06:53:09 2022 Page 1

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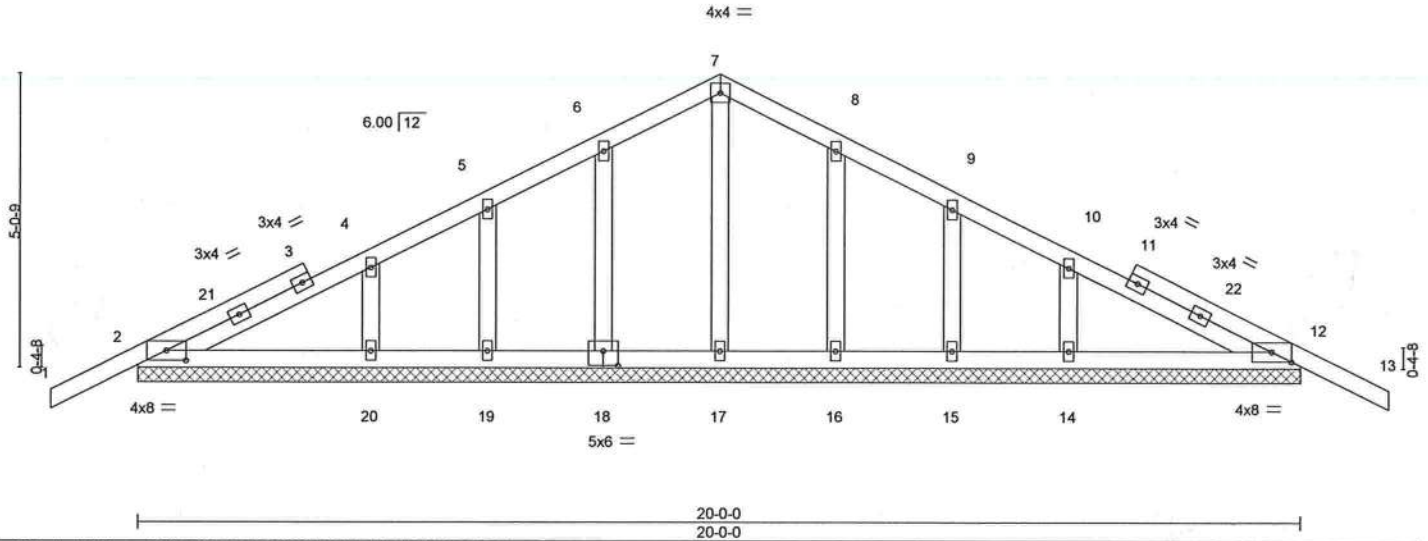


Plate Offsets (X,Y) =		[2-0-4-0,0-2-1], [12-0-4-0,0-2-1], [18-0-3-0,0-3-0]									
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL 20.0	Plate Grip DOL	1.25	TC 0.13	Vert(LL)	-0.00	13	n/r	120	MT20	244/190	
TCDL 7.0	Lumber DOL	1.25	BC 0.10	Vert(CT)	-0.00	13	n/r	120			
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.05	Horz(CT)	0.00	12	n/a	n/a			
BCDL 10.0	Code FBC2020/TPI2014		Matrix-S								
									Weight: 105 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 6-0-0 oc bracing.

**REACTIONS.** All bearings 20-0-0.  
(lb) - Max Horz 2=81(LC 17)  
Max Uplift All uplift 100 lb or less at joint(s) 2, 12, 18, 19, 20, 16, 15, 14  
Max Grav All reactions 250 lb or less at joint(s) 2, 12, 17, 18, 19, 20, 16, 15, 14

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

#### 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=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 10-0-0, Corner(3R) 10-0-0 to 13-0-0, Exterior(2N) 13-0-0 to 21-6-0 zone; 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) 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) All plates are 2x4 MT20 unless otherwise indicated.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 2-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* 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.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 12, 18, 19, 20, 16, 15, 14.
- 11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2, 12.

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16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

July 27, 2022

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

**MiTek**

16023 Swingley Ridge Rd  
Chesterfield, MO 63017



Job 3250262	Truss T02	Truss Type Half Hip Girder	Qty 1	Ply 1	GIEGEIG CONST. - LOT 29 CW Job Reference (optional)	T28368032
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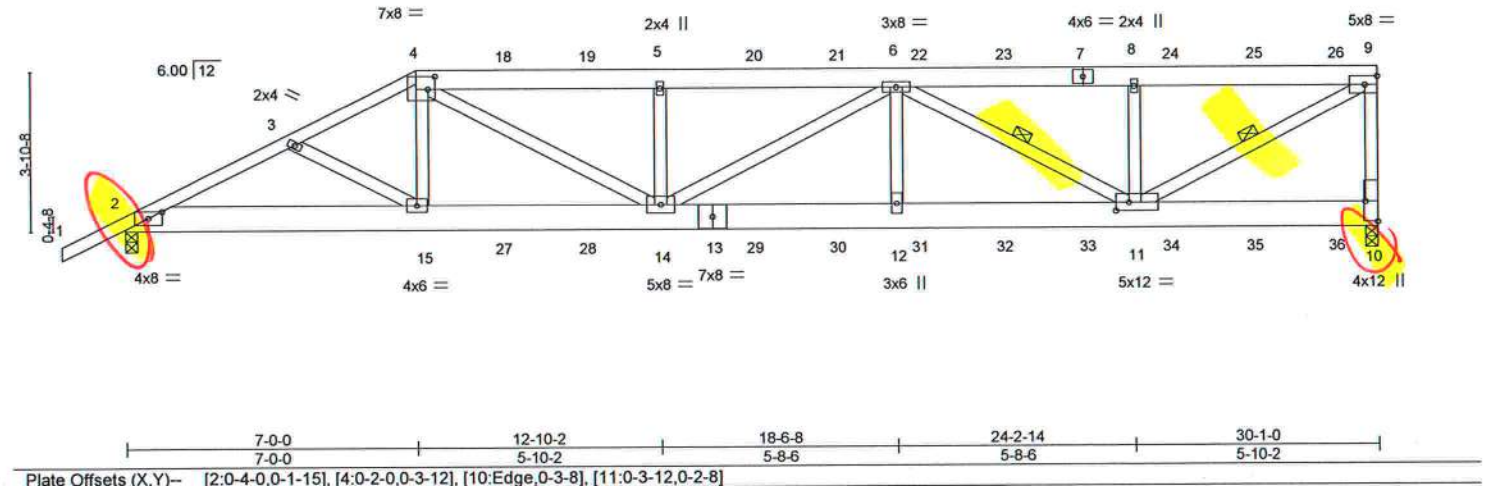
Builders FirstSource (Lake City, FL), Lake City, FL - 32055,

8.530 s Dec 6 2021 MiTek Industries, Inc. Wed Jul 27 06:53:11 2022 Page 1

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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 0.85	Vert(LL)	0.26 12-14	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.28	Vert(CT)	-0.40 12-14	>886	180		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.87	Horz(CT)	0.06 10	n/a	n/a		
BCDL 10.0	Code FBC2020/TPI2014		Matrix-MS					Weight: 223 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x6 SP No.2 \*Except\*  
1-4: 2x4 SP No.2  
BOT CHORD 2x8 SP 2400F 2.0E  
WEBS 2x4 SP No.3 \*Except\*  
4-14,6-14,6-11,9-11: 2x4 SP No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 2-7-7 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 7-10-3 oc bracing.  
WEBS 1 Row at midpt 6-11, 9-11

**REACTIONS.** (size) 10=0-3-8, 2=0-3-8  
Max Horz 2=141(LC 8)  
Max Uplift 10=1166(LC 5), 2=888(LC 8)  
Max Grav 10=2560(LC 1), 2=2234(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-4390/1854, 3-4=-4271/1862, 4-5=-5311/2384, 5-6=-5307/2381, 6-8=-3375/1520, 8-9=-3375/1520, 9-10=-2376/1097  
BOT CHORD 2-15=-1688/3878, 14-15=-1693/3837, 12-14=-2322/5165, 11-12=-2322/5165  
WEBS 4-15=-263/714, 4-14=-819/1753, 5-14=-714/365, 6-12=-123/496, 6-11=-2075/930, 8-11=-659/340, 9-11=-1736/3857

#### 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; 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.
- Provide adequate drainage to prevent water ponding.
- 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) 10=1166, 2=888.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 128 lb down and 90 lb up at 7-0-0, 110 lb down and 90 lb up at 9-0-12, 110 lb down and 90 lb up at 11-0-12, 110 lb down and 90 lb up at 13-0-12, 110 lb down and 90 lb up at 15-0-12, 110 lb down and 90 lb up at 17-0-12, 110 lb down and 90 lb up at 19-0-12, 110 lb down and 90 lb up at 21-0-12, 110 lb down and 90 lb up at 23-0-12, 110 lb down and 90 lb up at 25-0-12, 110 lb down and 90 lb up at 27-0-12, and 113 lb down and 90 lb up at 29-0-12, and 139 lb down and 88 lb up at 29-11-4 on top chord, and 335 lb down and 236 lb up at 7-0-0, 86 lb down and 60 lb up at 9-0-12, 86 lb down and 60 lb up at 11-0-12, 86 lb down and 60 lb up at 13-0-12, 86 lb down and 60 lb up at 15-0-12, 86 lb down and 60 lb up at 17-0-12, 86 lb down and 60 lb up at 19-0-12, 86 lb down and 60 lb up at 21-0-12, 86 lb down and 60 lb up at 23-0-12, 86 lb down and 60 lb up at 25-0-12, and 86 lb down and 60 lb up at 27-0-12, and 88 lb down and 59 lb up at 29-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

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Date:

July 27, 2022

Continued on page 2  
**LOAD CASE(S) Standard**  
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**MiTek**  
16023 Swingley Ridge Rd  
Chesterfield, MO 63017



Job	Truss	Truss Type	Qty	Ply	GIEGEIG CONST. - LOT 29 CW	T28368032
3250262	T02	Half Hip Girder	1	1	Job Reference (optional)	

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

8.530 s Dec 6 2021 MiTek Industries, Inc. Wed Jul 27 06:53:11 2022 Page 2  
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#### LOAD CASE(S) Standard

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

Uniform Loads (plf)

Vert: 1-4=-54, 4-9=-54, 2-10=-20

Concentrated Loads (lb)

Vert: 4=-110(F) 7=-110(F) 9=-139(F) 15=-335(F) 14=-64(F) 5=-110(F) 18=-110(F) 19=-110(F) 20=-110(F) 21=-110(F) 22=-110(F) 23=-110(F) 24=-110(F)  
25=-110(F) 26=-113(F) 27=-64(F) 28=-64(F) 29=-64(F) 30=-64(F) 31=-64(F) 32=-64(F) 33=-64(F) 34=-64(F) 35=-64(F) 36=-66(F)

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017





Job	Truss	Truss Type	Qty	Ply	GIEGIG CONST. - LOT 29 CW	T28368034
3250262	T04	Hip	1	1	Job Reference (optional)	

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8.530 s Dec 6 2021 MiTek Industries, Inc. Wed Jul 27 06:53:13 2022 Page 1

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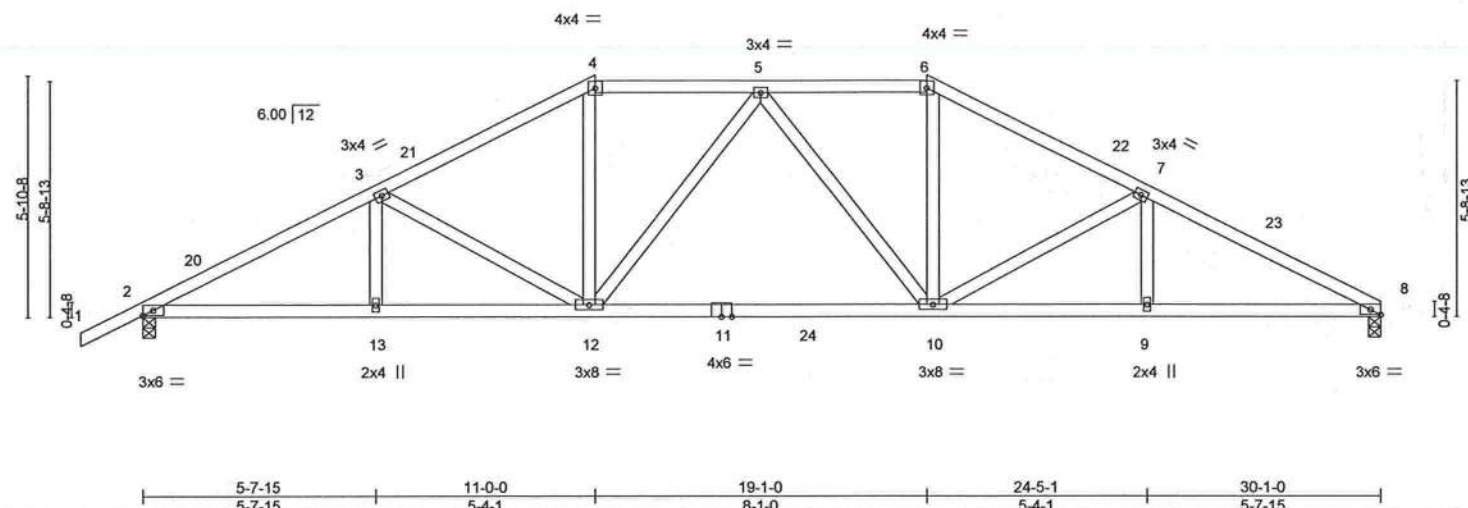


Plate Offsets (X,Y)-- [8:0-2-15,Edge]		LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
		TCLL	20.0	Plate Grip DOL		TC	0.31	in (loc)		MT20		244/190	
		TCDL	7.0	Lumber DOL		BC	0.81	Vert(LL)					
		BCLL	0.0 *	Rep Stress Incr		WB	0.30	Vert(CT)					
		BCDL	10.0	Code FBC2020/TPI2014		Matrix-MS		Horz(CT)		Weight: 156 lb		FT = 20%	

<b>LUMBER-</b>		<b>BRACING-</b>	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 3-8-7 oc purlins.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 9-2-11 oc bracing.
WEBS	2x4 SP No.3		

<b>REACTIONS.</b>	
(size)	8=0-3-8, 2=0-3-8
Max Horz	2=102(LC 12)
Max Uplift	8=238(LC 13), 2=270(LC 12)
Max Grav	8=1202(LC 2), 2=1271(LC 2)

<b>FORCES.</b>	
(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.	
TOP CHORD	2-3=-2228/431, 3-4=-1821/373, 4-5=-1572/363, 5-6=-1575/359, 6-7=-1825/375, 7-8=-2233/442
BOT CHORD	2-13=-407/1953, 12-13=-407/1953, 10-12=-242/1657, 9-10=-338/1969, 8-9=-338/1969
WEBS	3-12=-428/188, 4-12=-80/599, 5-12=-273/116, 5-10=-271/114, 6-10=-80/602, 7-10=-442/198

- 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=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 1-6-2, Interior(1) 1-6-2 to 11-0-0, Exterior(2R) 11-0-0 to 15-0-8, Interior(1) 15-0-8 to 19-1-0, Exterior(2R) 19-1-0 to 23-4-1, Interior(1) 23-4-1 to 30-1-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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) Provide adequate drainage to prevent water ponding.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* 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.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 8=238, 2=270.

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Job	Truss	Truss Type	Qty	Ply	GIEGIG CONST. - LOT 29 CW	T28368036
3250262	T06	Common	3	1	Job Reference (optional)	

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

8.530 s Dec 6 2021 MiTek Industries, Inc. Wed Jul 27 06:53:15 2022 Page 1  
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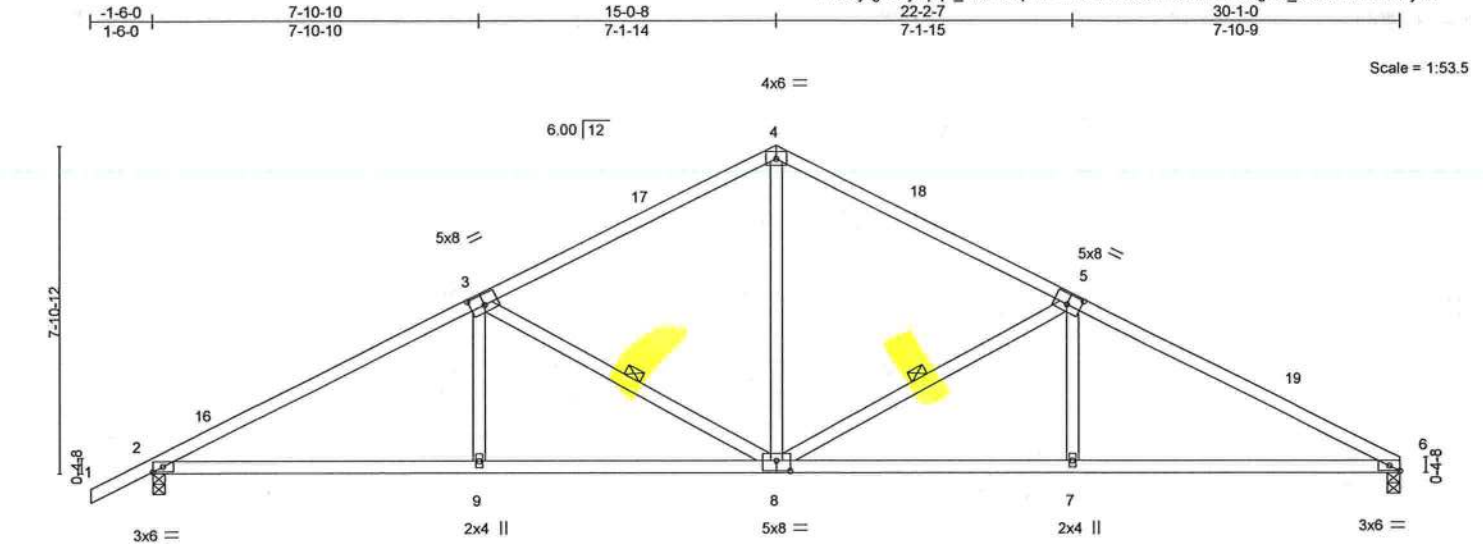


Plate Offsets (X,Y)~		[3:0-4-0,0-3-0], [5:0-4-0,0-3-0], [6:0-2-15,Edge], [8:0-4-0,0-3-0]									
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL 20.0	Plate Grip DOL	1.25	TC 0.64	Vert(LL)	-0.12	7-15	>999	240	MT20	244/190	
TCDL 7.0	Lumber DOL	1.25	BC 0.72	Vert(CT)	-0.26	7-15	>999	180			
BCLL 0.0	Rep Stress Incr	YES	WB 0.30	Horz(CT)	0.08	6	n/a	n/a			
BCDL 10.0	Code FBC2020/TP12014		Matrix-MS								
										Weight: 143 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 3-3-5 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 9-3-6 oc bracing.  
WEBS 1 Row at midpt 5-8, 3-8

#### REACTIONS.

(size) 2=0-3-8, 6=0-3-8  
Max Horz 2=134(LC 12)  
Max Uplift 2=-264(LC 12), 6=-231(LC 13)  
Max Grav 2=1196(LC 1), 6=1111(LC 1)

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

TOP CHORD 2-3=-1984/390, 3-4=-1352/330, 4-5=-1353/336, 5-6=-1994/401  
BOT CHORD 2-9=-381/1704, 8-9=-382/1701, 7-8=-286/1712, 6-7=-286/1715  
WEBS 4-8=-142/792, 5-8=-692/281, 5-7=0/320, 3-8=-679/274, 3-9=0/318

#### 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 1-6-2, Interior(1) 1-6-2 to 15-0-8, Exterior(2R) 15-0-8 to 18-0-10, Interior(1) 18-0-10 to 30-1-0 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) 2=264, 6=231.

This item has been electronically signed and sealed by Magid, Michael, 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.

Michael S. Magid PE No.53681  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

July 27, 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 **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd  
Chesterfield, MO 63017



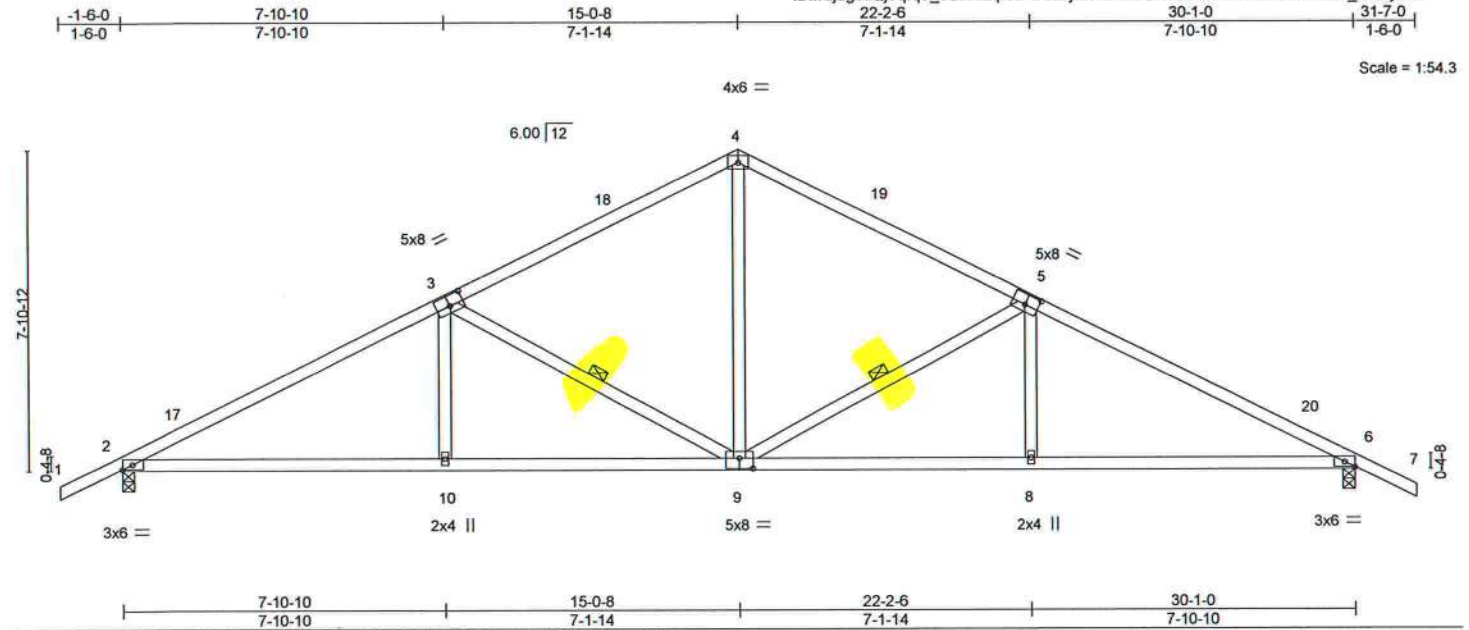


Plate Offsets (X,Y)=[ 3:0-4:0,0-3:0], [5:0-4:0,0-3:0], [6:0-2:15,Edge], [9:0-4:0,0-3:0]												
LOADING (psf)		SPACING- 2:0-0		CSI.	DEFL.		in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	CT 0.62	Vert(LL)	-0.10	8-16	>999	240		MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC 0.69	Vert(CT)	-0.24	8-16	>999	180			
BCLL	0.0 *	Rep Stress Incr	YES	WB 0.30	Horz(CT)	0.08	6	n/a	n/a			
BCDL	10.0	Code FBC2020/TPI2014		Matrix-MS								
											Weight: 145 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 3-4-12 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 9-5-1 oc bracing.
WEBS	1 Row at midpt                      5-9, 3-9

REACTIONS. (size) 2=0-3-8, 6=0-3-8  
Max Horz 2=123(LC 16)  
Max Uplift 2=-263(LC 12), 6=-263(LC 13)  
Max Grav 2=1194(LC 1), 6=1194(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3--1979/390, 3-4--1348/329, 4-5--1348/329, 5-6--1979/390  
BOT CHORD 2-10--370/1700, 9-10--370/1697, 8-9--258/1697, 6-8--257/1700  
WEBS 4-9--135/787, 5-9--678/274, 5-8--0/318, 3-9--678/274, 3-10--0/318

### NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDF=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCp=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E)-1-6-0 to 1-6-2, Interior(1) 1-6-2 to 15-0-8, Exterior(2R) 15-0-8 to 18-0-10, Interior(1) 18-0-10 to 31-7-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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) 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.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=263, 6=263.

This item has been electronically signed and sealed by Magid, Michael, 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.

Michael S. Magid PE No.53681  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

July 27, 2022



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

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED WATER RESISTANCE PAGE 10-1419 (10-17-2022) 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, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd  
Chesterfield, MO 63017



8.530 s Dec 6 2021 MiTek Industries, Inc. Wed Jul 27 06:53:17 2022 Page 1  
ID:fRijugoliQj9qlqT\_5CiYdzq7NP-jtJ4L3awhUluxBewOBwLODlhQohDurveYdk\_eryxfG

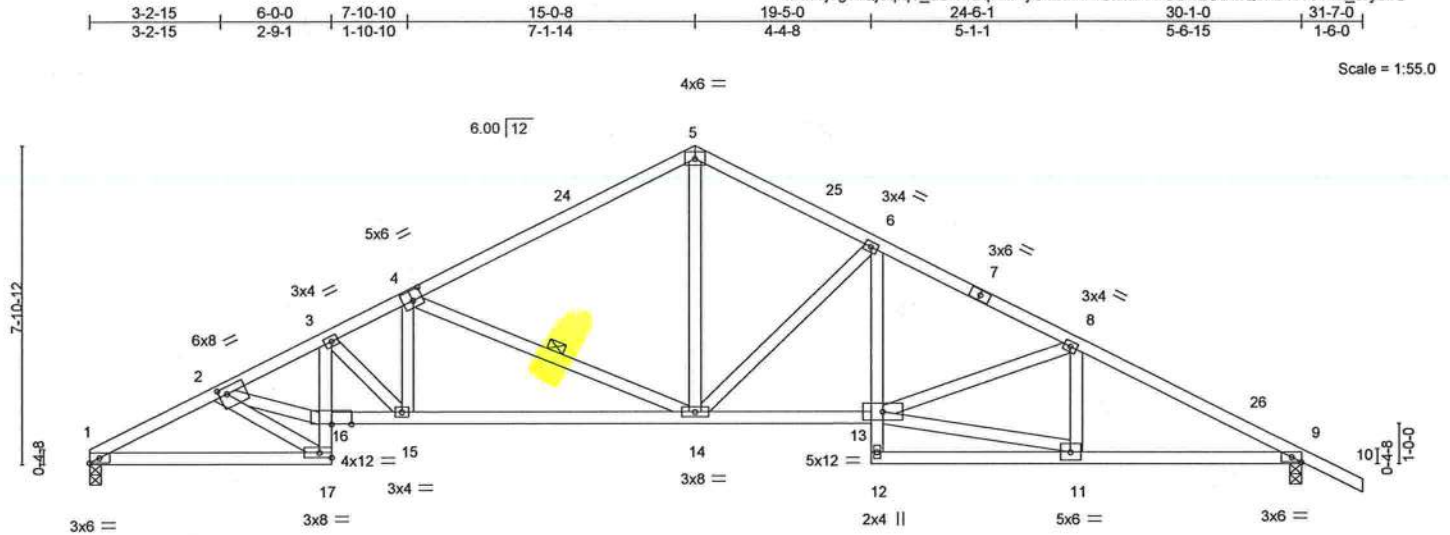


Plate Offsets (X,Y)-- [2:0-2-4,0-2-0], [4:0-3-0,0-3-0], [9:0-2-15,Edge]									
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc) l/defl L/d		PLATES GRIP	
TCLL	20.0	Plate Grip DOL	1.25	TC	0.62	Vert(LL)	-0.17 15 >999 240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.76	Vert(CT)	-0.35 14-15 >999 180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.17 9 n/a n/a		
BCDL	10.0	Code FBC2020/TP12014		Matrix-MS				Weight: 172 lb	FT = 20%

**LUMBER-**  
**TOP CHORD** 2x4 SP No.2  
**BOT CHORD** 2x4 SP No.2 \*Except\*  
 6-12: 2x4 SP No.3  
**WEBS** 2x4 SP No.3

<b>BRACING-</b>	
<b>TOP CHORD</b>	Structural wood sheathing directly applied or 3-2-10 oc purlins.
<b>BOT CHORD</b>	Rigid ceiling directly applied or 7-11-0 oc bracing.
<b>WEBS</b>	1 Row at midpt                      4-14

REACTIONS. (size) 1=0-3-8, 9=0-3-8  
Max Horz 1=-134(LC 17)  
Max Uplift 1=-231(LC 12), 9=-264(LC 13)  
Max Grav 1=1111(LC 1), 9=1196(LC 1)

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

**TOP CHORD**  
1-2=2148/458, 2-3=2778/593, 3-4=2467/525, 4-5=1541/351, 5-6=1501/353,  
6-8=2033/414, 8-9=2076/411

**BOT CHORD**  
1-17=427/1886, 16-17=235/979, 3-16=112/399, 15-16=553/2519, 14-15=480/2225,  
13-14=2401/1773, 6-13=75/445, 9-11=287/1804

**WEBS**  
2-17=1822/489, 2-16=510/2198, 3-15=396/101, 4-15=45/521, 4-14=1012/352,  
5-14=180/993, 6-14=661/232, 11-13=281/1727


**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=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCp1=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-1-1, Interior(1) 3-1-1 to 15-0-8, Exterior(2R) 15-0-8 to 18-0-10, Interior(1) 18-0-10 to 31-7-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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) 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.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=231, 9=264.

This item has been electronically signed and sealed by Magid, Michael, 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.

Michael S. Magid PE No. 53681  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

July 27, 2022

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

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED LITERATURE REFERENCE PAGE MH-743 (REV. 3/19/2020) 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 **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Code**

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



**MiTek**

16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	GIEGIG CONST. - LOT 29 CW	T28368039
3250262	T09	Roof Special	3	1	Job Reference (optional)	

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

8.530 s Dec 6 2021 MiTek Industries, Inc. Wed Jul 27 06:53:18 2022 Page 1  
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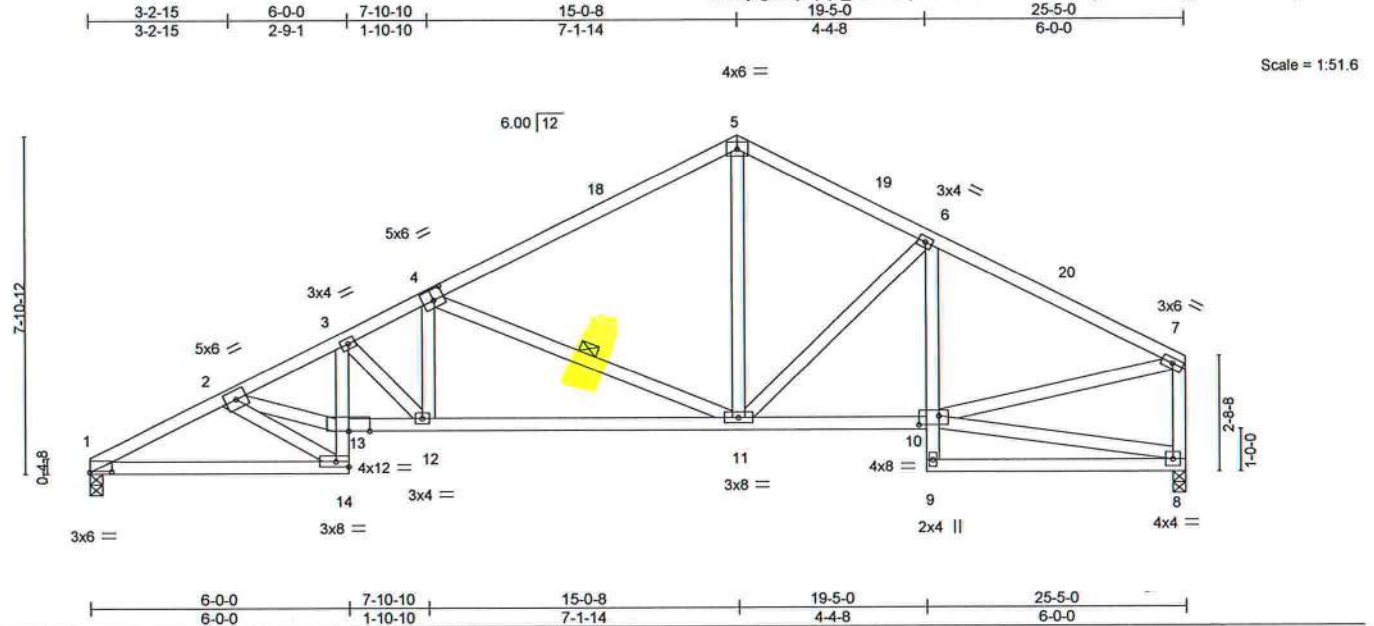


Plate Offsets (X,Y) - [1:0-6-0,0-0-4], [4:0-3-0,0-0-3], [10:0-5-8,0-2-8]

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 0.52	Vert(LL)	-0.11	12	>999	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.94	Vert(CT)	-0.23	11-12	>999		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.67	Horz(CT)	0.11	8	n/a		
BCDL 10.0	Code FBC2020/TPI2014		Matrix-MS					Weight: 157 lb	FT = 20%

#### LUMBER-

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2 \*Except\*  
3-14,6-9: 2x4 SP No.3  
WEBS 2x4 SP No.3

#### BRACING-

TOP CHORD Structural wood sheathing directly applied or 3-7-9 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.  
WEBS 1 Row at midpt 4-11

#### REACTIONS.

(size) 1=0-3-8, 8=0-3-8  
Max Horz 1=159(LC 12)  
Max Uplift 1=-203(LC 12), 8=-174(LC 13)  
Max Grav 1=935(LC 1), 8=935(LC 1)

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

TOP CHORD 1-2=-1773/411, 2-3=-2241/536, 3-4=-1954/468, 4-5=-1090/300, 5-6=-1053/315,  
6-7=-1176/296, 7-8=-877/238  
BOT CHORD 1-14=-477/1556, 13-14=-239/821, 3-13=-114/349, 12-13=-559/2017, 11-12=-485/1768,  
10-11=-208/991  
WEBS 2-14=-1510/497, 2-13=-519/1766, 3-12=-334/102, 4-12=-46/482, 4-11=-954/354,  
5-11=-133/600, 7-10=-208/984

#### 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) 0-0-0 to 3-1-1, Interior(1) 3-1-1 to 15-0-8, Exterior(2R) 15-0-8 to 18-0-8, Interior(1) 18-0-8 to 25-3-4 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) 1=203, 8=174.

This item has been electronically signed and sealed by Magid, Michael, 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.

Michael S. Magid PE No.55681  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingle Ridge Rd. Chesterfield, MO 63017  
Date:

July 27, 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 ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingle Ridge Rd  
Chesterfield, MO 63017

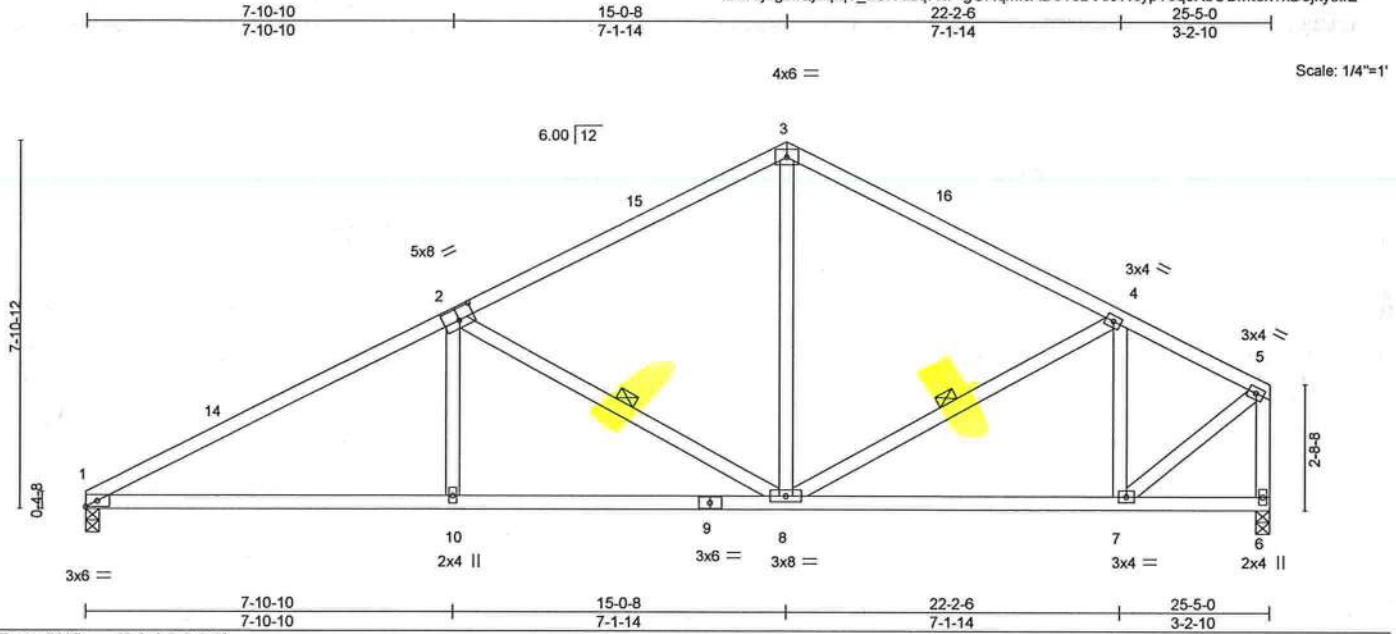


Job 3250262	Truss T10	Truss Type Common	Qty 1	Ply 1	GIEGEIG CONST. - LOT 29 CW	T28368040
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Builders FirstSource (Lake City, FL), Lake City, FL - 32055,

8.530 s Dec 6 2021 MiTek Industries, Inc. Wed Jul 27 06:53:19 2022 Page 1  
ID: fRijugoliQj9qlqT\_5CiYdzq7NP-gGRqmlcAD6?cBVojWcypTeg0XbOBMI8x?xD5jkytE

Job Reference (optional)



LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES	
TCLL	20.0	Plate Grip DOL	1.25	TC	0.64	Vert(LL)	0.11 10-13 >999 240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.66	Vert(CT)	-0.23 10-13 >999 180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.34	Horz(CT)	0.04 6 n/a n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-MS				Weight: 134 lb	FT = 20%

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 3-9-0 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	2x4 SP No.3	WEBS	1 Row at midpt 2-8, 4-8

REACTIONS.	
(size)	1=0-3-8, 6=0-3-8
Max Horz	1=159(LC 12)
Max Uplift	1=203(LC 12), 6=174(LC 13)
Max Grav	1=935(LC 1), 6=935(LC 1)

FORCES.	
(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.	
TOP CHORD	1-2=-1608/361, 2-3=-966/281, 3-4=-961/278, 4-5=-781/195, 5-6=-924/220
BOT CHORD	1-10=-381/1370, 8-10=-381/1367, 7-8=-159/698
WEBS	2-10=0/318, 2-8=-693/281, 3-8=-79/487, 4-7=-444/166, 5-7=-207/900

- 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) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 15-0-8, Exterior(2R) 15-0-8 to 18-0-8, Interior(1) 18-0-8 to 25-3-4 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) 1=203, 6=174.

This item has been electronically signed and sealed by Magid, Michael, 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.

Michael S. Magid PE No.53681  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

July 27, 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 **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

**MiTek**

16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	GIEGIG CONST. - LOT 29 CW	T28368041
3250262	T11	Hip Girder	1	1	Job Reference (optional)	

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

8.530 s Dec 6 2021 MiTek Industries, Inc. Wed Jul 27 06:53:21 2022 Page 1

ID: fRijugoliQj9qlqT\_5CiYdzq7NP-cfZbBQeQjFKQoxhd1?HY3wL0P9oquETFiBncytfc  
 -1-6-0 3-10-15 7-0-0 10-7-2 15-0-8 19-5-15 23-1-0 26-2-1 30-1-0 31-7-0  
 1-6-0 3-10-15 3-1-1 3-7-2 4-5-7 4-5-7 3-7-2 3-1-1 3-10-15 1-6-0

Scale = 1:53.9

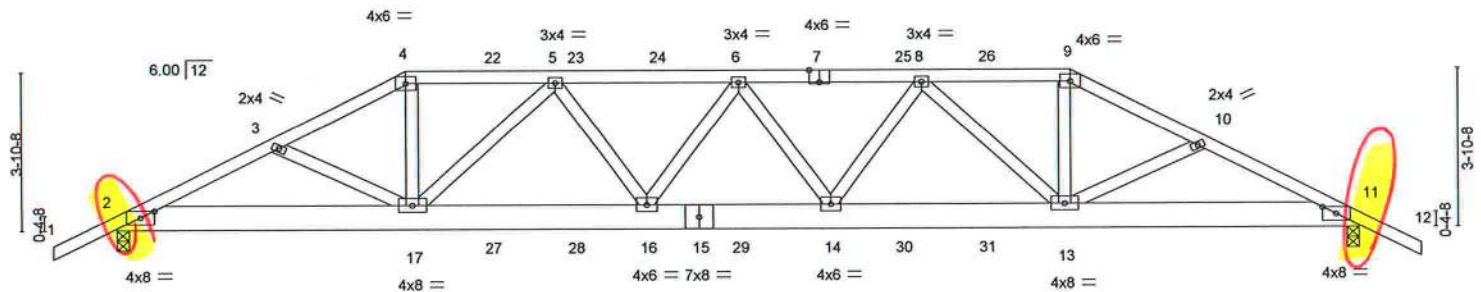


Plate Offsets (X,Y)--		[2:0-4-0,0-1-15], [7:0-3-0,Edge], [11:0-4-0,0-1-15]							
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.25	TC 0.75	Vert(LL)	0.28 14-16	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.27	Vert(CT)	-0.44 14-16	>805	180		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.65	Horz(CT)	0.08 11	n/a	n/a		
BCDL 10.0	Code FBC2020/TPI2014		Matrix-MS					Weight: 200 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x8 SP 2400F 2.0E  
 WEBS 2x4 SP No.3

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 2-0-9 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 7-10-6 oc bracing.

**REACTIONS.** (size) 2=0-3-8, 11=0-3-8  
 Max Horz 2=63(LC 12)  
 Max Uplift 2=944(LC 8), 11=961(LC 9)  
 Max Grav 2=2261(LC 1), 11=2301(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-4424/1925, 3-4=-4275/1885, 4-5=-3863/1737, 5-6=-5194/2304, 6-8=-5216/2303,  
 8-9=-3938/1769, 9-10=-4361/1921, 10-11=-4509/1961  
 BOT CHORD 2-17=-1710/3913, 16-17=-2096/4849, 14-16=-2328/5369, 13-14=-2104/4892,  
 11-13=-1679/3989  
 WEBS 4-17=-681/1584, 5-17=-1429/676, 5-16=-299/660, 6-16=-350/187, 6-14=-301/159,  
 8-14=-273/615, 8-13=-1375/643, 9-13=-657/1549

#### 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; 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.
- Provide adequate drainage to prevent water ponding.
- 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)  
 2=944, 11=961.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 128 lb down and 90 lb up at 7-0-0, 110 lb down and 90 lb up at 9-0-12, 110 lb down and 90 lb up at 11-0-12, 110 lb down and 90 lb up at 13-0-12, 110 lb down and 83 lb up at 15-0-8, 110 lb down and 90 lb up at 17-0-4, 110 lb down and 90 lb up at 19-0-4, and 110 lb down and 90 lb up at 21-0-4, and 230 lb down and 173 lb up at 23-1-0 on top chord, and 335 lb down and 236 lb up at 7-0-0, 86 lb down and 60 lb up at 9-0-12, 86 lb down and 60 lb up at 11-0-12, 86 lb down and 60 lb up at 13-0-12, 86 lb down and 60 lb up at 15-0-8, 86 lb down and 60 lb up at 17-0-4, 86 lb down and 60 lb up at 19-0-4, and 86 lb down and 60 lb up at 21-0-4, and 335 lb down and 236 lb up at 23-0-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

This item has been electronically signed and sealed by Magid, Michael, 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.

Michael S. Magid PE No.53681  
 MiTek Inc. DBA MiTek USA FL Cert 6634  
 16023 Swingley Ridge Rd. Chesterfield, MO 63017  
 Date:

July 27, 2022

Continued on page 2

**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 **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

**MiTek**

16023 Swingley Ridge Rd  
 Chesterfield, MO 63017



Job	Truss	Truss Type	Qty	Ply	GIEGEIG CONST. - LOT 29 CW	T28368041
3250262	T11	Hip Girder	1	1	Job Reference (optional)	

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

8.530 s Dec 6 2021 MiTek Industries, Inc. Wed Jul 27 06:53:21 2022 Page 2  
ID:fRijugoliQj9qlqT\_5CiYdzq7NP-cfZbBQeQljFKQoxhd1?HY3wLOP9oqiuETFiBncytxfC

#### LOAD CASE(S) Standard

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

Uniform Loads (plf)

Vert: 1-4=-54, 4-9=-54, 9-12=-54, 2-11=-20

Concentrated Loads (lb)

Vert: 4=-110(B) 7=-110(B) 9=-182(B) 17=-335(B) 16=-64(B) 6=-110(B) 14=-64(B) 13=-335(B) 22=-110(B) 23=-110(B) 24=-110(B) 25=-110(B) 26=-110(B)

27=-64(B) 28=-64(B) 29=-64(B) 30=-64(B) 31=-64(B)

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

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



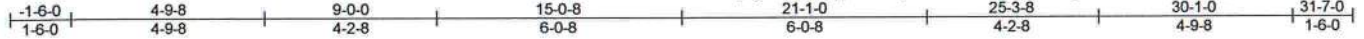
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	GIEGIG CONST. - LOT 29 CW	T28368042
3250262	T12	Hip	1	1	Job Reference (optional)	

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

8.530 s Dec 6 2021 MiTek Industries, Inc. Wed Jul 27 06:53:22 2022 Page 1

ID:fRijugoliQj9qlqT\_5CiYdzq7NP-4r6zOme2W1NA2yWuBkWW5GSbTpOgZBNNhvRIJ3yxfB



Scale = 1:54.8

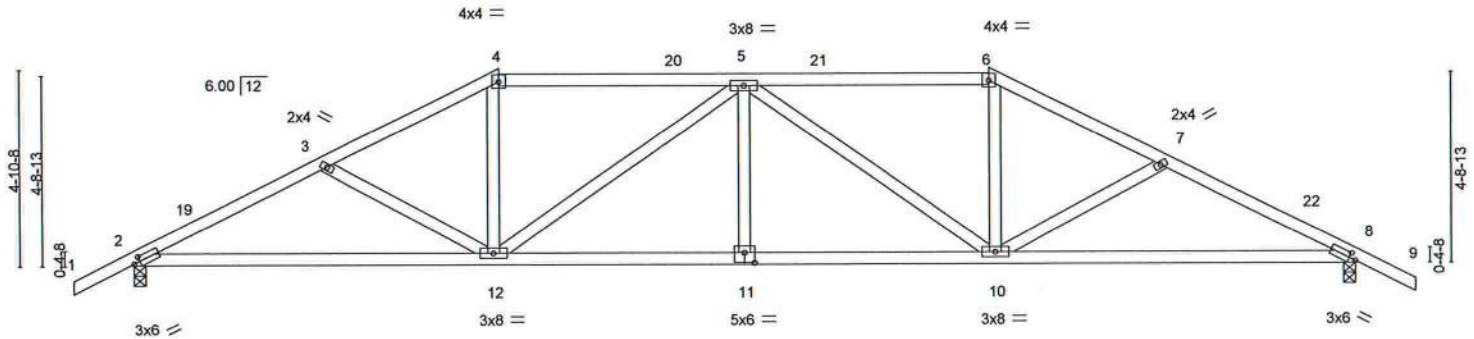


Plate Offsets (X,Y)=-	2:0-1-15,0-1-8], [8:0-1-15,0-1-8], [11:0-3-0,0-3-0]
-----------------------	---

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 0.41	Vert(LL)	-0.14 12-15	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.74	Vert(CT)	-0.30 12-15	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.57	Horz(CT)	0.09 8	n/a	n/a		
BCDL 10.0	Code FBC2020/TPI2014		Matrix-MS					Weight: 152 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 3-11-5 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 9-2-9 oc bracing.

#### REACTIONS.

(size) 2=0-3-8, 8=0-3-8  
Max Horz 2=76(LC 12)  
Max Uplift 2=273(LC 12), 8=273(LC 13)  
Max Grav 2=1194(LC 1), 8=1194(LC 1)

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

TOP CHORD 2-3=-2049/455, 3-4=-1822/386, 4-5=-1578/374, 5-6=-1578/374, 6-7=-1822/386,  
7-8=-2049/455  
BOT CHORD 2-12=-409/1804, 11-12=-329/1923, 10-11=-329/1923, 8-10=-333/1804  
WEBS 4-12=-74/530, 5-12=-519/167, 5-10=-519/167, 6-10=-74/530

#### 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 1-6-2, Interior(1) 1-6-2 to 9-0-0, Exterior(2R) 9-0-0 to 13-3-1, Interior(1) 13-3-1 to 21-1-0, Exterior(2R) 21-1-0 to 25-5-6, Interior(1) 25-5-6 to 31-7-0 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.
- Provide adequate drainage to prevent water ponding.
- 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) 2=273, 8=273.

This item has been electronically signed and sealed by Magid, Michael, 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.

Michael S. Magid PE No.53681  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingle Ridge Rd. Chesterfield, MO 63017  
Date:

July 27, 2022

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

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Chesterfield, MO 63017



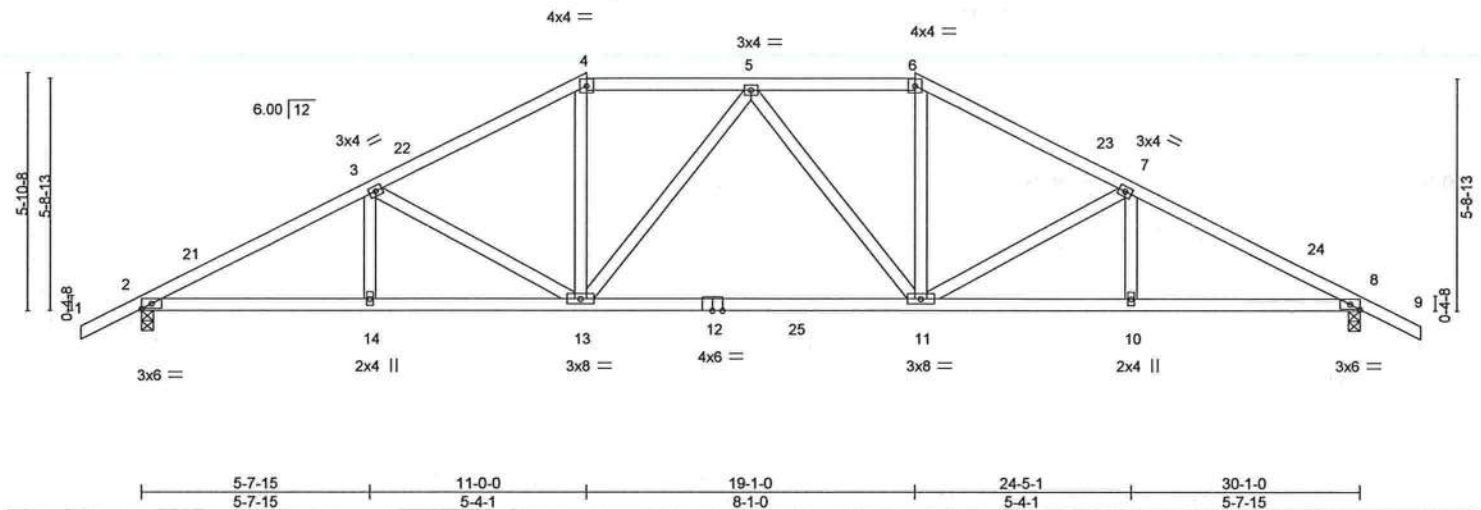
Job	Truss	Truss Type	Qty	Ply	GIEGEIG CONST. - LOT 29 CW	T28368043
3250262	T13	Hip	1	1	Job Reference (optional)	

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

8.530 s Dec 6 2021 MiTek Industries, Inc. Wed Jul 27 06:53:23 2022 Page 1  
ID: fRijugoliQj9qlqT\_5CiYdzq7NP-Y1gLB6fgHKV1f654IS1IdU?o1Cjltir?XwZBIsVytbfA

-1-6-0	5-7-15	11-0-0	15-0-8	19-1-0	24-5-1	30-1-0	31-7-0
1-6-0	5-7-15	5-4-1	4-0-8	4-0-8	5-4-1	5-7-15	1-6-0

Scale = 1:54.8



LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL	20.0	Plate Grip DOL	1.25	TC	0.29	Vert(LL)	-0.23 11-13	MT20	244/190		
TCDL	7.0	Lumber DOL	1.25	BC	0.81	Vert(CT)	-0.41 11-13				
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.29	Horz(CT)	0.09 8				
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MS							
								Weight: 158 lb FT = 20%			

<b>LUMBER-</b>		<b>BRACING-</b>	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 3-9-8 oc purlins.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 9-4-4 oc bracing.
WEBS	2x4 SP No.3		

<b>REACTIONS.</b>	
(size)	2=0-3-8, 8=0-3-8
Max Horz	2=-91(LC 17)
Max Uplift	2=-270(LC 12), 8=-270(LC 13)
Max Grav	2=1270(LC 2), 8=1270(LC 2)

<b>FORCES.</b>	
(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.	
TOP CHORD	2-3=-2225/430, 3-4=-1818/366, 4-5=-1569/357, 5-6=-1569/357, 6-7=-1818/366, 7-8=-2225/431
BOT CHORD	2-14=-396/1950, 13-14=-396/1950, 11-13=-224/1653, 10-11=-307/1950, 8-10=-307/1950
WEBS	3-13=-429/188, 4-13=-79/598, 5-13=-271/115, 5-11=-271/114, 6-11=-79/598, 7-11=-429/189

- 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 1-6-2, Interior(1) 1-6-2 to 11-0-0, Exterior(2R) 11-0-0 to 15-0-8, Interior(1) 15-0-8 to 19-1-0, Exterior(2R) 19-1-0 to 23-4-1, Interior(1) 23-4-1 to 31-7-0 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.
  - Provide adequate drainage to prevent water ponding.
  - 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 100 lb uplift at joint(s) except (jt=lb) 2=270, 8=270.

This item has been electronically signed and sealed by Magid, Michael, 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.

Michael S. Magid PE No.53681  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

July 27, 2022

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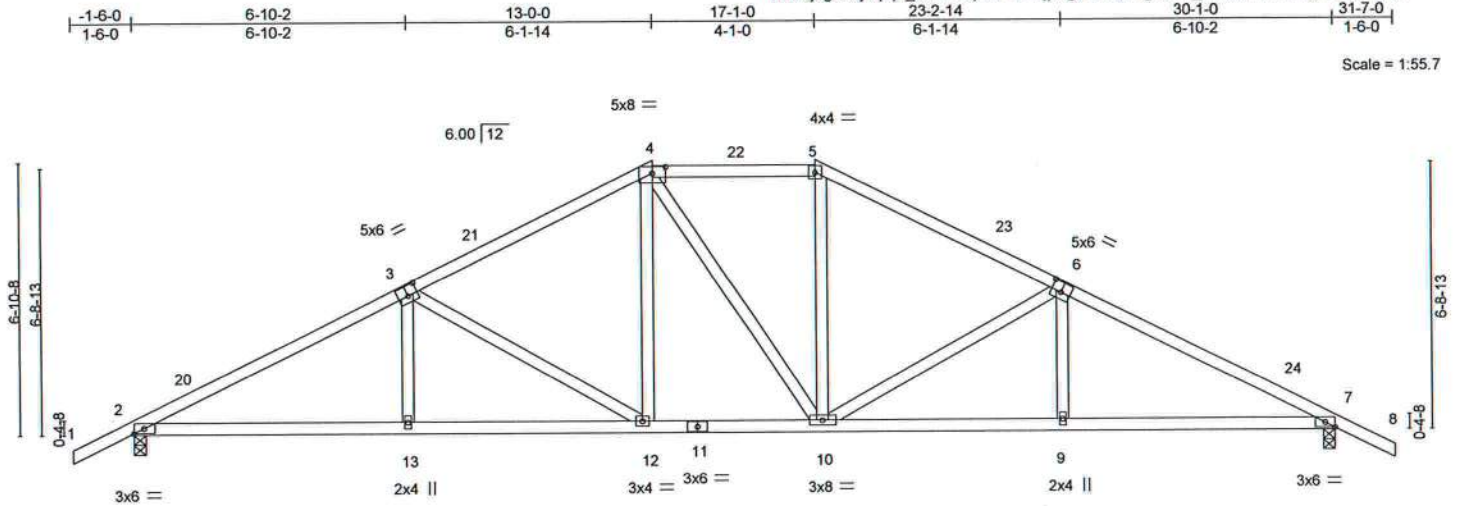


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	GIEGEIG CONST. - LOT 29 CW	T28368044
3250262	T14	HIP	1	1	Job Reference (optional)	

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

8.530 s Dec 6 2021 MiTek Industries, Inc. Wed Jul 27 06:53:24 2022 Page 1  
ID:1RijugoliQj9qlqT\_5CiYdzq7NP-0EEjpSgJ2eduHGgGJ9Y\_AhYxYc7s15mg9DwrOxyt9



Scale = 1:55.7

Plate Offsets (X,Y) --		[3:0-3-0,0-3-0], [4:0-4-0,0-1-15], [6:0-3-0,0-3-0], [7:0-2-15,Edge]
LOADING (psf)	SPACING-	2-0-0
TCLL 20.0	Plate Grip DOL	1.25
TCDL 7.0	Lumber DOL	1.25
BCLL 0.0 *	Rep Stress Incr	YES
BCDL 10.0	Code	FBC2020/TPI2014
	CSI.	
	TC 0.43	
	BC 0.57	
	WB 0.51	
	Matrix-MS	
	DEFL.	in (loc) l/defl L/d
	Vert(LL)	-0.09 12 >999 240
	Vert(CT)	-0.19 12-13 >999 180
	Horz(CT)	0.08 7 n/a n/a
	PLATES	GRIP
	MT20	244/190
	Weight: 158 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 3-9-8 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 9-4-12 oc bracing.

#### REACTIONS.

(size) 2=0-3-8, 7=0-3-8  
Max Horz 2=107(LC 12)  
Max Uplift 2=267(LC 12), 7=267(LC 13)  
Max Grav 2=1194(LC 1), 7=1194(LC 1)

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

TOP CHORD 2-3=-2029/411, 3-4=-1508/355, 4-5=-1272/352, 5-6=-1509/355, 6-7=-2028/411  
BOT CHORD 2-13=-383/1754, 12-13=-383/1756, 10-12=-185/1272, 9-10=-291/1756, 7-9=-291/1754  
WEBS 3-13=0/273, 3-12=-556/226, 4-12=-80/395, 5-10=-71/396, 6-10=-555/226, 6-9=0/272

#### 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 1-6-2, Interior(1) 1-6-2 to 13-0-0, Exterior(2E) 13-0-0 to 17-1-0, Exterior(2R) 17-1-0 to 21-4-1, Interior(1) 21-4-1 to 31-7-0 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.
- Provide adequate drainage to prevent water ponding.
- 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) 2=267, 7=267.

This item has been electronically signed and sealed by Magid, Michael, 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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MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

July 27, 2022



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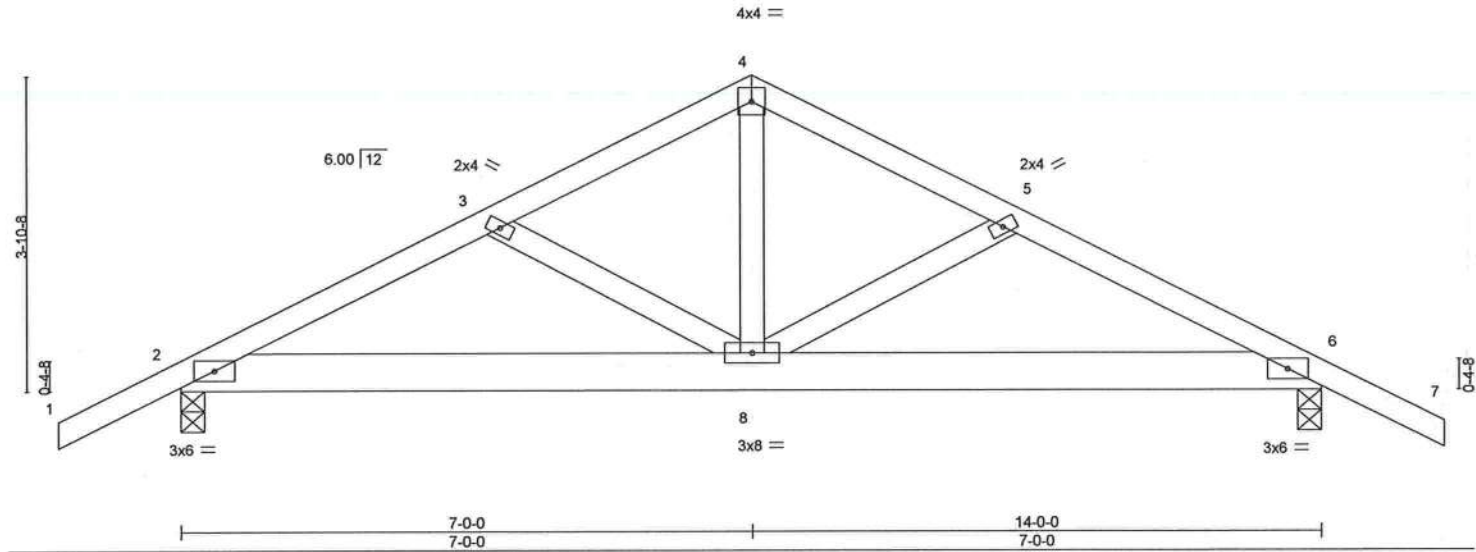
16023 Swingley Ridge Rd  
Chesterfield, MO 63017



Job	Truss	Truss Type	Qty	Ply	GIEGEIG CONST. - LOT 29 CW	T28368045
3250262	T15	QUEENPOST	1	1	Job Reference (optional)	

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

8.530 s Dec 6 2021 MiTek Industries, Inc. Wed Jul 27 06:53:25 2022 Page 1  
ID: fRijugoliQj9qlqT\_5CiYdzq7NP-UQo50ohxpyllvQFSst3Div4Ao0WcmaaqOtgPwNybdf8



LOADING (psf)	SPACING-	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.25	TC 0.15	Vert(LL) 0.04	8-10	>999	240		MT20	244/190
TCDL 7.0	Lumber DOL 1.25	BC 0.34	Vert(CT) -0.07	8-10	>999	180			
BCLL 0.0	Rep Stress Incr NO	WB 0.35	Horz(CT) 0.02	6	n/a	n/a			
BCDL 10.0	Code FBC2020/TPI2014	Matrix-MS							
								Weight: 76 lb	FT = 20%

<b>LUMBER-</b>		<b>BRACING-</b>	
TOP CHORD 2x4 SP No.2		TOP CHORD	Structural wood sheathing directly applied or 4-8-11 oc purlins.
BOT CHORD 2x6 SP No.2		BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3			

<b>REACTIONS.</b>	(size) 2=0-3-8, 6=0-3-8
	Max Horz 2=-63(LC 13)
	Max Uplift 2=-322(LC 8), 6=-322(LC 9)
	Max Grav 2=906(LC 1), 6=906(LC 1)

<b>FORCES.</b>	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	2-3=-1499/574, 3-4=-1326/546, 4-5=-1326/546, 5-6=-1499/574
BOT CHORD	2-8=-511/1321, 6-8=-468/1321
WEBS	4-8=-389/906

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCCL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone; porch left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - 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) 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.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=322, 6=322.
  - 7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 101 lb down and 89 lb up at 7-0-0 on top chord, and 541 lb down and 351 lb up at 7-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
  - 8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

<b>LOAD CASE(S)</b>	Standard
1) Dead + Roof Live (balanced):	Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)	
Vert:	2-6=-20, 1-4=-54, 4-7=-54
Concentrated Loads (lb)	
Vert:	4=-73(B) 8=-541(B)

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Michael S. Magid PE No.53681  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

July 27, 2022

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	GIEGIG CONST. - LOT 29 CW	T28368046
3250262	T16	Common	2	1	Job Reference (optional)	

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

8.530 s Dec 6 2021 MiTek Industries, Inc. Wed Jul 27 06:53:25 2022 Page 1

ID:fRijugoliQj9qlqT\_5CiYdzq7NP-UQo50ohxpyllvQFSst3Div44o0U4me3qOtgPwNytbf8

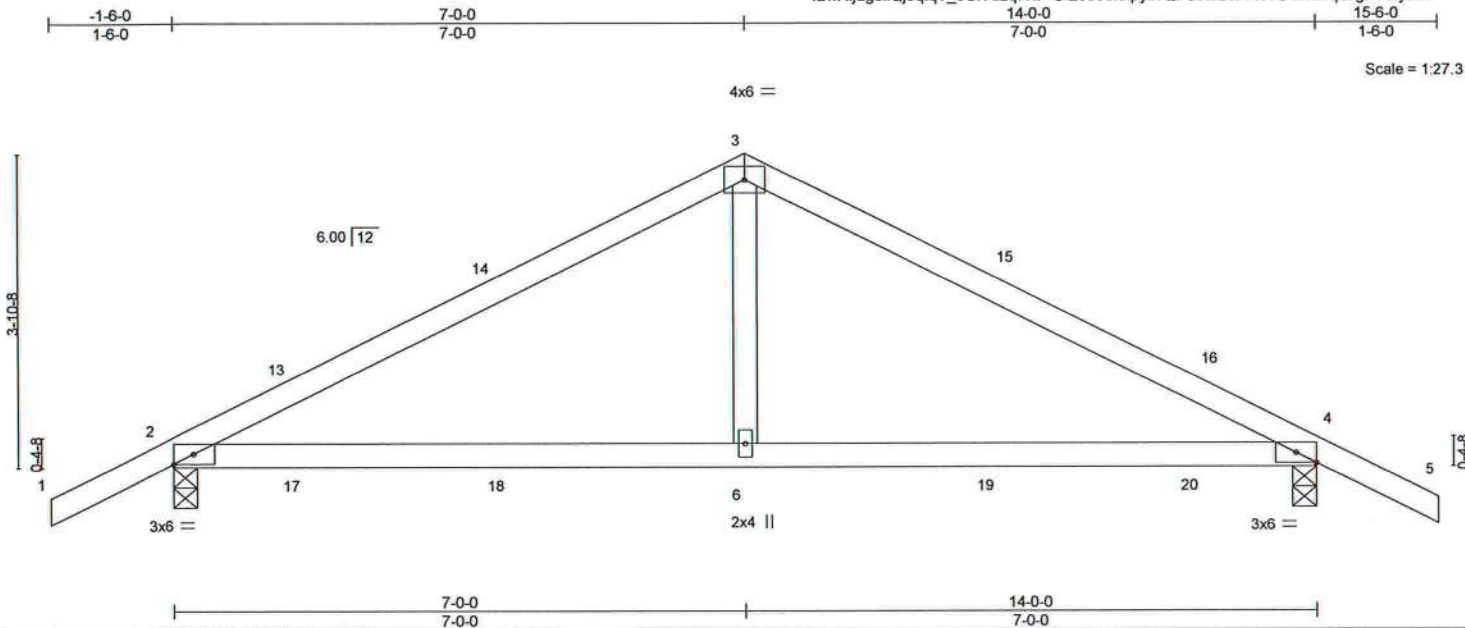


Plate Offsets (X,Y) - [4:0-2-15,Edge]											
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP		
TCLL 20.0	Plate Grip DOL	1.25	TC 0.53	Vert(LL)	0.14 6-12	>999	240	MT20	244/190		
TCDL 7.0	Lumber DOL	1.25	BC 0.50	Vert(CT)	-0.13 6-9	>999	180				
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.12	Horz(CT)	0.01 4	n/a	n/a				
BCDL 10.0	Code FBC2020/TPI2014		Matrix-MS								
								Weight: 54 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 5-11-14 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-11-15 oc bracing.

#### REACTIONS.

(size) 2=0-3-8, 4=0-3-8  
Max Horz 2=63(LC 12)  
Max Uplift 2=-148(LC 9), 4=-148(LC 8)  
Max Grav 2=599(LC 1), 4=599(LC 1)

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

TOP CHORD 2-3=-719/787, 3-4=-719/788  
BOT CHORD 2-6=-588/575, 4-6=-588/575  
WEBS 3-6=-440/320

#### 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 7-0-0, Exterior(2R) 7-0-0 to 10-0-0, Interior(1) 10-0-0 to 15-6-0 zone; porch left and right exposed; 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) 2=148, 4=148.

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Date:

July 27, 2022



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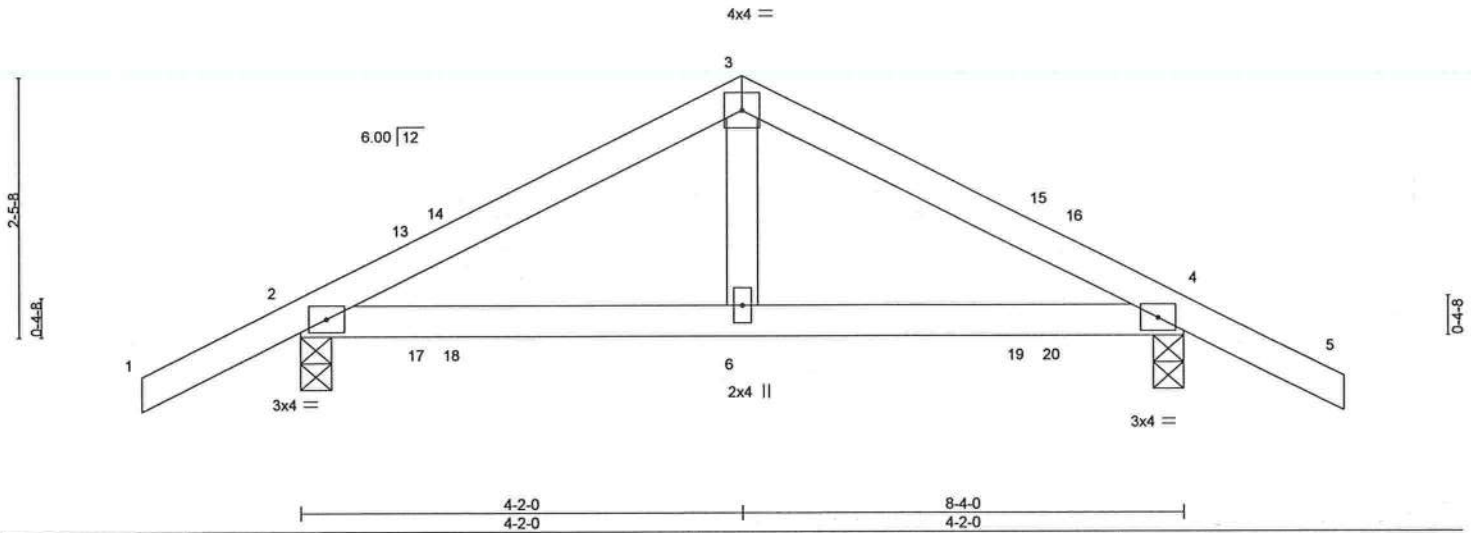
Job	Truss	Truss Type	Qty	Ply	GIEGEIG CONST. - LOT 29 CW	T28368047
3250262	T17	Common	1	1	Job Reference (optional)	

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

8.530 s Dec 6 2021 MiTek Industries, Inc. Wed Jul 27 06:53:26 2022 Page 1  
ID: fRijugoliQj9qlqT\_5CiYdzq7NP-zcMUE8hZaFtcWaqfQaaSF6dK2QuOV59zcXPySqtYxf7



Scale = 1:20.9



LOADING (psf)	SPACING-	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.25	TC 0.24	Vert(LL) 0.03	6-9	>999	240		MT20	244/190
TCDL 7.0	Lumber DOL 1.25	BC 0.18	Vert(CT) -0.02	6-9	>999	180			
BCLL 0.0 *	Rep Stress Incr YES	WB 0.07	Horz(CT) -0.00	4	n/a	n/a			
BCDL 10.0	Code FBC2020/TPI2014	Matrix-MS						Weight: 34 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 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 9-2-14 oc bracing.

#### REACTIONS.

(size) 2=0-3-8, 4=0-3-8  
Max Horz 2=42(LC 12)  
Max Uplift 2=-98(LC 12), 4=-98(LC 13)  
Max Grav 2=389(LC 1), 4=389(LC 1)

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

TOP CHORD 2-3=390/544, 3-4=390/544  
BOT CHORD 2-6=378/310, 4-6=378/310  
WEBS 3-6=286/180

#### 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 4-2-0, Exterior(2R) 4-2-0 to 7-2-0, Interior(1) 7-2-0 to 9-10-0 zone; porch left and right exposed; 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) 2, 4.

This item has been electronically signed and sealed by Magid, Michael, 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.

Michael S. Magid PE No.53681  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

July 27, 2022



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

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

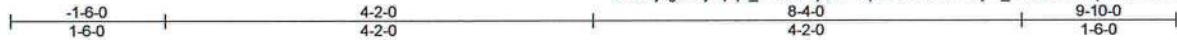


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	GIEGEG CONST. - LOT 29 CW	T28368048
3250262	T17G	GABLE	1	1	Job Reference (optional)	

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

8.530 s Dec 6 2021 MiTek Industries, Inc. Wed Jul 27 06:53:27 2022 Page 1  
ID:fRijugoliQj9qlqT\_5CiYdzq7NP-RpwsRUiBLZ?T8jPr\_H6hoKAV3qGuEZw7rB9W?Gyxf6



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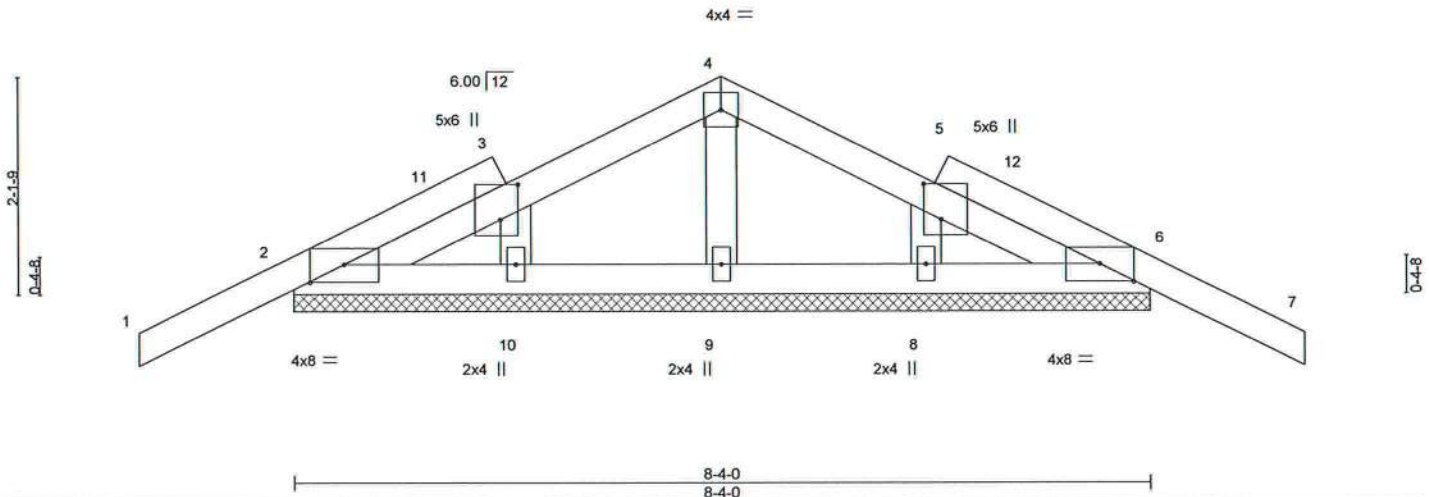


Plate Offsets (X,Y)- [2:0-4-0,0-2-1], [3:0-4-2,0-2-0], [5:0-4-2,0-2-0], [6:0-4-0,0-2-1]

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 0.16	Vert(LL)	-0.01	7	n/r	120	MT20
TCDL 7.0	Lumber DOL	1.25	BC 0.03	Vert(CT)	-0.01	7	n/r	120	244/190
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.04	Horz(CT)	0.00	6	n/a	n/a	
BCDL 10.0	Code FBC2020/TPI2014		Matrix-S						
								Weight: 40 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 8-4-0.  
(lb) - Max Horz 2=37(LC 12)  
Max Uplift All uplift 100 lb or less at joint(s) 2, 6, 9, 10, 8  
Max Grav All reactions 250 lb or less at joint(s) 2, 6, 9, 10, 8

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

#### 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=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 4-2-0, Corner(3R) 4-2-0 to 7-2-0, Exterior(2N) 7-2-0 to 9-10-0 zone; porch 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) 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) 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) 2, 6, 9, 10, 8.

This item has been electronically signed and sealed by Magid, Michael, 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.

Michael S. Magid PE No.53681  
MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

July 27,2022

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017



Job	Truss	Truss Type	Qty	Ply	GIEGEG CONST. - LOT 29 CW	T28368049
3250262	T18	Common	3	1	Job Reference (optional)	

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

8.530 s Dec 6 2021 MiTek Industries, Inc. Wed Jul 27 06:53:28 2022 Page 1  
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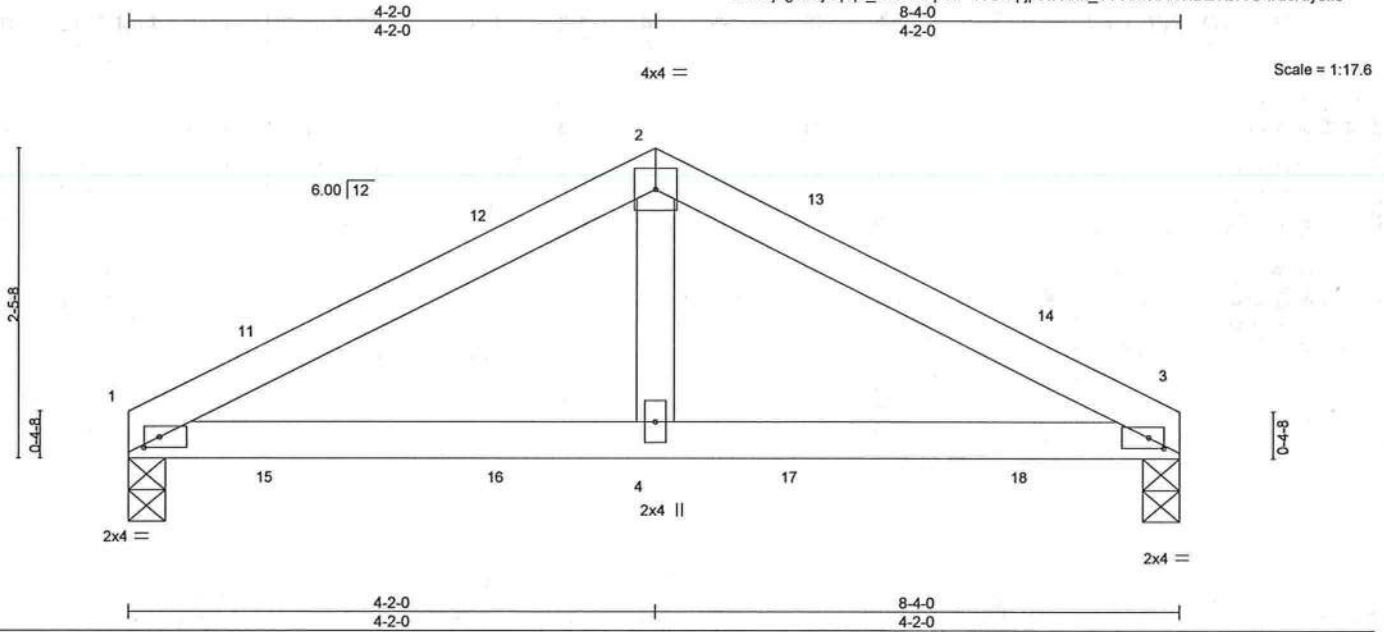


Plate Offsets (X,Y) -		[1:0-1-7,0-1-0], [3:0-1-7,0-1-0]									
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	L/defl	L/d	PLATES	GRIP	
TCLL 20.0	Plate Grip DOL	1.25	TC 0.26	Vert(LL)	0.03	4-7	>999	240	MT20	244/190	
TCDL 7.0	Lumber DOL	1.25	BC 0.20	Vert(CT)	-0.02	4-7	>999	180			
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.07	Horz(CT)	-0.00	3	n/a	n/a			
BCDL 10.0	Code FBC2020/TPI2014		Matrix-MS								
										Weight: 29 lb	FT = 20%

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 8-2-5 oc bracing.
WEBS	2x4 SP No.3		

**REACTIONS.** (size) 1=0-3-8, 3=0-3-8  
Max Horz 1=-31(LC 13)  
Max Uplift 1=-82(LC 9), 3=-82(LC 8)  
Max Grav 1=308(LC 1), 3=308(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-430/601, 2-3=-430/601  
BOT CHORD 1-4=-479/349, 3-4=-479/349  
WEBS 2-4=-321/186

- 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=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) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 4-2-0, Exterior(2R) 4-2-0 to 7-2-0, Interior(1) 7-2-0 to 8-4-0 zone; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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) 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.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

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MiTek Inc. DBA MiTek USA FL Cert 6634  
16023 Swingley Ridge Rd. Chesterfield, MO 63017  
Date:

July 27, 2022

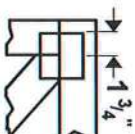
**WARNING -** Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.  
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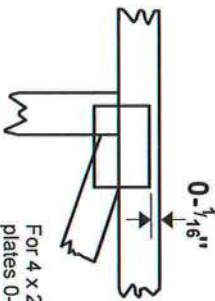
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

# 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- $\frac{1}{16}$ " from outside edge of truss.

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

\* Plate location details available in Mitek 20/20 software or upon request.

## PLATE SIZE

4 X 4

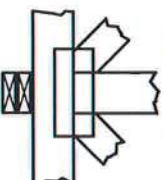
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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: National Design Specification for Metal

Plate Connected Wood Truss Construction.

DSB-89:

Design Standard for Bracing.

BCSI:

Building Component Safety Information,

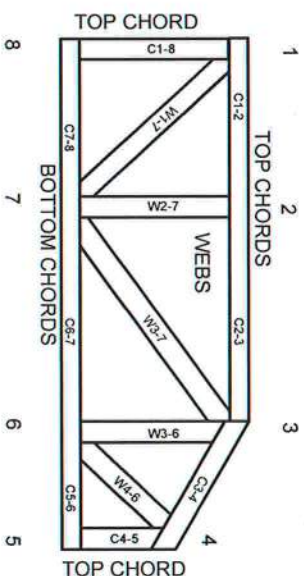
Guide to Good Practice for Handling,

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

ESR-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 section 6.3. These truss designs rely on lumber values established by others.

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



# General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

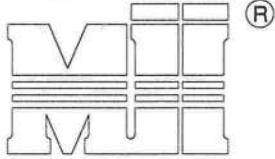
1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative for 1 bracing should be considered.
3. Never exceed 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.



AUGUST 1, 2016

# T-BRACE / I-BRACE DETAIL WITH 2X BRACE ONLY

MII-T-BRACE 2



MiTek USA, Inc.

ENGINEERED BY  
**TRENCO**  
A MiTek Affiliate

MiTek USA, Inc. Page 1 of 1

Note: T-Bracing / I-Bracing to be used when continuous lateral bracing is impractical. T-Brace / I-Brace must cover 90% of web length.

Note: This detail NOT to be used to convert T-Brace / I-Brace webs to continuous lateral braced webs.

## Nailing Pattern

T-Brace size	Nail Size	Nail Spacing
2x4 or 2x6 or 2x8	10d (0.131" X 3")	6" o.c.

Note: Nail along entire length of T-Brace / I-Brace  
(On Two-Ply's Nail to Both Plies)

## Brace Size for One-Ply Truss

### Specified Continuous Rows of Lateral Bracing

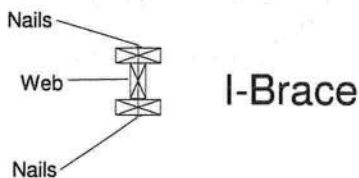
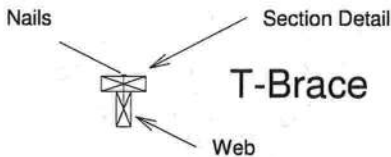
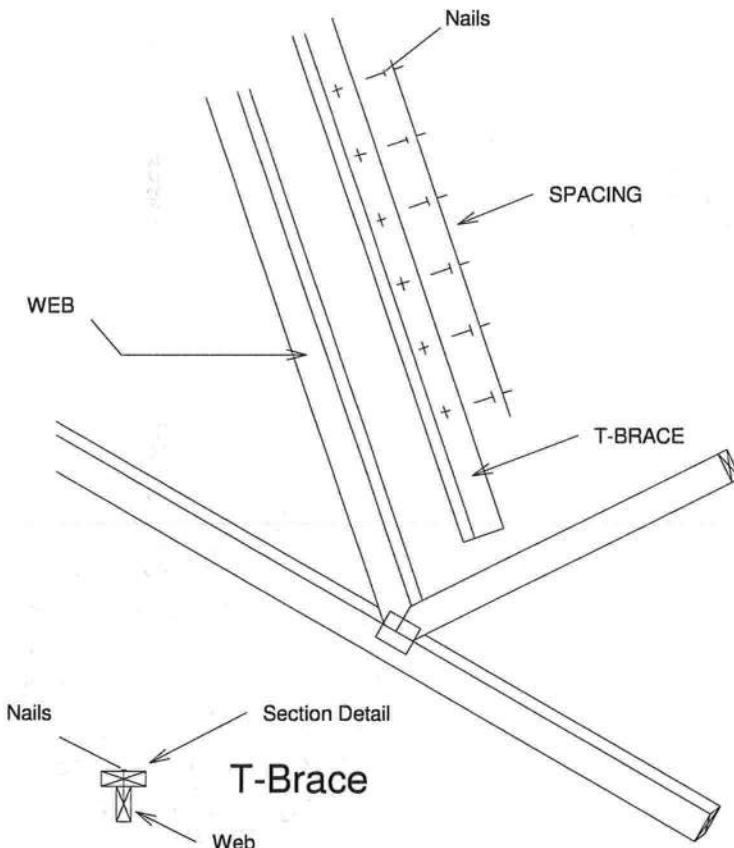
Web Size	1	2
2x3 or 2x4	2x4 T-Brace	2x4 I-Brace
2x6	2x6 T-Brace	2x6 I-Brace
2x8	2x8 T-Brace	2x8 I-Brace

## Brace Size for Two-Ply Truss

### Specified Continuous Rows of Lateral Bracing

Web Size	1	2
2x3 or 2x4	2x4 T-Brace	2x4 I-Brace
2x6	2x6 T-Brace	2x6 I-Brace
2x8	2x8 T-Brace	2x8 I-Brace

T-Brace / I-Brace must be same species and grade (or better) as web member.



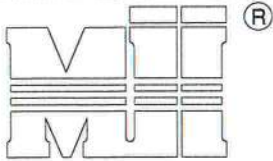
Thomas A. Albani PE No.39380  
MiTek USA, Inc. FL Cert 6634  
6904 Parke East Blvd. Tampa FL 33610  
Date:

February 12, 2018

AUGUST 1, 2016

SCAB-BRACE DETAIL

MII-SCAB-BRACE



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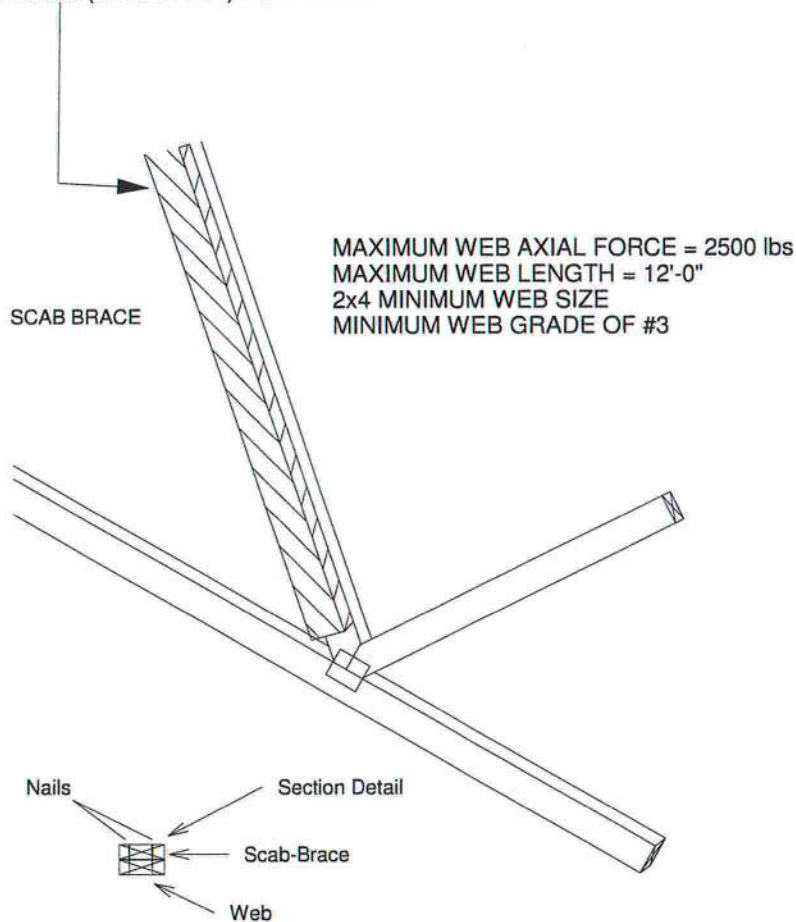
MiTek USA, Inc.

Page 1 of 1

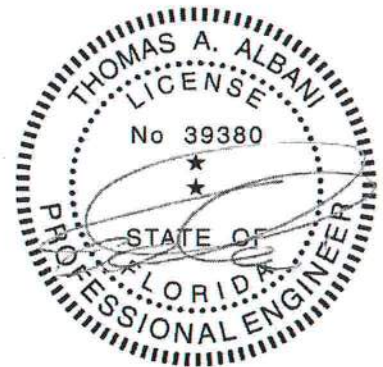
Note: Scab-Bracing to be used when continuous lateral bracing at midpoint (or T-Brace) is impractical.  
Scab must cover full length of web +/- 6".

\*\*\* THIS DETAIL IS NOT APPLICABLE WHEN BRACING IS REQUIRED AT 1/3 POINTS OR I-BRACE IS SPECIFIED.

APPLY 2x SCAB TO ONE FACE OF WEB WITH  
2 ROWS OF 10d (0.131" X 3") NAILS SPACED 6" O.C.  
SCAB MUST BE THE SAME GRADE, SIZE AND  
SPECIES (OR BETTER) AS THE WEB.



Scab-Brace must be same species grade (or better) as web member.



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Date:

February 12, 2018

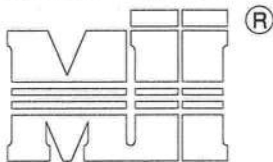


AUGUST 1, 2016

STANDARD REPAIR TO REMOVE END  
VERTICAL (RIBBON NOTCH VERTICAL)

MII-REP05

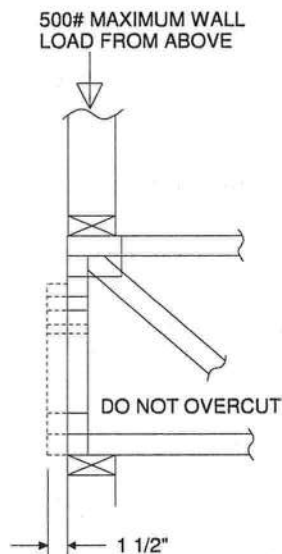
MiTek USA, Inc. Page 1 of 1



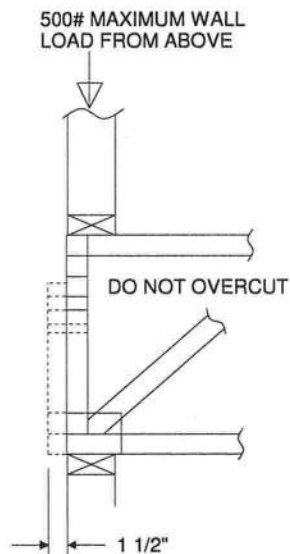
MiTek USA, Inc.

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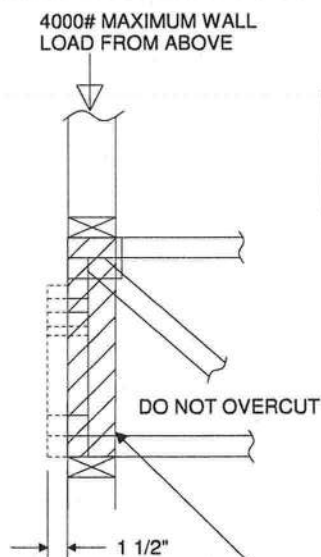
1. THIS IS A SPECIFIC REPAIR DETAIL TO BE USED ONLY FOR ITS ORIGINAL INTENTION. THIS REPAIR DOES NOT IMPLY THAT THE REMAINING PORTION OF THE TRUSS IS UNDAMAGED. THE ENTIRE TRUSS SHALL BE INSPECTED TO VERIFY THAT NO FURTHER REPAIRS ARE REQUIRED. WHEN THE REQUIRED REPAIRS ARE PROPERLY APPLIED, THE TRUSS WILL BE CAPABLE OF SUPPORTING THE LOADS INDICATED.
2. ALL MEMBERS MUST BE RETURNED TO THEIR ORIGINAL POSITIONS BEFORE APPLYING REPAIR AND HELD IN PLACE DURING APPLICATION OF REPAIR.
3. THE END DISTANCE, EDGE DISTANCE, AND SPACING OF NAILS SHALL BE SUCH AS TO AVOID SPLITTING OF THE WOOD.
4. LUMBER MUST BE CUT CLEANLY AND ACCURATELY AND THE REMAINING WOOD MUST BE UNDAMAGED.
5. THIS REPAIR IS TO BE USED FOR SINGLE PLY TRUSSES IN THE 4X ORIENTATION ONLY.
6. CONNECTOR PLATES MUST BE FULLY IMBEDDED AND UNDISTURBED.



REFER TO INDIVIDUAL  
TRUSS DESIGN FOR  
PLATE SIZES AND  
LUMBER GRADES



TRUSSES BUILT  
WITH 4x2 MEMBERS

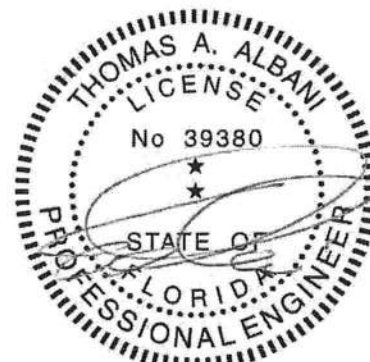


REFER TO INDIVIDUAL  
TRUSS DESIGN FOR  
PLATE SIZES AND  
LUMBER GRADES



TRUSSES BUILT  
WITH 4x2 MEMBERS

ATTACH 2x4 SQUASH BLOCK (CUT TO FIT TIGHTLY)  
TO BOTH SIDES OF THE TRUSS AS SHOWN WITH  
10d (0.131" X 3") NAILS SPACED 3" O.C.



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Date:

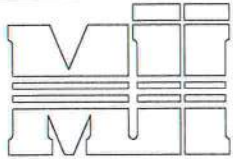
February 12, 2018

AUGUST 1, 2016

## Standard Gable End Detail

MII-GE130-D-SP

MiTek USA, Inc. Page 1 of 2

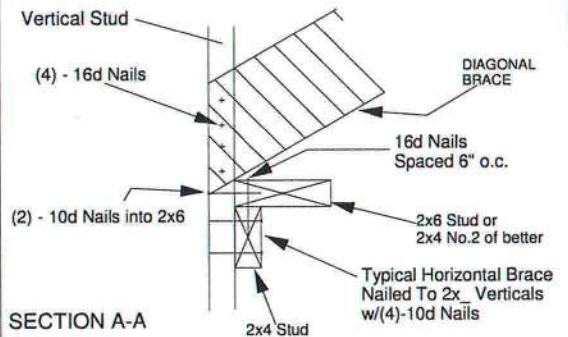


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Typical 4x L-Brace Nailed To  
2x Verticals W/10d Nails spaced 6" o.c.

Vertical Stud

SECTION B-B

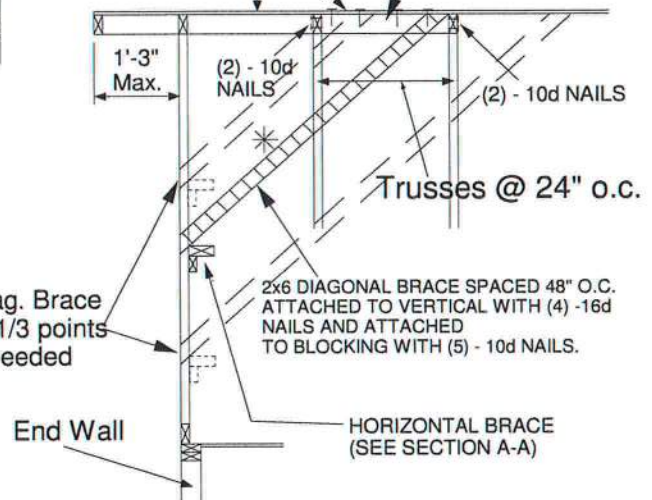


SECTION A-A

PROVIDE 2x4 BLOCKING BETWEEN THE FIRST TWO TRUSSES AS NOTED. TOENAIL BLOCKING TO TRUSSES WITH (2) - 10d NAILS AT EACH END. ATTACH DIAGONAL BRACE TO BLOCKING WITH (5) - 10d NAILS.

(4) - 8d (0.131" X 2.5") NAILS MINIMUM, PLYWOOD SHEATHING TO 2x4 STD SPF BLOCK

Roof Sheathing



TRUSS GEOMETRY AND CONDITIONS SHOWN ARE FOR ILLUSTRATION ONLY.

12  
Varies to Common Truss

SEE INDIVIDUAL MITTEK ENGINEERING DRAWINGS FOR DESIGN CRITERIA

\* - Diagonal Bracing Refer to Section A-A

\*\* - L-Bracing Refer to Section B-B

## NOTE:

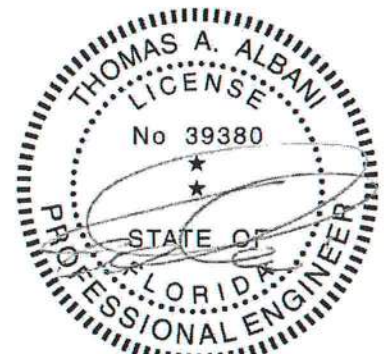
1. MINIMUM GRADE OF #2 MATERIAL IN THE TOP AND BOTTOM CHORDS.
2. CONNECTION BETWEEN BOTTOM CHORD OF GABLE END TRUSS AND WALL TO BE PROVIDED BY PROJECT ENGINEER OR ARCHITECT.
3. BRACING SHOWN IS FOR INDIVIDUAL TRUSS ONLY. CONSULT BLDG. ARCHITECT OR ENGINEER FOR TEMPORARY AND PERMANENT BRACING OF ROOF SYSTEM.
4. "L" BRACES SPECIFIED ARE TO BE FULL LENGTH. GRADES: 1x4 SRB OR 2x4 STUD OR BETTER WITH ONE ROW OF 10d NAILS SPACED 6" O.C.
5. DIAGONAL BRACE TO BE APPROXIMATELY 45 DEGREES TO ROOF DIAPHRAM AT 4'-0" O.C. MAX
6. CONSTRUCT HORIZONTAL BRACE CONNECTING A 2x6 STUD AND A 2x4 STUD AS SHOWN WITH 16d NAILS SPACED 6" O.C. HORIZONTAL BRACE TO BE LOCATED AT THE MIDSPAN OF THE LONGEST STUD. ATTACH TO VERTICAL STUDS WITH (4) 10d NAILS THROUGH 2x4. (REFER TO SECTION A-A)
7. GABLE STUD DEFLECTION MEETS OR EXCEEDS L/240.
8. THIS DETAIL DOES NOT APPLY TO STRUCTURAL GABLES.
9. DO NOT USE FLAT BOTTOM CHORD GABLES NEXT TO SCISSOR TYPE TRUSSES.
10. SOUTHERN PINE LUMBER DESIGN VALUES ARE THOSE EFFECTIVE 06-01-13 BY SPIB/ALSC.
11. NAILS DESIGNATED 10d ARE (0.131" X 3") AND NAILS DESIGNATED 16d ARE (0.131" X 3.5")

Minimum Stud Size Species and Grade	Stud Spacing	Without Brace	1x4 L-Brace	2x4 L-Brace	DIAGONAL BRACE	2 DIAGONAL BRACES AT 1/3 POINTS
		Maximum Stud Length				
2x4 SP No. 3 / Stud	12" O.C.	3-9-13	4-1-1	5-9-6	7-1-3	11-5-7
2x4 SP No. 3 / Stud	16" O.C.	3-5-4	3-6-8	5-0-2	6-10-8	10-3-13
2x4 SP No. 3 / Stud	24" O.C.	2-9-11	2-10-11	4-1-1	5-7-6	8-5-1

- \* Diagonal braces over 6'-3" require a 2x4 T-Brace attached to one edge. Diagonal braces over 12'-6" require 2x4 I-braces attached to both edges. Fasten T and I braces to narrow edge of diagonal brace with 10d nails 8" o.c., with 3" minimum end distance. Brace must cover 90% of diagonal length.

MAX MEAN ROOF HEIGHT = 30 FEET  
CATEGORY II BUILDING  
EXPOSURE D  
ASCE 7-98, ASCE 7-02, ASCE 7-05 130 MPH  
ASCE 7-10 160 MPH  
DURATION OF LOAD INCREASE : 1.60

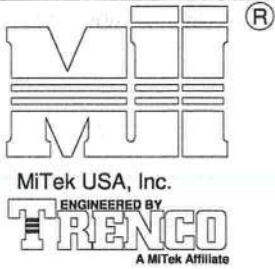
STUD DESIGN IS BASED ON COMPONENTS AND CLADDING.  
CONNECTION OF BRACING IS BASED ON MWFRS.



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Date:

February 12, 2018

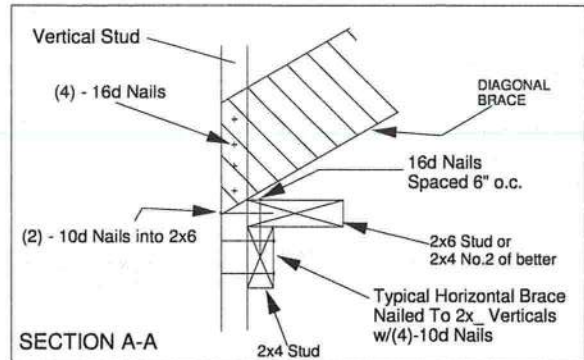




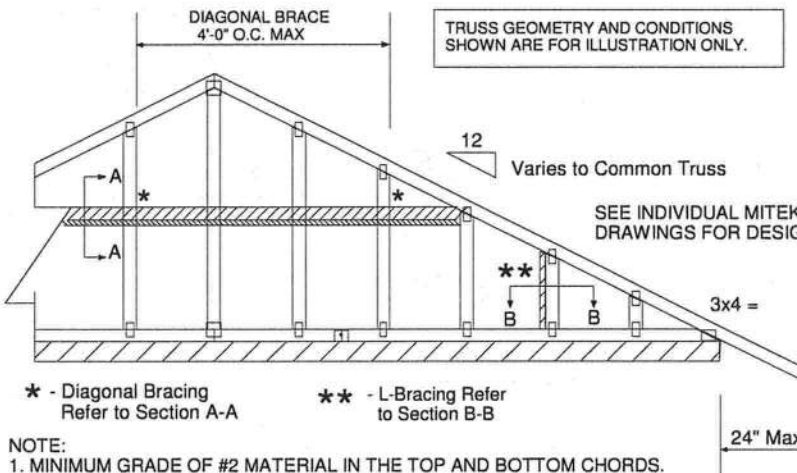
Typical 1/4 L-Brace Nailed To  
2x Verticals W/10d Nails spaced 6" o.c.

Vertical Stud

SECTION B-B



MiTek USA, Inc. Page 1 of 2



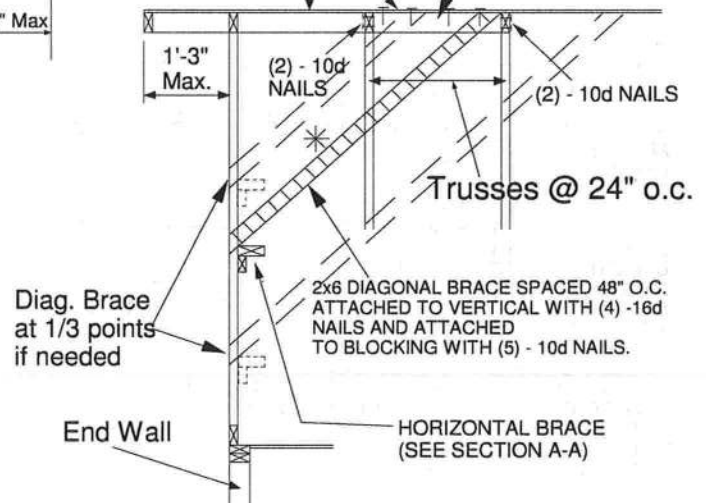
NOTE:

1. MINIMUM GRADE OF #2 MATERIAL IN THE TOP AND BOTTOM CHORDS.
2. CONNECTION BETWEEN BOTTOM CHORD OF GABLE END TRUSS AND WALL TO BE PROVIDED BY PROJECT ENGINEER OR ARCHITECT.
3. BRACING SHOWN IS FOR INDIVIDUAL TRUSS ONLY. CONSULT BLDG. ARCHITECT OR ENGINEER FOR TEMPORARY AND PERMANENT BRACING OF ROOF SYSTEM.
4. "L" BRACES SPECIFIED ARE TO BE FULL LENGTH. GRADES: 1x4 SRB OR 2x4 STUD OR BETTER WITH ONE ROW OF 10d NAILS SPACED 6" O.C.
5. DIAGONAL BRACE TO BE APPROXIMATELY 45 DEGREES TO ROOF DIAPHRAM AT 4'-0" O.C.
6. CONSTRUCT HORIZONTAL BRACE CONNECTING A 2x6 STUD AND A 2x4 STUD AS SHOWN WITH 16d NAILS SPACED 6" O.C. HORIZONTAL BRACE TO BE LOCATED AT THE MIDSPAN OF THE LONGEST STUD. ATTACH TO VERTICAL STUDS WITH (4) 10d NAILS THROUGH 2x4. (REFER TO SECTION A-A)
7. GABLE STUD DEFLECTION MEETS OR EXCEEDS L/240.
8. THIS DETAIL DOES NOT APPLY TO STRUCTURAL GABLES.
9. DO NOT USE FLAT BOTTOM CHORD GABLES NEXT TO SCISSOR TYPE TRUSSES.
10. SOUTHERN PINE LUMBER DESIGN VALUES ARE THOSE EFFECTIVE 06-01-13 BY SPIB/ALSC.
11. NAILS DESIGNATED 10d ARE (0.131" X 3") AND NAILS DESIGNATED 16d ARE (0.131" X 3.5")

PROVIDE 2x4 BLOCKING BETWEEN THE FIRST TWO TRUSSES AS NOTED. TOENAIL BLOCKING TO TRUSSES WITH (2) - 10d NAILS AT EACH END. ATTACH DIAGONAL BRACE TO BLOCKING WITH (5) - 10d NAILS.

(4) - 8d (0.131" X 2.5") NAILS MINIMUM, PLYWOOD SHEATHING TO 2x4 STD SPF BLOCK

Roof Sheathing



Minimum Stud Size Species and Grade	Stud Spacing	Without Brace	1x4 L-Brace	2x4 L-Brace	DIAGONAL BRACE	2 DIAGONAL BRACES AT 1/3 POINTS
		Maximum Stud Length				
2x4 SP No. 3 / Stud	12" O.C.	4-0-7	4-5-6	6-3-8	8-0-15	12-1-6
2x4 SP No. 3 / Stud	16" O.C.	3-8-0	3-10-4	5-5-6	7-4-1	11-0-1
2x4 SP No. 3 / Stud	24" O.C.	3-0-10	3-1-12	4-5-6	6-1-5	9-1-15

- \* Diagonal braces over 6'-3" require a 2x4 T-Brace attached to one edge. Diagonal braces over 12'-6" require 2x4 I-braces attached to both edges. Fasten T and I braces to narrow edge of diagonal brace with 10d nails 8" o.c., with 3" minimum end distance. Brace must cover 90% of diagonal length.

MAX MEAN ROOF HEIGHT = 30 FEET  
CATEGORY II BUILDING  
EXPOSURE B or C  
ASCE 7-98, ASCE 7-02, ASCE 7-05 130 MPH  
ASCE 7-10 160 MPH  
DURATION OF LOAD INCREASE : 1.60

STUD DESIGN IS BASED ON COMPONENTS AND CLADDING.  
CONNECTION OF BRACING IS BASED ON MWFRS.



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Date:

February 12, 2018



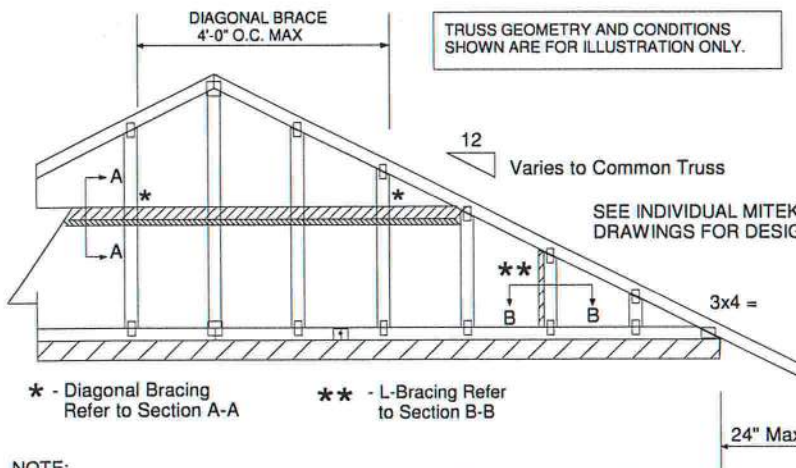
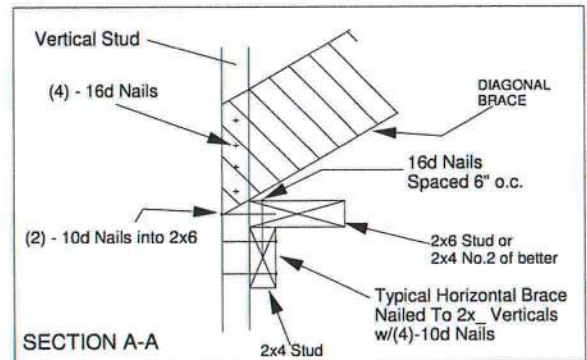
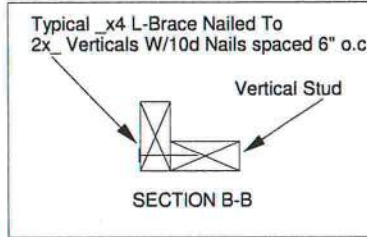
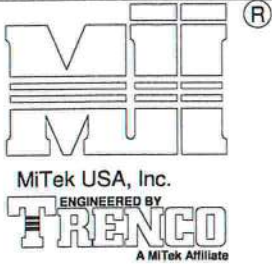
JANUARY 6, 2017

## Standard Gable End Detail

MII-GE140-001

MiTek USA, Inc.

Page 1 of 2



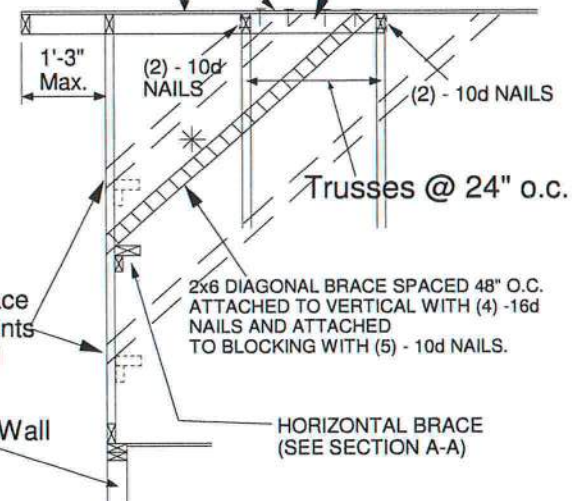
TRUSS GEOMETRY AND CONDITIONS SHOWN ARE FOR ILLUSTRATION ONLY.

SEE INDIVIDUAL MITTEK ENGINEERING DRAWINGS FOR DESIGN CRITERIA

PROVIDE 2x4 BLOCKING BETWEEN THE FIRST TWO TRUSSES AS NOTED. TOENAIL BLOCKING TO TRUSSES WITH (2) - 10d NAILS AT EACH END. ATTACH DIAGONAL BRACE TO BLOCKING WITH (5) - 10d NAILS.

(4) - 8d (0.131" X 2.5") NAILS MINIMUM, PLYWOOD SHEATHING TO 2x4 STD DF/SPF BLOCK

Roof Sheathing



Diag. Brace at 1/3 points if needed

End Wall

HORIZONTAL BRACE (SEE SECTION A-A)

## NOTE:

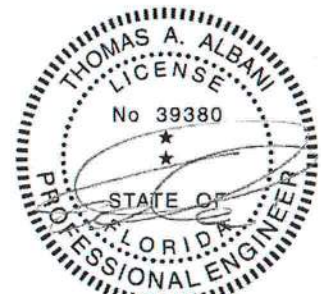
1. MINIMUM GRADE OF #2 MATERIAL IN THE TOP AND BOTTOM CHORDS.
2. CONNECTION BETWEEN BOTTOM CHORD OF GABLE END TRUSS AND WALL TO BE PROVIDED BY PROJECT ENGINEER OR ARCHITECT.
3. BRACING SHOWN IS FOR INDIVIDUAL TRUSS ONLY. CONSULT BLDG. ARCHITECT OR ENGINEER FOR TEMPORARY AND PERMANENT BRACING OF ROOF SYSTEM.
4. "L" BRACES SPECIFIED ARE TO BE FULL LENGTH. GRADES: 1x4 SRB OR 2x4 STUD OR BETTER WITH ONE ROW OF 10d NAILS SPACED 6" O.C.
5. DIAGONAL BRACE TO BE APPROXIMATELY 45 DEGREES TO ROOF DIAPHRAM AT 4'-0" O.C.
6. CONSTRUCT HORIZONTAL BRACE CONNECTING A 2x6 STUD AND A 2x4 STUD AS SHOWN WITH 16d NAILS SPACED 6" O.C. HORIZONTAL BRACE TO BE LOCATED AT THE MIDSPAN OF THE LONGEST STUD. ATTACH TO VERTICAL STUDS WITH (4) 10d NAILS THROUGH 2x4. (REFER TO SECTION A-A)
7. GABLE STUD DEFLECTION MEETS OR EXCEEDS  $L/240$ .
8. THIS DETAIL DOES NOT APPLY TO STRUCTURAL GABLES.
9. DO NOT USE FLAT BOTTOM CHORD GABLES NEXT TO SCISSOR TYPE TRUSSES.
10. NAILS DESIGNATED 10d ARE (0.131" X 3") AND NAILS DESIGNATED 16d ARE (0.131" X 3.5")

Minimum Stud Size Species and Grade	Stud Spacing	Without Brace	1x4 L-Brace	2x4 L-Brace	DIAGONAL BRACE	2 DIAGONAL BRACES AT 1/3 POINTS
		Maximum Stud Length				
2x4 DF/SPF Std/Stud	12" O.C.	3-10-1	3-11-7	5-7-2	7-8-2	11-6-4
2x4 DF/SPF Std/Stud	16" O.C.	3-3-14	3-5-1	4-10-2	6-7-13	9-11-11
2x4 DF/SPF Std/Stud	24" O.C.	2-8-9	2-9-8	3-11-7	5-5-2	8-1-12

- \* Diagonal braces over 6'-3" require a 2x4 T-Brace attached to one edge. Diagonal braces over 12'-6" require 2x4 I-braces attached to both edges. Fasten T and I braces to narrow edge of web with 10d nails 8" o.c., with 3" minimum end distance. Brace must cover 90% of diagonal length.

MAXIMUM WIND SPEED = 140 MPH  
MAX MEAN ROOF HEIGHT = 30 FEET  
CATEGORY II BUILDING  
EXPOSURE B or C  
ASCE 7-98, ASCE 7-02, ASCE 7-05  
DURATION OF LOAD INCREASE : 1.60

STUD DESIGN IS BASED ON COMPONENTS AND CLADDING.  
CONNECTION OF BRACING IS BASED ON MWFRS.



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Date:

January 19, 2018



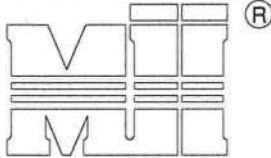
AUGUST 1, 2016

## Standard Gable End Detail

MII-GE170-D-SP

MITek USA, Inc.

Page 1 of 2



MITek USA, Inc.

ENGINEERED BY  
**TRENCO**

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DIAGONAL BRACE  
4'-0" O.C. MAXTypical 2x4 L-Brace Nailed To  
2x4 Verticals W/10d Nails spaced 6" o.c.

Vertical Stud

SECTION B-B

TRUSS GEOMETRY AND CONDITIONS  
SHOWN ARE FOR ILLUSTRATION ONLY.

Varies to Common Truss

SEE INDIVIDUAL MITEK ENGINEERING  
DRAWINGS FOR DESIGN CRITERIA

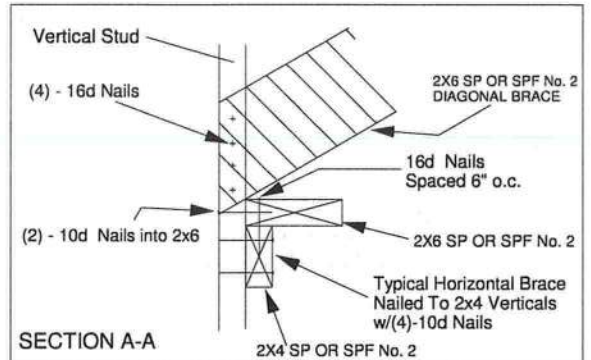
3x4 =

24" Max

\* - Diagonal Bracing  
Refer to Section A-A\*\* - L-Bracing Refer  
to Section B-B

## NOTE:

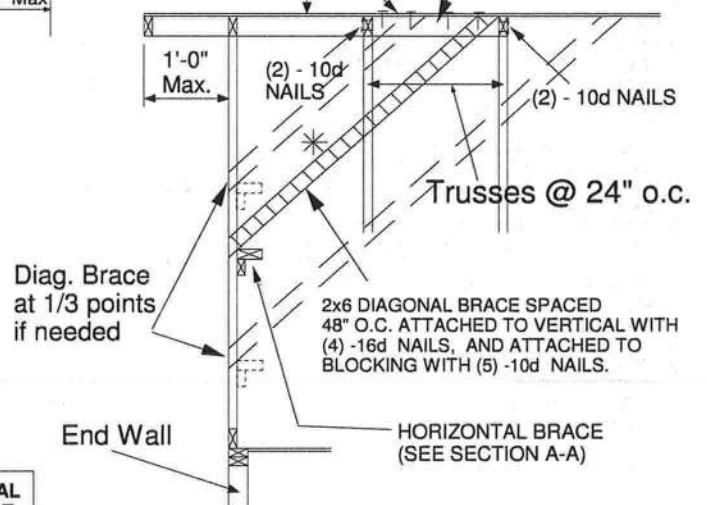
1. MINIMUM GRADE OF #2 MATERIAL IN THE TOP AND BOTTOM CHORDS.
2. CONNECTION BETWEEN BOTTOM CHORD OF GABLE END TRUSS AND WALL TO BE PROVIDED BY PROJECT ENGINEER OR ARCHITECT.
3. BRACING SHOWN IS FOR INDIVIDUAL TRUSS ONLY. CONSULT BLDG. ARCHITECT OR ENGINEER FOR TEMPORARY AND PERMANENT BRACING OF ROOF SYSTEM.
4. "L" BRACES SPECIFIED ARE TO BE FULL LENGTH, SPF or SP No.3 OR BETTER WITH ONE ROW OF 10d NAILS SPACED 6" O.C.
5. DIAGONAL BRACE TO BE APPROXIMATELY 45 DEGREES TO ROOF DIAPHRAM AT 4'-0" O.C.
6. CONSTRUCT HORIZONTAL BRACE CONNECTING A 2x6 AND A 2x4 AS SHOWN WITH 16d NAILS SPACED 6" O.C. HORIZONTAL BRACE TO BE LOCATED AT THE MIDSPAN OF THE LONGEST GABLE STUD. ATTACH TO VERTICAL GABLE STUDS WITH (4) 10d NAILS THROUGH 2x4. (REFER TO SECTION A-A)
7. GABLE STUD DEFLECTION MEETS OR EXCEEDS  $L/240$ .
8. THIS DETAIL DOES NOT APPLY TO STRUCTURAL GABLES.
9. DO NOT USE FLAT BOTTOM CHORD GABLES NEXT TO SCISSOR TYPE TRUSSES.
10. SOUTHERN PINE LUMBER DESIGN VALUES ARE THOSE EFFECTIVE 06-01-13 BY SPIB/ALSC.
11. NAILS DESIGNATED 10d ARE (0.131" X 3") AND NAILS DESIGNATED 16d ARE (0.131" X 3.5")



PROVIDE 2x4 BLOCKING BETWEEN THE FIRST TWO TRUSSES AS NOTED. TOENAIL BLOCKING TO TRUSSES WITH (2) - 10d NAILS AT EACH END. ATTACH DIAGONAL BRACE TO BLOCKING WITH (5) - 10d NAILS.

(4) - 8d (0.131" X 2.5") NAILS MINIMUM, PLYWOOD SHEATHING TO 2x4 STD SPF BLOCK

Roof Sheathing



Minimum Stud Size Species and Grade	Stud Spacing	Without Brace	2x4 L-Brace	DIAGONAL BRACE	2 DIAGONAL BRACES AT 1/3 POINTS
		Maximum Stud Length			
2x4 SP No. 3 / Stud	12" O.C.	3-9-7	5-8-8	6-11-1	11-4-4
2x4 SP No. 3 / Stud	16" O.C.	3-4-12	4-11-15	6-9-8	10-2-3
2x4 SP No. 3 / Stud	24" O.C.	2-9-4	4-0-7	5-6-8	8-3-13
2x4 SP No. 2	12" O.C.	3-11-13	5-8-8	6-11-1	11-11-7
2x4 SP No. 2	16" O.C.	3-7-7	4-11-5	6-11-1	10-10-5
2x4 SP No. 2	24" O.C.	3-1-15	4-0-7	6-3-14	9-5-14

- \* Diagonal braces over 6'-3" require a 2x4 T-Brace attached to one edge. Diagonal braces over 12'-6" require 2x4 l-braces attached to both edges. Fasten T and l braces to narrow edge of diagonal brace with 10d nails 6" o.c., with 3" minimum end distance. Brace must cover 90% of diagonal length. T or l braces must be 2x4 SPF No. 2 or SP No. 2.

MAX MEAN ROOF HEIGHT = 30 FEET  
EXPOSURE D  
ASCE 7-10 170 MPH  
DURATION OF LOAD INCREASE : 1.60

STUD DESIGN IS BASED ON COMPONENTS AND CLADDING.  
CONNECTION OF BRACING IS BASED ON MWFRS.



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Date:

February 12, 2018

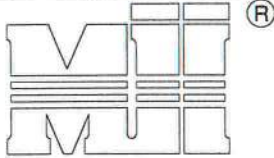


AUGUST 1, 2016

## Standard Gable End Detail

MII-GE180-D-SP

MiTek USA, Inc. Page 1 of 2



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ENGINEERED BY  
**TRENCO**

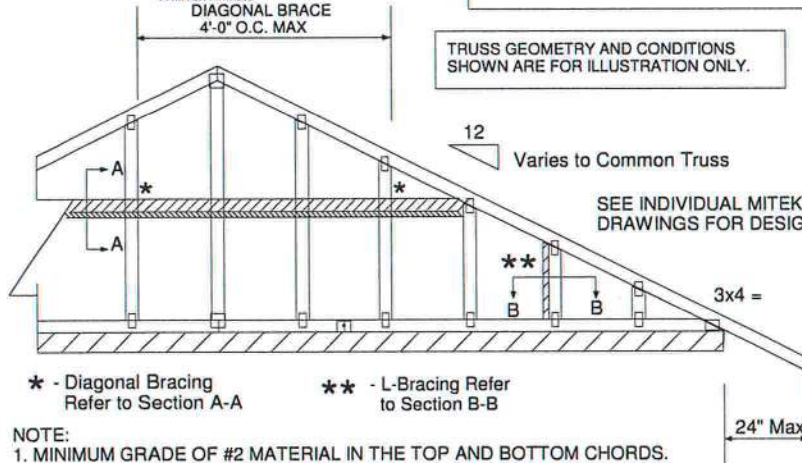
A MiTek Affiliate  
DIAGONAL BRACE  
4'-0" O.C. MAX

Typical 2x4 L-Brace Nailed To  
2x4 Verticals W/10d Nails spaced 6" o.c.

Vertical Stud

SECTION B-B

TRUSS GEOMETRY AND CONDITIONS  
SHOWN ARE FOR ILLUSTRATION ONLY.



\* - Diagonal Bracing  
Refer to Section A-A

\*\* - L-Bracing Refer  
to Section B-B

## NOTE:

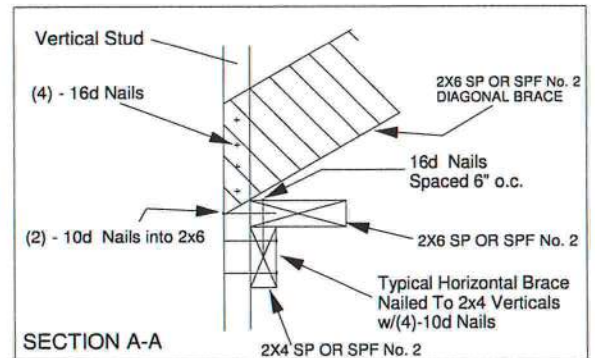
1. MINIMUM GRADE OF #2 MATERIAL IN THE TOP AND BOTTOM CHORDS.
2. CONNECTION BETWEEN BOTTOM CHORD OF GABLE END TRUSS AND WALL TO BE PROVIDED BY PROJECT ENGINEER OR ARCHITECT.
3. BRACING SHOWN IS FOR INDIVIDUAL TRUSS ONLY. CONSULT BLDG. ARCHITECT OR ENGINEER FOR TEMPORARY AND PERMANENT BRACING OF ROOF SYSTEM.
4. "L" BRACES SPECIFIED ARE TO BE FULL LENGTH, SPF OR SP No.3 OR BETTER WITH ONE ROW OF 10d NAILS SPACED 6" O.C.
5. DIAGONAL BRACE TO BE APPROXIMATELY 45 DEGREES TO ROOF DIAPHRAM AT 4'-0" O.C.
6. CONSTRUCT HORIZONTAL BRACE CONNECTING A 2x6 AND A 2x4 AS SHOWN WITH 16d NAILS SPACED 6" O.C. HORIZONTAL BRACE TO BE LOCATED AT THE MIDSPAN OF THE LONGEST GABLE STUD. ATTACH TO VERTICAL GABLE STUDS WITH (4) 10d NAILS THROUGH 2x4. (REFER TO SECTION A-A)
7. GABLE STUD DEFLECTION MEETS OR EXCEEDS L/240.
8. THIS DETAIL DOES NOT APPLY TO STRUCTURAL GABLES.
9. DO NOT USE FLAT BOTTOM CHORD GABLES NEXT TO SCISSOR TYPE TRUSSES.
10. SOUTHERN PINE LUMBER DESIGN VALUES ARE THOSE EFFECTIVE 06-01-13 BY SPIB/ALSC.
11. NAILS DESIGNATED 10d ARE (0.131" X 3") AND NAILS DESIGNATED 16d ARE (0.131" X 3.5")

Minimum Stud Size Species and Grade	Stud Spacing	Without Brace	2x4 L-Brace	DIAGONAL BRACE	2 DIAGONAL BRACES AT 1/3 POINTS
		Maximum Stud Length			
2x4 SP No. 3 / Stud	12" O.C.	3-7-12	5-4-11	6-2-1	10-11-3
2x4 SP No. 3 / Stud	16" O.C.	3-2-8	4-8-1	6-2-1	9-7-7
2x4 SP No. 3 / Stud	24" O.C.	2-7-7	3-9-12	5-2-13	7-10-4
2x4 SP No. 2	12" O.C.	3-10-0	5-4-11	6-2-1	11-6-1
2x4 SP No. 2	16" O.C.	3-5-13	4-8-1	6-2-1	10-5-7
2x4 SP No. 2	24" O.C.	3-0-8	3-9-12	6-1-1	9-1-9

- \* Diagonal braces over 6'-3" require a 2x4 T-Brace attached to one edge. Diagonal braces over 12'-6" require 2x4 l-braces attached to both edges. Fasten T and l braces to narrow edge of diagonal brace with 10d nails 6in o.c., with 3in minimum end distance. Brace must cover 90% of diagonal length. T or l braces must be 2x4 SPF No. 2 or SP No. 2.

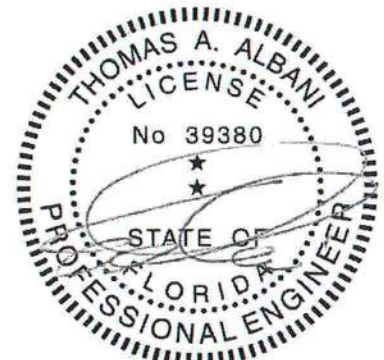
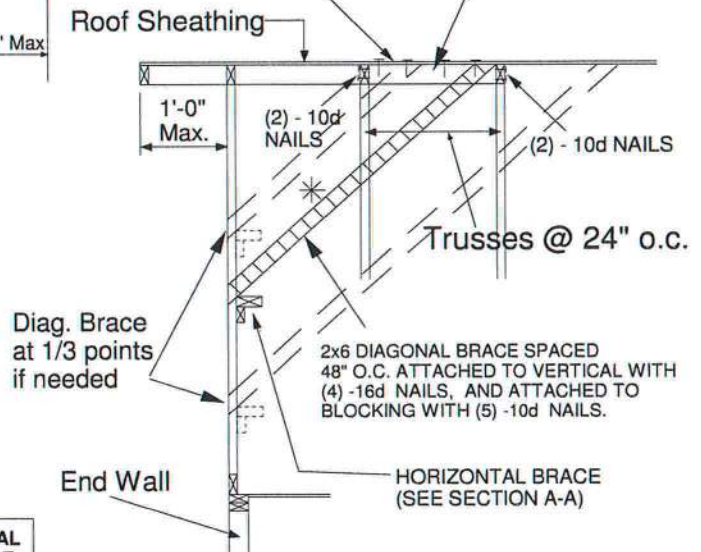
MAX MEAN ROOF HEIGHT = 30 FEET  
EXPOSURE D  
ASCE 7-10 180 MPH  
DURATION OF LOAD INCREASE : 1.60

STUD DESIGN IS BASED ON COMPONENTS AND CLADDING.  
CONNECTION OF BRACING IS BASED ON MWFRS.



PROVIDE 2x4 BLOCKING BETWEEN THE FIRST TWO TRUSSES AS NOTED. TOENAIL BLOCKING TO TRUSSES WITH (2) - 10d NAILS AT EACH END. ATTACH DIAGONAL BRACE TO BLOCKING WITH (5) - 10d NAILS.

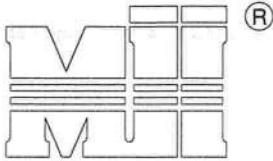
(4) - 8d (0.131" X 2.5") NAILS MINIMUM, PLYWOOD SHEATHING TO 2x4 STD SPF BLOCK



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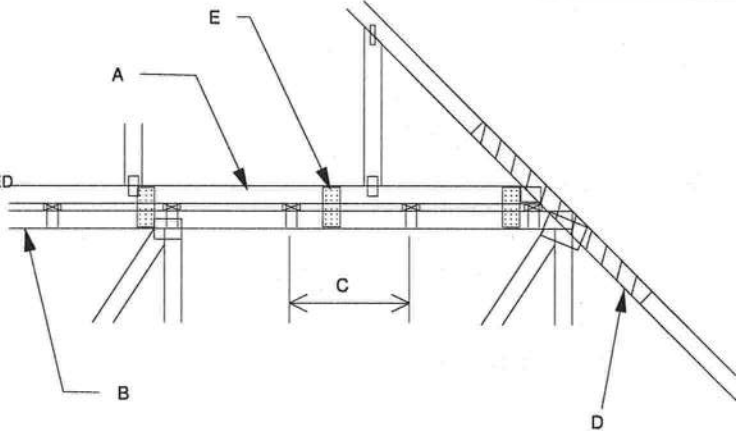
MiTek USA, Inc.

**ENGINEERED BY**  
**TRENCO**  
 A MiTek Affiliate

MAXIMUM WIND SPEED = REFER TO NOTES D AND OR E  
 MAX MEAN ROOF HEIGHT = 30 FEET  
 MAX TRUSS SPACING = 24" O.C.  
 CATEGORY II BUILDING  
 EXPOSURE B or C  
 ASCE 7-10  
 DURATION OF LOAD INCREASE : 1.60

DETAIL IS NOT APPLICABLE FOR TRUSSES  
 TRANSFERRING DRAG LOADS (SHEAR TRUSSES).  
 ADDITIONAL CONSIDERATIONS BY BUILDING  
 ENGINEER/DESIGNER ARE REQUIRED.

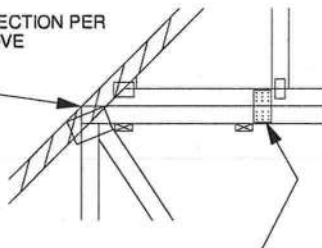
- A - PIGGYBACK TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING. SHALL BE CONNECTED TO EACH PURLIN WITH (2) (0.131" X 3.5") TOE-NAILED.
- B - BASE TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING.
- C - PURLINS AT EACH BASE TRUSS JOINT AND A MAXIMUM 24" O.C. UNLESS SPECIFIED CLOSER ON MITEK TRUSS DESIGN DRAWING. CONNECT TO BASE TRUSS WITH (2) (0.131" X 3.5") NAILS EACH.
- D - 2 X 4'-0" SCAB, SIZE TO MATCH TOP CHORD OF PIGGYBACK TRUSS, MIN GRADE #2, ATTACHED TO ONE FACE, CENTERED ON INTERSECTION, WITH (2) ROWS OF (0.131" X 3") NAILS @ 4" O.C. SCAB MAY BE OMITTED PROVIDED THE TOP CHORD SHEATHING IS CONTINUOUS OVER INTERSECTION AT LEAST 1 FT. IN BOTH DIRECTIONS AND:  
 1. WIND SPEED OF 115 MPH OR LESS FOR ANY PIGGYBACK SPAN, OR  
 2. WIND SPEED OF 116 MPH TO 160 MPH WITH A MAXIMUM PIGGYBACK SPAN OF 12 ft.
- E - FOR WIND SPEEDS BETWEEN 126 AND 160 MPH, ATTACH MITEK 3X8 20 GA Nail-On PLATES TO EACH FACE OF TRUSSES AT 72" O.C. W/ (4) (0.131" X 1.5") NAILS PER MEMBER. STAGGER NAILS FROM OPPOSING FACES. ENSURE 0.5" EDGE DISTANCE. (MIN. 2 PAIRS OF PLATES REQ. REGARDLESS OF SPAN)



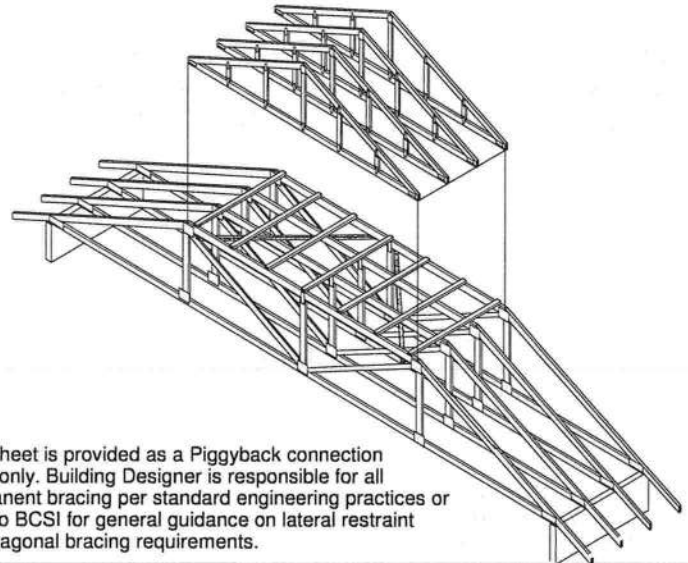
#### WHEN NO GAP BETWEEN PIGGYBACK AND BASE TRUSS EXISTS:

REPLACE TOE NAILING OF PIGGYBACK TRUSS TO PURLINS WITH Nail-On PLATES AS SHOWN, AND INSTALL PURLINS TO BOTTOM EDGE OF BASE TRUSS TOP CHORD AT SPECIFIED SPACING SHOWN ON BASE TRUSS MITEK DESIGN DRAWING.

SCAB CONNECTION PER  
NOTE D ABOVE

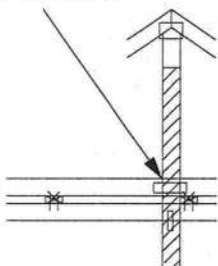


FOR ALL WIND SPEEDS, ATTACH MITEK 3X6 20 GA Nail-On PLATES TO EACH FACE OF TRUSSES AT 48" O.C. W/ (4) (0.131" X 1.5") PER MEMBER. STAGGER NAILS FROM OPPOSING FACES ENSURE 0.5" EDGE DISTANCE.



This sheet is provided as a Piggyback connection detail only. Building Designer is responsible for all permanent bracing per standard engineering practices or refer to BCSI for general guidance on lateral restraint and diagonal bracing requirements.

VERTICAL WEB TO  
EXTEND THROUGH  
BOTTOM CHORD  
OF PIGGYBACK



#### FOR LARGE CONCENTRATED LOADS APPLIED TO CAP TRUSS REQUIRING A VERTICAL WEB:

- 1) VERTICAL WEBS OF PIGGYBACK AND BASE TRUSS MUST MATCH IN SIZE, GRADE, AND MUST LINE UP AS SHOWN IN DETAIL.
- 2) ATTACH 2 x 4'-0" SCAB TO EACH FACE OF TRUSS ASSEMBLY WITH 2 ROWS OF 10d (0.131" X 3") NAILS SPACED 4" O.C. FROM EACH FACE. (SIZE AND GRADE TO MATCH VERTICAL WEBS OF PIGGYBACK AND BASE TRUSS.) (MINIMUM 2X4)
- 3) THIS CONNECTION IS ONLY VALID FOR A MAXIMUM CONCENTRATED LOAD OF 4000 LBS (@1.15). REVIEW BY A QUALIFIED ENGINEER IS REQUIRED FOR LOADS GREATER THAN 4000 LBS.
- 4) FOR PIGGYBACK TRUSSES CARRYING GIRDER LOADS, NUMBER OF PLYS OF PIGGYBACK TRUSS TO MATCH BASE TRUSS.
- 5) CONCENTRATED LOAD MUST BE APPLIED TO BOTH THE PIGGYBACK AND THE BASE TRUSS DESIGN.



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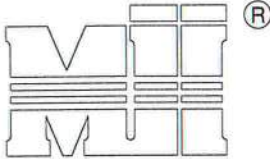


AUGUST 1, 2016

# STANDARD PIGGYBACK TRUSS CONNECTION DETAIL

MII-PIGGY-ALT  
7-10

MiTek USA, Inc. Page 1 of 1



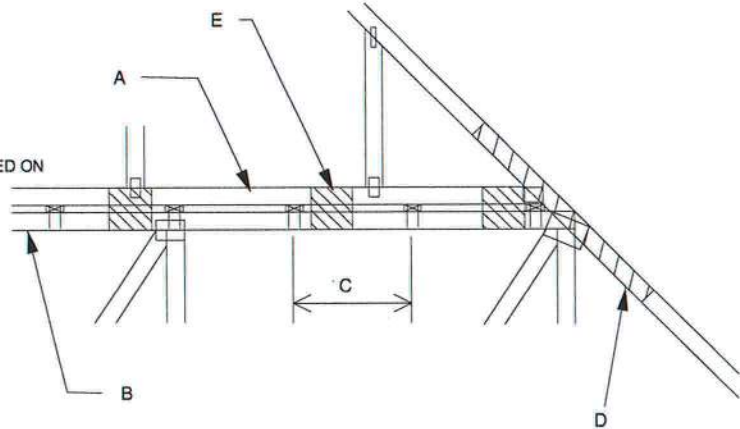
MiTek USA, Inc.



MAXIMUM WIND SPEED = REFER TO NOTES D AND OR E  
MAX MEAN ROOF HEIGHT = 30 FEET  
MAX TRUSS SPACING = 24" O.C.  
CATEGORY II BUILDING  
EXPOSURE B or C  
ASCE 7-10  
DURATION OF LOAD INCREASE : 1.60

DETAIL IS NOT APPLICABLE FOR TRUSSES  
TRANSFERING DRAG LOADS (SHEAR TRUSSES).  
ADDITIONAL CONSIDERATIONS BY BUILDING  
ENGINEER/DESIGNER ARE REQUIRED.

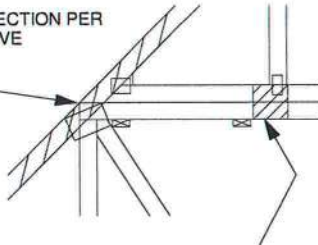
- A - PIGGYBACK TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING.  
SHALL BE CONNECTED TO EACH PURLIN  
WITH (2) 0(0.131" X 3.5") TOE-NAILED.
- B - BASE TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING.
- C - PURLINS AT EACH BASE TRUSS JOINT AND A MAXIMUM 24" O.C.  
UNLESS SPECIFIED CLOSER ON MITEK TRUSS DESIGN DRAWING.  
CONNECT TO BASE TRUSS WITH (2) 0(0.131" X 3.5") NAILS EACH.
- D - 2 X  $\frac{1}{2}$  X 4'-0" SCAB, SIZE TO MATCH TOP CHORD OF  
PIGGYBACK TRUSS, MIN GRADE #2, ATTACHED TO ONE FACE, CENTERED ON  
INTERSECTION, WITH (2) ROWS OF 0(0.131" X 3") NAILS @ 4" O.C.  
SCAB MAY BE OMITTED PROVIDED THE TOP CHORD SHEATHING  
IS CONTINUOUS OVER INTERSECTION AT LEAST 1 FT. IN BOTH  
DIRECTIONS AND:  
1. WIND SPEED OF 115 MPH OR LESS FOR ANY PIGGYBACK SPAN, OR  
2. WIND SPEED OF 116 MPH TO 160 MPH WITH A MAXIMUM  
PIGGYBACK SPAN OF 12 ft.
- E - FOR WIND SPEED IN THE RANGE 126 MPH - 160 MPH  
ADD 9" x 9" x 1/2" PLYWOOD (or 7/16" OSB) GUSSET  
EACH SIDE AT 48" O.C. OR LESS. ATTACH WITH  
3 - 6d (0.113" X 2") NAILS INTO EACH CHORD FROM  
EACH SIDE (TOTAL - 12 NAILS)



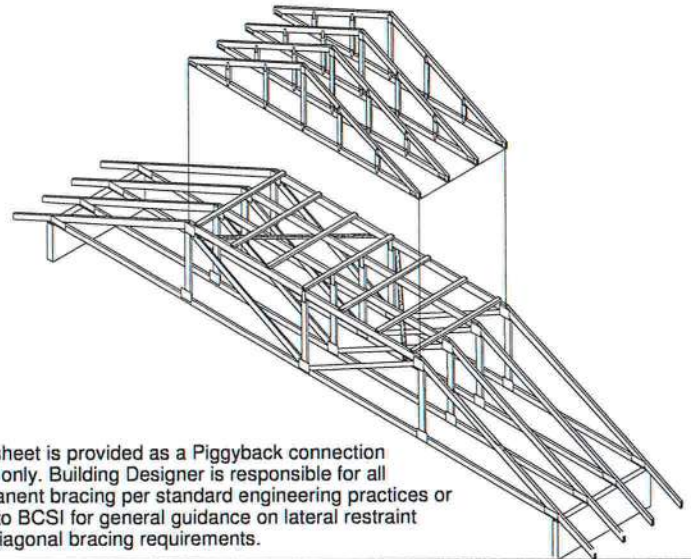
WHEN NO GAP BETWEEN PIGGYBACK AND BASE TRUSS EXISTS:

REPLACE TOE NAILING OF PIGGYBACK TRUSS TO PURLINS WITH PLYWOOD  
GUSSETS AS SHOWN, AND INSTALL PURLINS TO BOTTOM EDGE OF BASE  
TRUSS TOP CHORD AT SPECIFIED SPACING SHOWN ON BASE  
TRUSS MITEK DESIGN DRAWING.

SCAB CONNECTION PER  
NOTE D ABOVE

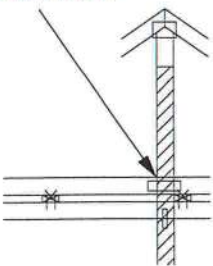


7" x 7" x 1/2" PLYWOOD (or 7/16" OSB) GUSSET EACH SIDE AT 24" O.C.  
ATTACH WITH 3 - 6d (0.113" X 2") NAILS INTO EACH CHORD  
FROM EACH SIDE (TOTAL - 12 NAILS)



This sheet is provided as a Piggyback connection  
detail only. Building Designer is responsible for all  
permanent bracing per standard engineering practices or  
refer to BCSI for general guidance on lateral restraint  
and diagonal bracing requirements.

VERTICAL WEB TO  
EXTEND THROUGH  
BOTTOM CHORD  
OF PIGGYBACK



FOR LARGE CONCENTRATED LOADS APPLIED  
TO CAP TRUSS REQUIRING A VERTICAL WEB:

- 1) VERTICAL WEBS OF PIGGYBACK AND BASE TRUSS  
MUST MATCH IN SIZE, GRADE, AND MUST LINE UP  
AS SHOWN IN DETAIL.
- 2) ATTACH 2 x  $\frac{1}{2}$  X 4'-0" SCAB TO EACH FACE OF  
TRUSS ASSEMBLY WITH 2 ROWS OF 10d (0.131" X 3") NAILS  
SPACED 4" O.C. FROM EACH FACE. (SIZE AND GRADE TO MATCH  
VERTICAL WEBS OF PIGGYBACK AND BASE TRUSS.)  
(MINIMUM 2X4)
- 3) THIS CONNECTION IS ONLY VALID FOR A MAXIMUM  
CONCENTRATED LOAD OF 4000 LBS (@1.15). REVIEW  
BY A QUALIFIED ENGINEER IS REQUIRED FOR LOADS  
GREATER THAN 4000 LBS.
- 4) FOR PIGGYBACK TRUSSES CARRYING GIRDER LOADS,  
NUMBER OF PLYS OF PIGGYBACK TRUSS TO MATCH BASE TRUSS.
- 5) CONCENTRATED LOAD MUST BE APPLIED TO BOTH  
THE PIGGYBACK AND THE BASE TRUSS DESIGN.



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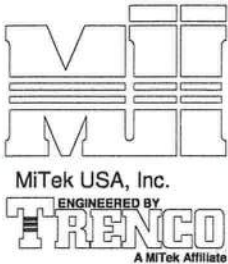


AUGUST 1, 2016

STANDARD REPAIR DETAIL FOR BROKEN CHORDS, WEBS  
AND DAMAGED OR MISSING CHORD SPLICE PLATES

MII-REP01A1

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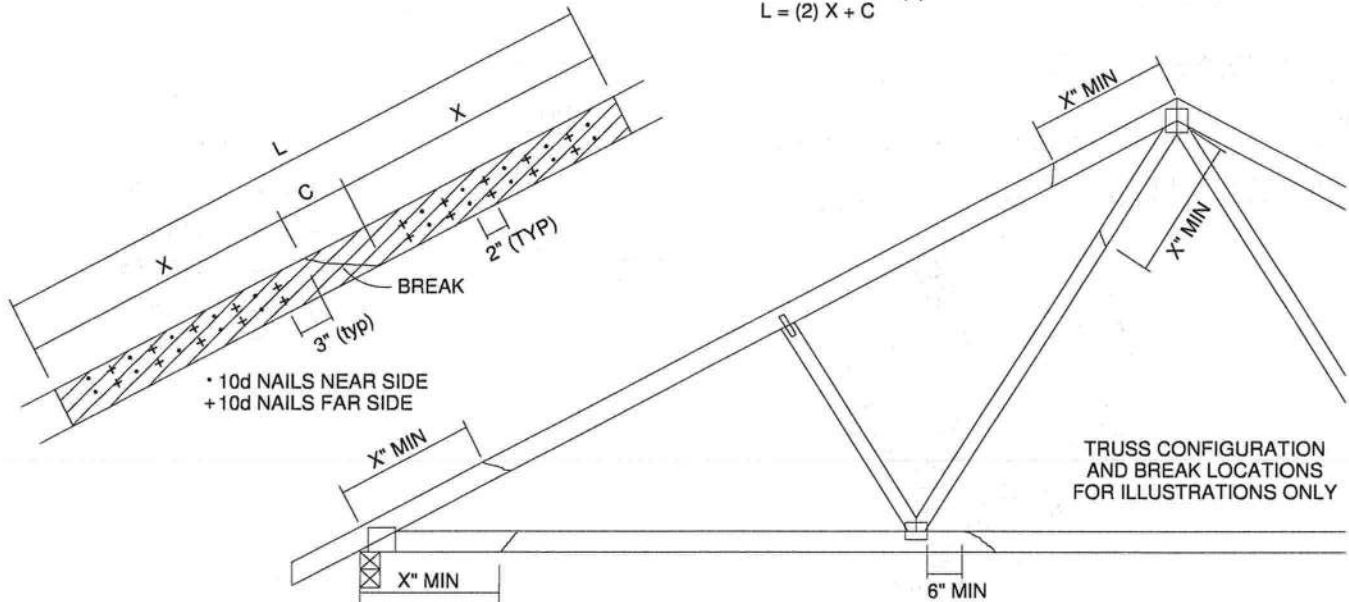


TOTAL NUMBER OF NAILS EACH SIDE OF BREAK *		X INCHES	MAXIMUM FORCE (lbs) 15% LOAD DURATION							
			SP		DF		SPF		HF	
2x4	2x6		2x4	2x6	2x4	2x6	2x4	2x6	2x4	2x6
20	30	24"	1706	2559	1561	2342	1320	1980	1352	2028
26	39	30"	2194	3291	2007	3011	1697	2546	1738	2608
32	48	36"	2681	4022	2454	3681	2074	3111	2125	3187
38	57	42"	3169	4754	2900	4350	2451	3677	2511	3767
44	66	48"	3657	5485	3346	5019	2829	4243	2898	4347

\* DIVIDE EQUALLY FRONT AND BACK

ATTACH 2x SCAB OF THE SAME SIZE AND GRADE AS THE BROKEN MEMBER TO EACH  
FACE OF THE TRUSS (CENTER ON BREAK OR SPLICE) WITH 10d (0.131" X 3") NAILS  
(TWO ROWS FOR 2x4, THREE ROWS FOR 2x6) SPACED 4" O.C. AS SHOWN.  
STAGGER NAIL SPACING FROM FRONT FACE AND BACK FACE FOR A NET 0-2-0 O.C.  
SPACING IN THE MAIN MEMBER. USE A MIN. 0-3-0 MEMBER END DISTANCE.

THE LENGTH OF THE BREAK (C) SHALL NOT EXCEED 12". (C=PLATE LENGTH FOR SPLICE REPAIRS)  
THE MINIMUM OVERALL SCAB LENGTH REQUIRED (L) IS CALCULATED AS FOLLOWS:  
 $L = (2) X + C$



THE LOCATION OF THE BREAK MUST BE GREATER THAN OR EQUAL TO THE REQUIRED X DIMENSION FROM ANY  
PERIMETER BREAK OR HEEL JOINT AND A MINIMUM OF 6" FROM ANY INTERIOR JOINT (SEE SKETCH ABOVE)

DO NOT USE REPAIR FOR JOINT SPLICES

## NOTES:

1. THIS REPAIR DETAIL IS TO BE USED ONLY FOR THE APPLICATION SHOWN. THIS REPAIR DOES NOT IMPLY THAT THE REMAINING PORTION OF THE TRUSS IS UNDAMAGED. THE ENTIRE TRUSS SHALL BE INSPECTED TO VERIFY THAT NO FURTHER REPAIRS ARE REQUIRED. WHEN THE REQUIRED REPAIRS ARE PROPERLY APPLIED, THE TRUSS WILL BE CAPABLE OF SUPPORTING THE LOADS INDICATED.
2. ALL MEMBERS MUST BE RETURNED TO THEIR ORIGINAL POSITIONS BEFORE APPLYING REPAIR AND HELD IN PLACE DURING APPLICATION OF REPAIR.
3. THE END DISTANCE, EDGE DISTANCE AND SPACING OF NAILS SHALL BE SUCH AS TO AVOID UNUSUAL SPLITTING OF THE WOOD.
4. WHEN NAILING THE SCABS, THE USE OF A BACKUP WEIGHT IS RECOMMENDED TO AVOID LOOSENING OF THE CONNECTOR PLATES AT THE JOINTS OR SPLICES.
5. THIS REPAIR IS TO BE USED FOR SINGLE PLY TRUSSES IN THE 2x ORIENTATION ONLY.
6. THIS REPAIR IS LIMITED TO TRUSSES WITH NO MORE THAN THREE BROKEN MEMBERS.



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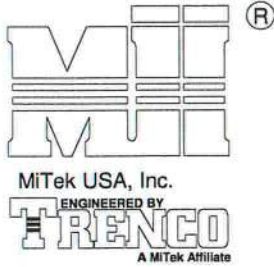
AUGUST 1, 2016

## LATERAL TOE-NAIL DETAIL

MII-TOENAIL\_SP

MiTek USA, Inc.

Page 1 of 1



## NOTES:

1. TOE-NAILS SHALL BE DRIVEN AT AN ANGLE OF 45 DEGREES WITH THE MEMBER AND MUST HAVE FULL WOOD SUPPORT. (NAIL MUST BE DRIVEN THROUGH AND EXIT AT THE BACK CORNER OF THE MEMBER END AS SHOWN.)
2. THE END DISTANCE, EDGE DISTANCE, AND SPACING OF NAILS SHALL BE SUCH AS TO AVOID UNUSUAL SPLITTING OF THE WOOD.
3. ALLOWABLE VALUE SHALL BE THE LESSER VALUE OF THE TWO SPECIES FOR MEMBERS OF DIFFERENT SPECIES.

THIS DETAIL APPLICABLE TO THE  
THREE END DETAILS SHOWN BELOW

VIEWS SHOWN ARE FOR  
ILLUSTRATION PURPOSES ONLY

TOE-NAIL SINGLE SHEAR VALUES PER NDS 2001 (lb/nail)

	DIAM.	SP	DF	HF	SPF	SPF-S
3.5" LONG	.131	88.0	80.6	69.9	68.4	59.7
	.135	93.5	85.6	74.2	72.6	63.4
	.162	108.8	99.6	86.4	84.5	73.8
3.25" LONG	.128	74.2	67.9	58.9	57.6	50.3
	.131	75.9	69.5	60.3	59.0	51.1
	.148	81.4	74.5	64.6	63.2	52.5

VALUES SHOWN ARE CAPACITY PER TOE-NAIL.  
APPLICABLE DURATION OF LOAD INCREASES MAY BE APPLIED.

## EXAMPLE:

(3) - 16d (0.162" X 3.5") NAILS WITH SPF SPECIES BOTTOM CHORD

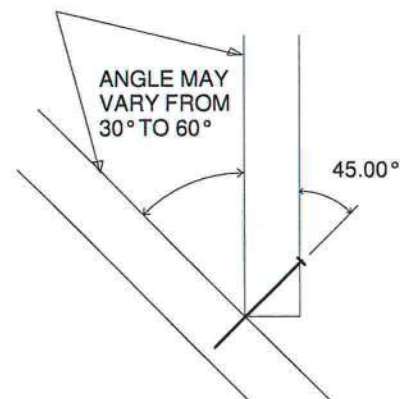
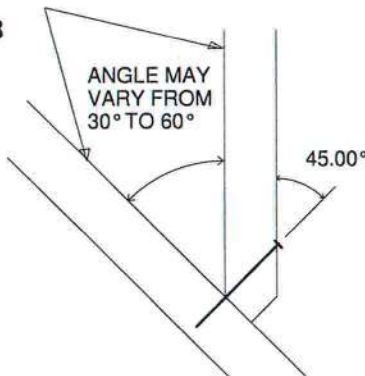
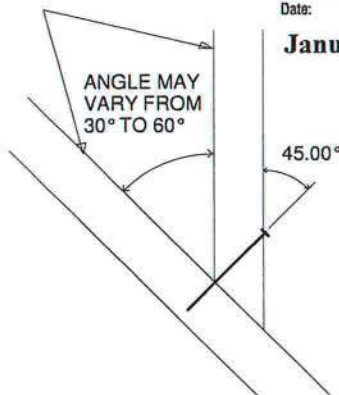
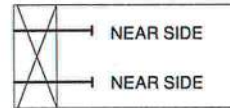
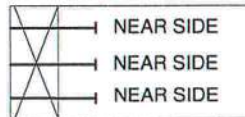
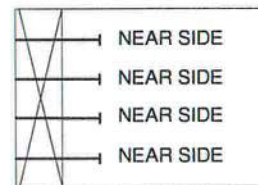
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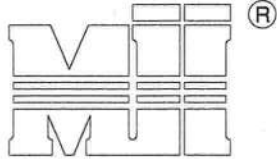


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January 19, 2018

SIDE VIEW  
(2x3)  
2 NAILSSIDE VIEW  
(2x4)  
3 NAILSSIDE VIEW  
(2x6)  
4 NAILS

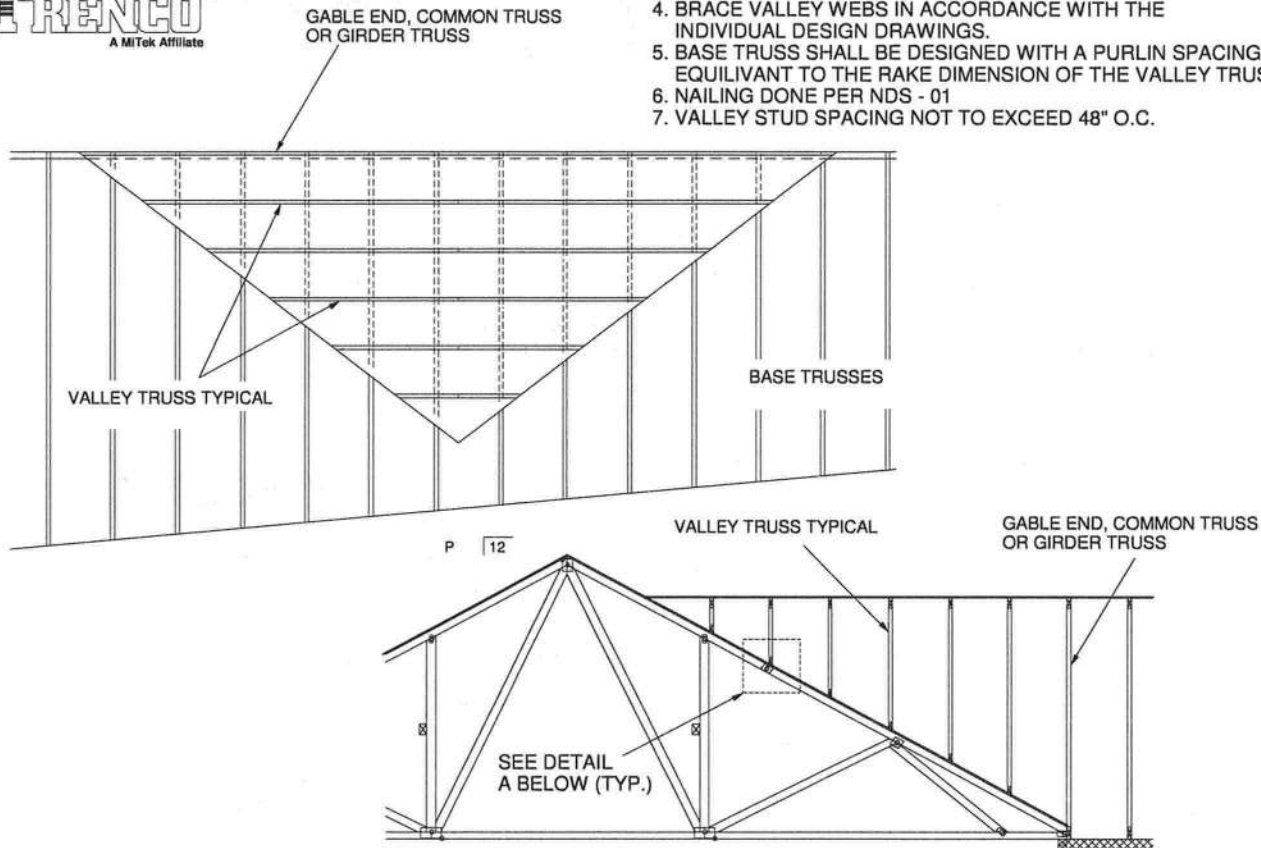




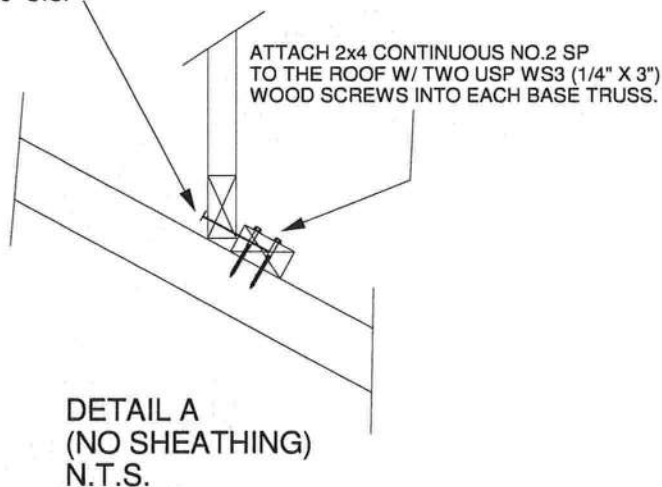
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## GENERAL SPECIFICATIONS

1. NAIL SIZE 10d (0.131" X 3")
2. WOOD SCREW = 3" WS3 USP OR EQUIVALENT  
DO NOT USE DRYWALL OR DECKING TYPE SCREW
3. INSTALL VALLEY TRUSSES (24" O.C. MAXIMUM) AND SECURE PER DETAIL A
4. BRACE VALLEY WEBS IN ACCORDANCE WITH THE INDIVIDUAL DESIGN DRAWINGS.
5. BASE TRUSS SHALL BE DESIGNED WITH A PURLIN SPACING EQUIVANT TO THE RAKE DIMENSION OF THE VALLEY TRUSS SPACING.
6. NAILING DONE PER NDS - 01
7. VALLEY STUD SPACING NOT TO EXCEED 48" O.C.



SECURE VALLEY TRUSS  
W/ ONE ROW OF 10d  
NAILS 6" O.C.



DETAIL A  
(NO SHEATHING)  
N.T.S.

WIND DESIGN PER ASCE 7-98, ASCE 7-02, ASCE 7-05 146 MPH  
WIND DESIGN PER ASCE 7-10 160 MPH  
MAX MEAN ROOF HEIGHT = 30 FEET  
ROOF PITCH = MINIMUM 3/12 MAXIMUM 6/12  
CATEGORY II BUILDING  
EXPOSURE C  
WIND DURATION OF LOAD INCREASE : 1.60  
MAX TOP CHORD TOTAL LOAD = 50 PSF  
MAX SPACING = 24" O.C. (BASE AND VALLEY)  
MINIMUM REDUCED DEAD LOAD OF 6 PSF  
ON THE TRUSSES



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January 19, 2018

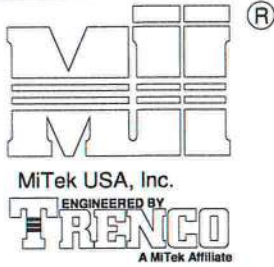
AUGUST 1, 2016

# TRUSSED VALLEY SET DETAIL

MII-VALLEY HIGH WIND2

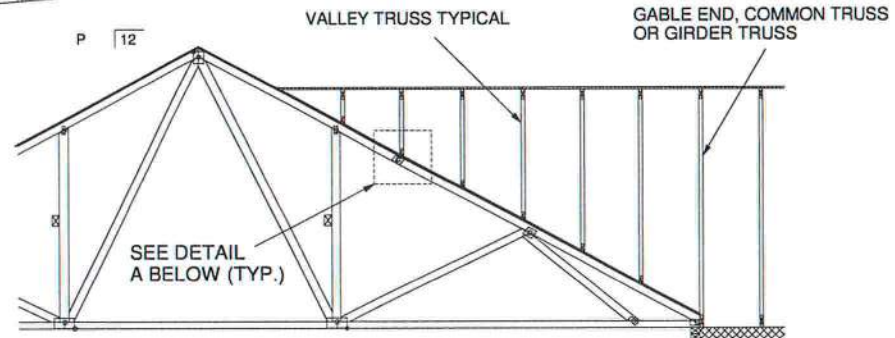
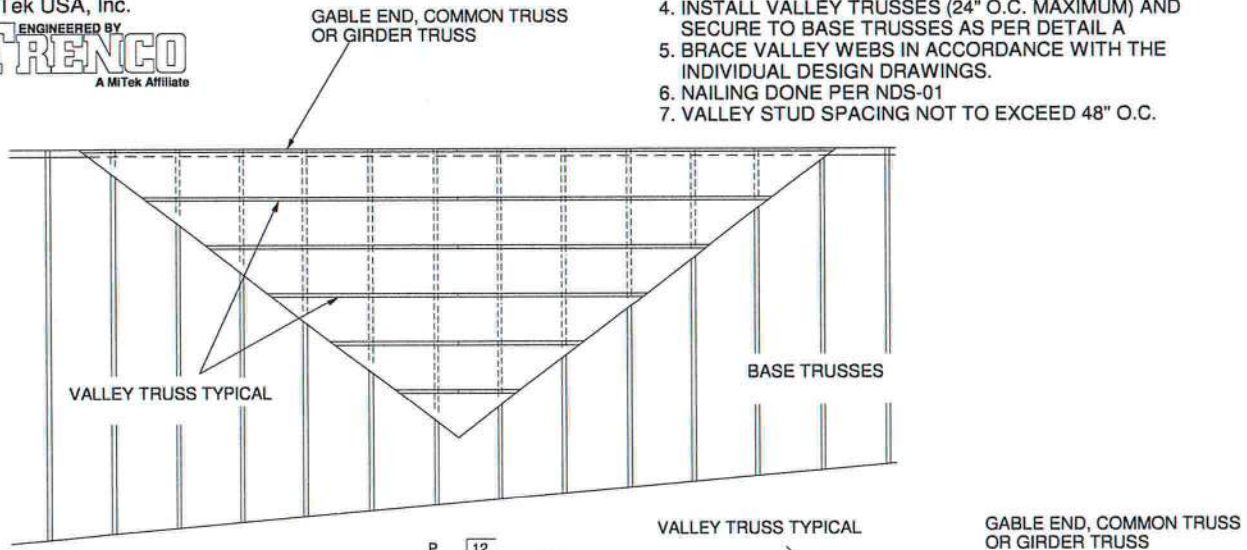
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Page 1 of 1

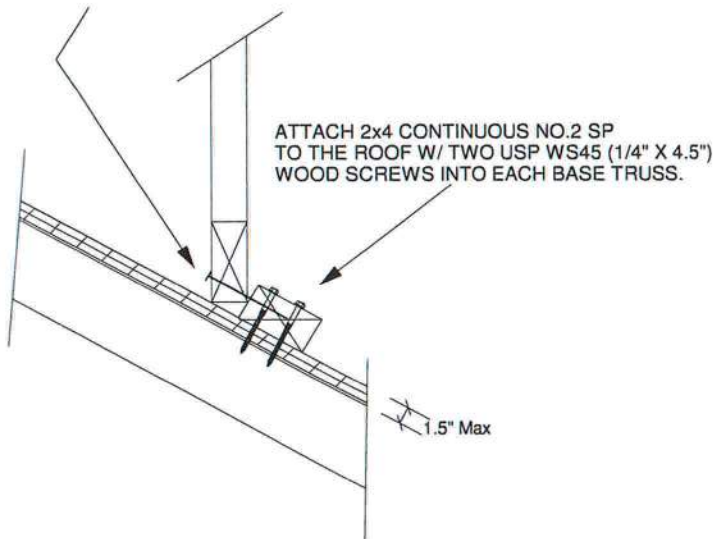


## GENERAL SPECIFICATIONS

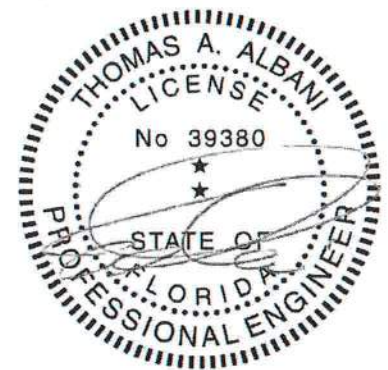
1. NAIL SIZE 10d (0.131" X 3")
2. WOOD SCREW = 4.5" WS45 USP OR EQUIVANT
3. INSTALL SHEATHING TO TOP CHORD OF BASE TRUSSES.
4. INSTALL VALLEY TRUSSES (24" O.C. MAXIMUM) AND SECURE TO BASE TRUSSES AS PER DETAIL A
5. BRACE VALLEY WEBS IN ACCORDANCE WITH THE INDIVIDUAL DESIGN DRAWINGS.
6. NAILING DONE PER NDS-01
7. VALLEY STUD SPACING NOT TO EXCEED 48" O.C.



SECURE VALLEY TRUSS W/ ONE ROW OF 10d NAILS 6" O.C.



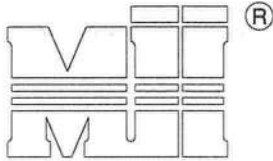
WIND DESIGN PER ASCE 7-98, ASCE 7-02, ASCE 7-05 146 MPH  
WIND DESIGN PER ASCE 7-10 160 MPH  
MAX MEAN ROOF HEIGHT = 30 FEET  
ROOF PITCH = MINIMUM 3/12 MAXIMUM 6/12  
CATEGORY II BUILDING  
EXPOSURE C  
WIND DURATION OF LOAD INCREASE : 1.60  
MAX TOP CHORD TOTAL LOAD = 50 PSF  
MAX SPACING = 24" O.C. (BASE AND VALLEY)  
MINIMUM REDUCED DEAD LOAD OF 6 PSF ON THE TRUSSES



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February 12, 2018



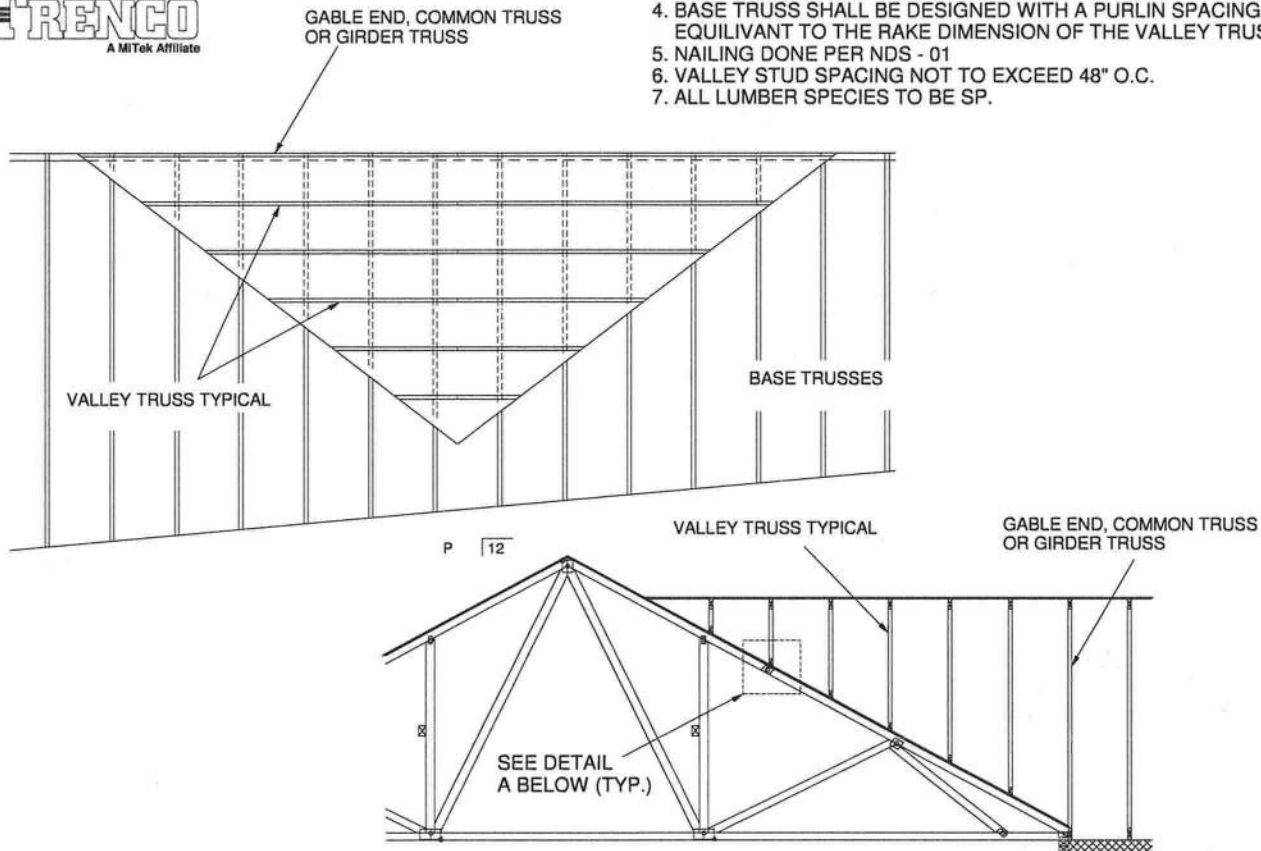
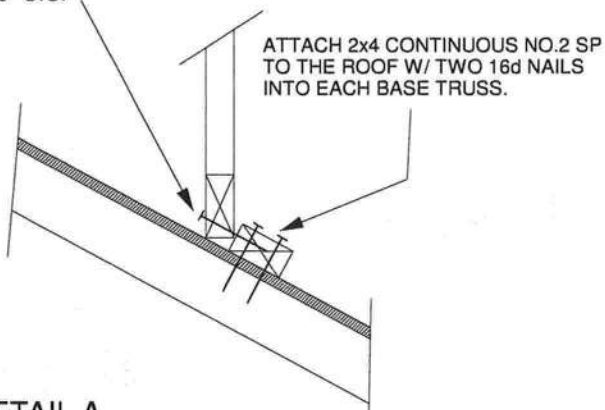


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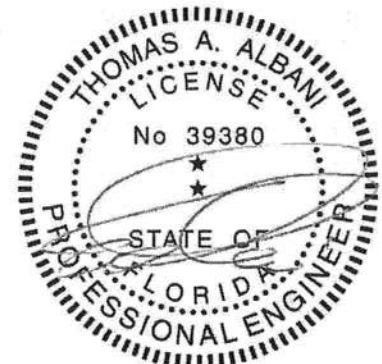
**ENGINEERED BY**  
**TRENCO**  
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## GENERAL SPECIFICATIONS

1. NAIL SIZE 16d (0.131" X 3.5")
2. INSTALL VALLEY TRUSSES (24" O.C. MAXIMUM) AND SECURE PER DETAIL A
3. BRACE VALLEY WEBS IN ACCORDANCE WITH THE INDIVIDUAL DESIGN DRAWINGS.
4. BASE TRUSS SHALL BE DESIGNED WITH A PURLIN SPACING EQUIVARIANT TO THE RAKE DIMENSION OF THE VALLEY TRUSS SPACING.
5. NAILING DONE PER NDS - 01
6. VALLEY STUD SPACING NOT TO EXCEED 48" O.C.
7. ALL LUMBER SPECIES TO BE SP.


 SECURE VALLEY TRUSS  
 W/ ONE ROW OF 16d  
 NAILS 6" O.C.

 DETAIL A  
 (MAXIMUM 1" SHEATHING)  
 N.T.S.

 ATTACH 2x4 CONTINUOUS NO.2  
 TO THE ROOF W/ TWO 16d NAILS  
 INTO EACH BASE TRUSS.

 WIND DESIGN PER ASCE 7-98, ASCE 7-02, ASCE 7-05 120 MPH  
 WIND DESIGN PER ASCE 7-10 150 MPH  
 MAX MEAN ROOF HEIGHT = 30 FEET  
 ROOF PITCH = MINIMUM 3/12 MAXIMUM 10/12  
 CATEGORY II BUILDING  
 EXPOSURE C OR B  
 WIND DURATION OF LOAD INCREASE : 1.60  
 MAX TOP CHORD TOTAL LOAD = 60 PSF  
 MAX SPACING = 24" O.C. (BASE AND VALLEY)  
 MINIMUM REDUCED DEAD LOAD OF 4.2 PSF  
 ON THE TRUSSES

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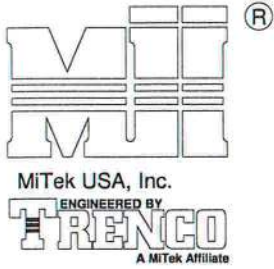
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AUGUST 1, 2016

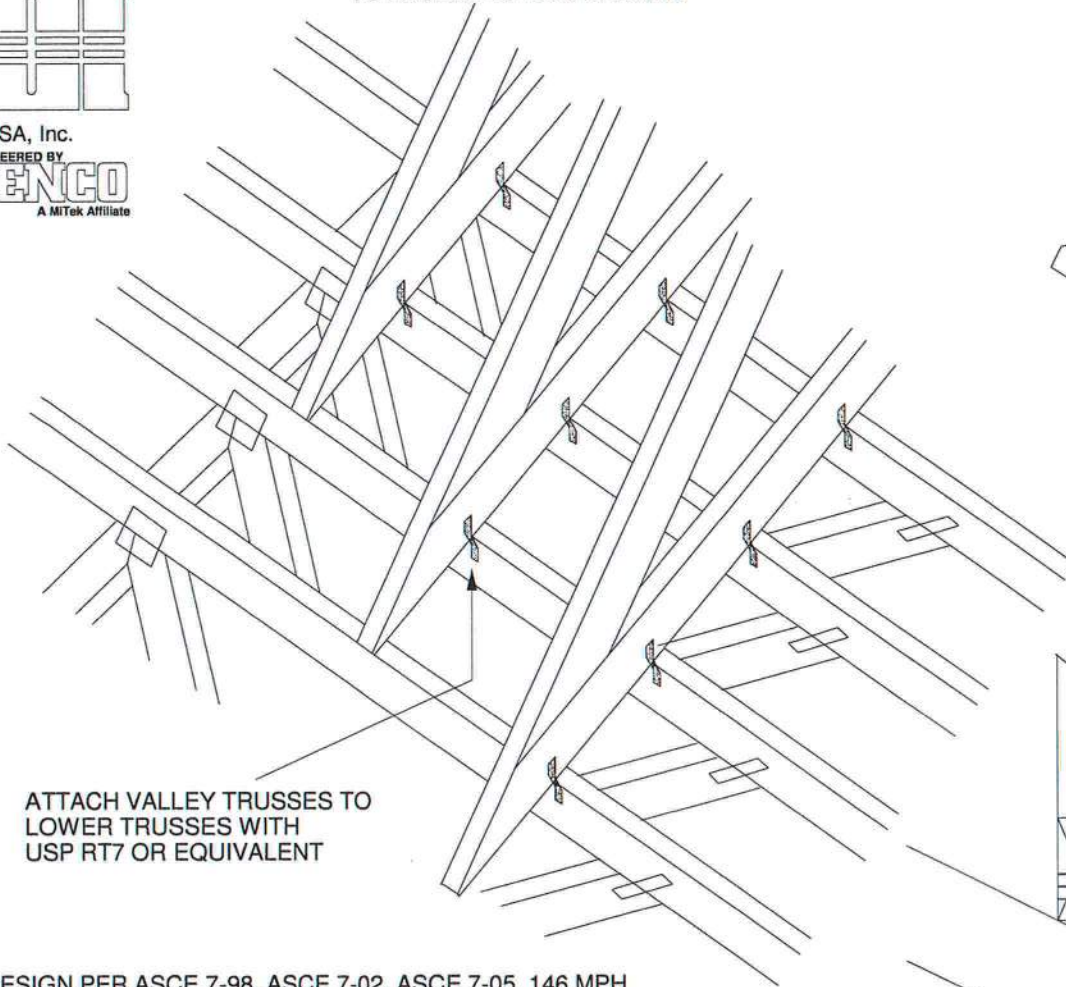
TRUSSED VALLEY SET DETAIL  
(HIGH WIND VELOCITY)

MII-VALLEY

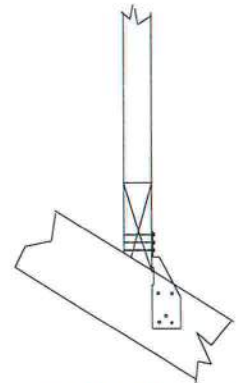
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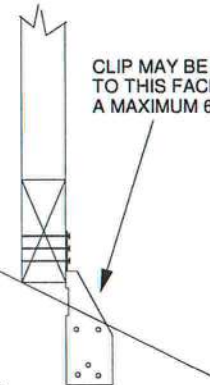
NOTE: VALLEY STUD SPACING NOT  
TO EXCEED 48" O.C. SPACING



ATTACH VALLEY TRUSSES TO  
LOWER TRUSSES WITH  
USP RT7 OR EQUIVALENT



FOR BEVELED BOTTOM  
CHORD, CLIP MAY BE  
APPLIED TO EITHER FACE



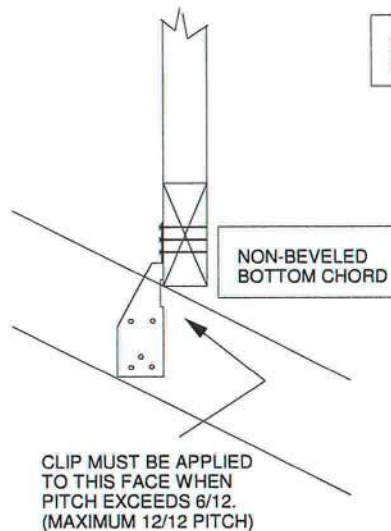
CLIP MAY BE APPLIED  
TO THIS FACE UP TO  
A MAXIMUM 6/12 PITCH

WIND DESIGN PER ASCE 7-98, ASCE 7-02, ASCE 7-05 146 MPH  
WIND DESIGN PER ASCE 7-10 160 MPH  
MAX MEAN ROOF HEIGHT = 30 FEET  
CATEGORY II BUILDING  
EXPOSURE B or C  
WIND DURATION OF LOAD INCREASE : 1.6  
MAX TOP CHORD TOTAL LOAD = 50 PSF  
MAX SPACING = 24" O.C. (BASE AND VALLEY)

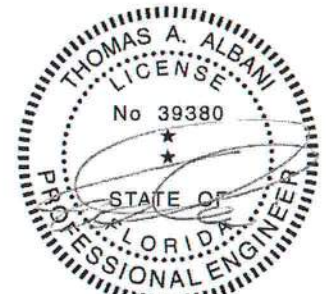
SUPPORTING TRUSSES DIRECTLY UNDER  
VALLEY TRUSSES MUST BE DESIGNED  
WITH A MAXIMUM UNBRACED LENGTH OF  
2'-10" ON AFFECTED TOP CHORDS.

NOTES:

- SHEATHING APPLIED AFTER  
INSTALLATION OF VALLEY TRUSSES
- THIS DETAIL IS NOT APPLICABLE FOR  
SPF-S SPECIES LUMBER.



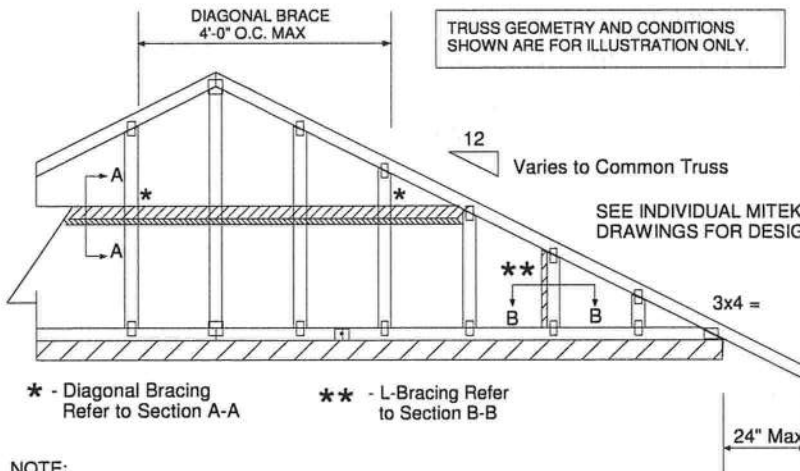
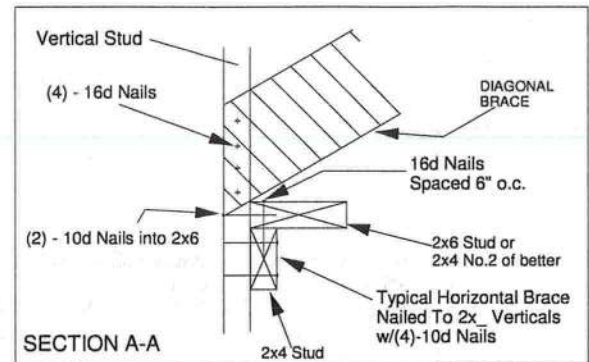
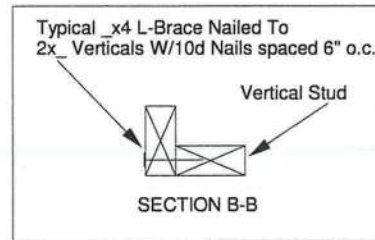
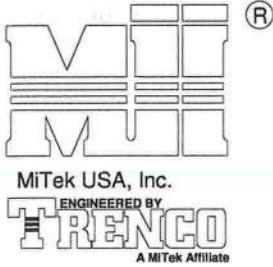
CLIP MUST BE APPLIED  
TO THIS FACE WHEN  
PITCH EXCEEDS 6/12.  
(MAXIMUM 12/12 PITCH)



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January 19, 2018



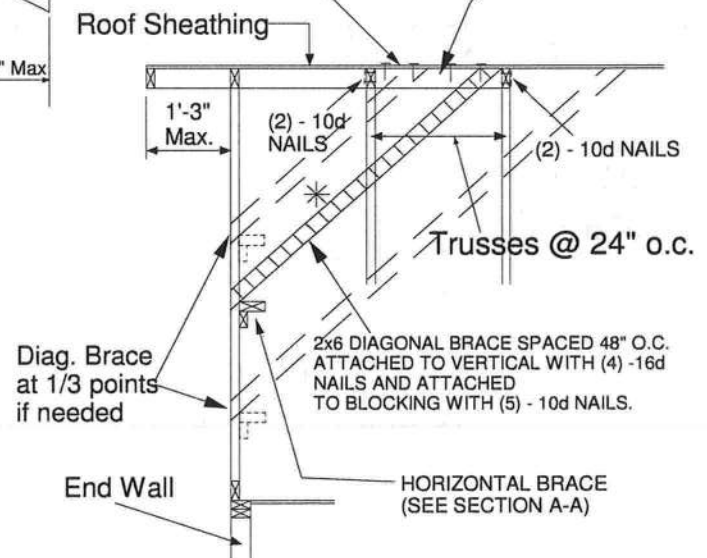


## NOTE:

1. MINIMUM GRADE OF #2 MATERIAL IN THE TOP AND BOTTOM CHORDS.
2. CONNECTION BETWEEN BOTTOM CHORD OF GABLE END TRUSS AND WALL TO BE PROVIDED BY PROJECT ENGINEER OR ARCHITECT.
3. BRACING SHOWN IS FOR INDIVIDUAL TRUSS ONLY. CONSULT BLDG. ARCHITECT OR ENGINEER FOR TEMPORARY AND PERMANENT BRACING OF ROOF SYSTEM.
4. "L" BRACES SPECIFIED ARE TO BE FULL LENGTH. GRADES: 2x4 No 3/STUD SP OR BETTER WITH ONE ROW OF 10d NAILS SPACED 6" O.C.
5. DIAGONAL BRACE TO BE APPROXIMATELY 45 DEGREES TO ROOF DIAPHRAM AT 4'-0" O.C.
6. CONSTRUCT HORIZONTAL BRACE CONNECTING A 2x6 STUD AND A 2x4 STUD AS SHOWN WITH 16d NAILS SPACED 6" O.C. HORIZONTAL BRACE TO BE LOCATED AT THE MIDSPAN OF THE LONGEST STUD. ATTACH TO VERTICAL STUDS WITH (4) 10d NAILS THROUGH 2x4. (REFER TO SECTION A-A)
7. GABLE STUD DEFLECTION MEETS OR EXCEEDS L/240.
8. THIS DETAIL DOES NOT APPLY TO STRUCTURAL GABLES.
9. DO NOT USE FLAT BOTTOM CHORD GABLES NEXT TO SCISSOR TYPE TRUSSES.
10. NAILS DESIGNATED 10d ARE (0.131" X 3") AND NAILS DESIGNATED 16d ARE (0.131" X 3.5")

PROVIDE 2x4 BLOCKING BETWEEN THE FIRST TWO TRUSSES AS NOTED. TOENAIL BLOCKING TO TRUSSES WITH (2) - 10d NAILS AT EACH END. ATTACH DIAGONAL BRACE TO BLOCKING WITH (5) - 10d NAILS.

(4) - 8d (0.131" X 2.5") NAILS MINIMUM, PLYWOOD SHEATHING TO 2x4 STD SP BLOCK



Minimum Stud Size Species and Grade	Stud Spacing	Without Brace	2x4 L-Brace	DIAGONAL BRACE	2 DIAGONAL BRACES AT 1/3 POINTS
		Maximum Stud Length			
2x4 SP No 3/Stud	12" O.C.	3-11-3	6-8-0	7-2-14	11-9-10
2x4 SP No 3/Stud	16" O.C.	3-6-14	5-9-5	7-1-13	10-8-11
2x4 SP No 3/Stud	24" O.C.	3-1-8	4-8-9	6-2-15	9-4-7

- \* Diagonal braces over 6'-3" require a 2x4 T-Brace attached to one edge. Diagonal braces over 12'-6" require 2x4 I-braces attached to both edges. Fasten T and I braces to narrow edge of web with 10d nails 8" o.c., with 3" minimum end distance. Brace must cover 90% of diagonal length.

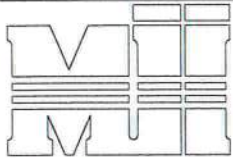
MAXIMUM WIND SPEED = 146 MPH  
MAX MEAN ROOF HEIGHT = 30 FEET  
CATEGORY II BUILDING  
EXPOSURE B or C  
ASCE 7-98, ASCE 7-02, ASCE 7-05  
DURATION OF LOAD INCREASE : 1.60

STUD DESIGN IS BASED ON COMPONENTS AND CLADDING.  
CONNECTION OF BRACING IS BASED ON MWFRS.



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Date:

January 19, 2018



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Page 1 of 1

## TRUSS CRITERIA:

LOADING: 40-10-0-10

DURATION FACTOR: 1.15

SPACING: 24" O.C.

TOP CHORD: 2x4 OR 2x6

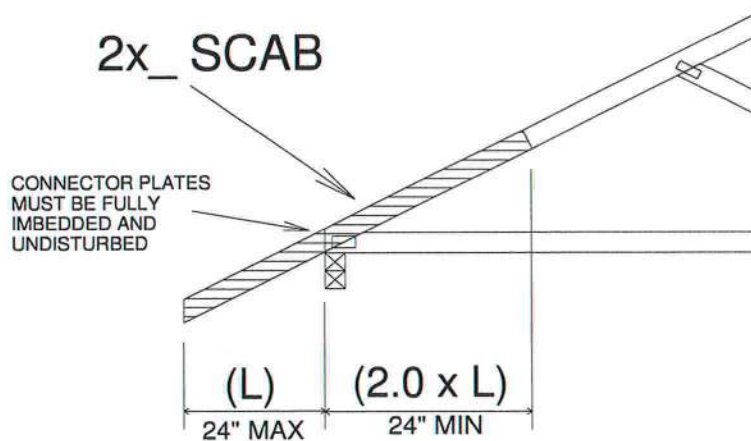
PITCH: 4/12 - 12/12

HEEL HEIGHT: STANDARD HEEL UP TO 12" ENERGY HEEL

END BEARING CONDITION

## NOTES:

1. ATTACH 2x SCAB (MINIMUM NO.2 GRADE SPF, HF, SP, DF) TO ONE FACE OF TRUSS WITH TWO ROWS OF 10d (0.131" X 3") SPACED 6" O.C.
2. THE END DISTANCE, EDGE DISTANCE, AND SPACING OF NAILS SHALL BE SUCH AS TO AVOID UNUSUAL SPLITTING OF THE WOOD.
3. WHEN NAILING THE SCABS, THE USE OF A BACKUP WEIGHT IS RECOMMENDED TO AVOID LOOSENING OF THE CONNECTOR PLATES AT THE JOINTS OR SPLICES.

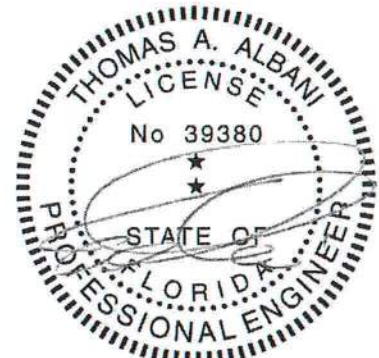


## IMPORTANT

This detail to be used only with trusses (spans less than 40') spaced 24" o.c. maximum and having pitches between 4/12 and 12/12 and total top chord loads not exceeding 50 psf.

Trusses not fitting these criteria should be examined individually.

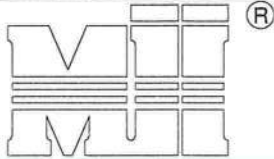
REFER TO INDIVIDUAL TRUSS DESIGN  
FOR PLATE SIZES AND LUMBER GRADES



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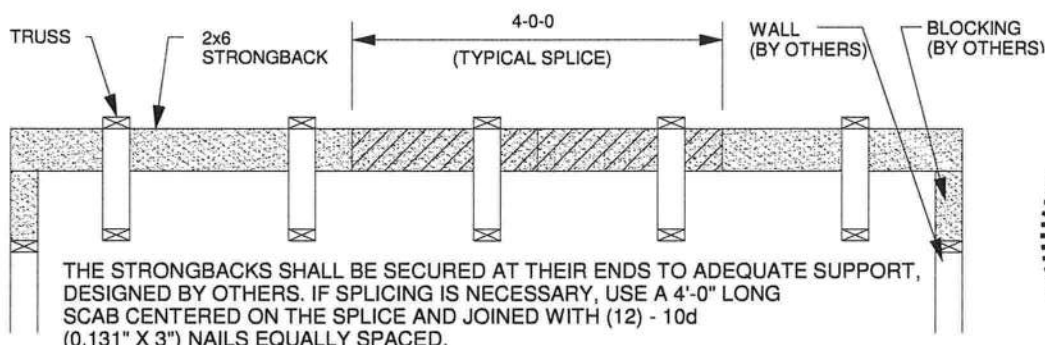
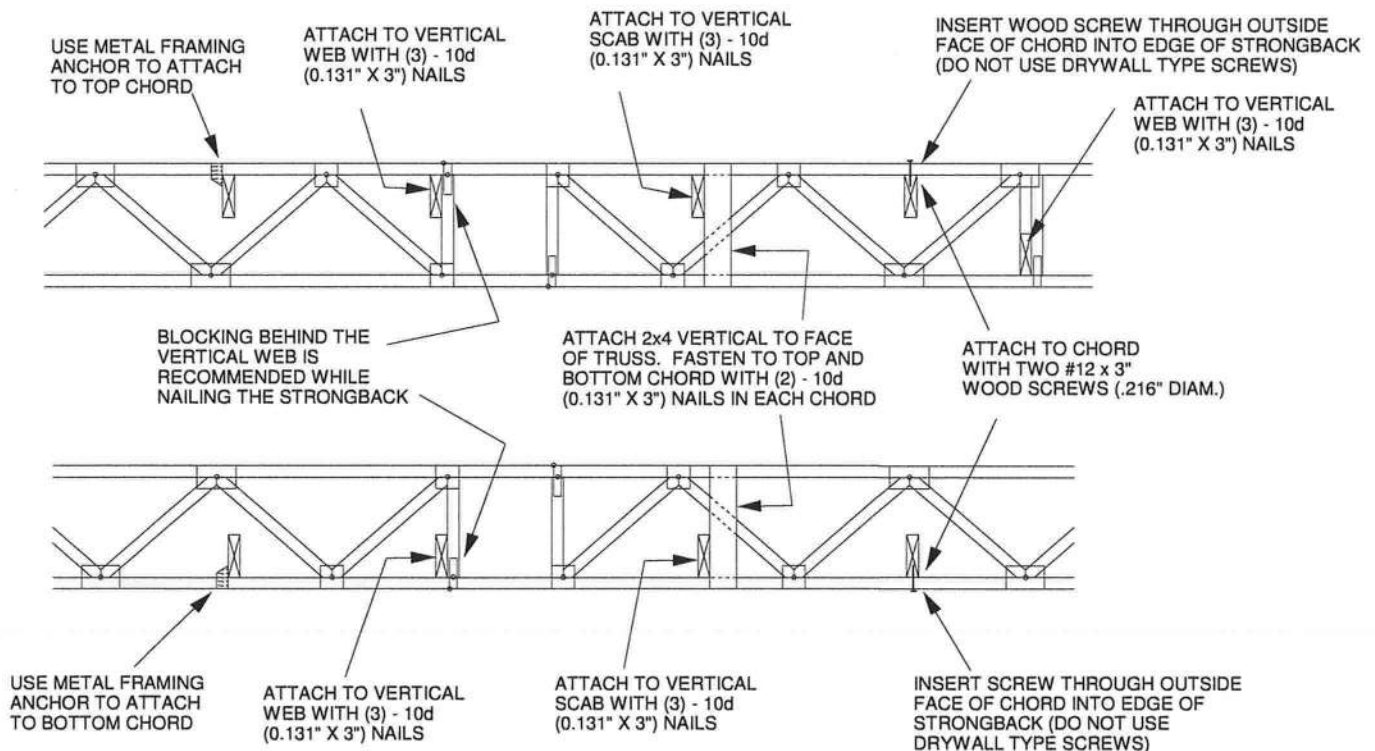


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TO MINIMIZE VIBRATION COMMON TO ALL SHALLOW FRAMING SYSTEMS, 2x6 "STRONGBACK" IS RECOMMENDED, LOCATED EVERY 8 TO 10 FEET ALONG A FLOOR TRUSS.

NOTE 1: 2X6 STRONGBACK ORIENTED VERTICALLY MAY BE POSITIONED DIRECTLY UNDER THE TOP CHORD OR DIRECTLY ABOVE THE BOTTOM CHORD. SECURELY FASTENED TO THE TRUSS USING ANY OF THE METHODS ILLUSTRATED BELOW.

NOTE 2: STRONGBACK BRACING ALSO SATISFIES THE LATERAL BRACING REQUIREMENTS FOR THE BOTTOM CHORD OF THE TRUSS WHEN IT IS PLACED ON TOP OF THE BOTTOM CHORD, IS CONTINUOUS FROM END TO END, CONNECTED WITH A METHOD OTHER THAN METAL FRAMING ANCHOR, AND PROPERLY CONNECTED, BY OTHERS, AT THE ENDS.



ALTERNATE METHOD OF SPLICING:  
OVERLAP STRONGBACK MEMBERS A MINIMUM OF 4'-0" AND FASTEN WITH (12) - 10d (0.131" X 3") NAILS STAGGERED AND EQUALLY SPACED.  
(TO BE USED ONLY WHEN STRONGBACK IS NOT ALIGNED WITH A VERTICAL)



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